

# CORNELL Chronicle

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United Way

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For the first time in its history of altruism, the annual Employees' United Way Campaign is adding the inducement of prizes to meet its campaign goal.

Japan's economy

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A top Japanese banker brought to campus a cheerful, confident and proud description of Japan's economy during a time when some critics are predicting disaster.

## National Professor of the Year

### Engineering's Mary Sansalone takes top classroom honor

By Larry Bernard

Mary Sansalone is in a league of her own.

Formerly a star player with a women's major league softball team that won two national championships, the associate professor of civil and environmental engineering also lettered in five sports in high school in Cincinnati. And she played varsity field hockey at the University of Cincinnati and for regional and national teams.

Her athletic days over — a crushing shoulder injury ended her competitive sports participation a number of years ago — the professor now excels in the college classroom, research laboratory and in the field of civil engineering.

Last Friday, Sansalone was named Professor of the Year, a national honor conferred on a single college instructor each year by the Council for Advancement and Support of Education (CASE) in Washington, D.C., for excellence in college teaching. She is the first award winner from Cornell and the first engineering professor to win the award since its inception in 1981.

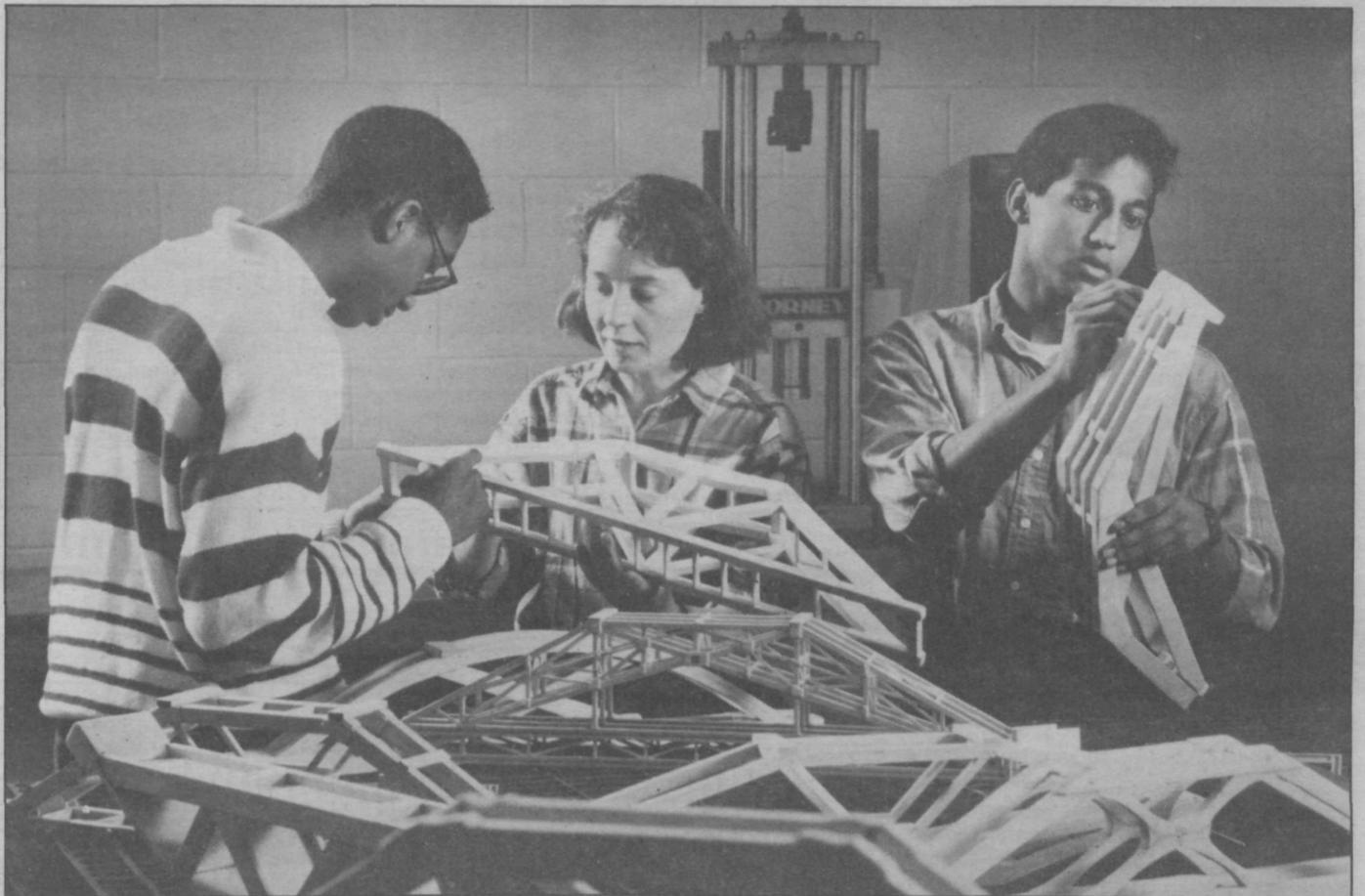
#### A whole new world

"When I came to Cornell as a graduate student, a whole new world opened up," Sansalone said. "I had never given much thought to teaching. I was very shy and apprehensive of speaking in front of students, and I was more excited and interested in research. But after a good experience as a teaching assistant, and due to the constant encouragement of my adviser, Professor Richard White, I eventually decided to give teaching a try.

"By the end of the first semester as a professor, I knew this was what I wanted to do. I find teaching very rewarding. And I can still be involved in research and in consulting," she said. "I can't think of a better combination."

Steeped in engineering at a young age, Sansalone, now 34, and any number of her seven brothers and sisters often accompanied her civil engineer father on his job in and around Cincinnati — home of her favorite bridge, the Roebling Suspension Bridge, a 1,057-foot prototype of the Brooklyn Bridge connecting the city to Covington, Ky.

"I was riding bulldozers before bicycles," she said. "My father encouraged my interests in math and science, and he often took all his



Bruce Wang/University Photography

Mary Sansalone, associate professor of civil and environmental engineering, works with Ed Hoffer '93 (left) and Devang Shah '94 on balsa wood bridges that her students design to withstand a load test. She has been named Professor of the Year by the Council for Advancement and Support of Education.

children to construction sites. We loved those trips. I think it was this early exposure that helped lead me to a career in engineering."

But it was her love of literature that led Sansalone to choose literature first as an undergraduate major at the University of Cincinnati. She finally got her degree, after six years of switching majors, in civil engineering in 1982. She earned a master's in 1984 and doctorate in 1986 from Cornell. She joined the Cornell faculty in 1987 after a year at the National Institute of Standards and Technology (then the National Bureau of Standards)

and in 1991 received a Presidential Young Investigator Award administered by the National Science Foundation.

The CASE award tops a long list of teaching recognitions. Sansalone has won, in five years of teaching, the following awards from Cornell's College of Engineering: the Dean's Award for Excellence in Undergraduate Teaching (1988), the Tau Beta Pi Award for Excellence in Teaching (1989) and the Dean's Award for Innovation in Teaching (1992), as well as teaching excellence awards from the School of Civil and Environmental Engineering in

1989 and 1991. She is well-known for research in structural engineering as well, having a patent on an instrument that is used for non-destructive testing of concrete structures.

#### A creative approach

"She's exceptional. Anything she does, she brings a creative approach," said Richard N. White, professor of civil engineering and Sansalone's mentor. "I remember the fall of 1983 was her first teaching experience, as she was finishing her master's degree. She was a little wary. But she has sparkled ever since."

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## Titan may have essentials of life

By Larry Bernard

Titan, the largest of Saturn's 17 moons and the only natural satellite in the solar system to have a dense atmosphere, should have all the chemical building blocks of life, Cornell astronomers say.

And rather than being an icy, static body locked in deep-freeze, Titan also may have the liquid water that was necessary, on Earth, for these organic chemicals to interact and evolve toward the first living organisms.

Space scientists W. Reid Thompson and Carl Sagan, the David Duncan Professor of Astronomy and Space Sciences, both at Cornell's Laboratory for Planetary Studies, demonstrate mechanisms by which the rich variety of organic chemicals in Titan's atmosphere can produce amino acids, nucleotide bases and simple

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## Scholars to assess 'State of Indian America'

By Roger Segelken

Struggles to preserve religious freedom, culture, the environment and a way of life will be assessed when American-Indian scholars gather here Oct. 8-10 for an international conference, "State of Indian America: Prospects for the Future."

Scheduled as it is on the eve of the Columbus Quincentenary, the meeting will not dwell on 500 years of differences between Europeans and the original inhabitants of South, Central and North America, conference organizers insist. Rather, the conference will look to a future of mutual appreciation of cultures, freedoms and the shared environment.

Keynote speakers at the three-day conference will be Vine Deloria Jr., the Lakota author and attorney; Reuben Snake, a Winnebago and Roadman for the Native American Church; Ola Cassador, Apache elder; Marilyn Harris, Hopi elder; and Dave Warren, Santa Clara Pueblo and former deputy director of the Smithsonian Institution.

Session topics include "Environment and Development," "Religion and Development: Spiritual Directions," "Culture and the Arts," "Natural World and Survival of Cultures" and "Reviving the Treaty-making Process." Following the Ithaca

meeting, some conference participants will take part in Columbus Day observances in New York City, where replicas of the explorer's 1492 ships are docked and the Spanish government will issue a "Pledge of Respect for Native Cultures."

#### Cultural encounters

The Cornell conference is the culmination of a five-year process of cultural encounters. American-Indian opinion leaders were surveyed for recommendations on the appropriate observance of the Columbus Quincentenary, according to Jose Barreiro, a conference organizer and editor-in-chief of Akwe:kon Press at Cornell.

"We are responding to a mandate from the elders that religious freedom is a very important issue today and in the future," Barreiro said. "There continues to be a shrinking 'habitat,' both spiritually and geographically, for religious practice in this hemisphere.

"Clarifying the myths — telling the story of Native American peoples' contribution to world civilization — was another concern of the elders, and so is our stewardship of the environment," said Barreiro, a Guajiro Indian who was born in Cuba. "Schools and colleges led an education movement in the past several years to look at curricula and clear up the myths with

*Continued on page 2*

## Community leaders



Chris Hildreth/University Photography

Ithaca Common Council member Robert Romanowski (second from left), Cornell Class of 1955, and his wife, Ellie, are flanked by Stephen P. Johnson (left), executive director of government affairs, and Provost Malden C. Nesheim Saturday at the Statler Hotel, where state and local government leaders were honored by Cornell for their public service. Romanowski, a Republican who represents the city's first ward, was one of several dozen officials who also attended the football game with Lehigh.

## BRIEFS

• **Fire prevention:** Life Safety Services is reminding the campus community that Oct. 4-10 is national Fire Prevention Week. The 1992 theme is "Test Your Detector — It's Sound Advice!" Life Safety maintains alarm systems in campus buildings and living units. Most fatal home fires occur at night while people are asleep. At the very least, there should be smoke detectors outside each bedroom and on each additional story of the house, including the basement. Batteries should be replaced at least once a year, and detectors should be checked once a week to ensure that they are operational. As part of next week's observance, Life Safety and Ithaca Fire Dept. Neriton Fire Co. No. 9 will sponsor a fire safety display table Oct. 6 and 7 from 10 a.m. to 4 p.m. outside Willard Straight Hall.

• **Green Cards:** Anyone who immigrated to the United States in 1977 or before and has not become a citizen must file for a new Green Card, according to the Immigration and Naturalization Service. Those required to file should

call the district office in Buffalo at (716) 849-6760 and request Form I-90. The application period extends until the end of July 1993.

• **EDUCOM:** "EDUCOM92: Charting Our Course" will be held Oct. 28-31 in Baltimore. EDUCOM is a consortium of nearly 500 institutions that promotes excellence in the use of information technologies in higher education. Its annual conference features sessions on a variety of topics of interest to the higher education community involved with information technology. For more information and a registration form, contact EDUCOM by electronic mail at CONF@EDUCOM.EDU, or by phone at (202) 331-5375.

• **Day Hall parking:** Renovations to the basement of Day Hall are set to begin in about two weeks. Parking in the one-hour spaces next to the building will be reduced by seven spaces to provide space for construction equipment.

• **Fellowship:** Applications are being accepted

for DAAD (German Academic Exchange Service) fellowships. The fellowship provides tuition and fees, a stipend and transportation to a graduating senior, graduate student or doctoral candidate under 35 years of age to conduct research or study at a German university. Fellowships are available to study at Heidelberg and Gottingen universities; these fellowships carry tuition a stipend, but do not cover transportation and are restricted to graduate students. For information, contact Professor Herbert Deinert, 188 Goldwin Smith Hall, 255-8356, or Marguerite Mizelle, 183 Goldwin Smith Hall, 255-4047. Deadline is Oct. 14.

• **Writing:** Writing workshop walk-in service with free tutorial instruction in writing is offered Sundays from 2 to 8 p.m. in 178 Rockefeller Hall; Mondays through Thursdays, 3:30 to 5:30 p.m. and 7 to 10 p.m., 178 Rockefeller Hall; Sundays through Thursdays, 8 to 11 p.m., Clara Dickson Macintosh Computer Room; and Sundays through Thursdays, 8 to 11 p.m., Noyes Center Room 112.

## Investigation continues into attack in gorge

An intensive police investigation is continuing in the search for four men who attacked a man and woman in the Cascadilla Gorge Monday night.

The Ithaca Police Department, assisted by Cornell Public Safety, is canvassing the Collegetown and Cascadilla areas to locate witnesses who may have information, Acting Public Safety Director William Boice said.

The man who was attacked, an 18-year-old visitor to the campus, is listed in critical condition at Robert Packer Hospital in Sayre, Pa., where he was airlifted Monday night. The woman, an 18-year-old Cornell student, remains hospitalized.

Boice said the two were apparently beaten with rocks in the attack, which occurred at about 9:30 p.m. Monday night as they were walking in the gorge. Police have not issued a description of the attackers.

## Indian *continued from page 1*

real history. But determining what is the best relationship of all peoples to the Earth is an unresolved problem."

Other conference speakers include John Mohawk, a Seneca historian; Freida Jacques, an Onondaga clanmother; Victor Montejo, a Jacalteco Mayan from Guatemala and author of the historical novel *Testimony: Death of a Village*; Evaristo Nukuag, an Aguaruna Indian from Peru and director of C.O.I.C.A., the confederation of native tribes in the seven-country Amazon region; and Sam Mercado and Amalia Dixon, Miskito Indians from Nicaragua who founded the Pana Pana community development organization.

Also Katsi Cook, a Mohawk midwife; Simon Brascoupe, a Mohawk-Algonquin artist, professor and delegate to the 1992 Rio de Janeiro environment conference; William Antell, an Anishinabe who was the first president of the National Indian Education Association; Billy Frank Jr., a Nisqually tribal leader, chairman of the Northwest Indian Fish and Wildlife Commission and winner of the 1992 Albert Schweitzer Prize for Humanitarianism; Mike Davis, a Jicarilla Apache elder; and Caleen Sisk-Franco, a Wintu Indian student-recruiter for California State University who chronicles efforts to preserve sacred lands.

Conference-organizer Barreiro noted the "persistence of native people of the world," calling that struggle "the greatest story of the 20th century. If we have achieved nothing else, we can take satisfaction in the injection of the native voice in this quinquennial."

The conference is open to the public for a registration fee of \$55 in advance or \$65 at the conference. Student registration is \$15. For those not registered at the conference, admissions of \$5 each will be charged at the Meeting of the Elders Oct. 8 at 8 p.m. in Statler Auditorium and at the Vine Deloria lecture Oct. 9 at 7:30 p.m. in Bailey Hall. More information is available at 255-0421.

## CORNELL Chronicle

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Cornell University is committed to assisting those persons with disabilities who have special needs. A brochure describing services for persons with disabilities may be obtained by writing to the Office of Equal Opportunity, Cornell University, 234 Day Hall, Ithaca, N.Y. 14853-2801. Other questions or requests for special assistance may also be directed to that office.

## GRADUATE BULLETIN

• **Course Changes:** A petition is needed to drop a course or to change grading options or course credit after Oct. 16.

• **Fellowships:** Applications for the following fellowships are available:

• **NSF Graduate Fellowships and NSF Minority Graduate Fellowships.** Applicants must be U.S. citizens and incoming students in the biological, physical or social sciences. Annual stipend of \$14,000, tuition payment of \$7,500; Cornell provides remainder of tuition.

• **Hertz Graduate Fellowship.** Available to U.S. citizens (or those applying for citizenship) in the applied physical sciences. Award is \$15,000 stipend plus \$10,000 tuition, renewable. Deadline is Oct. 23.

• **Howard Hughes Medical Institute Pre-Doctoral Fellowships in the Biological Sciences.** Annual stipend of \$14,000 and \$12,700 cost-of-education allowance.

• **Ford Foundation Predoctoral Fellowships for Minorities.** Award of \$11,500 stipend plus \$6,000 tuition, renewable up to three years.

Cornell provides remainder of tuition.

• **Fulbright Hays Fellowship.** Applications now available in World Area Programs offices; completed applications due Oct. 14 in Graduate Fellowships Office.

• **Dissertation and Thesis Seminars** will be held in the Morison Seminar Room, Corson/Mudd Hall, Oct. 26 at 1 p.m. for master's theses and Oct. 27 at 1 p.m. for doctoral dissertations.

• **Graduate Student Council meeting** Oct. 5 at 5:15 p.m., Big Red Barn.

## OBITUARY

• **Julie Stellrecht**, who was a purchasing agent for the School of Hotel Administration for 16 years until her retirement in 1966, died Sept. 12 in Jocotepec, Jalisco, Mexico. She was 86.

## Planning group seeks opinions

By Sam Segal

The 27 members of the Strategic Planning Advisory Board began this week to sample campus opinion on critical issues facing Cornell.

At a meeting Sept. 25, members of the board — which includes President Frank H.T. Rhodes, Provost Malden C. Nesheim, students, staff and faculty — were given six questions and 12 names of students, faculty and staff.

Each member is to survey at least six people on that list but is free to do more or to question anyone else chosen by any means.

"The names were chosen randomly from computer systems," said Vice President for Planning John Wiesenfeld, who is providing staff leadership for the review that will produce, in 18 months, a brief document to guide Cornell's continuous planning process.

Wiesenfeld said the selection of names "was not intended to be truly statistically significant. Scientific sampling will be part of the process later."

Now, he said, the questioning serves two main purposes: to help define the strategic-planning issues that should be addressed and to involve the board with a range of Cornell people whom they would not ordinarily meet during their usual work routines.

The six questions, which invite open-ended answers, ask what three things the subject values most about Cornell, what internal or external changes will affect Cornell most over the next decade, whether Cornell's environment encourages individual development, what criteria should determine budget priorities, what are the three most important issues relating to teaching and learning at Cornell, and what ought to be the 21st century version of Ezra Cornell's idea that any person should be able to pursue any subject at Cornell.

Based partly on the results of this questioning, the board in late October will set up broadly representative panels that will analyze specific critical issues. Wiesenfeld emphasized after the meeting that the board's goal is not to micromanage the university. He recalled Rhodes' comment at the initial meeting Aug. 28 that "this will not remove from the deans the executive authority of their colleges."

Rather, Wiesenfeld said, strategic planning will offer a framework within which central university priorities can be meshed with the goals and priorities of the colleges and with the budgeting process.

The process begun with the six-question survey is intended to answer the question: "What do we want to be?" Wiesenfeld said.

"By making strategic planning a continuing process, we can then continually ask the further question: 'Does what we are doing support what we want to be?'"

## Derrida to visit next week

Jacques Derrida, the pioneer of deconstruction, will visit campus next week to give a two-part lecture entitled "Is My Death Possible?"

The internationally known philosopher and literary critic will speak on Tuesday, Oct. 6, at 4:30 p.m. in Room 120 of Ives Hall and on Wednesday, Oct. 7, at 8 p.m. in 110 Ives.

"In part, his talk will be an analysis of Heidegger's discussion of death. But I say in part because he usually talks about many other things," said Jonathan Culler, the Class of 1916 Professor of English and director of the Society for the Humanities, which is sponsoring Derrida's visit.

Derrida is known for developing a strategy of "deconstructing" or analyzing the language of literary and philosophical texts to identify inherent metaphysical assumptions.

This school of thought achieved dominance in European philosophy of the latter half of the 20th century.

A professor of the history of philosophy at the Ecole des Hautes Etudes en Sciences et Sociales in Paris, Derrida is a former A.D. White Professor-at-Large.

## Employees begin United Way fund drive

By Martin B. Stiles

For the first time in its long history of altruism, the annual Cornell Employees' United Way Campaign is adding the inducement of prizes to its efforts to raise money for the 1992 Tompkins County United Way fund drive.

In short, if you return your pledge card by Oct. 29, you are eligible to win an Early Bird Special Prize, which is a weekend stay for two at the Cornell Club in New York City, including roundtrip airfare.

That was the lure blazoned on a passion-pink announcement attached to the traditional "Dear Colleague letter" announcing this year's drive that was mailed to all employees. The announcement also promised more great prizes to come, to be revealed as the campaign continues throughout the fall.

Cornell's 1992 goal is \$526,000. The university is the area's largest single employer, and the campaign by Cornell's employees

represents 34 percent of the county's total goal of \$1.54 million.

"The prizes are an attempt to broaden employee participation in the campaign, which ran at about 50 percent for years but has dipped below 40 percent in these last few years of economic recession," explained Beverlee Hughes, the campaign committee member in charge of publicity.

Hughes, university policy coordinator in the Office of the Controller, is one of more than 250 volunteers who work annually for the Cornell employee-run campaign. The only official university involvement in the campaign consists of allowing volunteers to work on the campaign during working hours and providing some funding for operational costs.

The "Dear Colleague letter" signed by 19 members of the Cornell Campaign Committee emphasizes that contributions can be made through biweekly payroll deductions throughout 1993.

The letter also states, "Regardless of your

method of pledge, by using a donor designation card [to be distributed by the volunteers], you may choose a single United Way agency in Tompkins County to receive your pledge, or you may request your donations be sent to the United Way in your home county. Ask the employee volunteer in your work area for details."

Hughes stressed that 86 percent of the money raised in Tompkins County goes to support local agencies, while the remaining 14 percent sustains local administrative costs, national advertising and educational materials to enhance local fund-raising efforts.

But the most important information that this year's campaign committee wishes to stress is that donors may pledge through payroll deduction. The announcement puts it this way: "Did You Know! You can pledge through payroll deduction — the first deduction appears in your January 1993 paycheck. You can pledge any AMOUNT! Fifty cents a week? One dollar a week? Whatever!"

## Write on



Peter Morenus/University Photography

Writers from the faculty and the Ithaca community gathered Sept. 22 for a Uris Hall reading as part of a nationwide effort to benefit the homeless. The local reading raised \$1,617, which will be distributed by Save Our Strength, a Washington, D.C.-based group. Participating writers included (from left): Ted Pearson, Roald Hoffmann, Stephanie Vaughn, Ken McClane, Molly Hite, Harryette Mullen, James McConkey, Lamar Herrin, Robert Morgan, A.R. Ammons (rear), Dan McCall and Alison Lurie.

## Panel to examine science-government relations

By Larry Bernard

Wolfgang K.H. Panofsky, former director of the Stanford Linear Accelerator Center (SLAC), will visit campus Oct. 4-11 as an A.D. White Professor-At-Large.

Panofsky will give a free public lecture, "Is There a Crisis in the Science-Government Relationship?" Wednesday, Oct. 7, at 8 p.m.,

**Participants will include Wolfgang Panofsky, Kurt Gottfried, Hans Bethe, Dale Corson and Thomas Eisner, beginning at 8 p.m. Oct. 7.**

in the Hollis E. Cornell Auditorium, Goldwin Smith Hall.

The lecture will be followed by a panel discussion until 10 p.m., moderated by Kurt Gottfried, chairman of the Physics Department. Panelists will be Cornell faculty members Hans Bethe of physics, a Nobel laureate

in physics; Dale Corson, Cornell president emeritus and physicist; and Thomas Eisner, the Schurman Professor of Biology.

Panofsky, a presidential science adviser during the Eisenhower and Kennedy administrations, now is chairman of the National Academy of Sciences Committee on International Security and Arms Control. During the late 1950s, he was chairman of the U.S. committee which negotiated the Test Ban Treaty banning atmospheric tests of nuclear weapons.

More recently, Panofsky has worked on arms control issues in China, the former Soviet Union and the United States. He was the principal architect and first director of SLAC, a two-mile long particle accelerator at Stanford University. Panofsky also is the chairman of the Board of Overseers for the consortium of universities responsible for building the Superconducting Supercollider in Texas. When completed at the end of the decade, the SSC will be the world's largest particle accelerator.

Also during his Cornell stay, Panofsky will give a special Journal Club on Tuesday, Oct. 6, at 4:45 p.m., in Room 306 Newman Laboratory, called "The Building of SLAC: A Personal Perspective."

Also, he will address a Peace Studies semi-

nar on Thursday, Oct. 8, at 12:15 p.m. with a talk, "The Future of Fissionable Material in the Former Soviet Union," in Room G-08, Uris Hall.

Panofsky, 73, earned a bachelor's degree from Princeton University and a doctorate from the California Institute of Technology. He has been a Stanford physics professor since 1951 and directed the SLAC from 1961 to 1984. He received the National Medal of Science in 1969.

## Kroch Library is dedicated today

Cornell's new Carl A. Kroch Library will be dedicated today, Oct. 1, at 2:30 p.m. in the library's atrium.

Among those expected to speak are President Frank H.T. Rhodes, University Librarian Alain Seznec and alumnus Carl Kroch, Class of '35, who donated \$10 million of the \$25 million needed to build the new building — a three-story underground library that houses Cornell's special collections, including rare books and university archives.

# National standards, labels needed for compost: researcher

By Roger Segelken

No gardener concerned with the health of the family—or the tomato plants—would apply pesticide without reading the instructions and list of ingredients. Commercially produced compost should be labeled the same way, say analysts at the Cornell Waste Management Institute.

Nationwide truth-in-advertising standards, along with better regulation of compost-production facilities, would safely increase organic materials that can be diverted from the waste stream, say the authors of an August report, *Municipal Solid Waste Composting: Policy and Regulation*.

"Composting has the potential to divert as much as 50 to 70 percent of a community's solid waste from landfills and incinerators to marketable compost," said Ellen Z. Harrison, associate director of the institute and co-author of the report.

The Cornell institute is a research-analy-

sis-education center that examines complex waste issues. Composting is the natural process that converts organic materials into soil-like products. According to Tom L. Richard, a Cornell agricultural engineer and co-author of the report, a range of materials can be composted, and the quality of the compost produced will depend on both the input materials and the processing. "The cleanest compost comes from source-separated 'green wastes,' such as food and garden trimmings, but many other materials (such as sewage sludge, farm wastes and paper) can also be composted," Richard observed.

## Compost quality

"The public sees composting as a positive component in an integrated waste-management system, along with recycling, waste-reduction, incineration and landfilling," Harrison said. "Yet, we have no national standards for compost quality, and there are standards in only a handful of states. We could adopt the 'no-net degradation' standard of

some European countries and Canadian provinces. That would prohibit any composts that were not as 'clean' as existing soils and would effectively limit the types of materials that could be composted."

A more reasonable approach, the authors

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Research

say, might be a spectrum of compost-quality standards that specifies the materials' permitted uses. Based on an analysis of the potential health or environmental concerns, compost that is not as clean as soil might not be allowed in food production, for example, but it might be permitted on golf courses or forest land.

## Foreign insects used to control 'noxious weed'

By William Holder

Confronted by an exotic plant that is choking wetlands throughout North America, scientists are unleashing three foreign insects in five states and Canada to control this "noxious weed."

Purple loosestrife, an attractively blooming plant sold in some nurseries, can be found coast to coast in North America. Listed as a "noxious weed" by some states, it crowds out native vegetation, destroys the habitat for birds and other native wildlife, and reduces the overall biological diversity of many wetland systems, according to Richard Malecki, a wildlife biologist with the U.S. Fish and Wildlife Service's Cooperative Fish and Wildlife Resource Unit in the College of Agriculture and Life Sciences.

### U.S. and European effort

As head of the Purple Loosestrife Working Group, Malecki has spearheaded an effort to identify insects that control purple loosestrife in its native, European environment. He and a dozen U.S. and European colleagues have identified a root-mining weevil and two leaf-eating beetles that feed exclusively on purple loosestrife and exist over a wide geographic and climatic range.

The researchers have obtained U.S. government approval to release the insects and are dispersing them at test locations in Washington, Oregon, Minnesota, New York and Pennsylvania. Releases are also planned for Canada. They plan to study winter survival and spring reproduction of the insects during the coming year.

"These insects possess good dispersal and host-finding mechanisms. We are hopeful that



Peter Morenus

Purple loosestrife with one of its natural enemies from Europe, a root-mining weevil.

our strategy of using several insects on this one plant species will lead to effective control," Malecki said. "Past efforts to control purple loosestrife with herbicides or by cutting or burning have met with limited success. Such programs are costly, require long-term maintenance, and in the case of herbicides, are non-selective and environmentally degrading.

### Reversing wetland degradation

"Our program, which uses biological predators, is intended not only to reverse the massive degradation of wetlands by purple loosestrife," he said, "but also to highlight the rigorous protocol presently involved in screening foreign insects for release in this country. We also plan extensive post-release monitoring and research."

The researchers have used quarantine facilities to study the effect of the European insects on a wide variety of plants from sites in

the United States and Europe. They paid particular attention to the potential impact on economically or ecologically important plants and threatened or endangered species, finding no significant impact.

Purple loosestrife was introduced to North America in the early 1800s as a contaminant of European ship ballast. The plant now thrives in dense stands throughout the northeastern United States, southeastern Canada, the Midwest and in scattered locations in the Pacific Northwest and California.

Its invasion also has reduced wetland pasture and hay meadows since it is less palatable to livestock than the native grasses and sedges it displaces. Sites with heavy infestations are difficult to mow and manage. In Western states, the establishment of purple loosestrife in irrigation systems has generated substantial concern, according to Malecki.

## BTI improves method of producing viral pesticides

By William Holder

An improved method for using insect cells to produce biological pesticides, devised by researchers at the Boyce Thompson Institute for Plant Research Inc. on campus, could help make these agents more competitive in the marketplace.

The advance is significant for integrated pest management programs, which frequently are hampered by the high cost of biological pest controls, the researchers say. Such programs seek to minimize applications of chemical pesticides by employing alternative approaches, such as biological pest controls.

### Improved technique

The technique relies on taking cells from the very same insects that can cause crop damage, such as caterpillars, and using them as a medium for producing exceptional quantities of biological products, said Robert Granados, director of the Plant Protection Program at Boyce Thompson. The institute is a private, non-profit research institution located here.

The researchers say their patent-in-process

cell lines are five- to 25-times as effective at producing biological products as previous ones. Among the products that can be grown this way are three registered by the U.S. Environmental Protection Agency: cotton boll worm virus, gypsy moth virus and Douglas fir caterpillar virus. None of them are in widespread commercial production.

"I think that the success of viral pesticides may eventually hinge on the use of insect cell cultures," Granados said. Members of his research team presented their findings July 13 and 14 at the annual meeting of the American Society for Virology, held at Cornell. The additional researchers at Boyce Thompson include Kevin McKenna, Alan Wood and Tom Davis. Michael Shuler, Cornell professor of chemical engineering, and Daniel Hammer, associate professor of chemical engineering, collaborated in this work.

The Boyce Thompson technique differs from current methods of producing viral pesticides, which rely on living organisms as hosts and are labor-intensive. About 60 to 70 percent of their cost is in labor, according to Granados. Insect cell cultures, in contrast, are

more conducive to automated production.

Any insect can furnish cells at any stage in its life cycle to form a cell culture, which simply is a collection of cells growing in isolation from the parent organism. Insect cell cultures are self-perpetuating (the line never dies), non-infectious to humans, and unlike mammalian cell cultures, do not display characteristics of cancer cells. These traits make them suitable for use in commercial settings.

### Cell cultures

Cell cultures serve as a growth medium for viral pesticides, but good results depend upon finding a match between the specific insect cell culture and the product to be grown. Granados and his colleagues say their cell cultures, derived from species of lepidoptera (caterpillars and moths), are the best found so far for growing viral pesticides.

The scientists also are exploiting the ability of these insect viruses (called baculoviruses) to be extremely efficient at producing recombinant DNA products. They reason that they might be able to enhance the activity of viruses against agricultural pests by genetically engineering them to produce toxins such as Bt.

Large-scale compost production would have to be better regulated than it is now, they add. Some states monitor composting facilities, but the standards differ, Harrison said. The so-called Class I compost, which is allowed to be used anywhere without restriction, can contain 500 parts per million of lead in Florida; in New York state Class I compost can contain only 250 ppm of lead — a 100 percent difference.

"Meeting user expectations is critical if composts are to be marketed successfully," Richard said. "Promoting composts that don't meet user's expectations — either because of contaminants, such as shards of glass, or because the product is not properly aged — can turn off consumers to compost altogether."

Said Harrison: "Composting is not a magic bullet to solve all our waste woes, but done right, it holds promise for a significant part of our municipal solid waste. Done wrong, it is an expensive way to reduce the volume of wastes going to the landfill."

## Women need to cut out fat, not calories, to lose weight

By Susan Lang

Blueberry muffins, pizza, oatmeal cookies and more can be compatible with a low-fat, weight-reducing diet, says a Cornell nutritionist.

Last year, David Levitsky reported that when women ate all the low-fat food they wanted, they lost weight steadily — about one-half pound a week.

"Low-calorie diets don't work because people just get hungrier," Levitsky said. "Low-fat diets, on the other hand, are so much lower in calories because of less fat, that a person can eat all she wants yet still lose weight."

The weight loss is relatively slow but persistent and should result in a 10 percent loss of body weight per year, Levitsky said.

### Government guidelines

Government guidelines for women recommend that no more than 30 percent of calories per day come from fat. Low-fat diets reduce the risk for heart disease, cancer, stroke and arteriosclerosis, yet even lower levels — about 20 percent of calories from fat — are more effective in reducing weight and health risks.

Levitsky recommends:

- Reducing fat in all standard recipes, including muffins, quick breads and cookies by one-fourth to one-half.
- Replacing sour cream or mayonnaise with any combination of low-fat or non-fat yogurt, blended cottage cheese, reduced-calorie sour cream or mayonnaise.
- Thickening sauces and gravies without fat by mixing cornstarch or flour with a little cold liquid, stirring slowly into hot liquid and bringing to a boil.
- Using skim milk cheeses in pizza and pasta recipes and having ice milk instead of ice cream.
- Using one to two egg whites instead of one whole egg.
- Cutting high-calorie ingredients, such as sunflower seeds, dried coconut, raisins, chocolate chips and nuts, in half in recipes.
- Using maple syrup or honey instead of oil in salad dressings.
- Opting for baked crackers and chips instead of fried ones whenever possible.

### Low percentage of fat

The bottom line is to eat food with no more than 20 to 30 percent of calories from fat. To calculate percent of calories from fat from a food label: multiply number of grams of fat by 9 calories; divide that by the total calories per serving to get the percent of calories from fat.

For example: In a serving of crackers that has 70 calories with 3 grams of fat: multiply 3 grams by 9 calories, for 27 calories; 27 divided by 70 equals 38 percent of calories from fat, which is above the recommended level.

For information on how to revise recipes to reduce fat, obtain *Food for Health: Revitalize Your Recipes for Better Health* (399DNSFS2), for \$1 from the Cornell Distribution Center, Business and Technology Park Building.

# Life before birth

## Fetal brain needs help in setting time for birth

By Roger Segelken

A mystery pondered by every pregnant woman and every physician since Hippocrates — exactly what determines the moment of birth — is no secret to an on-board computer called the fetal brain.

So says Cornell obstetrician and reproductive biologist Peter W. Nathanielsz in a new book, *Life Before Birth and Time To Be Born*. Nathanielsz tells how the fetal brain develops the skill to monitor and respond to normal and abnormal intrauterine conditions and to signal the onset of labor. Parents-to-be (as well as doctors, nurses and the general public) who read the book will appreciate why Nathanielsz recommends a T-shirt for every pregnant woman with the legend: "Baby on Board — Don't Abuse."

"How a pregnant woman eats, how much and how well she sleeps, how she copes with financial and personal stress over the nine months of her pregnancy will greatly affect how her baby grows and develops his skills," Nathanielsz writes. After describing how stresses on pregnant women affect prenatal development — and the enormous cost of treating premature infants and the subsequent ailments they often suffer — the obstetrician concludes: "We must do everything within our power to reverse the trends of the last 20 years in which the general level of prenatal care has diminished."

### Fundamental questions

Director of Cornell's Laboratory for Pregnancy and Newborn Research, Nathanielsz turned from obstetrics practice 30 years ago to biomedical research in the hope of answering fundamental questions about premature labor and abnormal fetal growth. His laboratory was the first, in 1991, to show that the chemical signal to start labor comes from the fetal paraventricular nuclei (two ball-bearing-sized collections of nerve cells in the hypothalamus) in the fetal brain, rather than from the mother.

Twenty-six centuries earlier, Hippocrates, the Father of Medicine, professed that the baby "decides" when the birth process begins. Proof of that came only with the application of ultrasound monitoring, biomedical techniques to measure hormones and other blood constituents, and computer analysis of fetal brain waves, heart rates and the patterns of uterine contractions.

"This book could not have been written 10 years ago," Nathanielsz said, noting that physicians who have been out of school that long will find much of the information new to them. While he included enough detail to engage scientists and physicians, the author said, he deliberately wrote *Life Before Birth* in language understandable to non-scientists, for every mother- and father-to-be.

Besides showing how the fetus starts the birth process, Nathanielsz answers such questions as: Why does the fetus make breathing movements, why does it stop breathing when the oxygen supply is short, and how may prenatal events predispose a baby to Sudden Infant Death Syndrome? Or, how do cells in different parts of the fetus "talk" to each other during development, can the fetus tell time, and how does maternal lifestyle affect the fetus?

The book can be read as a pregnancy progress, but it's more of a "what's-happen-

ing" story than "how-to-do-it," a genre that already fills the publishing marketplace. If readers can understand the process that enables one cell to become properly organized billions — and what can go wrong along the way — they will feel compelled to help the baby-on-board emerge only when it is ready for life's challenges, Nathanielsz said.

### Fetal development

He covers the range of stresses that can affect fetal development, including tobacco smoke, alcohol and non-prescription drugs. Emotional stresses can be harmful, and Nathanielsz points in particular to money worries. Financial stress may lead to increased secretion of adrenaline, the stress-related hormone, which decreases blood flow to the uterus and hence to the placenta. "The fetus will get a better chance in life if his mother can have nine months free of money concerns and other major worries," he writes.

Everyone (except pregnant women) should worry about the lack of money spent on prenatal care, the physician-researcher said. "I look forward to a time when adequate maternal care will be available to all mothers," Nathanielsz said, "when each newborn baby not only cries, 'I am here!' but cries, 'I am perfectly made!'"



Peter Morenus/University Photography

Obstetrician and reproductive biologist Peter W. Nathanielsz examines a sonogram of Newfield resident Kris Quill's fetus with the help of ultrasonographer Jeanette Knuutila at Tompkins Community Hospital.

## 'Popular' book gives parents-to-be biological news they can use

By Roger Segelken

After spending 30 years writing scores of technical papers and books on reproductive physiology, Peter W. Nathanielsz, M.D., Ph.D., penned a "popular" book for two compelling reasons. Scientists and physicians are not the only taxpayers, and they are not the only ones having babies, either.

The Cornell obstetrician-turned-researcher sees his latest book, *Life Before Birth and A Time to Be Born*, as a way of reporting to the public on results of publicly funded research. All questions in the field of reproductive biology have not been resolved, Nathanielsz acknowledges. But biomedical science in that area has reached enough of a plateau, he thinks, to offer valuable new information for parents — and policy-makers, too — who should be interested in healthy babies.

### Time of synthesis

"This is a time of synthesis," Nathanielsz said, "a time when independent but interrelated scientific studies throughout the world are adding up to a better understanding of how to help the pregnant woman and the fetus."

Nathanielsz chairs the Maternal Health Research Committee of the National Institute

of Child Health and Human Development, which evaluates the major government-funded research projects conducted in the area of pregnancy and newborn life. He is director of the Cornell Laboratory for Pregnancy and Newborn Research, which focuses on two particular problems, premature labor and abnormal fetal growth.

The author and father of two grown children was born in 1941 in Ceylon (now Sri Lanka) and earned his medical and Ph.D. degrees from England's Cambridge University. He taught and conducted research at the University of California in Los Angeles for six years before joining the Cornell faculty in 1982.

Nathanielsz said his inspiration to study medicine was his father, who "picked up a brown paper bag containing a physically handicapped baby on the steps of the Government House" in Colombo, the capital of Ceylon, and proceeded to found the Ceylon Crippled Children's Association.

One goal of Nathanielsz's pregnancy research is to reduce the number of premature births — now about 10 percent in the United States — because at least 75 percent of fetal deaths during labor or in the first month of the baby's life are associated with prematurity. He notes that premature babies are 10 times more likely than full-term infants to suffer major neurological handicaps, and low-birth-weight babies are 200 times more likely to die in their first year.

### Understanding the normal

"We can't understand the abnormal — and put it right — until we know how the normal works," Nathanielsz said. Much of the research at his Cornell lab, which is part of the College of Veterinary Medicine, is conducted with pregnant sheep as animal models of the human reproductive system. One result of studies of natural fetal rhythms was the discovery that few babies-about-to-be keep convenient doctors' hours: Labor (in sheep and in humans) most frequently begins at night.

To keep from spending too much time "in the rarified atmosphere of research," Nathanielsz takes his new knowledge to the bedside, giving grand rounds in obstetrics at 15 to 20 major teaching hospitals nationwide each year.

The author said the book should help prospective parents ask more informed questions of their obstetricians, even as they monitor progress of the pregnancy with an insight that not all physicians have. One reviewer, Dr. Edward J. Quilligan, editor of the *American Journal of Obstetrics and Gynecology*, commended Nathanielsz for including details on development of the fetal brain and behavior, the lungs and heart, and how the fetus tells time — issues not covered in other books.

Nathanielsz would like people other than mothers — medical policy-makers, for example — to read it. It is ironic, Nathanielsz said, that at a time when medical science is demonstrating the value of preventive care during pregnancy, "we still cut back on prenatal care in those disadvantaged sections of the community that would most benefit.

"No generation of children has been born less well nourished and less well prepared for life after birth than the babies being born today," according to Nathanielsz. "In a society as endowed with material benefits and knowledge as ours, there is deep shame in this state of affairs."

# Birth of first child triggers distress only when women quit work

By Susan Lang

Although some women experience postpartum depression, for most women having or adopting a baby has no direct effect on their mood or level of psychological distress, according to a Cornell study. What matters most is whether the women work.

Women who leave full-time jobs to stay home with their babies are more psychologically distressed than new mothers who do not quit work, says medical sociologist Elaine Wethington, an assistant professor of human development and family studies in the College of Human Ecology. Wethington studies the sociological aspects of stress and depression.

"Contrary to popular belief, the transition to parenting is not inevitably related to having more psychological distress," she said. "Evidently, though, it affects mental health status insofar as it relates to a woman's decision whether to cut back on paid employment."

Wethington and co-researcher Ronald C. Kessler of the University of Michigan used data from 745 married women in the Detroit area who were interviewed in 1985 and then reinterviewed in 1988.

The researchers found that when women increased their labor force participation — going from full-time homemakers to full-time or heavy part-time workers — their levels of psychological distress declined, while women

who cut back on paid work to stay home with children reported more distress.

"In fact, the women in the Detroit sample benefit from increased employment hours whether or not they have children and irrespective of the number and ages of their children," Wethington said.

These findings are consistent with other studies that have found that employed women generally report better mental health than unemployed women. They are inconsistent, however, with research that has indicated that mothers employed part time report the highest levels of satisfaction with their lives.

Whereas high part-time workers in the study reaped the same emotional benefits as

full-time workers, low part-time workers reported more stress than full-time mothers. The reasons, Wethington suspects, may be that women with a light work commitment may not be able to enlist more spousal, paid child care or housework help while also failing to benefit from the other rewards of a work commitment, such as on-the-job relationships, more complex and meaningful responsibilities, stronger career tracks and greater income.

"Women fear that combining work and family responsibilities is a big problem," she concludes. "Our study suggests that the average mother who works is doing very well — in many ways better than the average woman who does not participate in the labor force."

## 'Glass ceiling' keeps women, minorities down

By Lisa Bennett

Sure, women hold only about 7 percent of top management jobs across the United States. But they haven't been active in the workforce long enough to work their way up. If they'd only wait 10 years, the imbalance would take care of itself.

Ten years? Women could wait 100 years and they still wouldn't find doors opening to them in the executive offices of most American businesses. Not unless the barriers that keep women and minorities down are recognized, removed and replaced with new strategies that help them get to top positions.

These are the two views people commonly take on the "glass ceiling" — barriers believed to block women and minorities from top management positions, Renae Broderick said last week during an Advisory Committee on the Status of Women-lunch discussion that attracted more than 60 Cornell women.

Broderick is a senior extension associate with the Center for Advanced Human Resource Studies in the School of Industrial and Labor Relations. The ACSW is a group of 21 women who seek to educate and advocate on issues of concern to women and, among other activities, hold brown-bag lunches on the fourth Tuesday of every month.

### Problem in academia

The existence of the glass ceiling in academia began to come under the scrutiny of Secretary of Labor Lynn Martin just this month, as she asked 20 college presidents to suggest ways to deal with barriers to the promotion of women and minorities.

Last year, Martin vowed to help shatter the glass ceiling in industry through a public awareness campaign and an awards program to recognize effective efforts.

Among the reasons why corporations should seek to crack the glass ceiling, Broderick noted, are the increasingly global market and the changing workforce.

The U.S. Bureau of Labor Statistics predicts that by the year 2000, up to 85 percent of new entrants to the labor force will be women and minorities.

In other words, there soon will be too few white men to fill the top posts, anyway.

Broderick also outlined the five common barriers to the promotion of women and minorities. Because her research has been primarily in private industry, she could not say whether the same conditions apply to academia.

Among the barriers, Broderick said, are these:

- Women and minorities are frequently assigned to staff positions that are not considered training grounds for top management, such as public relations, communications and human resources.

### Qualifications discounted

- The qualifications of women and minorities often are discounted because of cultural differences or differences in academic experience, for example.

- Women and minorities tend to be given less responsibility, authority and compensation than white men, even when they are promoted to equal rank.

- Women and minorities have more limited access to informal networks of higher level managers or to mentoring relationships. This is sometimes the case because the women and minorities are reluctant to cross gender and racial lines, or because upper management deems them high-risk and are, themselves, resistant, Broderick said.

- When hiring, companies often use a restricted range of referrals and outside sources — or "the old boys' network," said Broderick.

This month's ACSW brown-bag lunch will focus on "The Presidential Election: The Climate for Women," with speaker Mary Katzenstein, professor of government. It will be held on Tuesday, Oct. 27, from 11:45 a.m. to 12:45 p.m. in Room G-01 of the Biotechnology Building.

## Seeking ways to make food acceptable to Jews, Moslems

By Albert E. Kaff

Divided in the Middle East, Moslems and Jews are working together in the United States to develop food products acceptable to both religious groups.

Two food scientists here are trying to show the food industry how to produce products that meet both Moslem halal and Jewish kosher dietary rules.

Some kosher foods are acceptable to Moslems, Joe M. Regenstein and Abdel-Samie Hamed told Cornell students and faculty in a lecture on interaction of halal and kosher laws in America. But methods of slaughtering animals and use of certain substances in food processing complicate integration of halal and kosher products.

Regenstein, a member of Gov. Mario M. Cuomo's New York Kosher Food Advisory Council, is a professor of food science who describes himself as "a practicing Jew who keeps a kosher home." Hamed, an assistant professor of animal science at Cairo University in Egypt, is conducting postdoctoral research in the Department of Food Science.

### 20,000 kosher products

Kosher food is big business, accounting for \$1.6 billion in annual sales in the United States, Regenstein said. Quoting statistics from the advertising industry, he said that about 20,000 kosher products are in stores, comprising about one-third of the food products sold in supermarkets in the northeast United States.

"But only about one-third of kosher products are bought by Jews observing dietary laws," he added. "Other purchasers are Moslems, Seventh Day Adventists, vegetarians and consumers who view kosher as being quality food."

One challenge facing the food industry is to lower the price of kosher meat and poultry products that now are priced relatively higher than non-kosher food.

But kosher meat does not always fit strict Moslem requirements, Hamed said. Halal rules require that animals be slaughtered by a Moslem with the animal facing east toward Mecca, Islam's holy city. As each animal is killed, this prayer to Allah must be said: "Bismillah Allah Akbar." The knife must be razor sharp, with a cut quick enough to avoid

unnecessary pain for the animal.

Regenstein said that some meat packers now are placing animal holding boxes so that they face toward Mecca. Kosher laws require only one prayer for a number of animals. But if a Moslem is present and says the appropriate prayer while a rabbi does the slaughtering, the "meat is better than kosher but not fully halal," Regenstein said.

Bone gelatin and alcohol, used in processing some food items, pose problems in meeting both kosher and halal requirements, the two scientists said.

"We are working to develop fish-skin gelatins that will be acceptable to both groups," Regenstein reported. "Also, we believe that food-approved solvents which are non-intoxicating can be used in place of alcohol in flavors used for processed foods so as to make them acceptable to Moslems."

### Intoxicating beverages

While Moslem law prohibits any intoxicating beverages, Regenstein noted that Coors has had its beers kosher-certified. Coors sales are up significantly although nothing special was done to the beer other than certification.

Because it is difficult to remove the sciatic nerve, Jews do not eat the hind quarter of kosher-slaughtered animals. However, this meat is acceptable to some Islamic scholars if a Moslem is present and the name of Allah is verbally invoked during slaughtering.

A problem confronting both Jews and Moslems comes from packaging food in steel drums coated with lard. "The two groups are going through steel plants to check all the coating used in manufacturing equipment for food processing," Regenstein said. "Jews, Moslems and Seventh Day Adventists are working together on this."

The scientists said that efforts are being made to obtain federal regulations identifying animal-fat coatings applied to fruits and vegetables to make them shiny and retain moisture.

"In the United States, I was surprised to learn that not all food marked as kosher is acceptable to Moslems, because lard or alcohol is used in some processes," Hamed said.

Regenstein added: "We are trying to make food laws work for both communities. The big companies want this business."

## Florida electric utility executive talks about Hurricane Andrew

By Larry Bernard

The biggest surprise Hurricane Andrew wreaked on the major utility in South Florida was not the damage to hundreds of miles of transmission and distribution lines, power plants and transformers.

The power company was ready for all that. What management was unprepared for was providing basic needs for hundreds of its employees — housing, food, clothing, meals and health care.

"The major surprise was not the damage. We had no problem getting new poles and lines," said James L. Broadhead, chairman and chief executive officer of Florida Power & Light Group Inc. "We did not envision so many people in our company with so many needs, that we would have 700 people without homes. We filled those needs, because that's what family does. And our employees are family."

Broadhead, a 1958 Cornell mechanical engineering graduate and member of the College of Engineering Advisory Council, delivered two talks to engineering students and faculty Sept. 24. He described the utility's response to the Aug. 24 Andrew, the most destructive hurricane on record to hit the U.S. coast and one of the nation's worst natural disasters. He also showed FP&L videotape of damage to its system.

### 16,000 meals a day

Broadhead summarized the effects on FP&L employees: 3,000 employees affected, 700 with major losses and many who lost their homes completely. The company provided 16,000 meals a day, laundry for more than 4,000 people, 1.3 million gallons of fuel to power 3,153 vehicles, 2,626 hotel rooms and 110 buses.

Damage to its system was extensive, he said: the firm had to replace or repair 1,900 transmission towers (50-ton reinforced towers that snapped like toothpicks), 20,000 utility poles, 600,000 feet of conducting wire and 8.5 million feet of distribution wire. About half of its customer base, 3.5 million customers, were without power after the storm.

"Every part of our system was damaged," Broadhead said.

And at the Turkey Point power plant, which has two fossil fuel and two nuclear power generators, a 400-foot, 11.5-million-ton, steel-and-concrete reinforced smokestack was so heavily cracked and damaged that engineers had to destroy it by detonation. Turkey Point was right in the path of the hurricane's eye, just outside Homestead, Fla., where the worst destruction occurred. The nuclear containment buildings were not damaged, Broadhead said, although warehouses next to them were destroyed.

"Hurricane Andrew was a crisis of major proportions. It put all of us to the test. Success was a matter of being prepared, of planning and of being flexible enough to respond to circumstances you couldn't even imagine," Broadhead said.

Even then, with workers from eight other utilities from other states pitching in, power was not restored fully until last weekend, more than a month after the hurricane — to those homes that were able to have power.

Still, "I can't think of anything where we really went off the trail. I can't think of what we didn't do that we should have done," Broadhead said.

### National energy policy

Earlier in the day, Broadhead gave a talk, "Engineering and Environmental Changes for the Electric Power Industry," in which he



Peter Morenus/University Photography

Florida Power & Light Group Inc. Chairman James L. Broadhead, a 1958 Cornell graduate, lectures about his utility's response to Hurricane Andrew.

called for a national energy policy.

"I think there are going to be a lot of bumps in establishing safe, reliable energy for this country," he said. "I believe we will be able to reduce the environmental impacts of generating and using electricity, but it will be more difficult to maintain in the face of increasing regulation. We need enactment of a national energy strategy."

Broadhead described the irony of electric power in the United States: While electricity is capturing a growing share of energy usage in this country, there is resistance to using fossil fuels for environmental reasons, to nuclear generation of power for fear of radioactivity, to hydroelectric generation because of environmental concerns, to new transmission and distribution systems for fear of health concerns.

"That's quite a paradox," he said.

FP&L's fuel mix is: 27 percent nuclear; 19 percent coal; 17 percent oil; 34 percent purchased power derived primarily from coal; 3 percent gas. "The mix is determined by cost, supply and price. No one fuel is the choice for all companies in all circumstances," he said. "We are quite confident our crystal ball is cloudy. We probably should increase coal and gas to our mix over the next few years."

New technology, spurred by the Clean Air Act amendment that requires reductions of sulfur dioxide in the air, will shift some of the choices by utilities in the next few years, Broadhead said. FP&L, for example, is invested in companies doing research in alternative energy sources such as hydro, wind, thermal, solar, photovoltaic, biomass and geothermal.

# Japan's economy remains strong: leading banker

By Sam Segal

When Vice President for University Relations Henrik N. Dullea introduced Yoh Kurosawa to a standing-room crowd in the Schwartz Auditorium Sept. 24, he noted that, during Kurosawa's working years in Germany, he had developed a fondness for singing "German requiems."

When Kurosawa, president of the Industrial Bank of Japan (IBJ), took the lectern as the 13th Hatfield Fellow in Economic Education, he ad-libbed a preface:

"I did not come here to sing German requiems, but a more cheerful song."

The exchange reflected the quickness and humor that characterized Kurosawa's day of lecturing and meeting with small groups of students and faculty; it also set the tone for his message — a "cheerful," confident and proud description of Japan's economy during a time when some critics are predicting disaster.

The title of Kurosawa's Hatfield lecture was "The Japanese Economy — The Coming Collapse?" The president of the world's, and Japan's, seventh largest bank (the world's top eight are all Japanese) answered his question mark with assertions that Japan was fundamentally solid, its current recession was serious but superficial, and expansion would resume in mid-1993.

Kurosawa, 65, worked for IBJ in Germany, studied business at Harvard and meets regularly with colleagues around the world, including a stop at the World Bank's Washington meeting just before his Cornell visit.

He was the first Hatfield fellow not from the top ranks of U.S. corporations, and Dullea's introduction said "this reflects Cornell's growing ties with other nations, particularly in Asia," as well as a more cosmopolitan outlook in general.

## Meets with faculty, students

Kurosawa, who arrived after midnight the day before and left before dawn the day after his lectureship, seemed to breeze through a packed schedule that included meeting classes and faculty groups at the Johnson Graduate School of Management and the College of Agriculture and Life Sciences, visits to Japanese language classes and the Herbert F. Johnson Museum of Art's Asian collections, and several social functions.

Tall, slim and straight in a dark suit, often clasping his hands in front of him or behind, he spoke evenly, sometimes picking up his notes and holding them right up to his glasses but never getting frazzled, even when audience members presumed to ask three questions at once.

He would also sometimes digress from the English text of his formal lecture. In a passage noting that Japanese companies operated 1,600 factories in the U.S. — in every state but North Dakota — he digressed: "I don't know where North Dakota is located, but sorry: no factory." After long laughter, he added: "It may come."

During a morning meeting with Professor Alan McAdams'



Peter Morenus/University Photography

Yoh Kurosawa, president of the Industrial Bank of Japan, speaks with students at the Johnson Graduate School of Management during his visit to campus as the 13th Hatfield Fellow in Economic Education.

Managerial Economics class in the Johnson School, Kurosawa was discussing traditions and couldn't remember the year Kyoto was founded as Japan's capital. He tried 794, but checked with his wife, who was in the front row. She said 792, and he said, again to loud laughter: "My wife corrects me; she is correcting me always."

During classes, he fielded questions about economics and politics in Japan and throughout the world.

He said Americans often exaggerated the value of Japan's "industrial policy," which helped Japan's computer industry, he said, but had little to do with electronics and autos. Recalling the Japanese visit of President Bush and heads of the big-three American auto companies, he said the top four auto imports to Japan were German and added: "Before saying Japan's market is closed, the U.S. better send delegations to Munich to study BMW."

On the world scene, he said that China "isn't any more under a communist regime," that foreign investment and Vietnamese industriousness would make Vietnam "another Korea" in 10 or 15 years, and that China's support for a new Hong Kong airport had dramatically raised confidence that Hong Kong would continue to boom after its 1997 takeover by China.

## Maastricht is dead

In answer to questions about the European currency problems, Kurosawa said flatly: "The Maastricht Treaty is dead. There will never be one common European currency. There will be no central bank for, perhaps, a hundred years."

He said problems caused by today's fixed-rate currency system and the treaty's cool reception in France and Denmark meant that politicians will have to re-draw details of the economic plans if progress is ever to be made.

As to the effect of the European crisis on Japan, Kurosawa told a questioner: "Your currency and ours are out of the storm. We are seeing a baseball game from very cheap seats."

As to Japan's prolonged recession, he acknowledged that the "bubble" that drove land and stock prices too high had burst, with production and economic growth now down and corporate profits headed for a third consecutive yearly decline for the first time since the end of World War II.

But he followed with statistics to show that the recession was not fundamental:

- Japan's gross national product (GNP) is 13 percent of the world's GNP — behind the United States' 24 percent but almost double Germany's 7 percent and half the 26 percent of the entire European Community.

- It is the world's largest creditor nation.

- It produces 30 percent of new cars registered in the United States.

- Though profits are down, about 90 percent of Japanese companies remain in the black, real GNP should grow by about 2 percent in the fiscal year ending March 31, and unemployment has not exceeded 2 percent.

- Inflation is holding at 2 percent, and the trade balance continues \$110 billion in surplus.

Moreover, he said, a plan announced by the government on Aug. 28 will pump \$86 billion into the economy and is expected to increase real GNP growth by 0.8 percent.

"And if that is not sufficient," he said, "the government is firmly committed to doing more."

In response to critics' suggestions that Japan's economic problems were more than temporary, Kurosawa concluded: "I believe that once the sun sets, it also rises again."

# 'This is not an ethnic war,' says Bosnian ambassador to U.N.

By Albert E. Kaff

A former Tulane University football player came to Cornell last Saturday, not to play, but to describe the slaughter of thousands of people in the war in Bosnia and Herzegovina.

Although he is an American citizen and resident, Muhamed Sacribej earlier this year became the first ambassador appointed by the Bosnian government. He is the Balkan state's representative to the United Nations.

About 400 students and faculty filled Anabel Taylor Auditorium for a lecture and question-and-answer session that lasted two hours and 15 minutes. Some questions from students of Yugoslav extraction were hostile, but Sacribej demonstrated his diplomatic aplomb by never losing his cool. He voiced respect for Serbs, some of whom he said are leaders in his government, although many are fighting against it.

Born in Sarajevo, capital of today's Bosnia and Herzegovina, Sacribej played defensive back ("I was not a star.") at Tulane, where he received his bachelor's degree in 1977 and a law degree in 1980.

## Balkan history

He devoted most of his lecture to a lengthy account of Balkan history from the Roman Empire to the Catholic schism that led to the Roman and Orthodox churches and onward through history: the Ottoman Empire; Moslem and Jewish migrations from Spain to Sarajevo in 1492 during the Spanish Inquisition; the Austro-Hungarian Empire; World War I; the Serbian Kingdom; the creation of Yugoslavia; the 1980 death of Marshal Tito, its post World War II leader; and the breakup of Yugoslavia and today's war.

He spoke of an earlier era of peace among



Peter Morenus/University Photography

Muhamed Sacribej, Bosnia's ambassador to the United Nations, speaks to students during a reception at Sigma Phi.

the multicultural peoples in his native land, the Serbs, Croats, Bosnian Moslems, Slovenes, Macedonians, Albanians and Jews. "Mosques, churches and synagogues were built side by side, and we intermarried," he said, adding: "This is not an ethnic war. Most of the Moslems and Croats are on our side, and one-half of Bosnia's Serbs are on our side."

He concluded his remarks by explaining how an American citizen became ambassador of Bosnia and Herzegovina, and by describing some of the horrors of the war.

"Born in Sarajevo, I lived in a multicultural society," he said. "I came to the United States in 1967 and fell in love with this [American] society, because it, too, is multicultural. My whole life focused on becoming American."

In addition to a Tulane law degree, Sacribej earned an M.B.A. at Columbia University. He worked two years as a lawyer for Standard & Poor's, went into investment banking and then started his own finance firm.

"I remained involved culturally in Bosnia, but America is still my home," he said. "When

Bosnia became independent in February and March of this year and the war started, I became drawn in, and I thought that I should return and fight as a soldier."

But he had just had surgery on his heel. "On crutches, I felt helpless," he said. "I may not be suited for battle; I can't put a lobster in a pot of boiling water, and when I see a spider, I catch it and throw it out the window."

## Horrors of war

He described the horrors of Bosnia's war: "Children as young as 8 raped, babies thrown in the air and caught on bayonets, women violated by bottles being forced inside their bodies.

"We are facing an aggression both within and from without by one of the most well-armed forces in Europe. Against us are 350 artillery pieces, 100 tanks, 100 jets, and they occupy the high ground. We have 20 artillery pieces, two tanks, no planes and obviously a tactical disadvantage. Our troops are dressed in sneakers and jeans, awaiting winter. They are dressed in the Yugoslav national uniform."

In May, Bosnia appointed him as its ambassador to the United Nations. "I didn't know how to proceed, what letterhead to use," he recalled. "I didn't have financing for an embassy, and I depend on private donations from Bosnians. Although Bosnia was recognized by many governments [including the United States], I was its first ambassador. It's hard to set up embassies from a country when its capital is surrounded [by enemy military], so I became a sort of foreign office for Bosnia."

He illustrated his multicultural homeland by reporting that his office in New York includes "two Serbs, three or four Croats, two or three Moslems and a man from Ghana, Africa."

Sansalone *continued from page 1*

"She meets every challenge," White added. "I suggested she take a look at a problem in timber structures I was working on as a possible master's thesis topic. She came back the next week and had the major problem of it solved like it was nothing. 'OK, what's next?' she said. I was dumbfounded!" Sansalone credits White with interesting her in teaching and providing a role model.

William B. Streett, dean of the College of Engineering, said that Sansalone is testimony to the importance of good teaching. Sansalone credits Streett's emphasis on undergraduate teaching as a model of support.

"Mary has achieved true distinction in teaching, service and scholarship, and has set an excellent example for engineering faculty everywhere," Streett said.

Her college teaching innovations, and her attitude, make Sansalone a popular professor. She designed an introductory course in civil engineering—Engineering 116: Modern Structures—in which freshman students compete in a model bridge building competition. Students design and build balsa wood bridges that must withstand a load test at the end of the semester, usually resulting in a raucous but extremely popular class.

"It is one of the best learning experiences available," Jim Bowen, an engineering student, writes in the April issue of *Cornell Engineer*. "Rather than require some students to follow some written procedure for a lab, as in most physics or engineering courses, the bridge competition gives their imaginations free reign. This freedom creates a much more enjoyable environment and leads to a better understanding of the material."

#### Using current events

Sansalone also uses case studies, varying the curriculum each year to make use of current events in civil engineering: the space shuttle explosion, earthquakes such as Loma Prieta, the U.S. Embassy in Moscow. Most of her case studies are classic structures, following the example and work of David P. Billington of Princeton University, such as the George Washington bridge, the bridges of Maillart, the Astrodome and the Eiffel Tower.

She also was instrumental in designing a course to teach future engineers how to teach. The graduate level class—Engineering 600: Teaching Engineers—stems from the National Science Foundation-sponsored program called Synthesis, a National Engineering Education Coalition, coordinated by Cornell. Graduate student teaching assistants and senior undergraduates who want to become TAs learn how to teach engineering.

"I saw the coalition proposal suggesting such a course, and I wrote in the margin, 'Let me know if I could help.' Before I knew it, I was teaching the course," Sansalone said. Helping her are William Carlsen, an assistant professor of education, and Penny Beebe, a lecturer in engineering communications.

Sansalone's teaching philosophy is simple, and she is quick to credit her Cornell professors: "I always try to explain complex ideas in an easy to understand way. I try to relate abstract concepts to real-life examples, and I try to make learning fun and challenging. I also feel it is important to work with and be sensitive to students as individuals. I had some great teachers. I've borrowed something from many of the professors I had and adapted their techniques to my own style," she said, adding, "I have also tried not to replicate the things I found boring as a student."

Sansalone also advises student groups, having just finished a three-year term as faculty adviser to the Cornell student chapter of the American Society of Civil Engineers. During the past three years, the students she advised were involved in designing and building several engineering projects around the Ithaca and Cornell communities, such as a playground for a neighborhood center—a joint project of the ASCE and National Society of Black Engineers—an 80-foot bicycle bridge over a creek in Ithaca, the timber frame for a new science center now under construction in Ithaca, and a set of elevated stairs on a steep slope in Cornell Plantations.

Also, she advised the club on building concrete canoes for regional races against other universities. In 1991, under her guidance, the student chapter won an ASCE award



Peter McE. Buchanan, president of the Council for Advancement and Support of Education and a 1957 graduate of Cornell, presents the Professor of the Year award to Mary Sansalone at a news conference last Friday.

for the most outstanding student chapter.

"The students are all so motivated and talented," she said. "They can do amazing things if a faculty adviser provides a little support and guidance. Working with the ASCE student organization is at the top of my list of things I find most rewarding at Cornell."

#### Women in engineering

She is instrumental in attracting young women and girls to engineering. Among her activities, Sansalone serves as faculty adviser to Expand Your Horizons, a program organized by women graduate students in math, science and engineering for girls in the sixth through eighth grades. Women graduate students, faculty and women from industry lead an all-day conference, which gives girls and their parents a chance to participate in hands-on workshops designed to stimulate interest in math, science and engineering.

Such thinking extends to the classroom as well. "The most important thing we can do as faculty is be more sensitive to the needs of individual students. Good teaching is good for everyone, not just for a select group," she said. "But good teaching helps spark and maintain students' interest and thus encourages non-traditional engineering students to pursue careers in engineering."

In research, Sansalone specializes in stress wave propagation and non-destructive testing of concrete structures. Working first with Nicholas Carino of the National Institute of Standards and Technology—a Cornell civil engineering alumnus—and later with her graduate students, she has developed a technique for detecting cracks and flaws in concrete using low-frequency sound waves. Traditionally, engineers have had to bore holes in concrete structures to look for flaws. She has patented

an instrument with Donald Pratt, a former doctoral student, and a Danish company now manufactures and markets it. The instrument is being used in major construction and rehabilitation projects in North America, Europe, Asia and Australia.

"The instrument allows a user to map the location of defects in a structure, such as a bridge deck. This knowledge is then used to decide when and what type of repairs are needed, and what it will cost," she said.

She travels to Sweden or Denmark each year to consult with the company, waiving her consulting fee if the firm instead pays for her students to come along. "This gives students a chance to see the practical application of their research," she said.

In 1990, the American Concrete Institute awarded her the Wason Medal for Materials Research, one of the most prestigious awards in civil engineering, "usually earned by senior scientists with long and distinguished careers in research," said Streett, the engineering dean. "To be selected for this award within the first five years of one's professional career is a remarkable accomplishment."

No longer riding bulldozers—though she would be happy to if the situation called for it—Sansalone now rides horses. She finds riding along country roads and through the woods relaxing. She has studied classical dressage in Portugal, and has taken horseback riding trips in Europe, Africa and the western United States, and is looking forward to riding in the Australian outback next year.

The Cornell life suits her well. "I enjoy teaching, advising, working with student groups and the opportunity to work with graduate students on interesting research," she said, adding, "I feel very fortunate to be here."

## About the Professor of the Year award

Panels of judges convened by the Council for Advancement and Support of Education and The Carnegie Foundation for the Advancement of Teaching selected Mary Sansalone, associate professor of civil and environmental engineering, from 434 exceptional instructors nominated by institutions throughout the United States. The Carnegie Foundation provides a cash award of \$10,000 to the top professor.

"It is a particular pleasure for CASE to recognize Mary Sansalone for sharing her enthusiasm for her profession with her students and for providing them with the encouragement to develop the skills necessary for their academic and non-academic success," said CASE President Pe-

ter McE. Buchanan, a 1957 graduate of Cornell. "She is an inspirational educator and a superb scholar."

CASE began the Professor of the Year competition in 1981 to recognize faculty members for extraordinary commitment to undergraduate teaching, for contributions to the lives and careers of students, and for service to their institutions and the teaching profession.

CASE is an international association of colleges, universities and independent elementary and secondary schools. The Carnegie Foundation for the Advancement of Teaching, a policy center located in Princeton, N.J., is devoted to strengthening American higher education.

## Titan *continued from page 1*

carbohydrates—the suite of organic chemical building blocks of life here—if only Titan's icy surface could be melted for short periods.

"Virtually every one of the important molecules identified for chemical evolution of the precursors of life are present and could be derived from this mixture if exposed to water," Thompson said.

However, it has remained a "grand mystery" whether contact with water could have occurred, or even whether liquid water exists on the sphere. But at a session on "The Chemical Evolution of Titan" at the World Space Congress in Washington, D.C., earlier this month, Thompson asserted that areas on Titan's surface do occasionally melt, and gave evidence to support the theory that organic chemical evolution can occur.

"This idea would extend the role of icy Titan from one of a natural laboratory for the formation of prebiological organic compounds—already widely accepted in the scientific community—to that of a natural laboratory where these compounds have been mixed with liquid water, allowing further steps toward life to occur," Thompson said.

Thompson's theory is based on the assumption that Titan, like Saturn's other icy satellites, has been heavily cratered by meteoritic impacts over the last 3 billion years. Those impacts cause quite a splash, literally, thawing some of the ice and splattering a mixture of water and organic material onto the moon's surface.

If this is so, "Liquid water is mixed turbulently with organic material lying in the sediment, and it forms a solution of slurry. From that mix you get amino acids and other compounds," Thompson said. "Both the impact-ejected liquid water and the impact-explosion cloud are sure to produce transient environments where some chemical evolution can take place."

In laboratory simulations of the aurorae in Titan's nitrogen-plus-methane atmosphere, Sagan, Thompson and colleague Bishun Khare have produced a tarlike organic material, named "tholin" in a paper by Sagan and Khare about a decade ago. They also have measured the amounts of organic gases produced and have calculated that several-meters-thick layers of tholin mixed with frozen organic "snow"

would accumulate on Titan's surface over billions of years.

Thompson and Sagan now say that more than half of Titan's surface was covered by a slush of water, ice and organic compounds at some time in its past.

"Meteoritic impacts have created a mixed layer of 'soil' composed of 80 percent ice and 20 percent organic material. But more interesting is that about 1 percent of the crater volume remains as a pool of liquid water beneath the crater floor, and even more liquid—about 10 percent of the crater volume—is thrown onto the surrounding surface, producing 'splash craters,'" Thompson said.

#### Crater pool

Both the crater pool and "lakes" of water in the splash area would require an average of 1,000 years to freeze solid, he added, and "that's a long time for organics to interact with water."

"We expect that amounts corresponding to about 2-centimeter thick layers of amino acids, and 20-centimeter-thick layers of other aqueous reaction products have been produced on Titan from tholin alone," Thompson said.

Said Sagan: "The important new step is the realization that impacts will produce transient pools of liquid water. That really changes everything. That means in spurts, episodically, the surface of Titan may have edged further along the road to the origin of life than we previously thought."

The first step toward producing life would be the production of organic molecules on Titan, which Sagan proposed in 1974. The next step would be the exposure of the organic chemicals to water, to produce pre-life molecules. The final step would be further interactions to produce even larger molecular structures and eventually, life.

If the Titan impact model is correct, planetary scientists would have to reassess their notions of where life may be possible, he said.

Confirming this theory must wait at least until the year 2005, when a NASA-European Space Agency mission delivers an orbiting spacecraft to the Saturn system. The Cassini Mission, scheduled for launch later this decade, will carry a radar mapper and a probe called Huygens that will return, revealing new data on Titan's atmosphere and surface.

# Moon helps detect binary stars in studies at Palomar

By Larry Bernard

Cornell astronomers, using the moon as a shield in an experiment at Palomar Observatory with scientists from the California Institute of Technology, have seen an unusually high number of binary stars in a cluster of young stars just forming.

Using a similar technique, the astronomers also have learned about the structures of rings around Uranus by measuring light from a star as it passed behind the distant planet.

The researchers made use of occultation — the passing of one celestial body in front of another — in a series of experiments the night of July 11, 1992, using the 200-inch Hale Telescope atop Palomar Mountain near San Diego. Led by Philip D. Nicholson, a Cornell astronomer, Cornell doctoral candidates Doug Hamilton and Ignacio Mosquera made 18 occultation measurements that night — 16 with the moon, one with Uranus and one with Neptune. Graduate student Olga Perkovic is helping analyze the data.

By training the telescope on a cluster of newly forming T Tauri stars, they watched as

16 stars disappeared behind the moon. An infrared photometer measured light from these stars, and a computer graph showed where starlight was blocked and where it was not. A graph showing the "light" vanishing twice indicates a binary star system. About half of these stars were binaries, Nicholson said.

"These stars, which are surrounded by clouds of dust, cannot be seen in visible light. Infrared wavelengths, however, can pierce the dust cloud, allowing us to see the stars within," Nicholson said.

## Grand structures

Astronomers usually use the Hale telescope to study distant galaxies and other grand structures. But by using infrared instruments, scientists could learn more about planets within the solar system. "We could make use of the fact that in the infrared wavelengths, planets are very faint due to strong absorption of these wavelengths by the planet's atmosphere," Nicholson said. "This allows us to see very small objects, like satellites or rings, very close to the planet. At optical wavelengths, these objects cannot be seen from Earth because they are lost in the glare of the planet."



Chris Hildreth/University Photography  
The Palomar Observatory.

Their work, still incomplete, was funded by NASA and the New York Astronomical Society. Cornell astronomers have access to 25 percent of night observing time at the Palomar Observatory.

The researchers also trained their sights on a star passing behind Uranus. The photometer measured the infrared emissions from the star as it passed behind the outer seven of the planet's 10 rings. Astronomers could determine the opacity of each ring, whether its edge was sharp or fuzzy, and its width accurate to 1 km.

"Based on previous occultations, as well as Voyager images, we expected to find differences in width along the rings," Nicholson said. "We hope to combine our observations with the previous ones to better understand these breadth variations. For instance, the epsilon ring varies in width from 20 km to almost 100 km. We would like to know the dynamics of what keeps these rings as narrow as they are and what makes them different widths. These observations give us high quality data. Together with other observations, we should be able to model the rings very accurately."

# Helping people with disabilities go into business

By Susan Lang

Working from a wheelchair, a Syracuse woman has launched a successful tow truck business. Nearby, another wheelchair user makes a living repairing typewriters and computers. Four workers in the Binghamton area, all with "non-visible" disabilities, run a worker-owned bakery.

These success stories will be role models at the upcoming conference, "Employment for Individuals with Disabilities Through Entrepreneurship: The New Options," co-sponsored by the Human Services Administration Program in the College of Human Ecology and the International Center for the Disabled (ICD) in Manhattan. The conference is slated for Oct. 8-9 at Cornell and will be repeated Oct. 22-23 at the ICD.

"Our goal is to help find creative employment solutions to assist persons with disabilities. Employment options will be presented on how to become successful entrepreneurs or how to forge creative partnerships with businesses," says Ron House, senior lecturer and director of Cornell's Human Services Administration Program.

## Variety of resources

The conference will explore how individuals with disabilities can tap into a variety of private and public resources, including the Small Business Administration, the Commerce and Labor departments, New York State Office of Vocational and Education Services for Individuals with Disabilities, Veteran's Administration, Department of Economic Development, Farm Credit Bureau and Cornell Cooperative Extension, among others. One resource available to people with disabilities is a book entitled *Business Opportunity for Individuals with Disabilities* co-written by two of the conference presenters and available through the New York State Small Business Development Center in Syracuse.

The conference will also review how to obtain federal funding through the Social Security Administration's Plan to Achieve Self-Support (PASS) program and how to apply the funds to developing a small business; principles of starting a small business, including legal, marketing and economic concerns; and innovative success stories of persons with disabilities who have launched successful small businesses. Participants will include persons with disabilities as well as personnel who

coordinate employment efforts on behalf of those with disabilities.

## Self-development

The presenters at the conference are people with disabilities who have been successful through self-development. One goal of the conference is to convey how individuals have achieved self-sufficiency and a higher level of income through small business options.

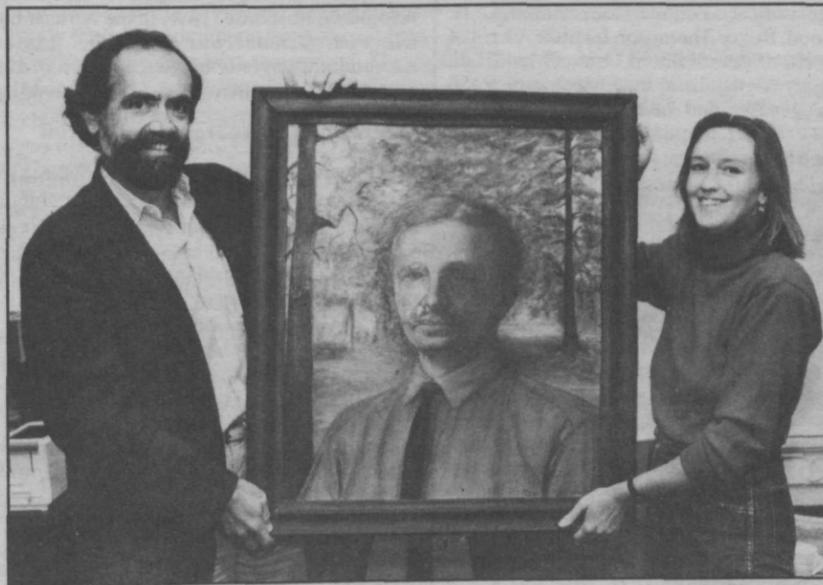
In the United States, it is estimated that some 43 million individuals have one or more of 600 physical and mental disabilities. About 70 percent of those with disabilities in this country are unemployed. This high rate could

be dramatically reduced if more individuals were to learn how to access available funding and services and how to go about creating an employment opportunity for themselves.

The Human Services Administration Program provides continuing education to rehabilitation personnel, independent living centers and other non-profit organizations in New York, New Jersey, Puerto Rico and the Virgin Islands. It is celebrating its 25th anniversary.

For more information on the conferences, contact Robin Thoman, Human Services Administration Program, 254 MVR Hall, or call 255-2575.

## Portrait found



Chris Hildreth/University Photography

James Lassoie (left), chair of the Department of Natural Resources, and Lisa Fernow '79, M.B.A. '84, hold a painting of her great-grandfather, Bernard Fernow, for whom Fernow Hall is named. The painting, loaned to Cornell from the estate of David Fernow '46, represents a triumph for Lassoie, who had known for some time that such a painting existed but was unable to discover its whereabouts. The mystery was solved recently when Lassoie met a cousin of Ms. Fernow's, who was visiting the building and told him its location. Ms. Fernow delivered it this past Saturday. Bernard Fernow was the first leader of Cornell's State College of Forestry, established in 1898. Though a political dispute led to the withdrawal of legislative support and the closing of the college in 1904, it re-emerged in 1911 as the Department of Forestry, later to become the Department of Natural Resources.

# Cornell and Wells set course exchanges

Students at Wells College and Cornell are able to take each other's classes starting this fall, under a new agreement intended to enrich undergraduate education at both ends of Cayuga Lake.

Full-time undergraduates will be able to enroll in courses not given at their home institutions — up to one course a semester and a maximum of four during their undergraduate years. The limits will not apply to Cornell students taking Wells teacher-education courses.

The agreement was announced jointly by

Linda Rinker, Wells' academic dean, and Larry I. Palmer, Cornell's vice president for academic programs and campus affairs.

Applications to take specific courses will go through the home colleges, to which tuition will be paid; but actual registration will be done at the guest college, whose course prerequisites must be met and whose faculty have final say on such questions as availability of space for the applicants.

"Our two institutions have long shared close ties — personal and professional," Palmer said, adding: "This will build on those ties and

give our students new course options without additional costs. We're delighted at the partnership."

Rinker called Cornell "one of the greatest educational institutions in the United States" and said: "I am delighted that Wells students will now have the opportunity to make use of that resource in a broader way in their undergraduate programs. At the same time, we welcome Cornell students who wish to take advantage of the programs we can offer them. This new agreement will strengthen the cooperative bonds between Wells and Cornell."

# A diploma is not enough, Tisch advises

By Albert E. Kaff

Jonathan M. Tisch, president and chief executive officer of Loews Hotels, told 400 students in the School of Hotel Administration that a diploma alone will not assure them of a good job.

"A diploma from such a prestigious school as this one won't be enough in this highly competitive business," said Tisch, speaking Sept. 25 at the Hotel School's weekly Dean's Distinguished Lecture Series. "You also must be creative."

To illustrate his point, Tisch gave examples of events sponsored by Loews Hotels "to edit out the ordinary [and] exclude the humdrum" in a bid to gain media attention while also performing a valuable public service.

"In the Regency in New York City, where rooms are priced around \$275 a night, we organized a high-stakes game of Monopoly that raised \$150,000 for charity and attracted a lot of media attention," he reported.

Loews then moved the Monopoly game to some of its other hotels. In other efforts, the hotel group supports community activities such as providing food for the homeless and sponsoring literacy programs, he said. The 14 Loews hotels are located in the United States, Canada and Monaco.

## Small advertising budgets

Tisch explained that hotels operate with relatively small advertising budgets and so must find other ways to get into news media. "We have one of the toughest advertising jobs in the world, because our advertising has tended to make hotels all look alike," he said. "Hotels have resisted big money on advertising because they believed that results were based on locations."

Tracing the history of hotel advertising, Tisch said that early in this century most hotels advertised that they were fireproof. During the Great Depression, they advertised economy rates as low as \$2 a night "with a radio in every room." He added: "We need more aggressive advertising. But hotel group ads all look alike, too much 'Me, too.'"

He challenged educators: "Hotels are 15 years behind in advertising. Part of the blame is on hotel schools, because most of them do not teach advertising."

Tisch compared hotels to show business. "As the song says, 'There is no business like show business,' and now there is no hotel business without entertainment," Tisch said. "Our performance goes on 24 hours a day, 365 days a year, and we have to keep our act together."

Before joining Loews, Tisch, a graduate of Tufts University, was a cinematographer/producer for WBZ-TV, an NBC affiliate in Boston. He is a director and treasurer of the New York Giants and a member of Dean David Dittman's Hotel School Advisory Council.

Among upcoming speakers in the lecture series is David Thomas, founder and senior chairman of Wendy's International Inc., who will speak on Nov. 6.

# CALENDAR

continued from page 12

## MUSIC

### Department of Music

The Ithaca Opera will perform Ira and George Gershwin's "Of Thee I Sing," a timely, Pulitzer Prize-winning musical comedy, Oct. 2 and 3 at 8 p.m. in Barnes Hall. Tickets are \$15 and are available at the Lincoln Hall ticket office and the DeWitt Mall ticket center.

Composer/pianist David Feurzeig will perform Oct. 4 at 8:14 p.m. in Barnes Hall. Featured will be his "Lemme Tell Ya Somethin'," with soprano Judith Kellock and the Ithaca Brass Quintet; "On-goings," with Kellock; "Sextet"; Gary L. Feurzeig's "Four Homages"; and Barbara White's "Movements."

Students of Jonathan Shames will perform concertos by Mozart and Prokofiev and solo works by Bach, Brahms and Liszt on Oct. 5 at 8:15 p.m. in Barnes Hall.

### Bound for Glory

Michael Smith, will perform in three sets Oct. 4 at 8:30, 9:30 and 10:30 p.m. in the Commons Coffeehouse in Anabel Taylor Hall. Bound for Glory can be heard Sundays from 8 to 11 p.m. on WVBR-FM 93.5.

## RELIGION

### Sage Chapel

PHEME PERKINS, New Testament Studies, Boston College, will deliver the sermon on Oct. 4 at 11 a.m. Music by the Sage Chapel choir, under the direction of William Cowdery, acting university organist. Sage is a non-sectarian chapel that fosters dialogue and exploration with and among the major faith traditions.

### Afro-American

Sundays, 6:30 p.m., Robert Purcell Union.

### Catholic

Daily masses at 12:20 p.m. in Anabel Taylor Chapel. Weekend masses: Saturday, 5 p.m.; Sunday 9:30 a.m., 11 a.m. and 5 p.m., auditorium, Anabel Taylor Hall. Sacrament of Reconciliation, Saturday, 3:30 p.m., G-22 Anabel Taylor Hall. Parish Synod Discussion — "How Can We Help Those Facing Violence, Addiction, Unwanted Pregnancies or Terminal Illnesses?" Oct. 7, 7 to 9 p.m., One World Room, Anabel Taylor Hall. For more information call, 255-4228 or Carole Liggett at 272-1951.

### Christian Science

Testimony and discussion meeting every Thursday, 7 p.m., Founders Room, Anabel Taylor Hall.

### Episcopal (Anglican)

Sundays, worship and Eucharist, 9:30 a.m., Rev. Gurdon Brewster, chaplain, Anabel Taylor Chapel.

### Friends (Quakers)

Sundays, 9:45 a.m., adult discussion; 11 a.m., meeting for worship, Edwards Room, Anabel Taylor Hall.

### Jewish

Reform: Fridays 6 p.m., chapel, Anabel Taylor Hall; Conservative/Egalitarian: Fridays, 5:30 p.m., Founders Room, and Saturdays 9:30 a.m., Founders Room, Anabel Taylor Hall; Orthodox: Saturday, 9:15 a.m., Edwards Room, Anabel Taylor Hall.

Yom Kippur, Oct. 6-7: Conservative: Oct. 6 at 6:30 p.m., Oct. 7 at 9:30 a.m., concluding services at 5 p.m., Statler Auditorium. Reform: Oct. 6 at 8:15 p.m., Oct. 7 at 9:30 a.m., concluding services at 5 p.m., Anabel Taylor Hall auditorium. Reform: Oct. 6 at 6 p.m., Oct. 7 at 9 a.m., One World Room, Anabel Taylor Hall. Free tickets are necessary for Conservative and Reform services the first evening of Kol Nidre. They are available in the Hillel Office, G-34 Anabel Taylor Hall.

### Korean Church

Sundays, 1 p.m., chapel, Anabel Taylor Hall.

### Muslim

Friday prayers, Founders Room at 1 p.m.; Edwards Room at 1:25 p.m. Daily prayer, 1 p.m., 218 Anabel Taylor Hall.

### Protestant Cooperative Ministry

Sundays, 11 a.m., chapel, Anabel Taylor Hall.

### Zen Buddhist

Thursdays, 5 p.m., chapel, Anabel Taylor Hall.

## SEMINARS

### Anthropology

"Culture and Poverty Reconsidered," Delmos Jones, City University of New York, Oct. 2, 3:30 p.m., 215 McGraw Hall.

### Boyce Thompson Institute

"Genes Involved in the Control of Growth and Differentiation in Plants," Jeff Schell, Max Planck Institute for Plant Research, Cologne, Germany, Oct. 7, 4 p.m., Large Conference Room, Biotechnology Building.

### Center for the Environment

"Public Policy Dispute Resolution in Hawaii or Conflict Management in Paradise," Dee Dee Letts, Center for Alternative Dispute Resolution, Hawaii, Oct. 7, 2:30 p.m., 400 Riley-Robb.

### Chemical Engineering

"NMR of Catalysts and Catalyst Supports," Gary L. Haller, Yale University, Oct. 6, 3:30 p.m., 165 Olin Hall.

### Chemistry

"On the Control of Molecular Photoionization," Purdue University, Edward R. Grant, Purdue University, Oct. 1, 4:40 p.m., 119 Baker.

### CIIFAD Forum

"Impact of Rice Seeding Practices on a Leafhopper-Virus-Parasitoid Complex in Thai Rice Paddies," Alison G. Power and Marcia Ishii-Eiteman, ecology and systematics, Oct. 5, 4 p.m., 135 Emerson Hall.

### Ecology & Systematics

"The Effect of Habitat Fragmentation on Populations of tits (parus spp.)," Andre Dhondt, University of Antwerp, Oct. 7, 4 p.m., Morison Seminar Room, Corson/Mudd Hall.

### Education

"Technology and Communications in the Classroom," Geri Gay, education, Oct. 7, 12:20 p.m., 209 Kennedy Hall.

### Electrical Engineering

"Semiconductor Technology Trends in the 21st Century," James F. Freedman, Semiconductor Research Corp., Oct. 6, 4:30 p.m., 219 Phillips Hall.

### Entomology Jugatae

"Genetically Enhanced Pesticides: Ecological, Regulatory and Political Considerations," H. Alan Wood, Boyce Thompson Institute, Oct. 1, 4 p.m., Morison Seminar Room, Corson/Mudd Hall.

"Mighty Metabolism: the Cytochrome P450 Monooxygenases and Insecticide Resistance," Jeffrey G. Scott, entomology, Oct. 8, 4 p.m., Morison Seminar Room, Corson/Mudd Hall.

### Food Science & Technology

"Gums and Hydrocolloids for the Food Industry," James Carr, Sanofi Bio-Industries, Oct. 6, 4:30 p.m., 204 Stocking Hall.

### Fruit & Vegetable Science

"Visionaries in Agricultural Science Today: Where Are They?" Richard Sawyer, retired director general of C.I.P., Oct. 1, 4:30 p.m., 404 Plant Science Building.

"Productivity in Apple Production Systems: The Role of Light Interception by Different Shoot Types," Jens-Norbert Wunsche, visiting scientist, Agricultural Experiment Station at Geneva, Oct. 8, 4:30 p.m., 404 Plant Science Building.

### Geological Sciences

"Volcanic Risk Mitigation," Michael Sheridan, SUNY Buffalo, Oct. 6, 4:30 p.m., 1120 Snee Hall.

### Immunology

"The Role of the Transmembrane Glycoprotein of HIV in Cellular Entry," Lee Henderson, Oct. 2, 12:15 p.m., auditorium, Boyce Thompson Institute.

### Mechanical & Aerospace Engineering

"Predicting Texture Evolution in Metal Forming: Recent Progress and Trends," Paul Dawson, mechanical and aerospace engineering, Oct. 6, 4:30 p.m., 111 Upson Hall.

### Microbiology

"Traditional Fermented Foods of Sudan," Hamid Dirar, University of Khartoum, Sudan, Oct. 1, 4 p.m., Large Conference Room, Biotechnology Building.

Title to be announced, Barbara Iglewski, University of Rochester, Oct. 8, 4 p.m., Large Conference Room, Biotechnology Building.

### Natural Resources

"New Perspectives and New Forestry: So What's New?" James Coufal, SUNY College of Environmental Science and Forestry, Oct. 6, 4 p.m., 304 Fernow Hall.



The popular Gershwin musical, "Of Thee I Sing," will be presented by the Ithaca Opera Association Oct. 2 and 3 at 8 p.m. in Barnes Hall. Pictured are Adam Perl, Graham Stewart, Kathryn Dyer and Robin Booth.

### Neurobiology & Behavior

"Better Living Through Chemistry: Adaptive Strategies of Insects," Thomas Eisner, neurobiology and behavior, Oct. 1, 12:30 p.m., Morison Seminar Room, Corson/Mudd Hall.

"Computational Algorithms for the Jamming Avoidance Response (JAR) in the African Electric Fish *Gymnarchus niloticus*," Masashi Kawasaki, University of Virginia, Oct. 8, 12:30 p.m., Morison Seminar Room, Corson/Mudd Hall.

### Operations Research & Industrial Engineering Manufacturing Engineering Seminar

"What Went Wrong?" Bernard Ross, Failure Analysis Associates, Oct. 1, 4:30 p.m., 155 Olin Hall.

"Issues in Global Manufacturing of Computers," John Monroe, Hewlett Packard, Oct. 8, 4:30 p.m., 155 Olin Hall.

### Ornithology

"Mating Systems in the Blue Tit (*Parus caeruleus*)," Andre Dhondt, University of Antwerp, Belgium, Oct. 8, 7:45 p.m., Fuertes Room, Laboratory of Ornithology, 159 Sapsucker Woods Road.

### Peace Studies

"Future of Fissionable Material in the Former Soviet Union," Wolfgang Panofsky, A.D. White Professor-at-Large, Oct. 8, 12:15 p.m., G-08 Uris Hall.

### Pharmacology

"Structure and Function of High Affinity IgE Receptors," Jean-Pierre Kinet, NIAID, National Institutes of Health, Oct. 5, 4:30 p.m., G-3 Vet Research Tower.

### Physics/Astronomy

"Interplanetary Scintillation Imaging: A New Look at an Old GOLD Problem," Anthony Hewish, Cambridge University, Oct. 5, 4:30 p.m., Schwartz Auditorium, Rockefeller Hall.

### Physiology & Anatomy

"Hypothalamic Control of Thyroid Secretion in Fetal Lambs," T. McDonald, Oct. 6, 4:30 p.m., G-3 Vet Research Tower.

### Plant Biology

"Molecular Biology in the Ultrafast Lane: Probing the Function of Photosynthetic Carotenoids," Thomas Owens, plant biology, Oct. 1, 11:15 a.m., 404 Plant Science Building.

### Plant Breeding & Biometry

"Wheat Breeding Research in the Third World: Recent Impacts," Derek Byerlee, Oct. 6, 12:20 p.m., 135 Emerson Hall.

### Plant Pathology

"Pollen Incompatibility," June Nasrallah, plant biology, Oct. 6, 4:30 p.m., 404 Plant Science Building.

"Characterization of Resistance Mechanisms to the Photosensitizing Compound, Cercosporin," Margaret Daub, North Carolina State University, Oct. 8, 3 p.m., Barton Laboratory, Room A133, Agricultural Experiment Station, Geneva.

### Psychology

"Experimental Sociology: Studying Macro-processes in a Micro-Environment," Henry A. Walker, sociology, Oct. 2, 3:30 p.m., 202 Uris Hall.

### Soil, Crop & Atmospheric Sciences

"Cadmium in Soils and Crops: Influence of Management Practices," Kevin Tiller, CSIRO, Glen Osmond, South Australia, Oct. 6, 3:30 p.m., 135 Emerson Hall.

### Southeast Asia Program

"The 'Syncretic' Nature of Malay World View," Anne Larsen, SEAP visiting scholar, Oct. 1, 12:20 p.m., George McT. Kahin Center, 640 Stewart Ave.

### Space Sciences

"The Pulsar Era," Anthony Hewish, Cambridge University, Oct. 1, 4:30 p.m., Schwartz Auditorium, Rockefeller Hall.

"The Center of the Milky Way," Leo Blitz, University of Maryland, Oct. 8, 4:30 p.m., 105 Space Sciences Building.

### Stability, Transition & Turbulence

"Parallel Implementation of PDF/Monte Carlo Methods," S.B. Pope, mechanical and aerospace engineering, Oct. 6, 12:30 p.m., 178 Theory Center.

### Textiles & Apparel

"Pesticide Contamination in Farm Clothing: An Iowa Case Study," Janis Stone, Iowa State University, Oct. 1, 12:20 p.m., 317 Martha Van Rensselaer.

"Watermaking: A Carpet Mystery," Debbie Jose, E.I. du Pont de Nemours & Co., Oct. 8, 12:20 p.m., 317 Martha Van Rensselaer Hall.

## SYMPOSIUMS

### German Studies

"Music & German Culture," a conference to

Continued on page 11

## CALENDAR

continued from page 11

be held Oct. 10 and 11 at the A.D. White House. Participants include: "Engendering the Minor Mode in Mozart's Operas," Gretchen Wheelock, Eastman School of Music, Oct. 10, 11:15 a.m.; "Constructing Nuremberg: Imagined Communities in Wagner's 'Meistersinger,'" Arthur Groos, German studies, Oct. 10, 2 p.m.; "Fin-de-siecle Fantasies: Electra, Degeneration and Sexual Science," Lawrence Kramer, New York University, Oct. 10, 3:15 p.m.; "The Foxtrot as 'Totentanz': Brecht and Weill's Mahagonny as Weimar Amerikanismus," Kim Kowalke, University of Rochester, Oct. 11, 9 a.m.; "Computers to Cars: German Rock from Kraftwerk to the Skorpions," Matthew Grant, German studies, Oct. 11, 10:15 a.m. The conference is co-sponsored by Deutscher Akademischer Austauschdienst and Western Societies Program.

### American Indian Program

"State of Indian America: Prospects for the Future" will be the topic of a conference held Oct. 8, 9 and 10 on campus. Some of the featured speakers are John Mohawk, "A Vision of Traditional Indian Futures, A Time to Listen"; Simon Brascoupe, Council on Indigenous Peoples' Economics, "Report on UNCED"; Amalia Dixon and Sam Mercado, "Panah Panah, a Miskito Program for Village Life and Eco-Cultural Preservation"; Victor Montejo, "The New Mayan Millennium"; and Billy Frank Jr., "Spirit of the Salmon/A Cycle of Our Culture"; plus reports from native representatives to the Earth Summit '92 in Rio de Janeiro. The conference is open to the public. Registration for the three-day event is \$55 in advance or \$65 at the door for the general public and \$15 for students. Pre-registration is suggested because attendance is limited to 500 people. For information write or call State of Indian America Conference 1992, American Indian Program, 300 Caldwell Hall, Attention: Tony Del Plato, 255-6587.

## THEATER

### Department of Theatre Arts

"Les Liaisons Dangereuses," by Christopher Hampton, a play about the game and power of manipulation set in France among the aristocrats before the Revolution, will be held in the Proscenium Theatre, Center for Theatre Arts, 430 College Ave., on the following dates and times: Oct. 1, 2 and 3, at 8 p.m. Tickets are \$5 and \$7. Black Box Theatre Series No. 1, "Romancers" and "Bedtime Story," will be performed on Oct. 3 and 4 at 7 p.m. in the Black Box Theatre.

## MISC.

### Alcoholics Anonymous

Meetings are open to the public and will be held Monday through Friday at 12:15 p.m. and Saturday evenings 7 p.m. in Anabel Taylor Hall. For more information call 273-1541.

### Christian Science Monitor

The Christian Science Monitor Resource Files will be in Willard Straight Hall lobby on Oct. 1 from 10 a.m. to 4 p.m. with free up-to-the-minute newspaper articles on over 150 topics to assist in research and studies. Free current copies of the Monitor will be available.

### Computer Workshops

The following free workshops on searching databases in Mann Library are open to all members of the Cornell community. Advance registration is required, so stop by the Mann Library Reference Desk, call 255-5406 or e-mail: manx@cornellc for information and registration. Agriculture and Biology Information, Oct. 20 and 28, Nov. 5, 13 and 17; Education Information (ERIC), Oct. 21 and 27 and Nov. 11; General Periodicals, Oct. 20 and 29 and Nov. 18; Nutrition Information, Nov. 4; Census Information, Oct. 22; and Computerized Datasets, Oct. 14.

### Macintosh Users Group (MUGWUMP)

"What Word Processor?" general meeting Oct. 1 at 4:30 p.m., 100 Caldwell Hall. For more information, Mark Anbinder, 257-3480.

### Writing Workshop

Writing workshop walk-in service: free tutorial instruction in writing. Sunday, 2 to 8 p.m., 178 Rockefeller Hall; Monday through Thursday, 3:30 to 5:30 p.m. and 7 to 10 p.m., 178 Rockefeller Hall; Sunday through Thursday, 8 to 11 p.m., Clara Dickson Macintosh Computer Room; Sunday through Thursday, 8 to 11 p.m., Noyes Center Room 112.

## SPORTS

Home contests in ALL CAPS.  
Win-loss records as of Sunday.

### Men's Cross Country

Oct. 3, GBS Invitational at Minneapolis

### Women's Cross Country

Oct. 3, GBS Invitational at Minneapolis

### Varsity Football (1-1)

Oct. 3, LAFAYETTE, 12:30 p.m.

### Lightweight Football (1-0)

Oct. 2, PRINCETON, 7:30 p.m.

### Men's Varsity Soccer (3-2)

Oct. 3, at Columbia, 11 a.m.

### Women's Varsity Soccer (5-1)

Oct. 3-4, CORNELL CLASSIC, noon

### Men's Golf

Oct. 1, ECAC Tournament at Cornell  
Oct. 4-5, Toski Invitational at Amherst, Mass.

### Women's Varsity Field Hockey (4-1-1)

Oct. 4, BOSTON COLLEGE, noon

### Women's Tennis

Oct. 7, at Colgate, 3 p.m.

### Women's Volleyball (3-4)

Oct. 2, at Columbia, 7 p.m.  
Oct. 3, at Hofstra, 5 p.m.

## This annual football game pits the 'rookies' against the 'fossils'

By Martin B. Stiles

No matter how you look at it, participation, more participation and perpetual participation is what Cornell lightweight football is all about.

This is never so apparent as when the team's alumni return to campus for their annual game with the university's current representative in the Eastern Intercollegiate Lightweight Football League. That's the hard-hitting and lightning fast but little-known league where a player must weigh 158 pounds or less 48 hours before an official game.

Of course, the 48-hour weight limit is stretched into years when the gridiron warriors of bygone days — most in their late 20s and 30s and several even in their 40s — return to campus for a game of rock 'em, sock 'em tackle with the "rookies." "The rookies" is how the self-named "fossils" describe their 1992 alter egos.

"Hey, it's fun playing against guys with mustaches and beards," 18-year-old defensive end Quinn Bellamy '96 said after this year's clash between the past and present on a sun-soaked Schoellkopf Field Sept. 12.

And on the other side of the field, 46-year-old Bob Hudak '68, holding one of his two children in his arms, said: "After banging heads for a while, I suddenly realized, wow, the last time I did this these guys weren't even born." Hudak, who lives in Rochester, said he'll be back next year and will continue to train as he had during the past year — getting down to a truly trim 180 pounds on his 6-foot frame.

Oh, by the way, both teams won. The game ended in a 14-14 tie. Several of the "rookies" expressed satisfaction with the score, pointing out that the "fossils" "usually beat us anyway. They don't have to make weight anymore like we do."

During the 17-year series, the alumni are 13 and 3, in addition to this year's tie.

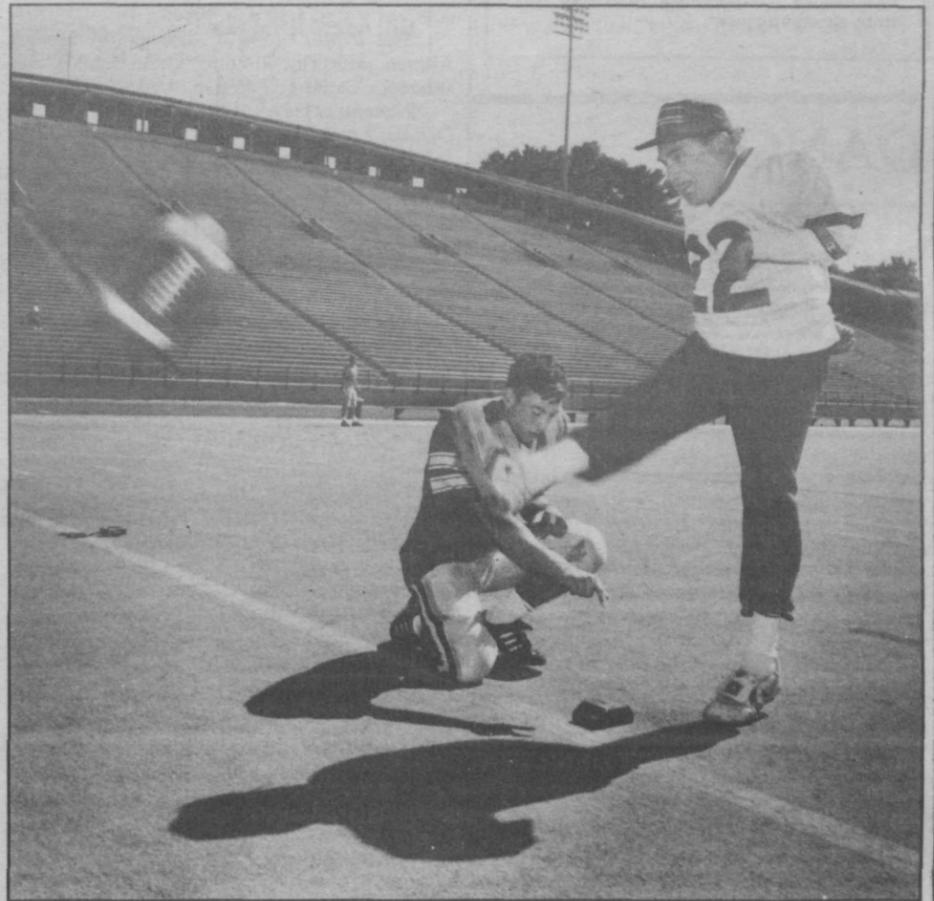
In his report of the game to alumni not there, Jay W. Carter '71, president of the Lightweight Football Alumni Association and a player in all 17 alumni games, wrote: "The rookies put up a spirited fight this year but eventually succumbed to our experience and cunning (and size)."

But others might say: "Age and treachery triumph over youth and skill." The "fossils" scored their second touchdown on a sleeper play — that is, by pretending to substitute a player who at the last second sneaked back on the field of play and raced down the sideline for a pass.

The perpetrator of this deed was Ray Zagars '75, who at 37 still displayed much of the speed and agility that made him one of the league's

## Lightweights beat Army

Last Saturday, Cornell's lightweight football team defeated Army 20-17 at Schoellkopf Field, giving the Cadets their first loss in 21 games.



Peter Morenus/University Photography

Dan Morris '44 kicks from a hold by Dan Hatoca '94 as they practice before a recent game between the lightweight football team and lightweight football alumni.

all-time greats. After scoring on the 40-yard pass play in the waning minutes of the game, he then ran the ball into the end zone for a two-point conversion, tying the game at 14.

Zagars, who hasn't missed one of these alumni games and who obviously works out year-round, said: "There really is no way to get ready for the pounding I take here, but I'll be back next year."

Another lightweight football alumnus sure to be back is Mark Clemente '73, who traveled up and down the sidelines during the game in the wheelchair to which he has been confined since he was paralyzed in a tray-sliding accident on Libe slope in December 1969.

Clemente, who played as a freshman, was back with the team in the fall of 1970, in his wheelchair, as a manager. He also served as the public address announcer at home games even after graduating. It was in that capacity during a game with Army that he stretched the lightweight football concept of participation to the outer limits: A voice reflecting his irrepressible nature echoed throughout Schoellkopf advising the referee that Army's "number 85 is offside again." Cornell barely escaped a major penalty from the incensed referee.

Now a lawyer living in Glenn Ridge, N.J., Clemente has only missed one or two of the alumni games. This year, like all the other 60 or so returning alumni, he was subject to a \$2 fine for every pound over 158, the wheelchair included.

Raising money for the survival of the light-

weight football program after budget cuts in athletics here is only the latest challenge for this special group of Cornellians, which numbers more than 1,100.

With a tradition of more than 50 percent participation in its past fund-raising efforts, the lightweight football alumni are seeking to establish a \$1.2 million endowment for the program. In the meantime, the program is being kept alive with an annual \$20,000 subsidy from an anonymous donor.

The all-too-often hollow expression in sports, "we are a family," echoes with decades of true meaning when it comes to Cornell lightweight football.

Before the alumni game, one of his former players carried his baby into Coach Bob Cullen's office to say hello, but in reality to pay informal homage to the 81-year-old patriarch of not only Cornell but Eastern Intercollegiate Lightweight Football. The league's championship trophy is named in his honor.

Cullen, who once said, "If I didn't have lightweight football, I would die," officially retired as coach in 1979. He has continued as "co-coach" with his 49-year-old son Terry, who joined his father's staff in 1964.

"As always," Carter wrote in his letter to alumni, "the best way you can help is by staying in touch. Please continue to direct your letters, telephone calls and contributions to Coach Cullen."

Everyone knows that means either Bob or Terry.

## Intramural sports standings from flag football, volleyball & soccer

The following teams are among the leaders in this fall's intramural sports program. Teams listed may be from different leagues.

### Flag Football

Touchdown Johnsons (JGSM), 3-0  
Penalized Johnsons (JGSM), 2-1  
Do Right Men (Law), 2-1

### Volleyball

Vet Set (Veterinary Medicine), 2-0  
Evolutionary Mutants (Ecology & Systematics), 2-0  
Los Sacahispos (Foreign Graduate Student Association), 2-0  
Fernow Athletics (Natural Resources), 2-0

### Soccer

Aurora Brasileira (Brazilian Student Association), 2-0  
ILR Reprobates (ILR), 2-0  
Scissorkick Johnsons (JGSM), 1-0

# CALENDAR

All items for the Chronicle Calendar should be submitted (typewritten, double spaced) by campus mail, U.S. mail or in person to Chronicle Calendar, Cornell News Service, Village Green, 840 Hanshaw Road.

Notices should be sent to arrive 10 days prior to publication and should include the name and telephone number of a person who can be called if there are questions.

Notices should also include the sub-heading of the calendar in which the item should appear.

## DANCE

### Cornell International Folkdancers

All events are open to the Cornell Community and general public. Admission is free, unless stated otherwise. For further information, call 539-7335 or 277-3638.

Picnic and dance evening (please bring a dish to pass), Oct. 4, Large Pavilion, Stewart Park. Global Dancing, Tuesdays, teaching 8:30 p.m.; open dancing 9:45 to 10:30 p.m. in Helen Newman Hall Dance Studio. European and Scandinavian Couple Dancing, Thursdays, 8:30 p.m., Helen Newman Dance Studio. For more information call Dick at 273-0707 or Marie at 844-8783.

### Israeli Folkdancing

Thursdays, 8 p.m., Edwards Room, Anabel Taylor Hall.

## EXHIBITS

### Johnson Art Museum

The Herbert F. Johnson Museum of Art, on the corner of University and Central avenues, is open Tuesday through Sunday from 10 a.m. to 5 p.m. Admission is free. Telephone: 255-6464.

"Agnes Denes: A Retrospective," the first comprehensive retrospective exhibition of the work of the contemporary American artist Agnes Denes, on view through Oct. 25. The museum is publishing a major monograph on the artist, with essays by Robert Hobbs, Donald Kuspit, Peter Selz and Lowery Stokes Sims and an introduction by Thomas W. Leavitt, former director of the museum. The book is edited by Jill Hartz, co-curator of the exhibition and museum director of public relations and publications, and designed by Jordan Davies.

"China Between Revolutions, 1917-1927: Photographs by Sidney D. Gamble," will be on exhibit through Oct. 24. During this period China's last dynasty gave way to a fledgling republic. The exhibition is divided into four sections: "Life Outside the Courtyard," "Working," "Honoring the Gods and Ancestors" and "Passage Through Life." A videotape comprised of historical footage shot by Gamble on 16-mm film in 1920 complements the photographs. In conjunction with the exhibit, Leslie Schwartz, coordinator of adult programs at the museum, will conduct a tour Oct. 1 at noon.

On Oct. 3 from 10 a.m. to noon, there will be a tour of the Cornell Library Conservation Laboratory. Tatyana Petrukhova, a conservation specialist, will demonstrate the methods used by a paper conservator. This tour is free, but space is limited.

### Hartell Gallery

Photographs by Susan Werner and paintings and drawings by Thomas Mills, through Oct. 10. The gallery is located in Sibley Dome and is open Monday through Friday, 9 a.m. to 5 p.m.

### Olive Tjaden Gallery

Works by Alice Shih, through Oct. 3. The gallery is located in Tjaden Hall and is open Monday through Friday, 9 a.m. to 5 p.m.

## FILMS

Films listed are sponsored by Cornell Cinema unless otherwise noted and are open to the public. All films are \$4.50 (\$4 for students) EXCEPT Monday Night Film Club (9:30 p.m.), \$3 for all; Thursdays, \$3.50 for all; Saturday

Ithakid Film Festival, \$2 and \$1.50 under 12; and Sunday Matinees, \$3.50. All films are held in Willard Straight Theatre except where noted.

### Thursday, 10/1

"The Wall" (1991), directed by Jurgen Bottcher, 4:30 p.m. Free.

"Be Good, My Children" (1992), directed by Christine Chang, shown with "Dreaming Filipinos" (1990), directed by Manny Reyes, 7:30 p.m.

"Patriot Games" (1992), directed by Philip Noyce, with Harrison Ford, Anne Archer and James Fox, 10 p.m.

### Friday, 10/2

"Leipzig in Autumn" (1989), directed by Andreas Voigt, 4:30 p.m. Free.

"The Player" (1992), directed by Robert Altman, with Tim Robbins, Greta Scacchi and Whoopi Goldberg, 6:45 p.m., Uris.

"November Days" (1992), directed by Marcel Ophuls, 7 p.m.

"Patriot Games," 9:30 p.m. and midnight, Uris.

"To Liv(e)" (1991), directed by Evans Chan, shown with "Too Happy For Words" (1992), directed by Stanley Kwan, 9:50 p.m.

### Saturday, 10/3

"The Player," 7:15 p.m., Uris.

"Pushing Hands" (1991), directed by Ang Lee, with Sihung Lung, Lai Wang and Bo Z. Wang, 7:30 p.m.

"Wisecracks" (1991), directed by Gail Singer, with Whoopi Goldberg, Jay Behar and Paula Poundstone, 9:50 p.m.

"Patriot Games," 10 p.m., Uris

"Housesitter" (1992), directed by Frank Oz, with Steve Martin, Goldie Hawn and Dana Delany, midnight.

### Sunday, 10/4

"Eagle Against the Sun" (1992), directed by John Akshoshi; "Homo Videocus" (1991), directed by Kyuk & Je-Yong; "Island Memory" (1991), directed by Byron Spicer; "Kinestasis Korean Cinema" (1992), directed by Jungtae Lee; "Open Letter" (1992), directed by Brenda Joy Lem; and "Surfaces" (1991), directed by Wing Ko, Asian American Shorts, 2 p.m. Johnson Art Museum.

"The Player," 4:30 p.m.

"Patriot Games," 8 p.m.

### Monday, 10/5

"Sparrow with Sparrows, Raven with Ravens," Southeast Asia Film Series, 4:30 p.m., George McT. Kahin Center, 640 Stewart Ave.

"A Small Piece of Germany" (1990), directed by Joachim Tschirner, 4:30 p.m. Free.

"Wisecracks," 7:20 p.m.

"A Streetcar Named Desire" (1951), directed by Elia Kazan, with Marlon Brando, Vivian Lee and Kim Hunter, 9:30 p.m.

### Tuesday, 10/6

"In the Splendor of Happiness" (1990), directed by Johann Feindt, 4:30 p.m. Free.

"Housesitter," 7:15 p.m.

"The Player," 10 p.m.

### Wednesday, 10/7

"Countdown I" (1990), directed by Ulrike Ottinger, 4:30 p.m. Free.

"Warrior: The Life of Leonard Peltier" (1992), directed by Suzie Baer, 7:20 p.m.

"Every Conceivable Position" (1992), directed by Claire Beavan, shown with "Sluts and Goddesses Video Workshop" (1992), directed by Beatty and Sprinkle, 9:30 p.m.

### Thursday, 10/8

"Countdown II" (1990), directed by Ulrike Ottinger, 4:30 p.m. Free.

"Marquis" (1991), directed by Henri Zhoneux, 8 p.m.

"Housesitter," 10 p.m.

## LECTURES

### Africana Studies & Research Center

"Poetry of African, African-American and Caribbean Identity and Liberation," readings by Micere Mugo of Kenya/Zimbabwe, visiting professor, Africana studies; Ken McClane of Harlem, W.E. B. Du Bois Professor of English; with video presentations by Jamaica's Lorna Goodison and Louise Bennett, introduced by Locksley Edmondson, professor and director, African Studies, Oct. 6, noon, Hoyt Fuller Room, 310 Triphammer Road.

### American Indian Program

"Traditional Cultural Practices in Latin America: Images from Guatemala and Bo-

livia," Victor Montejo, Mayan novelist; and Elsa Guevarra, Quechua representative of the Bolivian rural workers union, Oct. 7, 4:30 p.m., Kaufmann Auditorium, Goldwin Smith Hall.

"An Indigenous View of the Earth Summit," Evaristo Nugkuag, Amazonian environmental representative; and Simon Brascoupe, Mohawk Algonquin representative, Oct. 7, 7:30 p.m., Kaufmann Auditorium, Goldwin Smith Hall.

### Chemistry Baker Lectures

"DNA Analysis From Genomes to Sequence — Part I: Fundamentals," Charles R. Cantor, University of California, Berkeley. "DNA Purification Methods," Oct. 1; "Genetic Mapping," Oct. 6. Part II: Large Scale DNA Analysis, "Physical Mapping: Pseudogenetics and Cytogenetics," Oct. 8. All lectures will be held at 11:15 a.m. in 200 Baker.

### Communication

"What's a Ph.D. in French Literature Doing on Madison Avenue?" Bob Mitchell, Ph.D. in French literature from Harvard and formerly senior vice president and creative director, J. Walter Thompson, Oct. 2, 2:30 p.m., 213 Kennedy Hall

### Cooperative Extension Forum

"Reflections on the Horizon: Human Resource Services at Cornell University," Beth I. Warren, vice president for university resource services, Oct. 5, 9:15 a.m., (8:30 a.m., conversation with colleagues and coffee; introductions and announcements), 401 Warren Hall. The forum is a monthly opportunity to learn about programs, reflect on trends and policies, build networks, learn about Extension and support collaborative work.

### European Studies Program

"The Disintegration of Czechoslovakia," Petr Mares, Woodrow Wilson Center, The Smithsonian, co-sponsored by peace studies, Oct. 1, 12:15 p.m., G08 Uris Hall.

"Observations from Spending the Summer in Moscow," David Hoffmann, history, Mellon postdoctorate fellow, Oct. 2, 12:15 p.m., 153 Uris Hall.

"The Transition to Capitalism in Eastern Europe: The Problem and the Necessity of Bankruptcy," Janet Mitchell, economics, Oct. 5, 4 p.m., 153 Uris Hall.

### Hotel Administration

Brian Halloran, executive chef, Statler Hotel, will discuss donations of food and leftovers to community kitchens, Oct. 1, 11:55 a.m., 465 Statler Hall.

Jacqueline Gaines, executive director of Health Care for the Homeless Inc., Baltimore, Oct. 8, 11:55 a.m., 465 Statler Hall.

### Near Eastern Studies Becker Lecture

"Gender and Religious Revival in the Middle East," Fedwa Malti-Douglas, co-sponsored by women's studies, Oct. 1, 4:30 p.m., Lecture Room D, Goldwin Smith Hall.

"Shah Bano and the Marking of South Asian Muslim Women in the Age of Islamic Fundamentalism," Bruce Lawrence, co-sponsored by South Asia Program, Oct. 2, 4:30 p.m., 374 Rockefeller Hall.

### Operations Research & Industrial Engineering D.R. Fulkerson Lecture Series

Richard M. Karp, University of California, Berkeley: "Physical Mapping of Chromosomes: A Combinatorial Problem in Molecular Biology (Part II)," Oct. 1, 3 p.m., 456 Theory Center; "Probabilistic Analysis of the Assignment Problem and the Asymmetric Traveling-Salesman Problem," Oct. 2, 2 p.m., 165 Olin Hall.

### Plantations Audrey Harkness O'Connor Lecture

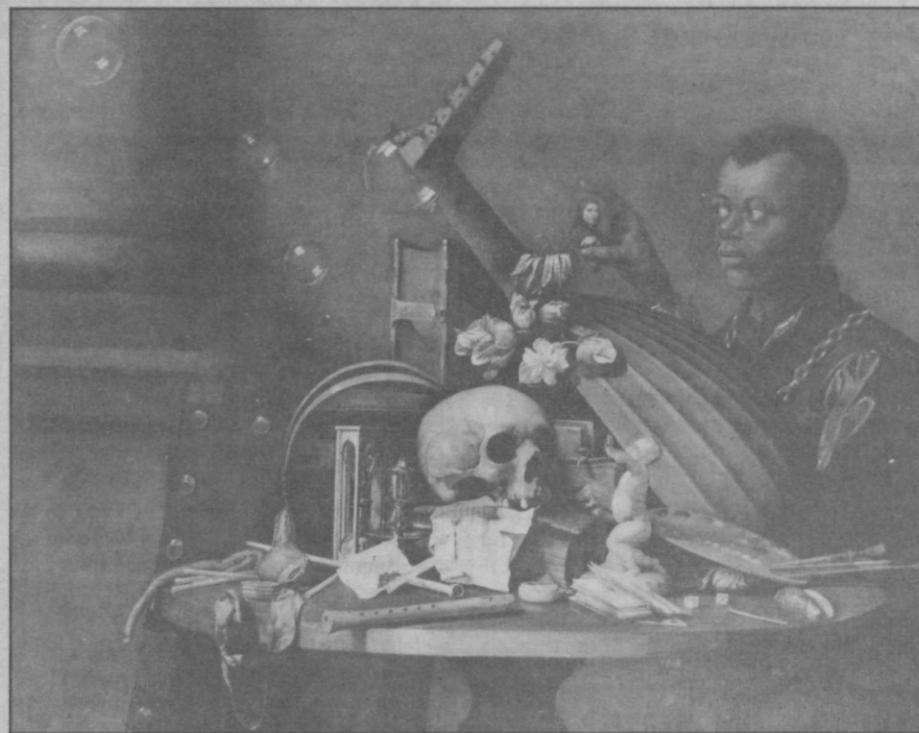
"Ethnobotany of the Iroquois From Root Tip to Pollen: The Broad Botanical Uses of Indigenous Plants for Food, Beverage and Medicine," E. Barrie Kavasch, ethnobotanist and author of *Native Harvests and American Indian Cooking*, Oct. 1, 7:30 p.m., Multi-Purpose Room, Robert Purcell Union.

### Society for the Humanities

"The Yuppie Spectator: Yuppie Envy and Yuppie Guilt (Thirty Something)," Jane Feuer, University of Pittsburgh, former fellow, Society for the Humanities, Oct. 1, 4:30 p.m., Guerlac Room, A.D. White House.

### Theory Center

"Trends in High Performance Computing," Sidney Karin, San Diego Supercomputer Center, Oct. 6, 2:30 p.m., 456 Theory Center.



"Vanitas with Negro Boy" by David Bailly (1584-1657) is on view Oct. 2 through Nov. 29 at the Johnson Museum as part of the exhibition *In Medusa's Gaze*.

## Still life exhibition at Johnson Museum

*In Medusa's Gaze: Still Life Paintings from Upstate New York*, an exhibition of 41 European and American still life paintings from the 17th to 20th centuries, will be on view at the Herbert F. Johnson Museum of Art from Oct. 2 to Nov. 29.

At different times the still life has been used to convey a moral message and remind us of the fragility of life, to allow experimentation or to display the technical accomplishments of the artist.

The show takes its name from the still life painting's ability to stop time and to "depict the world as if frozen by the gaze of Medusa," as described by the curator, Bernard Barryte.

The show is drawn from the collections of

six museums — the Johnson, the Albany Institute of History and Art, the Albright-Knox Gallery, the Everson Museum of Art, the Memorial Art Gallery and the Munson-Williams-Proctor Institute.

The show includes the Johnson Museum's still lifes by David Bailly, Otto Martseus van Schriek, Cornelis Spaendonck and Raoul Dufy. The exhibit also contains works by Picasso, O'Keefe and Warhol.

Barryte will give a lecture about the exhibit on Sunday, Oct. 18, at 2 p.m., followed by a reception. Museum Director Frank Robinson will give a gallery talk about selected Dutch paintings in the show on Oct. 22, at noon. Both events are free and open to the public.

# WorkPlace

Sharing human resource perspectives

Produced by University Human Resource Services

## Learning and Living with Change

Dear Colleagues:

In the first issue of *The Cornell Workplace*, I talked about the Cornell community as being a community of learners, involved in the process of continuous learning. Today I would like to expand on this concept of learning as it applies both to us as individuals within the Cornell workforce and to Cornell as an organization.

The central idea I would like to explore today is this: that continuous real learning is important because it enables us to reframe our questions and our searches for creative solutions in ways that give us—both as individuals and as an organization—the flexibility to respond to the many rapid changes that are taking place in the world around us. At the same time, paradoxically, learning is not just a matter of learning in order to cope with change; learning itself brings about change.

As an example, consider the tremendous impact personal computers and "fax" machines have had on some of the simplest details of doing work at Cornell. My colleagues tell me that only a few years ago, if one department wanted another department to do something, the first department would call the other on the phone, explain that some important materials would be sent over either by courier or through campus mail, and ask the second department to act on those materials within the next couple of days. Now one department calls up another to say that it is "faxing" something over, and "can you look at it this afternoon?" Or we "quickmail" documents and messages off, at even a faster rate, and expect that the response will be almost immediate.

This simple change in our work patterns has had and will continue to have a profound effect on us. Most obviously, the pace and complexity of all our work has increased. Secondly, our need for staff with skills in either MacIntosh or IBM compatible programs has grown while our need for traditional typists has decreased. And many staff members and faculty have also learned new computer skills in order to remain current in their respective fields.

Thirdly—and perhaps ironically—learning these computer skills in order to cope with change has itself created further change. It is, for instance, no longer as crucial that Cornell's departments or units be located on central campus. Because of our new technologies, it is has become increasingly feasible for Cornell to move many of its nonacademic operations to East Hill Plaza, the airport, or other off-

campus sites to relieve some of our on-campus traffic congestion and office and classroom space shortages. Whether or how our concept of the workplace should be flexed to extend to other areas of Cornell's worklife as well—such as working at home—is a question we have yet to answer. Regardless of how we address the question, it will surely be facing us as an institution in the years ahead, as

studies suggest that rather than pursuing a single career through a progression of positions and promotions up the career ladder, most of us will make several career changes in the course of our worklife. Moreover, the "flatter," less hierarchical organizations that have emerged as a result of restructuring or recession—or just from the general availability of knowledge that the information age has

others, it will mean developing an attitude of reflection—asking, what has happened? how did it happen? how could it have been different or better? And particularly at Cornell, with such a wealth of expertise in so many diverse areas, we can learn from each other. We can seek out mentors, network with colleagues, join study or support groups, volunteer to serve within the Cornell or Ithaca community.

These forms of learning are not that much different from what many of us have done all our lives. The difference is, rather, one of its central rather than peripheral place in the organizational work world. Because of our interdependency, our lifelong learning will mean developing the art of working in an intensely human environment. Increasingly, as we continue to network with each other, it will mean learning to work as part of a team. Because of the rapid changes in our worklife, it will mean developing the flexibility to respond to rather than avoid new situations, to solve problems, resolve dilemmas, meet challenges—in other words, to embrace continuous growth in our lives and our work.

And, for an organization such as Cornell, it will mean asking questions such as:

- As Cornell undergoes reorganization in all areas, how do we create structures that are flexible and can respond to changes not yet foreseen? What role does strategic planning play?
- The new classification structure of the Classification Review Study has fewer, but wider, bands or levels, and thus in some ways Cornell itself will be a "flatter," less hierarchical organization. What will be some of the cultural as well as work-related implications of this structure?

(continued on p. 2)



increasing numbers of women enter the workforce and increasingly come from dual-career or single-parent families, families with childcare needs or families with elderly parents.

I pick this one example of computers because, if learning is both the response to change and the cause of change, learning can by definition never be a process that is finished.

The concept of lifelong learning is familiar to many of our faculty but has in general been less pervasive in the American corporate world of work. In the traditional view of the work world, learning was considered to be that activity that takes place when we are young—during high school, military service, or college—in preparation for the day we began our jobs or our careers. Once we had acquired this learning, our societal myth implied, then we got our job or career, settled down, and "lived happily ever after."

In the world of the 1990s, this pattern rarely holds true. For most of us, changes have been so pervasive that even "refresher" courses are no longer enough to keep us current. And recent

brought about—also make it less likely that the normative pattern will be to "fast-track" careers toward the top.

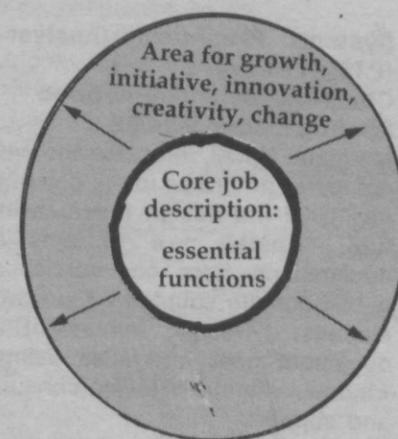
If these emerging patterns do indeed become the norm, then most of us will find that we identify our concept of our selves less with our particular jobs and more with the various talents and skills that enable us to perform these jobs. We will start to build what Charles Handy, in his book *The Age of Unreason*, has called "work portfolios": "A work portfolio is a way of describing how the different bits of work in our life fit together to form a balanced whole."<sup>1</sup>

So real learning has to give us the skills and tools necessary for building this work portfolio, for creating room for horizontal expansion in our work lives.

Charles Handy uses the analogy of an inverted donut to illustrate how we can conceptualize our current jobs and our core definitions of work so that both as individuals and as organizations we can build into our frameworks room for horizontal job enhancement as well as vertical advancement (see Chart 1). In Handy's analogy, the center is the core of the job—its essential functions, clearly defined in the job description—and the outer circle is the less delineated area that provides the individual or organization space for creativity, innovation, and initiative—flexibility, in other words, to change and create change.<sup>2</sup>

How do we prepare for a work portfolio that will strengthen both the core and the outer circle of our individual "inverted donuts"? In some instances, this will mean attending classes, workshops, seminars or conferences; acquiring new skills; reading and researching; or tackling new projects. In

Chart 1



# Living with Change

(continued from p. 1)

- How should our learning as individuals and as an organization be framed within the Quality Improvement Program, which models problem-solving and teamwork?
- How will we recognize performance as we take on new tasks as teams? What will some of the implications of these new responsibilities be for us in terms of our own career development?
- What emerging dimensions of the work and family interface do we need to be considering, given the changing demographics of the workforce?
- How can Cornell best take advantage of the new technologies in configuring the ways in which work is done?

Sometimes, in our learning as an organization and as individuals, we will discover something new. Some-

times we will uncover something that has always been there, but never realized so fully. And sometimes, as T.S. Eliot would say,

We shall not cease from exploration  
And the end of all our exploring  
Will be to arrive where we started  
And know the place for the first time.

*Beth I. Warren*

— Beth I. Warren

<sup>1</sup>Charles Handy, *The Age of Unreason* (Boston: Harvard Business School Press, 1989), p.183.

<sup>2</sup>Handy, p. 129.

<sup>3</sup>T.S. Eliot, *Four Quartets*. In *Collected Poems, 1909-1962* (London: Faber and Faber, Ltd., 1963), p. 222.



## THE Bulletin Board

### Breakfast Dialogues with the Senior Vice President

The Human Resource Relations and Development unit of University Human Resource Services is coordinating invitation-only Breakfast Dialogues with the Senior Vice President, which will take place during the academic year. This is an opportunity for staff to engage in meaningful discussions with the Senior Vice President and colleagues about issues of concern at Cornell. Supervisors are encouraged to allow their staff release time to attend.

### "Getting Out of the Victim Trap" Presentation Slated for Oct. 8

Do you suffer from a chronic illness or know someone who does? It's all too easy to find oneself feeling the "victim" of a disease/disability. The best way to get out of the victim trap is to avoid falling into it in the first place. Susie Szasz, author of *Living With It: Why You Don't Have to Be Healthy to be Happy* will address this issue during a Brown Bag luncheon on October 8 at 12:00 noon in the Day Hall Board Room.

For further information call Joan Fisher, coordinator for disability services at 255-3976.

# Opportunities

Employment Services, 160 Day Hall, Cornell University, Ithaca, NY 14853-2801  
Day Hall: (607) 255-5226  
East Hill Plaza: (607) 255-7422

- Employees may apply for any posted position with an Employee Transfer Application. A resumé and cover letter, specifying the job title, department and job number, are recommended. Career counseling interviews are available by appointment.
- Requests for referral and/or cover letters are not accepted from external candidates unless specified in the ad. Candidates should submit a complete and signed employment application which will remain active 4 months. Interviews are conducted by appointment only.
- Employment Services will acknowledge receipt of all material by mail. Hiring supervisors will contact those individuals selected for interview by phone. Please include two or more numbers if possible. When the position is filled, candidates should receive notification from the hiring supervisor.
- Cornell University is an equal-opportunity, affirmative-action educator and employer.
- Career Opportunities can be found on CUINFO

**Please note the following different procedures for each category of positions:**

- **Nonacademic professional positions encompass a wide variety of fields including management, research support, computing, development, finance and accounting, dining services and health care.** All external candidates must have a completed signed employment application on file with Employment Services before they can be interviewed for a position. Submit a resume and cover letter for each position, specifying the job title, department and job number. Employees should include an Employee Transfer Application.
- **As a prominent research institution, Cornell has a diverse need for laboratory, electro/mechanical and computer support.** Individuals with backgrounds in computer science, biology, microbiology, chemistry, animal husbandry, plant science and medical laboratory techniques are encouraged to apply; applicants with ASCP or AHT licenses are in particular demand. All external candidates must have a completed signed employment application on file with Employment Services before they can be interviewed for a position. Send a cover letter and resume for each position, specifying the job title, department and job number, to Sam Weeks, 160 Day Hall. Skill assessment check lists, available at the Day Hall office, are a valuable aid when applying for computer or laboratory related positions.
- **Approximately half of all university openings are for Office Professionals.** Individuals with secretarial, word processing (IBM PC, Macintosh, Wang, Microm), data entry, technical typing, or medium to heavy typing (45-60+ wpm) are encouraged to apply. Employee candidates should submit an employee transfer application and cover letter, if requested, for each position in which they are interested. All external candidates must have a completed signed employment application on file with Employment Services before they can be interviewed for a position. The submitted application and resume will remain active for a period of four months. During this time, you will be considered for any appropriate openings for which you are competitively qualified. Requests for referral and/or cover letters are not accepted from external candidates unless specified in the ad. Qualified applicants will be invited for a preliminary interview at our EHP office. If you are currently available for employment, you may want to consider temporary opportunities at the University. Please contact Karen Raponi at 255-2192 for details.
- **All external candidates should submit a signed employment application which will remain active for a period of four months.** During this time you will be considered for any appropriate openings for which you are competitively qualified. Requests for referral and/or cover letters are not accepted from external candidates unless specified in the ad. Qualified applicants will be invited for a preliminary interview at our EHP office. If you are currently available for employment, you may want to consider temporary opportunities at the university. Please contact Karen Raponi at 255-2192 for details.

### Professional

**Systems Programmer/Analyst III (PT3803) Level 34**  
**Computer Science-Endowed**  
**Posting Date: 9/24/92**

Maintain, install, integrate and create computer programs in the computing facility of the design research institute. Install new systems and applications from commercial and public domain sources on sun workstations. Design, implement and document user interfaces using x-window systems. Provide consulting and support.

**Requirements:** BS or equivalent in computer science, mathematics, or

equivalent combination of education and experience. 2-3yrs. experience with common LISP, writing C programs on UNIX and X-window system. Familiarity with Emacs text editor; GNU Emacs LISP; and user interface design and modification. Send cover letter and resume to Sam Weeks.

**Applications Programmer/Analyst III (PT3614) Level 34**  
**CIT/Network Resources**  
**Posting Date: 9/10/92**

Support the applications environment of collaborative systems. Design, develop, maintain, test, evaluate and recommend software. Evaluate, test, and productize LAN-based and client/server based packages. Interface with vendors to obtain test software,

resolve problems, etc. Assist in support of UNIX servers for network based applications. Develop tools in support of electronic mail.

**Requirements:** BS degree or equivalent experience with some computer courses. 2-3yrs of related experience in computing and networking. Knowledge of C, Macintosh hardware/software, DOS hardware/software, UNIX, Appleshare, and Novell. Some teaching and/or consulting experience useful. Send cover letter and resume to Sam Weeks.

**Systems Programmer Analyst II (PT3607) Level 33**  
**Modern Languages and Linguistics-Endowed**  
**Posting Date: 9/10/92**

Support speech analysis, speech synthesis, and speech perception research in the Cornell phonetics laboratory. Maintain software and hardware for a number of networked computer systems, including SUN workstations (UNIX), IBM PC's (DOS), and Apple Macintoshes.

**Requirements:** BS or equivalent in computer science, electrical engineering or related field plus at least 2yrs. relevant experience. System programming experience in UNIX and C programming essential. Knowledge of electronics required. Ability to maintain systems with heavy usage and high volumes of data. Familiarity with serial and parallel data transmission, digital signal processing, digital signal processing

digital audio, networking and recording equipment highly desirable. Send cover letter & resume to Sam Weeks.

**Physical Therapist (PA3802) HRI  
University Health Services-Endowed  
Posting Date: 9/24/92**

Responsible for development, implementation and coordination of a back injury prevention program for Cornell employees. Responsible for work site analyses (75%). Also, evaluation and treatment of patients referred for physical therapy (25%).

**Requirements:** Bachelors degree or equivalent in physical therapy required. Masters preferred. 3-5yrs. experience required. Current NYS license and registration. Certification by national Athletic Trainer's Association preferred. 1-2yrs. experience in orthopedic and sports related physical therapy. Send cover letter and resume to Cynthia Smithbower.

**Editor II (PC3607) HRI**

**Media Services-Statutory  
Posting Date: 10/1/92 Repost**

Media services seeks a manuscript editor for a wide range of publication. Responsibilities include helping clients develop copy, editing, and checking proof, galleys through blue-line. Work involves close interaction with clients, designers, and production coordinator.

**Requirements:** Bachelor's degree or equivalent and 2yrs. solid manuscript experience required. Must have excellent editorial skills and strong interpersonal and planning skills. Facility with personal computers and reading knowledge of Spanish essential. Submit cover letter, resume, and three editing samples by October 7, 1992 to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Executive Staff Assistant (PC3901)  
HRI**

**Human Development and Family  
Studies-Statutory**

**Posting Date: 10/1/92**

Provide administrative support for Cornell youth and work program. General administrative responsibilities including correspondence, accountability supervisor, publications, newsletter, and project development.

**Requirements:** Bachelor's degree or equivalent and 2-3yrs. related experience. Knowledge of wordperfect 5.1. Ability to work independently and under pressure. Excellent organizational, interpersonal, and communication (written and oral) skills. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Research Support Specialist I  
(PT3905) HRI**

**Vet Microbiology, Immunology and  
Parasitology-Statutory**

**Posting Date: 10/1/92**

Perform structural analysis on nucleic acids from viral clones and transcripts. Perform southern and northern blot analysis; DNA sequence analysis; mammalian cell culture; and sub-cloning in plasmid and lambda vectors. Direct students and staff in lab procedures. 10 month appt.

**Requirements:** BS or equivalent required in chemistry or biochemistry, MS desired. 2-3yrs. related lab experience. Some experience with the procedures listed above. Send cover letter & resume to Sam Weeks.

**Conference Coordinator I (PA3901)  
HRI**

**Lab of Nuclear Studies-Endowed**

**Posting Date: 10/1/92**

Plan, organize, schedule and coordinate services, activities, staff and facilities for a large international conference including contractual arrangements, housing, transportation, dining, physical facility needs and social events. Assist with preparing publication materials, conference budgets, and accounting and financial reports. This position will be half-time from November 1, 1992 through April 30, 1993 and full-time from May 1, 1993 through August 31, 1993.

**Requirements:** A.A.S. degree or equivalent required. 2-3yrs. related experience required. Bachelor's degree preferred. Previous conference organization helpful. Excellent organizational, interpersonal and communication skills are necessary. Send cover letter and resume to Cynthia Smithbower.

**Extension Support Aide (PA3807)  
HRI**

**Family Life Development Center-  
Statutory**

**Posting Date: 9/24/92**

Under the direction of the project manager provide administrative support to the project manager and project staff for a United States Department of Agriculture-Extension Service funded one-year grant. Responsible for assistance in the production and marketing of instructional/training materials, child and spouse abuse prevention resource manual, quarterly and final reports. Also responsible for administrative arrangements for a conference, including securing site, finalizing details, and maintaining financial and program records. Position Until 9/30/93.

**Requirements:** Bachelors degree or equivalent required. 2-3yrs. related experience required. Experience in writing, editing and organizing conferences necessary. Send cover letter and resume to Cynthia Smithbower.

**Special Projects Assistant (PA3705)  
HRI**

**Public Service Center-Endowed**

**Posting Date: 9/17/92**

Develop programmatic and student linkages with faculty initiated community service projects. Devise and implement a communication strategy for the public service center to enhance linkages. Assist with the coordination and development of student staff, both paid and volunteer, and with student community service groups. 1yr. appointment with possibility of extension, academic year full-time, then part-time. Some evening hours and weekends.

**Requirements:** Bachelor's degree or extensive college and community experience in public service. 2yrs. of work related to public service, including college experiences. Familiarity with Cornell student life and Ithaca community desirable. Ability to work with people of diverse ethnicity and interests. Excellent communication skills. Working knowledge of Microsoft Word, PageMaker and desktop publishing. Send cover letter and resume to Cynthia Smithbower.

**Research Support Specialist I  
(PT3605) HRI**

**School of Chemical Engineering-  
Endowed**

**Posting Date: 9/10/92**

Design and conduct experiments involving differentiated cells and vesicles. Provide support to a research group (primarily graduate students) in instruction in maintenance of analytical devices, and in appropriate laboratory procedures. Perform and assist in experiments

using radiolabels. Establish and maintain primary cell lines. Operate HPLC and Coulter Counter. Perform ELISA and gel electrophoresis (DNA and protein gels). Maintain equipment.

**Requirements:** B.S. or equivalent in biochemistry, cell biology, microbiology or related area. Experience with mammalian cell tissue culture is essential. At least 2yrs. as laboratory technician is desirable. Send cover letter and resume to Sam Weeks.

**Applications Programmer II (PT2205)  
HRI**

**Section of Ecology and Systematics-Statutory**

**Posting Date: 9/3/92 Repost**

Design and code (in C++) the porting of an existing DOS-based database applications to UNIX, Windows, or Macintosh for the MUSE project. Provide programming documentation. Provide fixes for system bugs.

**Requirements:** BA or equivalent experience in computer science required. Minimum of 2-3yrs. of C and C++ programming experience. Requires experience programming user interfaces on at least two of the following platforms: DOS, UNIX, Macintosh, Windows. Database programming experience desirable. Send cover letter and resume to Sam Weeks.

**Professional Off-Campus**

**PA#18A Agriculture Program Leader  
Seneca County, Waterloo, NY**

**Posting Date: 10/1/92**

Provide leadership for planning, implementing, and evaluating the agriculture and natural resources education program for Cornell Cooperative Extension of Seneca County. Participate as an active member of the association program management team in developing an integrated association educational effort. Analyze and comprehend the total food and agriculture system in the area, state, nation, and world and interpret its impact locally in providing leadership for programming. Program emphasis will be on agricultural competitiveness and profitability (30%); economic viability (20%); and enhancing the environment (20%). Manage educational resources and assure that accountability and affirmative action requirements are met within the program unit.

**Minimum Qualifications:** Master's degree with specialization appropriate to agricultural and natural resources education. 3yrs. progressively responsible professional experience in extension or related area. Ability to: initiate, plan, organize, teach and evaluate non-formal educational programs; provide supervision and guidance to paid and volunteer staff; lead and effectively participate in

team efforts; relate effectively to co-workers, advisors, community and professional leaders, and clientele audience groups. Skills in oral and written communication. Ability to understand, synthesize, and communicate a broad range of agriculture and natural resource related information. Background in farm business management desirable. Salary: \$30,000, commensurate with qualifications. Vehicle available for business use. Apply by October 15, 1992. Send letter of intent, resume and transcripts to: 365 Roberts Hall, Cornell University, Ithaca, NY 14853.

**PA#33 4-H/Youth Development  
Schuyler County, Montour Falls, NY**

**Posting Date: 10/1/92**

Responsible for planning, implementing, and evaluating educational programs in 4-H/youth development within Cornell Cooperative Extension of Schuyler County. Using a variety of delivery methods, conduct educational programs in 4-H/youth development that impact youth and adult audiences in one or more of the following areas: youth-at-risk, special needs audiences, intergenerational programs, youth employment, home economics and environmental education. Participate in mass media efforts related to program and work with schools, agencies and other groups as identified. Develop and enhance networks of volunteers to extend program.

**Minimum Qualifications:** Bachelor's degree in human ecology, environmental studies, education or related field. 1yr. related experience desired in teaching or extension-type work or experience in the Cornell Cooperative Extension Intern Program. Coursework in education highly preferred. Work experience with programs for youth-at-risk desirable. Salary: \$19,600, commensurate with qualifications. Apply by: October 15, 1992. Send letter of intent, resume and transcripts to: 365 Roberts Hall, Cornell University, Ithaca, NY 14853.

**PA#32 Extension Associate II, Business  
Management Education**

**Lake Erie Regional Grape Program  
(Cattaraugus, Chautauqua, and  
Niagara Counties in New York and  
Erie County in Pennsylvania)**

**Posting Date: 10/1/92**

Plan, conduct and evaluate a comprehensive educational program in the economics and management of commercial grape production in the lake Erie grape belt (New York and Pennsylvania). As a member of a three person team, identify program needs and opportunities. Develop, implement, and evaluate educational programs with emphasis on grape production for commercial growers and other grape industry clientele.

**The Cornell Workplace**

**Mission of University Human Resource Services: "to advance the practice of human resource management in the Cornell workplace."**

EDITOR: Nancy Doolittle, 255-3541 PRODUCTION: Cheryl Seland, 255-6890  
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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, sexual orientation, age, or handicap. The university is committed to the maintenance of affirmative-action programs that will assure the continuation of such equality of opportunity. Sexual harassment is an act of discrimination and, as such, will not be tolerated. Inquiries concerning the application of Title IX may be referred to Cornell's Title IX coordinator (coordinator of women's services) at the Office of Equal Opportunity, Cornell University, 234 Day Hall, Ithaca, NY 14853-2801 (Telephone: 607-255-3976).

Cornell University is committed to assisting those persons with disabilities who have special needs. A brochure describing services for persons with disabilities may be obtained by writing to the Office of Equal Opportunity, Cornell University, 234 Day Hall, Ithaca, NY 14853-2801. Other questions or requests for special assistance may also be directed to that office.

Program will include but not be limited to: record keeping and business analysis; economics of production practices; financial management; forms of business organizations, labor management, taxation; and marketing and cooperatives. Develop strategies for implementing programs that utilize a variety of available alternatives such as mass media, newsletters, and electronic technology. In close collaboration with faculty, conduct appropriate applied research and field demonstrations in the economics of grape production and the analysis of farm businesses. Cooperate with other specialists, faculty and staff, agribusiness, industry, and community leaders to develop joint efforts at area and state levels.

**Minimum Qualifications:** Master's degree in agriculture with a major in agricultural economics or closely associated field. 3yrs. of professional work experience in agribusiness, fruit crop production, Cooperative Extension, or in developing informal educational programs. Must possess agricultural experience with ability to relate to routine farm situations. Coursework in viticulture and pomology, soils, plant physiology, entomology, plant pathology, education, and communication desirable. Salary: Commensurate with qualifications. Apply by December 1, 1992. Send letter of intent, resume and transcripts to: 365 Roberts Hall, Cornell University, Ithaca, NY 14853.

#### Professional Part-Time

##### Staff Nurse (PA3902) HRI University Health Services-Endowed Posting Date: 10/1/92

Provide nursing care for ambulatory and inpatients at Gannett Health Center. Assist nursing supervisor with clinic flow. To act as patient advocate. 9 month position. Some evening and weekend work in the overnight unit. Monday-Friday, 20hrs./week.

**Requirements:** Graduate from an accredited school of nursing - BSN degree preferred. Current NYS license with minimum of 2yrs. recent experience in an ambulatory or acute care setting. CPR-BLS level certification required within 1yr. of employment. Send cover letter and resume to Cynthia Smithbower.

#### Professional Temporary

##### Editor/Designer (S3001) Agriculture and Biological Engineering-Statutory Posting Date: 7/30/92

Edit manuscripts for engineering-related cooperative extension publications. Make grammatical and structural changes as necessary; write news releases; design and proof publications; prepare mechanicals for delivery to printer; assist in performing clerical-administrative tasks.

**Requirements:** Bachelor of Science emphasizing writing, editing and design of technical information for a general audience. Must be familiar with macintosh; experience with pagemaker desirable. Send cover letter, resume, 2 writing samples and 1 design sample to Karen Raponi, Employment Services, East Hill Plaza #2.

#### Professional Part-Time Temporary International Careers Advisor (PA3903) University Career Center-Endowed

##### Posting Date: 10/1/92

Advise students about international careers and conducting a search for international jobs. Serve as reference for international resources in university career center library as part of advising responsibilities. 2days/week, to be determined.

**Requirements:** Bachelor's degree or equivalent experience. International experience and strong interest in international careers. Skill in helping students obtain information they need to pursue international careers. Send cover letter and resume to Cynthia Smithbower.

##### Community Center Program Advisor (PA3805) HRI

##### Residence Life-Endowed

##### Posting Date: 9/24/92

Provide program advising, coordination, direction and implementation as required, during a period of transition and development for one of two residential community centers. 20hrs/week, evenings/some weekends, until 6/1/93.

**Requirements:** BA or equivalent. Some experience working with college students and or groups/program development. Send cover letter and resume to Cynthia Smithbower.

##### Temporary Part-Time Applications Programmer (PT3806)

##### Albert R. Mann Library-Statutory

##### Posting Date: 9/24/92

Provide technical and systems support for large scale electronic journals research project including UNIX operating system configuration and maintenance; network configuration; applications software installation and configuration; and file system management. Some work with 3rd party hardware peripheral installation and management.

**Requirements:** BS degree or equivalent. Experience with UNIX operating system configuration and maintenance, TCP/IP network management, and maintenance of a large scale mass storage installation. Programming with shell scripts, AWK, SED, some C, and x-windows experience desirable. Good oral and written communication skills and proven ability to work with a team. Send cover letter and resume to Sam Weeks.

#### Technical

##### Animal Technician GR18 (T0103) Laboratory Animal Services-Statutory

##### Minimum Biweekly Salary: \$542.89

##### Posting Date: 9/24/92 Repost

Monitor and provide routine care (feed, water and clean) for research animals. Follow protocols for sterile or disease control environments. Follow animal welfare regulations. Maintain records. Assist vets in treating animals when required. Take animal care courses. Weekends and holiday coverage required.

**Requirements:** High school diploma or equivalent. AAS degree in animal science desired. Assistant animal technician certificate helpful. 1yr. animal experience. Knowledge of a variety of lab animals and animal breeding required. Ability to lift 50 pounds. NYS driver's license. Must pass pre-employment physical and take all necessary immunizations required. Send cover letter and resume to Sam Weeks.

##### Technician GR19 (T3602)

##### Animal Science-Statutory

##### Minimum Biweekly Salary: \$566.28

##### Posting Date: 9/10/92

Provide technical assistance in poultry nutrition research. Perform basic

analytical work such as proximate analysis. Use bomb calorimeter, spectrophotometer, atomic absorption, and other analytical instruments. Assist in milling experimental feeds and setting up poultry experiments.

**Requirements:** Associates degree or equivalent in chemistry or animal science. 1-2yrs experience conducting chemical analyses for nutrition studies. Experience working with common nutritional lab analytical instruments. Ability to lift 60-80 lbs. Send cover letter and resume to Sam Weeks.

##### Technician (T2901)

##### Chemistry-Endowed

##### Posting Date: 7/23/92

Site-directed mutagenesis using E. coli; DNA sequencing; general molecular biology cloning techniques; protein purification (HPLC).

**Requirements:** BS in microbiology, molecular biology or biochemistry or equivalent required. 1 or more yrs. experience in recombinant-DNA techniques. Send cover letter and resume to Sam Weeks.

##### Technician GR20 (T3904)

##### Entomology-Statutory

##### Minimum Biweekly Salary: \$590.45

##### Posting Date: 10/1/92

Provide support for research on the genetics of plant-insect interactions using pea aphids. Assist in experimental design. Rear insects. Make field observations and collect insects. Collect data and assist in summarization, statistical analysis and computing of data. Conduct literature searches. Assist in training and supervising staff. Maintain lab order and equipment. Order supplies. 1yr. appointment.

**Requirements:** BS in biology or entomology. 1-2yrs. related experience. Some computer literacy. Knowledge of Mac computers and training in protein electrophoresis desirable. Valid NYS driver's license. Send cover letter and resume to Sam Weeks.

##### Computer Operator GR20 (T3502)

##### CU Press-Endowed

##### Minimum Biweekly Salary: \$590.45

##### Posting Date: 9/3/92

Operate and maintain the Cornell University Press services computer system. Execute and monitor end-of-day programs. Print invoices, statements and reports. Perform daily system backup procedures. Perform routine maintenance. Assist in development, testing and implementation of new or revised programs and procedures.

**Requirements:** High School diploma or equivalent required. Coursework or certificate in computer operations/programming or equivalent experience. Send cover letter and resume to Sam Weeks.

##### Technician GR20 (T3405)

##### Biochemistry, Molecular and Cell Biology-Statutory

##### Minimum Biweekly Salary: \$590.45

##### Posting Date: 8/27/92

Provide technical support to molecular and cell biology research lab working on the effect of oncogenes on cultured cells. Perform basic techniques in recombinant DNA, cell culture, microscopic examination of stained cells, and enzyme and protein assays. Maintain cell culture facility. Keep accurate records of experiments and write reports.

**Requirements:** BS degree in biology or equivalent with background in biochemistry and cell biology or cell physiology. 1-2yrs. experience in lab recombinant DNA techniques. Send cover letter and resume to Sam Weeks.

##### Veterinary Technician GR20 (T3001) Vet Medical Teaching Hospital-Statutory

##### Minimum Biweekly Salary: \$590.45

##### Posting Date: 7/30/92

Maintain aseptic conditions and provide coordination of the surgery team in the operating room during a surgical procedure. Clean and sterilize surgical and hospital equipment. Must be available at designated times to assist with emergency procedures (On-Call schedule).

**Requirements:** AAS degree in animal health technology-Licensed or eligible for NYS license or equivalent. Experience with small animals. Experience with surgical procedures preferred. Send cover letter and resume to Sam Weeks.

##### Technician GR21 (T3903)

##### Diagnostic Lab-Statutory

##### Minimum Biweekly Salary: \$615.42

##### Posting Date: 10/1/92

Provide technical support for service, research and teaching projects in diagnostic toxicology. Conduct analysis of toxicants and drug related compounds. Perform thin layer, liquid, and gas-liquid chromatography; atomic absorption, and other analytical techniques. Maintain integrity of samples and chain of custody. Prepare reagents. Order supplies.

**Requirements:** BS in science or equivalent experience required. 1-2yrs. lab experience. Typing and computer skills helpful. Send cover letter and resume to Sam Weeks.

##### Computer Operator GR21 (T3804,5) CIT/CR-Endowed

##### Minimum Biweekly Salary: \$615.42

##### Posting Date: 9/24/92

Operate large scale computer systems and associated peripheral equipment. Monitor data communications network. Consult with vendor engineers and department support staff. Verify and mount magnetic volumes as requested by users. Attend job related courses and seminars.

**Requirements:** A.A.S. or equivalent combination or education and experience in large data processing facilities required. Computer operating experience with minimum 3yrs. related data communications experience helpful. Knowledge of computer hardware, software operating systems and programming languages. Send cover letter and resume to Sam Weeks.

##### Technician GR21 (T3701)

##### Avian and Aquatic Animal Medicine-Statutory

##### Minimum Biweekly Salary: \$615.42

##### Posting Date: 9/17/92

Perform various virological and immunological assays in a research laboratory, including cell cultures, virus isolations, cell-mediated cytotoxicity assays, preparations of media and reagents. Handling and inoculation of experimental animals (mostly chickens) and collection of samples. Order and prepare media and reagents. Assist grad students.

**Requirements:** Bachelor's degree or equivalent in immunology, microbiology or related field. At least 2yrs. experience in a research laboratory including handling of radioisotopes and cell cultures. Experience with sterile techniques. Equipment: ultracentrifuges, gamma and beta counters, spectrophotometers, microscopes, etc. Send cover letter and resume to Sam Weeks.

##### Technician GR21 (T3603)

##### Vet Microbiology, Immunology, and Parasitology-Statutory

##### Minimum Biweekly Salary: \$615.42

##### Posting Date: 9/10/92

Provide technical assistance with

vivo and in vitro immunological experiments using mice and mouse tissue. Perform a variety of procedures including serological techniques (ELISA), use of radioisotopes, blood collection, injections, euthanasia and necropsy. Assist with lymphocyte cultures and purification. Obtain sterile blood samples from cattle. Assist with purification of bacterial proteins and detergent extractions and column purification procedures. Perform data entry and provide lab maintenance.

**Requirements:** AAS-degree or equivalent. 1-2yrs. related lab experience including lab animal, sterile technique and microbiology work. Send cover letter and resume to Sam Weeks.

**Technician GR21 (T3302)**  
**Diagnostic Laboratory/Clinical Pathology-Statutory**  
**Minimum Biweekly Salary: \$615.42**  
**Posting Date: 8/20/92**

Perform diagnostic tests in hematology, cytology, chemistry, and immunology with the emphasis on hematology and cytology. Use computer for data entry and retrieval.

**Requirements:** AAS in medical technology required. BS in Medical technology and ASCP certification preferred. 1-2yrs. general lab experience. Send cover letter and resume to Sam Weeks.

**Research Equipment Technician GR22 (T9102)**  
**Plant Pathology-Statutory**  
**Minimum Biweekly Salary: \$641.92**  
**Posting Date: 9/3/92 Repost**

Responsible for the operation, service and maintenance of several environmental growth chambers and their electrical/mechanical systems.

**Requirements:** Associate's degree or equivalent. 2yrs. related experience in refrigeration/air conditioning or in electrical/electronics field and an understanding of both areas. Troubleshooting skills. Training will be provided. NYS driver's license. Ability to lift 75lbs. Send cover letter and resume to Sam Weeks.

**Environmental Safety Technician GR23 (T3606)**  
**Environmental Health-Endowed**  
**Minimum Biweekly Salary: \$669.23**  
**Posting Date: 9/10/92**

Implement asbestos survey program, survey campus buildings to locate, identify and evaluate asbestos containing materials, and establish computerized databases.

**Requirements:** Associate's degree or equivalent in Engineering or Science, BS preferred. NYS Dept. of Labor Certificate as an Inspector & Management Planner and NYS driver's license required. Minimum of 3 yrs related lab & construction experience desirable. 2yrs. asbestos related experience preferred. Excellent oral and written skills; effective communication. Send cover letter and resume to Sam Weeks.

#### Technical Part-Time

**Part-Time Technical Assistant (T3705)**  
**Biochemistry, Molecular and Cell Biology-Statutory**  
**Minimum Full-Time Equivalent: \$530.38**  
**Posting Date: 9/17/92**

Provide routine support for a research lab. Insure a regular supply of sterile culture media and solutions and lab ware. Assist with tissue culture and biochemical experiments. Maintain supplies and equipment. Run errands, perform layout work for

publications, and provide darkroom assistance.

**Requirements:** High school diploma or equivalent required. 6 month to 1yr. formal training in biology lab work preferred. Lab experience helpful. Send cover letter and resume to Sam Weeks.

**Technician GR21 (T3303)**  
**Diagnostic Laboratory/Clinical Pathology-Statutory**  
**Minimum Biweekly Salary: \$615.42**  
**Posting Date: 8/20/92**

Perform various diagnostic tests in hematology, cytology, chemistry and immunology. Use computer for data entry and retrieval. Hours Thursday-Saturday, 8-5.

**Requirements:** AAS in medical technology required. BS in medical technology and ASCP certification. 1-2 yrs. clinical laboratory experience. Send cover letter and resume to Sam Weeks.

#### Technical Part-time Temporary

**Temporary Computer Technician (T3615)**  
**Modern Languages and Linguistics-Endowed**  
**Hiring Rate: \$7.50**  
**Posting Date: 9/10/92**

Take on network projects. Install network software, and monitor the system. Provide documentation. Assist the department's teaching staff with installation and training on multimedia hardware and software.

**Requirements:** Must have strong knowledge of DOS and Mac systems and significant experience with DOS based networks (preferably Novell). Experience with UNIX systems and C. Ability to complete long-term projects without constant supervision. Wiring systems. PC repair, and documentation experience helpful. Send cover letter and resume to Sam Weeks.

#### Office Professionals

**Office Assistant GR17 (C3903)**  
**Campus Store-Endowed**  
**Minimum Biweekly Salary: \$530.38**  
**Posting Date: 10/1/92**

Coordinates the textbooks order fulfillment process: including extensive utilization of in-house computer system to insure correct and timely product flow; processes associated invoices, including authorization for payment; assists in the functional supervision of students and temporary employees as needed.

**Requirements:** High school diploma or equivalent. Minimum of 1yr. retail and/or customer service experience. Knowledge of computerized inventory system necessary. Strong organizational and communication skills needed. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include a transfer application.

**Accounts Assistant GR18 (C3909)**  
**Section of Physiology-Statutory**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 10/1/92**

Assist in the accounting and purchasing functions of the department/section utilizing and annual budget of more than 4 million. Assist in the management of funds from state, college, endowed and sponsored programs sources.

**Requirements:** High school diploma or equivalent. Additional education and/or experience in accounting/book-keeping preferred. Minimum 1yr. related experience. Excellent orga-

nizational, interpersonal and communication skills. Knowledge of computers. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Telephone Receptionist GR18 (C3910)**  
**Financial Aid/Student Employment-Endowed**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 10/1/92**

Responsible for answering three line switchboard for financial aid/student employment offices. Using AT&T PC, responsible for typing, editing, and updating financial aid/student employment correspondence and forms.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. Excellent telephone etiquette. Able to manage several projects simultaneously. Meet deadlines. Very good organizational skills. 1-2yrs. related experience required. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Secretary GR18 (C3912)**  
**Civil and Environmental Engineering-Endowed**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 10/1/92**

Answer incoming calls for general school queries, screen incoming calls for Director, Associate Director and Administrative Manager; take messages for faculty and staff within the school; input and format manuscripts, correspondence, coursework, course evaluations and numerous other projects for several faculty and school organizations; oversee collection and distribution of U.S. and campus mail, provide back-up support for other staff.

**Requirements:** High school diploma or equivalent. 2yrs. related experience in secretarial/office assistant work. Knowledge of PC (WordPerfect). Good telephone skills. Ability to communicate accurately with others, good grammar and spelling essential. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Office Assistant GR18 (C3905)**  
**Vet Teaching Hospital-Statutory**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 10/1/92**

Mornings-Clinics Business Office: Responsible for computer input of hospital vouchers. Assist in functions of accounts receivable and cash control. Afternoons and Saturdays-Small Animal Clinic: Front office reception, gathering patient history, client information, operating computer terminal for medical records, handling admission and discharge of patients and cashiering. Monday-Saturday, 39hrs./week.

**Requirements:** High school diploma or equivalent. Experience/coursework in accounting and medical terminology desirable. 1-2yrs. related experience. Strong organizational, interpersonal and communication skills required. Able to work independently in an active complex environment. Light typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include an employee transfer application.

**Office Assistant GR18 (C3904)**  
**Residence Life-Endowed**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 10/1/92**

Provide receptionist support for the housing office. Handle word processing, screen office mail, assist with housing assignment and off-campus life work.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. Micro and mainframe computer data entry experience necessary. Strong interpersonal, organizational and communication skills essential. Excellent skills in spelling, grammar and punctuation required. Capable of working in a fast-paced office environment. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include an employee transfer application.

**Academic Secretary/Receptionist GR18 (C3802)**  
**Architecture-Endowed**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 9/24/92**

Act as main receptionist and academic secretary for the department. Schedule chairman's appointments; refer students, faculty, and visitors; sort and forward mail; answer telephone; post notices; coordinate room schedules; update faculty notices; type course programs and other documents (general correspondence, letters of reference, minutes, etc.)

**Requirements:** High school diploma or equivalent. Minimum 1-2yrs. secretarial experience. Ability to type accurately. Know Mac SE/30, Merging, WriteNow, Microsoft Word. Previous experience in dealing with the public is essential. Heavy typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Financial Aid Assistant GR18 II (C3803)**  
**Financial Aid/Student Employment-Endowed**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 9/24/92**

Coordinate and process student loans and student aid applications; data entry; handle incoming telephone calls.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. 1-2yrs. related experience required. Strong organizational, interpersonal, and communication skills. Able to work under pressure. Medium typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Office Assistant GR18 (C3703)**  
**School of Continuing Education and Summer Sessions-Endowed**  
**Minimum Biweekly Salary: \$542.89**  
**Posting Date: 9/17/92**

Serve as receptionist; process mail and requests for information; order supplies; general typing; provide clerical support to registrar. Assist registrar in registration process.

**Requirements:** High school diploma or equivalent required. 1-2yrs. office experience required. Some college coursework preferred. Able to work with diverse public. Excellent interpersonal and communication skills required. Experience with WordPerfect desirable. Able to set priorities and work independently under pressure. Some familiarity with Cornell desir-

able. Medium typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Office Assistant GR18 (C1611)  
Agricultural and Biological Engineering-Statutory**

**Minimum Biweekly Salary: \$542.89  
Posting Date: 4/23/92 Repost**

Provide secretarial and administrative support to the Cornell Local Roads Program staff. Register workshop participants, perform routine accounting tasks, distribute publications, type correspondence, answer telephones, and respond to inquiries. Travel four to six times annually for three to four days per trip.

**Requirements:** High school diploma or equivalent required. Some college coursework desirable. Valid NYS Driver's license. Advanced proficiency in WordPerfect 5.0 or 5.1 necessary. Knowledge of Dbase III inquiry, Lotus, and Harvard graphics desirable. Minimum 1 yr. general office experience necessary. Desire to work in a service-oriented position with daily public contact helpful. Medium typing. Send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include an employee transfer application.

**Administrative Aide GR19 (C3801)  
Telecommunications-Endowed**

**Minimum Biweekly Salary: \$566.28  
Posting Date: 9/24/92**

Provide administrative support for the assistant director and other members of the management team. Department is responsible for campus wide customer support for voice and data services.

**Requirements:** High School diploma or equivalent. Some college coursework required. 1-2yrs. related experience. Working knowledge of Macintosh required, excellent interpersonal and communication (oral and written) skills required. Information technologies and/or telecommunications experience desired. Ability to maintain confidentiality. Ability to maintain a high degree of professionalism in a fast paced ever changing environment is essential. Must be capable of working independently and managing multiple priorities. Medium typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Secretary GR19 (C3816)  
Office of Public Affairs/College of Agriculture and Life Sciences-Statutory**

**Minimum Biweekly Salary: \$566.28  
Posting Date: 9/24/92**

Assist gift records manager with donor acknowledgements. Coordinate undergraduate and graduate financial aid fund records and related fund development; coordinate corporate and foundation gift acknowledgements and records, and maintain files; assist the assistant director with mailings and other projects; assist with special projects and other tasks as assigned by the director of development and assistant dean.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. 3yrs. of secretarial experience and ability to use Macintosh and PC. Knowledge of WordPerfect essential; familiarity with FileMaker and Cornell public affairs record systems helpful. Gracious handling of requests from alumni and

friends and ability to handle confidential information. Must be able to plan and prioritize work. Ability to work with public, college, and university administrators essential. Heavy typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Administrative Secretary GR19 (C3608)**

**Division of Nutritional Sciences-Statutory**

**Minimum Biweekly Salary: \$566.28  
Posting Date: 9/10/92**

Provide administrative, word processing, and clerical support to a Senior Research Associate of an international food policy research program.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. 1-2yrs. in responsible secretarial position or a business office employee with secretarial experience. Heavy typing 60-75 wpm and transcription skills required. Familiarity with Cornell systems, procedures and international program requirements preferred. Excellent communication (written and verbal), organizational and interpersonal skills a must. Send cover letter and resume to Esther Smith, Employment Services, EHP#2. Employees should include an employee transfer application.

**Secretary GR19 (C3311)**

**JGSM-Endowed**

**Minimum Biweekly Salary: \$566.28  
Posting Date: 8/20/92**

Provide clerical and secretarial support to the dean's office. Answer telephones and assist in the preparation of reports and projects.

**Requirements:** High School diploma or equivalent required. Some college coursework preferred. 1-2yrs. office experience required. Macintosh experience required; experience with Microsoft Word, Excel and Filemaker Pro. Familiarity with higher education and/or business management. Excellent organizational and oral skills. Ability to communicate and articulate with public, as well as academicians. Send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer applications.

**Administrative Aide GR20 (C3906)  
Financial Planning and Budget Management-Endowed**

**Minimum Biweekly Salary: \$590.45  
Posting Date: 10/1/92**

Provide administrative support for the office of financial planning and budget management. Responsibilities include data administration, accounting and technical duties in addition to the function of maintaining a quality office operation.

**Requirements:** Associates degree or equivalent required. 2-3yrs. related experience. Use of microcomputers for meeting management, electronic mail and word processing. Excellent communication skills for working with many individuals. Light typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Accounts Assistant GR20 (C3911)  
Civil and Environmental Engineering-Endowed**

**Minimum Biweekly Salary: \$590.45  
Posting Date: 10/1/92**

With minimum supervision perform

various accounting functions such as payroll, academic appointment forms, journal vouchers, purchase orders, and travel reimbursements. Process accounts payable vouchers and deposits, assist accounts coordinator as necessary.

**Requirements:** Associates degree or equivalent. 2-3yrs. experience with accounting and office procedures. Excellent communication skills and ability to deal effectively with students, faculty, and staff. Ability to work in a fast paced office with numerous interruptions. Cornell accounting experience desirable. Macintosh experience preferred. Light typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include transfer application.

**Administrative Aide GR20 (C3819)  
Division of Nutritional Science/  
CFNPP-Statutory**

**Minimum Biweekly Salary: \$590.45  
Posting Date: 9/24/92**

Provide administrative assistance and secretarial support to the administrator and accounts assistant of an international food and nutrition policy research program.

**Requirements:** AA/AAS degree or equivalent. 2-3yrs. previous office experience. Proven ability to work independently. Able to work under pressure and handle many assignments simultaneously. Experience using micro-computers and familiarity with WordPerfect. Excellent grammatical skills. Familiarity with international work preferred. Heavy typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Accounts Assistant GR20 (C3818)  
ILR-MP Catherwood Library-Statutory**

**Minimum Biweekly Salary: \$590.45  
Posting Date: 9/24/92**

Provide administrative support in area of financial management. Prepare requisitions, review purchase requests for appropriateness, review and approve invoices for book purchases, review direct charges to accounts, record and deposit accounts receivable payments and reimbursed library expenses; maintain computer-generated equipment inventory file; handle telephone calls; assist visitors; assist with circulation department duties during peak periods or in absence of regular staff. Until 6/30/93.

**Requirements:** Associates degree or equivalent. 2-3yrs. related experience. Ability to use spreadsheet programs (Lotus 1-2-3), WordPerfect, DataPerfect, and EasyFiler. Familiarity with Cornell Mainframe and use of NOTIS on-line catalog fund accounting systems helpful. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Administrative Aide GR20 (C3106)  
Mechanical and Aerospace Engineering-Endowed**

**Minimum Biweekly Salary: \$590.45  
Posting Date: 9/24/92 Repost**

Provide extensive administrative support for director and administrative associate of a large academic department. Work with personnel matters and other highly confidential subjects.

**Requirements:** A.A.S. degree or equivalent required. 2-3yrs. experience (Cornell Preferred). Good interpersonal and communication skills. Ability to work with spreadsheets, Microsoft Word and Excel programs. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Administrative Secretary GR20 (C3810)**

**Student Life Union-Endowed  
Minimum Biweekly Salary: \$590.45  
Posting Date: 9/24/92**

Provide administrative and secretarial support for the assistant dean of students working with the parents program and the assistant dean of students working with the orientation program out of the Student Life Union.

**Requirements:** Associates degree or equivalent required. Additional college coursework preferred. 2-3yrs. of secretarial experience. Macintosh experience necessary. Strong organizational and communication skills. Cornell experience strongly preferred. Medium typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Administrative Aide GR21 (C3902)  
Vice President for Finance and Treasurer-Endowed**

**Minimum Biweekly Salary: \$615.42  
Posting Date: 10/1/92**

Provide executive, secretarial, and administrative support to the vice president for finance and treasurer. Oversee, coordinate, and integrate the flow of information and materials through the office; refer inquiries and materials as appropriate; some accounting; maintain calendar; handle correspondence and travel.

**Requirements:** Associate's degree or equivalent. 2-3yrs. of executive secretarial experience. Knowledge of Cornell University required. Knowledge of Macintosh computer and software, including Word and Excel is preferred. Excellent organizational and interpersonal skills. Demonstrated oral and written skills. Ability to set priorities and work independently. Highest degree of confidentiality essential. Medium typing. Regular Cornell University employees only. Send employee transfer application, cover letter, and resume to Esther Smith, Employment Services, East Hill Plaza #2.

**Accounts Coordinator GR21 (C3809)  
University Accounting-Statutory**

**Minimum Biweekly Salary: \$615.42  
Posting Date: 9/24/92**

Provide administrative support for various aspects of accounting. Includes establishing accounts, journal preparation and monitoring account activity in accordance with generally accepted accounting principals, outside agencies and Cornell policy.

**Requirements:** Associates degree in accounting or equivalent education and experience required. Minimum of 3yrs. experience in accounting. Working knowledge of spreadsheets is required. Familiarity with university accounting system is preferred. Strong communication (oral and written) skills required. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Accounts Assistant GR22 (C3914)  
Controller's/Accounting-Endowed  
Minimum Biweekly Salary: \$641.92  
Posting Date: 10/1/92**

Prepare and maintain various computer generated reports. Assign and establish sponsored programs accounts; review budget categories and prepare preliminary analysis for financial reports; follow up on overdrawn accounts and outstanding accounts receivables.

**Requirements:** Associates degree or equivalent, BS degree in accounting/business field preferred. 2-3yrs. job related experience. Grant and contract experience desirable. Experience with personal computers and business software, EG mainframe, spreadsheets, and database. Excellent organizational skills and service orientation is essential. Regular Cornell University employees only. Send employees transfer application, cover letter, and resume to Esther Smith, Employment Services, East Hill Plaza #2.

**Office Systems Specialist GR22 (C3813)**

**JGSM-Endowed  
Minimum Biweekly Salary: \$641.92  
Posting Date: 9/24/92**

Provide administrative and computer systems support to the admissions office.

**Requirements:** Associates degree or equivalent required. 3-4yrs. office experience preferred. Familiarity with computer programs and databases. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Office Professionals Part-time**

**Lab Receptionist/Sales Assistant GR17 (C3913)**

**Laboratory of Ornithology-Statutory**

**Minimum Full-time Equivalent: \$530.38**

**Posting Date: 10/1/92**

Act as lab's receptionist and sales clerk for Crow's Nest Birding Shop. Answer the lab's main telephone number and direct calls to appropriate staff; direct visitors and answer general nature and birding questions; also serve as backup for weekend sales associates. Monday 12pm-5, 7pm-10, Tuesday-Thursday 12pm-5, Friday 12pm-4.

**Requirements:** High school diploma or equivalent. Pleasant phone manner. Knowledge of birds and nature required. Excellent interpersonal skills. Sales experience helpful. Able to work in hectic environment. Light typing. Regular Cornell University employees only. Send cover letter, resume, and employee transfer application to Esther Smith, Employment Services, East Hill Plaza #2.

**Secretary GR17 (C3814)**

**Art-Endowed  
Minimum Full-time Equivalent: \$530.38**

**Posting Date: 9/24/92**

Coordinate the Olive Press Project; arrange meetings; schedule reservations; accounts payable/receivable; answer telephone; type correspondence. M-F, 4hrs/day.

**Requirements:** High school diploma or equivalent. 6 months related experience preferred. Light typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Secretary GR18 (C3808)  
University Health Services-Endowed  
Minimum Full-time Equivalent: \$542.89**

**Posting Date: 9/24/92**

Receptionist for physical therapy department to assure & maintain smooth and efficient patient scheduling and flow. Working primarily with the back injury prevention program for Cornell employees. M-F, 20hrs/week.

**Requirements:** HS diploma or equivalent. Some college coursework preferred. 1-2yrs. medical experience and computer skills required. Strong interpersonal and communication skills necessary. External applicants send cover letter and resume to Esther Smith, Employment Services, EHP #2. Employees should include employee transfer application.

**Office Assistant GR18 (C3706)  
Human Development and Family Studies-Statutory**

**Minimum Full-time Equivalent: \$542.89**

**Posting Date: 9/17/92**

Secretarial and receptionist support for very busy academic department. Provide secretarial support for graduate and undergraduate program. Answer main phone line, handle walk-in traffic. Monday-Friday, 12:30-4:30 or 1:00-5:00 (20hrs).

**Requirements:** High school diploma or equivalent required. 1-2yrs. previous experience in academic department essential. Computer skills essential. Medium typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Secretary GR18 (C2905)  
Physiology-Statutory**

**Minimum Full-time Equivalent: \$542.89**

**Posting Date: 9/17/92 Repost**

Provide secretarial support for 1 or 2 faculty members and assist the accounting section by typing requisitions and filing. Monday-Friday, 8-12.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. Minimum 1yr. related secretarial experience. Knowledge of computers (IBM/WordPerfect 5.1) preferred. Medium typing. Send cover letter and resume to Esther Smith, Employment Services, EHP #2. Employees should include employee transfer application.

**Research Aide GR19 (C3907,8)  
Classics-Endowed**

**Minimum Full-time Equivalent: \$566.28**

**Posting Date: 10/1/92**

Correct texts of Greek inscriptions from publications which were converted into computer-readable form by the Kurzweil optical scanner for inclusion in a database on the Ibycus computer system. Update records on the status of texts, train undergraduate students. Flexible.

**Requirements:** Associates degree or equivalent required. Bachelor's degree in classics, ancient history or a related field is preferred. 1-2yrs. related experience required. An advanced knowledge of ancient Greek and proficiency in Latin, experience with data entry on any computer system. External applicants send cover letter and resume to Esther Smith, Employment Services, EHP #2. Employees include employee transfer application.

**Administrative Aide GR19 (C3820)  
Center for the Environment-Statutory**

**Minimum Full-time Equivalent:**

**\$566.28**

**Posting Date: 9/24/92**

Provide administrative and secretarial support. Responsible for telephones and reception, word processing (Mac) of formal and informal communications, scheduling of meetings and travel arrangements. Act as liaison to central administration unit for accounts payable and receivable. 4 consecutive days/week, 5hrs/day.

**Requirements:** High school diploma or equivalent. Some college coursework preferred. 1-2yrs. office experience. Macintosh experience, especially word processing. Good communication skills. Familiarity with Cornell accounting system desirable. Ability to work independently and set priorities. Medium typing. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Accounts Assistant GR19 (C3707)  
Human Development and Family Studies-Statutory**

**Minimum Full-time Equivalent: \$566.28**

**Posting Date: 9/17/92**

Process standard vouchers, purchase orders and interdepartmentals for busy academic department. Assist administrative supervisory with other accounting activities. Monday-Friday, 8am-12noon, 20hrs.

**Requirements:** High school diploma or equivalent required. Some college coursework preferred. 1-2yrs. previous Cornell accounting experience, or fund accounting experience in other settings. IBM computer, WordPerfect 5.1 and Lotus. Light typing. External applicants send cover letter and resume to Esther Smith, Employment Services, EHP #2. Employees should include an employee transfer application.

**Administrative Assistant GR19 (C3701)**

**Facilities Engineering-Endowed  
Minimum Full-time Equivalent: \$566.28**

**Posting Date: 9/17/92**

Provide basic and specialized administrative and clerical support services for architectural, engineering, and design staff of the facilities engineering department. Transcribe, type, edit and modify various types of office correspondence and documentation. Range of work includes basic office correspondence, detailed construction bid documents, project specifications, and technical reports. Provide front-line training and support for computer software applications (wordprocessing, spreadsheet, and terminal emulator) and telephone (system 85 and audix). Arrange and coordinate all aspects of departmental travel, to include processing vouchers. There will be occasions when a full work week will be required. Mon-Thurs, 11-5, Fri, 11-4.

**Requirements:** High school diploma or equivalent required. Associates degree or equivalent preferred. 2yrs. working with word processing systems in an office environment. Experience with Macintosh computers and software very desirable. Must demonstrate sound interpersonal and organizational skills. Heavy typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Senior Department Assistant GR20 (C3704)**

**Music Library-Endowed  
Minimum Full-time Equivalent:**

**\$590.45**

**Posting Date: 9/17/92**

Assist with the acquisition and bibliographic control of materials in the Music Library, including ordering and cataloging. Perform administrative and clerical duties as required. 20hrs/wk.

**Requirements:** Associates degree in music (with history emphasis) or equivalent required. Computer literacy. Reading skill in one foreign language. Good communication and interpersonal skills. Some library experience desirable. Light typing. External applicants please submit a cover letter and resume to Esther Smith, Employment Services, EHP #2. Employees should include employee transfer application.

**Casual**

**Cashier/Data Entry (S3813)**

**Ornithology**

**Casual Appointment**

**Posting Date: 10/1/92**

The Crow's Nest Birding Shop is seeking an individual to perform data entry and cashiering duties. Answer phones. Must be very customer service oriented. Please send cover letter and resume to Karen Raponi, Employment Services, East Hill Plaza #2. Hours are Saturday and Sunday 10am-4pm. Other weekday hours as needed.

**Program Secretary (S3808)  
Language House Program-Endowed  
Posting Date: 9/24/92**

Type correspondence, reports and agendas, answer phone; process language house applications and accounting forms. 10hours/week, flexible.

**Requirements:** A.A.S. or equivalent in secretarial science. WordPerfect 5.1 on an IBM or IBM compatible; basic accounting procedures if preferred. Medium typing. External applicants submit cover letter and resume to Karen Raponi, Employment Services, East Hill Plaza #2. Employees should include employee transfer application.

**Office Professionals Temporary Part-time**

**Office Assistant GR17 (S3503)  
South Asian Collection/Kroch Library**

**Posting Date 9/3/92**

**Term Appointment until 5/26/93**

Under the general supervision of the South Asia Curator, provide coverage for the day-to-day office activities of the South Asia office. Coordinate the searching of western and South Asian languages titles, with the assistance of student employees.

**Requirements:** High school diploma or equivalent. College course work with background in social sciences and humanities, especially in Asian or South Asian languages helpful. Knowledge of South Asia and one or more South Asian languages helpful. Fluency in English required. Ability to handle complex telephone calls. Light typing and some computer skills. Good interpersonal skills. Please send cover letter and resume to Karen Raponi, Employment Svcs, EHP #2.

**Temporary Accounts Assistant (S3404)**

**Cooperative Extension**

**Posting Date: 8/27/92**

Process vouchers and billings, monitor invoices, prepare notices of proposed travel, and submit purchase order requests for Extension Sea Grant program. Input, retrieve and analyze data of CUDA expendi-

ture and summary reports for Extension Sea Grant Program. Part-time, 20 hours per week. Please send cover letter and resume to Karen Raponi, Employment Svcs, EHP #2.

**Interviewer (S3605)**  
**Communications-Statutory**  
**Hiring Rate: \$6.60**  
**Posting Date: 9/10/92**

Interview farmers for research project. Travel required - some overnight. Requires careful attention to detail.  
**Requirements:** Interviewing skills; computer skills a plus. Send cover letter and resume to Karen Raponi, Employment Services, EHP #2.

## General Service

**Custodian SO02 (G3901)**  
**Avian and Aquatic Animal Medicine-Statutory**  
**Hiring Rate: \$6.90**  
**Posting Date: 10/1/92**

Cleaning and general janitorial duties such as dust mopping, mopping and waxing floors, clean windows, etc. Monday-Friday 7:30am-4.

**Requirements:** Basic reading and writing skills. Able to lift 50 lbs. and climb 8' ladder. Valid NY state driver's license. Regular Cornell University employees only. Send employee transfer application to Esther Smith, Employment Services, East Hill Plaza #2.

**Dish Machine Operator SO02 (C3902)**  
**Statler Hotel-Endowed**  
**Hiring Rate: \$6.90**  
**Posting Date: 10/1/92**

Maintains a consistent supply of clean dishes, glassware, flatware, pots, and silver. Keeps work area and garbage area at an acceptable level of neatness and cleanliness. Flexible nights and weekends. 10 month appointment.

**Requirements:** Must be able to read and write. Basic math skills (accounting, recording). Experience as a dish machine operator desired. Regular Cornell University employees only. Send employee transfer applications to Esther Smith, Employment Services, EHP #2.

**Houseperson SO02 (C3903)**  
**Statler Hotel Housekeeping-Endowed**  
**Hiring Rate: \$6.90**  
**Posting Date: 10/1/92**

Cleans the public guest areas of the hotel. Stocks the guestroom floor closets for the room attendants and does other tasks as they relate to these main objectives. Flexible nights and weekends.

**Requirements:** Basic reading and writing skills. Hotel housekeeping experience preferred. Regular Cornell University employees only. Send employee transfer application to Esther Smith, Employment Services, EHP #2.

**Delivery Driver SO04 (C3904)**  
**Residence Life-Endowed**  
**Hiring Rate: \$7.52**  
**Posting Date: 10/1/92**

Provide courier service throughout the department of residence life. Provide student service assistance in all departmental residence halls as required during brief staff absences and peak times of the year (opening, closing, commencement, reunions).

**Requirements:** High school diploma or equivalent. Some computer experience helpful. Excellent interpersonal, communication, and organizational skills. Must be in good physical condition and able to regularly lift 75 lbs. Valid NY state driver's license and good driving record essential. Regular Cornell University employees only. Send employee transfer application to Esther Smith, Employment Services, EHP #2.

**Life Safety Specialist II GR22 (G3816)**  
**Life Safety Services-Endowed**  
**Minimum Biweekly Salary: \$641.92**  
**Posting Date: 9/24/92**

Respond to all on/off campus emergencies occurring in university structures. Basically work is unsupervised, and must exercise a high degree of self reliance, sound judgement, initiative and motivation. Shift work, weekends, holidays.

**Requirements:** Associate's degree or equivalent required. Bachelors degree preferred. Minimum 3yrs. experience in campus setting required. Mechanical aptitude. Valid NYS driver's license. Good (oral and written) communication skills. Working knowledge of fire suppression, rescue and fire preventive activities. 1st Aid, CPR certification. Must pass extensive background check, pre-hiring physical and annual physical. Must be acquainted with computer keyboard. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include an employee transfer application. Resumes must be received by October 16, 1992.

**Building Trade Laborer (G3815)**  
**Maintenance and Service Operations-Statutory**

**Hiring Rate: \$8.74**  
**Posting Date: 9/24/92**

Perform manual work in support of trades people. Drive trucks used for pick up and delivery of materials. Monday-Friday, 3:30-midnight, until 10/6/93, possible extension to 12/31/93.

**Requirements:** High school diploma or equivalent. 1 or 2yrs. unskilled construction experience desirable. Working knowledge of equipment, tools, and materials used in all types of construction activities. Must have and maintain a valid NYS drivers license. External applicants send cover letter and resume to Esther Smith, Employment Services, EHP #2. Employees should include employee transfer application.

**Electrician (G3805-14)**  
**Maintenance and Service Operations-Statutory**

**Hiring Rate: \$17.78**  
**Posting Date: 9/24/92**

Install and retrofit lighting systems. Monday-Friday, 3:30-midnight, until 10/6/93, possible extension to 12/31/93.

**Requirements:** High school graduate or equivalent. Completion of accredited inside wiremans apprenticeship or equivalent experience. Must have and maintain valid NYS driver's license. External applicants send cover letter and resume to Esther Smith, Employment Services, East Hill Plaza #2. Employees should include an employee transfer application.

## General Service Temporary

**Temporary Materials Handler (S3807)**

**Lab Animal Services-Statutory**  
**Hiring Rate: \$6.00**  
**Posting Date: 9/24/92**

Assist in ordering, maintaining and delivering feed, supplies and equipment. Monday-Friday, 7:00-3:30.

**Requirements:** HS diploma or equivalent required. Ability to lift 75lbs. Current driver's license. Must be in good physical condition. Pre-employment physical required. Please submit application materials to Karen Raponi, Employment Services, EHP #2.

## Academic

**Library Director**  
**Cornell University Martin P.**  
**Catherwood Library/ILR**  
**Posting Date: 10/1/92**

Staff of 25, collection of 200,000 volumes, plus large labor manuscript repository.  
**Requirements:** MLS or equivalent. 5yrs. senior level administrative experience preferably in an academic or research library. Background in industrial labor relations or related field. Strong understanding of trends in electronic information and scholarly communication. Send cover letter, resume, and names, addresses and phone numbers of three references by October 23, 1992 to Ann Dyckman, Director of Library Human Resources, 201 Olin Library, Cornell University, Ithaca, NY 14853.

**Organist/Harpsichordist**  
**Music Dept., Cornell University**

**Deadline: December 1, 1992**

**Posting Date: 10/1/92**

Tenure-track position at the rank of assistant professor for and organist/harpsichordist with an active interest in any of the following areas: composition, conducting, ethnomusicology, music theory or musicology. 3yr. appointment, commence July 1, 1993 at a salary commensurate with qualifications and experience. Serve as university organist and performing as an organist/harpsichordist; teaching individual organ and harpsichord students; teaching in the candidate's other area(s) of interest; academic advising; and in some cases supervising the dissertations of doctoral candidates. Participation in the collegial activities of the faculty will be expected.

**Requirements:** Doctoral degree in music or demonstrate equivalent professional achievement and recognition. Send application, cover letter, curriculum vitae, and at least 3 current letters of recommendation. Supporting materials such as concert programs and reviews may also be included, but please do not send recordings or publications unless requested to do so. Apply to: Prof. Neal Zaslaw, Chair, Search Committee, Department of Music, Lincoln Hall, Cornell University, Ithaca, NY 14853-4101, Telephone, 607-255-4279.

**Extension Administrator Cornell**  
**Cooperative Extension**

**Cornell University, Ithaca, NY**  
**Posting Date: 10/1/92**

Provide leadership for ensuring that quality nonformal educational programs are developed, delivered, evaluated and marketed to diverse audiences throughout New York State. Provide leadership and support for campus and Cornell Cooperative Extension Association work related to vision, scope and direction of youth development programs and the Cornell Cooperative Extension system. Initiate and maintain policies that will enable a futuristic 4-H youth development program to continue to grow and expand. Work with the executive director of the New York State 4-H foundation, serve as a member of the board and on the executive committee to ensure that resources are consistent with the philosophy and direction of 4-H youth development programs. Collaborate on state and national youth initiatives and the work of

the national 4-H council. Encourage collaborative efforts between faculty and off-campus staff and work with state and national agencies and organizations on issues of common concern. Recruit and participate in screening of candidates to be recommended for Cornell Cooperative Extension positions.

**Requirements:** Master's degree in a discipline appropriate to the position. 8yrs. progressively responsible professional experience to include 5yrs. of demonstrated success in program development, implementation, management and evaluation. An earned doctorate is preferred with at least 6yrs. of progressively responsible professional experience which includes at least 3yrs. of demonstrated success in program development, implementation, management and evaluation. Salary: Commensurate with qualifications. Send letter of intent, current resume which includes responsibilities and accomplishments for each significant position; and names, addresses and telephone numbers of four references by NOVEMBER 15, 1992 to: Dr. Michael Duttweiler, Search Committee Chairperson, 354 Roberts Hall, Cornell University, Ithaca, NY 14853, (607)-255-2231.

**Faculty Position**  
**Chemistry**

**Posting Date: 9/24/92**

Available at the assistant professor level. Outstanding candidates in the areas of biophysical or inorganic chemistry will be considered. Successful applicant will be expected to carry out an effective research program and teach standard chemistry courses.

**Requirements:** PhD is required. Submit a curriculum vitae, publication list, summary of research experience, graduate transcript, and a brief statement of research plans. These materials and three letters of recommendation should be sent to: Chair, Faculty Search Committee, Department of Chemistry, Baker Laboratory, Cornell University, Ithaca, NY, 14853-1301, and be received no later than November 15, 1992.

**Assistant Librarian CA02**  
**CISER**

**Posting Date: 9/24/92**

Assist the data archivist, participating in a full range of activities involving public services, technical processing, and systems design and testing. Specific duties include providing reference consulting with clients, preparation of cataloging information and recommendations for cataloging of data files, participation in system requirements and evaluation, and outreach activities. M-F, 8:30-5:00, flexible.

**Requirements:** ALA- accredited MLS. Experience or training with social and economic data, quantitative research, computer systems; excellent interpersonal skills, strong oral and written communication skills. Send application materials to Ann Gray, Associate Librarian, 262 Caldwell Hall, Cornell University, Ithaca, NY 14853.