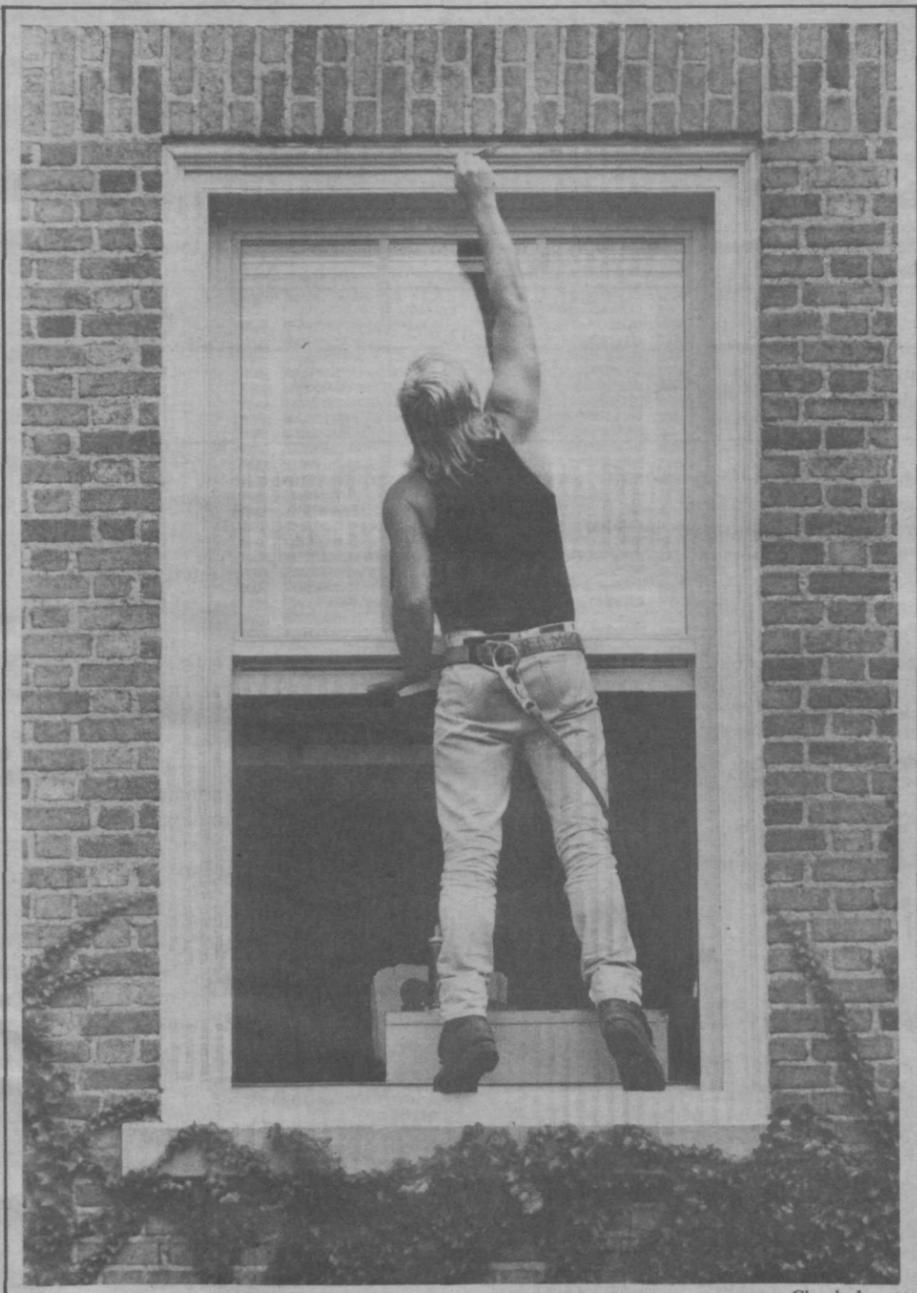
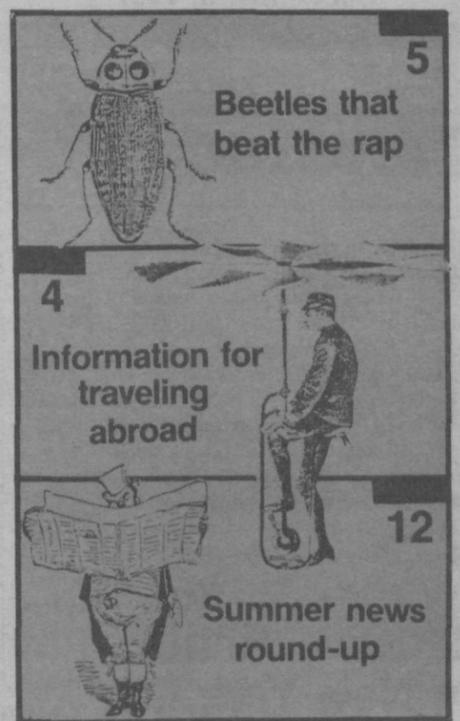


Cornell CHRONICLE

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FINISHING TOUCHES: Jeff Anderson of Syracuse, who works for the R. D. McCarthy Co. in that city, puts a final coat of paint on a third floor window in the School of Industrial and Labor Relations.

Deans Doherty, Ziegler ending terms next year

Cornell has started a nationwide search for two academic deans who will head the College of Human Ecology and the School of Industrial and Labor Relations.

The current deans of the two units will complete their terms next year and return to faculty assignments, Provost Robert Barker said.

They are Jerome M. Ziegler, who has directed Human Ecology since 1978, and Robert E. Doherty, who will complete his three-year term in Industrial and Labor Relations next year.

Barker said the university hopes to complete initial screening of candidates by mid-October and then invite the finalists to the Ivy League campus in central New York State for selection.

"We hope that the appointed deans will be able to take up their assignments in late spring next year," Barker said.

The university appointed two search committees to review candidates. Barker is serving as chairman of both.

"I have written a large number of letters to deans in other universities as well as to

representatives of alumni groups," Barker said. "To obtain a list of candidates, we are contacting people not only in academia but also people in other professions.

"Members of our search committees also are proposing prospective candidates whom they know, and we are advertising the openings in a number of newspapers and association publications."

Barker said no formal closing time has been set for the searches. "But we hope that by the end of September to have identified a short list of 12 to 20 candidates for each position," he said. "Then we will battle down the short list to about three to five candidates who will be invited to the campus, and we hope that we can begin to do that by mid-October."

Barker praised the work of Doherty and Ziegler, saying that each man carried his unit through transition periods in which the academic needs of students as well as the expectations of society, industry and the professions were changing rapidly.

"Both have been exemplary deans," the

Continued on page 9

Satellite uplink donated to give TV instant access

A \$500,000 gift from anonymous donors for the purchase of a satellite uplink will make Cornell faculty, stories about their research and other educational programs as available to television as they are now to radio, newspapers and magazines.

Academic uses are expected to include continuing education, new instructional programs and communication among off-campus facilities.

In July, Cornell announced that BAF Corp. of Woburn, Mass., had been selected through competitive bidding to supply the

university with a newsgathering vehicle capable of transmitting stories by satellite.

The 22-foot-long truck, which will be operated by the Division of Media Services' Educational Television Center, should be in use later this fall.

Because Cornell is the only American university of its caliber situated in a city without wire service bureaus or a local network television affiliate, one of the prime functions of the satellite uplink will be to transmit live and taped interviews with

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Inadequate buildings, equipment hamper research

On the Cornell campus can be found some of the best laboratories at a major research university — and some of the worst.

As a unique combination of public and private university, Cornell offers vivid contrasts between the effects of adequate state and private funding for research facilities and of inadequate federal funding.

The contrasts in research facilities at Cornell are sometimes stark:

- At one site, a sophisticated \$32.5 million biotechnology building rises. Beginning next year, some 100 scientists there will develop new ways to engineer plants, animals and microbes.

- In a nearby building, one of the country's brightest young engineers, designated a Presidential Young Investigator, finds his experiments squeezed into the hallway of an outdated classroom building. It was designed in an era when engineering education meant almost exclusively undergraduate instruction.

- In a special clean-room resides the

National Nanofabrication Facility, the country's top laboratory for building the tiniest of microcircuits, vital in the international microelectronic race.

- In contrast, nearby, a \$1.6 million machine for making new electronic materials, donated by a corporation, sits in crates because space is unavailable to set it up.

Problems of a research power

Cornell's facilities situation is particularly significant because the university is one of the leading research powers of both the State of New York and the United States.

At the state level, Cornell is the official land-grant college of New York and possesses the state's largest research budget: more than \$230 million annually. At the national level, Cornell receives more money from the country's principal basic research funding agency, the National Science Foundation, than any other university; it also ranks among the top universities in overall research funding.

This fall, the national debate over funding for university research facilities will intensify as both the U.S. Senate and the House of Representatives debate bills aimed at funding new university research facilities.

The Senate bill, sponsored by Sen. Christopher Dodd (D-Conn.), provides for \$1 million for 1988, \$47 million for 1989, \$95 million for 1990, and additional sums for 1991 and 1992 to be decided later. The House bill, introduced by Rep. Robert A. Roe (D-N.J.), establishes a 10-year, \$250-million-per-year program to repair and replace obsolete university laboratories.

"Buildings and instruments do not figure in press conferences heralding the newest scientific breakthroughs," said Roe in introducing his bill. "But, without them, there would be no breakthroughs to improve the quality of life for all of us."

The need for such facilities is acute nationwide, according to a study released in July by the Society for College and University Planning. Virtually all institutions sur-

veyed said they would undertake major reconstruction and renovation projects in the next five years, and 44 percent are building new laboratories. About 60 percent of the planners termed such construction "extremely urgent" or "very urgent."

"Inadequate buildings and equipment are by far our biggest problem in maintaining the viability of our research program," said Joseph Ballantyne, Cornell's vice president for research and advanced studies.

Ballantyne asserted that, without high-quality facilities and equipment, research is stunted and universities stand to lose the best researchers to other universities or to industry. The resulting damage and delay to research compromises the country's efforts to remain competitive.

Poor facilities also compromise the future of science and technology, because graduate students are best trained on updated equipment if they are to do useful work in the future. Also, prospective graduate students in science may abandon the field, as they

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Notable

Robert W. Langhans, professor of floriculture in the College of Agriculture and Life Sciences, is the 1987 recipient of the Society of American Florists' Alex Laurie Award for Education and Research. He received the award July 25 at the annual meeting of the SAF in St. Louis. Langhans, who has been a member of the faculty since 1956, is internationally recognized for contributions to his field, including cloning chrysanthemums and carnations and doubling the yield of greenhouse roses in winter with high-intensity-discharge lamps.

Trustees to meet in New York City

The executive committee of the board of trustees will meet in open session on Sept. 10 at 1 p.m. in the Executive Faculty Room (A-126) of the William Hale Harkness Medical Research Building at the medical college, 1300 York Ave. in New York City.

The committee's agenda will include financial, facilities and personnel matters, including title changes for three vice provosts.

At 9 a.m. on the same day, the buildings and properties committee will meet in open session in the Vanderwarker Room of the Memorial Sloan-Kettering Cancer Center, 1275 York Ave.

A limited number of tickets for the open session of the executive committee will be available to the public beginning at 9 a.m. on Sept. 8 at the Information and Referral Center in the Day Hall lobby. Tickets are not required for the buildings and properties committee meeting.

We need
10
days



All submissions to the Chronicle, whether items for the Calendar or for any other section, should be sent to the Chronicle office not less than 10 days before the date of publication. The address is Village Green, 840 Hanshaw Road. Campus mail deliveries are made twice daily.

Cornell CHRONICLE

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



CHECKING THE LIST: Two freshmen, Chris Mera, left, and Laura German look up the books listed for a course in the Campus Store. Undergraduate classes began last Monday.

Doug Hicks

Briefs

■ **Career Development Office wins award:** The Career Development Office of the College of Agriculture and Life Sciences has been cited for excellence in programming by the State University of New York Career Development Organization in competition with units at 64 SUNY campuses. The office, which is directed by William N. Alberta, was recognized for its Computerized Career Library.

■ **Students and staff receive \$10,000 in grants:** Cornell's Council of the Creative and Performing Arts has awarded 26 students and staff members a total of \$10,000 in grants for projects to be completed and

publicly presented during the 1987-88 academic year. Ranging from \$120 to \$500, the grants are for proposed projects, none of which may be part of a course work, in such areas as photography, music, painting, sculpture, graphics, apparel design, art history, writing and theater arts. Public presentations of the projects will be announced throughout the year by CCPA, according to its director Anna Geske. Information concerning grants for 1988-89 is available at the council's office in the Andrew D. White House.

■ **Bloodmobile at Willard Straight Sept. 10:** The Tompkins County Red Cross will

take blood donations in the Memorial Room of Willard Straight Hall from 10 a.m. to 3:45 p.m. on Sept. 10. Walk in and give or make an appointment in advance by calling the Red Cross at 273-1900. Kappa Delta Rho fraternity is sponsoring the bloodmobile visit.

■ **Undergraduate access to Olin's stacks changed:** Access to the Olin Library stacks has been revised by a newly adopted policy designed to provide more equitable research opportunities for undergraduates.

Effective Aug. 31, all undergraduates who use the Olin stacks must "demonstrate need" based on a recommendation from the faculty member assigning the research.

The policy has been unanimously endorsed by the Olin User's Committee, according to Olin Librarian David W. Corson, who said the new policy responds to complaints over what was considered the arbitrary way access was given undergraduates and to increased complaints about noise and disruption made by persons using the facilities for study or leisure but not research.

"While providing adequate undergraduate study space on campus continues to be a major goal of the university, Olin was never intended to meet this need," explained Corson, adding "The library was designed as a research library with a very large book capacity and relatively few reader seats arranged to meet the needs of faculty and graduate students."

■ **English as a second language offered:** English conversation and grammar classes at all levels of competence are being offered by the Cornell International Hospitality Committee, Sept. 14 through Dec. 18. Classes are open to anyone who wishes to learn English. The semester fee is \$5. Registration will take place Sept. 9 at 7:30 p.m. in the Edwards Room, Anabel Taylor Hall, and Sept. 10 at 7:30 p.m. in the Bess Brown Center at Hasbrouck Apartments. For more information, call 257-2028.

■ **Bus service changed for Labor Day:** There will be regular campus bus service on Labor Day, Sept. 7, except the A-Morrison route. Also, there will be regular bus service on Ithaca Transit runs and NET Route 1. However, the NET Route 2, East Ithaca and TOMTRAN runs will not be scheduled on Labor Day.

■ **Students' preregistered parking permits available till Sept. 11:** Students have until Sept. 11 to pickup parking permits they pre-registered with the Traffic Bureau through the mail this summer. The bureau located 116 Maple Avenue is open 7:45 a.m. to 5 p.m. Monday-Friday, telephone 255-PARK.

Barton Blotter:

\$5,000 in cash, valuables stolen

Nearly \$5,000 in cash and valuables were reported stolen on campus during the period Aug. 23-30, according to the morning reports of the Department of Public Safety.

Included in the 10 reported thefts were four speakers worth \$1,000 taken from Upson Hall, an \$885 field hockey machine stolen from Schoellkopf Hall, a \$750 sail board stolen from a car parked on North Campus and a wallet with \$915 in cash and valuables taken from a North Campus residential hall.

Other thefts included a \$545 couch stolen from Cascadilla Hall, a table worth \$200 taken from a lounge in University Hall No. 2 and two parking signs worth \$200 taken

from a parking area at McGraw Place.

Matthew Jason Price, Arts '91, was released from Tompkins Community Hospital at 2:10 a.m. Aug. 27 after being treated for contusions, bruises, and cuts incurred when he was struck by a Public Safety patrol car shortly after midnight that day. The accident occurred on University Avenue near Central Avenue and was investigated by Ithaca Police who have not filed charges resulting from the incident. The vehicle was driven by Officer Theodore P. Lazcano.

In other incidents reported on campus during the eight-day period, one person was charged with driving while intoxicated, another was referred to the judicial administrator on assault charges, and another person was charged with trespassing.

Isacks named first Snee Professor

Bryan L. Isacks, a leading authority on earthquakes and the theory of plate tectonics, is the first holder of the William and Katherine Snee Professorship in Geological Sciences.

A member of the Cornell faculty since 1971, Isacks is co-author of more than 70 articles in his field, including one on global tectonics that is considered a classic.

The Snee chair was established in 1986 with gifts from Katherine Snee and her husband, the late William E. Snee, who was a member of the Cornell Class of 1924. A leader and innovator in petroleum exploration, Snee died in 1977.

Snee Hall, the university's three-year-old, \$11 million facility for geological sciences, also was made possible through gifts from the Snees.

Before coming to Cornell, Isacks was a research geophysicist with the U.S. Department of Commerce's Environmental

Science Services Laboratory at the Lamont Geological Observatory of Columbia University. He was also an adjunct associate professor of geology at Columbia University.

He came to Cornell as an associate professor and was promoted to professor in the Department of Geological Sciences in the College of Engineering in 1976 and to the Snee professorship as of Jan. 1 of this year.

Isacks is a fellow of the American Geophysical Union and of the Geological Society of America. He has served on the board of directors of the Seismological Society of America and is chairman of the Geophysics Division of the Geological Society of America.

He graduated from Columbia College in 1958 with a bachelor of arts degree and earned a Ph.D. at Columbia University in 1965.

— Martin B. Stiles

Two university letters publicize position in UAW salary dispute

University officials are continuing to publicize their position on the salary dispute with service and maintenance employees by sending written messages to two different campus groups.

The newest, a memorandum, dated Sept. 1, has been sent to faculty, deans, directors and department heads by Lee Snyder, director of the Office of Human Resources. While mostly a compilation of statements previously made public during the summer when many faculty and staff were away, it also includes a new salary comparison:

Current scheduled minimum salaries paid to at least three categories of university employees in the UAW bargaining unit are higher than the scheduled minimums paid to their counterparts employed by the City of Ithaca, and Cornell's scheduled maximum salaries are higher in at least four categories.

Snyder also says in the memorandum that "a review of average wages paid for job grades probably is more appropriate" than reviewing salary schedules. He goes on to say that Cornell's average wage of \$6.25 an hour and scheduled maximum of \$9.24 an hour for a custodian "are very competitive in the local area and in upstate New York."

Commenting on the memorandum Tues-

day, he added, "Once the negotiations are complete, the university would be in an even more competitive position on salaries."

The other message is a letter dated Aug. 19 and also from Snyder. It went to the 882 service and maintenance employees at the university, who are represented by Local 2300 of the United Auto Workers.

They serve in a number of Cornell job categories, including 349 custodians, the largest group. Among other union-covered positions are dining employees, bus and delivery drivers, mail couriers, duplicating and printing machine operators, grounds workers, maintenance mechanics, nurses aides, vehicle mechanics, dairy and milk plant workers, and animal and laboratory attendants.

The union's three-year contract with Cornell, which expires next June, provides for renegotiating wages at the end of the second year. Although bargaining began in February, the two sides have been unable to reach agreement.

The union has held rallies on campus to publicize its position; the last took place on Aug. 23 as freshmen and their parents were arriving. Members of the local voted in June to give their leadership the power to call a strike, and Snyder's letter to

employees addresses this possibility.

In a question-and-answer format, he stresses the right of each employee to decide whether to work during a strike and the right to notify university, union or federal officials if threatened by anyone because of a decision to work or a decision to participate in a strike.

Snyder's letter also says the university would continue to operate during a strike and might hire temporary or permanent replacements for strikers or others honoring picket lines.

The letter to faculty, deans, directors and department heads includes the following assertions:

- The university has offered a salary package that's essentially the same percentage increase offered all other non-academic employee groups, while the union is demanding roughly three times as much. "The university has consistently taken the position that it cannot make an offer to this group of employees that is fundamentally different from the percentage increase given this year to all other nonacademic employee groups — both represented and non-represented," the letter states.

- The union has rejected a wage proposal that includes a provision to give more

within the overall pool to those employees at the lower end of the wage scale — a 6.8 percent increase — than to others.

- Some 24 individuals have entry-level positions paying less than \$11,200, the federal established poverty level for a family of four, but because of privacy reasons the university does not know whether any have working spouses.

- Salaries are competitive with those at other upstate institutions and the university's offer exceeds the increases of 3 to 4 percent provided to similar groups of employees at the University of Rochester and Syracuse University.

- Cornell faces a tight budget year, having assigned 2 percent base budget reductions to virtually all campus units in order to keep the tuition increase to 7 percent, the lowest in 14 years, and to fund a 13.8 percent increase in financial aid.

- More than 96 percent of all gifts to Cornell specify the programs to which they can be applied, including funds used in the purchase of a building in New York City for academic and alumni activities. The union leadership had called that purchase an indication that the university has the money to meet its demands.

— Barry Gross



Lisa Miller

CITY GARDENERS: A few of the 16,000 city dwellers who attended the 11th annual City Gardeners' Harvest Fair Aug. 15 and 16 are seen at the Cornell Cooperative Extension pavilion in a hanger of Brooklyn's Floyd Bennett Field, a landmark of aviation history. The fair is the outgrowth of an end-of-the-season harvest celebration staged in 1977 by a Cornell cooperative extension specialist who had assisted city gardeners with plots at the Gateway National Recreation Area located at Floyd Bennett Field. The Harvest Fair now focuses on the agricultural efforts of gardeners living in New York City's five boroughs and is jointly sponsored by city, state and federal governing agencies along with Cornell Cooperative Extension. The urban dwellers compete for ribbons with their city-grown crops, prepared foods and handicrafts. Other activities included a bluegrass-band competition, hayrides, a petting zoo, square dancing and frisbie-playing dogs.

Ring around the collar: soil-release finishes may be the answer

Clothing made from polyester-cotton blends with a permanent-press finish remains popular, despite one big problem: ring-around-the-collar.

Blended fabrics did not introduce that famed nemesis. Polyester and the chemicals in permanent-press finishes, however, retain more body oil than does cotton, making it much tougher to clean such clothing — especially shirt collars, where oil and dirt are rubbed continuously into the fabric.

But treating fabrics with a special soil-release finish such as acrylic acid prevents body oil and dirt from penetrating into the yarn and makes laundering blended fabrics just as effective as cleaning all-cotton shirts, textile scientist S. Kay Obendorf said during the American Chemical Society meeting in New Orleans.

In short, soil-release finishes applied by manufacturers and pre-washing treatments used in the home — whether commercial products or a homemade paste made from powder detergent — are effective at counteracting soil buildup on garments, said Obendorf, chairwoman of the Department of Textiles and Apparel.

"Although much is known about detergents and laundry, the hardest soil to remove remains body oils and dirt from shirt collars or bedding," she said. "We need to know more about the synergism between oil and clay in order to enhance its removal to keep garments clean."

— Mark Eyerly

Bronfenbrenner calls for better treatment of parents

Urie Bronfenbrenner, emeritus professor of human development and family studies and of psychology, has called for full employment of family breadwinners to keep children out of poverty, flexible work schedules for parents and wider recognition of the dangers to families from single-parent households and job-related stress on parents.

"No one wants to hear about poverty anymore, and single-parent households and stress at work are so common that nobody wants to know about how they can undermine families," Bronfenbrenner told the American Psychological Association convention in New York Aug. 31. "Our society, including social scientists, is saying: 'Don't tell me about it.'"

"But the family is the most powerful, most humane and, by far, most economical system known for making human beings human, and it's falling apart. It's about time for the United States to invest in its families," he warned.

Mentors can be crucial

In a separate address Aug. 30 at the APA convention, Bronfenbrenner reported findings from a preliminary study indicating that non-relative adult mentors can be crucial to a child's development, and he shared

plans for a study of high school students' interactions with adult mentors.

"Just like businesses routinely give employees time to work on United Way campaigns, maybe they should let employees spend company time with young people as mentors to help develop our next generation," he said.

"No one wants to hear about poverty anymore, and single-parent households and stress at work are so common that nobody wants to know about how they can undermine families."

— Urie Bronfenbrenner

Bronfenbrenner, a co-founder of the Head Start program, received an award during the APA convention for his contributions to human welfare and his advocacy of families.

Poverty destroys families

According to Bronfenbrenner, poverty is the leading destroyer of family life. Between

1973 and 1985, the proportion of American children under 6 years of age living in poverty increased from 16 percent to more than 25 percent; 13.4 million children under 18 lived in poverty in 1985.

Also, single-parent homes and job-related stress do put children's development at risk, but those risks can be ameliorated, he claimed.

"The problem is not parents, but the way we treat parents in our society," Bronfenbrenner said. "Some people like to blame working mothers, but a working mother can enrich the development of children, particularly daughters, because it helps teach them about the world outside."

"What we need to do is to get families out of poverty and reduce job-related stress on families so that children have a stable environment in which to grow up," Bronfenbrenner said. His suggestions:

- The federal government should ensure that all family breadwinners have a job and should encourage employers to give preferences to parents when making hiring decisions, other things being equal.

- "Instead, parents often have a strike against them because children compete with the office or factory for their time and energy," he said. "Plus, companies often

pressure young people to 'prove themselves' just when they're at the age to start families."

- Whenever possible, employers should provide flexible working hours, allowing parents to tailor their time at work to reduce job interference with family life.

"It's not fashionable now to study family questions . . . But the functional capacity of families is no less important than our national defense."

— Urie Bronfenbrenner

- Parents should be given several unrestricted days off work each year as "parental leave" to spend with their families, and sick days should apply to their children's illnesses as well as their own.

- Employers and the government should support day-care programs.

- Social scientists should devote more energy to understanding families and what can be done to strengthen them.

"It's not fashionable now to study family questions; there isn't much funding availa-

Continued on page 4

Travel Abroad Resource File now available

Talking to a traveler just back from a foreign country is one way to learn the "do's and taboos" of an unfamiliar land. Reading up on the country is another. Cornell students and staff members can find both sources of information in a new service of the Office of Sponsored Programs: the Travel Abroad Resource File.

"There are all kinds of hazards in traveling to an unfamiliar foreign country, ranging from health and safety problems to political and cultural concerns," said Beulah C. Miller, associate director of the Office of Sponsored Programs.

Originally, the resource file was established for Cornell researchers traveling on grants and contracts. The service is now available to all members of the Cornell community who are traveling, for whatever purpose.

Information continuously updated

Resource file users start in the Sponsored Programs Library, in 115 Day Hall, where printed information on individual countries is compiled and updated continuously. Passport photos are made in Photographic Services, in B-27 Day Hall. For vaccinations and medical questions, the next stop may be the Travel Shot Service in the Gannett Health Center.

And because first-hand experience is the most valuable kind, travelers often are referred to Cornell researchers who have just returned from abroad. Some of them record their advice and comments in an anecdotal log in the Sponsored Programs Library.

Miller encouraged returning travelers to share their experiences in the log, noting that information on schools, housing availability and other resources for traveling families is particularly useful.

Student researches Western Samoa

One of the first students to use the Travel Abroad Resource File was David Poland, a graduate student in communications arts who was leaving to conduct nine months of research in Western Samoa. An experienced traveler in Southeast Asia, Poland acknowledged he knew little about the South Pacific islands of Samoa except that anthropologist Margaret Mead had studied cultures there "and the women wear grass skirts."

Among the information he found on Western as well as American Samoa were requirements for passports, visas and other documents; U.S. Department of State "background notes" and University of Utah "Culturegrams"; the Samoan islands' currencies and what standards they are pegged to; State Department per-diem rates, which determine reimbursement for government officials and which are a guide to the cost of living for civilians; lists of key officers in foreign service posts; and Cornell guidelines for conducting sponsored research abroad.

At the Travel Shot Service, the director of nurses, Jane Brown, recommended appointments four to six weeks before departure. Some vaccinations are part of a series or cannot be administered together with other types, she explained. The service is designated by the federal Centers for Disease Control as the local source of yellow fever shots for the general public, and offers other required and recommended vaccinations to travelers connected with Cornell. Immunization at Gannett Health Center is charged on a per-shot basis.

Additional information on travel abroad is available from a variety of sources on campus. Among them are the Career Center library in Sage Hall; the Dean of Students' office and the International Students and Scholars' office, both in Barnes Hall; the Center for International Studies, Uris Hall; the International Agriculture Program, Caldwell Hall; and the Human Ecology Field and International Study Program in Van Rensselaer Hall.

There is no charge for students, faculty and staff members using the Travel Abroad Resource File.

As he was about to leave for Samoa, Poland said the most useful information was the reference to the State Department desk responsible for Americans in that country. The graduate student-researcher said he didn't anticipate any political uprisings during his visit, but noted that "no one expected the government of Fiji to be overthrown, either."

— Roger Segelken



ACID RAIN TESTS: Jay S. Jacobson, plant physiologist at the Boyce Thompson Institute for Plant Research and one of the BTI scientists making an all-out effort to see if ozone and acid rain play a role in killing forests in the Northeast, discusses his work during last week's Open House. Jacobson sprays spruce seedlings with simulated acid rain, and the seedlings are protected from natural rains by an overhead canopy which automatically extends when rain falls and retracts when it stops. The BTI studies focus on the effects of ozone and acid rain on red spruce and sugar maples, two commercially important species.

Claude Levet

Employees earn degrees for fully paid work

An innovative educational program at Cornell has given new meaning to the term "on-the-job-training." In the program, graduate students have earned advanced degrees for productive work as employees in the everyday work world.

The student-employees, employers and the university "all come up winners" under this collaborative approach," said Associate Professor Lynne H. Irwin, a nationally recognized authority on road and highway engineering, who conceived the program.

"The programs are designed to address several problems facing higher education and the nation's worldwide economic competitiveness, particularly in the area of technology transfer," Irwin said. "Too often the results of American research have been left on the shelf only to be ignored or exploited by foreign enterprise."

Under the collaborative research program, the employee is assigned to Cornell as a duty station and paid on a half-time basis for work on a project of interest to the employer and to the Cornell Local Roads Program, which Irwin heads.

When the employees are not working, they are taking classes towards a master's degree. They pay full tuition and receive no

stipend from the university in contrast to most graduate students, Irwin said.

Irwin listed as the program's advantages:

- The student has an opportunity to work on a relevant project as an employee, earning seniority and developing relationships with colleagues while obtaining a graduate degree.
- The employer gets a better project, because the student is aware of and committed to the employer's goals and objectives.
- The university gains financial support for a student and is able to channel its advanced knowledge and expertise into the everyday world in an immediate and productive way.

So far, two of Irwin's engineering students have earned degrees in this way. One of them, Debbie Taylor, earned a master's degree in highway engineering for work as an employee of the U.S. Department of Agriculture Forest Service.

Taylor received a bachelor of civil engineering degree from Cornell in 1984, entering almost immediately into the road dust project after three months as an employee of the U.S. Forest Service.

Her academic pursuits at Cornell and her Forest Service work were joined in a collaborative, two-year project to develop an apparatus to measure dust levels produced on unpaved roads, a costly pollution and safety problem in the nation's forests.

The device has been tested in national forests throughout the country. Taylor, who earned her advanced degree from Cornell in 1986, has gone to California as an engineer with the Forest Service's Equipment Development Center at San Dimas.

Cheryl Richter, a staff engineer with the New York State Department of Transportation, joined NYSDOT in 1984 after graduating from Cornell with a bachelor's degree in agricultural engineering. She returned to Cornell a year later to work on a computerized system for NYSDOT that can predict when a road will require repaving.

While working on the project as an employee of NYSDOT, she also earned a master's degree in highway engineering from Cornell. Richter is remaining at Cornell as a full-time employee of NYSDOT evaluating new pavement design methods for use on the state's highways.

— Martin B. Stiles

Bronfenbrenner *Continued from page 3*

ble," he said. "But we have to realize that the functional capacity of families is no less important than our national defense. The military protects, but families have a constructive as well as protective role."

A pilot study with Cornell students and students in eighth and 11th grades in Potsdam, N.Y., has found that children and youth list unrelated adults, as well as parents, peers and teachers, as influential people in their lives, Bronfenbrenner reported.

The study, conducted with several faculty and students in the College of Human Ecology, also disclosed that students who have a parent or other adult challenging and supporting them do better on measures of cognitive skill. Mentors tend to have more of an effect on students' cognitive development if they are of the same gender as the student.

"We're entering an unexplored continent," Bronfenbrenner said. Up to 100 children in upstate New York will be matched with mentors over the next two years to determine the mentors' influence. Bronfenbrenner recently returned from Japan, where he is consulting on a similar study of mentors.

— Mark Eyerly



FAST ASLEEP: And dreaming of sugar plums?

Claude Levet

Insects that feed on milkweed must first disarm the plant

Making a meal of milkweed leaves is a two-step process for some insects that wish to avoid the plant's noxious fluid, according to Cornell biologists who still wonder how vein-cutting bugs know which plants require special pretreatment.

First, the insects bite through veins that carry fluid to the leaves. Minutes later, when the fluid stops flowing, the insects can safely devour the leaves.

David E. Dussourd and Thomas Eisner report on vein-cutting behavior in the Aug. 21 issue of *Science*, the journal of the American Association for the Advancement of Science.

"In the long history of interaction between plants and insects, vein-cutting has developed as a counter adaptation," Dussourd explained. "A number of insect species independently have hit on a solution for circumventing a classic plant defense."

Most insects avoid milkweed

The milkweed's defense succeeds — for the most part. Their milk is a form of latex, similar to that from the rubber tree, and contains an assortment of compounds repellent and toxic to insects. Also, the sticky fluid coagulates when exposed to air, and gums up the insects' mouth parts. Most insects avoid the common weeds, which grow in fields and vacant lots throughout North America.

Not one kind of chrysomelid beetle, though. That insect inflicts a series of bites to the latex-bearing veins of the milkweed leaf. Latex continues to ooze from the cuts but, with the pressure cut off, no longer reaches the rest of the leaf. After cutting the veins, the beetle settles down for a safe meal.

The Cornell biologists said the milkweed

defenses are typical of those in other laticiferous, or latex-producing, plants. And a variety of insects evolved a strategy for getting around the defense. Among them are a long-horned beetle and the caterpillars of certain moths and butterflies. One caterpillar chews a circular trench in leaves and then consumes the leaf tissue inside the trench.

Other insects benefit

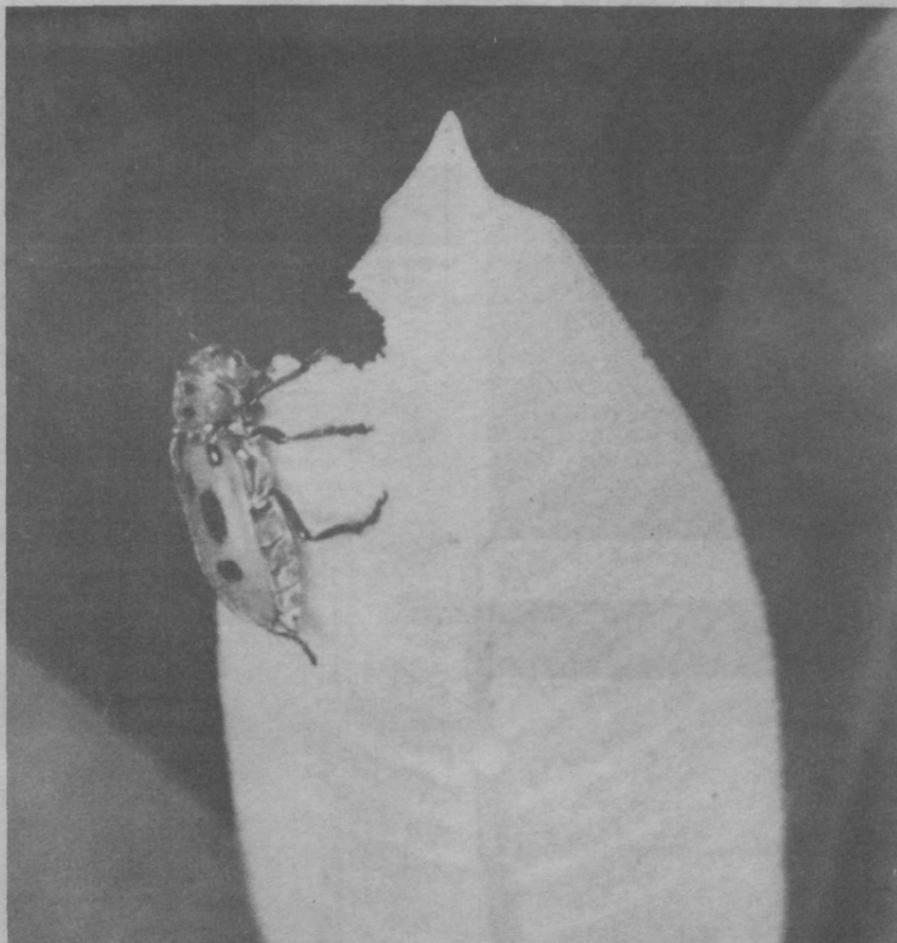
Another caterpillar observed by Dussourd and Eisner seems to have a keen understanding of leaf plumbing. When the *Erinnyis alope* caterpillar encounters a papaya leaf, with its network of veins laid out in loops to deliver latex through other channels if one is severed, it chews all the way across the leaf.

Then come the opportunists of the insect world, the bugs that wait until the vein-cutting insects have disarmed the plant defenses. When the Cornell biologists performed experiments to simulate leaf-cutting, they observed some insects that would not touch milkweed growing in nature — including the woolly bear caterpillar and the army worm — but were happy to dine on milkweed without the milk. They also found Japanese beetles consuming milkweed leaves that had been rendered defenseless by other insects.

"There are probably many insects in nature yet to be discovered that have special strategies for disarming plants before feeding on them," said Eisner, Schurman Professor of Biology and a specialist in the chemical defenses of insects and plants.

The research was supported by the Bache Fund of the National Academy of Sciences and by the National Institutes of Health.

"We still don't know what chemicals in



David Dussourd/Thomas Eisner

A PEACEFUL MEAL: Noxious fluid oozes from a vein cut made by a long-horned beetle in a milkweed leaf while the insect dines in safety.

the leaf cause the insect to cut veins," said Dussourd. He was a Ph.D. student in chemical ecology and animal behavior at Cornell when the research began and is now on the research staff of the University of Maryland.

Continuing the study, Dussourd hopes to discover the "chemical basis of assessment," the way a vein-cutting insect sizes up a potential meal before investing all that time and effort.

— Roger Segelken



Andre Watts, who will perform here on Sept. 22

Watts to give first performance in Cornell's Grand Pianist Series

Pianist Andre Watts will perform works by Haydn, Mozart, Schubert and Brahms on Sept. 22 in Bailey Hall at 8:15 p.m. Tickets for the concert will go on sale Sept. 8 at the Lincoln Hall ticket office. The telephone number is 255-5144. Prices for the general public are from \$12.50 - \$20, and for students from \$10.50 - \$17.

Watts began playing the piano at the age of six, and two years later he started his studies at the Philadelphia Musical Academy. At 16 he burst into international fame when Leonard Bernstein introduced him on television as soloist for a New York Philharmonic Young People's concert.

In the ensuing three years while continuing his academic studies at the Lincoln Preparatory School and his piano studies with Leon Fleisher at the Peabody Conservatory in Baltimore, he made successful appearances in recitals and as soloist with major symphony orchestras throughout the United

States.

At age 26 Watts became the youngest person in more than 200 years to receive an honorary doctorate from Yale University.

Now in his mid-30s, Watts is firmly established as one of the four or five leading pianists of our time. He gives over 100 recitals annually, and he is invited to play at coronations, inaugurations and command performances all over the world. This will be his second appearance in Ithaca.

The concert is part of the new Grand Pianist Series at Cornell which will bring to Bailey Hall outstanding keyboard artists during the 1987-88 season. Other pianists in the series are Peter Serkin, who will perform on Dec. 7, and Andras Schiff, who will perform on Feb. 8.

Series subscriptions at a considerable discount are available at the Lincoln Hall ticket office until Sept. 22.

Managers might read this, but would they listen to it?

Managers spend most of their working time listening to employees and colleagues but often fail to understand what is really meant, according to Judi Brownell, an assistant professor of communication in the School of Hotel Administration.

"Training managers of Fortune 500 companies see high-quality instruction in listening as one of their most pressing needs. Yet listening is the communication skill that is taught less frequently, compared to speaking, reading and writing."

Half the day spent listening

Brownell said that managers spend between 45 and 63 percent of their workdays listening to someone in order to gather information and solve problems. In three industries, she tested 200 managers and 800 of their colleagues.

"The managers rated themselves as much better listeners than their employees did," she said. "In the business world, what we find is that, when we ask employees 'what problems do you have with your managers?' more and more often we are finding that listening is among those neglected but really visibly felt areas of need."

In an article published in the *Hotel School's* magazine, *The Cornell Quarterly*, and in a lecture at a summer seminar, Brownell listed steps to become a good listener.

Good listeners don't interrupt

"Listening is actually a complex activity that requires five different skill areas: hearing, understanding, remembering, interpreting and evaluating," she wrote.

Her first suggestion is to concentrate on what the speaker is saying without interrupting.

"Take notes, ask questions or check your perceptions by restating the speaker's main points," she recommended. "Sit forward, nod your head and provide other nonverbal cues that show you're listening."

"Many listeners never let the speaker finish a point. Some of them interrupt mentally by jumping to a conclusion and then go on to think about their own response. Others break into the conversation, sometimes even finishing a sentence for the speaker."

Brownell said that managers are more likely to interrupt subordinates, and men

are more apt to interrupt women than vice versa.

In concentrating on a speaker, one problem is that a person can listen about three times faster than most people talk and therefore is tempted to use this bonus time to think about other things, Brownell said.

"Your brain can focus information so well that you can hear two messages simultaneously, one in each ear, and retain both of them with a high degree of accuracy," she said. "In that interval when you are waiting for the next word, use the lag time to focus on the message at hand."

Tips for listening well

Because words mean different things to different people, the good listener should know something about the speaker's values, goals and experiences, she said. For example, to one person the word "transfer" might suggest a better job while another person would think negatively about a transfer: leaving friends, moving to an unknown city and learning a new position.

Brownell listed several tips on good listening:

- "Whenever you become emotional — whether excited, angry or frustrated — your ability to listen objectively decreases, and you start filtering or distorting incoming information."

- "It is essential that you maintain an open mind whenever someone is trying to explain something to you."

- "Remember that you never have all the facts. Whenever you disagree with someone, consider the possibility that the person might be presenting new information — ideas or arguments that you haven't heard before."

- Separate "the details and the main idea. Sometimes we get so caught up in the specifics of what someone says that we can really misinterpret" their intended meaning.

- "As soon as listeners feel threatened or challenged, they stop thinking about what the speaker is saying and turn their attention to the task of defending themselves."

What's the bottom line to being a good listener?

"A good listener is not only popular everywhere, but after awhile he or she even learns something," Brownell said.

— Albert E. Kaff

CALENDAR

All items for the 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 must be received 10 days prior to publication and must 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

Israeli Folkdancing

Every Thursday, 8:30 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. Call 255-6464 for further information.

Thomas Hart Benton: A selection of lithographs and books illustrated by the American regionalist Thomas Hart Benton will be on view through Sept. 13. In conjunction with the exhibition, the museum will feature **Romancing the Stone: The Revival of Lithography in America**, consisting of works by George Bellows, John Stewart Curry, Grant Wood, Yasuo Kuniyoshi, Charles Sheller, and Bolton Brown.

8 New York Artists: An exhibition organized by the Ken Keleba Gallery of New York City featuring the work of mature artists living and working on New York City's Lower East Side will be on display from Sept. 5 through Oct. 25.

The eight artists are: Alcopley, James Bohary, Herman Cherry, Dorothy Dehner, Reuben Kadish, Elaine de Kooning, Richards Ruben and Edvins Strautmanis. Approximately 60 paintings, drawings, prints and sculptures, spanning a 40 year period of their careers will be presented.

Many of the artists will participate in a symposium cosponsored by the Department of Art Sept. 12 from 10:30 a.m. to noon. The roundtable discussion is open to the public without charge.

Art Department Faculty Exhibition: Recent works of art in various media, including watercolor, photography, sculpture and oil, by current and emeriti professors comprise this annual exhibition, which runs from Sept. 8 through Oct. 18.

Two Icelandic Artists: Nina Tryggvadottir and Louisa Matthiasdottir: The work of two well-known Icelandic women artists will be on display from Sept. 8 through Oct. 25. The exhibition complements an Icelandic conference, organized by the Fiske Icelandic Collection, on Sept. 10 and 11.

Gallery Reopened: The George and Mary Rockwell Galleries of Asian Art on the fifth floor are now open to the public with the exceptions of a few galleries still being renovated.

FILMS

Unless otherwise noted, films are sponsored by Cornell Cinema. An (*) indicates that admission is charged.

Thursday, 9/3

"The Stunt Man," (1980), directed by Richard Rush, with Peter O'Toole, Steve Railsback and Barbara Hershey, 8 p.m., Uris Hall.*

"Chile: Hasta Cuando," (1986), directed by David Bradbury, a documentary that looks back to the violence of 1973 in which the country's military overthrew the government of Salvadore Allende, 8 p.m., Anabel Taylor Hall.

Friday, 9/4

"Athens, Ga. Inside Out," (1986), directed by Tony Gayton, with R.E.M., B-52's, midnight, Uris Hall.*

"Prick Up Your Ears," (1987), directed by Stephen Frears, with Gary Oldman, Alfred Molina and Vanessa Redgrave, 7:30 p.m., Uris Hall.*

"The Sacrifice," (1986), directed by Andrei Tarkovsky, with Erland Josephson, Susan Fleetwood and Valerie Mairesse, 8 p.m., Anabel Taylor.*

"Lethal Weapon," (1987), directed by Richard Donner, with Danny Glover, Mel Gibson and Gary Busey, 9:45 p.m., Uris Hall.*

Saturday, 9/5

"Athens, Ga. Inside Out," midnight, Uris Hall.*

"Prick Up Your Ears," 9:45 p.m., Uris Hall.*

"The Sacrifice," 8 p.m., Anabel Taylor Hall.*

"Lethal Weapon," 7:30 p.m., Uris Hall.*

Sunday, 9/6

"Lethal Weapon," 7:15 p.m. and 9:30 p.m., Uris Hall, limited.*

"Inughuit: The People at the Navel of the Earth," (1985), directed by Staffan and Ylva Julen, a documentary that has been described as the most important ethnographic film on Eskimo life since "Nanook of the North," co-sponsored with CCPA, 2 p.m., Johnson Museum.

Monday, 9/7

"Athens, Ga. Inside Out," 8 p.m., Uris Hall.*

Tuesday, 9/8

"Marlene," (1986), directed by Maximilian Schell, with Marlene Dietrich, 8 p.m., Uris Hall.*

"Borobodur: The Cosmic Mountain," sponsored by the Southeast Asia Program Film Series, Sept. 8, 4:30 p.m., 310 Uris Library.

Wednesday, 9/9

"Notorious," (1946), directed by Alfred Hitchcock, with Cary Grant, Ingrid Bergman, and Claude Rains, 8 p.m., Uris Hall.*

"Mecca: The Forbidden City," (1960), sponsored by Near Eastern Studies, brown-bag lunch, 12:15 p.m., 374 Rockefeller Hall.



MUSIC IN HIS EYES: Eric Aceto of the Eric Aceto Quartet performs in front of Willard Straight Hall last week.

Claude Levett

LECTURES

Development Sociology

"Hidden Transcripts of Subordinate Groups," James Scott, Dept. of Political Science, Yale University, Sept. 4, 12 p.m., 102 West Avenue.

"Peasant Resistance," James Scott, Dept. of Political Science, Yale University, Sept. 4, 3:30 p.m., 32 Warren Hall.

Icelandic Symposium

"Iceland and Today's World," Ingvi Ingvarsson, ambassador of Iceland; and "The Role of the Book in Icelandic Society," Finnboogi Guthmundsson, national librarian of Iceland, Sept. 10, 4-6 p.m. A reception will follow. The film "Iceland: a land for all seasons" will be shown at 7:30 p.m. in Uris Library. Geology Professor William White will introduce the film with a brief talk on the geology of Iceland.

"Interpreting the Icelandic Saga," Theodore Andersson, Stanford University; "Two Master Craftsmen in the Works of Snorri Sturluson," son, Finnboogi Guthmundsson, and "Iceland and the Continent in the Later Middle Ages," Marianne Kalinke, University of Illinois, Sept. 11, 9 a.m.-noon, Hans Bethe Seminar Room, Clark Hall. In the Johnson Museum of Art at 4 p.m. Peter Kahn, professor emeritus of history of art, will discuss "Two Icelandic Women Painters."

MUSIC

Bound for Glory

Songwriter Mark Rust will make his annual appearance Sept. 6. Bound for Glory presents three live sets, at 8:30, 9:30 and 10:30 p.m., every Sunday at the Commons Coffeehouse, Anabel Taylor Hall. Admission is free and children are welcome. The show can also be heard on WVBR-FM93.

Chamber Singers

The Chamber Singers, a mixed-voice ensemble open to experienced singers in the Ithaca and Cornell communities, will hold auditions Sept. 7 and 8. Directed by Susan Davenny Wyner, the group will meet approximately three hours a week (exact times to be arranged at the first rehearsal). Concerts are scheduled for Dec. 4 and April 23 in Sage Chapel, with additional performances to be announced.

The programs will include music from the 12th through 20th centuries written for double and triple choruses as well as for small ensembles. For audition information, contact the Music Department Office, 125 Lincoln Hall, or call 255-4097.

Chinese Student Chorus

The Chinese Student Chorus and Federation of Alumni From Taiwan present "Echo: Chinese Melody," Chinese folk songs and classical songs, Sept. 5, 7:30 p.m., in the Anabel Taylor chapel. Admission is free and open to the public.

Cornell Chorus

A treble-voice ensemble directed by Susan Davenny Wyner will hold auditions for new members Sept. 4, 5 and 6. Special concerts are scheduled for Nov. 13 and April 8. On April 30, the chorus will be joined by the Glee Club, CCO, children's choir and soloists in Britten's "War Requiem." Rehearsals are scheduled twice a week. For audition appointments or further information, call 255-2324.

Department of Music

Sylvia Kahan will perform piano works by Byrd, Wyner, Beethoven and Rzewski, Sept. 5, 8:15 p.m., Barnes Hall auditorium.

RELIGION

Sage Chapel

Robert L. Johnson, director of Cornell United Religious Work, will open the service at Sage Chapel, Sept. 6, at 11 a.m.

Sage Chapel Choir is looking for new members for its 89th season of service to the Ithaca area. No auditions are required and members need not be students.

Prospective choir members are welcome and encourage to attend regular rehearsal on Monday or Thursday evenings, 7-8:30 p.m. or Sunday mornings beginning at 9:15 a.m. at Sage Chapel. For more information, call Donald R. M. Paterson at 255-3531.

Catholic

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

Christian Science

Testimony Meeting: Every Thursday, 7 p.m., the Anabel Taylor Founders Room.

Episcopal (Anglican)

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

Friends (Quakers)

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

Jewish

Morning Minyan: Young Israel House, 106 West Avenue. Call 272-5810.

Conservative/Egalitarian Services: Friday 6 p.m., Saturday 9:45 a.m., Anabel Taylor Hall Founders Room.

Orthodox Services: Friday evenings, Young Israel House, 106 West Avenue. Call 272-5810. Saturday, 9:15 a.m., Anabel Taylor Edwards Room.

Reform Services: Friday Evenings 6 p.m., Anabel Taylor Chapel.

Shabbat Dinner: Michel Abehsera, macrobiotic chef and mystic, will share thoughts on Jewish tradition and the counterculture, "Food for Body, Food for Soul," Sept. 4 following services (about 6:45 p.m.).

Korean Church

Every Sunday, 2:30 p.m. Anabel Taylor Hall.

Muslim

Sunday through Thursday, 1 p.m., 218 Anabel Taylor Hall. Friday 1 p.m. Anabel Taylor Edwards Room.

Protestant

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

SEMINARS

Agricultural Engineering

"Educating Engineers for Biotechnology," N. R. Scott, director of Research, Agricultural Experiment Station, Ithaca, Dept. of Agricultural Engineering, Sept. 7, 4 p.m., 400 Riley-Robb.

Agronomy

"Alternative Approaches for Computerized Crop Enterprise Cost and Return Analysis," William Lazarus, Dept. of Agricultural Economics, Sept. 8, 4 p.m., 135 Emerson Hall.

Applied Mathematics

"Systems of Differential Equations Describing Phase Boundaries," Gunduz Caginalp, University of Pittsburgh, Sept. 11, 4 p.m., 322 Sage Hall.

Biophysics

"Elastic Processes in Protein Mechanisms," Dan Urry, Laboratory of Molecular Biophysics, University of Alabama in Birmingham, Sept. 9, 4:30 p.m., 700 Clark Hall.

Chemistry

"Organometallic Chemistry in Biology: The Role of Vitamin B12," Jack Halpern, University of Chicago, Sept. 10, 4:40 p.m. 119 Baker Laboratory.

Food Science

"Food Service from a Soldier's Point of View," Major General William T. McLean, Commanding General Army Quartermaster Center, Ft. Lee, Sept. 8, 4:30 p.m., 204 Stocking Hall.

International Nutrition

"Agriculture, Social Organization and Nutrition," Frank Young, Dept. of Rural Sociology, Sept. 10, 12:15 p.m., Faculty Commons, First Floor, New Wing, Martha Van Rensselaer Hall.

Mechanical and Aerospace Engineering

"Space Structures, Chaos, and Magnetic Levitation Fantasies," Francis C. Moon, Sept. 8, 4:30 p.m., 282 Grumman.

Microbiology

Topic to be announced, Roger Avery, Dept. of Vet Microbiology, Sept. 10, 4:30 p.m., 124 Stocking Hall.

Natural Resources

"Impacts of the Bioeconomic Model on Fisheries Management," Colin Clark, visiting professor from the University of British Columbia, Vancouver, Sept. 10, 12:20 p.m., 304 Fernow Hall.

Peace Studies

"The Cuban Missile Crisis: Rethinking the Lessons," Ned Lebow, director of the Peace Studies Program, Sept. 10, noon (brown bag lunch), G-08 Uris Hall.

Physiology

"Loss of visual function following induced retinal peroxidation," Ellis Loew, Department of Physiology, Sept. 8, 4:30 p.m., G-3 Veterinary Research Tower.

Plant Biology

"A Tale of Two Charas: A Comparative Study of Salt Tolerance," Mary Bisson, SUNY Buffalo, Sept. 4, 11:15 a.m., 404 Plant Science Building.

Plant Pathology

"Cassava anthracnose disease: Pathogenic variation among the isolates of Colletotrichum gleosporioides f.sp. manihotis and the role of Pseudotheraptus devastans Dist. (coreid) in the etiology of disease," A. Muimba-Kankolongo, Dept. of Plant Pathology, Sept. 8, 4:30 p.m., 404 Plant Science.

Southeast Asia Program

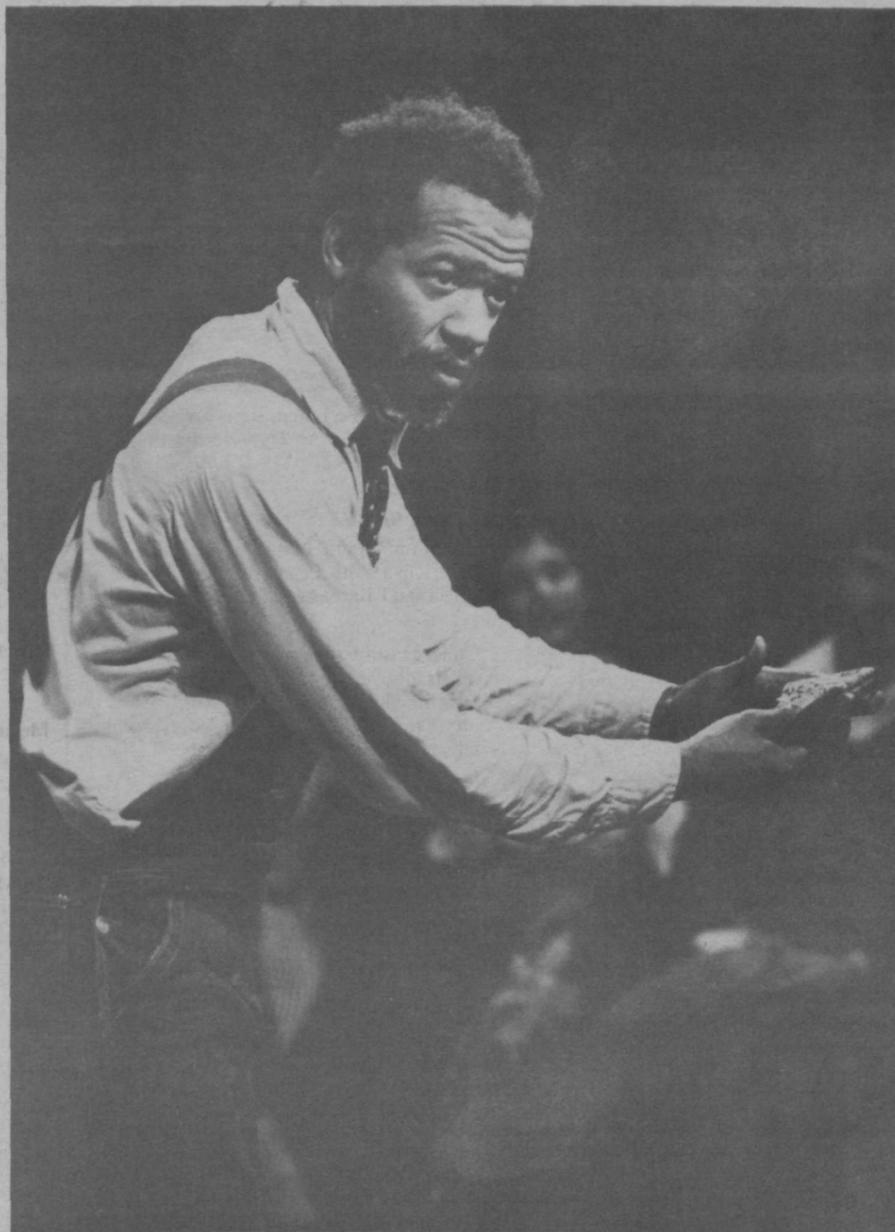
"Thailand 1962-64/1985-86," A. Thomas Kirsch, Dept. of Anthropology, Sept. 10, 12:20 p.m., 102 West Ave. Ext.

THEATRE

Theatre Cornell

"John O'Neal," a one-man show, Sept. 11 and 12, 8 p.m., in the Drummond Lab Theatre, Lincoln Hall.

O'Neal, founder of the Free Southern Theatre, has been the recipient of the Louisiana Artists' Fellowship and of Rockefeller and Ford Foundation playwriting grants. He is currently at work on a play about the life of Nat Turner. For more information, call 255-5165.



FOLKLORIST: John O'Neal, who will perform at Drummond Lab Theatre Sept. 11 and 12 in "Don't Start Me to Talking or I'll Tell Everything I Know: Sayings of Junebug Jabbo Jones."

MISC

Alternatives Library

Located in 122 Anabel Taylor Hall, this library contains more than 5,000 books, 180 periodicals and 350 tapes and slide shows on topics of individual, social and ecological transformations. Areas include eco-justice, holistic health, Native Americans, sustainable agriculture, appropriate technology, gay issues, political and economic analysis, and spirituality and mysticism.

Cornell Equestrian Program

The Cornell Equestrian Program resumes its fall activity on Sept. 14. The program, offering all levels of Hunt Seat instruction, is open to members of the Cornell Community regardless of age or skill level. Inquiries invited at 255-3625 or by stopping at the stable office at Oxley Arena, Route 366, Monday-Friday, 4:30-5:30 p.m.

Camel Breeders

The Camel Breeders will hold their first meeting of the fall semester Sept. 4, 4 p.m., 401 Warren Hall. All are welcome to attend and share ideas.

Folk Guitar Lessons

The Willard Straight Hall board again presents Phil Shapiro's Group Folk Guitar Lessons. There are eight one-hour lessons on Monday nights starting Sept. 7 in the North Room of Willard Straight Hall. Register at the first lesson; just come, and bring a guitar.

A 7 p.m. class for beginners will teach those who have never played at all or just a little. The class assumes no knowledge whatsoever. An 8 p.m. class for intermediates is for players with some experience who want to learn fingerpicking and break out of repetitious patterns. It includes an introduction to improvisation.

Those who are unsure which class is for them should come to both. The course costs \$25, payable at the first lesson. It is open to the general public. For more information, call Phil Shapiro at 844-4535.

Fuertes Observatory

Fuertes Observatory, located on the hill behind Helen Newman Hall, will be open to the public every clear Friday night from 8 p.m. until midnight. Call the observatory at 255-3557 after 8 p.m. on clear Fridays for more information.

Intramural Soccer (men, women)

Deadline for entries is Sept. 9 at 4 p.m. in the intramural office, Helen Newman Hall. Fee is \$10 per team, due with team roster. Minimum of 12 to enter. Play will be on Jessup Field starting Sept. 21. Specify preferred day of play on roster.

Olin Library Orientation Tours

Orientation tours for faculty and graduate students will provide an introduction to Olin's services, facilities and resources. Tours last about 45 minutes. Meet in the lobby across from the Circulation Desk at the following times: Sept. 3 at 1:10 p.m.; Sept. 4 at 10:10 a.m.; Sept. 8 at 10:10 a.m.; Sept. 9 at 11:10 a.m.; Sept. 10 at 2:10 p.m.; and Sept. 11 at 10:10 a.m.

The next Olin Library Research Seminar will be offered Sept. 12 at 10 a.m. For information and registration, call or stop by the Olin Reference Desk. Telephone, 255-4144.

Personal Growth Workshops

A new series beginning the week of Sept. 14 will include assertiveness, building self-esteem, building satisfying relationships, stress management, women, food and self-esteem.

Lesbian? Bisexual?, a support group for women, meets Wednesdays 7-9 p.m., 103 Barnes Hall; Gay? Bisexual, a support discussion group for men meets Tuesdays, 6-8 p.m., 103 Barnes Hall. Groups are free and confidential and open to all members of the Cornell community. Signups begin Sept. 3. For more information or to sign up, call 255-3608 or stop by 103 Barnes Hall.

Uris Library Tours

Tours of the Uris Undergraduate Library will be given weekdays Aug. 31-Sept. 4. Meet at the Uris Circulation Desk at the following times: Sept. 3, 3:30 p.m.; Sept. 4, 11:15 a.m. Tours last about 30 minutes. Handicapped students who need special tours should call 255-2339.

Research facilities

Continued from page 1

see poor facilities reflecting a lack of commitment by the country to research.

State vs. federal funding

"As a general rule, the public side of Cornell is in much better shape than the private side, because New York State has done a more adequate job of providing research facilities than the federal government," Ballantyne said. "Unlike the federal government, the state has a regular mechanism for funding building on campus."

State funding plays a major role in the \$32.5 million biotechnology building, \$6 million Food Sciences Laboratory, \$70 million Veterinary College renovation and \$29 million engineering/supercomputer center.

Except for the supercomputer center, these are facilities for the state-supported units of Cornell, Ballantyne said.

Engineering research in a classroom

The Engineering College is a prime example of the inadequacy of the private, or endowed, side of Cornell's research facilities.

"Over the last several decades, we've coped with buildings that were obsolete when they were built," said Engineering Dean William Streett. "The majority of our buildings were built in the 1950s as undergraduate classroom and office buildings to accommodate about 2,400 students, the number now enrolled.

"Since then, we've had to superimpose on that number 1,100 graduate students and \$45 million in research annually."

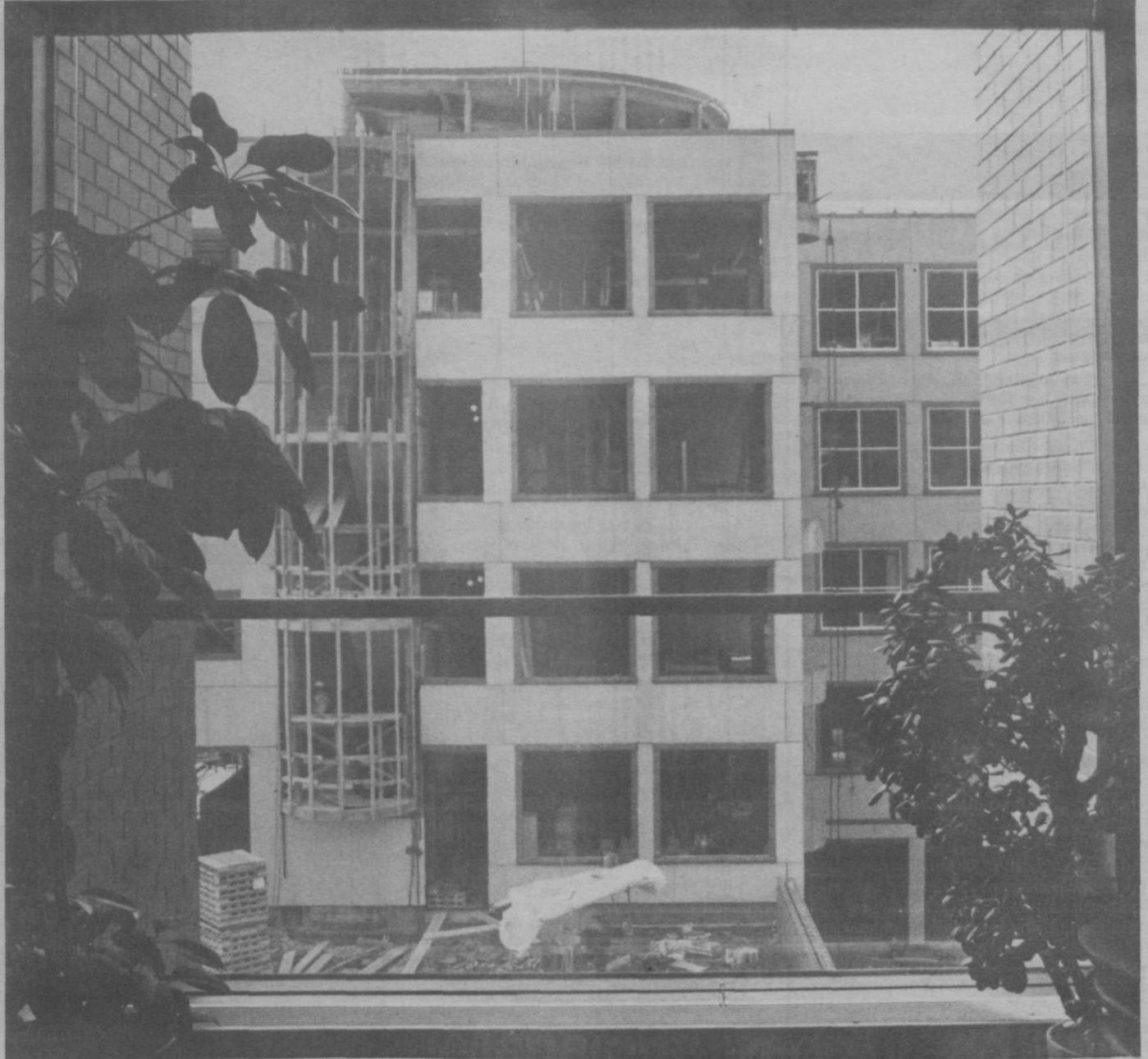
According to Streett, most of Cornell's engineers do without laboratory features considered basic to the support of modern research. These include air conditioning to protect sensitive instruments, advanced ventilation and drain systems to allow for handling hazardous materials and adequate "clean" power for computers and other electrical devices.

They also do without space. In a survey comparing Cornell with eight peer institutions (including MIT, Columbia, Stanford, Princeton and UC Berkeley), Cornell ranked below average in space per faculty in all areas of engineering.

The university ranks low in a discipline that itself ranks lowest in academe in terms of adequacy of space. In a 1986 study by the National Science Foundation, 93 percent of college engineering deans said they had serious space problems, the highest percentage of any academic field.

The space squeeze already has had serious consequences. Streett said that a \$1.6 million ion implantation machine — a device for making new electronic materials for research and teaching — donated by Eaton Corp. will sit in crates for over a year for lack of a properly equipped room to house it.

He also said he received a letter from a young engineering faculty member — designated a Presidential Young Investigator



NEW QUARTERS: Construction of the campus' new biotechnology building as seen from Mudd Hall.

Claude Levett

because of his high promise — pointing out that his research has been forced into a hallway of one of the old buildings.

To cope with the heritage of low- or no-tech facilities in a high-tech research world, the college has upgraded individual laboratories piecemeal, but, Streett said "the hundreds of thousands of dollars we spend to fix up a lab here and there will go down the drain when we finally have to go to overall rebuilding."

Raising funds for renovation of an entire building is extremely difficult, Streett added. Faced with an estimate of \$13 million to renovate the Olin Hall of Chemical Engineering, the college found it had to break the project into phases that will stretch into

the 1990s. The college has raised most of the \$5 million for the first phase from private donors and corporations.

Recognizing the need for a comprehensive approach to planning, the college has developed an extensive 10-year master plan for renovating old facilities and building new ones. The plan calls for adding at least 250,000 net square feet of classrooms, offices and modern laboratories at a cost of up to \$156 million.

"The question is where can we possibly go for the funds for a rebuilding program of this magnitude," Streett said.

Private help is insufficient

Private foundations, corporations and

individuals have helped to provide the few bright spots in the Engineering College's facilities picture. This funding, along with state financing, will play a major role in the new 252,000-square-foot Theory Center building to house the supercomputer center and engineering faculty. Other buildings aided by major private donations include:

- The \$4 million Knight Laboratory housing the National Nanofabrication Facility, aided by a donation from engineer Lester B. Knight Jr. and a grant from the J.N. Pew Jr. Charitable Trust.

- A new \$5.4 million, two-floor addition to Upson Hall — headquarters for the Department of Computer Science — aided by a grant from the Pew Charitable Trust.

- The \$13 million Snee Hall of Geological Sciences, aided by a bequest from petroleum geologist William E. Snee and a grant from the Pew Charitable Trust.

However, Streett pointed out that private gifts are seldom enough to fund major construction.

"Few donors can give the \$30 million that's considered necessary to build a modern research and teaching building today. Thus, without substantial federal help, there is no way to really provide first-rate facilities," he said.

State funding problems

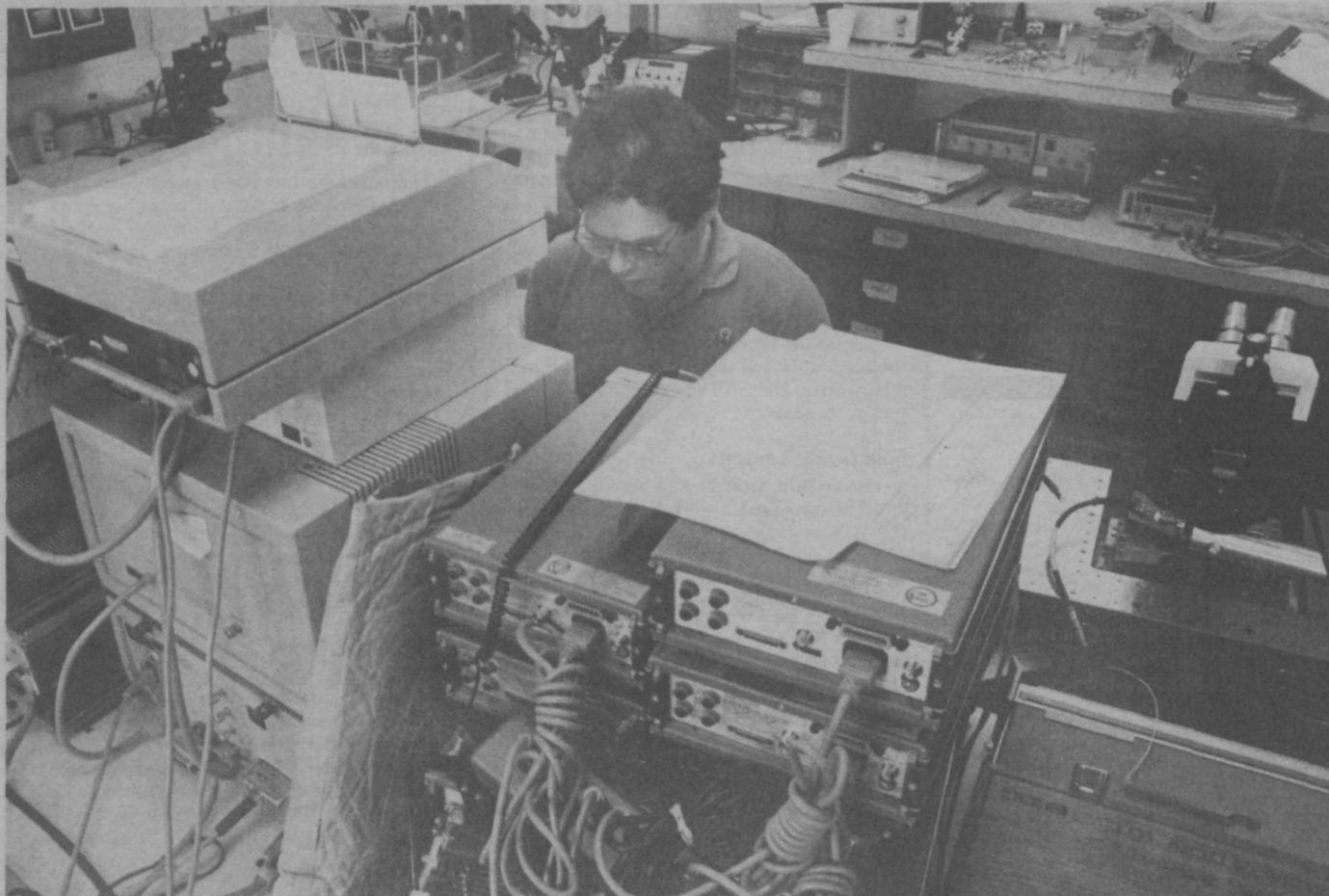
Even though the state-funded side of Cornell fares better in financing new laboratories, it still has its share of problems, notably in funding rehabilitation of aging research facilities.

"Given today's methods of doing research, the state funding methods are quite inadequate," said David Call, dean of the College of Agriculture and Life Sciences.

Rehabilitation is currently funded through annual appropriations, and such budgets are usually not enough for expensive renovation of entire buildings, which often can cost more than the original building, he said, adding that the university must often resort to piecemeal renovation.

"We'll spend about \$200,000 redoing a single laboratory, including new heating and ventilating systems, and over the long term we end up with a cobbled-up system of individual laboratories," Call said.

He said the problem would be eased greatly if the state increased the cap on its bonding capacity, allowing universities to



CRAMPED QUARTERS: Brigon Hughes, a visiting fellow in electrical engineering, works in cramped quarters in Phillips Hall lab.

Claude Levett

Continued on page 9

Research funding

Continued from page 8

borrow the large sums needed for wholesale renovations. In the past, bonding usually has been used only to finance new facilities.

Sometimes, departments trying to renovate facilities can find themselves boxed into a very expensive corner. For example, Cornell's Chemistry Department, a state-of-the-art research facility housed in the Olin and Baker laboratories, is faced with replacing its corroded ventilation system to continue to meet safety standards. However, before the ventilation system replacement, the department will have to undergo a large, costly, disruptive asbestos-removal project in Olin Laboratory, which was constructed in an era when asbestos was used extensively for insulation.

The new instrumentalists

Bricks, mortar and fume hoods are by no means the only facilities problems that administrators face. They also must cope with funding the extraordinarily elaborate machinery of modern research.

Areas such as biotechnology, which in the past may have needed only test tubes and Petri dishes, have blossomed into big-science, big-instrument disciplines.

The new biotechnology building, for example, will boast expensive instruments such as computer graphics systems and electron microscopes that only a few years ago might have been found only in chemistry or physics laboratories.

"We can't buy any major instrument for less than a hundred thousand dollars," said Gordon Hammes, director of the Biotechnology Program. "Even chemicals can be incredibly expensive. A small vial of monoclonal antibody can cost \$5,000 to \$10,000."

Even the basic enzymes needed to snip apart DNA for genetic engineering cost \$100 for a thimble-sized vial, and about \$5,000 worth is needed for research even to begin, he added.

While the biotechnology building was fully funded by the New York State and Cornell, the program would have suffered from a severe lack of equipment without a



A QUARTER TURN: Lynne Adler, a graduate student working on spectroscopy of plasma openings, works in the hallway of another plasma lab in a Grumman Hall lab.

\$1 million instrumentation grant from the U.S. Army Research Office, Hammes said.

Gifts of equipment do not come cheap, for they can bring heavy costs for maintenance and operation. Thus, Cornell, like other universities, finds itself looking more and more equipment gift horses in the mouth.

"The cost of maintaining equipment that has been given us, which sometimes run to 10 percent of the equipment cost per year, already put a severe strain on our budgets," Streett said. For example, computer main-

tenance typically costs 10 percent of the purchase price annually, which means that a gift of \$5 million in computers would end up costing Cornell \$500,000 per year to support, he added.

Maintenance aside, taking full advantage of gifts of new equipment often means renovating facilities, adding technicians and developing new courses, all of which can be expensive.

Cornell administrators have calculated that the \$2 million in microcomputers that International Business Machines Corp.

donated to Cornell to launch the Project Ezra educational computing program has cost Cornell \$5 million to support.

How Cornell and other universities will pay the immense costs of new research facilities is far from settled. It is clear, however, that in an age of supercomputers, superconductors and supercolliders, universities cannot function as the country's basic research foundation with laboratories built in a bygone era.

— Dennis Meredith

O'Neal to present 'Junebug Jabbo Jones'

Author-actor John O'Neal will present stories and sayings from the life and writings of "Junebug Jabbo Jones" in two one-man performances Sept. 11 and 12 in the Drummond Lab Theatre.

O'Neal, co-founder of the Free Southern Theatre in 1963, has based his script on aphorisms and anecdotes attributed to the folklore character popular during the heyday of the Student Non-Violent Coordinating Committee (SNCC) in the 1950s and 60s.

Both performances will start at 8 p.m. Free tickets may be reserved by calling Cornell Theatre Arts 255-0549 between 1 p.m. and 4 p.m. starting Sept. 7. Any remaining seats will be available at the door of Drummond Theater after 7:50 p.m. on both nights of the performance.

In addition to the performances, O'Neal will lecture on "Theatre of Conscience: Racism, Chauvinism and Change in the South" at 4:40 p.m. on Sept. 8 at the Andrew D. White House under the sponsorship of the Society for the Humanities.



DETOUR: A student pauses to gaze at the construction site at the Colletown bridge.

Doug Hicks

Deans

Continued from page 1

university provost said. "The Human Ecology College has made a remarkable transition by establishing new programs, and it enjoys an excellent reputation nationally and internationally. Human ecology now focuses on the broad needs of our society and is an integral part of state extension and outreach into our communities."

Cornell's Human Ecology College and its Industrial and Labor Relations School are funded by the State University of New York system. Cornell is unique among American universities in that part of the institution is private and part is state supported.

"Bob Doherty stepped into Industrial and Labor Relations and brought to the school a period of thoughtful reexamination," Barker said.

"The dynamics of industrial and labor relations are much different today than they were when the school was set up 42 years ago, and Bob has helped the school to

organize to the new challenges."

Barker said that Doherty plans to remain on the Cornell faculty until 1989 and Ziegler longer. Both deans will be 65 years old next year, and Cornell generally does not renew or appoint a dean at that age.

Doherty earned his doctorate in education at Columbia University in 1959 after teaching in high schools in New York and Oregon. He was an instructor at Columbia and an associate professor at State University College in Oneonta, New York, before joining the Cornell faculty in 1961.

Speaking in an interview about his term as dean, Doherty said, "Nice things happened during my watch, and my great accomplishment was not getting in the way of people who were doing things.

"We received significant endowments and research grants, including a \$2.5 million endowment to study alcoholism and other work-related problems. We established an

institute for collective bargaining, which held a conference in New York City with participation by the secretary of labor.

"We received a substantial grant from the Army to study personnel policies of major companies and how effective these policies are. We have a bright and energetic faculty."

Doherty, who has taught labor law, collective bargaining and labor history, served three years in the Army in the Pacific during World War II and reports that one of his hobbies is poker along with reading, gardening and hiking. He has written and contributed to a number of books, including studies of collective bargaining in public school systems.

His advice to his successor: "Keep your cool and, if you have a sense of humor, exploit it."

Ziegler received a master's degree in political science and anthropology from the University of Chicago after pre-medical stu-

dies, and he did his doctoral studies at the London School of Economics and Political Science.

He joined the Cornell faculty in 1978 after working in a wide range of public and private positions. A Navy pharmacist's mate and ensign in World War II, Ziegler was an economic analyst for the Marshall Plan in Paris following the war and then worked as a machinist for General Motors Truck and Coach Co. and in foundry production at Ford Aircraft Engine Division.

He went to Puerto Rico with the Peace Corps, headed his own consulting firm, taught in the State University of New York at Old Westbury and served four years as commissioner of higher education in Pennsylvania.

Ziegler was traveling on the west coast this week and the Chronicle was unable to reach him before its presstime.

— Albert E. Kaff

Job Opportunities

September 3, 1987
 Number 33
 Office of Human Resources
 Cornell University
 160 Day Hall
 Ithaca, New York 14853-2801

In compliance with the Immigration Reform and Control Act of 1986, Cornell University is now required to check the identity and employment eligibility of all new hires.

Effective June 1, 1987, if you accept a position, you must show documents on or before your first day of work, that indicate your identity and employment eligibility; for example, a state issued driver's license and a birth certificate. For more information, contact Staffing Services, 255-5226.

-Employment and employee transfer applications forms are available at both Staffing Services locations-160 Day Hall and East Hill Plaza.

-Requests for referral and/or cover letters are not accepted unless specified in the ad.

-Cornell University is an Affirmative Action/Equal Opportunity Employer.

-This listing is also available on CUINFO, Cornell's computerized info service.

Administrative and Professional

Minimum salaries listed are for recruitment purposes only.

ASSISTANT TO BUSINESS MANAGER (PC3314) (Minority Trainee)/Division of Campus Life 1 yr. appt.

Provide staff support to Busn. Manager/Campus Life (\$60 M budget). Analyze finan. & operational info., prepare reports, with division staff (at least 50% of time) using PC & mainframe computer apps. Assist in admin. of personnel/EEO & labor agreement policies, practices, procedures. This appt. provides exp. in a variety of univ. admin. functions sufficient to prep. indiv. to assume possible mgmt. resp. with Cornell.

Req.: BA busn. admin., fin. or acctg. with 2-3 yrs. exp. req. MBA pref. Able to work with a variety of groups; staff, students, admin. on an independent basis nec. Good written/verbal comm. skills essent. Familiar with IBM PC desir. Send cover letter & resume to Bettie Thompson by 9/30.

ASST. FARM MANAGER (PT3312) Poultry & Avian Sciences

Assist Farm Mgr. by supervising major farm activities. Provide tech. poultry knowl. & skills in support of teaching, research & extension functions/programs.

Req.: BS pref. in An. Sci.; or equiv. exp. & trng. Able to acquire ALAS Technicians Accreditation & Pesticide Lic.; Supv. exp., knowl. of using poultry as research animal. Good interper. skills. Send cover letter & resume to Judi Deane by 9/11.

RESEARCH SUPPORT SPECIALIST I (PT3311) Vet Micro.-Baker Institute

Operate & maintain research service function. Schedule users, maintain & operate HPLC. Maintain & repair a wide range of analytical equip. (i.e. refrig. centrifuge, CO2 incubators, laminar flow hoods, spectrophotometers, etc.). Competence in diagnosis of equip. failure & perform simple repairs. Maintain operating log on major equip. Assist in developing integrated equip. arrays. Provide user instruction.

Req.: BS in bio. or biochem. 2 yrs. exp. Demonstrated mechanical aptitude. Send cover letter & resume to Judi Deane by 9/18.

ASST. DIR., DEVELOPMENT & ALUMNI AFFAIRS (PA3309) Engineering Dean's Office

Responsible for developing & implementing programs for Engineering alumni; work directly with Dean, faculty, volunteers & members of public affairs staff to schedule & plan events both on/off campus. Maintain computer based alumni files & records; oversee annual membership campaign & stewardship of endowed scholarship funds.

Req.: BA/BS. Exc. comm. & writing skills. Exp. working with volunteer organizations pref. Knowl. of personal computers req. Initiative & ability to set priorities. Send cover letter & resume to Cynthia Smithbower by 9/11. Employees should include an employee transfer application.

MGR., SYSTEMS DEPT. (PT3317) Bursar

Manage & coord. automated Bursar receivable system incl. student finance, student loan, Cornellcard & installment plant. Supv. daily systems operations & data processing staff. Serve as principal liaison for Bursar's Office with Computer Services & user depts.

Req.: BA/BS or equiv. exp. in computer related field. Supv. exp. & microcomputer knowl. essential. Familiar with CU student acctg. programs, acctg. systems & CU computer environ. pref. Send cover letter & resume to Judi Deane by 9/18.

DINING SUPV. (PG3306) Dining Services

Supv. daily operation of dining unit, incl. purchasing & storage of food & supplies, maintenance of equip., planning menus & preparation & dispensing of food.

Req.: AAS or equiv. combination of ed. & exp. req. 1 yrs. food service supv. exp. Knowl. of food & health codes desir. Send cover letter & resume to J. Courtney Fletcher by 9/11.

TECHNICAL CONSULTANT/SYSTEMS PROGRAMMER (PT3316) CISER

Provide systems prgrmg. & support for social sci. community using IBM 4381. Responsible for maint., development & documentation of user interface software at both mainframe & micro levels incl. development of social sci. workbench that integrates microcomputers with mainframes.

Req.: BS or equiv. Social sci. research exp. pref. Exp. with IBM mainframes running VM/SP CMS nec. Prgrmg. exp. using system interpreter (REXX) & ISPF is a plus; skills in prgrmg. languages such as FORTRAN or RL/I with willingness to learn. Exp. with IBM PC's incl. software pkgs. such as dBase III, Lotus 1-2-3, Kermit, DOS; bkgnd. with Macintosh & knowl. of SAS &/or SPSS pkgs. Exc. writing & comm. skills. Send cover letter & resume to Judi Deane by 9/18.

HEAD COACH, SWIMMING (PA3313) Physical Education & Athletics

Under direction of Assoc. Athletic Dir., resp. for planning & executing men's/women's intercollegiate swimming prog. Duties incl. coaching, supv. of practices & team mtgs. Recruit, identify, evaluate & encourage application & acceptance of student athletes at CU in accordance with Ivy

League & Univ. policy. Teach phys. ed. classes as assignd. by Dir. of Phys. Ed.

Req.: BS in phys. ed. Proven success in coaching, recruiting & working with student athletes. Send cover letter & resume to Search Committee: Hd. Coach-Swimming, by 9/18.

RESEARCH SUPPORT SPECIALIST III (PT3301) Agricultural Economics

Examine electricity use on NYS Farm. Assist in construction & estimating of models to forecast electricity consumption with & without conservation incentives. Until 8/10/89.

Req.: MS in Ag. Econ. or Economics. Strong econometric skills, familiar with SAS, conditional demand & discrete-choice models. Send cover letter & resume to Judi Deane by 9/18.

TECHNICAL CONSULTANT III (PT3302, PT3303) Theory Center

Provide full range of consulting svcs. to researchers using resources at Cornell National Supercomputer Facility.

Req.: BS, grad. study in either computer sci. or physical/bio./enrg. sci., 3-5 yrs. related exp. Exp. with mainframe computers essen., with VM/CMS & array processors desir. Fluency in 2 prgrmg. languages. Demonstrated ability to work with complicated programs. Strong written & interper. skills. Send cover letter & resume to Judi Deane by 9/18.

TECHNICAL CONSULTANT III (PT3304, PT3305) Theory Center

Provide support in numerical analytical techniques in supercomputing; train staff & researchers in efficient use of scientific & math pkgs. Identify appropriate pkgs., evaluate, obtain, install & monitor.

Req.: BS or equiv. pref. 3-5 yrs. prgrmg. exp.; strong bkgnd. in numerical tech. or a computational sci.; scientific FORTRAN desir.; demonstrated ability to work with numerically intensive programs; strong written & interper. skills. Send cover letter & resume to Judi Deane by 9/18.

AREA MANAGER I (PT3307) Theory Center

Provide technical & admin. leadership of scientific software support group; establish & implement goals for CNSF in this area.

Req.: BS or equiv. MS in computer sci. or I of the hard sciences or engr. or equiv. 3-5 yrs. computing exp.; IBM VM/CMS & scientific FORTRAN desir.; exc. comm. (verbal/written) skills. Send cover letter & resume to Judi Deane by 9/11.

NETWORK SYSTEMS PROGRAMMER (PT3308) Computer Services

Write & enhance programs for micro computers to implement packet network protocols & associated user interfaces.

Req.: MS in computer sci. or engr. Strong exp. in 2-3 of following: Assembly language; "C" language prgrmg. for IBM PC; knowl. of 3270 data stream protocols & TCP/IP protocols; exp. with local area network equip.; IBM mainframe prgrmg. Send cover letter & resume to Judi Deane by 9/18.

SYSTEMS PROGRAMMER III (PT2406, PT2407) Theory Center-repost

Resp. for analysis of scientific codes for researchers using the CNSF, incorporate parallel processing, vectorization, numerical methods, & other computational techniques.

Req.: BA or equiv. 3-5 yrs. programming exp. Demonstrated ability to work in a scientific or large-scale computing environment. IBM VM/CMS & Fortran exp. desir. Send cover letter & resume to Judi Deane by 9/18.

ADMINISTRATIVE MANAGER I (PA3218) Plant Pathology

Assist Dept. Chair, with admin. of large academic dept. Responsible for staff support in all non-academic areas incl. financial, personnel & facilities mgmt. incl. renovations. Act as dept. resource person & chief liaison with numerous non-academic & academic offices. Supervise dept. clerical staff.

Req.: BA/BS or equiv. 2 yrs. mgmt. exp. in academic setting. Supervisory exp. Computer literate. Send cover letter & resume to Cynthia Smithbower by 9/11. Employees should include an employee transfer application.

RESEARCH SUPPORT SPECIALIST II (PT3214) Agronomy

Support plant physiology/seed biology research program involving physiological, biochemical, molecular & genetic mechanisms regulating embryogenesis, seed growth, maturation & germination. Grow & mature somatic embryos in tissue culture; from artificial seeds. Support biochem. lab & greenhouse activities; data collection, analysis & publication.

Req.: MS in biochem., plant molecular bio., chem., plant physiology, plant sci. or agronomy. 2 yrs. biochemical research req. Radioisotope & plant tissue culture exp. desir. Org. & supervisory skills essential. Date analysis, interpretation & computer skills needed. Send cover letter & resume to Judi Deane by 9/11.

APPLICATIONS PROGRAMMER II (PT3209) Agricultural Economics

Assist faculty in creative design, development & use of computer tech. to improve quality of teaching in undergrad. courses. 3 yrs. Contingent upon funding & need.

Req.: BS, computer related courses or equiv. trng. & exp. IBM environ., microcomputing systems, knowl. of data & file mgmt. processes. 1 yr. exp. in data processing environ. & interest in academic instruction. Strong interper. skills. Send cover letter & resume to Judi Deane by 9/11.

PUBLIC AFFAIRS ASST. (PC3213) Law School Development & Public Affairs

Work with Asst. Dean to plan, develop & implement programs relating to increasing support for Law School. Work closely with alumni, friends, faculty, students & staff in capital fund raising & annual giving programs. Until 8/88.

Req.: BS or equiv. Exc. org., interper. & comm. skills. Knowl. of computing & data-based info. systems. Exp. in event/mgt. planning desir. Send cover letter & resume to Esther Smith by 9/4.

EXECUTIVE STAFF ASST. (PC3212) Ecosystems Research Ctr.

Responsible for daily admin. of ERC provide admin. support to Dir. & Assoc. Dir. incl. in their roles as faculty in Section of Ecology & Systematics; assist with budget mgmt.; develop & implement efficient offic. procedures; manage workloads to assure timely completion of tasks; edit manuscripts.

Req.: BS desir. some sci. background or sci. editing. 3-5 yrs. admin. exp. Scientific editing. Microcomputer skills desir. Send cover letter & resume to Esther Smith by 9/4.

HEALTH ASSOCIATE I (PA3203) Univ. Health Services

Using health associate-physician approved guidelines, provide primary health care to Univ. students, faculty & staff members. Emphasis on continuity of care, health ed., health maintenance & preventative care.

Req.: NYS RN/PA lic. & grad. of accred. NP/PA program req. Exp. & prof. cert. pref. Send cover letter & resume to Cynthia Smithbower by 9/11.

RESEARCH SUPPORT SPECIALIST I (PT3205) Plant Pathology

Design, execute & analyze experiments related to study of soil-borne plant pathogens. Independent research will be conducted in 1 or more following areas: Microbial responses to roots, isolation & analysis of plant exudates, microbe-microbe interactions, biological control. Train & supervise students & others in lab experimental procedure. Routine lab mgmt.

Req.: MS or equiv. in Plant Path. or Microbio. or related field. 2 yrs. lab exp. in Microbiology req., trng. in biochem. & soil science desir. Evidence of independent research skills req. Send cover letter & resume to Judi Deane by 9/11.

RESEARCH SUPPORT SPECIALIST I (PT3204) Plant Pathology

Provide tissue culture expertise to research program on biology & control of nematode parasites of potato. Resp. for all support effort involving tissue culture experimentation incl. experimental design & analysis. Investigations focus on use of tissue culture tech. to contribute to better understanding of host-resistance & nematode biology, which are primary objectives of research program.

Req.: MS or equiv. in Bio. or related field. 2 yrs. exp. in plant tissue culture techniques. Send cover letter & resume to Judi Deane by 9/11.

MGR., CUSTOMER SERVICE (PA3211) Maintenance & Serv. Operations

Manage Univ's approx. \$3m/yr. in-house preventive & routine maintenance programs. Responsible for daily supv. of 4 subordinate units: Customer Service Ctr., Customer Service Shop, Mechanical Maintenance Shop & Garage.

Req.: BS Engineering a plus. Working knowl. of computerized preventive maintenance scheduling system. Demonstrated supv. skills. Proven oral/written comm. skills. 7 yrs. exp. in facilities maint. Knowl. of CU facilities helpful. Send cover letter & resume to Cynthia Smithbower by 9/11. Employees should include an employee transfer application.

APPLICATIONS PROGRAMMER/ANALYST III (PT3201) Mechanical & Aerospace Eng.

Resp. for continued development of large, sophisticated software pkg. Responsible for documentation, development of new applications & system utilities to support ongoing application development by others.

Req.: BS or MS in technical field. Programming exp. in FORTRAN, C, UNIX, color graphics & distributed processing. Send cover letter & resume to Judi Deane by 9/11.

ASSOCIATE DIRECTOR (PA3216) Office of Human Resources

Responsible for developing goals, operating plans, & strategic objectives related to the mgmt. of Benefits, Compensation & Human Resources Information areas. In collaboration with Dir. & Dep. Dir., provide gen. mgmt. of Division & assist key Univ. administrators regarding implications of organizational change efforts.

Req.: BS/BA or equiv. Adv. degree in HR mgmt. or bus. admin. pref. Extensive & progressively resp. HR exp. with mgmt. respons. in at least 2 of above areas; knowl. of PC/computer hardware/software essent. Strong org., analytic & supv. skills nec. Exc. oral presentation & writing skills critical. Send cover letter & resume to Bettie Thompson by 9/11.

DIRECTOR (PA3217) Office Of Equal Opportunity

Under the leadership of Assoc. Vice Pres./Human Relations responsible for ensuring Univ. compliance & commitment to academic & non-academic AA/EEO programming. Duties incl. advising Assoc. V.P. & other exec. officers on program guidelines; develop & implement programs/resources designed to address Univ. AA Plan goals & object.; provide training & tech. resources to managers for ensuring optimal work environment.

Req.: BA/BS req. MA/MS pref. Extensive admin. exp. in higher ed. dealing with policy/procedure development & implementation at a sr. level pref. Familiar with EDP reporting/analysis environ. nec. Demonstrated knowl. of AA/EEO regs. (with part. emphasis on MBE/WBE util.), reporting req. with exc. comm. skills (written/oral) req. Ability to work with faculty, admin., staff & students req. Send resume & cover letter by 9/30 to Bettie H. Thompson.

ASSOCIATE VICE PRESIDENT FACILITIES PLANNING AND CONSTRUCTION (PA3219)

Responsible for managing all phases of the Univ. capital project development. Reporting to the Sr. V.P., the incumbent will share respons. with Vice Provost for Budget & Planning for development, implementation & maintenance of a full scale campus facilities plan covering building sites & infrastructure (e.g. utilities, roads, parking, landscape etc.). In addition respons. for complete facilities programming, site selection & design, while maintaining an effective construct. mgmt. org. which supports campus planning, space analysis & building project programs.

Req.: BS Arch. or Eng. req. Adv. degree pref. 15 yrs. of progress. resp. exp. in arch./eng. firm, construct. mgmt. or similar position in a large, complex public or private org. req. Demonstrated leadership in design & construct. of major capital projects & large-scale site plans essential.

Effect. comm. & motivational skills with ability to work in a large decentralized environ. nec. Send resume & cover letter by 10/2 to Bettie H. Thompson.

ASSOCIATE DIRECTOR (PA131) Campus Store-repost

Manage all facets of support functions of store; business office, operations, traffic, personnel, systems; provide leadership in these areas & facilitate full store planning; provide support to director in storewide planning & decision-making.

Req.: MBA or equiv. & 5 yrs. exp. in retail or business environ. Supervisory & financial exp. essential. Exc. verbal & written comm. skills needed. Planning, negotiating, org. & general admin. skills req. Familiarity with automated business systems pref. Send cover letter & resume to Cynthia Smithbower by 9/18.

CLEO PHYSICS PROGRAMMER (PT3111) Nuclear Studies

Provide top level internal technical guidance involving CLEO offline data analysis. Resp. for technical consulting, software design, programming documentation & coordinating analysis operation.

Req.: BS/BA or equiv. MS or equiv. pref. 3-5 yrs. related scientific programming. Ability to write complex scientific programs using FORTRAN, VAX/VMS or IBM/VM operating systems. Strong emphasis on computer sci. & physics coursework or equiv. Strong written/oral comm. skills & interper. skills. Able to function effectively within a large collaboration. Send cover letter & resume to Judi Deane by 9/11.

ARCHITECT I (P4613) Facilities Engineering-repost

Perform architectural design & drafting services for Univ. renovations; participate & assist on major projects; independently under take in-house projects.

Req.: BS Architecture. Min. or 1 yr. related exp.; exc. org., interper. & comm. (oral/written) skills, valid driver's lic. Send cover letter & resume to Cynthia Smithbower by 9/4.

HEALTH EDUCATOR (PA260c) Health Services-repost

Responsible for overall planning, development, coordination & evaluation of outreach programs on birth control, STD's & AIDS. Coordinate Peer Sexuality Ed. program, provide inservice training, & assist Dir., Health Ed.

Req.: MED/MPH with 2-3 yrs. exp. providing sexuality or AIDS ed. programs. Must have proven exc. written & oral comm. skills. Exp. working with college age men & women desir. Send cover letter & resume to Cynthia Smithbower by 9/11.

ASST. DIR., SUMMER COLLEGE (PA061) Summer Session-repost

Assist Summer College dir. in selection & recruitment of high school student participants. Direct summer-residential program. With Residence Life asst. dir., develop & implement program for selecting & training summer residential staff. Full-time, regular, Jan.-Sept. Recurring 9 month appt.

Req.: BS in Student personnel or related field. MS pref. Exp. in residence life req., admission & financial aid exp. pref., supv. skills necessary. Must have use of own vehicle. Preferably able to live in residence hall for approx. 8 wks. Send cover letter & resume to Cynthia Smithbower by 9/30.

ESTIMATOR I (PG2908) M&SO

Prepare detailed estimates for maintenance, repair or construction projects.

Req.: AAS in Mech. Tech. or related field and/or completion of sheet metal apprenticeship program. Min. 5 yrs. exp. in field. Exc. comm. skills, understanding of scheduling & project mgmt. Exp. in univ. research environ. & computer knowl. most helpful. Send cover letter & resume to J. Courtney Fletcher.

EXECUTIVE DIETITIAN (PG2803) Dining

Plan & direct all service, production, personnel & financial aspects of a dining operation; coordinate contemporary nutrition program. Assist managers in menu planning; prepare budgets, control revenues & expenses; forecast customer counts; develop new recipes & programs; develop competent & efficient staff through effective hiring & training programs.

Req.: BS & 3-5 yrs. related food service exp. or equiv. Registered Dietitian (R.D.) by American Dietetic Association pref. Knowl. of food handling & health regulations essential. Exp. teaching dietetic course work desir. Send cover letter & resume to J. Courtney Fletcher.

Clerical

REGULAR EMPLOYEES Submit an employee transfer application, resume & cover letter.

Career counseling interviews are available by appt. **EXTERNAL APPLICANTS** Submit an employment application & resume. Interviews are conducted Wed. from 1-6pm at Staffing Services, East Hill Plaza by appt. Contact Esther Smith (255 6878) or Lauren Worsell (255-7044).

OFFICE ASST., GR16 (C3310) Travel Office

Resp. for distribution of phone & in-person reservation requests; giving travel info., apps., forms & assist in ticketing process.

Req.: H.S. dip. or equiv. Travel School cert. pref. Knowl. of travel industry, good phone technique, able to work within multiple deadlines. Med. typing.

Minimum Biweekly Salary: \$401.78

RECEPTIONIST/SECRETARY, GR16 (C3301) Arch.; Art & Planning

Act as receipt. for Dean's Office Suite, greet & assist students, faculty, staff & visitors in-person & on phone. Maintain key Mac. database, update computerized files; screen, document & process bldg. maintenance requests; sort, distribute & post mail, type, xerox & file. Other duties as assigned.

Req.: 6 months 1yr. off. exp., pref. at CU; basic computer skills essential, exp. with Macin-

tosh using WP, file mgmt., spread sheet pref. Warm, professional manner, etc. Public rapport nec. Med. typing.

Minimum Biweekly Salary: \$401.78

OFFICE ASST., GR16 (C3305) Feline Health Center

Provide assist. to office secretaries; main. mailing lists, enter membership dues & contributions into database program; mail memorial letters, membership cert. & other routine items; file letters.

Req.: H.S. dip. with 1-2 yrs. office work exp. Accurate typing essential. Good clerical & filing skills req. Lt. typing.

Minimum Biweekly Salary: \$400.67

CIRC./RESERVE ASST., GR16 (C2619) Mann Library-repost

Work regularly scheduled shifts at both circ. & reserve desks. Assist with supervision of students assts. during daily shifts at desk; responsible for processing of holds/recalls & renewal sheets; shelve books & maintain collection on several tiers; serve as back up in various other dept. tasks. Tues.-Fri., 8-5; Sat., 10-6; one night/wk.

Req.: H.S. dip. or equiv. Some college exp. desir. Able to work with wide variety of people in public service capacity. Org. & interper. skills essential.

Minimum Biweekly Salary: \$401.78

OFFICE ASST., GR17 (C3309) Statler Hotel & Conf. Center

Under general supv., perform receptionist, sec. & clerical duties for hotel executive office.

Req.: H.S. dip. 2 yrs. receipt. sec. exp.

Minimum Biweekly Salary: \$421.81

SECRETARY, GR17 (C3303) Education

Provide sec. support for NSF grant, coord. staff activities (i.e., calendars & mtgs.) interim & final reports, transcribe research-based interview tapes, attend advisory committee & staff mtgs., prepare minutes.

Req.: H.S. dip., busn. or sec. school pref. with 1-2 yrs. sec. exp. Solid WP, typing, transcription skills req. Good org. & interper. skills nec.

Minimum Biweekly Salary: \$420.76

SECRETARY, GR18 (C3307) Agricultural Economics

Provide sec. admin. & research support to 2 professors, a RSS & grad. students. Broad responsibilities incl. support of teaching, extension & research programs.

Req.: H.S. dip., sec. sci. & WP courses desir. 1-2 yrs. sec. WP exp. nec. Familiar with computers, calculators & other office equip. desir. Med. typing.

Minimum Biweekly Salary: \$443.13

SECRETARY, GR18 (C3306) Law School

Provide sec. support to faculty; print manuscripts, briefs, corresp., class materials using WP; prep. travel vouchers; research ref. & citations in law library; xerox; file; answer phone.

Req.: H.S. dip. or equiv.; busn. or sec. school pref. Off. exp. & familiar with IBM-PC (WordPerfect) desir.; able to coord. & prioritize variety of tasks.

Minimum Biweekly Salary: \$444.37

SR. CIRC./RESERVE ASST., GR18 (C3308) ILR Catherwood Libr.

Under general supv. of Circ. Supv. set up & maintain reserve collection using in-house micro-computer based system for records, coord. with faculty concerning reserve reading assignmt., check avail. materials & copyright clearance. Use RLIN terminal for search & verification of publications. Check open stack/reserve material for patrons.

Req.: H.S. dip. + some college busn. school or equiv. Min. 2 yrs. libr. & supv. exp. Prior IBM PC exp. desir. Accuracy; exc. org. & inter

Satellite uplink *Continued from page 1*

Cornell faculty to media centers where they can be included in national news programs.

"A satellite uplink will eliminate Cornell's geographic isolation at a stroke. It will make the campus as accessible as the White House, which has a satellite truck parked outside," said John Burness, vice president for university relations.

Other uses envisioned for the state-of-the-art equipment include:

- Expansion of Cornell's continuing education programs, particularly in the School of Hotel Administration and its new Statler Hotel & Conference Center, as well as the Johnson Graduate School of Management.

- An instructional network proposed by the College of Engineering to be sponsored by the National Science Foundation and operated in cooperation with other leading engineering schools.

- Communication among Cornell Cooperative Extension on campus and its 62 offices in New York State. Purchase of the necessary downlinks is under discussion.

- Teleconferences for educational and commercial purposes.

- Improved academic programming for Cornell's off-campus programs in Albany, Washington, D.C., and for Cornell Abroad.

The mobile satellite uplink production unit also will be made available for use outside the university. Other educational institutions already have expressed interest in renting the new equipment, according to David Watkins, director of Media Services.

The unit will be the only mobile uplink facility in central New York between New

York City and Buffalo. Thus, independent and network television stations in the region are expected to make use of it.

In researching the new equipment, Douglas Dunning, chief engineer at the Television Center, and other university technicians determined that a mobile production unit would be both more cost effective and more versatile than a fixed installation in which the antenna would be mounted on a concrete pad.

Engineering executives and satellite producers of the major networks contributed advice and recommendations for the facility, and network executives from ABC, NBC, CBS, PBS and CNN have expressed a

"A satellite uplink will eliminate Cornell's geographic isolation at a stroke. It will make the campus as accessible as the White House, which has a satellite truck parked outside."

— John Burness

strong interest in making regular use of the uplink for interviews with experts at the university, Burness said.

Currently, it is easier for a TV news anchor to interview the president of India across the world than the president of Cornell across the state. A member of the Cor-

nell community must make the 250-mile flight to New York City to appear on national television.

Such well-known Cornell professors as astronomer Carl Sagan, nuclear physicist Hans Bethe and economist Alfred Kahn frequently have had to turn down invitations for television interviews because they could not interrupt their teaching and research schedules for several hours to travel to and from a communications hub.

The Cornell News Service, directed by Irv Chapman, has been able to give print journalists instant assistance by transmitting material to them by computer modem or facsimile machine. And audio equipment makes taped or live interviews immediately available by telephone to radio networks and stations. The satellite technology extends Cornell's reach through another medium.

The university long has had film and videotape facilities, mainly to produce instructional materials and promotional spots for Cornell Cooperative Extension. But with the new acquisition, it is "reasonable to expect to be able to take this truck almost anywhere on campus [for live broadcasts], as long as we can see the satellite," said Watkins.

Yervant Terzian, chairman of the Department of Astronomy, will serve as chairman of a committee that will advise Burness on policy guidelines for the new equipment.

— Irv Chapman and Carole Stone

Graduate Bulletin

Registration for Graduate School Students: Late registration through Sept. 4 is being done in the Graduate School, Sage Graduate Center. Registration after Sept. 4 will be in the Office of the University Registrar, 222 Day Hall.

Graduate Faculty: The next meeting, which has been called solely to vote on August degrees, will be held on Sept. 4, 4 p.m. in the General Committee Room, Sage Graduate Center.

Income Tax Notes: Receipts from purchase of books, supplies and equipment required for courses should be saved to prepare 1987 income tax returns — particularly for students with assistantships or fellowships.

Fellowships and Financial Aid: Fulbright grant applications are available at the Office of the Dean, 110 Sage Graduate Center. Completed applications have a Sept. 25 campus deadline. Fannie and John Hertz Foundation Fellowship applications are available in the Fellowship Office, 116 Sage Graduate Center, 255-5819. Completed applications are due by Nov. 1, 1987.

Job Opportunities

CUSTODIAN, SO16 (G3306) Residence Life-Endowed

Perform maintenance & custodial care of bldgs. & grnds. in immediate vicinity of assigned area. Mon.-Thurs., 7:30 a.m. 4 p.m.; Fri. 7:30 a.m. 3 p.m.

Req.: H.S. dip. or equiv. Able to operate a variety of heavy power equip., lift 50 lbs. & climb an 8 ft. ladder. Basic reading & writing skills. Daily contact with students.

Minimum hourly rate: \$5.14

CUSTODIAN, SO16 (G3301) Dining-Endowed

Provide general custodial care of bldgs. & grnds. in immediate vicinity of assigned area. Shift subject to change.

Req.: H.S. dip. or equiv. Able to operate a variety of heavy power equip., lift 75 lbs. & climb an 8 ft. ladder. Basic reading & writing skills.

Minimum hourly rate: \$5.14

PHOTOGRAPHIC ASST., GR18 (G3307) Media Services

Accept, advise & write client orders; make & mount slides; make, finish & assemble photographic prints; do photographic copy work.

Req.: Degree or cert. in photography desir. Some trng. & exp. doing photographic copy work, film processing & printing. Customer sales & services helpful but not essential.

Minimum Biweekly Salary: \$443.13

ANIMAL TECHNICIAN, GR18 (G3309) Lab Animal Service

Daily care of lab animals (care, feed, water, exercise); general cleaning & maintenance of cages & pens. Maintain I.D., breeding & inventory records.

Req.: H.S. dip. or equiv., AAS in Animal Sci. pref. Asst. Animal Tech. Certification desir. Previous animal handling exp. in an institutional environ. desir. NYS driver's lic. & able to lift 100 lbs. Pre-employment physical req.

Minimum Biweekly Salary: \$444.37

COPY PREPARATION SPECIALIST, GR20 (G2529) Media Services-repost

Operate Compugraphic 8400 Typesetting system serving NYS Colleges of Ag. & Life Sci., Human Ecol. & NYS Coop. Ext.

Req.: H.S. dip. or equiv. Lt. typing. Formal training or exp. in Graphic Arts, Telecommunications & computers desir. Proven proficiencies in complex typesetting, formatting & coding. Able to adapt to new technology in typesetting. Strong interper. skills.

Minimum Biweekly Salary: \$496.80

MAINTENANCE MECHANIC, SO22 (G3308) Residence Life-Endowed

Resp. for general maintenance of assigned residence areas incl. physical plant facilities & dept. equip. M-Th, 7:30 a.m. 4 p.m.; F, 7:30 a.m. 3 p.m.

Req.: H.S. dip. or equiv. 3-5 yrs. exp. in maint. mech. or bldg. & maint. field req.; 2 yrs. exp. in trade & general knowl. of others. Able to work in student oriented env. Good comm./interper./org. skills. Able to make immediate on-site decisions. NYS class 3 driver's lic. pref. Must be in good physical condition & able to perform heavy lifting.

Minimum hourly rate: \$7.07

OFFICE SYSTEM SPECIALIST, GR22 (G3209) Computer Services

Serve as customer advisor & consultant to assist them in making informed decisions regarding acquisition of office equip.; incl. typewriters, dictation equip., word processors, printers, copy machines, PCs, etc. Advise on service & maintenance agreements. Serve as liaison between vendors & campus customers.

Req.: BS in busn. ed. or busn. admin. desir. 2-3 yrs. exp. selling &/or instructing in use of variety of office equip. Exp. as an operator of a variety of office equip. helpful. Exc. comm. & org. skills. Valid NYS motor vehicle operator's license & car.

Minimum Biweekly Salary: \$556.14

UNIVERSITY SERVICE OFFICER, GR02 (G3305) Public Safety

Resp. for prevention & detection of criminal behavior; external & internal patrol of Univ. property within assigned area for fire, safety & crime hazards; enforcement of campus parking regulations.

Req.: H.S. dip. or equiv. Formal ed., training or exp. in law enforcement field pref. Satisfactory completion of basic Univ. Service Officer training. U.S. citizenship; eyesight 20/40 corrected to 20/20; no record of convictions other than minor traffic infractions. NYS driver's lic. ability to obtain NYS pistol permit within 90 days of employment. Must pass physical exam. Minimum hourly rate: \$6.50

Technical

REGULAR EMPLOYEES: Submit an employee transfer application, resume & cover letter.

EXTERNAL APPLICANTS: Submit an employment application, resume, & list of laboratory techniques/equipment, or computer languages/hardware with which you are familiar. Submit a cover letter for each position for which you apply, (specify title, dept. & job number) to Judi Deane 160 Day Hall. Interviews are conducted the first Thursday of each month from 1:30-4:30 p.m. at Staffing Services, East Hill Plaza. The following backgrounds are highly desired: biochem., chem., microbio., elect., physics, lic. animal health tech. No appt. is necessary, however a brief wait may be required.

TECHNICIAN, GR18 (T3308) Food Science

Lipid extraction, separation of classes; TLC, fatty acid analyses; radioimmunoassays; HPLC; conduct nutritional studies. Assist with animal care operations.

Req.: BS in biochem, nutrition. Some exp. in lipid research. Apply by 9/18.

Minimum Biweekly Salary: \$443.13

TECHNICIAN, GR19 (T3302) Vet Micro., Immunol. & Parasit.

Assist in bacterial disease research lab. Run ELISA; perform affinity column chromatography, SDS-PAGE & immunoblots, protein antigen extractions & purifications; culture & harvest bacterial cells. Maintain lab records & inventory, order supplies, prepare media, autoclave glassware.

Req.: BS in microbio., biochem., immunol. pref. Lab exp. in mass culture & bacterial cell harvesting; ELISA procedures, SDS-PAGE, immunoblotting, antiserum production, affinity chromatography. Apply by 9/11.

Minimum Biweekly Salary: \$469.53

TECHNICIAN, GR20 (T3306) Neurobiology & Behavior

Schedule appts. of mothers, infants & adults for vision testing; photograph same. Maintain records & enter data into computer; analyze data. Aid in prep. of grant proposals & manuscripts. Construct special lab equip.; maintain lab & order supplies.

Req.: BS in sci. 1-2 yrs. related exp. Apply by 9/18.

Minimum Biweekly Salary: \$496.80

TECHNICIAN, GR20 (T3202) Physiology

Assist in prep. & coordination of lab for several Dept./Section of Physiology courses. Co-supervise lab assts. & support interaction with T.A.'s & faculty in charge.

Req.: BS in Biological Sci. with emphasis on Physiology. 1-3 yrs. exp. in conduct of physiology labs. Apply by 9/11.

Minimum Biweekly Salary: \$496.80

TECHNICIAN, GR21 (T3216) Div. of Nutritional Sci.

Supv. 2 research labs, lab tests for health screening, vitamin assays for metabolic studies program, & order supplies. For 1 yr.

Req.: BS + 2 yrs. lab exp. Must have exp. in methods of food analyses & biochem. methods for nutritional assessment. Apply by 9/11.

Minimum Biweekly Salary: \$527.69

ELECTRONIC TECHNICIAN, GR22 (T3307) Human Ecology Computer Literacy

Provide tech. support for microcomputers & mainframe systems to College user community. Duties incl. setting up new equip., installing software & troubleshooting. Assist with trng. users (1-on 1 & groups) on various software pkgs.

Req.: BS with coursework in computing & related exp. Proficiency with hardware & software for IBM-PC & compatible Macintosh, peripheral devices & CU mainframe systems. Working knowl. of major software packages such as Lotus, dBase III+, Word Perfect, MS Word, Excel, & dBase req. Knowl. of statistical software & networking systems beneficial. Apply by 9/11.

Minimum Biweekly Salary: \$554.63

TECHNICIAN, GR22 (T3220) Vet Micro., Immunol. & Parasit.

Assist in research on isolation & synthesis of the peptide fragment that carries the epitope of S. equi M protein active in mucosal immunity in the horse.

Req.: BS in biochem, chem. or microbio. with concentration in biochem. Sterile microbiologic technique, harvesting of bacteria from mass culture, gel-filtration &/or ion exchange chromatography, SDS-PAGE techniques, immunoblotting, familiarity with electrophoresis & chromatography apparatus. Apply by 9/11.

Minimum Biweekly Salary: \$556.14

ENVIRONMENTAL SAFETY TECH., GR23 (T3303, T3304) Environmental Health

Survey campus bldgs. to evaluate the condition of specific bldg. materials. Evaluate materials for potential health hazards, perform limited maintenance & keep accurate records. 1 yr. appt.

Req.: AAS req., sci. & engr. construction coursework helpful. Valid NYS driver's lic. req.; lab & construction exp. desir. Exc. written & oral comm. skills req.

Minimum Biweekly Salary: \$589.44

RESEARCH ASST. (T3310) Boyce Thompson Institute

Assist in gene cloning strategies that reveal cell differentiation processes in fungi of plants. Incl. sterile culture techniques, extractions, electrophoresis, autoradiography, HPLC, mutagenesis & prep. of probes.

Req.: BS in biochem., biology or related field. Lab exp. in biochem., microbio. or cytology helpful. Contact Dr. E.H. Buckley or Dr. R.C. Staples, 257-2030.

Minimum Annual Salary: \$12,000

RESEARCH ASST. (T3311) Boyce Thompson Institute

Assist in develop. of techniques for research on effects of air pollutants on trees. Conduct experiments in wind tunnel & field. General lab work in chem., electronics, & physics.

Req.: BS in ag engr. or bio. Exp. with computers & small tools desir. Contact R.C. Mandl, 257-2030.

Minimum Annual Salary: \$12,000

Part-Time

RESEARCH SUPPORT SPECIALIST I (PT3315) Div. of Nutritional Sci.

Conduct community-based needs assessments concerning maternal nutrition & access to & quality of prenatal care; assist community-based

personnel in setting up programs to meet needs of disadvantaged pregnant women & mothers with young children; develop nutrition education materials on maternal nutrition. 20 hrs./wk. until 7/31/88.

Req.: MS in community nutrition or nutrition ed. 2 yrs. community-based exp. Send cover letter & resume to Judi Deane by 9/11.

ACCOUNTS ASST., GR18 (C3304) Office of Instruction-CALS

Assist Admin. Supv. in operation & maint. of dept. fiscal, inventory & student employee areas. Process fiscal & travel forms, student appts. & payrolls. Maintain equip. & other assorted records, inventory & supplies.

Req.: H.S. dip. req.; AAS pref. Exp. in acctg. oriented setting necessary. Accurate typing essential. Computer exp. helpful. Med. typing.

Minimum full-time equivalent: \$444.37

COOK, SO18 (G3302, G3303-2 positions) Residence Life-Endowed

Clean, prepare & cook food for Univ.-owned fraternity. Clean all food prep. areas, cooking areas & assist in keeping storerooms & refrigerators sanitary. Aid student steward in menu-planning & food purchases as needed. P-t; 20 hrs./wk.

Req.: H.S. dip. or equiv. 1-3 yrs. cook exp. Able to follow recipes accurately, operate standard food prep. & cooking equip. Exp. in large quantity prep. essential. Good org. skills. Able to work with little superv. pref. Apply at East Hill Plaza Staffing office, Mon.-Thurs., 9 a.m.-noon.

Minimum hourly rate: \$5.71

NIGHT SUPV., GR18 (C2807) Music Library-repost

Supv. & assist. circ. in procedures. Provide info. & reference asst. to patrons; responsible for security of Lincoln Hall during eve. & weekend hrs.; assist with processing operations. Other duties as req. 20 hrs./wk. during eve. & weekends.

Req.: BA in music with emphasis in music history or equiv. Med. typing. Previous exp. supervising. Strong interper. & org. skills. Reading knowl. of at least 1 foreign lang., pref. German.

Minimum full-time equivalent: \$444.37

INFO. ASST., GR18 (C2711) A.R. Mann Library-repost

Provide info. about libr. collection & services; answer in-person & telephone questions using card catalogs, RLIN database, reference books & other libr. resources; assist with maintenance of reference collection & projects.

Req.: BA or equiv., pref. in agric., bio., or hum. ecol. Evidence of strong interper. & comm. skills. Exp. working in academic/research libr. & teaching is desir.

Minimum full-time equivalent: \$444.37

COOK, SO18 (G3206) Residence Life-Endowed

Clean, prepare & cook food for University-owned fraternity. Clean all food prep. areas, cooking areas & assist in keeping storerooms & refrigerators sanitary. Aid student steward in menu-planning & food purchases as needed. Mon.-Fri., 2-6 p.m.; Sun. 1-5 p.m.

Req.: H.S. dip. or equiv. 1-3 yrs. cook exp. Able to follow recipes accurately, operate standard food prep. & cooking equip. Exp. in large quantity prep. essential. Good org. skills. Able to work with lmt. supervision & with student volunteers. Able to supervise student helpers pref. Apply at East Hill Plaza Staffing office.

Mon.-Thurs., 9 a.m.-noon.

Minimum hourly rate: \$5.71

SECRETARY, GR19 (C3302) Arch., Art & Planning

Provide admin. & sec. support for 2 Assoc. Dean's. Coord. academic & non academic activities for Assoc. Dean's (i.e., Rome Program, Fine Arts Libr., Minority ed., Hartell Gallery, Slide lib., college awards/scholarships); prepare coursework materials, manuscripts; handle acctg. detail for research grants; share receipt. duties. 9 months; Mon.-Fri. 9:30-5:00.

Req.: AAS busn. or sec. degree. or H.S. with equiv. exp. 1-2 yrs. offic. exp., academic setting

pref. PC WP skills, pref. Macintosh. Able to interact effectively with faculty, staff & students. Strong interper. skills.

Minimum full-time equivalent: \$470.80

EDITORIAL ASST., GR19 (C3104) Psychology

Send all submitted manuscripts to reviewers & keep detailed records of each history. Type all corresp. incl. letters to authors re: ms status; keep detailed records on computer of transactions; maintain records & comm.; handle incoming & outgoing mail. Correspond directly when not required of editor; oversee budget & reports periodically to editor & APA. Resp. for supplies, records, equip. Mon.-Fri. 5 hrs./day. Dependent on continued funding up to 6 yrs.

Req.: AAS or equiv. BA desir. Computer use of software to manage files.

Minimum full-time equivalent: \$470.80

ASST. WOMEN'S CREW COACH (PA3310) Physical Education & Athletics

Plan & organize aspects of practice & competitions as assigned by head coach. Evaluate individual performances, assist members in performance improvement. Identify, evaluate, encourage application & acceptance of student athletes at CU in accordance with Ivy League & Univ. policies. Other admin. duties as assigned by head coach.

Req.: BS in phys. ed. or equiv. Proven success in coaching, recruiting & working with student athletes. Send cover letter & resume to Search Committee: Asst. Women's Crew Coach by 9/18.

Temporary

Experienced & skilled individuals specifically interested in temporary clerical/secretarial work can contact Lauren Worsell (255-7044).

ANIMAL TECHNICIAN, GR18 (G3310) Lab Animal Services

Provide weekend care of lab animals (care, feed, water, exercise); general cleaning & maintenance of cages & pens. Maintain I.D., breeding & inventory records.

Req.: H.S. dip. or equiv. Previous animal handling exp. in an institutional environ. desir. NYS driver's lic. & able to lift 100 lbs. Pre-employment physical req. Apply at East Hill Plaza Staffing Office, Mon.-Thurs., 9 a.m.-noon.

SECRETARY (C2307) Language House Program-repost

Type corresp., reports & agendas; answer phone; process applications for positions in Language House; process expenditures. 10 hrs./wk.

Req.: AAS or equiv. in sec. sci. Med. typing. Strong org., comm. & sec. skills. Able to set priorities & work in a complex, active environ. Call Laurie Worsell at 255-7044.

COLLECTIONS REPRESENTATIVE (C2305) Controller's/Accounting-repost

Telephone & written collection of past due receivables. Process & file all records pertaining to collection of past due receivables. Mon.-Thurs., noon 8 p.m., Fri. 8:00-4:30 p.m. Until 1/88, possible renewal.

Req.: H.S. dip. or equiv. Lt. typing. Collection exp. pref. Exc. phone & written comm. skills a must. Exp. with IBM PC computer system essential. Call Laurie Worsell at 255-7044.

ALERT COORD. (P2804) Univ. Health Services

Recruit, train & supervise student volunteers in outreach alcohol/drug education program (ALERT). Assist in develop., coord. & evaluation of substance abuse ed. programs for Univ. community. 10-20 hrs./wk.; some evening work req.

Req.: BS/BA in health or community ed., human services or related field. 1-2 yrs. exp. in providing substance abuse ed. programs. Must have strong org. & comm. skills. Send cover letter & resume to Cynthia Smithbower by 9/14.

While you were away ■ ■ ■ Summaries of several of the articles that appeared in the Chronicle during the summer

New administrators named

Recent resignations and reorganizations have changed Cornell's administrative lineup. Among the events:

- Senior Vice President William G. Herbster retired this summer and was succeeded as the university's top non-academic administrator by James E. Morley Jr., formerly the vice president and treasurer.
 - Robert M. Matyas resigned as vice president for facilities and business operations, but agreed to continue as a consultant to the university for the next three years.
 - Joycelyn R. Hart was appointed to the new post of associate vice president for human relations, in which she said she will be "involved in monitoring and promoting a new human relations agenda affecting all members of the Cornell community."
 - The Office of the Provost was reorganized, with Malden Nesheim appointed vice provost for budgeting and planning and Larry I. Palmer vice provost for academic programs, as Vice Provosts Barry B. Adams, James W. Spencer and Kenneth M. King, and Associate Provost Joan Egner left their posts. David S. Yeh became Cornell's first assistant vice provost for academic programs on Sept. 1.
- In his 13 years as vice president for facilities and business operations, Matyas oversaw extensive expansion and renovation involving more than 50 buildings at a cost close to \$1 billion, as well as Cornell's entry

into the world of modern telecommunications. He also has had a role in planning for the Superconducting Super Collider, the largest device ever contemplated to accelerate subatomic particles.

He said he will remain on the job until a replacement is found. And, at Morley's request, he has agreed to perform consulting work for the university through 1990.

Hart assumed her new duties July 1 as the university's chief affirmative action and equal opportunity officer. She has been associate dean of the Cornell Graduate School, with which she has been associated since 1982. She was associate ombudsman at Cornell from 1977 to 1982; she served as assistant to the ombudsman from 1970 to 1972, when she was named assistant ombudsman.

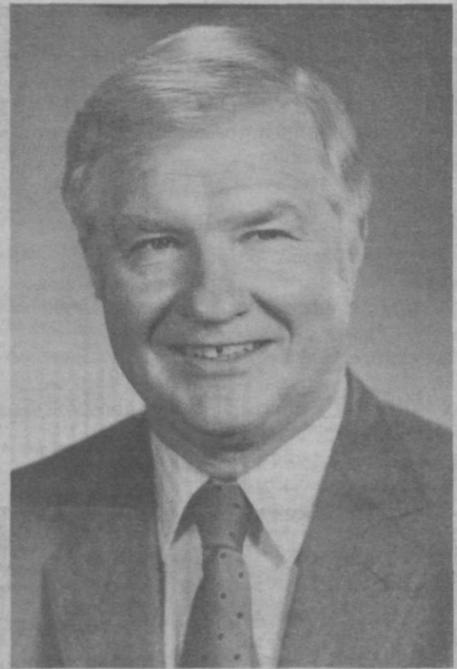
Hart will be responsible to the president on matters of general policy, and to the provost and senior vice president on matters related to their areas of responsibility. The university's Office of Equal Opportunity will be under her direct charge.

Nesheim, formerly director of the Division of Nutritional Sciences, will coordinate budgeting and planning offices for both the statutory and endowed segments of the university. These include the Endowed Budget Office, the Finance and Business Office of the Statutory Colleges, the Institutional Planning and Analysis Office, and the Campus Planning Office.



Joycelyn R. Hart

Yeh, who was associate director of the Office of Human Resources, has been with Cornell since 1983, first as manager for compensation, operations and records. He has been a social worker, family therapist, psychotherapist and U.S. park ranger. Before coming to Cornell, he was a clinical social worker, staff consultant, family therapist and human resource specialist at the



Malden Nesheim

Memorial Sloan-Kettering Cancer Center in New York City.

King resigned to become president of EDUCOM, a national organization that helps coordinate computing and communications development and information exchange among more than 500 colleges and universities. He will assume his new position with EDUCOM Sept. 15.

Soil, water tests to begin at inactive disposal site in nearby Lansing

Soil and water testing is expected to begin next week in and around an inactive chemical waste disposal site in Lansing where laboratory chemicals and equipment were buried or incinerated from 1962 to 1977.

Cornell will spend about half a million dollars to test the landfill, which is in a sparsely populated area off Snyder Road north of the Tompkins County Airport. It is one of more than 900 locations on the New York State Registry of Inactive Hazardous Waste Sites.

The state does not consider Cornell's site to be an imminent health hazard, but environmental laws require an assessment of the current site conditions in sufficient detail before determining if remedial actions are necessary, according to Judith A. Crawford, director of the university's Office of Environmental Health.

In addition to a variety of chemicals such as solvents and pesticides, the landfill is believed to contain laboratory supplies and equipment, compressed-gas cylinders and aerosol cans, Crawford noted. There is no radioactive material at the site.

Since 1977, chemicals from Cornell laboratories have been hauled by licensed firms to authorized disposal sites, according to W. Donald Cooke, Cornell's director of occupational health and safety. Cooke said the study and any cleanup work at the site, if necessary, could take several years.

Dean Meikle leaves medical college

The dean of Cornell Medical College, Dr. Thomas H. Meikle, is leaving to become president of the Josiah Macy Jr. Foundation.

Meikle will become the fifth president in the foundation's 57-year history when its board formally ratifies his appointment at its September meeting. He will succeed Dr. James G. Hirsch, who served as president from January 1981 to May 1987.

"Dr. Meikle brings to the presidency of the Macy Foundation an extraordinary

record of achievement as a researcher, teacher and administrator," Michalis said. "His knowledge of critical issues in medical education and his previous work with the Macy Foundation uniquely qualify him for this important post."

President Frank H.T. Rhodes announced that he has appointed a search committee, including members of the faculty, the Medical College Board of Overseers, the Governors of The New York Hospital and the student body, to identify a successor to Meikle.

Greenberg receives award

Donald P. Greenberg, director of Cornell's Program of Computer Graphics, received his field's highest professional award this summer — the Steven A. Coons Award for Outstanding Contributions to Computer Graphics.

The Association for Computing Machinery's Special Interest Group for Computer Graphics presented the award to Greenberg at an annual conference July 27-31 in Anaheim, Calif.

"Greenberg is both a pioneer of original ideas and a teacher of these ideas to numerous students — including this year's recipient of the Computer Graphics Achievement Award," said Bert Herzog, SIGGRAPH awards chairman.

The achievement award is being given to Robert Cook, who did his master's degree work at Cornell. Cook is being honored for his contribution in form of algorithms for realistic rendering of images.

Elkind joins health service

Dr. Leslie M. Elkind, chief of emergency service at Espanola Hospital, Espanola, N.M., was been appointed director of Cornell University Health Services effective Aug. 15.

He succeeds Dr. Allyn B. Ley, who is retiring after directing University Health Services since 1971.

Elkind received his medical degree from State University of New York at Downstate Medical Center in 1969 after graduating with a bachelor of arts degree from Cor-

nell's College of Arts and Sciences in 1965. He is certified in family practice, advanced cardiac life support and advanced trauma life support.

He served as an intern at San Francisco's French Hospital Medical Center, an assistant public health officer for Lane County, Ore., and medical director of a crisis intervention clinic in Eugene, Ore. He practiced family medicine in Bolinas, Calif., from 1973 to 1977, then began an emergency medicine practice in the Santa Fe, N.M., area.

Combustion Institute to be part of waste management program

Cornell has established a broad-based Waste Management Program to carry out a wide range of studies of waste generation, sorting and recycling, volume reduction, disposal, toxicity, and environmental impact. Included within this program will be the Combustion Institute recently funded by the New York State Legislature.

Richard E. Schuler, professor of economics and professor of civil and environmental engineering, will head the new program, which will act as a university-wide focal point to bring together researchers from throughout the university who are interested in waste management studies.

Last summer, Cornell agreed to mount a state-funded \$5 million study of how incineration can be utilized along with reuse and recycling to help cope with the state's mounting crisis in solid-waste disposal.

Under the terms of the New York State Solid Waste Combustion Institute Act, Cornell was asked to establish an institute to conduct a wide range of waste combustion studies, including questions of effluent detection and dispersion and anaerobic and aerobic digestion.

According to Schuler, given the wide range of issues involved in solid waste management, of which combustion was only one, it was decided that the best approach was to include the Combustion Institute in a broader program of studies.

Record gift given

Cornell's Class of 1962 celebrated its 25th reunion with a national-record-breaking gift of \$5.5 million to the university. The previous record of \$4.8 million had been set by the Yale University Class of 1961.

The university's previous record of \$3.2 million had been set at the 25th reunion of the class of 1956 and was matched last year at the 25th reunion of the class of 1961.

Twenty-fifth reunions traditionally have resulted in record class gifts at the nation's

institutions of higher education, said Richard Ramin, vice president for public affairs. More and more alumni are choosing their reunion years to make exceptional gifts to the university, and therefore reunion campaigns have become an increasingly important source of support, he added. In 1986-87, alumni gifts to Cornell in honor of reunions totaled \$16 million, more than a 75 percent increase over the previous year's total.

Marcham honored

Historian Frederick G. Marcham, who has been teaching at Cornell since 1923 without interruption, became the first recipient of a special certificate presented by the university for distinguished service.

The 88-year-old educator, who was cited as "the model Cornell University professor," said in response that the richness of his life as a teacher at Cornell "has sustained me into my 89th year, and keeps me today as full of excitement and adventure

— indeed, waiting for a new term to begin — as I was in the 1920s."

Pointing out that Marcham has taught an average of 80 students a semester since his on-paper retirement 18 years ago, President Frank H.T. Rhodes said the award was an "attempt to celebrate the many contributions of a remarkable individual."

Rhodes presented the certificate during the annual Board of Trustees dinner for retiring Cornell faculty on May 30.