

# Cornell Chronicle

Volume 16, Number 26

Thursday, March 21, 1985

## Rhodes Seeks SUNY Bypass on Statutory Budgets

### Asks Legislative Hearing for Direct Access to Governor, Legislature

Cornell President Frank Rhodes recommended at a state legislative hearing Friday that the four statutory units here work directly with the state legislature and the governor on budget business, rather than through the State University of New York as they do now.

He testified before a hearing in Binghamton by the Higher Education Committees of the State Senate and Assembly. Here is the text of his remarks:

"I am glad to have this opportunity to testify regarding the report and recommendations of the Independent Commission on the Future of the State University.

"In 1960, another distinguished Commission headed by Henry Heald, Marion Folson and John Gardner reported to Governor Rockefeller and the Legislature regarding the status of the then fledgling State University of New York.

"The Commissioners set three goals for higher education in the State, two of which bear directly on the findings of the present Commission: The Heald report asked the Governor and the Legislature: to assure a 'wide availability and diversity of educational opportunity to students with various intellectual capabilities and of all income classes in the State' and to assure 'the attainment of excellence in academic instruction and research...'"

"A quarter of a century later, after an era of unprecedented expansion, we congratulate the State University for meeting the first of these goals. SUNY has provided a broad educational experience to hundreds of thousands of New Yorkers, many of whom would not have attended a college or university, except for SUNY's dramatic growth.

"The findings of the present Commission, however, make it clear that State University

has not met the second goal. SUNY has not yet achieved a position of national leadership in research and graduate education.

"This failure is not merely regrettable on academic grounds, important as those considerations may be. It is also regrettable because, in the words of the SUNY Commission, the State of New York has lacked a state university system that can serve, in full partnership with private universities, 'as a magnet for industry and a force for community and economic development.'

"The Commission attributes this failure to over-regulation and argues that, because of over-regulation, SUNY lacks the flexibility to compete with leading universities elsewhere. The Commission recommends that SUNY become a public benefit corporation which would be free of the many restrictions which govern the administrative agencies of the State government.

"I have no wish, at this time, to evaluate the merits of converting SUNY into a public benefit corporation, and I think it premature to comment upon the specifics of the legislative proposal which SUNY has submitted to the Governor.

"At the very outset, however, let me emphatically state that I strongly support the general concept of more freedom for SUNY, which would permit the achievement of higher quality in graduate education and research.

"As the SUNY Commission notes, the statutory or contract colleges at Cornell are among the most distinguished in the nation. There is no reason why they cannot continue to prosper into the indefinite future despite the rising level of national competition for leadership in the field of graduate education,

Continued on Page 2



The Green Dragon ended its trip in the traditional flames (right) last Friday, but the trip itself was shortened when whipping winds toppled the head section of the beast. The spirits of Erik Alschuler, Arch. '88, (left) were only slightly dampened.

## Cornell Film Aimed to Make Money For Africa Famine Relief

Cornell United Religious Work is sponsoring the development of a documentary film about Africa that it hopes will help raise thousands of dollars for famine-plagued Ethiopia.

Writer and producer Robert Lieberman, a physics instructor at Cornell and a published novelist, has been in Ethiopia scouting locations for the film. The initial \$25,000 financing for the project came from the Episcopal Church's Presiding Bishop's Fund for World Relief, says Gail Riina, assistant director of CURW.

Lieberman was joined Monday (March 18) by a two-member, freelance production crew "loaned" from one of public television's super stations, WGBH in Boston — producer of the award winning "Nova" series. Rob Moss, a cinematographer and tea-

cher of filmmaking at Harvard, and Alex Anthony, a sound recordist, will spend the next two weeks with Lieberman gathering footage for the film which will put a "personal perspective" on the gut wrenching problems faced daily by millions of Africans.

Lieberman and his crew hope to trace a particular family's struggle for survival or compare the lives of Ethiopian orphans to

those children who still have intact families. The point is, says Riina, that no matter how bad a situation is, it can be made easier if there is familial love and support.

When the credits roll, however, the names of Ithacans working behind the scenes and making "in-kind" contributions will be acknowledged. James Maas, a professor of psychology at Cornell, will serve as a produc-

tion consultant and will provide editing equipment; and Cayuga Color Labs will donate film and processing time so that Lieberman and CURW can prepare a slide show illustrating his African journey.

Finally, in keeping with the true communal "giving" spirit of the project, Alitalia Airlines donated three round trip tickets to the production crew.

While money still must be raised to help finance the completion of the film, Riina is confident the donations will continue to come in to CURW. Meanwhile, the documentary, scheduled for completion this September, has captured the attention of the major networks. CURW officials plan to raise money for food-aid for Africa by selling the film to a network and PBS stations.

### Please Bear With Us...

This edition of the Chronicle was published using a variety of equipment, and we know it shows it. The computer system was being switched over at the shop that prints us ... and ... let's just say it's more than we want to get into now. Anyway, this type has been produced through more than one system. It's a hodgepodge. Maybe by next week we'll have it back together.

THE EDITOR

## The Songs of the Whales

Katharine Boynton Payne, a research associate at the Laboratory of Ornithology, will give a talk about whale songs 4:30 p.m. today. Her topic "Rhythms and Rhyming in Songs of the Humpback Whales" is part of the series of public sessions associated with a Common Learning course.

Free to the public, the discussion will be an informal report on work in progress based on years of collecting whale songs at sea and on unique studies of the recordings. Payne's work has been done in collaboration with Linda Guinee. The talk, in Barnes Hall auditorium, will be illustrated with slides and tapes. Appropriately, the common learning course sponsoring her talk, music 312, is titled: "Rhythms: Their Significance in Biology, Psychology, Anthropology, Music and Other Studies."



Payne recently returned from Africa where she did pioneering work by recording sounds of elephants.

Payne received an A.B. degree from Cornell in 1959. Her undergraduate studies included biology and music, and she won honors in music with her essay on the songs of John Dowland.

## Black Scholars Will Gather Here For Conference This Weekend

More than 300 black scholars and educators from across the United States will be here today through Sunday for the ninth annual conference of the National Council for Black Studies.

The Africana Studies and Research Center is host to this year's conference. James E. Turner, director of the center, is program chairman for the conference, which has as its theme "From Brown to Bakke to Reagan: 30 Critical Years in African American Social History."

Sessions will deal with unemployment, education, industrial changes in the workplace, economic development in the black community, the black family, and American foreign policy in the Caribbean. All conference sessions are being held at the Sheraton Inn, Ithaca.

Keynote speaker at the four-day conference is Rep. Ron Dellums (D-California). He will speak at 12:30 p.m. Friday.

Friday at 4 p.m., sociologist James Blackwell of the University of Massachusetts will speak to the topic, "Sociological and Political Cross Currents Impacting the Black Community: Implications for Public Policy."

Randall Robinson, executive director of Trans Africa, a lobby group, will be the banquet speaker at 7:30 p.m. Friday. Robinson was one of the principal organizers of protests outside the South African Embassy in Washington, DC.

Derek Bell, dean of the law school at the University of Oregon will speak at 9 a.m. Saturday on the "transformation in constitutional philosophy and shifting public policy toward civil rights and affirmative ac-

tion." Bell, who had been on the Harvard Law School faculty, is the author of *Race, Racism, and American Law*. He will also address faculty and students in the Cornell Law School Friday afternoon.

## Wilson Will Be On 'At Issue'

Kenneth G., Wilson, director of Cornell's Center for Theory and Simulation in Science and Engineering, will discuss the new facility's impact on employment in the region on the WSKG-TV public affairs program, "At Issue."

Focus of the program is the change from factory to "high tech" jobs in the Binghamton-Elmira-Ithaca area, according to WSKG producer Ken Grimbball. Wilson, the Weeks Professor of Physical Science at Cornell, is one of several public officials and employers interviewed for the half-hour program.

"At Issue" will be broadcast at 10:30 p.m. Monday, March 25. WSKG, channel 46, is carried by most cable television systems in the area.

## Rhodes Testimony at Hearing

Continued from Page 1

scientific research and high technology development.

"That continued success, however, is dependent upon a modification of the statutory and contractual arrangements with the State which will give to Cornell the same freedom of program development as SUNY seeks for itself. That freedom, we believe, can only be achieved if Cornell has the right of direct access to the Governor and the Legislature regarding our annual budget proposals.

"In sum, the trustees and administration of Cornell University endorse the findings of the report which recommend what might be called a deregulation of the State University. Most particularly, we support the statement of the Commission that 'New York State has handicapped both itself and SUNY over the years by relying on traditional governmental mechanisms that are not suited for the management of higher education.'

"Freedom and Responsibility are the twin organizational principles upon which every great university in the nation, private or public, must rest.

"Freedom, in the academic context, means that a university administration and board of trustees must have clearly articulated goals. They must have the administrative ability to marshal financial and human resources which are needed to achieve those goals. Most importantly, they must have the freedom, courage and determination to make hard choices in support of excellence.

"Responsibility, in the case of a state institution, means that the Governor and Legislature must be given sufficient information to understand the goals recommended by the trustees and to accept or modify them in the public interest. The expenditure of public funds, of course, must be subject to careful post-audit.

"I am gratified to learn that the Governor has endorsed the spirit of the Commission report and will ask the Legislature to support further liberalization and deregulation.

"I hope and trust that this spirit will also extend to needed reforms in the relationship between Cornell and the State University. These reforms, we believe, would serve the very same important purposes.

"As you know, Cornell operates the N.Y.S. Colleges of Agriculture and Life Sciences, Veterinary Medicine, Industrial and Labor Relations and Human Ecology. At present, and for a century past, these colleges have been defined by law as 'colleges furnishing higher education operated by private institutions on behalf of the State pursuant to statute or contractual agreements.'

"From the establishment of the earliest statutory or contract college at Cornell in 1894, State oversight of these colleges has been exercised by a variety of State officials, notably the Commissioner of Education. Since 1948, these colleges continue to be operated by private institutions but under 'the general supervision' of the State University trustees.

"Formerly, the Commissioners of Education confined State oversight to financial and fiscal matters. The fact that State University trustees, unlike former State overseers, are engaged in the actual operation of an educational enterprise has complicated the relationship. The reason is simple. Financial and fiscal issues cannot be separated from educational priorities and purposes.

"The present ambiguous and complicated relationship must be revised and simplified if we hope to protect and preserve the leading place in research and graduate education which the New York State contract colleges at Cornell have won. As you know, the College of Agriculture and Life Sciences is probably the premier institution of its kind in the nation. The College of Veterinary Medicine, though threatened, is still among the best two or three in the country. The College of Human Ecology and the School of Industrial and Labor Relations are recognized as among the best of their kind.

"The Colleges of Agriculture and Life Sciences and Veterinary Medicine, along with the endowed colleges, are deeply involved with the Biotechnology Institute and the new \$60 million Supercomputer Center recently announced by the National Science Foundation. These colleges are magnets for industry and forces for economic growth in New York State. In short, taken together, the endowed and contract colleges of Cornell are critically important to the commerce and industry of the State as we approach the 21st Century.

"We recognize, of course, that freedom and responsibility are inseparable. We accept the overseer role of the State of New York in relation to the statutory or contract colleges. We can continue to accept the 'general supervision' of the State University trustees.

"However, in order to protect the excellence of these colleges, we believe, most fervently, that the contract should be modified by statute to recognize and confirm the right and duty of Cornell to present our academic and research priorities and our budget for these colleges to the Governor and then to explain and defend that budget in the Legislature.

"Under the present statutory arrangement, the Cornell budget proposal for four contract colleges is submerged in a massive SUNY fiscal program which also attempts to deal with 59 other and very dissimilar institutions, including 29 state-operated units and 30 community colleges.

"That arrangement is not calculated to recognize the unique role of Cornell as the Land Grant institution of the State of New York. It is not designed to focus upon research and graduate programs of exceptional quality. It cannot. It is our experience that the internal constraints and pressures of the SUNY system, with the best will in the world, effectively exclude that possibility.

"What is the solution to the shortcomings which the Commission has noted regarding research and graduate education and, consistent with that search for solutions, how do we protect the high quality of the N.Y.S. contract colleges at Cornell?

"I do not pretend to know which specific remedies should be applied to the various graduate programs of the state-operated system. I can only reiterate that deregulation, in some form, is the vital first step. Thereafter the SUNY trustees must be free to state their priorities, to marshal human and financial resources for the entire state-operated system and then to muster the determination to apply them in support of high-quality programs.

"As to the statutory or contract colleges at Cornell, we have engaged in serious and searching discussion with the SUNY Board of Trustees regarding needed reforms in the relationship. In that connection, I wish to take this public occasion to thank Chairman Blinks and Chancellor Wharton for their interest in our views and their willingness to listen. The continuation of that spirit is vital to all our future efforts. However, we have not been able to reach agreement with them.

"We now believe that legislation is necessary which would guarantee to Cornell, as the Land Grant institution of the State of New York, the right of direct access to the Governor and the Legislature.

"We shall now develop a legislative proposal which extends to Cornell the necessary freedom of access to the elected representatives of the people. We shall seek your support for that reform.

"I wish you every success in dealing with the report of the Commission and in devising needed improvements. On behalf of the trustees of Cornell University, may I pledge our support to you in that effort. We will try to be helpful to you and your staff in any way we can.

"Many thanks for your kind attention."

## Cornell Chronicle

EDITOR: Randall E. Shew

CONTRIBUTING WRITERS: H. Roger Segelken, Martin B. Stiles, Lisa H. Towle, Anne S. Moffat, David I. Stewart, Mark Eyerly, Yong H. Kim, Susan S. Lang, Jeanne Mackin, Joseph Leeming.

PHOTOGRAPHERS: Sol Goldberg, Charles Harrington.

CIRCULATION MANAGER: Joanne Hanavan.

Published 49 times a year except Thanksgiving, Christmas and New Year's weeks.

Distributed free of charge to Cornell University faculty, students and staff by the University News Bureau. Mail subscriptions, \$13 per year. Make checks payable to Cornell Chronicle and send to Editorial Office, 110 Day Hall, Ithaca, N.Y. 14853.

Telephone (607) 256-4206.

Second-Class Postage Rates paid at Ithaca, N.Y.

POSTMASTER: Send address changes to the Cornell Chronicle (ISSN 0747-4628), Cornell University, 110 Day Hall, Ithaca, N.Y. 14853.

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The university is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

# New Transistors Will Trigger Communications Explosion

## Ultra-Fast Devices Developed in Cornell Electrical Engineer's Lab

Ultra-fast transistors being developed here will prompt fundamental revisions in computer architecture and integrated circuit design, and greatly expand communications capabilities. So said a Cornell electrical engineer in an address to leaders of the U.S. microelectronics industry meeting in Stanford, Calif., last Friday.

Lester F. Eastman predicted that transistor switching times will be so fast — 1.5 picoseconds (one and one half trillionths of a second) — that other components in computers will be unable to keep up and will have to be restructured.

For home owners, the most visible result of the so-called ballistic transistor technology will be pie plate-sized, rooftop satellite antennas capable of receiving 10 times as many television channels.

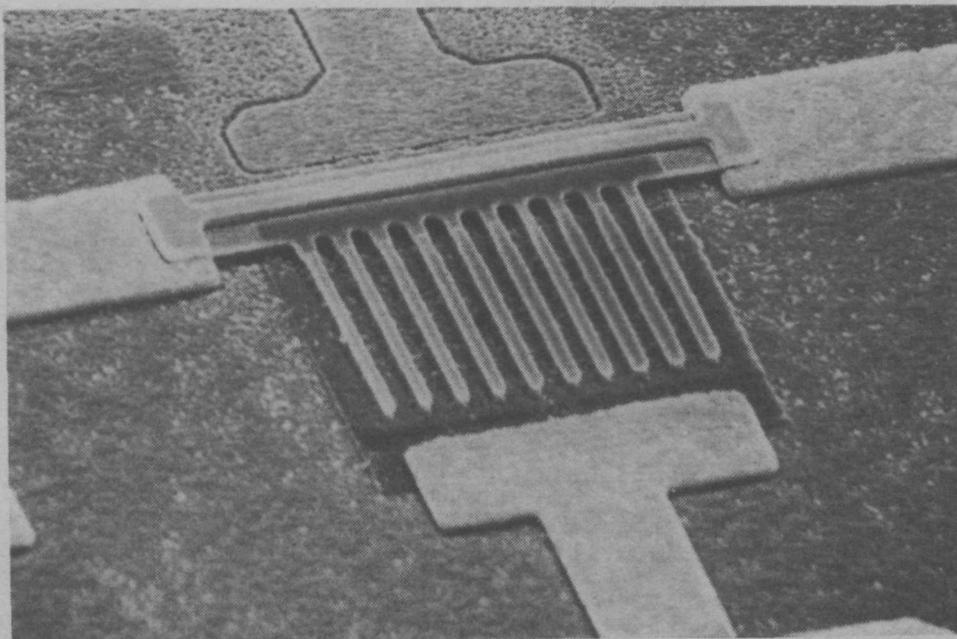
Eastman was one of eight speakers at a symposium on the future of microelectronics being held at Stanford University. The symposium, sponsored by the Cornell University School of Electrical Engineering, is one in a series of events marking the centennial of Cornell's first electrical engineering graduates. Cornell and the Massachusetts Institute of Technology awarded the first baccalaureate degrees in the field in 1885.

"The future of microelectronics will be found in the faster and the smaller," according to Eastman, the John LaPorte Given Professor of Engineering at Cornell and the leader of this country's largest academic effort (about 50 researchers) in the area of compound semiconductor devices.

Faster switching times are possible with ballistic transistors because electrons pass through a very short length of semiconductor material almost without collision, Eastman explained. The electron gains speed as it travels, just as a rock dropped from a bridge increases in velocity. Ballistic transistors can be made even faster by giving the electrons an initial boost — the equivalent of throwing a rock down from the bridge — and by applying an electric field to keep the signal hurrying along.

The ballistic effect works best in compound semiconductors, such as gallium arsenide, with dimensions less than half a micron (or half a millionth of a meter). The smallest integrated circuit devices now being manufactured have dimensions between five and two microns, and most are made of silicon, whose crystal structure offers much more likelihood of collisions to slow the electrons. The ballistic effect, when first proposed at Cornell in 1977, was generally thought to be impossible in semiconductors.

"We have been able to reach speeds up to



One of the next generation of ultra-fast switching devices, a ballistic electron injection vertical field effect transistor from Cornell's compound semiconductor device laboratory and the Submicron Facility, was fabricated by electrical engineering graduate student Joel R. Wendt, who also took this microscope photograph.

six times faster than the velocity of electrons in silicon structures by using special machines to make layered heterojunctions of gallium arsenide and other materials," Eastman said. The special equipment, such as molecular beam epitaxy (MBE) machines capable of depositing materials only a few atomic layers thick, is housed in his laboratories and in those of the National Research and Resource Facility for Submicron Structures at Cornell.

There are two advantages to compound semiconductors, of which gallium arsenide is the present leader in the "family," according to Eastman. "They emit light, so you can make lasers out of them, and fiber optical communications will make heavy use of such compound semiconductors. Furthermore, you can make transistors and other devices with electrons moving very fast.

"The slowest electrons (in gallium arsenide) are about twice as fast as those in silicon. The fastest, the ones we refer to as ballistic electrons, eventually can be made to go 15 times as fast as electrons in silicon. Whether it is two times or 15 times faster, the

frequency the transistors can reach in microwave amplification or the rate at which they can be switched for computers will rise proportionately."

But until computer circuits can be redesigned to take full advantage of the switching times of the new transistors, the slowest part of the process will be the transit time from one part of a circuit to another. Like race cars roaring from the starting line in rush hour traffic, the signals will come faster than the electrodes can move them. For a computer, that will be "unthinkably" fast and the ballistic transistors may have to be deliberately slowed.

Among Eastman's proposed solutions to the microtraffic jam are: — circuits or entire computers designed in square arrays of devices, with signals entering on two sides and moving in an L-shaped wave. Three-dimensional integrated circuits, built as layers in a cube, would decrease transit time with signals traveling a shorter distance — diagonally.

"We would have structures so small that the signal can get across within the switching

time. They would be related or connected to others nearby with waves of switching logic programmed ahead of time," according to Eastman.

—infrared laser light that can carry signals from one part of a computer to another. "We may even put light waveguides (tiny pieces of glass or plastic) on top of individual chips to carry the signal. There must be a marriage between integrated circuits with transistor-type electronic devices and optical devices on the same chip."

—in computers, all chips could be "clocked" to switch at the proper time with a "metronome" in the form of a light signal from overhead, Eastman said. The signal would be a short pulse, or "pancake" of light, hitting all chips in a surface at the same time.

"To use the higher switching speeds, there will have to be massive efforts for new architectures in the next few decades," Eastman said. "I believe the supercomputer of today will be the desktop calculator of tomorrow. The advances will not let up, and I don't see any limit until we get to transit times a thousand times faster than now."

Improvements in microwave communications will be just as dramatic, Eastman said. Transistors with fast electrons and small dimensions will be able to amplify microwave signals in the so-called millimeter wavelength region, above 30,000 megahertz.

A goal for satellite transmission, according to Eastman, would be 94,000 megahertz, a "window" where absorption of signals in the atmosphere is at a minimum. Increasing satellite transmission frequencies from 9,400 megahertz to 94,000 megahertz would allow increased bandwidth and carry 10 times as much information.

"We can imagine getting 10 times the television channels," Eastman said. "And instead of the giant, unsightly dish antennas in everybody's yard, we would have a little dome, perhaps one foot in diameter, on the top of the house. Such antennas would be every bit as sensitive and directive."

These advances won't come automatically, a fact that Eastman appreciates as he operates the million-dollar machines now needed to fabricate a few of the tiny, fast devices.

"We can vaguely tell you what these futuristic devices will be like, but we can't tell specifically. There are too many inventions along the way, inventions of new structures and means of making such structures," the Cornell electrical engineer said. "About 100 laboratories in the U.S. are now doing research on compound semiconductor optical, microwave, and high-speed devices and integrated circuits. The researchers in these laboratories will make these inventions."

## New Benefits Plan Offers Tax-Exempt Flexibility

### From University Personnel Services

Effective July 1, Cornell staff and faculty members will be able to convert a portion of salary each pay period into additional, specific benefits, on an individual, before-tax basis.

The new program, Select Benefits, is the result of extensive research into flexible benefits systems conducted through broad-based University planning committees. It emphasizes individual choice and responsibility in making tax-related and benefits-related decisions.

Participants in existing flexible plans of other employers report that, in many cases, allocating before-tax dollars to predictable individual benefits needs can substantially reduce the amount of compensation subject to personal income taxes, and result in greater disposable income. The program is tied to current federal tax regulations.

Select Benefits was announced this week by Lee Snyder, director of University Personnel Services. Preliminary details were distributed in a mailing to faculty and staff

members eligible to participate.

"Implementation of this program represents the productive outcome of a long review and planning process, and a commitment to benefits plan design that addresses the individual needs of employees," said Snyder. Snyder noted that the program is completely voluntary and that participation by employees should hinge on their individual situations.

The program allows employees who normally make health care plan premium contributions on an after-tax, deduction basis to make their contributions with before-tax dollars.

## Select BENEFITS

Of potentially greater financial impact are the reimbursement accounts. On a biweekly, before-tax basis, employees will be able to convert a portion of their salaries to reimbursement accounts, from which to pay eligible dependent care expenses and eligible out-of-pocket medical care expenses.

"For some individuals, the choices will be simple, even obvious; for others, the choices will be less clear cut," said Snyder. The plan is designed to provide broad choices to help meet diverse employee needs, increase tax efficiency, and contain benefits costs.

Information sought from benefits consulting firms and organizations with experience

in administering flexible programs was incorporated into a unique plan design to complement existing benefits at Cornell.

Select Benefits was developed by University Personnel Services, the Statutory Colleges Finance and Business Office, and advisory committees of staff and faculty members drawn from many University groups, including: the Advance Benefits Planning Task Force, the Employee Assembly, the Committee on the Professional and Economic Status of the Faculty, the Employee-Elected Trustees, and the Provost's Advisory Committee on the Status of Women.

Informational meetings scheduled for April will be announced in *Contact* and listed in the *Chronicle* and *Networking* calendars of events. The 1985 enrollment period will extend from May 1 through May 31. The first Plan year will run from July 1 through December 31, 1985. Subsequent Plan years will run for 12 months, on a calendar year basis.

## New Policy Defines Student 'Independence': 22 Years Old, Self-Supporting for 3 Years

Students seeking financial aid based solely on their own income and assets must be at least 22 years old and must have supported themselves for three consecutive years, under a new policy adopted by the university.

Otherwise, parental ability to help pay tuition and other costs will be considered to determine student eligibility for financial aid.

Previously, students could be classified "self-supporting" or independent if they met the federal criteria and supported themselves for one year while not attending college. There was no age requirement.

Under federal standards, students are considered independent if they are not claimed on their parents' tax return, do not live with their parents for more than six weeks, and do not receive more than \$750 from their parents for the year they are requesting independent status and the previous year.

Cornell's new requirements will not affect the 344 students currently classified as self-supporting, said Susan H. Murphy, financial aid director. The change applies only to new requests for self-supporting status, beginning with the 1985-86 academic year.

"The new criteria will provide a more equitable distribution of resources to all students receiving financial assistance," Murphy said.

Currently, Cornell spends approximately \$1.2 million a year in scholarship dollars for aid to independent students. Over the next four years, it is estimated that the new requirements may reduce the number of students qualified for self-supporting status by one-third, trimming the scholarship need of these students by \$400,000 to \$500,000.

Students defined as self-supporting are usually more likely to receive greater amounts of financial aid than they would otherwise, Murphy explained, because they do not rely on their parents to contribute to the costs of their education.

At Cornell, the percentage of all financial aid awarded to "self-supporting" students has been increasing. At the same time, university officials are concerned that there may not be enough financial aid dollars to meet full student need by 1986-87.

As a result, it was necessary to tighten the requirements for self-supporting status, Murphy said. As with the previous policy, eligible students are not automatically granted self-supporting status, but must still be screened by the financial aid office.

"Our philosophy is that both students and parents have a responsibility to help pay for a student's education," Murphy said. "We want to help students who have no parental

financial support, but we want to make sure that those students are truly independent."

As with the former policy, self-supporting status will be denied to students who simply refuse to ask their parents for support, or whose parents will not help meet the educational costs despite their ability to pay.

Also, students who marry during their undergraduate years must still be 22 and have supported themselves for three years to be considered for self-supporting status.

The new requirements may be waived if a student's parents are deceased, disabled, or declared incompetent; if the student is a ward of the state; or if the student or his or her family are receiving certain types of government assistance.

Specifically, the new Cornell plan requires students to be at least 22 by the June 30 prior to the year for which they apply for independent status, and to have supported themselves for the three previous calendar years. Students seeking independent status for the first time for 1985-86, for example, will have to be 22 by June 30, 1985, and must have supported themselves since January 1, 1982. New York State also uses age 22 to define student independence.

Students denied self-supporting status can still be considered for financial aid, but their parents' ability to pay will be taken into account.

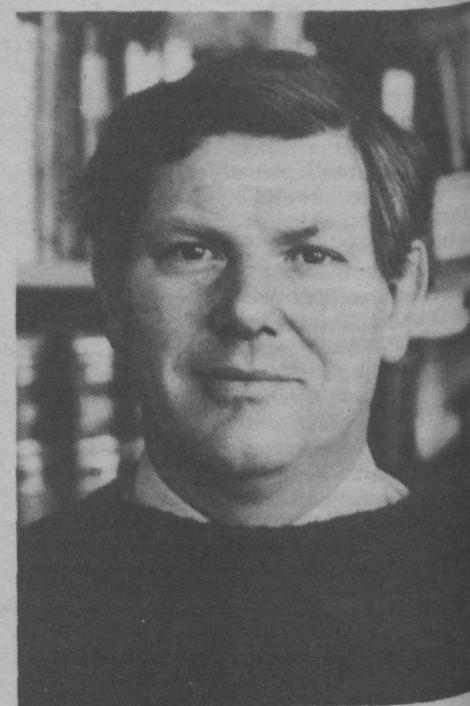
Cornell's action, effective immediately, comes amidst nationwide discussions about the increasing numbers of students declaring themselves independent. In some cases, students do so to apply for aid that they otherwise could not receive. For the most part, however, the trend is attributed to greater numbers of students entering college at an older age, and changes in family status, such as divorce, Murphy said.

The new guidelines apply to all financial aid awarded or administered by the university, including the federally funded Work Study and National Direct Student Loan programs. The changes do not alter the independence criteria for other programs, such as Pell Grants and Guaranteed Student Loans, that are not administered by Cornell.

The Reagan administration, however, is proposing that all students under age 22, except orphans and wards of the state, be declared dependent for federal financial aid purposes.

While the new Cornell policy is more restrictive than both the current federal standards and the Reagan administration's proposals, it is still more liberal than the guidelines used by most other Ivy League schools, Murphy said.

For example, Harvard considers students independent only in "quite extraordinary circumstances," Murphy said. Only 20 students at Harvard are considered independent; one-third of them are orphans.



MALCOLM L.H. GREEN

## Green Listed As Debye Lecturer

Malcolm L.H. Green, University of Oxford inorganic chemist, will deliver the 1985 Debye Lectures here April 8 through 10. The lecture are free and open to the public.

Sponsored by the Cornell Section of the American Chemical Society, the program brings distinguished scientists from around the world to Cornell for a series of lectures. The lectureship, established 22 years ago, is named for the late Peter J.W. Debye, a Cornell professor and nobel laureate (1936) in chemistry.

Green is a specialist in the synthesis and reactivity of inorganic and organometallic chemistry and in the catalytic reactions of transition metals. His schedule and topic for the lectures, all of which will be given in 119 Baker Laboratory, are:

— 4:30 p.m. Monday, April 8, "Alkane Transition Metal Chemistry."

— 11:15 a.m. Tuesday, April 9, "Chemistry of Electron-Rich Transition-Metal Complexes," and

— 4:30 p.m. Wednesday, April 10, "Studies in Cycloheptatrienyl Metal Chemistry."

Green serves as the Royal Society Senior Research Fellow at Oxford, where his research involves transition metal-hydrogen compounds, the activation of saturated carbon-hydrogen bonds by transition metals, as well as organometallic intercalation compounds. His recently developed techniques for the study of the chemistry of atoms of the most refractory elements are allowing chemists to synthesize and study zero- and low-oxidation states.

Green earned his doctorate in chemistry at Imperial College of Science and Technology, London. He conducted research and taught at Cambridge University, Corpus Christi College at Cambridge, and Balloil College, Oxford, before joining the faculty of the University of Oxford in 1963.

A recipient of the Corday-Morgan Medal and Prize in Inorganic Chemistry (1974), the Chemistry Society Medal for Transitional Metal Chemistry (1978), and the Tilden Lectureship and Medal (1982), Green has presented invited lectures on his research at universities in every part of the world. He has held visiting professorships at Western Ontario, Paris, Harvard, and Caltech.

Green is the author or co-author of more than 230 scientific publications and a member of the editorial boards of the Journal of Organometallic Chemistry, Nouveau Journal de Chimie, Journal of Coordination Chemistry, Reviews in Inorganic Chemistry, and Polyhedron.

## Second Issue of Undergraduate Research Journal Published

The second issue of an undergraduate research journal for Cornell is now available.

Designed as a forum for undergraduate research in the natural and social sciences, the "Journal of Cornell Scientists" is available for \$1 an issue at the Campus Store, Willard Straight Hall desk, Noyes Center, and the Robert Purcell Union.

Four issues of the journal are planned each year. The journal is supported by sales and with subsidies from the Student Finance Commission, the Division of Biological sciences, and department of chemistry.

The six student articles appearing in the current issue, published this month, are:

— "An Interview with Roald Hoffman - An exciting discussion with the 1981 Nobel Laureate in Chemistry," by Burkhard Braun, Ag '85;

— "Possible Reasons for Oviposition avoidance by the Cabbage Butterfly *Pieris rapae* - Why do butterflies avoid certain plants for laying eggs?" by Christine Frissors, Arts '85;

— "Determination of Tau, the Optical Density of a Comet's Coma - What can Halley's Comet, due this year, tell us about the

origins of the universe?" by John Huckans, Arts '85;

— "Submitting a Grant Proposal: A Game of Strategy and Skill - How does government policy affect the undergraduate, graduate, and post-graduate scientist?" by Heidi Norden, Ag '86

— "Copper and Bronze: Early American Metallurgy - A brief history of the development of copper and bronze," by Douglas Kliman, Arts '85;

— "Nuclear Strategy: Notions of Security and Perceptions of Vulnerability - The policy of America's decision makers," by Michael Charney, Arts '85, and Randy A. Poole, Arts '87.

Jeffrey D. Klausner, Arts '86, editor-in-chief of the journal and a prime mover in its creation, asks in the current issue that seniors working on an honors thesis send a condensed version of their work to the journal for possible publication.

Send papers to Journal of Cornell Scientists, Box 181, Willard Straight Hall, Cornell University, Ithaca, NY 14853.

## AT&T Donates Videotex Equipment To Educational TV Center Here

Videotex — the technology that combines computers, colorful graphics, and video monitors to create, retrieve, and process information — has been revolutionizing some businesses and home services.

Now, thanks to AT&T Consumer Products, Cornell University will be applying videotex technology to classroom instruction and to programming for consumers.

AT&T has donated three frame creation systems and 20 terminals to access the graphics and text programs developed by staff of the Television/Radio/Film Center of Media Services in cooperation with seven faculty members, most of them from the New York State College of Human Ecology at Cornell.

"We want to explore the attributes of videotex technology for education. These include: the capabilities of videotex for producing innovative, colorful graphics, and interactive capabilities with students; the ca-

capacity to easily update computerized pages that also can be changed very rapidly to simulate animation; and the opportunity for students to develop their own design solutions," says David O. Watkins, associate director of Media Services and the director of the Videotex Development Project.

Six projects using the new videotex equipment are planned. In the department of design and environmental analysis, three programs will be developed to provide classroom instruction for courses in apparel design, interior design, and building technology.

Two programs will be for Cornell Cooperative Extension. One will involve development of a data base for consumers seeking information about clothing and food related needs; the other will use videotex equipment to teach Cooperative Extension personnel in two New York State counties to use videotex equipment.

### Telecommunications Digging Scheduled

The installation of the new telecommunications system for campus is under way. Wiring of buildings is progressing in dormitories in both North Campus and West Campus.

Excavation for placing necessary underground lines and equipment will begin the week of March 25 in the general area of the Engineering Quadrangle.

#### Areas of Excavation:

1. West side of Hollister Hall toward Central Ave.
2. Crossing Campus Road between Hollister and Olin Hall
3. Back of Olin Hall
4. From Campus Road down the East side of Phillips Hall

# Lagoon Cycle Exhibit Has First Showing at Johnson

## Massive Display by Harrisons Will Run Through June 2

The first public showing of the full exhibition of "The Lagoon Cycle" by Helen Mayer Harrison and Newton Harrison opens Friday at the Herbert F. Johnson Museum of Art and runs until June 2. The exhibition will travel nationally after its Ithaca premiere.

"The Lagoon Cycle," 12 years in the making (1972-84), is the artists' most ambitious piece to date. This epic work, 350 feet long in all, comprises 59 large-scale panels divide into seven sections, or lagoons. The panels are hand-colored sepia-toned photographs mounted on unstretched canvas. Images include views of lagoons in Sri Lanka, close-ups of crabs, aerial and satellite photographs, and maps.

The work unfolds as a discourse between two characters, the Lagoonmaker and the Witness, who explore the implications of cultivating Southeast Asian mangrove crabs as a world food supply. They breed the crabs, experiment with artificial lagoons, and formulate aquatic farming systems. Throughout the course of the seven lagoons, the two discuss how the way we live affects what we do to each other and to the environment. Their dialogue addresses such topics as the scientific method, the marketplace, global survival, and the nature of individual identity.

The exhibit was named for the constantly changing estuarial lagoon, where fresh and salt waters meet and mix. This endangered environment becomes a tool for encouraging the viewer to think about the long-lasting repercussions of 20th-century life.

Helen and Newton Harrison began their artistic collaboration in 1970. Their work connects systems of nature with art, ecology, and social action. Married since 1953, the Harrisons are both professors in the Department of Visual Arts, University of California, San Diego.

Thomas W. Leavitt, director of the Johnson Museum, and Penny Bealle, Ph.D. candidate in art history at Cornell, organized the exhibition, which is on loan from Metromedia of Secaucus, N.J., and Los Angeles, Calif. Generous support for the exhibition and catalogue has been provided by the National Endowment for the Arts, the Museum Aid Program of the New York State Council on the Arts, and Metromedia.

The 108-page catalogue, with approximately 50 color illustrations, will be available for purchase in the museum lobby. It includes essays by art critic Carter Ratcliff and linguist Michel de Certeau, a chronology, and an annotated bibliography.

In conjunction with the exhibition, Helen

## Symposium Tied to Exhibit

Presented in conjunction with "The Lagoon Cycle" exhibition at the Johnson Museum will be a symposium entitled "Social Implications of Contemporary Art," which will be held Saturday, March 23, from 10:30 a.m. to 1 p.m. in Kaufmann Auditorium of Goldwin Smith Hall.

The symposium will address social implications of contemporary art. Thomas W.

## 'Eye Openers' Program at Museum

The education department of the Herbert F. Johnson Museum of Art at Cornell University will sponsor "Eye Openers," a two-part program designed to introduce families to art and museums.

"Part I: Discovering the Art Museum," will be held on Saturday, April 13, from 10:30 a.m. to noon, when participants will see "Norman the Doorman," a film about a mouse, Norman, who lives in the cellar of the Majestic Art Museum. They will then create an "Eye Opener" scrapbook to record their impressions of a special journey through the Johnson Museum led by the education department staff.

"Part II: Exploring Shape and Color,"



The First Lagoon: The Lagoon at Upouveli is one part of the Lagoon Cycle Exhibit.

and Newton Harrison will introduce **California Performance**, a video screening at the Johnson Museum at 2 p.m. on Sunday, March 24. As part of Cornell Cinema's **Expanding Cinema** program, "The Little Match Girl Ballet," by Eleanor Antin, and "The Eternal Frame," by the Ant Farm and T. R. Uthco will be shown.

In addition, two gallery talks on "**The Lagoon Cycle**" will be held at the museum. The first, at 2 p.m. Sunday, April 14, will be given by Thomas W. Leavitt. The second, led by Penny Bealle, will be at 2 p.m. Sunday, May 5.

Leavitt, director of the museum will introduce and moderate the panel. Other participants include Helen Mayer Harrison and Newton Harrison, who created the exhibit; Robert Ascher, professor of anthropology, Cornell; Agnes Denes, environmental sculptor; Kim Levin, art critic, *The Village Voice*; Timothy Murray, assistant professor of English, Cornell; and Carter Ratcliff, art critic.

will be held on Saturday, April 27, from 10:30 a.m. to noon. Participants will view the films "Tanagram" and "Bits and Pieces," for inspiring ideas about color and shape. Then they will take a shape scavenger hunt through the museum and help create colorful window collages from cellophane shapes and acetate sheets.

The events are for ages six and above, and children must be accompanied by an adult. The fee for the two-day event is \$5 per family (\$3 for members of the museum). Enrollment is limited so interested persons should call the education department at 256-6464 by March 22 to register or to receive more information.

## PEOPLE

### Gergely Leads Civil Engineering School

**Peter Gergely**, professor of structural engineering, has been named director of the university's School of Civil and Environmental Engineering through December 1989. He succeeds Richard N. White, director since 1978.

Gergely will also continue his chairmanship of the department of structural engineering through June 1988.

An authority on reinforced concrete and the response of structures to earthquakes, Gergely received the Delmar L. Bloem Distinguished Service Award from the American

**Robert C. Baker** has been reelected chairman of the department of poultry and avian sciences for an additional two years through Dec. 31, 1986. He was first appointed to this position in 1979. A member of the faculty in the State College of Agriculture and Life Sciences since 1949, Baker is known internationally for his pioneering work in the development of numerous convenience food items made of poultry, meat or eggs. In recent years, he has developed a number of new fish products.

**Joseph F. Metz Jr.**, professor of agricultural economics, has been awarded the title of professor of agricultural economics emeritus. Metz, who joined the faculty of the New York State College of Agriculture and Life Sciences in 1956, was elected professor of marketing in 1966. Metz served as the director of the international agriculture program from 1977 to 1982. He also served as associate director of research and director of planning and facilities in the College.

Concrete Institute in 1981. He is also corecipient of the 1974 State-of-the-Art Civil Engineering Award and the 1976 Raymond C. Reese Research Prize of the American Society of Civil Engineers.

He is a joint author of a three-volume series of textbooks on structural engineering used worldwide and author of some 100 papers and external reports in his field.

Gergely joined the Cornell faculty in 1963 as an assistant professor, was named associate professor in 1968, and professor in 1975.

**Frank Young**, professor of rural sociology, is serving as chairman of the department of rural sociology through June 1985 while Eugene Erickson is on leave. Erickson will be working in Rehovot, Israel, at the Settlement Study Centre on projects concerning rural development. A member of the faculty in the State College of Agriculture and Life Sciences since 1962, Young previously served as acting chairman of the department in 1971-72. Young's research concerns regional structure and change in Africa.

# 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

### EARS

Just want to talk? That's what EARS Counselors are there for! They are trained listeners and are waiting to lend a free and confidential "ear" to listen to your feelings, help you explore your situation and discover options. EARS Counselors provide non-judgmental, short-term counseling and have access to a wealth of information about other services at Cornell, if appropriate. Walk into WSH Room 211 or call 256-EARS. Su-Th, 3-11 p.m.; Fri & Sat, 7-11 p.m.

### Gay Jews Support Group

A support group for gay Jews is being formed to share and explore related concerns and conflicts, possible ways to confront them, exchange religious and cultural context material. If interested in taking part, please call GayPac, 256-6482. Confidentiality ensured.

### Writing Workshop Walk-In Service

Writing workshop walk-in service; free tutorial instruction in writing. Monday-Thursday from 3:30-6:00 & 7:30-10:00 p.m. and Sunday from 3:00-8:00 p.m. in room 174 Rockefeller Hall. Sunday-Thursday from 9:00-11:00 p.m. in room 340 Goldwin Smith Hall.

### Making Relationships Work

Making relationships work: A new 8 week workshop with Let Davidson, Ph.D., on creating satisfying and loving relationships, for individuals and couples, will meet Monday's, 7:00-10:30 p.m., beginning March 25. For more information and registration call 272-4131. Cosponsored by CRESF.

### Personal Effectiveness Seminar

Personal effectiveness seminar: A new 8 week series with Let Davidson, Ph.D., on developing self-awareness and self-confidence, integrity, commitment, creativity, vitality, peace of mind to make your life work, will meet Thursday's, 7:00-10:00 p.m., beginning April 4th. For more information and registration call 272-4131. Cosponsored by CRESF.

### Personal Growth Workshops

Personal growth workshops: new series begins the week of April 15. Topics include Assertiveness, Building Self-Esteem, Building Satisfying Relationships, Stress Management, General Personal Growth, Women, Food and Self-Esteem. Holistic Health group tentative. Free and confidential. Open to all members of the Cornell community. Signups begin March 27. For more information or to sign up, call 256-3608 or stop by 103 Barnes Hall.

### Alternatives Library

Learn more about alternative energy sources at the Alternatives Library, Anabel Taylor Hall, Cornell. Open to the public.

### Engineering Career Forum

Attention Freshman and Sophomore Engineers. The next Engineering Career Forum in Applied & Engineering Physics/Material Science is coming up on Wednesday, March 27, at 4:30 p.m. in Olin Hall, room 155. The Career Forums is a chance to hear firsthand about job opportunities for Applied & Engineering Physics/Material Scientists from BDM representatives. A graduate student will also present the options of continuing education. For more information, contact the Engineering Admissions Office at 256-5008. Sponsored by the Engineering Ambassadors Association.

### Fashion and Style Celebration

Students interested in attending the 1985 "Apparel Design Presentation" on Saturday, March 23, at 8:00 p.m. in the Statler Ballroom, may obtain free reservations in Martha Van Rensselaer Hall Registrar's Office on Monday, March 18, after 9:00 a.m. Funded by: CCPA, SFC, and COS-CEP.

### Jewish and Non-Jewish Relationships

"Interdating and Inter-marriage", on Wednesday, March 27, at 7:30 p.m., G-34 Anabel Taylor Hall, will be the topic of an open discussion for people involved in Jewish / Non-Jewish

relationships. Call Michael at 256-7195 for more information.

### Christian Science Monitor Resource Files

The Monitor Resource Files contain articles covering topics of major importance: national and world politics; social, scientific, and economic developments; world relations and peace, etc. The files will be available in Mann Library today and tomorrow from 10:00 a.m. to 4:00 p.m.

### Luncheon Discussion Group

"April 25, 1974: The Portuguese Revolution a Decade Later", with Agostinho D'Almeida. This talk will also serve to introduce Agostinho to the Western Societies Program community. He is a visiting lecturer in Romance Studies, delegated to Cornell by the Institute of Portuguese Languages and Culture of the Portuguese Ministry of Education. The luncheon discussion will be held in room 153, Uris Hall, at 12:15 p.m., on Friday, March 22.

## Colloquia

### Monday

March 25, 12:15-1:15 p.m. 302 Uris Hall. "One More Time: Militarizing The State Budget", with Larry Griffin, University of Indiana. Sponsored by the Department of Sociology.

## Dance

### Cornell Folkdancers

The Cornell Folkdancers invite everyone to their Spring Workshop, March 23, in the Memorial Room of Willard Straight Hall. Teaching sessions are 9:30-12:30 and 2:30-5:30, followed by an international dance party 8:00 till midnight. The workshop is taught by several Ithaca based dance experts, offering a program of middle and eastern European Dances, that should please everyone. For details concerning teachers, dances and scheduling, please call 257-3156 or 256-7149. The workshop can be attended in full for \$5.00 or in part for \$2.00 per session.

### Cornell Folkdancers

The Cornell Folkdancers meet in the North Room of Willard Straight Hall every Sunday. From 7:00 till 8:30 p.m. a review of workshop dances, and 8:30 till 10:30 request dancing. Free, no partners needed, beginners welcome. For more information please call 257-3156.

### Jitterbug Club

The Jitterbug Club dances the 1st, 3rd and 5th Wednesday of every month from 9-11 p.m. in the Edwards Room in Anabel Taylor Hall. We teach beginners from 9-10 p.m. Call Jim at 273-5268 for more information.

### Scottish Country Dancing

Scottish Country Dancing. Everyone welcome. Teaching for beginners is 8-10 p.m. Sundays, except the 1st week of every month. We meet Mondays, 8-10 p.m. at 213 S. Geneva Street. For more information call 272-6229.

### Country Dancers

The Country Dancers meet each Tuesday 7:30-9:30 p.m. in Martha Van Rensselaer Hall (lobby near "Martha's") for English and contra dancing. No partners needed. Beginners welcome—each dance is taught. For more information call Connie at 272-1931.

### Israeli Folk Dancing

Israeli Folk-Dancing every Thursday from 8-11 p.m. in the One World Room, Anabel Taylor Hall. Teaching from 8-9 p.m.; requests, 9-11 p.m. Call Sharon at 272-4176 for more information.

## Exhibits

### Herbert F. Johnson Museum

"Order and Enigma: American Art Between the Two Wars", on view from February 20th through April 7th, is an exhibition of sixty-two paintings, prints, sculptures and drawings created between 1917 and 1941. Represented are Charles Burchfield, Stuart Davis, Arthur Dove, Edward Hopper, Georgia O'Keeffe, Grant Wood and many others.

"Dyer's Art Weaver's Hand: Textiles from the Indonesian Archipelago", an exhibition comprised of approximately fifty textiles from private collections representing many of the islands of Indonesia, is on view from February 20th through May 1st. Cornell University's Southeast Asia Program is sponsoring the show in conjunction with the museum.

### The Lagoon Cycle

Helen and Newton Harrison's "Lagoon Cycle" (1972-1984), is an epic piece of over fifty large-scale panels divided into seven sections, or lagoons. The work features a discourse between two characters who explore the ecological implications of cultivating Sri Lankan crabs as a new food source. Images include views of lagoons in Sri Lanka, close-ups of crabs, hand-colored aerial and satellite photographs, and

maps. The exhibition will travel nationally after the Ithaca premiere. This exhibit will be presented from March 23 through June 2, at the Herbert F. Johnson Museum of Art.

## Films

Unless otherwise noted films are sponsored by Cornell Cinema.

### Friday

March 22, 7:00 p.m. \*Anabel Taylor Hall. "The Killers", (1964), directed by Don Siegel, with Ronald Reagan, Lee Marvin, and Angie Dickinson. Shown with "Hong Kong", (1951), directed by Lewis R. Foster, with Ronald Reagan and Rhonda Fleming. Open.

March 22, 10:00 p.m. \*Uris Auditorium. "Streamers", (1983), directed by Robert Altman, with Matthew Modine, Michael Wright, and Mitchell Lichtenstein. Limited.

### Saturday

March 23, 7:00 p.m. \*Uris Auditorium. "Streamers", (1983), directed by Robert Altman, with Matthew Modine, Michael Wright, and Mitchell Lichtenstein.

March 23, 8:00 p.m. \*Anabel Taylor Hall. "Bread and Chocolate", (1978), directed by Franco Brusati, with Anna Karina, and Nino Manfredi. Cosponsored by the Western Societies Program and the Aegean Society. Open.

March 23, 9:30 p.m. \*Uris Auditorium. "Psycho", (1960), directed by Alfred Hitchcock, with Anthony Perkins, Janet Leigh, and Martin Balsam. Cosponsored by the English Department. Limited.

March 23, midnight \*Uris Auditorium. "Psycho", (1960), directed by Alfred Hitchcock, with Anthony Perkins, Janet Leigh, and Martin Balsam. Cosponsored by the English Department. Limited.

### Sunday

March 24, 1:00 p.m. Johnson Museum. "Double Ikut at Tenganan Pegeringsingan IV: Weaving on a Horizontal Baktension Loom", and "Marvel: A Jakarta Boy." Sponsored by the Southeast Asia Program in conjunction with the Johnson Museum.

March 24, 2:00 p.m. \*Uris Auditorium. "Mon Oncle", (1958), directed by Jacques Tati, with Jacques Tati, Jean-Pierre Zola, and Adrienne Servanti. Cosponsored by the Ithaca Youth Bureau. Open.

March 24, 2:00 p.m. Johnson Museum. "The Little Match Girl Ballet", (1975), directed by Eleanor Antin, with Eleanor Antin. Shown with "The Eternal Frame", (1975). Open. Introduced by Helen and Newton Harrison.

March 24, 8:00 p.m. \*Uris Auditorium. "Counselor At Law", (1933), directed by William Wyler, with John Barrymore, and Bebe Daniels. Cosponsored by the Law and Society Program.

### Monday

Monday 25, 6:30 p.m. \*Uris Auditorium. "King Lear", (1971), directed by Grigori Kozintsev, with Yuri Yarvet, Elsa Radzin, and Galina Volchek. Cosponsored by the English Department.

March 25, 9:00 p.m. \*Uris Auditorium. "The Soft Skin", (1964), directed by Francois Truffaut, with Jean Desailly and Françoise Dorleac. Limited to Film Club Members only.

### Tuesday

March 26, 4:30 p.m. L-04 Uris Library. "Collision Course", videotape, 45 minutes. This videotape focuses on the contemporary (1970's) human rights problems in the Philippines viewed from the perspectives of the government and the Catholic Church. Cosponsored by the Southeast Asia Program.

March 26, 8:00 p.m. \*Uris Auditorium. "Cry the Beloved Country", (1952), directed by Zoltan Korda, with Sidney Poitier and Canada Lee. Limited.

### Wednesday

March 27, 8:00 p.m. \*Uris Auditorium. "The Scarlet Empress", (1934), directed by Joseph von Sternberg, with Marlene Dietrich and Sam Jaffe. Open.

### Thursday

March 28, 4:30 p.m. Uris Auditorium. "Ikarus", (1975), directed by Heiner Carow, with Peter Welz, Karin Gregorek, and Peter Aust. Cosponsored by the Department of German Literature. Open.

### Friday

March 29, 9:00 p.m. \*Statler Auditorium. "The Deer Hunter", (1978), directed by Michael Cimino, with Robert DeNiro, Meryl Streep, John Savage, and Christopher Walken. Limited.

### Saturday

March 30, 8:00 p.m. \*Uris Auditorium. "Passion D'Amore", (1981), directed by Ettore Scola, with Bernard Giraudeau and Laura Antonelli. Open.

### Sunday

March 31, 2:00 p.m. \*Uris Auditorium. "The Railway Children", (1971), directed by Lionel Jeffries, with Dinah Sheridan and Jenny Agutter. Cosponsored by the Ithaca Youth Bureau. Open.

March 31, 2:00 p.m. Johnson Museum. "The Beaver Animations", directed by Mabou Mines

March		1985				
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

with Mabou Mines. Shown with "Lies", (1980-1983), directed by Doris Chase, with Ruth Maleczek. Cosponsored by NYSCA and Theatre Cornell. Open.

March 31, 8:00 p.m. \*Uris Auditorium. "The Chicago Conspiracy Trial", (1972), directed by Christopher Burstall, with Cliff Gorman, Morris Carnovsky and Robert Loggia. Open. Cosponsored by Law and Society Program.

## Lectures

### Thursday

March 21, 4:30 p.m. James Law Auditorium. "Influenza: the Deadly Master of Disguise", by Robert G. Webster, Ph.D. Dr. Webster is a member of the Division of Virology and Molecular Biology at St. Jude Children's Research Hospital and Professor in the Department of Microbiology and Immunology at the University of Tennessee Center for Health Sciences, Memphis, Tennessee.

### Saturday

March 23, 10:30 a.m.-1:00 p.m. Kaufmann Auditorium, Goldwin Smith Hall. Presented in conjunction with "The Lagoon Cycle", will be a symposium entitled "Social Implications of Contemporary Art." The symposium will address social implications of contemporary art. Thomas W. Leavitt, director of the Johnson Museum, will introduce and moderate the panel. Other participants include Helen Mayer Harrison and Newton Harrison; Robert Ascher, professor of anthropology, Cornell; Agnes Denes, environmental sculptor; Kim Levin, art critic, The Village Voice; Timothy Murray, assistant professor of English, Cornell; and Carter Ratcliff, art critic.

March 23, 2:00-4:30 p.m. Kaufmann Auditorium, Goldwin Smith Hall. "The Lagoon Cycle", with the artists Helen and Newton Harrison, moderated by Johnson Museum director Thomas W. Leavitt.

### Monday

March 25, 4:15 p.m. 165 McGraw Hall. "Zion's Harp by the East River: Jewish-American Popular Songs in Columbus's Golden Land, 1880-1914", by Fred Somkin, Associate Professor of American History. Sponsored by the Department of History.

March 25, 7:00 p.m. 110 Ives Hall. "Surviving the Deluge of Toxic Chemicals", by John E. Casida, Ph.D. Dr. Casida is Professor of Entomology and Director, Pesticide Chemistry and Toxicology Laboratory of the University of California at Berkeley.

March 25, 7:30-9:00 p.m. One World Room, Anabel Taylor Hall. "America and the Third World Challenge", with Locksley Edmondson, Visiting Professor, Africana Studies. Sponsored by Center for World Community and IRIM.

March 25, 8:00 p.m. Statler Auditorium. "Students as Consumers in the 80's", with Ralph Nader. Sponsored by Cornell Public Interest Research Group.

### Tuesday

March 26, 4:30 p.m. Asian Studies Lounge, Rockefeller Hall. "Two Revolutions in Poetic Language: Symbolism in France and Japan", by Earl Jackson, Professor of Japanese Literature, University of Minnesota. Sponsored by the China Japan Program, cosponsored by the Department of Comparative Literature.

March 26, 8:00 p.m. 110 Ives Hall. Thomas Powers, winner of the Pulitzer Prize for journalism and author of books and articles on U.S. defense and intelligence policy, will speak. Sponsored by the November 11th Committee in conjunction with the Peace Studies Seminar, Sigma Delta Chi Journalism Fraternity, and Risley Residential College.

### Wednesday

March 27, 4:30 p.m. 110 Ives Hall. "Pesticides Past, Present, and Future", by John E. Casida, Ph.D. Dr. Casida is Professor of Entomology and Director, Pesticide Chemistry and Toxicology Laboratory of the University of California at Berkeley.

### Wednesday

March 27, 8:00 p.m. Statler Auditorium. Eudora Welty, novelist and short story writer and Andrew D. White Professor-at-Large will be reading her own stories.

### Thursday

March 28, 12:20 p.m. 102 West Avenue. "Ambiguous Gender: Male Initiation in a Buddhist Society", with Charles Keyes, Professor of Anthropology, University of Washington. Sponsored by the Southeast Asia Program.

### Friday

March 29, 12:20 p.m. Room N207, Martha Van Rensselaer Hall. "Chemistry and Toxicology of GABA Receptors", by John E. Casida, Ph.D. Dr. Casida is Professor of Entomology and Director, Pesticide Chemistry and Toxicology Laboratory of the University of California at Berkeley.

## Meetings

**Tuesday**  
Cornellesbians holds weekly meetings. Call 256-6482 for specific location and discussion topic.

The Cornell Outing Club holds weekly meetings. The meeting time is 7:30 at Japes (behind Noyes Lodge with the canoes on the roof).

**Thursday**  
GAYPAC holds weekly business meetings in Loft III, Willard Straight Hall at 7 p.m. Discussion to follow at 8 p.m. Call 256-6482 for more information.

## Music

**Friday**  
**March 22, 4:00 p.m.** Barnes Hall. New Music Colloquium: Christopher Rouse, guest composer. Sponsored by the Department of Music and the Cornell Council of the Creative and Performing Arts.

**March 22, 8:15 p.m.** Barnes Hall. Syracuse Society for New Music, Edward Murray Conducting Works of Rouse, Szollosy, Palmer, Harbison. Sponsored by the Department of Music and the Cornell Council of the Creative and Performing Arts.



The Clarke-Riordan Duo will appear as guest artists in Barnes Hall at 8:15 p.m. Mar. 23 as part of the 17th Cornell Festival of Contemporary Music. Saturday's concert features music by Cornell composers Joel Feigin, Karel Husa, Robert Palmer and Steven Stucky, played by a Festival Chamber Orchestra. On Friday, Mar. 22, at 8:15 p.m. another Barnes Hall concert will feature music by New York State Composers and will be performed by the Syracuse Society for New Music. Both concerts are free and public.

**Saturday**  
**March 23, 8:15 p.m.** Barnes Hall. Festival Chamber Orchestra. Works of Feigin, Husa, Palmer, Stucky. Sponsored by the Department of Music and the Cornell Council of the Creative and Performing Arts.

**Tuesday**  
**March 26, 8:15 p.m.** Barnes Hall. Student Recital: Ronald Wharton, piano. Works of Mozart, Beethoven, Chopin, others. Sponsored by the Department of Music.

## Religious Services

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

**Every Saturday, 5 p.m.** Anabel Taylor Auditorium. Catholic Mass.

**Every Sunday, 9:30 & 11 a.m., 5 p.m.** Anabel Taylor Auditorium. Catholic Mass. Sacrament of Reconciliation by appt. G-22 Anabel Taylor Hall.

**Christian Science**  
**Every Thursday, 7 p.m.** Anabel Taylor Founders Room.

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

**Friends (Quakers)**  
**Every Sunday** Anabel Taylor Edwards Room. Meeting for Worship at 11 a.m.; Adult Discussion

and First Day School at 9:45 a.m. Babysitting provided.

**Korean Church**  
**Every Sunday, 3 p.m.** Anabel Taylor Chapel.

**Lutheran**  
**Every Sunday, 10:45 a.m.** Worship Service. Sunday Church School at 9:30 a.m.

**Muslim**  
**Every Friday, 1 p.m.** Anabel Taylor Edwards Room. Juma Prayer. Anabel Taylor 218, Zuhr, Asr and other prayers.

**Every Sunday, 12:30 p.m.** Anabel Taylor Hall. Sunday meeting, discussion groups, children's classes, etc.

**Protestant Cooperative Ministry**  
**Every Sunday, 11:15 a.m.,** Anabel Taylor Chapel.

**Seventh Day Adventists**  
**Every Friday, 7:30 p.m.** Anabel Taylor Room 314.

## Seminars

**Agromony:** "Acid Rain and Available Nitrogen in Forest Soils," Hans Stroo, Graduate Student, 4 p.m. Tuesday, March 26, 135 Emerson.

**Animal Science:** "Dairy Cattle Breeding and Management in Northern Germany," Drs. H. Swalve and Hans Voss, visiting fellows, Animal Science, 11:15 a.m. Monday, March 25, 348 Morrison Hall.

"The Effect of Fabric Structure and Cell Surface Protein on the Proliferation and Adhesion of Biological Cells," by Tamara Topoleski, 4:30 p.m. Tuesday, March 26, 317 Martha Van Rensselaer Hall.

**Ecology and Systematics:** "The Role of Calcium-Dependent Proteinase in Molt-Induced Claw Muscle Atrophy," Donald L. Mykles, Oak Ridge National Laboratory, 4:30 p.m. Monday, March 25, Morison Seminar Room, Corson/Mudd Halls.

**Ecology and Systematics:** "Predators, Predation Rates and Plant Yields: Indirect Interactions and the Enemies Hypothesis," Michael J. Hanson, Sociology, University of Kentucky, 4:30 p.m. Wednesday, March 27, Morison Seminar Room, Corson/Mudd Halls.

**Environmental Toxicology:** "Correlation of Mixed Function Oxidase Induction and Genotoxicity in Vivo," Joshua Hamilton, graduate student, Cornell, 12:15 p.m. Friday, March 22, N207 Martha Van Rensselaer Hall.

**Floriculture and Ornamental Horticulture:** "The Effects of Truban, N-Serve or Dexon on the Mineral Nutrition of Radish (Raphanus Sativus L. 'Cherry Belle'," M. L. Stratton, 12:15 p.m. Thursday, March 21, 37 Plant Science.

**Food Science:** "R&D Management in the Food Industry," Jack Akerboom, Best Foods, Union, N.J., 4:30 p.m. Tuesday, March 26, 204 Stocking.

**History and Philosophy of Science and Technology:** "Sex in the Middle Ages: Scientific and Medical Views of Reproduction and Sexuality," Joan Cadden, associate professor, history, Kenyon College, Ohio, 4:35 p.m. Wednesday, March 27, 165 McGraw Hall.

**Jugatae:** "Phenological Synchrony of the Alfalfa Blotch Leafminer and Its Biological Control Agent — A Model for Use in Integrated Pest Management," Thomas Boyce, 4 p.m. Monday, March 25, 100 Caldwell Hall.

**Material Science and Engineering:** "X-ray Diffraction Studies of Defects in Silicon," M. Scott, Hewlett Packard, 4:30 p.m. Thursday, March 21, 140 Bard Hall.

**Mechanical and Aerospace Engineering:** "Chaotic Vibrations in Mechanical Systems and Feedback Control Devices," F. C. Moon, Cornell, 4:30 p.m. Tuesday, March 26, 282 Grumman.

**Pharmacology:** "Hormonal Control of Calcium AtPase," Dr. Paul J. Davis, SUNY Buffalo, 4:30 p.m. Monday, March 25, D-105 Pierre A. Fish Laboratory.

**Physiology:** "Opiate Interaction with the Nicotinic Acetylcholine Receptor," Robert Oswald, Pharmacology-Cornell, 4:30 p.m. Tuesday, March 26, G-3 Veterinary Research Tower.

**Planning:** "Are We on the Brink of a Great Depression?" Anwar Shaikh, Economics, the New School for Social Research, 12:15 p.m. Friday, March 22, 157 East Sibley.

**Plant Biology:** "Growth Responses to Potassium; A Cellular Explanation," Roger Leigh, Rothamsted Experiment Station, England, 11:15 a.m. Friday, March 22, 404 Plant Science.

**Plant Pathology:** "Environmental Water in Relation to Foliar Disease," Brian Sutton, University of Guelph, Ontario, 4:30 p.m. Tuesday, March 26, 404 Plant Science.

**Psychology:** "Brain Mechanisms in Vision," Dr. Torsten Wiesel, Rockefeller University, 3:30 p.m. Friday, March 22, 202 Uris Hall.

**Remote Sensing:** "Remote Sensing of Lake Acidification," Frank Vertucci, Cornell, 4:30 p.m. Wednesday, March 27, 110 Hollister Hall.

**Rural Development:** "The Bureaucratic Jungle: Orden e Progresso in the Brazilian Amazon," Richard Norgaard, agricultural and resource economics, University of California, Berkeley, 12:15 p.m. Friday, March 22.

**Theoretical and Applied Mechanics:** "Symmetry, Bifurcation and Computational Methods in Nonlinear Structural Mechanics," Timothy J. Healey, University of Maryland, 4:30 p.m. Wednesday, March 27, 205 Thurston Hall.

**Vegetable Crops:** "Some Extension Programs in Vegetable Crops — History to Date," Roger A. Kline, Vegetable Crops, 4:30 p.m. Thursday, March 28, 404 Plant Science.

## Sports

**Saturday**  
**March 23, 9:00 p.m.** Cascadilla Courts. Women's Tennis-Pennsylvania.

**March 23, 10:30 p.m.** Schoellkopf. Men's J.V. Lacrosse-Cobleskill.

**March 23, 2:00 p.m.** Schoellkopf. Men's Lacrosse-Harvard.

**March 23, 2:00 p.m.** Cascadilla Courts. Men's Tennis-Navy.

**Sunday**  
**March 24, 12:00 p.m.** Cascadilla Courts. Women's Tennis-Columbia.

**Tuesday**  
**March 26, 4:00 p.m.** Cascadilla Courts. Men's Tennis-Albany.

**Friday**  
**March 29, 3:30 p.m.** Schoellkopf. Men's J.V. Lacrosse-Army.

**Saturday**  
**March 30, 2:00 p.m.** Schoellkopf. Men's Lacrosse-Maryland-Balt. Co.

## Theater

**Theatre Cornell to Present 'Three Sisters'**  
After the sold-out run of "A Midsummer Night's Dream," Theatre Cornell will introduce its second production of 1985; "Three Sisters" by Anton Chekhov — Russia's greatest playwright, and innovator of modern Russian drama.

This eloquent, sensitive and bittersweet story of three women, trapped in a provincial Russian town, lamenting the passing of better times, and longing for the excitement of Moscow. "Three Sisters" is an exquisite masterpiece that pulls us with striking delicacy between hope and despair.

"Three Sisters" will be directed by M.F.A. candidate Anthony Cronin. Cronin is known to local theatre goers from his direction of "Our Town," "Confessional," and "The Gas Heart" in the Drummond Studio, as well as the Summer Shakespeare Festival on the Cornell campus during the summer.

New faces to Theatre Cornell will help set the stage for "Three Sisters": guest artist Michael Baumgarten will design the lights; Holly Cole, resident costume designer, and Rachel Berkowitz will design the costumes; guest artist Richard Smith will design the set.

"Three Sisters" will be performed in the Willard Straight Theatre on March 28-30, April 11-13, and 18-20 at 8:15 p.m. each day, and on Sunday, April 14 at 2:30 p.m. Tickets are \$5.50 for adults, \$4.50 for students/senior citizens on Friday and Saturday evenings; \$4.50 for adults, \$3.50 for students/senior citizens on Thursday evening and Sunday Matinee.

Reservations may be obtained by calling the Theatre Cornell box office at (607) 256-5165. The box office is located on the lower floor of Willard Straight Hall, and is open Monday-Friday from 1 to 6 p.m. Mail orders should be directed to Theatre Cornell, 101 Willard Straight Hall, Ithaca, NY 14853. Visa/Mastercard accepted.

Group rates are available for theatre parties of 15 or more. Group reservations may be made by calling (607) 256-3421.

# Graduate Bulletin

Commencement is June 2. The deadline for submitting your thesis is May 24. If you plan to attend graduation and would like to receive your diploma on June 2 and have your name in the commencement program, stop in the Graduate School and fill out the Provisional Degree and Diploma form. This must be done before March 29.

Rooms in Sage Hall, Schuyler House, and the Thurston Court Apartments will be available to graduate students in the All-graduate Room Selection, which is for graduate students currently living on campus who want to move to a different room and for graduate students living off campus who want to move on campus. You may apply for lottery numbers from 9 a.m. to 4:30 p.m. Tuesday and Wednesday, March 26 and 27, at the Residence Life Office in Sage Hall. The lottery numbers and ranks will be posted on Friday, March 29, at Sage Hall, Schuyler House, the Thurston Court Apartments and the Housing Assignment Office. Graduate students will select rooms and sign contracts on April 17 at 5 p.m. in Sage Hall.

**March 25, 1985: The Nature Conservancy, Albany, NY** Four internships are being offered in botany (2), conservation, and zoology. Complete descriptions have been sent to those fields and copies are available at 116 Sage Graduate Center.

Information regarding the **National Science Foundation's** Grants for Improving Doctoral dissertation Research has been sent to the biological, physical, and social sciences field offices and is on file in 116 Sage Graduate Center. Those grants are intended to provide funds for items not normally available from the student's university or other sources.

The 1985-86 Financial Need Determination Forms are available in 116 Sage Graduate Center. These forms should be completed by all graduate students who are United States citizens or permanent residents who will be registered in the 1985-86 academic year.

# CONFERENCES-SYMPOSIA

## Biotechnology Topic for International Symposium

An international symposium to examine research advances achieved in recent years in biotechnology and to explore the potential for applying these new technologies to plant breeding and to agribusiness will be held here, June 23-27.

The symposium — "Biotechnology in Plant Science: Relevance to Agriculture in the Eighties" — is being organized by the Cornell Biotechnology Program, which fosters research focused on the molecular aspects of genetics and cell biology for application to plants, animals, and cell production. The conference will be staged in Statler Auditorium on campus.

Explaining the purpose of the conference, Milton Zaitlin, associate director of the Cor-

nell Biotechnology Program and co-chairman of the symposium, says:

"Dramatic developments in biotechnology and in the plant sciences, principally in the last decade, have opened possibilities for developing plants with enhanced genetic capacity to greatly boost the production of food and fiber."

"This symposium," he adds, "will explore these advances in detail and address the potential for applying the new technologies to plant breeding and to agribusiness." Zaitlin is a professor of plant pathology in the New York State College of Agriculture and Life Sciences at Cornell and an authority on virology.

The Cornell symposium will feature six

plenary lecture sessions dealing with plant regeneration and genetic events associated with tissues culture, large-scale tissue culture operations, plant transformation, genes for transformation, and plant molecular biological agrichemicals. Sessions will feature talks by invited speakers from the United States, Australia, England, Germany, Hungary, and Japan.

In addition to examining the latest advances in biotechnology related to the plant sciences, the prospects of applying the new technologies to commercial agriculture will be assessed in two panel discussions — "Plant Molecular Biology and Agrichemicals" and "Agricultural Biotechnology and Industry."

Initiated in 1983, the Cornell Biotechnology Program is comprised of the New York State Center for Advanced Technology for Biotechnology at Cornell, supported by New York State, and the Cornell Biotechnology Institute, financed, in part, by several private corporations. University researchers work side by side with corporate scientists in the Biotechnology Institute.

For more information about the June symposium program and registration materials, contact Sheila Huey, Baker Laboratory, Cornell University, Ithaca, NY 14853-1301, or at (607) 256-2300.

## Agribusiness Executives Gather Here for Conference

Management personnel from business and government who serve the agricultural sector of the economy are invited here from June 17-28 for the 22nd Annual Cornell Agribusiness Executives Program.

Sponsored by the New York State College of Agriculture and Life Sciences and the Samuel Curtis Johnson Graduate School of Management, the intensive, two-week program is the only one of its kind in the nation.

"The program brings together key agribusiness executives and qualified academic personnel to explore the increasingly complex responsibilities management faces in this time of political, economic, social, and technological change," says Richard D. Aplin, profes-

sor of business management and co-director of the agribusiness executives program at Cornell.

The agribusiness executives program concentrates on various aspects of long-range planning that provide a sound base for future decision-making, Aplin says. "Never before have businesses been exposed to so many internal and external pressures. Recent developments in food, fiber, finance, farm supply, and farm service industries call for new, broader outlooks on the part of agribusiness firms."

Designed for top- and upper middle-level management personnel, the program this year will focus on capital budgeting and fi-

nance; the challenge of the economic environment for management; formulating business strategies; personal finance and investments; agribusiness marketing; accounting for planning and control; and the impact and implications of agricultural policies.

Program instructors, all from Cornell, include: Aplin; Bruce L. Anderson, program codirector and associate professor of business management and marketing; Jerome Hass, professor of managerial economics and finance; Kenneth Robinson, professor of agricultural economics; George Staller, professor of economics; and Robert Swieringa, professor of accounting.

A special workshop series — "Frontiers of Agricultural Science" — will be taught by Robert Barker, provost of Cornell; J. Murray Elliot, chairman of the department of animal science; and Norman Scott, director of Cornell's Agricultural Experiment Station and director of the office of research of the College of Agriculture and Life Sciences at Cornell.

To ensure maximum individual participation in the seminar program, enrollment will be limited. For further information, contact Clara Travis, Agribusiness Executives Program, 305 Warren Hall, Cornell University, Ithaca, NY 14853-7801, or call (607) 256-3068.

## Computing Networks Next Topic for Electrical Engineers

A world of information sources and versatile computing capabilities, linked by digital fiber optics networks but impeded by "technophobia" and a shortage of trained engineers, will be described when leaders in the U.S. computing industry gather Monday, April 1, in East Windsor, N.J.

The symposium, one of a cross-country series sponsored by the Cornell University School of Electrical Engineering in celebration of its 100th anniversary, will focus on the future of computing. The first baccalaureate degrees in electrical engineering were awarded in 1885 by Cornell University and by the Massachusetts Institute of Technology.

General chairman of the symposium is Jack M. Scanlon, vice president of AT&T Computer Systems. Faculty chairman is H.C. Torng, professor of electrical engineering. The symposium, open to the public, begins at 8:30 a.m. at the National Conference Center in East Windsor. A registration fee will be charged.

Short product gestation times and rapid evolution will result from the adoption of industry-wide standards, C. Gordon Bell, vice chairman for technology of Encore Computer Corp., is expected to tell the symposium. Bell's presentation, "The Mini and Micro Generations: Industry, Technology and Use," begins at 9 a.m.

"Some Opportunities in Computing" will be the topic for Joel S. Birnbaum, vice president and director Hewlett-Packard Laboratories, in a 9:40 a.m. talk. Birnbaum will discuss continued progress in microelectronics, communications, and software that will offer new opportunities in system organization and application.

Progress in designing the new reduced instruction set computers will be reviewed by John Cocke, IBM Fellow at the Thomas J. Watson Research Center, in a 10:40 a.m. presentation, "RISC Type Machines." Cooke will discuss the philosophy of RISC machines, comparing them with micro-coded machines, and will explain reasons for design

decisions at various performance levels.

Nationwide and even worldwide access to large amounts of information will be possible, with delays measured in milliseconds, thanks to high-speed, digital fiber optics networks, a Bell Communications Research scientist is expected to predict. Eric Nussbaum, assistant vice president for Network Systems and Services Research at Bell Communications Research, will speak at 11:40 a.m. on the topic, "Computing in the Next Communications Era."

The emergence of the information industry as an integrated, economic entity, will be detailed at 1:40 p.m. by Andrew Hospodor, vice president and general manager of automated systems at RCA General Systems Division. A major impediment to integration of the information industry is the shortage of university-educated, broadly based information systems engineers, Hospodor will say in his talk, "Computers: Hardware, Software and Communications."

The fundamental question underlying all of computer science — What can be automated? — will not be answered soon, thus the discipline will endure, according to Peter Denning, director of the Research Institute for Advanced Computer Science at the National Aeronautics and Space Administration. Denning's presentation, "What Is Computer Science?" is scheduled for 2:20 p.m.

Despite advances in "user-friendly" systems, most managers and executives today avoid computers and will probably continue to do so, David H. Ahl, editor-in-chief of Creative Computing magazine, will observe. The executives' reticence is due to "technophobia," the fear of the machine, and the realization that the computer has, as yet, little to offer them, Ahl will say in his 3:30 p.m. talk, "Milestones and Millstones."

Other sessions in the Cornell series, will focus on the future of communications, April 10 in Newton, Mass.; atmospheric and space sciences, April 17, in St. Louis; energy for the future, April 25, in Washington, D.C.;

and the societal impact and future directions of electrical engineering, June 12, in Ithaca. The series began March 15 with a symposium at Stanford University on the future of microelectronics.

Exhibits at each symposium site will include highlights of the history of electrical engineering at Cornell and a hologram of Samuel F.B. Morse's original telegraph receiver, which is now in the collection of Cornell's College of Engineering. Cornell Uni-

versity was established in 1865 with the assistance of Ezra Cornell's earnings from Western union; the university founder built the first telegraph line from Washington to Baltimore in 1844.

Symposium registration information is available from Denise Lentini, School of Electrical Engineering, Phillips Hall, Cornell University, Ithaca, NY 14853-5401, or by calling 256-5120.

## CIVITAS

CIVITAS would like to express gratitude for the outstanding response of Cornell students offering to tutor Ithaca high school students. Requests from the high school have continued to come in and you have made yourselves available to meet the need. There are a few unanswered requests: American history, physics, general science and math (Alternate School). So we hope your generous response will continue so we can stay on top of the requests for tutors in the community. You are providing a real service to these individuals and we think, from all we hear, that your life is being enriched as you serve.

If you are interested in becoming a **MEDICAL ASSISTANT** for CGSS next fall, you must sign up this spring. Contraception, Gynecology and Sexuality Service will be interviewing and selecting volunteers from a pool of applicants this month. In the fall there will be a training session for learning how to be a medical assistant. Duties include preparing patients for exam, assisting during exams, teaching proper use of birth control methods, etc. To volunteer you must be willing to work four hours per week for two semesters following the initial semester of training. To apply go to CGSS -3rd floor, Gannett Health Center, or call 256-3978.

The **SCIENCENTER** is seeking a group to put on a fund raising project for them. Any sorority, fraternity or club who is interested could take on this project. Individuals with knowledge and interest in advertisement have the opportunity at the Sciencenter to plan and help execute publicity for an advertising campaign.

**PARKIT**, the citizen action group devoted to combating drunken driving through education and legislation, is planning a day-long "Festival" in downtown Ithaca in April. They want help in various ways, like running a projector and poster-

ing. Anyone with a real concern for the subject can help.

There is an opportunity to work in a **DOWN-TOWN DAY CARE CENTER** on Tuesday and/or Thursday morning. Extra help would make field trips and other activities where more adults are needed possible.

Monday mornings help is needed with a **DOWN'S SYNDROME CHILD** stimulating him and helping him participate in activities. The location is downtown. This same child needs help any weekday at noon learning to feed himself.

Volunteer shifts in the **EMERGENCY ROOM AT TOMPKINS COMMUNITY HOSPITAL** have all been filled except Tuesday evenings from 6 p.m. to 9. Let us hear from you if you can volunteer then. It is necessary that you have your own transportation.

There is a **BLIND STUDENT** who needs 5 or 6 hours of help this month. He is preparing student fellowship applications, which are due in April, and could use the help of a volunteer with these forms.

If you are interested in working in a nearby **PRISON FOR 16-21 YEAR OLD MALES**, CIVITAS may be able to help with transportation. Tutoring is needed to help the inmates prepare for their high school equivalency exams in reading, math and social studies. Tutoring can take place any day of the week between 8:30 a.m. and 3:30 p.m. or between 6:30 and 8:30 p.m. You can also teach a craft of your choosing between 6:30 and 8:30 any evening.

**TO RESPOND: COME TO CIVITAS**, 119B Anabel Taylor Hall, open M, W, F, 9-3; T, Th. 10-2. Or call 256-7513.

Funded in part by the Student Finance Commission and open to the entire Cornell community.

## Please Note:

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

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

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. Applications can be submitted through the mail to University Personnel Services, Staffing Services, 160 Day Hall, Ithaca, N.Y. 14853. For more information on jobs listed, contact Staffing Services (607) 256-5226.

Employees who wish to transfer to other jobs within the University should complete a separate Employee Transfer Application form for each position and submit them to Staffing Services.

Individuals with official University layoff status will be given preference in referrals.

This listing is also available on CUINFO

Cornell University's computerized information service. For further CUINFO details, contact the Information and Referral Center at 256-6200 or Computer Services.

New vacancies are listed for two weeks in Job Opportunities.

\*Asterisks identify jobs that were not listed last week.

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

Description: Provide programming support to the Dairy Records Improvement Cooperative and the Animal Science department. Will write, test, debug and document applications programs written in assembler language and/or PL/1.

Requirements: Bachelor's degree preferable in dairy, animal science or computer science. Some programming experience, particularly with assembler languages (PL/1) as well as experience with CICS/VSE highly desirable. Please send cover letter and resume to Cynthia Smithbower.

Minimum Starting Salary: \$16,500  
Job Number: PT052

Position: Project Leader II  
Department: Computer Services (APS)  
Description: Plan, supervise and coordinate the development, implementation and maintenance of an ongoing major administrative system. Interface new systems and programs with existing systems and programs. Investigate and evaluate outside software systems to integrate or replace current production systems. Prepare estimates of programming time and computer production costs for given proposals.

Requirements: Master's degree or the equivalent combination of education and experience. Considerable systems design and computer experience is essential. A knowledge of interactive administrative systems, IBM operating systems and two major programming languages is essential. Supervision of programmers in a development group is desirable. Experience with the operation of a University physical plant design is also desirable. Please send cover letter and resume to Cynthia Smithbower.

Minimum Starting Salary: \$23,500  
Job Number: PT063

## Clerical

All applicants interested in positions requiring typing must take an official University test. Tests are given Mondays and Wednesdays at 8:00 a.m., Room 337, Statler Hall. Please contact Staffing Services for an appointment.

\*Position: Collections Representative, GR21  
Department: Controller's (Accounting)  
Description: Oversee and operate centralized University Collection Department for non-student accounts receivable. Duties include maintenance of all account records; collection contact with debtors via telephone and letter; and serving as liaison with client departments. Monday - Friday 8:00 - 4:30, some night work required during peak time.

Requirements: Associate's degree or equivalent preferred. Medium typing. Some commercial collections experience. Ability to communicate effectively via telephone and personal letter. Good interpersonal and organizational skills. Ability to work efficiently with a minimum of supervision. Please send cover letter and resume to Esther L. Smith by April 1, 1985.

Minimum Starting Salary: \$12,469  
Job Number: C1112

\*Position: Secretary, GR19  
Department: Food Science  
Description: Provide secretarial support for the Director of the Institute of Food Science and other faculty. Perform literature screening, abstracting and maintain bibliography on computer (IBM AT), organization of annual scientific symposium meeting; type correspondence, manuscripts, etc; handle telephone, travel arrangements and expense accounts. Other duties as assigned.

Requirements: Associate's degree or equivalent in education, experience and training. Heavy typing. Word processing experience and technical typing experience is essential. Training on an IBM PC is helpful. Excellent organizational, interpersonal and communication skills. Accuracy very important.

Minimum Starting Salary: \$11,125  
Job Number: C118

\*Position: Administrative Aide, GR19  
Department: Controller's (Accounting)  
Description: Provide administrative/secretarial support under minimal supervision for Director. Responsible for departmental personnel and payroll records; process departmental purchase orders and invoices; reconcile departmental accounts; provide bookkeeping services for small independent organization; assist Director on special projects as requires.

Requirements: Associate's degree in business/accounting or equivalent. At least one to three years experience. Medium typing. Previous accounting or bookkeeping experience is highly desirable. Word processing experience and familiarity with personal computers is essential. Excellent

Continued on Page 10

## Please Post

March 21, 1985

N.Y. 14853. For more information on jobs listed, contact Staffing Services (607) 256-5226.

Employee Transfer Applications: Employees who wish to transfer to other jobs within the University should complete a separate Employee Transfer Application form for each position and submit them to Staffing Services.

Individuals with official University layoff status will be given preference in referrals.

This listing is also available on CUINFO

Cornell University's computerized information service. For further CUINFO details, contact the Information and Referral Center at 256-6200 or Computer Services.

New vacancies are listed for two weeks in Job Opportunities.

\*Asterisks identify jobs that were not listed last week.

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

\*Asterisks identify jobs that were not listed last week.

## Job Opportunities

Cornell University is an equal opportunity, affirmative action employer.

independently and collaborate with non-technically oriented users. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT117

\*Position: Communications Production Coordinator  
Department: University

Description: Coordinate the printing and mailing of fund-raising communications, brochures, newsletters, alumni solicitation letters and invitations. Maintain records of production and distribution costs.

Requirements: Associate's degree or equivalent. Experience in graphic arts and fund raising helpful. Excellent communications and interpersonal skills with superior abilities in proof reading. Please send cover letter and resume to Ralph D. Jones.

Job Number: PA118

\*Position: Auditor (Two Positions)  
Department: New York City Cooperative Extension

Description: Perform energy audits and provide energy conservation information to owners of small businesses in Brooklyn. Energy audits will include but are not limited to inspecting heating systems; measuring insulation levels; room dimensions and air filtration systems; reviewing and analyzing utility records. New York City Cooperative Extension.

Requirements: Associate's degree or the equivalent in education and training in an electrical or mechanical related field. Minimum three years ability to take measurements, do simple arithmetic calculations, maintain well organized and accurate records and master the technical information required. Ability to communicate effectively on one to one and/or in groups. Light physical work, e.g. climbing ladders. Current New York State drivers license required. Please send cover letter and resume to Esther L. Smith.

Minimum Starting Salary: \$13,625  
Job Number: PC1111, PC1112

\*Position: Executive Staff Assistant  
Department: Chemical Engineering  
Description: Provide administrative support to the Chairman and Administrative Manager; assist in the preparation of departmental budget including account analysis and cost-benefit analysis; coordinate publication of departmental material; work closely with the College Public Affairs Office; interface with alumni and industrial sponsors; initiate correspondence; prepare periodic and quarterly reports; coordinate faculty searches; participate in department planning as assigned.

Requirements: Bachelor's degree or equivalent combination of education and experience. Three to five years related experience. Demonstrated excellent organizational, interpersonal and communication (written and oral) skills. Ability to work in an active, complex environment. Discretion in dealing with confidential materials. Ability to work independently. Please send cover letter and resume to Judith Morgan by April 1, 1985.

Job Number: P119

\*Position: Research Support Specialist II  
Department: Animal Science  
Description: Provide support in research effort to improve the economic efficiency of doing production through more effective management.

Requirements: Master's degree in statistics, computer science or animal science with strong quantitative background. Working knowledge of computer programming and statistics. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT112

Position: Research Support Specialist  
Department: Food Science

Description: Provide technical support in research on physical properties of proteins. Will involve determination of processing and chemical factors affecting surface area and flavor absorption, in addition to protein association, viscosity, gelation and surface activity. Help maintain laboratory instrumentation and coordinate purchasing and instrument use. Assist in supervision of lab operations.

Requirements: Bachelor's degree in physical chemistry, materials science or chemical engineering. Master's degree preferred. Knowledge of physical chemistry of proteins. Experience in physical testing of biological/food materials as well as coordinating and maintaining a research laboratory. Please send cover letter and resume to Cynthia Smithbower.

Minimum Starting Salary: \$16,000  
Job Number: PT102

Position: Administrative Supervisor I  
Department: Office of the Assemblies  
Description: A ten month appointment to coordinate the budgetary and operational aspects of the Student Assembly, Employee Assembly, University Assembly and the Cornell Recreation Club. The individual will also assist these committees plan, organize and schedule their various activities.

Requirements: Associate's degree or equivalent with demonstrated outstanding interpersonal skills required. Office supervisory experience and organizational ability a strong plus. Cornell experience preferred. Please send cover letter and resume to Ralph D. Jones by March 22, 1985.

Job Number: PA104

Position: Systems Analyst II  
Department: University Personnel Services  
Description: Under the supervision of the Manager, Human Resource Information Systems, design, implement, maintain and enhance mainframe and microcomputer systems for the Personnel area; provide leadership and functional supervision as project team leader as assigned.

Requirements: Bachelor's degree including computer courses. At least two years experience in administrative programming and operations. Familiarity with at least one high level language necessary. Knowledge of ADABAS/Natural preferred. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT103

Position: Applications Programmer/Analyst  
Department: Computer Services  
Description: Work as a member of a project team to install/maintain batch and interactive programs of an overall administrative system. Write production procedures and JCL. Interface with production control clerks.

Requirements: Bachelor's degree or equivalent with computer related courses. A knowledge of applications for interactive administrative systems and data base concepts desirable. Some experience with machine architecture, programming languages (such as PL/1, NATURAL, COBOL, MARK IV) and system utility programs necessary. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT091

Position: Applications Programmer I (Re-post)  
Department: Animal Science

## Administrative/Professional

The minimum salaries listed are for recruitment purposes only.

The minimum salaries listed are for recruitment purposes only.

\*Position: Director, Production Supercomputer Facility

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

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

Job Number: PT113

\*Position: Director of Budget and Institutional Planning

Department: NYSSILR  
Description: Senior Financial Officer of the ILR School, responsible to the Dean for planning, coordinating and supervising the financial and institutional support activities of the School. Responsibilities include budget, fiscal operations, facilities, institutional support services, grants and contracts administration, institutional research and planning.

Requirements: Master's degree in business or public administration or other related field or equivalent combination of education and experience. Minimum of five years related experience, substantial knowledge of higher education administration preferred. Please send cover letter and resume to Ralph D. Jones by April 15, 1985.

Job Number: PA114

\*Position: Director of Lab Operations  
Department: Equine Drug Testing & Research - Saratoga

Description: Operate a field drug testing laboratory at Saratoga Harness Track. Supervise and train technicians. Responsible for the analysis of blood and urine samples by thin layer chromatograph and gas chromatograph.

Requirements: Bachelor's degree in chemistry, biochemistry or toxicology. Master's degree preferred. Extensive experience in isolation, purification and identification of drug and drug metabolites. TLC, GC and supervisory experience required. Please send cover letter and resume to Cynthia Smithbower.

Job Number: PT115

\*Position: Technical Consultant  
Department: Residence Life

Description: Coordinate management systems in Residence Life, a \$16 million enterprise responsible for on campus housing for 7,000 students. Develop plans for current and future systems (hardware and software) development. Train Residence Life staff in use of mainframe and micro computers. Provide maintenance for hardware problems with all departmental system equipment.

Requirements: Bachelor's degree with related computer courses. Proven knowledge and experience in management systems, both micro computer and mainframe based required. Experience with ADABAS/NATURAL and micro computer software is extremely helpful. Ability to work in-

# Job Opportunities

Continued from Page 9

organizational, interpersonal and communication skills.

Minimum Starting Salary: \$11,125  
Job Number: C119

\*Position: Office Assistant, GR18

Department: Media Services

Description: Receive, sort, classify, and process all incoming mail and telephone orders for publications and materials; prepare cash and check deposits, prepare all charge purchase invoices; maintain price lists; prepare audio-visual invoices; maintain order files, research lost and/or defective orders, authorize and credit returns; resolve shipping and billing problems; assist manager in coordination of work flow.

Requirements: High school diploma or equivalent in education, experience and training. Medium typing. At least three to five years business office experience. Word processor, office calculator, typing required.

Minimum Starting Salary: \$10,500  
Job Number: C113

\*Position: Secretary, GR18

Department: Theory Center

Description: Provide secretarial support to Theory Center Executive Staff. Duties include typing; filing; answering telephone; handling mail and travel arrangements, other duties as assigned.

Requirements: High school diploma or equivalent. Medium typing. At least one to three years office experience. Familiarity with PC's, UNIX desirable. Excellent organizational, interpersonal and communication skills.

Minimum Starting Salary: \$10,500  
Job Number: C111

\*Position: Secretary, GR18

Department: University Development

Description: Provide secretarial and organizational support to Assistant Director of the Cornell Fund. Organize mailings; prepare reports; compile gift figures; arrange travel and events; handle correspondence; appointment scheduling and telephones.

Requirements: High school diploma or equivalent. Business or secretarial school preferred. Medium typing. At least two years' secretarial experience. Good rapport with volunteers via phone or in person. Ability to work independently. Good proofreading and grammatical skills. Knowledge of Cornell helpful.

Minimum Starting Salary: \$10,500  
Job Number: C117

\*Position: Secretary, GR18

Department: Ecology and Systematics

Description: Provide secretarial support for several department faculty. Duties include typing correspondence, course work, manuscripts, statistical charts, etc.; answering telephones; serving as department mail coordinator; performing other supporting functions.

Requirements: High school diploma or equivalent. Business or secretarial school preferred. Heavy typing. At least one to three years secretarial experience. Word processing (Xerox 860) high desirable. Strong organizational, communication, and interpersonal skills. Ability to work independently and under pressure.

Minimum Starting Salary: \$10,500  
Job Number: C116

Position: Administrative Aide, GR21

Department: Computer Services

Description: Provide administrative and secretarial support to the Director. Maintain files; screen incoming mail and telephone calls; arrange travel and schedule appointments; monitor department expenditures and maintain expense account balances using electronic spreadsheet packages; supervise full time office staff and work-study students.

Requirements: Associate's degree or equivalent education or experience. Heavy typing. Substantial secretarial experience at an administrative level. Supervisory experience desired. Familiarity with endowed accounting procedures and knowledge of electronic spreadsheet packages (NCPcalc or Lotus 1-2-3). Strong organizational, interpersonal and communications skills necessary.

Minimum Starting Salary: \$12,469  
Job Number: C108

Position: Word Processing Operator, GR20

Department: University Personnel Services

Description: Provide word processing support to the Director's group including the communications unit. Duties and responsibilities include: type and format correspondence, documents, manuscripts, booklets, news items, and departmental reports. Provide clerical assistance to the Director's group members. Design and program automated files in records processing. Code and communicate publications to

phototypesetter. Handle special projects as assigned.

Requirements: Associate's degree or equivalent. Demonstrated expertise with the English language. Courses relevant to the operation of word processing equipment. Heavy typing. Experience with and training of others on word processing equipment such as the Xerox 860 and IBM Displaywriter. Experience with communication to a computer and with office automation equipment desirable.

Minimum Starting Salary: \$11,739  
Job Number: C106

Position: LC Cataloger, GR20

Department: Catalog/Olin Library

Description: Catalog monographs with LC copy on Science and Technology Team utilizing RLIN system; update holdings and descriptive cataloging information for added volumes; re-catalog and reclassify where necessary; other cataloging duties as assigned.

Requirements: Bachelor's degree or equivalent; academic background in sciences preferred. Light typing. At least one year work experience in libraries; preferably technical services. Ability to perform detailed work with speed and accuracy. Foreign language competence desirable.

Minimum Starting Salary: \$11,739  
Job Number: C107

Position: Secretary, GR18

Department: Human Development and Family Studies

Description: Provide secretarial support to approximately five faculty members. Duties include heavy typing of correspondence, articles and class materials; phone coverage; travel arrangements and appointment scheduling. Other duties as assigned.

Requirements: High school diploma or equivalent. Business or secretarial school preferred. Medium typing. Strong typing skills. Ability to work under pressure. Experience with word processing desirable. Good interpersonal skills.

Minimum Starting Salary: \$10,500  
Job Number: C105

Position: Secretary, GR18 (Repost)

Department: Unions and Activities

Description: Basic information source for public and telephone contacts as well as serving as receptionist. Types for 4-6 administrative staff and student organizations (includes financial typing); answer a 15-line telephone system; assist with several major programs and projects.

Requirements: H.S. diploma or equivalent. Heavy typing. Familiarity with use of dictaphone and adding machine. Excellent telephone technique. Good organizational skills. Ability to deal with a variety of tasks and cope with interruptions. Ability to interact well with students.

Minimum Starting Salary: \$10,500  
Job Number: C3511

Position: Secretary, GR16

Department: NYSSILR

Description: Provide secretarial support for development director and communications director. Primary responsibility for receptionist support for division; type correspondence and manuscripts; some record-keeping; fill out travel forms; proofread.

Requirements: High school diploma or equivalent with secretarial training. Medium typing. Some secretarial experience. Ability to prioritize assignments and work under pressure. Excellent organizational, interpersonal and communication skills.

Minimum Starting Salary: \$9,494  
Job Number: C101

## General Service

\*Position: Union Carpenter

Department: Maintenance and Service Operations

Description: Must belong to Union or join within 30 days. An all around shop person: build all types of cabinets, windows, doors, and mouldings. Keep all shop machinery sharp and in working condition, such as jointer planer, sanders, and saws. Valid NYS Drivers License required.

Requirements: High school diploma or equivalent. Apprenticeship Certificate or equivalent. Extensive experience as a carpenter and apprentice.

Job Number: S115

\*Position: University Service Officer, CU-SEU GR 2 (GR21)

Department: Public Safety

Description: Responsibilities include prevention and detection of criminal behavior; external and internal patrol of University property within his/her area for fire, safety and crime hazards; enforcement of parking regulations occurring on the property of Cornell University.

Requirements: High school diploma or equivalent. Further formal education, training and/or experience in the law enforcement field preferred. Satisfactory completion of basic University Service Officer training. Knowledge of Cornell University rules and regulations; U.S. citizenship; eyesight 20/40 corrected to 20/20; no record of convictions other than minor traffic infractions; NYS driver's license; ability to obtain a NYS pistol permit within 90 days of employment. Must pass physical examination.

Minimum Starting Salary: \$6.06/hour  
Job Number: S113

\*Position: University Service Officer, CU-SEU GR 2 (GR21)

Department: Public Safety

Description: Responsibilities include prevention and detection of criminal behavior; external and internal patrol of University property within his/her area for fire, safety and crime hazards; enforcement of parking regulations occurring on the property of Cornell University.

Requirements: high school diploma or equivalent. Further formal education, training and/or experience in the law enforcement field preferred. Satisfactory completion of basic University Service Officer training. Knowledge of Cornell University rules and regulations; U.S. citizenship; eyesight 20/40 corrected to 20/20; no record of convictions other than minor traffic infractions; NYS driver's license; ability to obtain a NYS pistol permit within 90 days of employment. Must pass physical examination.

Minimum Starting Salary: \$6.06/hour  
Job Number: S114

\*Position: Duplicating Machine Operator, S020

Department: Graphic Arts Service - Print Shop

Description: Operate small business machines such as offset duplicators, xerographic duplicators, copiers, folders and collators. Good eyesight and liking for small machine mechanics. Working conditions may be messy at times. Other duties as assigned.

Requirements: High school diploma or equivalent; trade school training in graphic arts procedures desirable. Formal or on the job training in high speed duplicating procedures required.

Minimum Starting Salary: \$5.54/hour  
Job Number: S112

\*Position: Groundskeeper, S018

Department: Statler Inn

Description: Handle complete care of grounds and building exterior pertaining to Statler Hall.

Requirements: High school diploma or equivalent desired. Previous custodial or grounds care experience required.

Minimum Starting Salary: \$4.98/hour  
Job Number: S118

\*Position: Short Order Cook, S018

Department: Statler Inn

Description: Prepare breakfast items to order; prepare sandwiches to order at lunch; set up, breakdown and cleaning duties of kitchen area.

Requirements: high school diploma or equivalent desired. Two years cooking experience in high volume operation.

Minimum Starting Salary: \$4.98/hour  
Job Number: S119

\*Position: Custodian, S016 (Endowed)

Department: Buildings and Grounds Care

Description: Provide general maintenance and custodial care of buildings and grounds in immediate vicinity of assigned area. Monday thru Thursday 6:00 a.m. - 2:20 p.m., Friday 6:00 a.m. - 1:30 p.m.

Requirements: Ability to use a variety of heavy power operated equipment, climb an eight foot ladder and lift 50 pounds.

Minimum Starting Salary: \$4.47/hour  
Job Number: S116

\*Position: Dish Machine Operator, S016

Department: Cornell Dining

Description: Under direct supervision operate dish machine to wash dishes, pots and pans.

Requirements: high school diploma or equivalent. Familiarity with dishwashing equipment and proper use of cleaning agents. Ability to lift 30 lbs. and stand for long periods of time.

Minimum Starting Salary: \$4.47/hour  
Job Number: S111

## Technical

Applications for Technical positions should include the following information:

- Scientific/technical courses completed
- Lab techniques and/or equipment (knowledge of)
- Special skills (e.g. knowledge of computer language)

\*Position: Electronics Technician, GR22-24

Department: Lab of Nuclear Studies

Description: Perform technical work involving servicing, construction and development of complex electronic equipment for accelerator operations.

Requirements: Associate's degree in electronics or equivalent combination of training and experience. One to two years of experience helpful.

Job Number: T114

\*Position: Technician, GR22

Department: Pharmacology

Description: Conduct experiments and analyze results on biochemical research relating to the neuromodulatory function of peptides. Calculate and analyze data using statistics, graphics. Perform independently, to some extent, in the design and interpretation of results.

Requirements: Bachelor's degree or equivalent in biochemistry, neurobiology or similar field. Some laboratory experience in a related field, familiarity with balances, pH meter, centrifuges, gamma and scintillation counters, spectrophotometer, light microscope, and tissue culture equipment.

Minimum Starting Salary: \$13,141  
Job Number: T112

\*Position: Animal Health Technician

Department: Clinical Sciences

Description: Provide critical care of dogs and cats involving supervising entry of patients to I.C., appropriate monitoring and treatments, supervising drug and equipment inventory, cardio pulmonary resuscitation and O2 therapy. Notify clinicians of major changes in patient status. Keep ICU clean. Monday thru Friday, 10:00 p.m. - 6:00 a.m.

Requirements: associate's degree or equivalent. Licenses Animal Health Technician required by NYS law. Minimum of two years working with small animals required.

Minimum Starting Salary: \$12,500  
Job Number: T111

\*Position: Technician, GR21

Department: Vegetable Crops

Description: Provide research support in muckland vegetable program. Duties include conducting field, greenhouse, and laboratory experiments, analysis of data, maintaining equipment, preparing reports, maintaining laboratory, and preparing library research reports. Requires out of town travel.

Requirements: Bachelor's degree required in biological or agricultural science. Must have NYS certification for commercial pesticide use. Some experience in field research work, operation of farm equipment, use and handling of pesticides, statistical analysis, greenhouse operations, equipment repair preferred.

Minimum Starting Salary: \$12,469  
Job Number: T113

\*Position: Technician, GR21

Department: Hudson Valley Laboratory

Description: Provide technical assistance to entomologist and plant pathologist. Conduct field and greenhouse studies on pesticide efficacy, field surveys of fruit insect and disease incidence, and laboratory studies on insect and plant pathogen biology.

Requirements: Bachelor's degree or equivalent in plant sciences or Associate's degree or equivalent in plant sciences and considerable years of farm experience. Valid driver's license. Good general laboratory skills including sterile technique and microscope usage. Must obtain NYS certification as commercial pesticide applicator within two months after being hired. Some lab, greenhouse and orchard experience helpful. Knowledge of farm machinery repair and maintenance.

Minimum Starting Salary: \$12,469  
Job Number: T117

\*Position: Technician, GR21

Department: Plant Pathology

Description: Aid in the investigation of plant parasitic nematodes and associated diseases. Will extract nematodes and related soil organisms from soil and plant samples; culture and care for experimental plants and nematode populations in growth chambers, greenhouses and the field; prepare and assist in the preparation of materials used in a nematology/plant pathology course.

Requirements: Bachelor's degree or equivalent

lent in plant pathology, plant science, or crop science. One year laboratory experience related to plant parasitic nematodes helpful. Familiarity with light microscopy, inoculation, disease assessment as well as identification, culturing and assay techniques preferred.

Minimum Starting Salary: \$12,469  
Job Number: T116

\*Position: Technician (Animal) GR18  
Department: Veterinary Microbiology James A. Baker Institute for Animal Health

Description: Responsible for one or more animal rooms and their contents. Receive, identify, store and maintain a variety of lab animals used in research. Feed, water and care for animals, clean cages and racks. Practice rules and regulations pertaining to animal welfare.

Requirements: High school diploma or equivalent preferred. Basic knowledge of variety of lab animals and animal breeding.  
Minimum Starting Salary: \$10,500  
Job Number: T115

Position: Technician, GR24

Department: Equine Drug Testing & Research - Finger Lakes Racetrack

Description: Perform drug analysis of horse blood and urine. Assist Lab Director as needed with drug confirmations and routine lab operations. Supervise three technicians in the absence of the Lab Director.

Requirements: Associate's degree in chemistry with experience in GC/MS; Bachelor's degree preferred. Experience in isolation, purification and identification of drugs. Thin layer chromatography experience required. Experience in operation of gas chromatograph/mass spectrometer desired.  
Minimum Starting Salary: \$14,779  
Job Number: T102

Position: Technician, GR18

Department: Equine Drug Testing & Research - Vernon Downs Raceway

Description: Perform routine analysis of horse blood urine in the field lab at Vernon Downs, Vernon, NY.

Requirements: Associate's degree or equivalent. Experience with thin layer chromatography and general laboratory procedures.  
Minimum Starting Salary: \$10,500  
Job Number: T101

### Part-time

\*Position: Secretary, GR20

Department: Agricultural Engineering  
Description: Type large volume of correspondence, research and extension papers, classwork, proposals for outside funding, etc. on a Leading Edge word processor; make travel arrangements and prepare reimbursement vouchers for project personnel; assist in setting up large conferences; help monitor project budget and obtain necessary materials for project; handle special projects as assigned. Part-time, Monday thru Friday, 30 hours/week.

Requirements: Associate's degree in secretarial science or the equivalent in education, experience and training. Heavy typing. At least three to five years experience. Experience with word processor (Leading Edge) and/or strong desire to learn. Conference arrangement experience preferred. Ability to exercise considerable judgement and work independently. NYS driver's licenses.  
Minimum Starting Salary: \$11,739/annual equivalent  
Job Number: C1113

\*Position: Visual Specialist II

Department: Plantations  
Description: Provide professional level of support in the production of botanical and landscape illustrations for plantations publications and design of graphics and layout of the publications. Publications include: quarterly magazine, books, promotional brochures, scientific papers, advertisements, educational materials. part-time, 20 hours/week, occasional weekends.

Requirements: Bachelor's degree in art. Training in art, horticulture, illustration, and graphic reproduction required. Demonstrated ability and experience with illustration, graphic reproduction, and coordination of production schedules between scientist, illustrator, editor and printer. Submit cover letter and resume to Cynthia Smithbower.  
Minimum Starting Salary: \$6.75/hour  
Job Number: PT111

\*Position: Secretary, GR18

Department: Center for International Studies

Description: Type and proofread correspondence, reports, etc; arrange meetings, activities and conferences; handle all travel, lodging arrangements and reimbursements; screen phone calls; organize and maintain files. Part-time, 20 hours/week flexible.

Requirements: High school diploma or equivalent. Business or secretarial school desirable. medium typing. At least one to two years office experience. Good interpersonal skills, and organizational skills. Ability to work under pressure and handle confidential information. Word processing knowledge.

Minimum Starting Salary: \$10,500/annual equivalent

\*Position: Records Assistant, GR16

Department: University Libraries - Catalog Department

Description: Participate in a project to convert library catalog records in the sciences and technology into machine-readable form using the RLIN system. Input original catalog records into RLIN; photocopy catalog cards; sort and file worksheets; stamp shelf list cards representing completed records. Other duties as assigned. Part-time 20 hours/week TBA until 8/31/85.

Requirements: High school diploma or equivalent. Medium typing. Some office experience preferred. Ability to perform detailed and repetitive tasks accurately. Knowledge of or experience with foreign language helpful. Knowledge of computer input helpful.

Minimum Starting Salary: \*9,494/annual equivalent  
Job Number: C110

\*Position: Waitperson, S015

Department: Statler Inn  
Description: Under general supervision, serve meals to guests in Main Dining Room, according to established rules of etiquette, working in a formal setting. Set up and clean up of guest tables.

Requirements: High school diploma or equivalent. One year waiting experience preferred; strong interpersonal skills; standing/walking, heavy lifting (trays and dishes of food)

Job Number: S117

Position: Editorial Proofreader, GR19

Department: University Press

Description: Check all stages of proof; help with manuscript, index, reprint preparation; assist five editors; fill in for part-time secretary. Monday - Friday, 30-35 hours per week, 18 month renewable appointment.

Requirements: High school diploma or equivalent. Light typing. Some college and knowledge of "Chicago Manual of Style" desirable. Proofreading skills. Excellent concentration and eye for detail. Ability to organize flow of work and meet schedules.

Minimum Starting Salary: \$11,125/annual equivalent

Job Number: C104

Position: Office Assistant, GR17

Department: Media Services

Description: Conduct mail and telephone order fulfillment operations for pesticide applicator training publication; open and sort mail; check remittances; assemble and ship orders (lift up to 40-50 lbs.); file completed orders; prepare cash and check deposits; prepare invoices; maintain records and files; service inquiries. 20 hours per week (minimum, flexible) until June, 1986.

Requirements: High school diploma or equivalent. Medium typing. At least 1-2 years office experience. Excellent organizational, interpersonal and communication skills.

Minimum Starting Salary: \$9,967/annual equivalent

Job Number: C109

Position: Electronic Technician, GR22

Department: Theoreticel and Applied Mechanics

Description: Maintain and repair departmental equipment: electrical, mechanical, micro-computer, and audio visual. Provide technical support for teaching assistants during teaching labs. Procure materials and repair parts; move equipment and furniture; fabricate new teaching lab apparatus; set-up and maintain existing apparatus. Monday thru Friday, afternoons until August 30, 1985.

Requirements: Associate's degree in elec-

tronics or equivalent. Basic mechanical skills, machine shop practices, electronic troubleshooting, microcomputer basics. Several years experience in equipment repair and maintenance.

Minimum Starting Salary: \$13,141/annual equivalent

Job Number: T092

### Temporary

**TEMPORARY OPPORTUNITIES:** Cornell University has an ongoing need for qualified individuals willing to work on a temporary basis. We frequently need individuals to work as word processor operators, secretaries, typists, receptionists, office assistants, account clerks and data entry clerks. Requirements for these positions range from medium to heavy typing, some office/secretarial experience and knowledge of word processing equipment. If you have an interest in working on a temporary basis in the clerical area, please contact Tambi Benzoni at 256-5226 ext. 266; in the technical area, please contact Bill Webster at 256-5226 ext. 268; in the general service area, please contact Sharon Warunek at 273-1179.

### Academic

Please contact department directly.

Position: Collections Librarian  
Department: Albert R. Mann Library  
Contact: Carolyn A. Pyhtila, Personnel Director, 235 Olin Library, Cornell University, Ithaca, NY 14853-5301.

Job Number: A101

## Male Sweat Bees 'Mark' Females with Antiaphrodisiac after Mating

By SUSAN S. LANG

The alluring, aphrodisiac odors from a young virgin female sweat bee swiftly attract numerous males. After quickly mating with one, though, the female suddenly "loses" her sex appeal. Few males, including her mate, attempt to couple with her again.

The reason may be because the male secretes an "antiaphrodisiac" upon contact with a female so that males, including himself, won't waste time and energy trying to copulate with her again.

So suggests Penelope Kukuk, a Cornell University animal behaviorist, in the February 8 issue of *Science*, the scientific newsweekly of the American Association for the Advancement of Science.

"The female remains temporarily unattractive after mating. Since dead females are as attractive to males as living females, it's unlikely that the females are actively turning on and off some odor cue," says Kukuk, a postdoctoral researcher who studies sweat bees in the department of entomology in the New York State College of Agriculture and Life Sciences at Cornell.

Sweat bees — *Lasioglossum (Dialictus) zephyrum* — are small, gentle ground-nesting bees about the size of flies. One of the most primitive social insects, they have been studied in-depth for two decades. Various kinds of sweat bees are common throughout the U.S.

In warm weather, sweat bees land on humans to lick salt from their sweat, hence the popular name. If swatted at or annoyed, sweat bees may sting, though not as severely as larger bees do.

Previously, it was discovered that the female sweat bee who guards the entrance to her colony could learn the odors of her nest mates. Using her ability to distinguish

the odors of her nest mates from others, the guard bee can ward off invading sweat bees while allowing nest mates to enter.

Consequently, when it was later observed that males avoided females with whom they had already mated, it was suspected that males could recognize and "remember" the odors of their female mates, and thereby avoid them.

"But that meant that bees would have to learn an unbelievable number of odors," points out George Eickwort, a Cornell University wild bee expert and consultant on Kukuk's research.

Also, males tended to avoid females who had mated with other males. Kukuk suspected that sweat bees instead may use antiaphrodisiacs, substances that repel the opposite sex. Antiaphrodisiacs had been demonstrated only once before in insects — in a species of tropical butterfly.

To test her theory, Kukuk treated black nylon models that males recognized as females with varying concentrations of the odor of virgin females that had been extracted from dead bees.

The stronger the concentration of the "aphrodisiac," the greater the number of males were attracted to the model. Kukuk found. But even more significant was her finding that once a model had been visited by a male, the number of males making contact with that model again fell dramatically.

Although the type of chemical or substance used to repel males remains unknown, Kukuk concludes that sweat bees do use antiaphrodisiacs, thus shattering the previous notion that the males learn the odors of different females.

"Although it has been widely suspected that other insects also use also antiaphrodisiacs, her study provides the

strongest evidence to prove it," says Eickwort, a professor of entomology at Cornell. "It explains a lot of the behavior of other bees we've observed in the field."

"But more importantly, it points to the need to study antiaphrodisiacs in greater detail because of their potential to disrupt the mating process," Eickwort says.

"Someday, it may be possible to use antiaphrodisiacs as a control measure against insect pests," Eickwort concludes.

## Barton Blotter

Cash and valuables totaling \$5,580 — including \$2,015 in university owned furniture — were reported stolen on campus during the period March 11 through 17, according to the morning reports of the Department of Public Safety.

The furniture included two butcher-block type lounge chairs worth \$600 taken from Anna Comstock Hall, and two chairs and a sofa valued at \$1,415 taken from Lyon Hall. In addition, nine fire extinguishers worth a total of \$275 were taken from various buildings on campus.

Other thefts included five wallets with cash and valuables at a total of \$132, a \$359 airline ticket, two gold chain necklaces and a gold pendant coin worth \$1,250, a \$200 watch, a \$259 microwave oven, and a \$300 camera.

The Crime Prevention Unit sign in the hallway of Barton Hall outside of the Crime Prevention offices was stolen sometime between 4:30 p.m. and 8 p.m., according to a report filed Wednesday, March 13. The value of the sign was set at \$40.

# Brief Reports

## Pulitzer Prize Winner

### To Talk on 'War Plans'

Thomas Powers, winner of the Pulitzer Prize for journalism in 1971 and currently a contributing editor of the Atlantic Monthly, will speak on U.S. Nuclear War Plans at 8 p.m. Tuesday, March 26, in 110 Ives Hall.

Powers has written extensively on U.S. military and intelligence policy for the Atlantic, Rolling Stone, and the Washington Monthly. He also wrote "The Man Who Kept the Secrets: Richard Helms and the CIA" (1979), "Thinking About the Next War" (1982), and "The War at Home: Vietnam and the American People" (1973, republished 1984).

The lecture will be sponsored by the November 11th Committee, Cornell's chapter of the United Campuses to Prevent Nuclear War (UCAM), with the assistance of the Peace Studies Seminar and Risley Residential College. It is free and open to the public.

## Archaeology Travel Grants Are Available

April 8 is the deadline for Cornell undergraduate students to apply for Hirsch travel scholarships worth up to \$700 for summer research in archaeology.

Although archaeology majors are preferred, other students with a proven interest in the field will be considered.

Details and application forms are available from members of the archaeology faculty and from Beverly Phillips at 265 McGraw Hall between 8 a.m. and 1 p.m., Monday through Thursday; her telephone number is 256-7254.

About ten students will receive grants towards travel costs to properly supervised archaeological field schools and research projects in this country and abroad.

Also available at 265 McGraw Hall are fliers advertising summer field training programs other than those sponsored by Cornell.

## Poet Leslie Scalapino To Read from Her Works

Leslie Scalapino, who teaches at New College at San Francisco State University, will read from her poetry at 8 a.m. Monday,

March 25, in the Founders Room at Anabel Taylor Hall.

Scalapino is the author of "The Woman Who Could Read the Minds of Dogs" (1976), "Instead of an Animal" (1977), "This Eating and Walking at the Same Time is Associated All Right" (1979), and "Considering How Exaggerated Music Is" (1982).

Her long poem, "That They Were at the Beach — Aeolotropic Series," appeared in the Spring-Summer 1984 issue of Epoch magazine, published at Cornell.

The reading is sponsored by the Cornell Creative Writing Program, the Cornell Council for the Creative and Performing Arts, and the National Endowment for the Arts. After the reading there will be a reception.

## ALERT Program Seeking Part-Time Student Help

The Office of the Dean of Students is looking for six part-time graduate assistants to work 10 to 12 hours per week during the academic year in the areas of new-student programs, ALERT program (Alcohol Education, Research and Training), graduate student programs, fraternities and sororities, student families, and off-campus student programs.

Submit a resume, cover letter, and the names and phone numbers of two references by March 14, 1985 to the Dean of Students. For further information, call the Dean of Students Office, 103 Barnes Hall, 256-4221.

## Poet, Feminist Writer Will Conduct Seminar

Poet and feminist writer Adrienne Rich, one of Cornell's Andrew D. White Professors At Large, will give a four session seminar on writing poetry for Cornell students during her stay on campus April 8 through 19.

The seminars, which will be free, are open to 10 students on a first-come, first-served basis. Students who have not taken creative writing workshops or who are not literature majors are especially encouraged to sign up. The seminars will be given at 7 p.m. April 9, 11, 15, and 18.

For additional details and for registering, contact Helen Johnson at the Women's Studies Program office in 332 Uris Hall weekdays between 9 a.m. and 4:30 p.m. The telephone number is 256-6480.

Also during her stay, Rich will give a free public poetry reading, with commentary, at 8 p.m. Tuesday, April 16, in Alice Statler Auditorium of Statler Hall. Other activities will be announced later.

## Agreement to Be Signed With German University

Peter Fischer-Appelt, president of the University of Hamburg, Federal Republic of Germany, will be on campus Wednesday, March 27, to sign a cooperative agreement between the two universities.

This agreement will begin in the fall of 1985 with the establishment of a Cornell Abroad program at Hamburg and an exchange graduate student Ingeborg Thiering, studying in Cornell's Department of Astronomy.

Persons interested in meeting Fischer-Appelt should contact Ann Roscoe at the Center for International Studies, 256-6370.

## SAGE CHAPEL

### Samuel S. Hill Will Be Speaker

Samuel S. Hill, professor of religion at the University of Florida and the 1985 Eudora Welty Professor of Southern Studies at Millsaps College in Jackson, Miss., will speak at Sage Chapel at 11 a.m. Sunday, March 24.

His sermon topic will be: "To Be Both with Integrity: Universalist and Particularist."

Hill taught in the department of religion at Stetson University from 1959-60. He was in the department of religion at the University of North Carolina at Chapel Hill from 1960-1972 and was awarded the Tanner Award for Teaching at the University of North Carolina in 1964.

Hill's most recent books include "On Jordan's Stormy Banks," "Religion in the Southern States," "Encyclopedia of Religion in the South," and "Handbook of Denominations in the United States."

Music for the service will be provided by the Sage Chapel under the direction of Dr. Stephen May, Acting University Organist and Choirmaster.

## Typists Listed

The Reference Department of Uris Undergraduate Library maintains a listing of typists willing to prepare term papers, theses, etc. If you are a typist and are interested in having your name included on that listing, please fill in the form below and bring or send it to the REFERENCE DEPARTMENT, URIS LIBRARY before April 30th. Any forms received after that date will not be included in this year's listing.

(Name)	(Address & Phone) (office & home)
(Type of machine type face)	(Rate charged p. page (sgl or dbl spaced))
(Type of work done)	(e.g. theses, technical rept., legal or foreign materials)
(Pick up and/or delivery service (free or charge?))	

## The Week in Sports

### Lacrosse Opens Ivy Season with Harvard Saturday

#### Sports Information Office

After a tough loss in its season opener, the Cornell men's lacrosse team will seek to bounce back when it opens its Ivy League schedule against Harvard at 2 p.m. Saturday on Schoellkopf Field.

The Big Red men's and women's tennis teams will also see action at home this weekend. The women have two matches at the Kite Hill Tennis bubble, as they open Ivy League play against Pennsylvania Saturday and Columbia Sunday. Saturday's match will be played at 9 a.m., while Sunday's event begins at noon. The men's team also starts league competition, entertaining Eastern Intercollegiate Tennis Association rival Navy at 2 p.m. Saturday.

The Big Red lacrosse team opened its season with a tough 12-8 loss to Adelphi Saturday. The game this Saturday is an important one for the Red, as it will be taking on a Harvard team which is expected to challenge for the Ivy League title this season.

Senior midfielder Ken Entenmann led the Cornell offense Saturday, scoring three goals to match his career high. He now has a six-game scoring streak, which carries over from last year.

Junior Bill Hughes paced the attackmen with one goal and two assists, while classmate Nick Lantuh came off the bench to score twice in the fourth quarter. Midfielders Bob Cummins and Greg Ripich each had one goal, while seniors Jamie Smith and Tim Gordon, and junior Tom Gundersen notched one assist apiece.

Harvard is expected to continue where it left off last season, when the Crimson won five of its last six games and posted an 8-6 overall record. The Cantabs opened their season Saturday with a tough 11-9 loss to C. W. Post on Long Island, as they held a 9-6 advantage with 11:41 remaining in the contest.

Cornell leads the series with Harvard, 42-15, and has won the last four contests between the schools.

Last year, the Big Red captured a 10-5 decision, jumping out to a 9-0 lead as it held the Crimson scoreless for the first 38:06 of the contest.

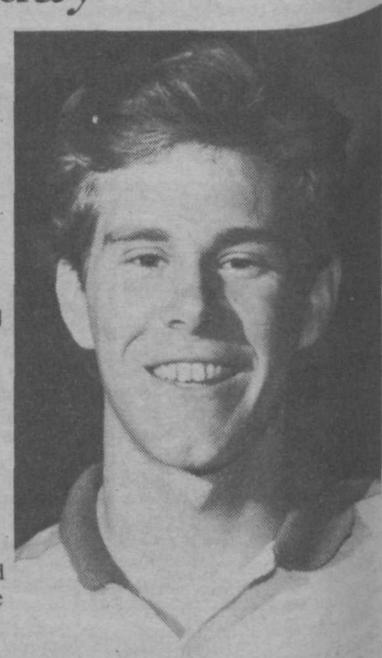
The Big Red men's tennis team opened its season this past weekend with a very fast start. Cornell, which had a 5-14 overall record last spring, won three matches in competition at Penn State. The Big Red defeated East Stroudsburg Friday, 9-0, and then topped Millersville, 8-1, and Penn State, 6-3, Saturday. The victory over Penn State was a big one, as last season Cornell dropped a 5-4 decision to the Nittany Lions.

Freshman Bruce Jervis, sophomore Eric Cruz, junior Paul Meehan and senior Mike Rytting all went 3-0 in singles play this past weekend. Senior Dave Merritt, the Red's No. 1 performer, also had a fine weekend and teamed up with freshman Mike White to go undefeated in doubles competition. Navy leads the series with Cornell, 20-13-1, as the Big Red hasn't defeated the Midshipmen

since 1970. Last year, the Red suffered a 6-3 defeat.

The women's tennis team has been off since Feb. 23, when it opened its season with a 6-3 loss to Penn State. Leading the team in that meet was freshman Barbara Prins, who posted a straight-set victory at the No. 3 singles position. Another freshman, Erin McPeak, also won at No. 5 singles. The Big Red has a very young squad this season, with freshmen and sophomores making up the bulk of the squad. Among the team's other top performers are sophomores Jana Klein, Lauren Levine and Anne Meinig; and freshmen Linda Manaster and Carolyn Savage.

The women will be looking to improve upon their 2-7 record of last season, which included a 1-6 record in the tough Ivy League. The Big Red should be more competitive in league matches this spring. Last year, Cornell defeated Columbia, 9-0, but lost to Pennsylvania, 8-1.



MIKE RYTTING  
Tennis