

Cornell CHRONICLE

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The future of
eCOOPERATIVE
EXTENSION
NEW YORK STATE



Art from the
Han Dynasty

Errors on
restaurant bills



Hotel School Dean Jack Clark displays a silver trowel presented to him last Thursday during topping off ceremonies at the new Statler Hotel & Conference Center. A ceremony also was held last week for the completion of the outside structure of the Law School addition.

Claude Levett

State budget plan may force scramble on expenses here

Cornell will have to scramble to cover some essential expenses if the state legislature approves the 1989 executive budget proposed last week by Gov. Cuomo, university officials say.

While the spending plan would increase the basic operating budget for Cornell's four state-supported units by about 2.5 percent, to \$101.7 million, several significant Cornell requests were turned down or approved at much lower dollar amounts than sought.

"We're very concerned about this budget," said John F. Burness, vice president for university relations. "In a few areas, the executive budget shows some understanding of what's need to maintain excellence. Unfortunately, those are more than offset by key areas that are either underfunded or not funded at all. We may have to take another look at our plans for next year's tuition."

Malden C. Nesheim, Cornell's vice president for planning and budgeting, cited the following significant problems in the executive budget:

- State funds to support salaries in all academic and nonacademic job categories would be cut by \$680,000. This reduction would mean that already authorized state job lines probably could not be filled and that some jobs that open will not be able to be filled, Nesheim said. "We're hopeful that we'll

be able to deal with the problem through attrition; we don't think we'll have to let existing people go," he said.

- Several requests for academic programs were not funded. Among the most important are \$875,000 in increased support for computing, \$500,000 for library automation and \$367,000 as the fifth year of a five-year plan to add medical specialties within the College of Veterinary Medicine.

- Other unfunded budget requests, though not so directly academic, are still critical, because the money may have to be diverted from academic programs, Nesheim said. Among these items are \$2.2 million to meet added utility costs, \$1 million for normal maintenance, and any increase to cover the effects of inflation on general expenses and the cost of supplies.

He said that positive items in the budget included \$66,000 to support library acquisitions, \$329,000 to help maintain and operate the new biotechnology building and \$623,000 to reimburse the private colleges of Cornell for courses taken by students in the state-supported units — costs, for instance, of history courses taken in the College of Arts and Sciences by students in the College of Agriculture and Life Sciences.

Cornell's portion of the state budget

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Entomologist calls for effort to fight mites threatening honey bees, crops

Parasitic mites from Asia are threatening to wipe out honey bees throughout the United States. This would not only paralyze the nation's beekeeping industry, but also hamper pollination of many agricultural crops, according to a Cornell entomologist.

At stake are several million honey bee colonies that produce about \$130 million worth of honey annually. More importantly, the mite infestation could seriously jeopardize the pollination of agricultural crops, valued at an estimated \$20 billion annually.

The scientist who issued the warning is Professor Roger A. Morse, one of the nation's leading authorities on honey bees. He described the situation as the "most serious" since European honey bees were brought to this continent more than three centuries ago.

Morse stressed the need to mount research efforts to meet the challenge and suggested countermeasures including chemical controls and developing honey bee strains resistant to the pest.

The mite, whose scientific name is *Varroa jacobsoni*, is about the size of a pinhead — less than one millimeter (0.4 inch) in length. It has eight legs, a hairy shell and a sharp, two-pronged tongue for feeding.

It enters bee hives, attaches itself to bee larvae and sucks blood from its victims. It also attacks pupae as well as adult drone (male) and worker (female) bees.

"If left unchecked, the mites can destroy a whole colony in no time," Morse said.

Mite-infested bees weaken and die prematurely, according to Scott Camazine, a research associate in entomology here. In a recent study, Morse's research team found that adult bees suffered as much as a 50 percent reduction in longevity even when attacked by only a single mite. Pupae infested with five or more mites lost weight drastically; some of them suffered deformations.

Morse conceded that nothing can stop the mites from overrunning some 3.5 million honey bee colonies owned and operated by 200,000 hobby beekeepers and 1,600 commercial beekeepers.

"We can be sure that within a year — and certainly

within two years — they will have overrun all honey bee colonies in the country," he predicted.

All honey bees in the United States are descendants of the European bees *Apis mellifera*. Honey bees in North America have never encountered the Asian mites before, and therefore "are highly susceptible to the invader," Morse said.

Morse explained that the mite can spread rapidly because honey bees don't always remember the location of their own colonies and therefore often "drift" away and join other colonies. Frequent raids and takeovers of weaker colonies also hasten the spread of the mite.

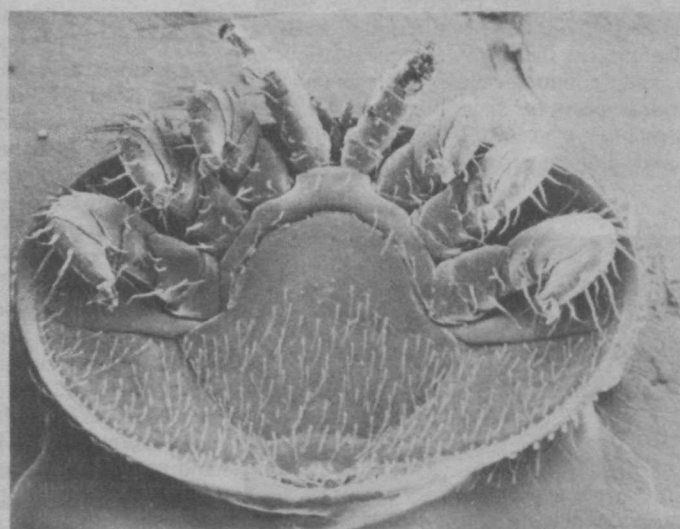
Moreover, tens of thousands of colonies involving countless honey bees are moved around the country each year to pollinate agricultural crops. According to Morse, California, for example, uses honey bees from 11 states to pollinate almond trees each February. Maine and Massachusetts also rely on a large number of out-of-state bee colonies to pollinate cranberry and blueberry crops.

Varroa originated in Asia. It was first found in Indonesia in 1904, attacking the Asian honey bee *Apis cerana*. Since then, it has spread all over Asia and other parts of the world, including Europe, North Africa, South America and Central America. It showed up in the Soviet Union as early as 1952. It has been reported that Australia is the only continent that remains free of the mite.

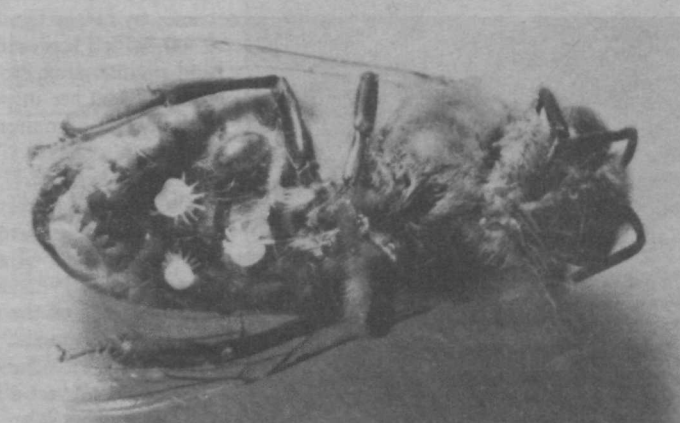
When the mite began spreading in Europe in the early 1980s, the infestation was so rapid that it literally halted all bee research projects there for several years, because it was impossible to keep even experimental colonies alive, Morse said.

For a few years when the mite infestation was at its peak before chemical treatment became available, honey production in Europe dropped by as much as 50 percent, he estimated. Pollination of agricultural crops also suffered extensively, resulting in a substantial drop in crop production, although it is difficult to put monetary figures on the damage. In Asia, however, the mite and its host *Apis cerana* have developed a peaceful coexistence over

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Asian parasitic mites like the one above have been discovered in 11 states, infesting honey bees. The pinhead-sized eight-legged mite sucks blood from its victims. Photo is an enlargement of the underside of a female mite seen under a scanning electron microscope.



An adult Asian mite and three immature ones (white) clinging to a honey bee taken from a hive cell. The mite does not crawl into its victims, but remains on their surface, sucking their blood.

Photos by Scott Camazine

Briefs

■ **Information fair on off-campus housing Jan. 28:** Students interested in living off campus next year can learn the ins and outs of renting in Ithaca at the Seventh Annual Off-Campus Housing Fair on Jan. 28 from 10 a.m. to 3 p.m. in the Memorial Room of Willard Straight Hall.

Tables will hold displays of information about places to live off campus, transportation, utilities, energy conservation, landlord-tenant relations, consumer issues, fire safety and crime prevention. For more information, call the Off-Campus Housing Office in 103 Barnes Hall, 255-5373.

■ **Students may sign up for breakfast with President Rhodes:** Students may sign up for breakfast with President Frank H.T. Rhodes by calling his office at 255-5201. The breakfasts are held from 7:30 to 8:30 a.m. in the Elmhurst Room of Willard Straight Hall. Reservations are made on a first-come, first-served basis. Reservation reminders will be mailed a few days before each scheduled breakfast.

■ **Employees may schedule breakfast or lunch with Senior Vice President James E. Morley:** Employees may schedule a breakfast or lunch with Senior Vice President James E. Morley by calling the Office of Human Resources at 255-3621. The breakfasts will be in the Elmhurst Room of Willard Straight Hall between 7:30 and 8:30 p.m. on Feb. 18, April 20, and June 23. The lunches will be from noon to 1 p.m. in a private dining room at Robert Purcell Union on March 14 and May 16. Reservations are on a first-come, first-served basis. Reminders will be mailed to signees a few days before each event.

■ **Extramural Study registration:** Area residents may update job skills, work towards a degree or explore a special interest through Extramural Study. A listing of late-afternoon and evening courses is available from the Extramural Study Office by calling 255-4987 or by writing to Box 82, B12 Ives Hall. Registration will take place on Jan. 25 and 26.

■ **Fence to separate N and F Parking lots from Upper Alumni Fields:** A protective fence is being constructed along the N and F parking lots off Tower Road to separate the lots from the athletic activities on the upper alumni fields. Although the lots will not be closed during construction — which is expected to take several months, weather permitting — there will be some disruption, including temporary elimination of some parking spaces for staging and storage needs of the project, according to William E. Wendt, director of transportation services.

Nationalist China's new president won top honors as a student here

Lee Teng-hui, who became president of Nationalist China Jan. 13, won honors in the classroom when he studied for his Ph.D. here 20 years ago but shunned campus social life.

"You wouldn't find many people at Cornell who knew him socially," recalled Daniel G. Sisler, professor of agricultural economics. "He wouldn't be out playing volleyball with other graduate students or down at a bar in College town."

"He was very quiet, very studious and personally dedicated to his work and to Taiwan. I gave him an A-plus in a course on research methods, and I don't give out many As."

Lee, 65, vice president of the Nationalist government on Taiwan, was sworn in as president three hours after the death of President Chiang Ching-kuo, 77, son of Generalissimo Chiang Kai-shek, who led the Kuomintang (Nationalist Party) government from 1928 until his death in 1975. His Soviet-educated son, married to a Russian, followed him in office. The younger Chiang made clear before his death that none of his four children would follow him in office.

With the Chiang dynasty ended, Lee became the first Taiwanese-born president of the government that was driven off the China mainland by the communists in 1949 and now rules only Taiwan while considering itself to be China's legitimate regime.

About 14 percent of Taiwan's 19.4 million people are mainland Chinese who followed Chiang Kai-shek into exile 39 years ago and their children, and they have dominated the Nationalist government. Native Taiwanese comprise about 84 percent of the population. Taiwanese are the major landowners and originally controlled much of the business on the island. Taiwanese speak a provincial language which is different than mainland dialects.

Lee studied agricultural economics here for three years as a graduate student and received his Ph.D. in 1968 when he was 45 years old. His doctoral thesis dealt with transfers between rural and urban areas of income and capital investments on Taiwan from 1895 to 1960. It was selected by the American Agricultural Economics Association as the outstanding dissertation of 1968 and was published as a book by Cornell University Press.

Lee, who was called "T.H." by his professors, "was older than most of the graduate students, very reserved, and not an extrovert or a politician," recalled Kenneth L. Robinson, also a professor of agricultural economics who was on the committee that examined Lee's doctoral research. "It's amazing that he rose so high in a political position. I would have expected him to become a senior bureaucrat. He was very able and extremely conscientious."

Bernard F. Stanton, another professor of agricultural economics, said that Lee demonstrated qualities which may assist him in the difficult task of dealing with mainland Chinese and native Taiwanese in his country.

"Dr. Lee is not a man you are about to push around," said Stanton, his teacher in one course here. "His great strength was his intellectual capacity and his ideas. He was very serious, and he came to Cornell with specific ideas on what he wanted to accomplish in his thesis. His command of English was average, but he possessed an excellent mind. He was a true Asian in that he was always correct, polite and a diligent worker."

Lee came to the Nationalist presidency with a broader international education than his predecessors. He received his bachelor of science degree after studying in Kyoto Imperial University in Japan and at



Lee Teng-hui as a Cornell graduate student in the 1960s

National Taiwan University and earned his master's degree from Iowa State University in 1953.

Chiang's death caused Dr. Frederick Chien, representative of Nationalist China in Washington, to postpone until April an address he was scheduled to make at Cornell Feb. 2 on the topic, "The Republic of China on Taiwan and Her Relations with the United States." A spokesman said that Chien may be called to Taipei for Chiang's Jan. 30 funeral.

Chien is the representative of the Coordination Council for North American Affairs, a non-diplomatic mission maintained by the Nationalists in the United States. The United States opened a similar unofficial office in Taipei after breaking diplomatic relations with the Nationalists in 1979 and recognizing the Chinese government in Beijing.

— Albert E. Kaff

Cornell to attend state hearing Feb. 9 on labor relations practices

Two state legislative committees have scheduled a hearing for Feb. 9 on Cornell's labor relations practices, and Cornell plans to attend, according to John F. Burness, vice president for university relations.

The hearing has been announced by Frank J. Barbaro (D-Brooklyn), chairman of the Committee on Labor, and Edward Sullivan (D-Manhattan), chairman of the Committee on Higher Education.

"We haven't been officially notified by the committees even though we're the focus of the hearing," Burness said Jan. 19. "We learned about it from Ithaca Mayor John Gutenberger, who sent us a copy of the committee's public notice. We do intend to send a representative."

Speakers are invited to discuss Cornell's labor relations as to fairness, responsibility and consonance with state policy, the hearing announcement said. It referred to Cornell, which is the state's land-grant institution, as "quasi-public." The New York State College of Agriculture and Life Sciences, College of Human Ecology, College of Veterinary Medicine and School of Industrial and Labor Relations receive almost 50 percent of their operating budgets from the state.

Cornell has about 2,500 academic and almost 6,500 nonacademic employees. About 1,000 of these nonacademic employees are members of five unions, whose contracts will be up for renegotiation this spring and summer. The largest of these, by far, is United Auto Workers Local 2300, which represents about 880 service and maintenance employees. Of these, roughly 600 are in positions at endowed Cornell; the remaining 280, in the publicly supported colleges.

In October, the UAW called a four-day strike following several months of negotiations with the university on a wage reopener in the third year of a three-year contract negotiated in 1985. At the time, UAW officials said one of the reasons they had agreed to accept the university's pre-strike offer was an assurance from Barbaro that he would conduct a hearing in Albany on the university's labor practices.

The hearing is scheduled at 10 a.m. in Assembly Hearing Room B of the Legislative Office Building in Albany. Speakers will be allowed up to 15 minutes each and were advised that they might address such

questions as:

- Whether Cornell's labor relations actions are consonant with state policy on collective bargaining.
- Whether Cornell is responsible and fair in its use of state wage allocations and pays wages comparable to those paid by similar institutions.
- How Cornell's labor practices affect the university's educational mission and the whole Cornell community.

At a press conference earlier this month announcing the hearing, and in subsequent mailings, the president of the UAW local, Al Davidoff, has urged members to attend the hearing. The UAW is trying to raise travel funds through a showing of the recent movie *Matewan*, which portrays union organizing in the South early in the century.

Last September, during negotiations involving a federal mediator, Gutenberger hosted a public forum in Ithaca at which the union aired its views before Barbaro and Sullivan. Cornell declined to participate in the forum because it was already in negotiations with the UAW. "We believe that labor negotiations should be conducted at the table and not in public forums," Burness said at the time.

Burness said attendance at the February hearing poses no conflict because negotiations have not begun for the contract that will replace the existing one. There is no precise date for opening those talks. The union's notification of intention to renegotiate must come within 60 days of the June 30 contract expiration.

— Sam Segal

Unauthorized calls made on WATS lines

The Admissions Office at 410 Thurston Ave. reported on Jan. 12 that \$430.97 in unauthorized WATS Line telephone calls had been made using the office's access code, according to the morning reports of the Department of Public Safety for Jan. 8 through 17.

Only two other thefts, a \$155 volt and ohm meter and a \$125 CB radio, were reported on campus during the 10-day period.

Coward to direct Int'l. Agriculture

E. Walter Coward Jr., who has conducted research and written extensively on rural development in Southeast Asia, has been appointed director of Cornell's International Agriculture Program.

Coward, whose appointment was effective in December, succeeded Edwin B. Oyer, who completed a five-year term as director and retired to half-time status.

Based in the College of Agriculture and Life Sciences, the International Agriculture Program prepares students to work in agriculture education, research and rural community projects in other countries.

The program also cooperates with overseas institutions in developing agriculture and currently is working in the Philippines, China, Guatemala, Brazil and Africa.

Coward, a professor of rural sociology, joined the Cornell faculty in 1973 after working in Laos with the International Voluntary Service [a forerunner of the Peace Corps], teaching at Pennsylvania State University and directing research at the International Institute of Rural Reconstruction in the Philippines.

Obituaries

Frank H. Page

A memorial service for Frank H. Page, manager of the Cornell polo and equestrian stable and riding facilities from 1942 to 1973, will be conducted at 4 p.m. on Feb. 6 in Sage Chapel.

The former U.S. Army horseman and mule skinner, affectionately known as "Sarge" to generations of Cornellians, died Dec. 23 of a heart attack. He was 79.

Page, who maintained a horse farm on Trumansburg Road, came to Cornell in 1932 as a member of a field artillery unit assigned to train ROTC students in equitation and field tactics. During World War II, he saw active duty as a mule skinner, taking supplies to China over the Burma Road.

He was associated with polo at Cornell and in the Northeast as both a coach and referee for more than 40 years.

Donations for a Frank Page Memorial at the new Cornell equestrian center on Pine Tree Road, may sent to Jan Suwinski, 451 Sheffield Rd., Ithaca, N.Y., 14850.

Cornell CHRONICLE

EDITOR: Carole Stone
GRAPHICS: Cindy Thiel
CIRCULATION MANAGER:
Joanne Hanavan

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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.



Cleveland Myers, a Cornell Dining cook, reads from his essay "Why We Honor Martin Luther King Jr." during a community fellowship luncheon at the Southside Community Center on Monday, Martin Luther King Jr. Day.

Claude Levett

Trustees to meet, discuss finances

The Cornell University Board of Trustees will hear Provost Robert Barker and other university administrators discuss the effects of the state's 1988-89 executive budget on Cornell during a meeting at 9 a.m. on Jan. 29 in the Executive Faculty Room of the William Hale Harkness Medical Research Building at the Cornell University Medical College in New York City. The open part of the meeting will begin between 1 and 2 p.m.

Other reports will be given by:

- Dean Robert Phemister on activities at the College of Veterinary Medicine.

- Joseph M. Ballantyne, vice president for research and advanced studies, on research.

- Dean of the Faculty Joseph B. Bugliari.

The board also will act on the nomination of Bruce S. Raynor as trustee from the field of labor through June 30, 1990, to succeed Jack Scheinkman, who has resigned.

In addition, the trustees' Buildings and Properties Committees will meet at 9 a.m. on Jan. 28 in the Vanderwerker Room of the Memorial Sloan-Kettering Cancer Center in New York City, and the trustees' Executive Committee will meet at 2 p.m. in the Executive Faculty Room of the William Hale Harkness Medical Research Building.

A limited number of tickets for the open sessions of the Executive Committee and the Board of Trustees will be available to the public beginning at noon on Jan. 26 at the Information and Referral Center in the Day Hall Lobby. Tickets are not required for the meeting of the Buildings and Properties Committee.

Land-grant schools urged to meet 21st century needs

With the 21st century just around the corner, the nation's land-grant universities such as Cornell face a major challenge to step up their research and teaching efforts to meet the changing needs of society, and the cooperative extension system will play an increasingly vital role in meeting that challenge, W.K. Kellogg Foundation Chairman Russell G. Mawby told a Cornell conference last week.

"There is a desperate need for our state universities to employ their resources more creatively in serving public interests," Mawby told the Cornell Conference on Research, Extension and Teaching held in Syracuse Jan. 12 through 14.

The conference was sponsored by the Colleges of Agriculture and Life Sciences and of Human Ecology. More than 500 participants representing faculty and staff of the two colleges and Cornell Cooperative Extension examined ways to meet what Dean David L. Call of the College of Agriculture and Life Sciences called Cornell's "special challenges" in carrying out its land-grant university mission for New York State.

The purpose of the conference was to examine "the shaping of the research, extension and teaching agenda that will comprise the future of Cornell's commitment to the people of New York State and beyond," Call said in an interview.

"As we consider issues under the broad headings of food and agriculture, economic development, education, environment, families and youth, international policy, and nutrition and health, it is clear that we have many opportunities," he said. "This is a beginning of the dialogue in which we must engage to start meeting of the needs of the 21st Century."

Lucinda A. Noble, director of Cornell Cooperative Extension, noted in an interview that the extension system's statewide education network is designed to apply knowledge generated through research at Cornell to address changing societal concerns. She said that Cooperative Extension will focus its attention on a number of issues, especially agricultural profitability, economic development, food and nutrition, strengthening families and environmental concerns.

Noble cited Governor Cuomo's recent proclamation designating the next 10 years as the "Decade of the Child" to meet the pressing health and education needs of children, from early childhood intervention to child care, and said that Cooperative Extension "will have to be increasingly concerned with children at risk in the years



Lucinda A. Noble

directly ahead."

In his keynote speech during the opening session of the conference, Mawby stressed the need for land-grant institutions to mobilize their knowledge resources more effectively to deal with societal issues facing the nation.

"The genius of the public university lies not in its teaching or its research, but in the creative integration of the two to serve various publics, and this is particularly true of land-grant institutions," he said. "Thus the challenge is to make research and teaching relevant today and to the needs of the future."

Mawby listed some of the major issues to be addressed as the nation looks to the 21st century as economic development, job generation, biotechnology and its ramifications, environmental quality, health care, competitiveness, elderly, youth, energy, peace, welfare reform, rural and urban decay, and waste disposal.

"Certainly, the success of our society in addressing these issues will influence the quality of life both of current and future generations," he said.

Citing some of the problems confronting today's young people as an example, Mawby pointed out that in Detroit 70 percent of black males between 15 and 24 years of age do nothing. "They are not in school; they are not employed; they are not engaged in any kind of constructive activity," he said. "Society cannot tolerate and cannot permit that kind of situation to continue."

Pointing to the declining financial strength of the United States, Mawby said, "The times are tough, and I suspect they are going to get tougher." As a result, he added, the land-grant institutions will face dwindling support, and those institutions that are inward-looking will be increasingly threatened.

"To deserve the continuing public confidence . . . and support, those institutions simply must demonstrate their capacity to be ever more useful to society," he emphasized.

The opening session also featured a talk by Peter A. Morrison, director of the Population Research Center for RAND Corp. in Santa Monica, Calif., on the changing patterns of American families and the workplace.

With the service sector of the nation's economy expected to grow at a faster rate than the manufacturing sector, future workers will need skills that fit into the service economy, he said. What this will mean is that a broad spectrum of job training programs must be carried out for youth as well as for people in need of retraining for new skills.

Highlights of some of the major demographic trends he discussed include:

- There were 87 million households in the United States in 1985. By the year 2000, the figure is projected to be 106 million, an increase of about 19 million.

"The genius of the public university lies not in its teaching or its research, but in the creative integration of the two to serve various publics, and this is particularly true of land-grant institutions."

— Russell G. Mawby

- Married couples with children made up 40 percent of all American households in 1970, but now the figure is down to 27 percent. In other words, a little more than one in four American households consists of married couples with children.

- The share of one-parent households with children has increased from 5 percent in 1970 to 8 percent in 1985.

- The most dramatic gain has taken place in the proportion of people who live alone — a non-family category — from 17 percent in 1970 to 24 percent in 1985.

- Today, about 22 percent of all children are born to single women. In 1970, 31



Russell G. Mawby

percent of black children were born to single mothers; the proportion rose to 60 percent in 1985. In the case of white children, it was 6 percent in 1970, and 14 percent in 1985. If current trends continue, the majority of children will be in single-parent families during the next century.

- By the turn of the century, about three-quarters of women in the United States are expected to be the work force. As a result, the number of children with working mothers is expected to increase sharply. In 1977, the share was 48 percent; it was 60 percent in 1987.

Morrison said that this combination of more mothers in the work force and more children with working mothers has translated into a dramatic increase in the family's reliance on organized child care: from 19 percent of families with full-time working mothers in 1982 to 30 percent in 1985.

Thus, child care for working mothers is expected to become a major issue in the years ahead, he said.

Morrison also predicted that health care for the elderly is expected to become an increasingly important societal need in the years to come, because more Americans are expected to live longer. A greater proportion of the elderly will be 85 or older, and an increasing proportion of the elderly will be females.

As a result, long-term health care for the elderly will become a women's issue in the same way child care will become a major issue for working mothers, he said.

Yong H. Kim

CORNELL in the News

A selection of articles from the national and international media featuring Cornell University

Science Newsfront

By ARTHUR FISHER

More light fantastic

All of the pictures on this page, though they may seem to be perfectly natural photographs of real scenes with various kinds of lighting, are in actuality computer mimics. They were made utilizing powerful new techniques recently developed by an interdisciplinary team of researchers

in Cornell University's Program of Computer Graphics, which is under the direction of Professor Donald Greenberg.

The new computer programs, termed "major breakthroughs" in the effort to depict lighting effects realistically, can solve previously formidable problems, for example, depicting the subtle effects of atmospheric components such

as dust, smoke, and fog. The two pictures at the bottom of the page show an imaginary scene, first in a smoky room in the afternoon and then at sunset. The picture above, of an equally imaginary etched-glass arrangement, shows how a range of transparency can be simulated with a technique called "two-pass" to calculate trans-

Continued

SYRACUSE
HERALD AMERICAN
Jan. 10, 1988

Arthur
Frommer



On-campus vacations exercise visitors' minds with lectures, seminars

Like the TV host of "Fantasy Island," who fulfilled your fondest dreams, a group of U.S. universities are currently enabling adults of all ages to briefly re-experience "the shortest, gladdest years of life," when they attended college.

There are, by my reckoning, 13 such schools. For a week in summer, when the campus blooms, they open their residences, dining halls and classrooms to every sort of student from around the nation, without conducting tests or issuing grades, and at wonderfully low costs. Few other short vacations can offer so much pleasure and yet such mental growth.

CORNELL'S "ADULT UNIVERSITY" is the most ambitious of the lot, four one-week sessions beginning July 10, 1988. At least 300 persons attend each week, enjoying comfortable student lodgings and highly-regarded food, eminent professors, bright fellow students, the verdant surroundings of Cornell's famous hillside campus ("high above Cayuga's waters"), and sensible prices: \$515 to \$585 per week per adult, including tuition and full room and board; \$160 to \$260 per child, depending on age.

All adults opt for a single, one-week topic, taught in half-day sessions throughout the week. "Frontiers of Technology," "Louis XIV and Versailles," "The Physics of Everyday Things," "Poets and Prophets: The Heritage of the Greeks and Hebrews," "Great Wines from Great Grapes," being highly illustrative samples from 1988's curriculum.

The quality of instruction, and convivial afternoon and evening recreation, create a setting so compelling that some guests need almost to be evicted after their week in "Brigadoon." Though the literature doesn't say so, guests are apparently restricted to a single week, and early applications are advisable. Write: Cornell's Adult University, 626 Thurston Ave. Ithaca, N.Y. 14850, or phone (607) 255-6260.

INVESTOR'S DAILY
Nov. 27, 1987

Cornell's Business School Expects Fewer Grads To Land On Wall St.

By Jon Friedman, *Investor's Daily*

NEW YORK — When Curtis W. Tarr, dean of Cornell University's Johnson Graduate School of Management, warns his students about the vicissitudes of the real world, he draws on his own unique experience.

The 63-year-old Tarr saw his undergraduate studies at Stanford interrupted by World War II, during which he served in Europe.

Then, in 1958, several years after gaining an MBA from the Harvard Business School, he waged an unsuccessful bid for the U.S. Congress from his native northern California.

A few years later, President Johnson asked him to head the Selective Service. It was at "the worst, worst possible time," he recalled, "just at the height of the Vietnam War."

Now, Tarr is confronting a challenge of a different sort — raising the profile of a top-notch business school that's never really enjoyed the cache of a Harvard or Stanford University graduate school of management.

That challenge is particularly acute since many investment companies that once acted as sponges for the nation's MBAs may now be facing a period of retrenchment.

"Wall Street will be much more selective," predicted Laurie Foltman, the Johnson School's director of Career Services.

Tarr's task is underscored by the fact that the Johnson School, while respected by peers and alumni, is not as well known in financial circles as many of its competitors. "I didn't even know

Cornell had a business school," said a Wall Street professional.

"It's a top-tier business school, one of the nation's 10 best," said Samuel Hayes, an investment banking professor at Harvard Business School. "But it's not that visible."

That fact concerns some Johnson graduates. While they are supportive of their alma mater, they acknowledge that the school may need a higher profile.

"I'm not sure that it is taking its message to the major companies in New York," said a graduate in his early 30s working as a bond trader on Wall Street. "The school has a big niche with accounting firms, but I'm not sure they've widened their base."

"Part of the problem is that it's looked at as a new school," said a 25-year-old professional at another major securities house, noting that Cornell took on the Johnson name as recently as 1985. "It doesn't really have a reputation for turning out people."

By contrast, Harvard Business School has that reputation. In Harvard's most recent graduating class, 201 of 664 graduates, or 30.3%, took jobs with investment banking and brokerage firms, a spokesman said.

At Cornell, 53 of the most recent 265 graduates — 20% — went into investment banking positions at securities firms. In 1985, just 10% of the graduates took that path.

"A lot more aspire to go to Wall Street than actually go there," Tarr said recently on a visit to New York from his base in upstate Ithaca, N.Y.

THE NEW YORK TIMES
Dec. 23, 1987

Evaluation by Students: Concept Comes of Age

By DEIRDRE CARMODY

It used to be that if what students had to say about their professors was unprintable, it remained that way. No longer.

Formal evaluations of teachers by students, something that would have been viewed as the height of disrespect a generation ago, has become an accepted procedure on most college campuses. The evaluations are used to improve teaching, to help students choose courses and to assist

faculty and administrators in promotion and tenure decisions.

"If somebody suggested we take out teacher evaluations, I think everybody would laugh," said Larry Palmer, vice president for academic programs at Cornell University.

Although few universities have had student evaluations for 50 years, the movement spread as students and college administrations alike began to press for better teaching.

THE NEW YORK TIMES
Dec. 14, 1987

Books of The Times

By WALTER GOODMAN

FIGHTING FAITHS: *The Abrams Case, the Supreme Court and Free Speech.* By Richard Polenberg. Illustrated. 431 pages. Viking. \$24.95.

IN 1919, Justice Oliver Wendell Holmes Jr., wrote the most celebrated dissent of a celebrated career. In holding that the conviction of four alien radicals for distributing anti-war leaflets was unconstitutional, he significantly broadened his own interpretation of First Amendment rights and lighted the way for greater tolerance of unorthodox opinions. As one scholar put it, his dissent transformed "the phrase

'clear and present danger' from an apology for repression into a commitment to oppose authority."

How Holmes worked his way from a conventional and conservative view of free speech to a remarkably expansive one for his time is part of the fascination of "Fighting Faiths." No less fascinating is the portrait by Richard Polenberg, who teaches American history at Cornell University, of the defendants in the case of "Jacob Abrams et al. v. United States," victims of the political crack-downs during and just after World War I.

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

Folkdancers

The Cornell community and the general public are welcome to join in folkdancing. Admission is free, unless stated otherwise.

Instruction and requests, Jan. 23, 7:30-10:30 p.m., North Room, Willard Straight Hall.

EXHIBITS

Hartell Gallery

The **Inhabited Landscape**, recent works by designers emphasizing the creation of habitable places in the landscape, Jan. 25 - Feb. 10, Hartell Gallery, Sibley Hall (College of Architecture, Art and Planning).

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.

Stories from China's Past: Han Dynasty Pictorial Tomb Reliefs and Related Objects from Sichuan People's Republic of China: More than 100 archeological treasures, including tomb reliefs, sculptural figures, an unusual bronze "money tree," rubbings and a spectacular reconstructed tomb model. The exhibition offers a rare glimpse of the regional art and culture of the Han Dynasty (206 B.C. - A.D. 220). The exhibit opens on Jan. 26 and will be on view through March 13.

Olive Tjaden Gallery

Exhibition of photographs from the past two years that explore light, shadow and the sculptural form of trees at forest's edge by Barry Perlus, on view daily through Jan. 29, 9 a.m.-5 p.m., Saturdays 11 a.m.-5 p.m., Tjaden Hall.

FILMS

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

Friday, 1/22

"Tampopo" (1986), directed by Juzo Itami with Tsutomu Yamazaki, Nobuko Miyamoto and Koji Yakusho, 7 p.m., Uris.*

"Gone with the Wind" (1939), directed by Victor Fleming, with Vivien Leigh, Clark Gable and Hattie McDaniel, 7:15 p.m., Anabel Taylor.*

"Dirty Dancing" (1987), directed by Emile Ardolino, with Jennifer Grey and Patrick Swayze, 9:40 p.m., Uris.*

"Bananas" (1971), directed by Woody Allen, with Woody Allen, Louise Lasser and Howard Cosell, midnight, Uris.*

Saturday, 1/23

"Tampopo," 9:20 p.m., Uris.*

"Gone with the Wind," 7:15 p.m., Anabel Taylor.*

"Dirty Dancing," 7 p.m., Uris.*

"Bananas," midnight, Uris.*

Sunday, 1/24/

"Dirty Dancing," 8 p.m., Uris.*

Monday, 1/25

"Women in Love" (1970), directed by Ken Russell, with Glenda Jackson, Oliver Reed and Alan Bates, 8 p.m., Uris.*

Tuesday, 1/26

"Crimes of Passion" (1984), directed by Ken Russell, with Kathleen Turner, Anthony Perkins and John Laughlin, 8 p.m., Uris.*

Wednesday, 1/27

"Lolita" (1961), directed by Stanley Kubrick, with James Mason, Sue Lyon and Peter Sellers, 8 p.m., Uris.*

Thursday, 1/28

"She's Gotta Have It," directed by Spike Lee, with Tracy Johns, Redmond Hicks and John Terrell, 8 p.m., Uris.*

LECTURES

University Lectures

"Oral History and Biography: Ives, Copland, Ellington, Cage and others," Vivian Perlis, director, oral history, American music, Yale University, co-sponsored by the Society for the Humanities, Dept. of Music and Committee on American Studies, Jan. 27, 4:30 p.m., A.D. White House.

MUSIC

Bound for Glory

New Down City Ramblers, bluegrass, Jan. 24. 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. The show can be heard live from 8 to 11 p.m. on WVBR-FM93.

Department of Music

David Breitman, doctorate candidate in the Eighteenth Century Performance Practice program and Kim Scholes, first prize winner of the 1985 Concert Artists Guild International Competition, will perform the complete works for piano and cello by Frederic Chopin, Jan. 22, 8:15 p.m., Barnes Hall Auditorium.

Sonya Monosoff, violin, and guest artist John Graham, viola, will give a concert featuring Haydn's Sonata for violin and viola in C Major; "Scottish Traditional Music for viola solo" by unknown composers; Villa-Lobos' "Duo for violin and viola"; Wolpe's "Piece for Viola Alone" and "Three Madrigals for violin and viola" by Bohuslav Martinu, Jan. 24, 4 p.m., Barnes Hall Auditorium.

Jonathan Shames, piano, will present an all Schubert program, including Sonata in E-flat Major, D. 568; Impromptu in B-flat Major, D. 935, No. 3; Impromptu in F Minor, D. 935, No. 4; Impromptu in A-flat Major, D. 935, No. 2, and Fantasy in C Major, "Wanderer Fantasie," D. 760, Jan. 26, 8:15 p.m., Barnes Hall Auditorium.

Guest artist Karel Paukert will perform organ works by Isan Yun, Donald Erb, Larry Baker, Gyorgy Ligeti and Maurizio Kagel, and the Festival Chamber Orchestra will perform Karel Husa's Concerto for Organ and Orches-

tra ("Sunlights") with Husa conducting, Jan. 28, 8:15 p.m., Barnes Hall Auditorium.

RELIGION

Sage Chapel

Robert L. Johnson, director of Cornell United Religious Work, will be the speaker at the Sage Chapel interfaith services Jan. 24 beginning at 11 a.m.

Catholic

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

Daily Masses Monday through Friday, 12:20 p.m., Anabel Taylor Chapel.

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.

Reform Services: Friday evenings 5:30 p.m., Anabel Taylor Chapel.

Conservative/Egalitarian Services: Friday 5:30 p.m., Saturday 9:45 a.m., Anabel Taylor Hall Founders Room.

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

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.

Baptist Campus Ministry (SBC): Every Tuesday, 7:30 p.m., Anabel Taylor Chapel.

Zen Buddhism

Zazen meditation: Tuesdays at 7 p.m., Edwards Room, Anabel Taylor Hall. Every Thursday 5:10 p.m., Anabel Taylor Chapel. For more information or to arrange beginner's instruction, call Ian Dobson at 277-4364.

SEMINARS

Agronomy

"Factors Influencing Calcium Accumulation by Winter Wheat Forage, *Triticum aestivum* L: pH Buffering Root Temperature," Susan Miyasaka, Dept. of Agronomy, Jan. 26, 4 p.m., 135 Emerson Hall.

Chemistry

"Everything You've Always Wanted to Know About Patents, But Were Afraid to Ask," H. Walter Haeussler, director, patents and licensing, Jan. 25, 4:40 p.m., 119 Baker Laboratory.

"Recent Research with Synchrotron Radiation at CHESS," Boris Batterman, Jan. 28, 4:40 p.m., 119 Baker Laboratory.

Ecology and Systematics

"Bridging the Gap Between Population Biology and Paleobiology in Stickleback Fish," Michael A. Bell, Dept. of Ecology and Evolution, SUNY at Stony Brook, Jan. 27, 4:30

p.m., Morison Seminar Room, A106 Corson/ Mudd.

Education

"Teaching In a Changing World — Dilemmas and Challenges," organizational meeting for one credit seminar, Education 590, offered with the lecture series of the same name, Jan. 25, 4:30 p.m., 260 Warren Hall.

Genetics and Development

"Genetics and Evolution in Variable Environments," Sara Via, Dept. of Entomology and Section of Ecology and Systematics, Jan. 25, 4 p.m., 135 Emerson Hall.

Geological Sciences

"The Oceanic Lithosphere: Evidence from Geoid Anomalies at Fracture Zones and Implications for Fracture Zone Formation," Marc Parmentier, Brown University, Jan. 26, 4:30 p.m., 1120 Snee Hall.

Olin Library

The first Olin Library Research seminar, Jan. 26, 10 a.m., Olin Library. For more information call 255-4144.

Plant Pathology

"Mycorrhizae Research in the Department of Floriculture & Ornamental Horticulture," Kenneth Mudge, Dept. of Floriculture & Ornamental Horticulture, Jan. 26, 4:30 p.m., Room 404 Plant Science Building.

Statistics

"Statistical Image Restoration and Refinement," Christopher Jennison, University of Bath, England, Jan. 27, 3:30 p.m., 100 Caldwell Hall.

MISC

Folk Guitar Lessons

Eight one-hour guitar lessons to be offered by Phil Shapiro for \$30. Lessons will be given Monday evenings, beginning Feb. 1 in the North Room, Willard Straight Hall. Beginner classes will be held at 7 p.m., intermediate at 8 p.m. Registration is the first lesson. For more information call 844-4535.

Intramural Volleyball

Deadline for entries is Feb. 1 at 4 p.m. in the Intramural Office, Helen Newman Hall. Entry fee of \$10 per team, due with roster to enter before the deadline. Minimum of nine to enter; co-ed 10 to enter, equal number of men and women.

Johnson Museum Children's Programs

"Funtastic Film Festival," a series of short films for children, including animated subjects which will be followed by a program of film-related activities, Jan. 23 and 30, 10-11:30 a.m. at the Johnson Museum.

Workshops for children ages 7-9 years will be held Jan. 23 and for children 10-12 years on Jan. 30. A fee of \$3 (\$2 to museum members) will be charged. Register one day in advance of workshops. For more information, call the education department at 255-6464.

Personal Growth Workshop

New series beginning the week of Feb. 8 will include assertiveness, building self-esteem, building satisfying relationships, stress management, women, food and self-esteem.

Lesbian/bisexual support group for women, general personal growth, gay/bisexual mens' support group, Asian-American concerns discussion group, graduate students support group, and the art of parenting.

Groups are free and confidential and open to all members of the Cornell community. Signups begin Jan. 27. For more information, call 255-3608 or stop by 103 Barnes Hall.

Symphony Orchestra Auditions

Auditions for the Cornell Symphony Orchestra will be held Jan. 25-27 from 2 to 4:30 p.m., Room B21E, Lincoln Hall. All interested students, staff and faculty are invited to audition. Rehearsals are on Wednesday evenings, beginning Jan. 27. Performances are scheduled for March 12 and April 30.

The repertory for this semester will include Beethoven's "Egmont Overture," excerpts from Prokofiev's "Romeo and Juliet" and Britten's "War Requiem." For further information call the music department, 255-4097.

Job Opportunities

January 21, 1987
Number 49
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.

-Send cover letters & resumes to Staffing Services, 160 Day Hall, Cornell University, Ithaca, NY 14853.

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

-Requests for referral &/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. Terminals are situated in main lobbies of Day Hall & Gannett Clinic, & the Olin, Mann & ILR Libraries.

Administrative and Professional

Minimum salaries listed are for recruitment purposes only.

FARM MANAGER I (PT0209) Vegetable Crops

Manage field operations. Develop & maintain long-term land mgmt. policies for 2 experimental farms, plus, oversee use of facilities & equip. by faculty, grad. students & staff. Provide tech. & gen'l. support to dept. for safe & efficient use of resources.

Req.: AAS in agriculture min. BS pref., certified pesticide applicator's lic. req. Min. 2 yrs. field exp. w/vegetable production, mech. ability & extensive exp. w/field equip. & shop tools. Demonstrated ability to superv. & I oversee work of other field workers. Letter & resume to Judi Deane by 2/5.

DINING SUPERVISOR (PA0203) Dining

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

Req.: AAS or equiv. combination of ed. & exp. req. 1 yr. food svc. supv. exp. Knowl. of food & health codes desir. Letter & resume to Cynthia Smithbower by 2/5.

RESEARCH SUPPORT SPEC. I (PT0204) Neurobiology & Behavior

Assist in electrophysiological studies of sensory processing in auditory nervous system & in behavioral studies of animal sound communication. Duties incl.: surgical prep. of small vertebrates (frogs, toads, lizards), fabrication of microelectrodes, recording & analysis of neuro-electric data.

Req.: BS in neurobio., physiology or bioengr. or related field. Familiar w/electronic instruments & computer analysis of electro physiological data plus histological equip. pref. Letter & resume to Judi Deane by 1/29.

FACILITIES COORDINATOR (PA0202) New York Statutory Colleges Finance & Business Operations

Reports to Dir., Stat. Fin. & Bus. Op., incumbent resp. for mgmt. existing instructional, research & extension facilities (\$300M) in NYS incl. Ithaca & Geneva Exp. Station. Work w/academic/non-academic, statutory, endowed univ. admin., contractors & facility/construction personnel, also resp. for full range of prof. activity, planning/construction of future renovation (e.g. rehab., restoration) & new facilities construction (e.g. site selection, design, etc.).

Req.: BS Arch. or mech. eng. & min. 10 yrs. significant & resp. exp. in priv. constr., govern. or univ. fac. mgmt. or rtd. exp.; understanding of computer use in long range planning, campus maint./util. proj. req'd. NYS prof. cert. or ability to secure w/in 1 yr. essent. MS mech./arch. eng., arch. or MBA must have min. 5 yrs. exp. indicated above. Exc. oral & written comm. skills w/demonstrated ability to work effectively w/in highly complex environ. must. College/univ. fac. exp. desir. Send letter, resume, salary history, & list of 3 prof. ref. by 2/22 to: Statutory Facilities Coordinator Search Committee, Statutory Finance & Business Operations, P.O. Box D, B-22 Mann Library Building, Ithaca, NY 14851-0199.

EDITOR II (PC0122) Media Services

Edit consumer & tech. bulletins, annual reports, admissions materials & development brochures. Help clients develop copy & check proof, galleys through blue-line. Work closely w/clients, designers & production coord.

Req.: BA or equiv. Min. 2 yrs. solid editorial exp. req. Exc. command of English, be attuned to nuances of language & have healthy respect for the writing styles & opinions of others. Strong interper. & planning skills req. Familiar w/PC's useful. Letter, resume & 3 editorial samples to Esther Smith by 1/29.

RESEARCH SUPPORT SPEC. I (PT0116) Entomology

Assist in insect-plant evolution associations research program. Mng. all phases of lab operations, supv. staff & student help, coord. & org. experiments in 2 research projects. Assist in exp. design & analysis. Until 6/30/88, renewable.

Req.: BS in bio. or equiv. 1 1/2 yrs. exp. in research lab environ. Trng. in evolution & ecology, exp. handling insects, use of computer & microscopes & working under field conditions highly desir. Letter & resume to Judi Deane by 1/28.

ADMINISTRATIVE SUPERVISOR I (PC0118) Purchasing

Provide admin. assistance in supv. of 15 non-exempt support staff & coord. of personnel mgmt. & policies; buyer duties/responsibilities.

Req.: AAS or equiv. Min. 3 yrs. supv. exp. Exc. comm., org. & supv. skills. Knowl. of CU acctg. system; some exp. in buying pref. Lt. typing. Letter & resume to Esther Smith by 1/22.

RESEARCH SUPPORT SPEC. III (PT0120) Food Science

Mng. pilot plant food processing operation. Mng. & supv. maint. & operation of equip. & machines. Coord. facility use in teaching & research programs. Work w/food industry in projects involving lab use.

Req.: BS or equiv. plus related exp. MS/food sci. or related field w/strong emphasis in food processing/engr. pref. Strong comm. & interper. skills; exp. in managing/operating pilot plant desir. Letter & resume to Judi Deane by 1/29.

DIRECTOR, LAB OPERATIONS (PT0119) Equine Drug Testing

Establish, maintain & coord. quality assurance testing & trng. programs at 7 field labs. Coord. research & state-of-the-art testing in labs. Supv. 2-4 technicians & lab operation.

Req.: MS in chem. or biochem. Exp. in isolation, purification & identification of drugs & metabolites using thin layer chromatography & analytical instrumentation. Exc. supv., interper. & comm. skills. Letter & resume to Judi Deane by 1/28.

DIRECTOR, PUBLIC SAFETY (PA0107) Public Safety

Reporting to V.P. Campus Affairs, Dir. is resp. for dept. admin./operation & establishes dept. policy & procedures. This includes mgmt. resp. for commissioned & civilian personnel (e.g. recruitment, trng., etc.). Also determines approp. dept. enforcement techniques & patrol procedures. Resp. for program devel. in following areas: law enforcement, security & univ. serv., parking control/enforcement, disaster procedures, records maint. program, inspectional svcs. & comm. systems, also maintains positive relationships w/members of univ. community & media, as well as local criminal justice & law enforcement agencies.

Req.: BS/BA & comb. of add'l. ed. & exp. Extensive exp. in leadership role w/a campus law enforcement org. & proven supv. skills over multi-faceted campus law enforcement agency essent. Salary negot. & based on exp. & quals. Start no later than 8/1/88. Letter, resume & 3 prof. refer. by Tues., 3/15 to: William D. Gurowitz, V.P. Campus Affairs, 313 Day Hall.

PROJECT LEADER III (PT0101) Computer Services (APS)

Plan, coord. & supv. development of major admin. systems. Initial assignment supports implementation of on-line acctg. system using 4th generation tech. (Natural/ADABAS) on IBM 3090 & develop. a distributed acctg. application in dBase III for IBM PC's.

Req.: MS or equiv., plus related exp. 9 yrs. exp., 2 as a project leader w/supv. resp. Prgrmmg. exp. req. Some data base design & mgmt. exp. pref. Knowl. of mini/microcomputers. Written/oral comm. & interper. skills essential. Letter & resume to Judi Deane by 2/5.

PLANT OPERATOR (PG0106) Utilities/Central Heating Plant

Operate Central Heating Plant in a safe & efficient manner, supv. Boiler Operator, Helper & Coal Machine Operator as nec. to produce Univ. steam needs. Rotating shift work.

Req.: H.S. dip. or equiv., plus formal Boiler Plant trng. Knowl. of coal, oil & gas boiler operation, incl. auxiliary plant equip. Able to understand, communicate, direct & carry out gen'l. Plant Mgmt. goals. Letter & resume to J. Courtney Fletcher.

SYSTEMS PROGRAMMER/ANALYST II (PT4006) Modern Lang. & Ling.

Support speech synthesis & analysis in Phonetics lab. Gen'l. resp. for maint. software on several computer systems, incl. SUN 160c Workstation (Unix), IBM-PC/AT (DOS), PDP 11/73 (RSX, RT-11) & PDP 11/40 (RT-11). Develop software; help applications software developers w/system specific problems; port existing software to new computers; interface existing software w/specific hardware (such as A/D converters); develop & maintain networks; enhance existing software w/new features (incl. graphics display of data); applications program development; write documentation. 20 hrs./wk.

Req.: BA/BS or equiv. exp. & trng. 2 yrs. related exp. Knowl. of Unix & C. Knowl. & interest in signal processing useful. Letter & resume to Judi Deane.

FINANCIAL ANALYST I (PC4404) Facilities & Engr. Admin.

Provide analytical, financial & database mgmt. support to Engr. & Facilities Dept.

Req.: BS in busn./computing or equiv. Min. 3 yrs. job-related exp. Exp. in gen'l. ledger, cost acctg. & busn. operations. Demonstrated org. & mgmt. skills req. Natural/ADABAS, JCL & other high level lang. (BASIC, PASCAL) desir. Physical plant knowl. pref. Letter & resume to Esther Smith.

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 to Esther Smith or Laurie Worsell. Interviews are conducted Tues. & Wed. at Staffing Services, East Hill Plaza by appt. only. Qualified applicants will be contacted after materials are reviewed.

OFFICE ASST., GR17 (C0213) NYSSILR Ext. & Public Service

Provide clerical support to Human Svcs. Admin. Program. Assemble & type trng. materials; prep. instructor contracts, travel expense forms & other program materials; maintain records, summaries & computerized mailing lists; type & edit corresp., reports, grant proposals & manuscripts; assist w/recept. duties. Until 10/31.

Req.: H.S. dip. or equiv. Some office exp. pref. Strong org. & comm. skills. Attention to detail & familiar w/IBM-PC & related software nec. Med. typing. Min. Biweekly: \$420.76

SECRETARY, GR17 (C0207) Architecture faculty & Grad. Programs

Req.: H.S. dip. or equiv. Familiar w/gen'l. office procedures. Able to use Leading Edge or other WP computer. Able to set priorities & meet deadlines. Exc. interper. & comm. skills essential. Heavy typing. Min. Biweekly: \$421.81

SECRETARY, GR18 (C0214) NYSSILR-Ext.

& Public Service

Provide sec. & clerical support for Human Services Admin. Program. Set up, maintain & revise program, student & instructor files; type & edit corresp., articles, manuscripts, grant applications & final reports; utilize computer for filing & WP; transcribe machine dictation; answer & screen calls; open, screen & route mail. Until 8/31/90.

Req.: H.S. dip. or equiv. Sec. school desir. Min. 2 yrs. related exp. Strong org., comm. & sec. skills. Familiar w/computer, WP & statutory college procedures nec. Med. typing. Min. Biweekly: \$443.13

SECRETARY, GR18 (C0204) Mathematical Sciences Inst.

Type highly tech. mathematical manuscripts, gen'l. corresp. & reports; assist workshop/tutorial coordinators in making arrangements for facilities, visitor accommodations; maintain office files; monitor status of office supplies; distribute mail; provide back-up to other secretaries.

Req.: H.S. dip. or equiv. Busn. or sec. school pref. Exp. w/tech. typing pref. Knowl. &/or ability to learn WP & Triad. Heavy typing. Min. Biweekly: \$444.37

SECRETARY, GR19 (C0215) Graduate Fellowship Office

Provide sec. support to Dir. & Asst. Dir. Coord. flow of materials through office; help organize annual Fellowship Competition; WP of award letters & gen'l. office comm.; some CRT entering. Special projects.

Req.: AAS or equiv. pref. Min. 3-5 yrs. office exp. Exc. typing skills. Strong org., interper. & comm. skills. Thoroughness & attention to detail essential. Knowl. of Wordperfect essential. LOTUS desir. Able to set priorities & work in a complex, active environ. Med. typing. Min. Biweekly: \$470.80

ACCOUNTS ASST., GR19 (C0206) Materials Science Ctr.

Resp. for entire purchasing procedure for approx. 60 active faculty members & 16 support operations; record-keeping for Ctr.

Req.: AAS in acctg. or equiv. Min. 2 yrs. on-the-job acctg. exp., busn./acctg. training. Accuracy at keyboarding. Double entry bookkeeping systems knowl. Good. org. & interper. skills. Familiar w/CU acctg. system req. Able to set priorities & work in a complex, active environ. Med. typing. Min. Biweekly: \$470.80

SECRETARY, GR20 (C0211) Public Affairs Reg'l. Office: Solana Beach, CA

Type corresp., forms, vouchers & other material; schedule appts.; maintain event calendar; assist in mtg. arrangements; assist in public affairs events occas.; interact w/alumni by phone & in person.

Req.: AAS or equiv. Min. 2-3 yrs. sec. exp. Exc. comm. skills. exp. w/IBM XT or equiv. Able to work in a complex, active environ. Med. typing. Min. Biweekly: \$496.80

ADMINISTRATIVE AIDE, GR20 (C0205) JGSM

Provide majority of WP for admissions office. Some data entry functions; resp. for all vouchers, incl. travel, reimbursements & billing; provide admin./clerical support to Dir. of Admissions.

Req.: AAS or equiv. Min. 2 yrs. admin./sec. exp. Good org., interper. & supv. skills. Computer knowl. Heavy typing. Min. Biweekly: \$496.80

FACILITIES INVENTORY ASST., GR21 (C0212) Facilities Engr.

Assist Fac. Inventory Coord. in maintaining & coordinating facilities & space data w/dept. & bldg. coord. Aid in mgmt. & entry of system data & production or related reports.

Req.: AAS or equiv. pref. Min. 2 yrs. exp. working w/database systems. Strong comm. & interper. skills. Valid NYS driver's lic. Min. Biweekly: \$527.69

ADMINISTRATIVE AIDE, GR21 (C0203) Internat'l. Agriculture Program

Provide admin./sec. support to Dir. & Assoc. Dir.

Req.: AAS or equiv. Min. 2-3 yrs. related trng./exp. Familiar w/computer programs. Able to communicate effectively (oral/written). Exc. interper. skills. Strong org. skills. Confidentiality essential; French or Spanish desir. Some international exp. pref. Able to set priorities & work independ. in a complex, active environ. Heavy typing. Min. Biweekly: \$526.14

General Service

REGULAR EMPLOYEES Submit an employee transfer application to Staffing Services, East Hill Plaza. **EXTERNAL APPLICANTS** Employment applications are available at Staffing Services, East Hill Plaza 9-noon, Mon.-Thurs.

FOOD SERVICE WORKER, SO15 (G0203) Dining-Endowed

Set-up, display & serve food &/or beverage. Check Co-op dining cards for validity & make sale transactions by cash or credit card. Shift subject to change.

Req.: H.S. dip. or equiv. Knowl. of food prep. & presentation pref. Good customer relation skills. Basic reading & computation skills req. Min. hourly: \$5.28

CUSTODIAN, SO16 (G0202, G0205) Dining-Endowed

Provide gen'l. custodial care of bldgs. & grounds 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 50 lbs. & climb an 8 ft. ladder. Basic reading & writing skills. Min. hourly: \$5.49

CASHIER, GR17 (G0209) Unions & Activities-WSH

Operation of food srvc. facility: cashiering, product inventory/ordering, customer service, scheduling/supv. of student employees. Mon.-Fri., 7:30 a.m.-4 p.m.

Req.: H.S. dip. or equiv. Exp. w/cash register operation, customer svc., scheduling, inventory, supv., menu planning, pricing/product selection. Min. Biweekly: \$421.81

BINDERY OPER., SO17 (G0210, G0211) Graphic Production Services-Endowed

Operate variety of bindery equip. Perform routine cleaning, adjustment & repair of same equip. Mon.-Fri., 8-4:30.

Req.: H.S. dip. or equiv. Min. 2 yrs. of commercial bindery exp. Must be dependable & able to work well w/others. Able to lift 60 lbs. Min. hourly: \$5.77

SHORT ORDER COOK, SO18 (G0201) Dining-Endowed

Prepare & serve food directly to customers from short order area. Shift subject to change.

Req.: H.S. dip. or equiv. 6-12 months related exp. Familiar w/short order equip. Able to prepare variety of short preparation foods under pressure. Good customer relations skills. Min. hourly: \$6.06

FACILITIES INVENTORY DRAFTER, GR19 (G0206) Facilities Engr.

Resp. for maintaining & updating drawings & floor plans of all CU owned bldgs. for Facilities Inventory.

Req.: H.S. dip. AAS pref. NYS driver's lic. req. 2 yrs. architectural drafting exp., good comm. & interper. skills. Min. Biweekly: \$470.80

APPRENTICE ELECTRICIAN (G0212, G0213, G0214) M&SO

Install & maintain all aspects of electrical systems incl. svcs., feeders branch circuits, motors, motor controls, fire alarm systems, generators, drives, transformers & lighting. M-F, 7:30-4.

Req.: H.S. dip. or equiv. req. Must qualify on the IBEW aptitude test. AAS in electrical tech. given preference. Knowl. of electrical material & construction practices a plus. Must have & maintain a valid NYS driver's lic. Must belong to IBEW within 30 days of employment. Pre-employment physical given.

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. The following backgrounds are highly desired: biochem., chem., microbio., elect., physics, lic. animal health tech.

TECHNICIAN, GR18 (T0118) Vet. Medical Teaching Hospital

Dispense pharmaceuticals & treatment items on veterinarian orders. Maintain inventory of Large & Small Animal Clinic Pharmacy.

Req.: 2 yrs. college or equiv. tech. exp. Exp. working in a pharmacy or equiv. pref. Apply by 1/28. Min. Biweekly: \$443.13

TECHNICIAN, GR18 (T2203) Vet. Physiology

Provide tech. support in characterization of monoclonal antibodies via HPLC, ELISA assay & immunofluorescent tech. to human intestinal brush border membrane proteins. Prepare cell culture items, order lab supplies & provide gen'l. lab asst.

Req.: BS in bio. sci. or equiv. Knowl. of cell culture & sterile tech. pref., not essential. Letter & resume to Judi Deane. Min. Biweekly: \$443.13

RESEARCH AIDE, GR19 (T0203) Food Science

Conduct lab research & quality control procedures to study microbio. quality of foods, esp. dairy products. Maintain lab cleanliness & orderliness. Order supplies.

Req.: AAS + microbio. exp.; BS pref. Able to perform methods listed in "Standard Methods for the Examination of Dairy Products", American Public Health Assoc., & methods adopted by Assoc. of Official Analytical Chemists. Some chem. analysis exp. nec. Apply by 1/29. Min. Biweekly: \$469.53

TECHNICIAN, GR19 (T0117) Plant Breeding & Biometry

Culture disease inoculum & inoculate alfalfa plants. Establish & maintain field/greenhouse experiments, cross-pollinate alfalfa plants & produce & process seed. Some data collection/analysis & record keeping.

Req.: BS in ag. or related bio. sci. Plant path. & breeding coursework desir. At least 100 hrs. lab exp. in culturing pathogens & inoculating plants. 1 yr. exp. in plant breeding & path. or related plant sci. desir. Some computer exp. Apply by 1/28. Min. Biweekly: \$469.53

TECHNICIAN, GR19 (T0105) Agronomy

Assist in plant cells/tissue cryopreservation/vitrification studies. Primary resp. incl. isolation of plant protoplasts, maint. of tissue cultures, prep. of solutions & media, light microscopic studies of protoplasts osmotic behavior using video image processing tech.

Req.: BS in bio. or biochem. or equiv. Previous lab exp. pref. Exp. w/plant tissue cultures, light microscopy &/or cryopreservation desir. Apply by 1/29. Min. Biweekly: \$469.53

ANIMAL ATTENDANT, SO20 (T0208) Poultry & Avian Sci.-Statutory

In-line supv. at Poultry Farm. Resp. for health welfare (daily care) of research lab animals plus animal facilities & equip. maint. Collect/record experimental data. 8-4:30, Mon.-Thurs.; 8-3:30 Fri. & weekends as needed.

Req.: AAS or equiv. exp. Must have or be able to acquire animal tech.'s certification, pesticide application certificate. Supv. exp. helpful; 2-3 yrs. working w/Poultry as research animal. NYS driver's lic. Able to lift & carry 100 lbs. regularly. Pre-employment physical req. Min. hourly: \$6.69

TECHNICIAN, GR20 (T0206) Entomology

Provide independ. research support for field & lab studies on efficacy of attractants & pesticides to carpenter ants. 1 yr. renewable.

Req.: BS in entomology or bio. MS highly desir. Valid NYS driver's lic. 2-3 yrs. trng./exp. in ant. ID, entomology, ant bio., stats. & compu-

ter literacy. Apply by 1/29. Min. Biweekly: \$495.35

TECHNICIAN, GR20 (T0205) Veterinary Pathology

Assist in development of assays & experiments req. to carry out scientific research in field of immunopathology & cellular bio. of autoimmune dermatosis. Maintain lab supplies & equip.

Req.: BS in bio. sci. 2-3 yrs. exp. in lab. Knowl. of polyacrylamide gel electrophoresis & western blot, immunohistochemical & in situ hybridization tech. Apply by 1/29. Min. Biweekly: \$495.35

TECHNICIAN, GR20 (T0114) Clinical Sciences

Provide tech. support for immunological lab researchers. Prepare tissue culture & bacteriological media, buffers & other precisely formulated reagents. Obtain milk & blood samples.

Req.: BS in bio. or equiv. Exp. in microbio. tech. Familiar w/handling techniques & common lab animals. Apply by 1/28. Min. Biweekly: \$495.35

TECHNICIAN, GR20 (T0115) Vet. Microbiology-Baker Inst.

Perform lab duties assisting in infectious disease oriented immunology lab. Provide support in investigation of immune response in rats to bacterium *Listeria monocytogenes*. Tissue culture & biochem. techniques, handle infectious bacteria & lab animals. Bacterial cultures & extracting bacterial antigens & prep. of glassware. Maintain supplies & radiation safety records.

Req.: AAS in microbio. or related field. BS/BA-sci. major pref. 2 yrs. exp. w/tissue culture techniques. Sci. bkgnd. & lab exp. desir. Exp. handling lab animals (rats, rabbits, mice) desir. Apply by 1/28. Min. Biweekly: \$495.35

TECHNICIAN, GR21 (T0211) Food Science

Conduct nutrit'l. studies on effects of unsaturated fatty acids; lipid analyses of bio. tissues; quantification of prostaglandins by RIA separation of lipid classes & leukotrienes by HPLC; analysis of fatty acids by gas chromatography.

Req.: BS or MS in biochem./nutri. sci. or related subject. Knowl. of lipid analyses, gas chromatography, HPLC & TLC. Exp. w/prostaglandin RIA analysis & feeding trials desir. Aptitude w/computers. Apply by 1/28. Min. Biweekly: \$526.14

COMPUTER OPERATOR, GR21-24 (T0110) Computer Services

Operate large scale computer systems & associated peripheral equip. Monitor data comm. networks; consult w/vendor

Restaurants losing money on checks, professors report

Restaurants may be losing nearly \$4 billion a year because of errors in guest checks, two Cornell professors report.

Sampling restaurants in 138 cities, they found that slightly more than one check in eight was incorrect. About 70 percent of the errors were checks that undercharged the diner.

About 91 percent of overcharged guests pointed out the error to the cashier, but 66 percent of guests who were undercharged paid the incorrect lower amount and said nothing, the research disclosed.

The study of guest-check accuracy was

directed by Thomas J. Kelly, a former restaurateur, and Steven Carvell. Both are professors in the School of Hotel Administration.

According to their study, the biggest errors are made in restaurants where waiters and waitresses fill out checks by hand. Incorrect handwritten checks undercharged the guest by an average \$5.39. Errors in electronically produced checks averaged \$1.29 in overcharges.

"The major source of error, we discovered, was an incorrect listing of the items ordered," the professors wrote. In most

cases, waiters failed to list served items on the check, particularly drinks ordered after the meal and desserts. The biggest problem, not charging for desserts, usually involved items served from a dessert cart.

Errors in adding up the check or recording the wrong price were not major factors because these errors can go either way and tend to balance out, Kelly and Carvell said.

Students and faculty from 10 hospitality colleges reported on the accuracy of guest checks issued by 288 fast-food, family and luxury restaurants in 36 states, the U.S. Virgin Islands and two Canadian provinces.

Check errors caused a loss of 2.3 percent from gross revenues, a large proportion of a restaurant's bottom line, Kelly and Carvell said, and may help explain the high rate of bankruptcy suffered by companies in the restaurant industry.

"Not surprisingly, check errors affected tip levels," the professors wrote. "Overcharged customers left an average tip of 4.7 percent, but when they were undercharged, customers left an average tip of 11.5 percent. When the check was accurate, the average tip was 13.3 percent."

— Albert E. Kaff

Graduate Bulletin

Spring registration for graduate students will be in Sage Hall Lounge, Jan. 18-22, 8:15 a.m. to 4:15 p.m. Bring student ID card and registration admission form sent by the registrar.

Course enrollment: Students may bring completed and signed course enrollment forms to registration and complete course enrollment during registration. Pick up course enrollment forms in graduate field office or in Sage Graduate Center. Feb. 12 is the last day for returning course enrollment forms.

Graduate faculty: The next regular meeting of the graduate faculty will be held Feb. 5 at 4 p.m. in the General Committee Room, Sage Graduate Center. This meeting is solely for the purpose of voting on January degrees.

Unregistered doctoral candidates who wish to avoid paying the \$200 active-file fee for the spring term must have met all degree requirements by Feb. 12. This includes the final defense and the filing of two acceptable copies of the dissertation in the Graduate School office. These students will receive a May degree.

New students must return the completed nomination of committee form to the Graduate School by Feb. 12.

Graduate seats on student assembly and student-elected trustee: Contact Office of the Assemblies, 165 Day Hall, 255-3715, for information and/or petitions. Petitions are due Feb. 5.

Fellowships for graduate students are listed on CUINFO.

Archeological objects from China to be shown at Johnson Museum

More than 100 archeological objects from ancient China — including tomb reliefs, sculptural figures, an unusual bronze "money tree," rubbings and a spectacular reconstructed tomb model — are part of an exhibition that will open at the Johnson Museum of Art on Jan. 26.

"Stories from China's Past: Han Dynasty Pictorial Tomb Reliefs and Related Objects from Sichuan, People's Republic of China" was organized by the Chinese Cultural Center of San Francisco in cooperation with the Sichuan Cultural Department of the People's Republic of China.

It offers a rare glimpse of the regional art and culture of the Han Dynasty (206 B.C.-A.D. 220). Photographic panels, maps, drawings, diagrams and extensive captions add additional insights into one of China's greatest imperial periods.

Han tomb reliefs provide some of the most important evidence for tracing the development of early Chinese life and pictorial art. During the Han, China's major art forms — painting and sculpture — emerged characterized by a burgeoning realism both in style and content. The visual narratives of the Sichuan reliefs offer insight into the activities, customs, rituals, mythology, folklore and philosophical beliefs of the ancient culture in southwest China.

According to Lucy Lim, executive director/curator of the Chinese Cultural Center, the aim of the exhibition is "to contribute to an understanding of an important regional cultural tradition of ancient China as well as its contemporary relevance." Recent archaeological discoveries in China as well as recent cultural exchange with the West were instrumental in making this exhibit possible.



Peter Schaal

John Graham, viola, will give a concert with Sonya Monosoff, violin, on Jan. 24 at 4 p.m. in Barnes Hall Auditorium.

Monosoff to perform with guest violist John Graham

Sonya Monosoff, violin, and guest artist John Graham, viola, will give a concert Jan. 24 at 4 p.m. in Barnes Hall Auditorium. Featured will be works by Haydn, Wolpe, Villa-Lobos and Martinu. (See calendar for details.)

Monosoff, currently a professor of music here, teaches early and modern violin playing, chamber music and solo performance, besides giving lectures, lecture recitals, workshops, masterclasses and performing internationally as a soloist and in ensembles.

Graham has played an important role in the viola's emergence onto center stage. He has performed as soloist on three continents and has collaborated with colleagues of the Juilliard String Quartet, Guarneri String Quartet, Mendelssohn Quartet and many others in the United States. Finland, West Germany, Holland, Poland and China have invited him various times not only to perform but also to teach and to introduce the viola repertoire.



"Untitled 1987" and other photographs by Barry Perlus exploring the forms of trees are on view through Jan. 29 at Tjaden Gallery. Perlus is an assistant professor of art.

Job Opportunities

Continued from page 6

Req.: H.S. dip. or equiv. Min. 1 yr. exp. Exc. org./comm./interper. skills. Exp. w/AT&T PC useful. Knowl. of Wordperfect, Mac & other software helpful. Med. typing. Min. full-time equiv.: \$443.13

EXECUTIVE STAFF ASST. II (PC0105) President Emeritus

Provide admin. support to President Emeritus. Manage daily operation of office; assist w/all aspects of CU, nat'l. & other resp.

Req.: AAS or equiv. Min. 5-7 yrs. admin. exp. (industrial, scientific or univ.) pref. Acctg./budgeting exp.; familiar w/CU acctg. system helpful. Able to work independ., initiative & strong org. skills. Letter & resume to Esther Smith by 1/22.

RESEARCH SUPPORT SPEC. I (PT0102) Modern Lang. & Ling.

Assist in design of lexical database system & compile entries for an on-line Russian-English dictionary. Until 9/25.

Req.: MA or equiv. Sound knowl. of Russian lang. Familiar w/lexicographic principles of Moscow School of Semantics. Letter & resume to Judi Deane by 2/5.

Temporary

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

TECHNICIAN (T0202) Agronomy

Prepare soil samples for analysis. Grind, sieve & weigh samples for lab & nutrient analysis. 3 month appt.

Req.: AAS in chem. or related field. Some lab exp. desir. Basic chem. lab techniques req. Knowl. of pH meters, analytical balances, automated titrimeters & pipettes. Letter & resume to Judi Deane by 1/29. Min. hourly: \$5.50.

EDITORIAL ASST. (C0216) CRSR

Prepare monthly progress reports for NASA, plus monthly cost stmts. as part of report pkg. 10 hrs./wk. flexible.

Req.: AAS; BA/BS pref. Good writing skills; must be familiar w/WP software; able to work w/others & meet deadlines; Lotus 1-2-3 exp. or willingness to learn. Lt. typing. Letter & resume to Laurie Worsell.

TECHNICIAN, GR21 (T4601) Psychology

Operate & supv. infant Research Ctr. Supv. research group conducting experiments w/human infants. Flexible 20 hrs./wk. Until 8/31/88.

Req.: BA/BS in Psychology. Some research exp. Good supv. & interper. skills essential. Computer prgrmmg. & WP skills pref. Letter & resume to Judi Deane ASAP. Min. full-time equiv.: \$527.69

SUPERVISOR TRAINEES

Cornell Catering is seeking responsible, hard-working individuals to be trained for supv. opportunities in catering field. Must be willing to work on-call, days, M-F, 20-40 hrs. weekly. Apply to Staffing Services, East Hill Plaza, Mon.-Thurs., 9-11 a.m.

SECRETARY (C0134) Mathematics

Provide sec. support for 1 Prof. Type highly tech. mathematical manuscripts, publications, class materials; other duties as assigned. Until 6/30. 1/2 to 3/4 time, flex. days/hrs.

Req.: H.S. dip. or equiv. Some offic. exp. essential. Knowl. or willingness to learn tech. typing using a Macintosh computer. Call Laurie Worsell at 255-7044.

REFERRAL ASST. (C0133) Student Employment

Aide Asst. Dir. & Job Developer for off-campus employment programs in referring students to Summer Job Network opportunities. Maintain contact w/students during Summer Job Network walk-in hrs. Provide employment counseling for applicants, answer phone inquiries; provide follow up w/employers; assist w/duplication of resumes & referral mailing.

Req.: H.S. dip. or equiv. Some college coursework essential. Human Resource bkgnd. & familiar w/computers pref. Call Laurie Worsell at 255-7044.

DATABASE SEARCHING ASST. (C2118) Mann Library

Oversee some admin. details of enduser program. Help train, schedule & evaluate staff; assist w/prep. of documentation & telecommunications software configuration; guide & coach student searchers during evenings & some weekends. Work under supv. of Info. Literacy. 5-15 hrs./wk.; some evenings & weekends.

Req.: BS/BA or equiv. in a subject related to agriculture, bio. or human ecology. Exp. w/PC's & software, w/trng. & supervising others & working w/public. Familiar w/databases & libs. Lt. typing.

SECRETARY (C4522) Hotel Admin.

Sec. support for Dean & Asst. Dean. Resp. for typing & using WANG PC; maintain files & confidential records; answer phones, direct calls; resp. for distribution of acct. statements, phone bills, etc.; greet on/off-campus & visitors; handle mail. 9-3 flex. Until 3/30/88.

Req.: H.S. dip. or equiv. Busn. or sec. school desir. Prior receipt. or sec. exp. highly desir. Able to work in complex, active, busn.-like environ. Heavy typing. Letter & resume to Laurie Worsell.

OFFICE ASST. (C4702) Vet Medical Teaching Hosp.

Provide informative & factual comm. between Small Animal Clinic, clients, referring vets. & gen'l. public. Resp. for scheduling appts.; messages; paging Drs.; handle emergencies & dispensing gen'l. info. to public. 10 a.m.-6 p.m., Mon.-Fri.; 8 a.m.-12 noon, Sat.

Req.: H.S. dip. or equiv. Basic med. term. helpful. Exc. phone manners essential. Customer svc. orientation. Computer exp. essential. Switchboard helpful. Letter & resume to Laurie Worsell.

OFFICE ASST. (C4701) Arts & Sci. Admissions

Greet public; answer phones; provide sec. support to Asst. Dir. Until 4/20/88.

Req.: H.S. dip. or equiv., some college pref. Knowl. of Xerox 860 helpful. Med. typing. \$5.25/hr. Letter & resume to Laurie Worsell.

DATA ENTRY OPER. (C4503) Summer Session

Computer entry (IBM PC/XT using dBase III plus) of data from application & recommendation forms for Summer College applicants; production of reports & program statistics, answer

phone inquiries from students, parents & guidance counselors re: Summer College program. Until 8/31/88.

Req.: AAS or equiv. Exp. w/IBM PC/XT & dBase III Plus software essential. Exc. keyboarding. Letter & resume to Esther Smith.

CLERICAL ASST. (C4504) Summer Session

Answer phone & mail inquiries; provide info. to callers; process applications, recommendations & transcripts through acceptance to programs; assemble & process bulk mailings, info. packets for students & parents & assist w/registration & course changes; enter student data on computer. Until 5/1/88.

Req.: AAS or equiv. Exp. w/IBM PC/XT using dBase III Plus software essential. Exc. org., interper. & comm. skills. Med. typing. Letter & resume to Esther L. Smith.

Academic

LIBRARIAN (A0201) JGSM Library

Send letter, resume & list of 3 references to Ann Dyckman, Personnel Director, Cornell University Library, 201 Olin Library, Ithaca, NY 14853-5301 by 3/1/88.

EXTENSION ASSOC. (A0202) Waste Mgmt. Inst.

Send resume to E. Harrison, 468 Hollister Hall, Cornell University, Ithaca, NY 14853.

SPORTS

Friday, 1/22
Women's Polo, at Yale, 7 p.m.
Men's Polo, Skidmore, 7:30 p.m.
Men's Hockey, at Brown, 7:30 p.m.

Saturday, 1/23
Men's Squash, Lehigh, 10 a.m.
Men's Gymnastics, Dartmouth, 1 p.m.
Men's Fencing, at Pennsylvania w/ Columbia and Brown, noon
Women's Fencing, at Pennsylvania w/ Columbia and Brown, noon
Women's Gymnastics, Vermont, 1 p.m.
Men's Swimming, at Syracuse, 1 p.m.
Women's Swimming, at Syracuse, 1 p.m.
Men's Track, at Army, 1 p.m.
Women's Track, at Army, 1 p.m.
Men's Jr. Varsity Basketball, Alfred, 2 p.m.
Women's Hockey, Boston College, 2 p.m.
Men's Squash, Hobart, 2 p.m.
Men's Polo, at Yale, 3 p.m.
Women's Basketball, Columbia, 5 p.m.
Men's Basketball, Columbia, 7:30 p.m.
Men's Hockey, at Yale, 7:30 p.m.
Women's Polo, Skidmore, 8:15 p.m.

Sunday, 1/24
Women's Gymnastics, Westchester, 1 p.m.

Monday, 1/25
Men's Jr. Varsity Basketball, Colgate, 5 p.m.
Men's Basketball, Colgate, 8 p.m.

Tuesday, 1/26
Women's Basketball, St. Lawrence, 6 p.m.

Wednesday, 1/27
Men's Gymnastics, at Cortland, 7 p.m.
Women's Gymnastics, at Cortland, 7 p.m.
Women's Hockey, at RIT, 7:30 p.m.

Last week's scores
[X-Y Overall record to date]
Men's Basketball [6-6], Ivy League [1-1]
Dartmouth 97, Cornell 83
Cornell 75, Harvard 50

Women's Basketball [6-4], Ivy League [0-2]
Dartmouth 69, Cornell 45
Harvard 80, Cornell 52

Men's Hockey [9-4], ECAC [6-4]
Cornell 4, Colgate 3
Cornell 8, Dartmouth 3

Women's Hockey [5-5], Ivy League [3-2]
Cornell 2, Brown 1
Cornell 4, Yale 1

Men's Fencing [0-2], Ivy League [0-2]
Yale 17, Cornell 10

Women's Fencing [0-2], [0-2]
Yale 13, Cornell 3

Men's Gymnastics [4-1], NAGL [2-0]
Cornell 214.55, Radford 187.7, Virginia Tech 60.95

Men's Swimming [1-4], EISL [0-4]
Cornell 117, Colgate 94

Women's Swimming [2-3], Ivy League [0-3]
Cornell 120, Colgate 87

Wrestling [0-2], Ivy League [0-0]
Placed 2nd at the New York State Championships

Polo fans, take note!
Work is being completed at the new Oxley Arena off Pine Tree Road. At press time it was unknown whether spectators would be welcome at Friday night's match. That depends on whether a nylon mesh net has been hung around the arena to prevent stray polo balls from flying into the stands. To find out whether the net is in place, call 255-9842.

Correction
A caption in last week's Chronicle incorrectly described a horse at Oxley Arena as a border horse. He is a lesson horse in the hunt seat riding program who used to be a polo horse before he slowed down.



Claude Levet
Greg Gilda, No. 52, a center from Bellingham, Washington, struggles for command of the ball during Friday night's game against Dartmouth. Cornell lost, 97-83.

Biotech Program Director Hammes leaving

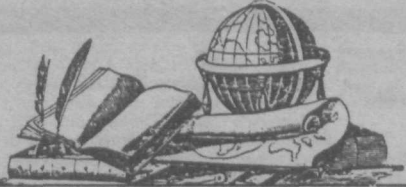
Gordon G. Hammes, director of Cornell's Biotechnology Program, is leaving to become vice chancellor for academic affairs at the University of California at Santa Barbara on July 1.
Hammes, a specialist in the biophysical chemistry of enzymes and proteins, has been a member of the Cornell faculty since 1965, served as chairman of the Department of Chemistry from 1970 to 1975 and currently is the Horace White Professor of Chemistry and

Biochemistry.
He is the founding director of the Biotechnology Program, which includes the New York State Center for Advanced Technology in Biotechnology (Agriculture), the U.S. Army Center of Excellence in Biotechnology and the Biotechnology Institute. The last is a collaboration between the university and corporations involved in agriculture and food and chemical production.
Cornell's vice president for research and advanced studies, Joseph M. Ballantyne, commended the administrator, saying, "Gordon Hammes has done a superlative job of guiding our program in biotechnology. He has been effective in working with faculty who participate in the program research and also with the sponsors of the work, including corporations and the State of New York. He was instrumental in securing support from the U.S. Army for the program, and is widely respected for both his scientific and administrative skills."
Hammes is a member of the National Academy of Sciences and the American Academy of Arts and Sciences, and is the author of more than 200 publications, including three books.
A search for new director at the Biotechnology Program is under way.

— Roger Segelken

Library tours

Tours will be offered to introduce faculty and graduate students to Olin Library's services, facilities and resources, daily Jan. 21-29.
Tours will be offered of the Engineering Library beginning at 2:30 p.m. on Jan. 26, 27 and 29. Tours will meet at the information/referral desk.



Budget Continued from page 1

directly affects those units affiliated with the State University of New York: the College of Agriculture and Life Sciences, College of Human Ecology, College of Veterinary Medicine and School of Industrial and Labor Relations. The total allocation for these four colleges in the executive budget is \$101.72 million, up \$2.34 million from \$99.23 million. The 2.5 percent proposed increase is a net figure that reflects some cuts — including that for salary support — as well as some increases. (It does not include additional money for annual salary-increase programs in already filled jobs within state-supported units. Figures for those increases, which must await general, state-employee salary agreements, will be available at a later date.)
Cornell also received renewed operating funding for a number of programs that are not housed or budgeted in the state-supported units. Among these are approximately \$1 million from the New York State Science and Technology Foundation for Cornell's Center for Advanced Technology in Biotechnology and \$800,000 for the Cornell Theory Center.
Nathan Fawcett, director of finance for the statutory colleges, said that "the state's capital budget, which generally covers construction projects, contains a number of items that were high on Cornell's list of critical needs. But

details are still very sketchy."
Among Cornell requests known to be included, though, were a \$10 million re-appropriation for the Theory Center — \$5 million as a grant and \$5 million as a loan — \$2.5 million to continue renovation of Martha Van Rensselaer Hall, \$1.2 million to upgrade campus steam pipes, \$731,000 to start planning pesticide storage and handling facilities for Ithaca and the Experiment Station at Geneva, and \$418,000 to repair a research facility at the Veterinary College.
In addition, the executive budget requests that the ceiling on State University of New York construction borrowing be raised by \$1 billion. If the borrowing cap is raised, Cornell eventually might receive up to \$100 million for the construction of the clinical hospital and other facilities in the master plan for the Veterinary College, and for expansion of the Mann and Catherwood libraries.
"It's a long time between January and April 1. We plan to work with the State University to inform members of the legislature about these problems at Cornell. We hope some relief may be possible by the time the legislature acts on the budget," Burness said.

— Sam Segal

Honey bees Continued from page 1

the past several decades.
Morse, a professor and chairman of the Department of Entomology in the College of Agriculture and Life Sciences, has studied the Asian mite extensively in Brazil over the past several years. In South America, it maintains a peaceful coexistence with Africanized bees, known more popularly as the killer bees.
How this pest got into the United States is not known, but it turned up in Wisconsin for the first time in late September 1987. Its presence has since been confirmed in 10 other states — New York, Pennsylvania, Maine, Florida, Ohio, Michigan, Illinois, South Dakota, Mississippi and Nebraska.
"We knew it was coming but we didn't expect it to be here quite so soon," Morse said.

According to Camazine, honey bees account for an estimated 80 percent of all insect pollination activities in the country, pollinating more than 100 agricultural
"We can be sure that within a year — and certainly within two years — they [Asian mites] will have overrun all honey bee colonies in the country."
— Roger A. Morse
crops, including fruits, vegetables, forage plants and oilseed crops.
Morse said that effective countermeasures might include newly developed chemicals

designed to kill the Asian mite without harming the honey bee. Fluvalinate, which is known by its trade name Spur, has just been cleared with the Environmental Protection Agency for general use in the United States, Morse reported. The chemical already has been used experimentally in Europe for the past several years.
In addition to using the chemical-control measure, the Cornell scientist hopes to seek a long-term solution to the problem by developing resistant strains of honey bees through breeding programs.
In the meantime, new practices to manage honey bee colonies more intensively will have to be worked out to cope with the crisis, Morse stressed. Management steps he suggests will involve, among other things, replacing the queen bees more frequently to

reduce the chance of mite infestations and monitoring the progress of mite infestations.
The situation will become even more complicated when Africanized bees, now in the southern part of Mexico, begin moving into the United States within a few years, eventually taking over the bee colonies throughout the country, Morse said.
Known to be aggressive in attacking their enemies — hence the nickname "killer bee" — Africanized bees, a race of the European honey bee species, were imported into Brazil in 1956. They displaced native honey bee colonies and began a northward spread toward the United States through Central America.
"The Africanized bee definitely will be here in 1990," Camazine predicted.

— Yong H. Kim