Cornell CHRONICLE

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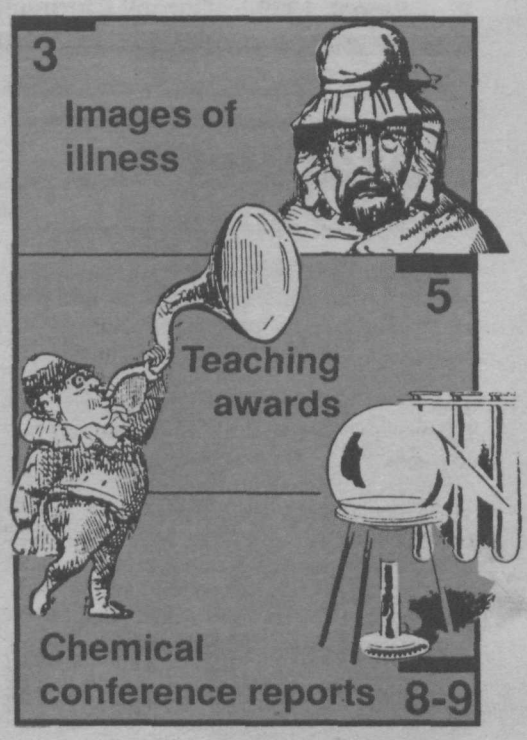

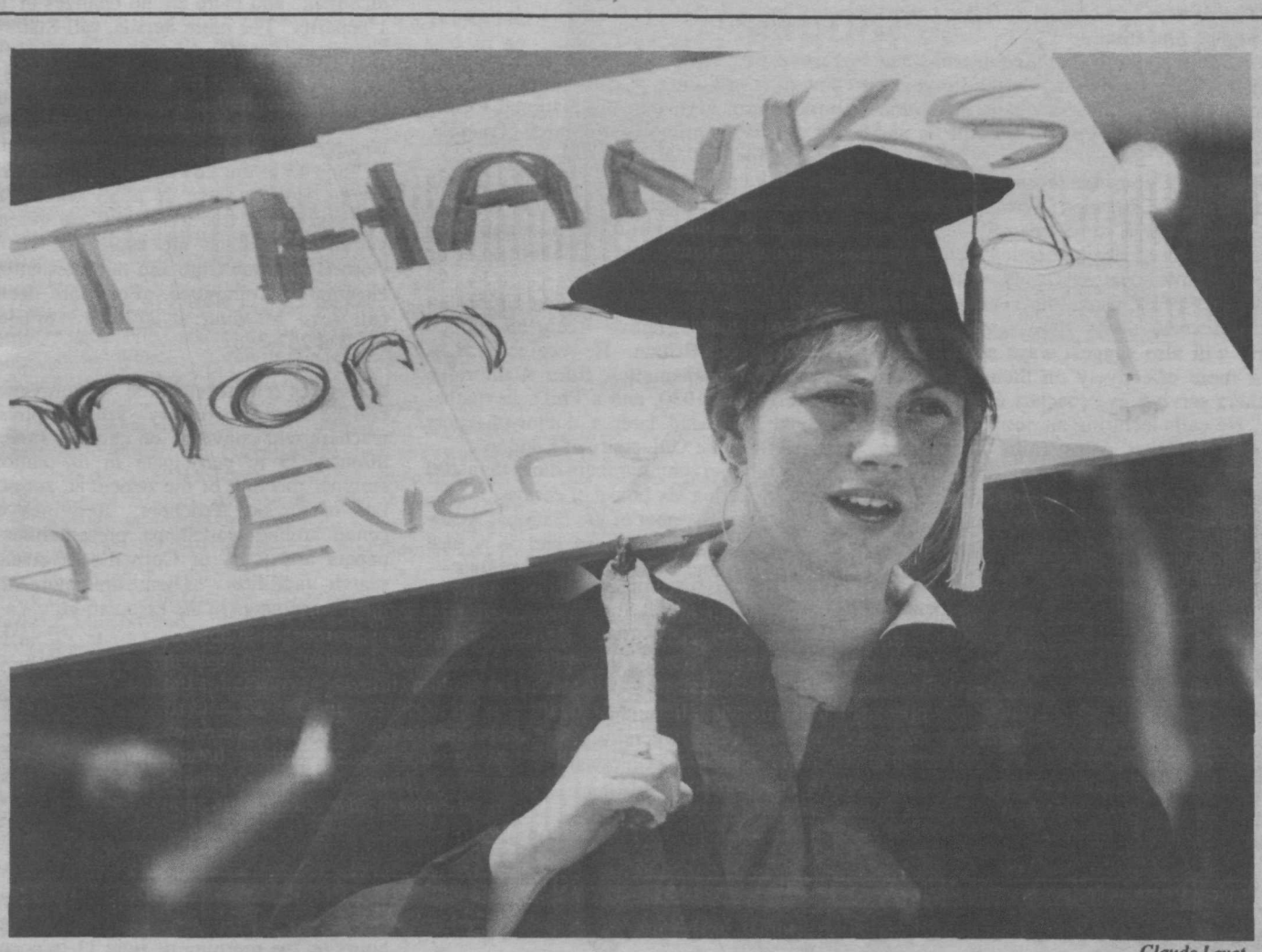

Claude Levet

"Thanks Mom & Dad & Everyone!" says a sign held high by Teresa Weronko of Brooklyn, N.Y., College of Agriculture and Life Sciences, during commencement ceremonies on May 29. More photographs and excerpts from President Frank H.T. Rhodes' address on pages 6-7.

Dean chosen for Human Ecology

Francille M. Firebaugh, vice provost for international affairs at Ohio State University, has been named dean of the College of Human Ecology.

Firebaugh, a specialist in family resource management and an administrator at OSU since 1973, will succeed Jerome M. Ziegler, who is retiring after holding the post for 10 years.

Firebaugh takes over leadership of a college with more than 1,200 undergraduate students, 93 faculty members and a $2.3-million-a-year research program in six areas: consumer economics and housing, design and environmental analysis, human development and family studies, human service studies, textiles and apparel, and nutritional sciences. The College of Human Ecology is one of four state-supported units on campus.

Firebaugh's appointment, confirmed by Cornell trustees and effective Oct. 1, is subject to approval by the State University of New York Board of Trustees.

President Frank H.T. Rhodes said,"Dr. Firebaugh is a superb choice to serve as the next dean of the College of Human Ecology, which plays an important role on both the graduate and undergraduate levels at Cornell. I have every confidence that she will lead the college and its faculty, staff and students to even greater heights of success."

Continued on page 4

Sagan to give Olin Lecture during Reunion Weekend

Astronomer Carl Sagan will give a lecture tomorrow at 4 p.m. in Bailey Hall as part of a weekend of events planned for alumni returning for class reunions. Some 5,000 alumni and their families are expected for the weekend.

Sagan, Cornell's David Duncan Professor of Astronomy and Space Sciences and director of the Laboratory for Planetary Studies, will speak on "Goals for the 21st Century" as he delivers the Spencer T. and Ann W. Olin Lecture.

Sagan has played a leading role in the Mariner, Viking and Voyager expeditions to the planets, and his research has enhanced understanding of the greenhouse effect on Venus, dust storms on Mars, the organic haze on Titan, the origin of life and the search for life elsewhere in the universe.

In addition to his scientific papers and popular articles, Sagan is the author or co-author of "Broca's Brain," "Comet," "Contact" and "The Dragons of Eden." The last book brought him the Pulitzer Prize in 1978.

His award-winning "Cosmos" television series has been seen in 60 countries by more than 300 million people, and the accompanying book by the same name is the best-selling science book ever published in the English language.

In recent years, Sagan and his colleagues have been involved in issues relating to nuclear war.

Admission to Bailey Hall will be by ticket only. Tickets for reunion classes will be distributed at class headquarters; others may contact the Barton Hall information desk, 255-3128.

President Frank H.T. Rhodes will give a state of the university address, including reports on alumni trustee elections, the Cornell Fund and alumni activities, on Saturday morning at 10 a.m. in Bailey Hall.

Following the president's address and in the same place, a Reunion Forum will examine changes in American political processes since 1963 and include comments on this year's presidential election.

Political scientist Ted Lowi, the John L. Senior Professor of American Institutions at Cornell, will serve as moderator. Panelists will include Irwin M. Chapman, executive director and editor-in-chief of the Cornell News Service; Kathleen Frankovic '68, director of surveys and producer, CBS News Elections and Survey Unit; Joel H. Silbey, President White Professor of History at Cornell; Paul H. Weaver '63, Hoover Institution, Stanford University.

The 100th anniversary of the founding of the Geological Society of America — it began with three Cornellians and 10 others meeting in the Cornell Botanical Hall — will be celebrated with a symposium featuring President Frank H.T. Rhodes, who is a geologist, this afternoon at 3 p.m. in Uris Hall auditorium.

Tomorrow morning, members of the College of Arts and Sciences' newly formed committee to study undergraduate education will examine the validity of Secretary of Education William Bennett's and ex-Cornellian Allan Bloom's indictments of what today's students know and learn. "Is There a Crisis in Undergraduate Education and, If So, What's Cornell Doing about It?" will begin at 10:30 a.m. in Kaufmann Auditorium, Goldwin Smith Hall. It is being sponsored by the Class of 1963 and the College of Arts and Sciences.

A reunion run on Saturday morning at 8

Continued on page 4

Carl Sagan

Trustees back more graduate housing units

Cornell's Board of Trustees has approved plans that will double on-campus housing for single graduate students by the fall of 1989.

The $11 million modular-housing project will replace the 80 family units of Cornell Quarters with 89 two-bedroom family units and 308 apartment units for single students.

The university now has campus housing at four sites for 300 single graduate students, according to William Paleen, director of residence life. It also houses about 330 graduate-student families. All Cornell Quarters families seeking replacement campus housing will be relocated at the Hasbrouck or Pleasant Grove apartments, Paleen said.

Approving the changes in graduate-student housing was among numerous decisions made by the trustees on May 28 in their last meeting of the academic year.

Among the trustees' other actions were:

• Adoption of previously announced 1988-89 budgets for the state-supported and private sides of the university.

• Receipt of the Annual Report on the Status of Women and Minorities, which showed a five-year trend — not always even — of greater Cornell representation of both groups.

• Approval of the Edward D. Cornell

Continued on page 12

Notables

Physicist **N. David Mermin** has been elected to the American Academy of Arts and Sciences. A member of the Cornell faculty since 1964, Mermin is a specialist in the theoretical physics of condensed matter and has been director of the university's Laboratory of Atomic and Solid State Physics since 1984. He was among 82 scholars, scientists, public figures and artists nationwide elected into the Boston-based academy on May 11. He joins 34 Cornell faculty members and 17 Cornell emeritus faculty members in the academy, which was founded in 1780 by John Adams and other leaders of the American Revolution.

Yong H. Kim, a science writer for the Cornell News Service since 1965, has received the 1988 Superior Award, the top honor in writing for magazines, from Agricultural Communicators in Education. It is the 10th straight year that Kim's writing has been cited by the group. This year's award is for an article on the farm sitters, an upstate New York couple, both graduates of Cornell, who have developed the unique business of working on farms — particularly dairy farms — while the owners are on vacation. Kim will receive the award at the July 10 through 14 annual meeting of ACE in Washington, D.C.

Jack E. Oliver, the Irving Porter Church Professor of Engineering, was awarded an honorary doctor of science degree by Hamilton College on May 22. Noting that Oliver was among the pioneers in testing the theory of plate tectonics, the citation reads that "your resulting observations contributed to validating the greatest geological discovery of our time. . . . You have revolutionized our view of the MOHO, that boundary between the earth's crust and the underlying mantle. . . . You have risen above the mundane to urge an imaginative, innovative and comprehensive global plan for the exploration of solid earth."

Cornell Chronicle summer schedule

The Cornell Chronicle publishes every other week in June and July and then skips a third week in mid-August.

The schedule is as follows: June 23; July 7; July 21; Aug. 4; Aug. 25.

Job Opportunities will be published separately during weeks when there is no Chronicle.

Networking will publish on June 23, July 21 and Aug. 25.

Cornell Chronicle

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Black to share radical ideas on curriculum

Max Black has a book of essays on the way to Cornell University Press, two more books in the works and several radical curriculum-reform ideas he'd like to see Cornell adopt.

He'll air those ideas at a public lecture, titled "Is There a Crisis in Higher Education?" tonight at 8:15 p.m., in the Kaufmann Auditorium of Goldwin Smith Hall.

Black's crowded agenda and ardor for change might mark him as a young man working for tenure. Actually, he is the 79-year-old Susan Linn Sage Emeritus Professor of Philosophy, and he describes his motive as wanting to see his beloved Cornell seize leadership at a critical time for American higher education.

An internationally honored teacher and scholar, Black was invited by the Provost's Commission on Undergraduate Education to give what is expected to become an annual lecture.

Black will consider recent criticisms of Secretary of Education William Bennett and will suggest some specific improvements in university education, including ways to start advanced study well before completion of the usual four years of undergraduate work.

He will also suggest ways students can learn more effectively on their own, with teachers serving as "coaches or cheerleaders." He calls lecturing an outmoded teaching method that dates from days when books were scarce.

Black says that, in the 42 years since he came to teach at Cornell, he has always welcomed change. He devised the idea for the A.D. White Professors-at-large, was the founding director of the Society for the Humanities, and was a senior member of the Program on Science, Technology and Society. Above all, though, he sees himself as a teacher, who has worked by invitation in Australia, Japan, India, at Oxford University in England and at the University of California, Dartmouth college and the In-

Max Black

stitute for Advanced Study in Princeton, among many other places. He has just returned from a year at the National Center for the Humanities in Research Triangle, near Chapel Hill, N. C.

One innovation that he advocated in vain was offering graduate students options other than the straight Ph.D. dissertation — including, for example, the chance to write three essays instead.

Black was born in the Soviet Union but speaks with the English accent he learned growing up in Britain. He received a B.A. degree in mathematics from Cambridge University in 1930, and a Ph.D. in mathematical logic and later a doctor-of-letters degree from the University of London.

His bibliography numbers more than 200 items, including six books of essays.

Black is a member of the National Academy of Arts and Sciences and is a past president — and first American member — of the International Institute of Philosophy, a Paris-based organization with a fixed membership of about 100.

He emphasizes that any goading of Cornell comes from "a devoted friend," whose two children, one grandchild and son-in-law all attended the university.

— Sam Segal

State budget shortfall may lead Cornell to more spending cuts

Governor Cuomo's projections of a $900 million shortfall in state revenues have forced Cornell to undertake "a thorough review of alternatives to reduce costs" in its four state-supported units, Provost Robert Barker has announced.

In a June 7 letter to faculty and staff of those units, Barker said the potential magnitude of the problem left the university "no choice but to consider layoffs among our alternatives, but we're going to do everything we can to avoid that."

Barker noted that the "regular" budget process for the fiscal year that began on April 1 already had left Cornell with a $2 million-plus budget shortfall — for funding positions and utility costs — requiring, among other measures, that the equivalent of 45 positions be held vacant for the full fiscal year.

It was after the regular process that Governor Cuomo, having reviewed preliminary revenue data, predicted the potential state shortfall of $900 million, or more than 3 percent of the state money in New York's 1989 budget. While many state legislators dispute the governor's projections, Barker noted, "it is clear that the situation is serious enough" that Cuomo felt it necessary to propose cost-saving measures, some of which require ratifying legislative action.

Among recommended cuts requiring legislative action was $733,000 in operating funds for the Theory Center, home of Cornell's National Supercomputing Facility. According to John F. Burness, vice president for university relations, such retrenchment "could not come at a worse time," with the National Science Foundation scheduled to consider a six-year renewal for funding of the Theory Center.

Burness noted that NSF's continued sponsorship of five national supercomputer centers is based partly on its assessment of state support. New York's annual commitment of $800,000 is considerably less than the support provided by other states that house national supercomputer centers, he said.

Burness said the proposed cut could jeopardize access to the supercomputer by more than 200 university and industry scientists, whose wide range of applied and theoretical research cannot practically be done without the dazzling speed of the supercomputer.

Cuomo also proposed a $42 million cut in State University of New York spending. Of that, $15.7 million would be absorbed by all 34 units of SUNY, including Cornell's College of Agriculture and Life Sciences, College of Human Ecology, School of Industrial and Labor Relations and College of Veterinary Medicine.

"As far as we can tell, the remainder of the SUNY-wide reductions will come in specific budget actions that may not require program reductions for Cornell's statutory colleges," Barker said in his letter.

Barker said he would work with Malden C. Nesheim, vice president for budgeting and planning, and with the deans of the state-supported units in an effort to minimize the impact on faculty, staff and students. He also said Cornell would be working with SUNY "to understand their strategies and to negotiate to limit the amount and the impact of the required reductions for Cornell."

WSKG to air Bartels forum tape on AIDS

Public television station WSKG will broadcast a tape of Cornell's recent forum on "AIDS: Science and Public Policy" on June 12 at 2 p.m. WSKG will also transmit the videotape to other public stations so they can broadcast it.

The program, the Spring 1988 Henry E. and Nancy Horton Bartels Fellowship Lecture, was taped in Bailey Hall and edited at Cornell's Educational Television Center.

Briefs

■ **Memorial service:** A memorial service for Harold Feldman will be held from 2 to 4 p.m. June 11 at the Unitarian Church of Ithaca, at Aurora and Buffalo Streets. Feldman, professor emeritus of human development and family studies, died May 11. He was 70 years old and had been a member of the Cornell faculty from 1948 until his retirement in 1981. Memorial donations may be made to Ithaca Neighborhood Housing Services at 520 West Green St.

■ **No "predicament":** An insurance company has been sending promotional letters with the phrase "pension predicament" to some Tier 1 members of the New York State Employees Retirement System. According to Mary Slaght of Statutory Employee Benefits, there is no "pension predicament" and there are no changes in Tier 1 benefits. For more details, call Statutory Benefits at 5-4455.

■ **English as 2nd language:** Registration for summer courses in English as a second language will take place from 7:30 to 9 p.m. on June 15 in the Edwards Room of Anabel Taylor Hall. There is a $3 fee for the courses, which last six weeks, are given at various levels and are sponsored by the Cornell Campus Club and the International Hospitality Committee. For more details, call Joan McMinn at 277-0013 or Betty Kord at 257-2967.

■ **Physics teachers:** Some 750 university, college and secondary school physics teachers will converge on campus June 20 through 25 to participate in the national summer meeting of the American Association of Physics Teachers. Activities will center around workshops, presentations of papers and tours of Cornell's diverse research facilities. There are more than 10,000 members in the association.

■ **$1,000 prize:** Janice Cunningham, Human Ecology '89, is the grand prize winner in the nationwide 1988 E.I. du Pont de Nemours & Co. "Antron" Student Design Award competition. She received $1,000 for her winning project, an airport playscape for children. Cornell also received a matching fund donation from the company.

■ **Streets closed:** Several streets on campus will be closed to vehicles for several hours on the morning of June 11 to accommodate Reunion events. East Avenue will be closed from the traffic booth in front of Rand Hall to Tower Road at Day Hall from 7:30 to 9 a.m. Closed from 7:30 to 8:30 a.m. will be a running route following East Avenue from Day Hall to Campus Road, then east to Garden Avenue and along Garden Avenue to Tower Road. Tower Road will be closed from Day Hall to the Veterinary College from 7:30 to 8:30 a.m. Motorists are asked to avoid using Forest Home Drive from Plantation Road to East Avenue and also Caldwell Road during the morning until 10 a.m. because these roads will be part of a five-mile running event.

Schoellkopf closed for resurfacing

Schoellkopf Field, including the track and crescent, is closed through Aug. 2 for installation of a new artificial surface on the playing field, according to Laing Kennedy, director of athletics.

However, arrangements have been made to use the stadium for the community fireworks show on July 1, Kennedy added.

Cornell trustees approved the approximately $500,000 project May 28 during their spring meeting in Ithaca, and a university benefactor is expected to provide the funds necessary to complete the project, Kennedy said.

The new surface, called All-Pro Turf, will be the third to be installed on the field. The natural turf at Schoellkopf was removed in 1971 and replaced with Poly-Turf. That covering was replaced in 1979 with AstroTurf.

"This type of synthetic surface will deliver superior performance for all kinds of sports applications," Kennedy explained. "This surface not only is ideally suited for our climate, but it helps extend our outdoor playing seasons."

Stigma of disease seen to affect treatment, morale

The popular image of dread disease — from insanity to tuberculosis to AIDS — very often is of an affliction that punishes society's outcasts, and this image has affected the effort to treat and cure the disease as well as the morale of the patients, according to Professor Sander L. Gilman.

"If AIDS had been introduced as a disease of hemophiliacs who contracted it in the hospital during the course of their treatment, it would have been a very different disease, with a very different stigma," he asserted. "It happened to have been diagnosed among one of the most stigmatized groups in the country, male homosexuals, and, in a real sense, the stigma of the group affected the disease."

In his new book, "Disease and Representation: Images of Illness from Madness to AIDS," published by Cornell University Press, Gilman compares the public's views of insanity in the 18th century, tuberculosis in the 19th century and AIDS in the 20th century to show how sufferers of each were regarded as beyond the pale. He draws many examples from art, literature, even opera.

"An audience which in the 19th century is terrified of tuberculosis goes to see 'Traviata,' and she's a prostitute, she's being punished by her illness," Gilman said in an interview. "In 'Boheme,' in a real sense, it's the same way, and they can say, 'That's not me. She's evil. I'm okay.' "

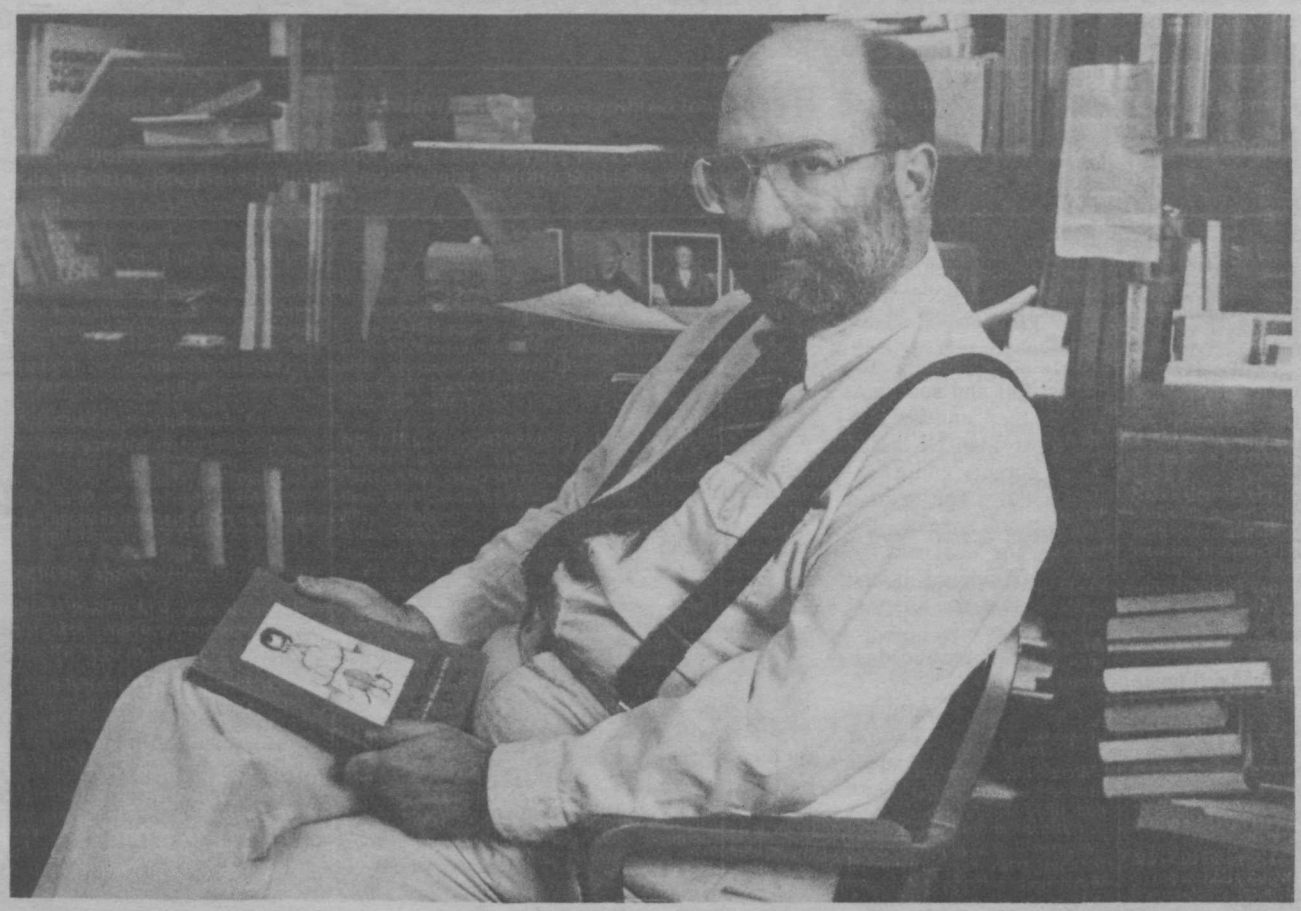
Gilman is a professor of humane studies in the College of Arts and Sciences in Ithaca and of the history of psychiatry at the Cornell Medical College in New York City. He has done much of his research on the role of stereotypes throughout history. He feels that the image of illness and its victims, often with a stigma attached, permits a person to rationalize his or her place in a world where disease is a fact of life and death.

"When you get ill with a disease which is heavily stigmatized, such as tuberculosis in the 19th century, AIDS in 1988, one of the things you inherit is a sense of being exiled within your own society," Gilman explained.

"I'm convinced — and a lot of people who have worked with AIDS patients are convinced — that the depression which seems to be part and parcel of the disease is not only a response to the viral infection and to the sense of finality about AIDS as a terminal disease, but also to the fact that these people are stigmatized. They do have a sense that they are different, that they are outside, that they are of less value.

"Why in New York City are AIDS patients hospitalized much more than in San Francisco?" Gilman asked. "The answer is that there is a supportive community environment in San Francisco which enables people to stay in their apartments, stay in their jobs, and therefore they are not admitted to hospitals until the most severe emergency. It's the same virus, but the way the community responds is very different, and that is a function of the way the AIDS patient is seen."

In part because of gay activism to promote research and public spending, "AIDS maintains its association as a 'gay disease.' That's a problem." Gilman said. "Although it is a disease that has heavily affected gays in the United States, it is also having an incredible impact on minority communities, where we're finding large numbers of intravenous drug users."



Claude Levet

Sander L. Gilman

He said that the misperceptions have created obstacles to effective public education regarding AIDS. "Look at the groups that are at risk," he pointed out. "Look at teenagers and ask yourself whether the present level of education is impacting on teenagers, particularly urban black teenagers. The answer is that it's having almost no effect. Although public education has much improved since the surgeon general started to promote it, still the message is, 'This is a gay disease, I'm a teenage heterosexual, I don't have to worry about it.' "

So, too, has mental illness acquired a new perception in recent years. "Because of deinstitutionalization, for the first time in nearly 200 years we know what it's like to have the mentally ill in society," he said. "Only in the 18th century were large numbers of the mentally ill confined within asylums. So it's a very short period of time in human history that the mentally ill have not been out there with us, as they are now.

"The 'madman' then, the bag lady now, are viewed as dangerous, out of control. We respond to them as if they were fearful," Gilman continued. "We have to respond in a serious way both to the realities about disease, as well as to the fantasies society has about them.

"There are mentally ill people who need the protection of hospitals. Those persons who are severely mentally ill cannot be expected to make choices about their own freedom.

" But that is really a social question, not a medical question, a choice for society to make. So that we're back to images about how the mentally ill are perceived, and how able they are thought to be to function in an urban society."

— Irv Chapman

Scholar examines political relations within China

China's rulers have changed their economic direction but not their goal of making China a superpower, according to Professor Vivienne Shue, chairwoman of Cornell 's government department.

The recent reforms have created a "great sense of energy" throughout the country, said Shue, who is the author of "The Reach of the State: Sketches of the Chinese Body Politic," which explores the relationship between village and central government over four decades of Communist rule. It was published by Stanford University Press.

China-watching has become tremendously exciting, Shue added in an interview. "I think to study China now is a great privilege if you're interested in social change, because there's so much of it going on everywhere. When you're in China now, you know that anybody with a brain in his head and a dollar in his pocket has probably got a chance of making something of himself. Opportunity is everywhere, and it gives a great sense of movement to the society.

"The last time I was in China, I had this overwhelming sense of witnessing the Industrial Revolution happening all over again — partly because they're still making use of aged machines," Shue noted. "These giant cotton gins and spinning machines that were shipped in from Manchester, England, to Shanghai in 1921, these behemoths of the industrial revolution, are now manned by small armies of Chinese women wearing white masks and working in loud, noisy, dusty, overheated conditions."

Shue has focused her research on Chinese life at the village level. She asserted that, since the death of Chairman Mao Zedong, it has become evident that his directives, which tyrannized the lives of many city dwellers, were much diluted by the rural village officials he trusted to carry them out.

"They found ways to evade or to deflect the policies, or essentially to lie about their degree of accomplishment of the goals that were set down," she said.

"They did this sometimes to protect themselves, to make their work and their lives easier as all bureaucrats do. They did it also in defense of their local constituents, the peasant villagers, whom they tried to serve — who had a different morality, a different set of values and aspirations which were either not addressed or were even assaulted by the party's demands."

As a result of this pattern of collusion to defend community interests under Mao, "it later wasn't so difficult for peasant farmers to walk away from the framework of collectivization and to reestablish quite naturally the household as the basis for farming," Shue continued. While decollectivation was under way, government farm prices were increased between 30 and 40 percent as a further incentive to produce more.

Claude Levet

Vivienne Shue

She said that Mao's successor, Deng Xiaoping, "thinks he's got a better route to economic growth than Mao Zedong ever found, and I would guess he's probably right — early returns would indicate that. Still it must be remembered that China is only now getting to the point of mass-producing consumer goods — television sets and ten-speed bicycles."

But Shue noted that "China's leaders advertise this turn toward market mechanisms and elements of capitalism as a temporary measure to produce greater wealth. That is, the desire for material goods is regarded now as healthy and necessary to motivate people to work hard and produce more. They believe, as all Marxists do, that once the standard of living is raised sufficiently, it will be possible to turn again to more egalitarian distributions."

The present leaders, however, speak of this return toward Communist ideals as being at least a half century away.

Shue feels that the relation between economic liberalization and a more liberal political future is a matter of speculation. "Will the Communist Party start accepting into its ranks the new rich who have managed to succeed under the current program of market reform? Or will some other relationship arise between the party and these emerging rural socio-economic elites, perhaps a corrupt one?" she asks.

"Embezzlement and corruption are big problems in China now, clearly something the center is worried about controlling. If corruption gets out of hand in too many villages, it can certainly damage the possibilities for developing a healthy political life in China. These are things I find it very exciting to study."

As to the demand for freer expression, "There's a very vocal and increasingly courageous group of intellectuals, mostly urban-based and mostly very young, who are even talking about moving China toward a multi-party system. Such liberal talk is tolerated, but it would be wrong to conclude that there is a very broad constituency for these kinds of liberal democratic reforms. A much more powerful theme in China's popular political culture stresses the need for a benevolent, wise, popularly responsive but nonetheless quite authoritarian state power to guide the nation."

Western influence might bring forth a current of dissent, Shue agreed.

But more significantly, "We can also see a definite trend lately toward the deliberate cultivation of patriotism as an honorable substitute ideology for the socialist egalitarianism that has now been put into the background. Patriotism is the current theme song of official propaganda, and it resonates very well both with majority political opinion and with the drive for rapid national economic development."

— Irv Chapman

Red-Red roosts at New York Hospital-CU Medical Center

For the first time since 1970, when Cornell ornithologists began a reintroduction program to save the peregrine falcon from extinction, one of the more than 2,000 Cornell peregrines is nesting and raising young on a Cornell building — the Cornell Medical Center's New York Hospital.

Red-Red, a two-year-old female hatched by the Peregrine Fund in Ithaca and released in Maine's Acadia National Park in the summer of 1986, and a male of unknown origin are feeding a pair of chicks born May 12 on a 24th-floor ledge of the East 68th Street building.

The female appeared outside the hospital's 19th floor last fall and soon was joined by one male and then another, according to Dr. John M. Aronian III, assistant professor of clinical surgery and a "serious amateur" birdwatcher. The second male moved on after several weeks, and Red-Red and friend spent the winter in the vicinity before taking up residence in the spring in the nesting box that the hospital staff provided on the 24th floor.

Two of three eggs the pair produced in early April hatched last month.

"They have a perfect home," Aronian said. "The building is as high as a natural cliff; it sits beside water and the open spaces of Queens and Rockefeller University; and it has an endless supply of edible pigeons."

It was pigeons that kept peregrine falcons from ever being released in Ithaca, according to Phyllis Dague, executive assistant for the Peregrine Fund. The towers of Barton Hall would have made an ideal nesting site for the heights-loving birds, she noted. But Cornell already was home to the Pigeon Project, a long-term research effort to learn the principles of animal navigation and migration with specially trained homing pigeons. Hungry falcons could not be expected to know the difference between a valuable homing pigeon and a common street pigeon, Dague explained, so the Cornell birds of prey were released hundreds and even thousands of miles from Ithaca.

Twenty-four stories above New York City's East River, peregrine falcon Red-Red peers intently at a visitor from the Cornell Medical Center.

Peregrine falcons had been driven to the brink of extinction by their place in the food chain: Residues of the pesticide DDT (from smaller birds they had eaten) damaged their eggs and wiped out peregrine populations east of the Mississippi. The Eastern Peregrine Falcon Reintroduction Program, led by Professor of Ecology and Systematics Tom J. Cade, successfully demonstrated that an endangered species can be raised in captivity and released to the wild to reproduce and increase in numbers.

The male on the New York Hospital building may be a second-generation bird from a peregrine released somewhere in the Northeast or Canada, Aronian speculated. Without an identifying leg band, it will be hard to tell where the wandering peregrine came from. His belligerent, protective attitude has earned him the name Buster, the surgeon added.

The female, officially, is bird B-29B. More affectionately, she is called Red-Red — from the "double red" status conferred on hospital staff members who earn undergraduate degrees in Ithaca and medical degrees at Cornell Medical College.

"This may be the start of a long-term relationship between NYH-CMC and these peregrines," Aronian said, noting that the rare birds often winter and nest year after year in the same place.

—Roger Segelken

Problems of science education to be discussed in 4-day forum

Such notables in the world of science as Carl Sagan and science writer Walter Sullivan will help examine a looming critical shortage in American-trained scientists and science teachers during a four-day symposium here June 14-17.

Sagan, the David Duncan Professor of Astronomy and Space Sciences, will open the symposium with a talk, "Why is Science in Trouble? The Need for Science Education," June 14, 3 p.m., in Kaufmann Auditorium of Goldwin Smith Hall.

His talk will be one of seven to be given over the four days, all in Kaufmann Auditorium. In addition, some 170 registered attendees will take part in workshops.

Sullivan, a New York Times science writer, will discuss "Science for Non-Scientists" at 11 a.m. on June 15. (For a complete schedule of lectures, see this issue's Calendar.)

The symposium, titled "Science Curriculum and Pedagogy," is the inaugural event in a three-year collaboration among seven colleges and universities in the Northeast aimed at improving undergraduate education in the sciences and mathematics.

The goal of the program — one of five nationwide funded by The Pew Charitable Trusts at a cost of $7.4 million — is to reverse declining undergraduate enrollments nationwide in the sciences and mathematics. Unless this decline is reversed, educators say it will guarantee a serious shortage of scientists and science educators in the 1990s and put additional stress on American competitiveness in the international marketplace.

Graduate Bulletin

Loan Deferral: Students with outstanding educational loans should be aware of changes in federal regulations. For each year a student is enrolled in a degree program, it is the student's responsibility to request, complete and file deferral forms with each lender. Students with outstanding educational loans from other institutions should contact their lenders and/or billing agencies to obtain specific instructions regarding deferral procedure and repayment terms. Students with outstanding loans from Cornell received a mailing from the Bursar's office in April or May with instructions for procedures to follow.

Wedding rice safe for birds, Landers is told

Birds aren't harmed when they eat grains of uncooked rice traditionally tossed at brides and grooms, a Cornell expert has advised columnist Ann Landers and her millions of readers.

"There is absolutely no truth to the belief that rice — even instant and Minute Rice — can kill birds," said ornithologist Steven C. Sibley, assistant director for education and information at Cornell's Laboratory of Ornithology.

Sibley was responding to a recent exchange in the syndicated "Ann Landers" column. A Long Island, N.Y., bride-to-be asked whether it is appropriate for wedding invitations to ask guests to throw birdseed instead of rice, citing "ecologists" who say dry rice is harmful to birds because it supposedly absorbs moisture in their stomachs and kills them. Landers said instant rice at weddings can be "lethal to wildlife."

But "rice, including Minute Rice and instant rice, is of no threat to birds because it must be brought up to boiling (212 degrees Fahrenheit) before it will expand," Sibley wrote in a letter he hopes the advice columnist will print. "Not only do internal temperatures in birds never reach higher than about 106 degrees F, but any food they swallow is ground up by powerful muscles and grit in the gizzard (stomach)."

In fact, some wild birds like rice so much that they are a threat to farmers' rice crops, the Cornell ornithologist noted.

To illustrate the extent of the rice myth, Sibley pointed to a bill banning instant rice from weddings that was introduced (but not passed) in the Connecticut state legislature. And a Connecticut mail-order firm is selling bird-related wedding items, including "feather-and-lace nuptial birdseed," Sibley said. There's nothing wrong with throwing birdseed, but rice is fine, too, the ornithologist said.

"Toss away!" he assured Landers and her readers. "Tradition will be served, and

Human Ecology *continued from page 1*

He added, "She is a noted scholar and a seasoned administrator with a thorough understanding of the complexities and critical nature of the human ecology curricula and the college's public service role through Cornell Cooperative Extension."

Firebaugh said that the College of Human Ecology is addressing wide-ranging social, economic, nutritional and environmental issues, often from an interdisciplinary perspective. "A part of my responsibility will be to work with the college in identifying special areas of focus that will be increasingly important in the 1990s.

"There is a long-time commitment to excellence in undergraduate and graduate teaching," Firebaugh said, "an increasing research capacity, and Cornell Cooperative Extension is one of the best — if not the best — in the United States. Cornell is going to be a very exciting place to be."

Firebaugh earned a Ph.D. in household economics and management from Cornell in 1962 after completing a B.S. in dietetics and home economics in 1955 from the University of Arkansas and an M.S. in home management and family relations in 1956 from the University of Tennessee. She went to OSU as an assistant professor of home economics in 1962 and was named director of the School of Home Economics there in 1973.

Before becoming vice provost for international affairs in 1984, she served as acting vice president for agricultural administration and executive dean of agriculture, home economics and natural resources at

Francille Firebaugh

OSU and associate provost. She served as acting vice president for academic affairs in 1985-86.

Firebaugh is the author or co-author of more than 50 scholarly articles and co-author of two books: "Home Management: Context and Concepts'' and "Family Resource Management."

—Roger Segelken

Symposium set for Geological Society at 100

The Geological Society of America will mark the 100th anniversary of its founding with a symposium on June 9 featuring two of the country's leading geologists.

The symposium will take place beginning at 3 p.m. in Uris Auditorium. The program will open with comments by President Frank H.T. Rhodes, who is a geologist, and by the current GSA executive director, Michael Wahl. Speaking at the symposium will be:

• Wallace Broecker, the Newberry Professor of Geology at Columbia University, on "Abrupt Changes in Climate in the Past: Implications for the Future." Broecker's research has concentrated on the role of atmospheric carbon dioxide in such climatic events as glacial periods.

• Michel T. Halbouty, chairman and chief executive officer of the Michel T. Halbouty Energy Co., on "The Role of Energy in the Reindustrialization of America." He has served on numerous government energy committees and commissions and heads one of the country's most active oil and gas exploration and production firms.

The GSA held its first meeting here on Dec. 27, 1888. Since that first meeting of 13 people, the society has grown to be the world's largest geology association, with a membership of more than 16,000.

Reunion *continued from page 1*

a.m. will see several hundred alumni and others compete along two-mile and five-mile courses that begin on East Avenue.

On Saturday evening, the Alumni Glee Club and Alumnae Chorus will present Cornelliana Night, a program of Cornell songs and other light-hearted entertainment beginning at 9:30 p.m. in Bailey Hall.

Outstanding teachers honored by students, peers

College of Arts and Sciences

Isabel V. Hull, an associate professor of history, and Ronald D. Mack, an associate professor of psychology, have been named the 1988 John M. and Emily B. Clark Award recipients as distinguished teachers of undergraduates in the College of Arts and Sciences.

In nominating Hull, Joel H. Silbey, the President White Professor of History, wrote: "Since coming to Cornell, Hull has established herself as a most demanding, highly innovative, and quite conscientious teacher. Her main lecture course, a year-long survey of German history since 1648, is among the most popular of our offerings in European history. . . . Professor Hull has earned a reputation as a quite demanding teacher and a 'tough' grader. She sets high standards and expects them to be met."

In nominating Mack for the annual award, Psychology Chairman and Professor James B. Maas wrote: "It is not unusual for students to comment that Ron has changed their career goals and made the single most important contribution to their educational life at Cornell. He has made a substantial impression on literally thousands of students, contributing greatly to their self-insight, their appreciation of mental health in society, and their willingness to get personally involved in the welfare of others in need."

Also, three lecturers won Clark Awards for distinguished teaching: S. Alexander Littauer, French; Maria G.S. Swenson, Italian; and Marilyn Rivchin, theater arts (filmmaking).

Also, seven teaching assistants and one temporary lecturer in the College of Arts and Sciences won Clark Awards for distinguished teaching. They are: Gerald Chapman, Janadas Devan and Timothy Muskat in English; Paul Doremus in government; Joanna Greenwood in music; and Rafael Kleinman, David Sandison and Donald Spector in physics.

College of Human Ecology

W. Keith Bryant, a professor of consumer economics and housing, has been named recipient of the 1988 Distinguished Teaching Award in the College of Human Ecology.

The recipient is selected based on a vote by juniors and seniors in the college, and is presented by the Alumni Association and the honor society, Omicron Nu.

Students praised Bryant for his ability to communicate complex ideas, caring genuinely about his students, treating all questions seriously and always being available for help. Said one student: "He'd rather miss lunch than turn away a student."

College of Agriculture and Life Sciences

Edward W. McLaughlin, an assistant professor of agricultural economics, was awarded the Professor of Merit Award during the CALS senior celebration on May 27.

Every year since 1947, the college's seniors have selected a deserving professor in the college who has shown outstanding ability in teaching and advising.

At the College of Agriculture and Life Sciences Alumni Breakfast on June 11, the college will present its annual Edgerton Career Teaching Award to a meritorious and senior faculty member of the college who has, throughout a long and continuous career in the college, provided outstanding teaching and advising for students.

The recipient is selected by peers and colleagues as having made a distinguished contribution throughout a lifetime devoted to instruction and teaching in the college. The award is made on the basis of years of teaching, continuity of service to teaching, excellence in teaching, commitment to students and scholarly self-renewal.

The Edgerton Fund will provide a monetary award to the recipient's department to be used in ways that will enhance its instructional capabilities.

College of Engineering

Four faculty members of the College of Engineering won awards this spring for outstanding contributions as teachers.

Clifford R. Pollock, associate professor of electrical engineering, was awarded the 1988 Excellence in Teaching Award. The award, which carries a $2,000 prize, is sponsored by the Cornell Society of Engineers, an alumni group, and by the Cornell chapter of Tau Beta Pi, the national student honorary society in engineering. Selection is based on an annual polling of students.

Pollock was cited by students for his responsiveness to their needs and for clear presentation of complex material. During the year, Pollock was responsible for revising an important undergraduate laboratory course known as "Superlab."

Also honored with Dean's Prizes for Excellence in Teaching, were Joseph S.B. Mitchell, assistant professor of operations research and industrial engineering; Mary Sansalone, assistant professor of structural engineering; and Kenneth C. Hover, associate professor of structure engineering. Each received $1,500.

Also this spring, the National Science Foundation named Mitchell a recipient of the Presidential Young Investigator Award, which carries a five-year research grant from NSF and funds to match industrial grants. Pollock and Hover are former PYI Award winners.

College of Architecture, Art and Planning

The Martin Dominguez Award for teaching has been presented to Vincent Mulcahy, an assistant professor of architecture. Mulcahy, who has worked for various architects, including Stuart Cohen of Chicago and Gwathmey Siegel of New York, was cited for his dedicated and energetic teaching and his enthusiasm.

College of Veterinary Medicine

The Norden Distinguished Teacher Award has been presented to Dr. H. Jay Harvey, an associate professor of clinical sciences and chief of the surgery section. A specialist in soft tissue surgery and surgical research on tumors, Harvey teaches small animal surgery and medicine to third year students, junior surgery and general medicine and surgery to second-year students.

This is the second time he has earned the award. Students in the the D.V.M. program selected Harvey for the first time in 1981.

Harvey said he is continually amazed by how well-rounded today's students can be and by their ability to focus on veterinary medicine while keeping up a broader scope of interests. He encourages his students in this direction.

Medical College

Teaching awards at the Cornell Medical College have been presented as follows:

The senior class presented the Elliot Hochstein Award for excellence in teaching to Dr. Marty Gardy, associate professor of medicine.

The second-year class gave its annual award for teaching second-year basic science to Dr. Annie Strupp, assistant professor of pathology.

The first-year class presented its annual award for teaching first-year basic science to Dr.

— Compiled by Mark Eyerly

Theodore J. Lowi

Shaping ideas in the classroom

Political scientist Ted Lowi is without doubt one of the most popular teachers of undergraduates on campus. He received a Clark Distinguished Teaching Award in 1985, and this year was honored by the Gordon Public Policy Center at Brandeis University, which presented him with its Burton Feldman Award in April and by the State University of New York at Stony Brook, which gave him an Honorary Doctor of Letters degree in May. Lowi will be moderator for a reunion panel on politics from Kennedy to Reagan on June 11 at 11 a.m. in Bailey Hall.

If readers were rushing out right now to buy the book which three years ago forecast the inevitable decline and fall of the Reagan presidency, Theodore J. Lowi would be piling up the royalties of Larry Speakes and Don Regan combined.

Lowi, Cornell's John L. Senior Professor of American Institutions, based his prediction of presidential decline not on crystal-ball gazing, and certainly not on astrological charts. In his award-winning "The Personal President: Power Invested, Promise Unfulfilled," Lowi traced the vast expansion of the powers of the presidential office in the 20th century, accompanied by an even greater upsurge of unrealistic popular expectations of what the president can accomplish.

Magnified by radio and then television, subject to a weekly "How Am I Doing?" public opinion poll, checkmated by undisciplined political parties and a disorganized Congress, the president — any president — can safely be predicted to begin a downhill slide once his initial post-inaugural honeymoon is over, in Lowi's view. "The institution has become an enemy of its occupant, and Reagan has not changed it," he said.

The Moscow summit will not "permanently reverse President Reagan's declining fortunes," Lowi asserted in an interview. "It will certainly buoy his approval ratings for the next few weeks, but not only will the poll ratings soon drop back, but the future assessment of his tenure will still be on the low side. And the summit results are having a devastating effect on his right wing which is alarmed by the thawing of the Cold War.

"The only thing that has been a dependable antidote to a decline in the polls has been international action by a president," Lowi noted.

If students who read his book get the feeling they've heard it all before in class, Lowi points to the essential link he sees between what others regard as separate professional compartments, research and teaching.

"I have a sensual relation with ideas," he said. "I get a great emotional charge out of something that I think I thought of myself. And I can't write for publication unless I've taught it. So there's such a strong relationship for me between teaching and the writing part of my research that it's hard for me to distinguish.

"After all, the biggest pain about writing is that you're taking things that are disparate, two or three unconnected things, and trying to make a logical connection between them," Lowi explained. "We impose an order or logic on what's occurring out there. So if I teach it three or four times, I may have a crack at some sense of meaningful connections. I could never write up the results of my reading and my research if I didn't have access to the classroom."

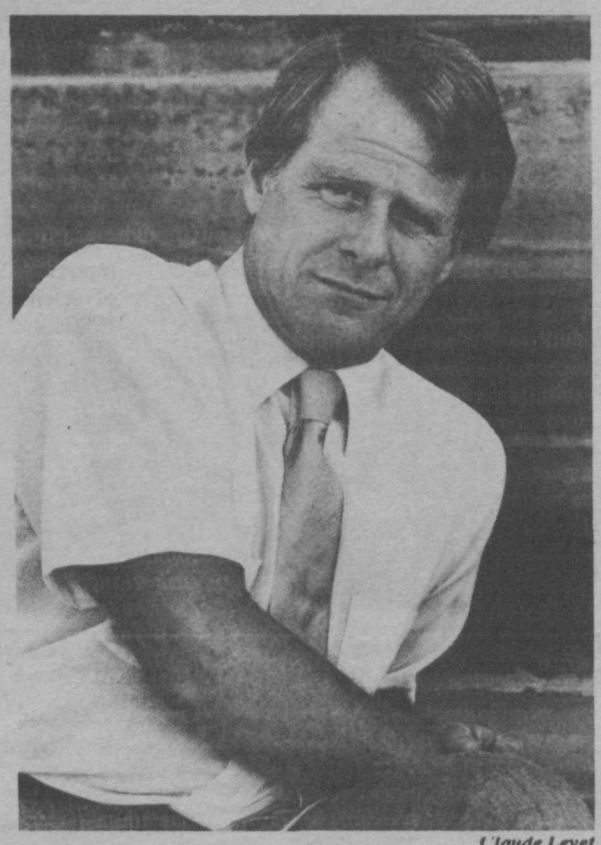
Lowi regards that as the selfish motivation added to the "emotional joy in teaching" undergraduates that he feels. "First of all, I like it because it's so unpredictable," he said. "You don't know if you're going to bore them; you don't know if you're going to inspire them. Something that went over one year goes over like a lead balloon the next. It's a totally incomprehensible world, and I find that fun."

Lowi is a native of Gadsden, Ala., which may account for his platform manner being reminiscent of a Southern revivalist. He studied at Michigan State, joined the Cornell government faculty in 1959 while completing his Ph.D. at Yale, left in 1965 for a seven-year stint at the University of Chicago and recently, after much soul-searching, turned down a generous offer to join the Yale faculty.

He describes Cornell as "a very democratic place, close to unique" because, among other apparent contradictions, "we are on the one hand an Ivy League school, and on the other hand we're far into the Midwest. We are a campus school, but with mainly urban kids attending. We are an arts college and a cow college — to me that's a virtue. All the aspects of public education are here, along with the elitist, expensive aspects of an Ivy eastern private-school education.

"And the mixture of those things, the fact that these kids live together in the dorms — and I feel bad that our dorm situation leaves a great deal to be desired," he went on — "but they're thrown together, and they make friends, and don't realize how diverse are their new friendships. The mix as we contend with each other, it's all kind of exciting."

Lowi enjoys guiding graduate students and conducting summer courses for Cornell Adult University, but said "all that is trimming on the cake. The toughest to teach and the most rewarding are the undergraduates," particularly in the introductory government course. "At the end of an hour lecturing, they're fatigued. I go out high as a kite!"



Claude Levet

Theodore J. Lowi

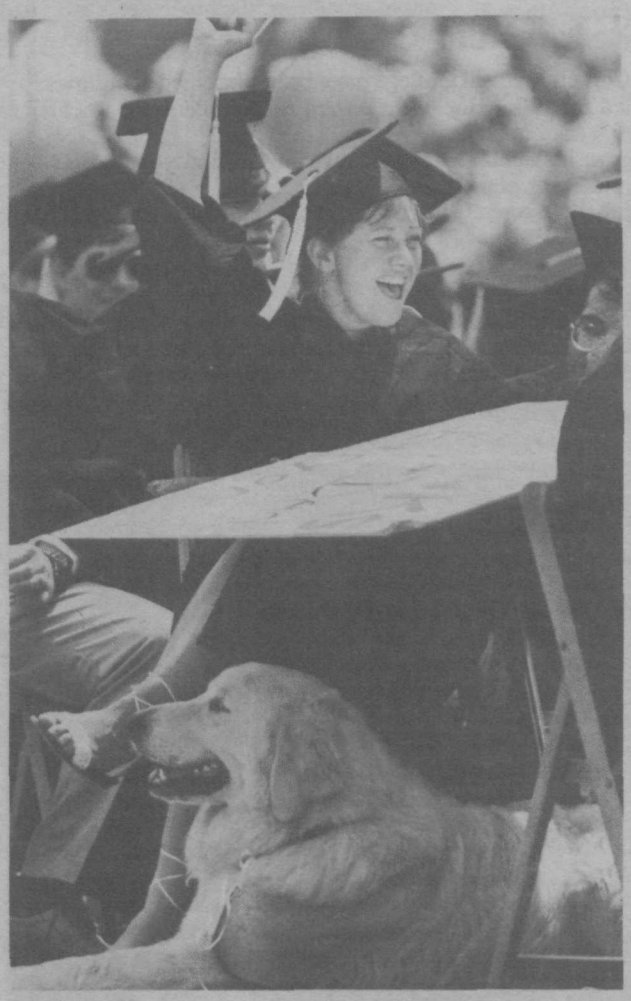
Despite his seeming despair about the institution of the presidency in general and the conduct of recent presidents in particular, Lowi insists his iconoclasm has its limits.

"I'm much closer to a Fourth of July type than many of my social science colleagues," he asserted. Although he urges his students to be suspicious of political rhetoric, to question the meaning and motivation behind the phenomena they study, he also says they should understand that "there are reasons that certain institutions have lasted a long time. They must be fulfilling some basic needs and are therefore worthy of respect."

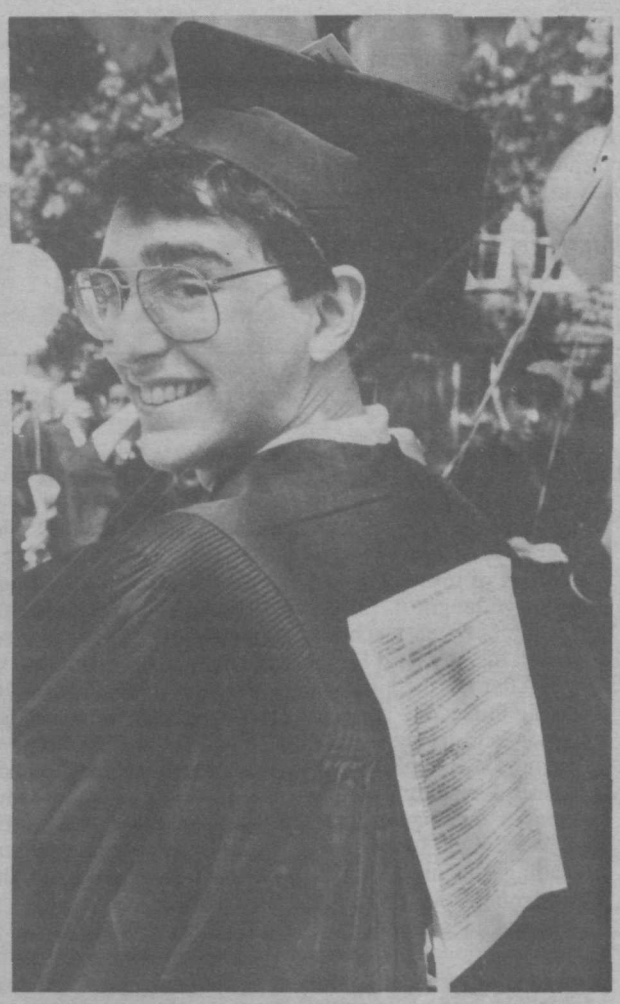
— Irv Chapman

Commence

Students and faculty from the School of Industrial and Labor Relations parade from the Arts Quad to Schoellkopf Stadium.



Teresa Weronko of Brooklyn, N.Y., College of Agriculture and Life Sciences, and her dog Kodi.



Howard Greenstein of Oceanside, N.Y., ILR School, announces he's looking for work.

Parents and friends fill the stadium as graduates file onto the field.

President Frank H.T.

In his commencement address on May 29, President Frank H.T. Rhodes told graduating seniors he would like to stick a small label on their diplomas, similar to the surgeon general's warning on cigarette packages. "The president has determined that graduation may be dangerous to your health," it would say. The following excerpts from the president's speech explain why.

Graduation may be hazardous to your health for two reasons: First, because graduation has been the grand objective for the last four years. It has been your lodestar; clear, precise and unambiguous. The route, the long march to today, was equally clear. It was mapped out for you with loving care by a curriculum committee and tailored to your own requirements by a thoughtful and attentive faculty adviser (well, more or less). Tutorial sessions, recitations sections, friendly tests and prelims provided the support and structure to help you reach your goal. We surrounded you with delights along the way: social opportunities, cultural activities, athletics, religious societies, political clubs, public service opportunities, medical attention, and more counseling and advising and peer support services than any reasonable person could use in a couple of lifetimes. All these have been yours — almost to the level of academic indigestion.

And suddenly today — it all ends. So what replaces all of this now? I have a feeling that for many of you, it is a sense of emptiness, a sense of anti-climax. As Robert Louis Stevenson wrote of "El Dorado," "To travel hopefully is a better thing than to arrive." But you are almost there. You are about to arrive. In fact, my speech is the only remaining obstacle that separates you from your diploma. Can what lies ahead possibly measure up to the hopeful journey, the good company, and the clear objective of the last few years?

The stark question that graduation brings is, "What am I going to do with the rest of my life?" I mean not just the first job, not just a steady paycheck, not just medical school or graduate school or an MBA, but what lodestar, what new over-arching goal, what aim or purpose will provide energy and zeal for the new journey that lies ahead? This is a question that produces a shuffling of feet. It is a tough question, and not one that any of us likes to face. But it is a nagging question that demands an answer, for without it, drift and indecision will keep you from progressing beyond today.

The Roman philosopher Seneca said it well: "Our plans miscarry because they have no aim. When a man does not know what harbor he is making for, no wind is the right wind." And so the danger of graduation is the challenge now before you: how to harness the energy and the knowledge and the enthusiasm you have brought to your years at Cornell and direct them toward new and meaningful goals, realizing that neither the goals nor the means to their achievement will be as clear or straightforward as they have been so far. Without that, no wind will be the right wind.

But there is a second sense in which today's graduation may be hazardous to your health, and it will make the setting of meaningful life goals even harder. It has to do with the academic style which is so much a part of the campus and which has conditioned your outlook over these past several years. This style is marked by reductionist thinking, and its results are abstraction, detachment, moral abstention and ultimately — in extreme cases — depersonalization. The academic style works very well for science and for some few other academic subjects, but it can be a disastrous attitude for life.

Reductionist thinking can substitute criticism for creativity, analysis for affirmation, removing all the mystery, all the subtle, intangible qualities that give deeper meaning to our existence. We may ignore the true, the good and the beautiful — those precious qualities that have guided humankind since the dawn of civilization — searching instead for the unambiguous conclusion, no matter how shallow or simplistic. The human spirit is a genetic sport. We are, by definition, estranged. Only our molecules — perhaps only our ultimate particles — are real, are at home. The true, the good, and the beautiful have no particular significance. In a world where all is relative, they are matters of taste — mere reflections of personal preference — rather than ultimate convictions by which we set our larger goals.

Is there an antidote to this simplistic, corrosive view of life? I think there is, and that your Cornell years have provided it. It is not the business of the university to commit its members to particular beliefs, to require any one specific view of life. Nor is it our task to legislate personal priorities. But it is the business of the university to encourage each individual to find his or her own wellspring of meaning, commitment and hope.

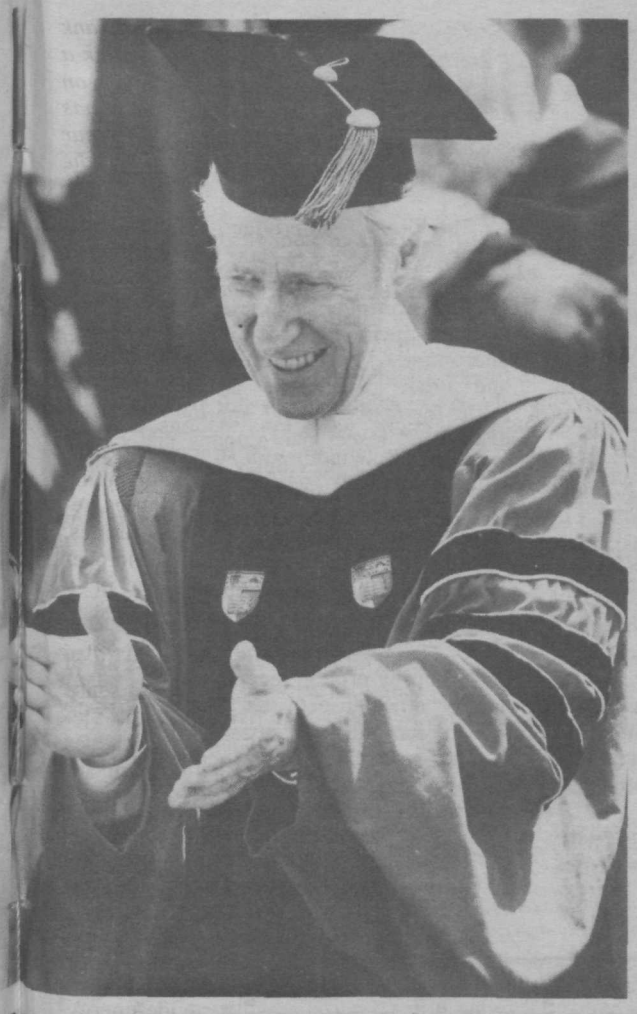
In this rainbow community, with its students and professors from six continents (and, of course, Long Island), with its Marxists and Nihilists and Southern Baptists, its architects and its artsies, you have learned that within an institution that cherishes individual freedom of thought and inquiry are also the seeds of a comprehending, committed and caring community. For all its differences, which are great, and all its imperfections, of which there are at least a few, this Cornell campus is a community of meaning and belonging.

Speaking of his dream of racial harmony at the Lincoln Memorial 25 years ago, Martin Luther King said it well:

ement 1988

Photos by Claude Levet

T. Rhodes' Address



Frank H.T. Rhodes

"Their destiny is tied up with our destiny, and their freedom is inextricably bound to our freedom. We cannot walk alone."

And in this community of meaning and belonging, over the past four years, you have walked not alone, but together, moving from ignorance to knowledge and from falsehood to truth. You also have experienced trust, hope and love. Isn't that what we cherish here? It comes as a shock to discover again that these qualities — taken for granted here — are not yet universal in the outside world. It is painful to encounter bigotry where you had expected to find acceptance, and discrimination where you thought none could exist. The world outside is not Cornell. Yet truth and hope, trust and love — the most precious gifts of your Cornell years — are surely the tools with which you may change it.

These fragile qualities are all the university has to give. So please don't forget to take them with you as you pack the car. Build them to you, for they will serve you well on the journey you begin today.

Earlier this year I was reminded of another journey, as I stood on a barren volcanic hill, 600 feet above the Ross Ice Shelf of McMurdo Sound, on the edge of the unforgiving Antarctic continent, swept by the worst gales in the world and temperatures so low as to numb the senses. On that hill is a simple memorial to five men who died 76 years ago. They had climbed the 10,000-foot-high Trans-Antarctic Mountains to the Polar Plateau and toiled 800 miles to the South Pole. When they reached it, they found they had been beaten there by one month by another team, so they turned around, and they walked — hauling their heavy sledges — almost all the 800 miles back. They died from exhaustion and starvation within 11 miles of a one-ton depot of food. A failure? Perhaps. But on Observation Hill there is a simple wooden cross with this epitaph taken from Tennyson's "Ulysses" — "To strive, to seek, to find and not to yield."

"*To strive, to seek, to find and not to yield.*"

That, it seems to me, is not just Victorian prose, matched to Edwardian heroics; it is a living, fitting goal for the Class of '88.

"But for what?" you ask. "What is the thing for which we are to strive, to seek, to find and not to yield?"

Let Albert Schweitzer, one of the most remarkable individuals of our century, speak to our generation: "I don't know what your destiny will be, but one thing I know: The only ones among you who will be really happy are those who have sought and found how to serve."

That is the antidote to the dangers of graduation. That will guard against the hazards to your health.

So Class of 1988, here's to you and to your families, to all you've striven for together and all you have achieved. Here's to these few brief, shining years in Ithaca and to the memories they will always hold. Here's to the bright careers that lie before you and all the opportunities they provide. Here's to truth and hope, trust and love — those precious gifts of this goodly fellowship of Cornell men and women. May they bring you not only the tangible rewards of success, but also the more lasting rewards of service. May they give you the means to make both a living and a life.

Cathy Ouellette of Ithaca, N.Y., College of Human Ecology, left, and Pat Brimais of the Bronx, N.Y., College of Arts and Sciences, congratulate one another.

Jonathan Rudolph of Wayne, N.J., College of Arts and Sciences, says a few parting words to A.D. White.

Chemical Congress of North America

This week at the Third Chemical Congress of North America in Toronto, Cornell researchers contributed some three dozen scientific papers. Here is a sampling of their research findings. The Congress, a combination of the American Chemical Society, the Canadian Chemical Congress and chemical societies from Mexico, is the largest scientific meeting ever held in Canada, with more than 5,500 papers.

EPA urged to deregulate the use of insect pheromones

Federal regulations are strangling the most effective, benign method of insect pest control, according to a Cornell entomologist who pioneered the study of sex-attractant pheromones.

"Pheromones should not be classified by the U.S. government as pesticides. They are natural products; they are not toxic; they work by disrupting insects' mating activity," said Wendell L. Roelofs, who reported on the progress of moth pheromone research at the Chemical Congress of North America.

Commercial or even experimental use of each pheromone has required a lengthy, costly review and approval process by the federal Environmental Protection Agency, he noted.

Roelofs, the Liberty Hyde Bailey Professor of Insect Biochemistry at the New York State Agricultural Experiment Station at Geneva, N.Y., has spent more than 20 years studying the pheromones used by female insects to lure males. Also discussing moth pheromone research at the Chemical Congress was Walter A. Wolf, a visiting scientist at the Geneva station.

Pheromones work to prevent reproduction of insect pests by attracting males to manmade sources of pheromones instead of to females of their own species. Cornell studies have led to patents on pest-control with the use of several insect pheromones.

Roelofs said he believes that the EPA should encourage the use of insect pheromones as alternatives to chemical pesticides — not make the approval process more arduous.

"FIFRA, the Federal Insecticide, Fungicide and Rodenticide Act, covers all compounds that mitigate insect activity, and the EPA interprets the law as including pheromones as pesticides," Roelofs explained. "But pheromones don't kill anything."

Following EPA logic, Roelofs said, "If grape growers could attract fruit flies from the grapes with bananas, they would need federal approval to hang pieces of bananas in the vineyards!"

The scientist, whose honors include the 1983 Wolf Foundation Prize for Agriculture and election to the National Academy of Sciences, makes several arguments for the use of pheromones in insect control:

• Whereas chemical pesticides can select out the strongest insects and produce subsequent generations of insecticide-resistant pests, disrupting mating with pheromones has not been shown to increase resistance to that method.

"It is very difficult for insects to build resistance to a communication system — pheromones — that is so vital to their reproduction," Roelofs asserted.

• Unlike chemical pesticides, pheromones leave no harmful residues, Roelofs said. Cornell tests found that even applications of four times as much pheromones as is needed to disrupt mating behavior left no detectable levels of residue.

• The cost of insect control with pheromones is comparable to that of chemical pesticides, and pheromones may cost less in the future as production becomes more commercialized. "In Bavaria, the government subsidizes pheromones because they are environmentally safer for consumers and for field workers," Roelofs noted.

After a year's struggle with the federal bureaucracy, Roelofs and the Geneva Experiment Station recently won EPA approval to test a promising application of insect pheromones: twist-ties to control the grape berry moth in vineyards.

The alternative is the highly toxic pesticides parathion and carbaryl. Twist-ties with grape berry moth pheromone are expected to interrupt reproduction of the destructive insect while holding vines to trellises.

But commercial production of the twist-tie pheromones — if they are effective — will require additional EPA certification, including proof that such animals as trout and mallard ducks are not harmed by moth pheromones. As a compromise, Roelofs and other pheromone advocates would settle for faster federal approval of newly discovered insect pheromones that can be dispensed with previously approved methods.

He would rather see insect pheromones taken out of the federal government's pesticide category.

"Insect pheromones are not toxic to man, beast or insect," the biochemist said. "They are natural compounds that are picked up by protein receptors in the antennae of other insects, as part of a finely tuned communication system."

The scientist said,"insect pheromones are everywhere. They are in the air we breathe in every field and orchard and backyard. They are not toxic and they certainly are not pesticides."

—Roger Segelken

Common causes of groundwater contamination cited

Communities should launch chemical-waste pickup proograms for homeowners that would allow separate disposal of such chemicals as paints, fertilizers, weedkillers, motor oil and other potentially harmful chemicals, a Cornell chemist has proposed.

Much chemical pollution of the nation's precious groundwater resource can be laid at the doorstep of the average citizen, chemist Ann T. Lemley told the Chemical Congress of North America. She advocated the pickup plan as part of a vigorous campaign of research and education to attack the problem.

"It's not just big, bad industry and it's not just the farmer who might incorrectly apply a chemical to his crops or soil who is contaminating the water supply," Lemley said. "It's each of us — every time we throw things out in the garbage or pour them down the drain, or dump used motor oil in a corner of our yard. It's what we put on our lawns and what the dry cleaner down the street does with his solvents.

"The problem of water-quality degradation will be solved only by the action of millions of people responding with local solutions to very site-specific concerns," she said. "In the United States, which places a high value on individual freedom and where the land mass is so large that policing of chemical use would be impractical, we must rely on aggressive education to convince agricultural producers, manufacturers, families and communities to adopt actions and plans that will conserve the quality and quantity of our nation's precious water resources."

This spring, Lemley testified before the U.S. House Appropriations Subcommittee on Rural Development and Agriculture, where she called for $25 million to support water-quality research and $15 million to support cooperative extension programs to educate people about water quality. She testified on behalf of the Ad Hoc Committee on Water Quality and Management of the National Association of State Universities and Land-Grant Colleges.

Researchers are only beginning to understand the extent to which contaminants are making their way into groundwater, the source of drinking water for half of the U.S. population, including 95 percent of those living in rural areas, Lemley said.

Studies have found that 20 percent of wells in the United States have nitrate concentrations strong enough to be considered contaminated and that more than 200 chemicals are found in groundwater, she said.

Many people test their water supply or add filters without understanding which of these chemicals should cause concern, Lemley added.

The quality of municipal water supplies is controlled by federal regulations, but contaminants from industry, agriculture and private homes are leaching undetected into groundwater, creating potential health hazards for private well water, she said.

"Improvements in chemistry have allowed us to detect substances at very low levels in water, but we don't know as much about how contaminants get into the water supply or about the health risks that they pose," she said. "The same is true in Canada, where regulatory procedures differ from those in the United States but the groundwater problem may be the same." Lemley is an associate professor in the College of Human Ecology.

In Toronto, Lemley discussed her research on the movement and degradation of pesticides into groundwater during a symposium titled "Your Garbage is Fouling my Nest."

"I'm hoping we can build awareness of groundwater issues through the science curriculum in the schools and through our extension education efforts," she said in an interview.

Lemley's studies focus on soil characteristics and environmental conditions such as acidity and temperature, and how they affect whether a chemical will reach and contaminate groundwater or whether the chemical will adhere to soil or be degraded to nontoxic products before reaching the water table.

— Mark Eyerly

Structure of hydrodesulfurization catalysts investigated

Cornell chemists have developed a method to better identify superior preparations of catalysts used in removing sulfur from crude oil.

These hydrodesulfurization (HDS) catalysts are used to treat all crude oils and represent a billion-dollar-a-year cost for petroleum refiners around the world.

Even though HDS catalysts, typically compounds of cobalt and molybdenum oxides attached to an aluminum oxide support, have been used for more than 20 years, they are still not well understood. This lack of knowledge of the catalysts' structure means that determining whether new compositions of catalysts will be superior to those in use is expensive, because the new catalysts must be tested in pilot plants. Also, learning to operate the catalysts efficiently as desulfurizing agents is often trial and error.

The Cornell chemists, research associate Ning-Shih Chiu and chemistry emeritus Professor Simon Bauer, working with Atlantic Richfield Co. research scientist Marvin Johnson, reported their latest studies on the structures of HDS catalysts in a paper delivered at the Chemical Congress of North America.

They used a technique called Extended X-ray Absorption Fine Structure (EXAFS) spectroscopy to determine the atomic coordination of sulfur and oxygen atoms about the molybdenum and cobalt atoms in the catalysts, and also established a significant correlation between the catalysts' structure and their efficiency.

Researchers obtain EXAFS spectra by illuminating a sample of material with an extremely powerful monochromatic x-ray beam and measuring how the relative absorption of energy by the sample changes as the beam is tuned to various energies. For their EXAFS studies, the Cornell chemists used the Cornell High Energy Synchrotron Source, among the most powerful x-ray sources in the world.

By choosing an x-ray energy level at which a certain element absorbs energy and carefully measuring how x-ray absorption changes as the beam is tuned over a closely spaced series of energies scientists can determine the chemical environment of a particular element in an amorphous material.

In their latest studies, Chiu and Bauer investigated a series of HDS catalysts prepared by Johnson and his colleagues at ARCO covering a range of concentrations of cobalt and molybdenum.

In operating HDS catalysts, petroleum refiners first treat the calcined catalyst material with a stream of hydrogen and hydrogen sulfide gas at elevated temperatures to produce oxysulfides of the metal atoms, which are distributed on the surface of the high-area aluminum oxide support.

When crude oil and hydrogen gas are passed over this sulfided catalyst, researchers theorize that the sulfur atoms on the catalyst react with the hydrogen and are removed as hydrogen sulfide gas. The vacancies left on the catalyst surface then react with the sulfides in the crude oil and, thus, aid their conversion to hydrogen sulfide plus organic residues.

In their studies of the catalyst in the sulfided state, the chemists discovered that the metals on the surface are not totally converted to sulfides, but have some residual oxygen atoms that bridge the contacts to the support. This incomplete sulfiding had been theorized previously, but the Cornell studies confirm the phenomenon.

The Cornell chemists also found using EXAFS spectroscopy that the molybdenum oxysulfide central to the operation of the catalyst is present on the support surface in the form of small planar "rafts," and that the active sites for the desulfurizing reaction are the peripheries of those rafts.

Perhaps most important, however, was the chemists' discovery of a direct relationship between the activity of the catalyst and its molybdenum and cobalt content.

"This means that chemists can now estimate from laboratory experiments the relative activity of new HDS catalysts before going to expensive pilot-plant testing," Bauer said. "Using structural analysis via EXAFS spectroscopy and the analytic composition of the alumina-supported molybdenum/cobalt oxides, the relationship we have developed permits prediction of catalytic conversion rates."

— Dennis Meredith

Scientists advance techniques of ion microscopy

Cornell chemists have significantly advanced a microscopic technique called ion microscopy that can yield images showing how chemical elements are distributed in subjects ranging from computer chips to living cells. By contrast, conventional light and electron microscopes can reveal a subject's structural features, but not its chemical makeup.

Speaking at the Chemical Congress of North America, the chemists outlined improvements they have made in computerizing images and in preparing biological samples for ion microscopy.

The researchers, postdoctoral associate Yong-Chien Ling, graduate student Dan Bernardo and chemistry Professor George Morrison, also showed how they have used ion microscopy to "see" the distribution in cells of the key elements calcium, potassium and sodium.

Ion microscopy consists of bombarding a sample to be studied with a stream of ions, called the primary beam, with energies between 5,000 and 20,000 electron volts. This bombardment blasts away the surface of the sample, in a process called sputtering, releasing a variety of particles, including charged particles called ions.

These emitted ions are captured, focused and filtered in the ion microscope using a system of electrostatic and magnetic lenses and filters. These ions produce an image of the sample when they are directed onto a fluorescent screen. This image can be photographed or fed into a TV camera to be digitized for computer analysis.

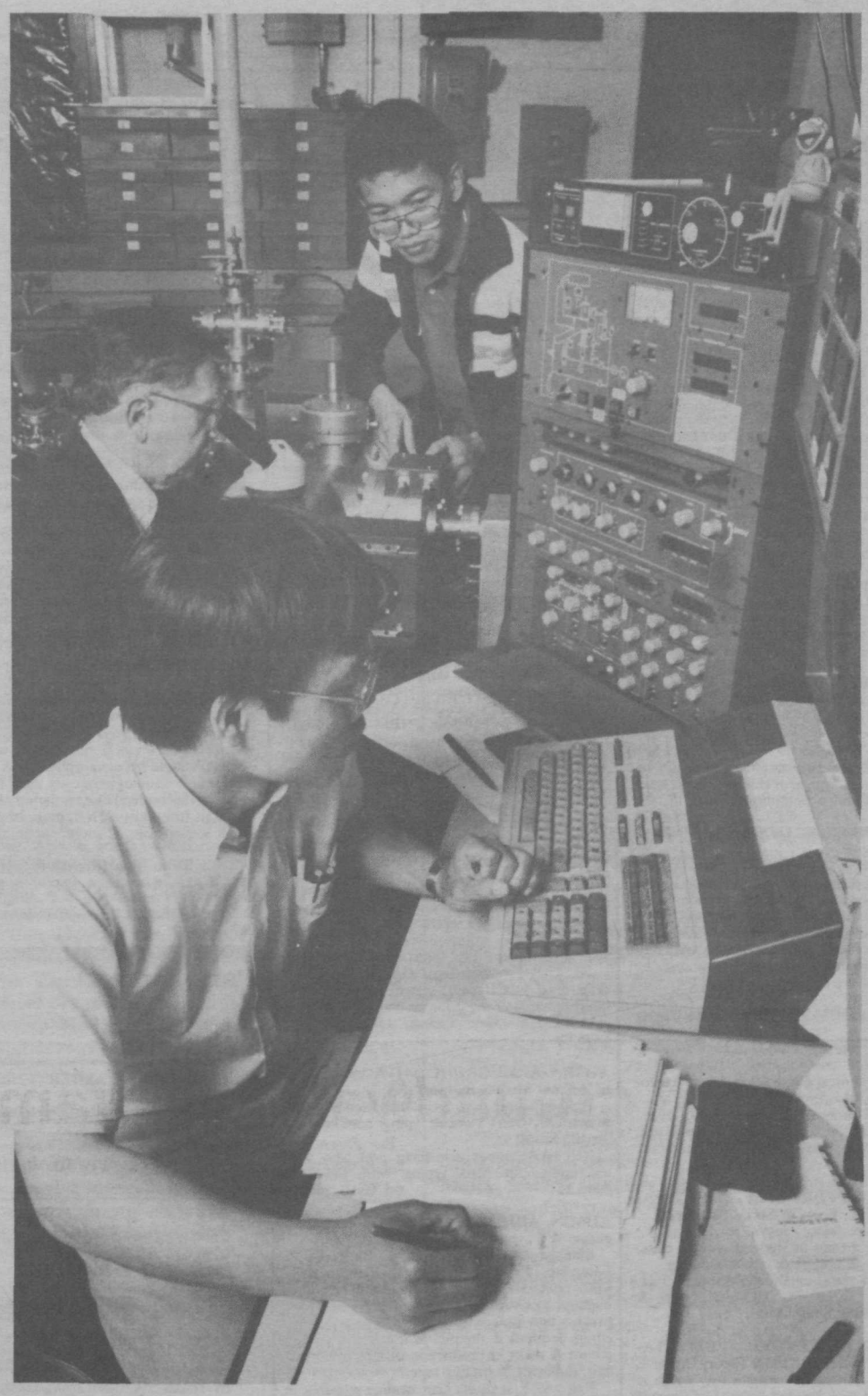
Researchers can easily adjust the filtering on the microscope to select any particular ion, thus obtaining pictures showing only how that ion is distributed in the sample.

Such adjustment means that ion microscopes can show the distribution of elements from the lightest to the heaviest — hydrogen to uranium — in a sample. Because such adjustments can be made in a few seconds, scientists can study the distribution of more than one element in the same sample.

Currently, ion microscopy can resolve structures as small as 0.1 micrometer. A micrometer is one-millionth of a meter.

Researchers using ion microscopy also can obtain a three-dimensional picture of an element's distribution by continuously bombarding the sample and taking successive images as the ion beam eats into the surface of the target. Such depth profiles can achieve a depth resolution as small as 0.005 micrometer.

Ion microscopy was invented in 1962 by French scientists Ramond Castaing and Georges Slodzian.



Chemistry Professor George Morrison, center, postdoctoral associate Yong-Chien Ling, front, and graduate student Dan Bernardo monitor an experiment on the Cornell ion microscope, which can yield a picture of how specific elements are distributed in objects from cells to computer chips.

At the Chemical Congress, the Cornell chemists reported improved techniques of preparing biological samples for ion microscopy and of processing the image.

According to Morrison, the usual techniques of preparing samples for electron microscopy are inadequate for ion microscopy because they allow elements such as calcium to diffuse away from their normal location. Also, plastics and other chemicals added in the usual preparation process can contaminate the sample.

"The sample preparation technique we have developed is ideal for ion microscopy because it preserves the structural and chemical integrity of the specimen," Morrison said. "Also, the procedure doesn't require the addition of any foreign compound into the tissue before analysis. In fact, it removes such materials as nutrients that might affect the image."

The preparation technique, developed by former senior research associate Subhash Chandra, consists of growing the cells on a polished silicon surface and then covering them with another clean silicon surface to create a sandwich. The sandwich is then frozen in cryogenic fluids and the top pried off. This separation "decapitates" the cells, removing the top membranes as well as the contaminating nutrient media in which the cells were grown. The silicon surface gives a conductive base that prevents the accumulation of charge on the sample.

The cells are then freeze-dried and studied using the ion microscope.

At the Chemical Congress, the Cornell scientists showed images of cultured cells made using the technique. These included images of potassium and calcium in rat cells, which showed how ion microscopy can be used to measure quantitatively the distribution of an element.

The chemists also showed how ion microscopy can yield a picture of elements in cells that can be compared with images obtained using fluorescent calcium markers imaged with a light microscope. While the light-microscope images showed only free calcium in the cell, the ion microscope gave a measure of total calcium in the cell, the researchers observed.

In their presentation, the Cornell scientists also discussed their techniques of feeding digitized images from the ion microscope into a computer, to allow more sophisticated analyses of the images. These analyses included three-dimensional computer maps showing the concentration of several elements in a sample.

— Dennis Meredith

Probing how the nose knows: a standard vocabulary helps

Trying to learn how the human sense of smell works, Cornell flavor scientists may have overcome the problem of the widely varying vocabulary people use in describing scents.

"We think that odor perception works like visual perception of a pointillist painting, in which the dots and dabs of pure colors are hard to recognize as an image until we stand back and see how they are integrated into the larger picture," biochemist Terry E. Acree told a news conference on new directions in flavor research at the 3rd Chemical Congress of North America. "The chemicals that cause flavor in wine, for example, are like the dots in a painting."

There is no standard vocabulary to describe a smell's components, Acree said.

His technique for identifying individual odor-active chemicals, called Charm analysis, has been highly successful in sorting out the chemicals responsible for human perception of odors — while disregarding those that don't contribute to perception. Charm odor analysis employs human volunteers to sniff a series of airborne chemicals that have been separated from foods or beverages by gas chromatography.

But just as one painter's vermillion is another's scarlet, people use different words for the same scent and the same words for different odors. Thus "grassy" and "plastic," two terms used by volunteers sniffing Concord grape juice in Acree's laboratory, can have different meanings — or the same ones — depending on whether the noses in question are used to Astroturf or the real article.

So Acree and Anna B. Marin, a Cornell colleague who reported on human variation in odor perception at the Toronto chemistry meeting, are letting people call the smells whatever they want. The flavor scientists added a preliminary step to Charm odor analysis: Volunteer sniffers assign names — such as fruity, musty, grassy or plastic — to chemicals they will be sniffing in the second stage of the tests. Then they sit through days of tests and hundreds of chemical samples from the gas chromatograph, indicating to a computer the name and intensity of what they're smelling.

"Perception is a model created by the brain of something happening in the outside world. The odor-perception model is built of memories and emotions and attention — selecting some information from all that is coming in from the senses — and cognition. But [unlike vision perception] we don't know similar odor-perception functions, just that stimuli somehow produce reactions and behavior," Acree said.

Studies of neurological activity in the brain show responses in certain odor-receptor neurons when the nose is smelling something, Marin said. So far, she said, there is no way of knowing how the odor receptors process the information and how the brain decides what smells good and what doesn't. The best alternative for odor-perception research is human feedback, from volunteer sniffers testing one chemical component at a time.

— Roger Segelken

Onion's roots made to yield better flavors than its oils

By culturing thick mats of onion roots in special "bioreactors," Cornell biotechnologists have produced natural-onion-flavor compounds that could be superior to commercial onion flavors now on the market. Current onion flavors lose many of the key flavor compounds of onions while their oil is processed.

Speaking at the Chemical Congress of North America, graduate student Christopher Prince and chemical engineering Professor Michael Shuler reported progress toward the goal of commercially producing onion and garlic flavors using cultures of plant roots.

Besides the possibility of improved flavorings, their research also will aid understanding of how laboratory cultures of plant organs could be grown to yield complex plant compounds useful as flavorings or drugs.

The researchers said that growing cultures of the organs of plants such as the roots, rather than suspensions of undifferentiated cells, offers a better way to produce commercial quantities of plant compounds. In contrast to the cell suspensions, the plant organs had become specialized to produce the complex substances called secondary compounds that are useful as flavorings or drugs.

Plant-organ cultures retain their ability to make secondary compounds, in some cases grow faster than cell cultures and are easier to immobilize in bioreactors than are cell suspensions, said Prince and Shuler.

Bioreactors are culture growth chambers in which living cells or tissues are fed nutrients. The useful products the cells release, such as flavor compounds, are recovered from the liquid flowing through the culture.

In the Chemical Congress paper, the Cornell researchers described improved methods of analyzing the sulfur-containing, onion-flavor compounds — called alkyl cysteine sulfoxides — to test the ability of onion cultures to produce the chemicals.

The technique, based on the method of separating chemicals called high-pressure liquid chromatography, has shown that the root cultures do produce quantities of the compounds comparable to those found in onion bulbs.

Prince and Shuler also reported the result of screening 13 different species of onion and its close relatives from Europe, North America and Japan for their productivity, amount of flavor compounds and ability to release the substances. The researchers have found several that look promising as the basis for commercial flavors.

— Dennis Meredith

Job Opportunities

June 9, 1988
Number 21
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.

-DURING THE SUMMER, JOB OPPORTUNITES WILL BE PRINTED SEPARATELY ON JUNE 16, 30, JULY 14, 28, AUGUST 11 & 18. THE CORNELL CHRONICLE RESUMES ITS WEEKLY SCHEDULE AUGUST 25.

-Interviews are conducted by appointment only.

-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.

-DEPTS.-Deadline for submission is noon on Thursday for following week's Job Opportunities.

-Minimum salaries listed are for recruitment purposes only.

-S=Statutory; E=Endowed

Administrative and Professional

CASH MANAGER (PA2104) Assistant Treasurer-E
Under gen'l. supv. of Asst. Treasurer & in cooperation w/Contr[illegible]er's & Investment Offices, ensure most [illegible] effective & efficient methods of cas[illegible] Develop cash mgmt. controls, syst[illegible]cies.
Req.: MBA [illegible]v. 2-4 yrs. exp. in banking, cash mgmt., tre[illegible]sury operations or other relevant areas. Supv. exp. req. Computer literate. Letter & resume to Cynthia Smithbower by 6/24.

Void

DIR. OF DEVELOPMENT, COLLEGE OF VETERINARY MEDICINE (PA2105) Veterinary Administration-S
Manage daily College development activities incl. Veterinary Annual Fund. Initiate approaches to corporations, foundations & individuals. Will be liaison w/various CU offcs. & college advisory committees.
Req.: BS/BA Exc. comm. (oral/written) & org. skills req. 3-5 yrs. fund raising exp. incl. working w/volunteers. Letter & resume to Cynthia Smithbower by 6/24.

APPL. PROGRAMMER/ANALYST II (PT-2101) University Press-E
Develop, write & run programs for publishing turn-key computer system (Global Pubs-Data) in BASIC (Data-General/Ultimacc dialect) or SKLR (Skillwriter) lang.
Req.: BA or equiv. BASIC & SKLR lang. req. Familiar w/gen'l. computer operations incl. knowl. of backup cyclic prgrmng., line printer & terminal operation procedures. Knowl. of file structure in minicomputer environ. Letter & resume to Judi Baker by 6/24.

DINING SUPERVISOR I (PA2102, PA2103) Dining Services-E
Supv. daily operation of dining unit, incl. purchase & 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 7/1.

EXECUTIVE DIRECTOR (P2106) Agora Project
For new not-for-profit small busn./farming develop. agency in Ithaca. Resp. for overall operation of agency incl.: planning & implementing busn. programs for diverse audience, fundraising, organizing community resources & representing agency in the community.
Req.: Strong written/oral comm. skills a must. Exp. in small busn. development &/or agriculture desir. Relevant degree &/or equip. exp. nec. Letter, resume, sample or writing & 3 references to Duncan Hilchey, Agora Project Manager, 316 Anabel Taylor Hall, Cornell Univ. by 6/24.

PROJECT COORDINATOR II (PA1804) Maintenance Management-E
Serve as liaison between Univ. depts. & M&SO on bldg. maint. matters. Identify bldg. operation problems & project scope. Schedule/coord. maint. & rehab. projects, inspect construction.
Req.: AAS in engr. or construction tech. req.; BS in engr., arch. or busn. admin. pref. Strong tech. bkgrnd. in bldg. maint. w/min. 4 yrs. exp. in construction & maint. mgmt. Letter & resume to Cynthia Smithbower by 6/20.

GRANT & CONTRACT OFFICER I (PA1604) Sponsored Programs-E
Review, process & administer proposals; negotiate resulting awards to review & approval of Assoc. Dir.
Req.: BA/BS & some related work exp. Exc. interper. & comm. (written/oral) skills; able to work independ. Some travel. Letter & resume to Cynthia Smithbower by 6/20.

MANAGER, PURCHASING (PA2003) Purchasing-E
Mng. psnl., equip., & facilities of Univ.'s Central Purchasing Dept. Provide efficient & exemplary srvc. in procurement of over $100M of material, equip. & srvc. annually.
Req.: BS, pref. in Busn. or tech./busn. program. 7-8 yrs. exp. in tech. MRO procurement w/at least 3 yrs. of first line mgmt. or supv. resp. Letter & resume to Cynthia Smithbower by 6/17.

FINANCIAL ANALYST II (PA2006) Assistant Treasurer-E
Design & implement computer based models to track & project Univ. expenses for employee benefits. Recommend analysis & report formats; work w/Asst. Treasurer to standardize analytical approaches for presenting decision alternatives for changes in employee benefit programs.
Req.: BS w/5 yrs. financial analysis exp. in busn. or univ. environ. MBA pref. Exp. w/spreadsheet programs such as Lotus 1-2-3 req. Project development (incl. analysis design, implementation & maintenance) exp. Budgeting or capital expenditure exp. useful. Strong interper. & writing skills req. Send letter & resume to Cynthia Smithbower by 6/17.

SR. BENEFITS ASSOC. (PA2001) Human Resources-E
Reporting to Benefits Mgr., monitor existing benefits plans & develop new programs. Design & maintain reporting systems which monitor exp. & cost of existing programs. Resp. for analysis of existing benefits plans to identify needed changes & research/report on industry trends, federal & state requirements & other employer programs.
Req.: BA/BS in Busn. or quant. field w/1-3 yrs. broad based exp. in pension & welfare design & analysis. MBA pref. Strong analytical, comm., interper. skills. Working knowl. of mainframe systems & on-hands exp. w/Lotus, Excel or similar software. Proven ability to plan, execute & implement program changes. Send letter & resume to Cynthia Smithbower by 6/17.

CIVIL ENGINEERING DESIGNER (PA2002) Facilities Engr.-E
Provide support svcs. incl. design, drafting, surveying, estimating, construction inspection & coord. of projects for Civil Engr. Section.
Req.: AAS in Construct. Tech. or equiv. Driver's lic. req. Knowl. of tech. math, surveying techniques, drafting, & construction materials req. Letter & resume to Cynthia Smithbower by 6/13.

CO-OP COORDINATOR I (PA2005) Dining Services-E
Administer contract dining plan (Co-op) & maintain related computerized database. The Co-op Contract meal plans serves 7,000+ customers having $10M revenues.
Req.: AAS in bus. or related field. 2 yrs. admin/offc. exp. Exc. customer relations & org. skills. Letter & resume to Cynthia Smithbower by 6/17.

TEACHING SUPPORT SPECIALIST I (PA-2007) NYSSILR, Econ. & Social Statistics-S
Assist in intro. stats.; supvs. teaching assts.; assist indiv. or groups of students; coord. class, seminar rooms & computer labs scheduling.
Req.: BS in stats. or equiv, MS pref. Exc. interper., org., & comm. skills nec. Letter & resume to Cynthia Smithbwer by 6/17.

ASSOC. DIR., SCIENTIFIC COMPUTATIONAL SUPPORT (PA1902) Theory Center-E
Administer the S.C.S. component, which is responsible for user support & trng., of Cornell Nat'l. Supercomputer Facility (CNSF). Provide Theory Center Directors w/advice regarding policy decisions affecting CNSF.
Req.: PhD, pref. in sciences. 8-10 yrs. related exp.; incl. exp. administering scientific projects/programs. Demonstrated ability to successfully coord. w/sr. scientists. Broad knowl. of wide range of issues impacting operation of a supercomputer ctr. Detailed understanding of principles & tools for scientific research in supercomputing is vital. Strong scientific bkgrnd. Exc. interper. skills. Letter & resume to Search Committee: Assoc. Dir. by 7/1.

ASSOC. DIR. OF FINANCE & BUSINESS FOR ACCOUNTING SVCS. (PA1904) Finance & Business Services-S
Resp. for stat. college acctg. function (approx. $250M budget) which justifies & generates req. revenue/expenditure reports of 4 partially state-supported colleges.
Req.: BS acctg., busn. admin. or related field w/8 yrs. exp. in public govt'l., higher ed. or related field acctg.; knowl. of SUNY acctg. & financial practices desir. MBA w/6 yrs. exp. as indicated above. CPA highly desir. Letter & resume to Bettie Thompson by 6/24.

Clerical

REGULAR EMPLOYEES Submit employee transfer application, resume & cover letter. Career counseling interviews available by appt. **EXTERNAL APPLICANTS** Mail employment application & resume to 160 Day Hall. Interviews conducted at Staffing Services, East Hill Plaza by appt. only. Qualified applicants are contacted after materials are reviewed.

SECRETARY, GR18 (C2101) Civil Environ. Engr.-E
Recept./sec. for service-oriented main offc. Input & format manuscripts, corresp., coursework, course evaluations for faculty & School org. Oversee collection & distribution of US & campus mail. Order supplies, maintain xerox machines; provide back-up support.
Req.: H.S. dip. or equiv.; sec. school desir. Some sec. exp. desir. Knowl. of WP equip. (Wordperfect) helpful. Strong org. & interper. skills. Heavy typing. Min. Biweekly: $444.37

OFFICE ASST., GR18 (C2110) American Indian Program-S
Provide clerical support to 7 prof. Gen'l. offc. duties; maintain flow of comm. among 3 components of A.I.P., Academic, Outreach & Student Support.
Req.: H.S. dip. or equiv. Min. 1 yr. related exp. Communicate w/variety of audiences incl. Inter-campus comm., interdept. & Indian communities, public schools & 2 yr. institutions & State Ed. dept. serving Indian students. Exc. interper. skills. Med. typing. Min. Biweekly: $443.13

OFFICE ASST., GR18 (C2114) Engineering & Facilities Admin.-E
Provide sec. & admin. support for Dir. of Utilities & Mgr. of Admin. Svcs. Provide recept. support for Utilities dept. & Admin. Svcs.
Req.: H.S. dip. or equiv. Busn./sec. school pref. Microcomputer WP & spreadsheet software exp. req. Strong org. skills. Exc. interper. & comm. (oral & written) skills. Med. typing. Min. Biweekly: $444.37

SR. CIRC./RESERVE ASST., GR18 (C2109) JGSM Library-E
Resp. for daily operation of Circ./Reserve desk; supv. book stacks & other public areas of lib. & train & work with student employees. Tues.-Sat. during academic terms; Mon.-Fri. during intersession & summer.
Req.: Req.: 2 or more yrs. of college or equiv. Good comm. skills, able to quickly & effectively comm. w/patrons. Good human/public relations skills. Able to org. & complete detail work effectively & accurately & supv. p/t student staff. Team work essential. Min. Biweekly: $444.37

ADMINISTRATIVE AIDE, GR20 (C2103) Theory Center-E
Provide admin./sec. support to Dir., Deputy Dir. & Personnel Assoc.
Req.: AAS or equiv. Min. 3 yrs. admin./executive sec. exp. Familiar w/IBM PC & UNIX desir. Knowl. of tech. term. helpful. Demonstrated writing ability & org. skills essential. Good interper. skills. Med. typing. Min. Biweekly: $496.80

SECRETARY, GR20 (C2112) Real Estate-E
Provide admin./acct. support to 6 profs. Prep. corresp. using WP equip. Serve as recept.; coord. appts., mtgs., travel; monitor investment & non investment real estate accts.; review & process all acctg. documents; respond independ. to routine requests; oversee p/t sec.
Req.: AAS or equiv. 2 yrs. related sec. exp. WP & computer exp. pref. or willingness to learn. Real Estate or legal exp. helpful. Supv. skills. Exp. w/CU acctg. system helpful. Strong interper. skills & attention to detail. Valid driver's lic. req. Med. typing. Min. Biweekly: $496.80

ADMIN. AIDE, GR20 (C2111) Avian & Aquatic Animal Med.-S-Eastport, NY
Provide admin./sec. assistance for Duck Research Lab. Gen'l. clerical; typing; bookkeeping; recept. duties.
Req.: AAS or equiv. in acctg. pref. Min. 1 yr. sec./acctg. exp. Med. typing. Min. Biweekly: $495.35

ADMIN. AIDE, GR21 (C1916) Modern Languages & Linguistics-E
Manage busn. operations of Phonetics & Lang. labs. Prep. annual budget; attend to daily busn. operations of labs; function as bldg. coord. backup; hire, train & supv. student employees, process tape orders for mail-order srvc.; coord. equip. requests & instruct in use of a/v equip.; record & assist in production of tape materials; edit, duplicate & catalog tapes.
Req.: AAS or equiv. Exp. dealing w/public in univ. setting. Some supv. exp. helpful. Exp. w/dBase III helpful. Able to work in fast-paced environ. w/limited supv. Exp. w/budget admin. & development & w/a-v equip. Med. typing. Min. Biweekly: $527.69

ADMIN. AIDE, GR22 (C2102) Computer Science-E
Provide direct admin. & sec. support to Chair. Supv. activities of 2 dept. secretaries & oversee faculty proposals & research grant comm. Involved w/highly confidential gov't., busn. & academic issues.
Req.: AAS or equiv. Min. 3 yrs. public relations, supv., admin. & sec. exp. in univ. research environ. Exp. w/offc. computer systems desir. Tech. WP. Med. typing. Min. Biweekly: $556.14

General Service

REGULAR EMPLOYEES Submit employee transfer application to Staffing Services, 160 Day Hall. Interviews conducted by appt. only. **EXTERNAL APPLICANTS** Mail employment application to Staffing Services, 160 Day Hall. Interviews conducted by appt. only. Qualified applicants are contacted after materials are reviewed.

CUSTODIAN, SO16 (G2101) Buildings Care-Endowed
Provide gen'l. custodial care of bldgs. & grounds in immediate vicinity of assigned area. Nights & weekends. Sat.-Thurs., 11 p.m.-7:30 a.m.; Wed., 11 p.m.-6:30 a.m.
Req.: H.S. dip. or equiv. Able to operate a variety of heavy power equip., lift 50 lbs. & climb an 8 ft. ladder. Basic reading & writing skills. Min. hourly: $5.49

UNIV. SERVICE OFFICER, GR02 (G1004) Public Safety
Resp. for prevention & detection of criminal behavior; external & internal patrol of Univ. property within assigned area for fire, safety & crime hazards; enforcement of parking regulations on campus.
Req.: H.S. dip. or equiv. Formal ed., trng. or exp. in law enforcement field pref. Satisfactory completion of basic Univ. Service Officer trng. U.S. citizenship; eyesight 20-40 corrected to 20-20; no record of convictions other than minor traffic infractions. NYS driver's lic.; able to obtain NYS pistol permit within 90 days of employment. Must pass physical exam. Min. hourly: $6.75

Technical

REGULAR EMPLOYEES: Submit employee transfer application, resume & letter. **EXTERNAL APPLICANTS:** Mail employment application, resume, & list of lab techniques/equip., or computer software/hardware with which you are familiar. Submit letter per position, specify title, dept. & job number. Interviews conducted by appt. only. Qualified applicants are contacted after materials are reviewed. Backgrounds highly desired: biochem., chem., microbio., elect., physics, lic. animal health tech.

TECHNICIAN, GR20 (T1808) Nutrit'l. Sciences-S
Assist Principal Investigator in research on effects of malnutrition on lactat'l. performance; mng. animal exp. & various tech. activ.; gen'l. lab participation (order supplies, etc.); gen'l. tech. duties (test various assay techs., small animal surgerys, use of radioisotopes, etc.); data mgmt. & analysis; prep. data for oral/written research reports.
Req.: BS req. w/2 yrs. related lab exp.; MS in bio., biochem., nutrition or related field desir. Exp. in relevant lab techs. w/particular emphasis in small animal surgical procedures & RIA procedures; good interper. relations & tech. writing; data mgmt. & stat. analysis skills highly desir. Apply ASAP. Min. Biweekly: $495.35

RESEARCH ASST. (T2103) Boyce Thompson Institute
Assist in conducting research in biochem. lab. primarily concerned w/factors involved in growth of insect pathogens on insect hosts. Tech. used will incl. extraction & purification of proteins, polyacrylamide gel electrophoresis & participation in gene cloning strategies such as prep. of libraries of genomic DNA, isolation of mRNA & synthesis from it of cDNA, prep. of plasmids & DNA sequencing. 12 month appt. w/probable ext.
Req.: BS in bio. or relevant field. Previous trng. & exp. in biochem., microbio. or cytology lab helpful. Contact Drs. R.C. Staples or R.J. St. Leger, Boyce Thompson Institute, 607-257-2030.

Part-Time

CASUAL GLASS WASHER (T2102) Nutrit'l. Sciences-S
Wash glassware in 3 labs. Perform some acid washing. Keep counters clean. 5-10 hrs./wk.
Req.: H.S. dip. or equiv. Previous lab exp. helpful but not req. Apply ASAP. Min. hourly: $4.90

OFFICE ASST., GR16 (C2107) Johnson Museum-E
Operate museum recept. desk in lobby. Provide info. to visitors; sell cards, catalogues & posters; answer phone switchboard; take messages for staff members; provide security for museum lobby. Sat. & Sun., 9 a.m.-5 p.m. plus evening special events.
Req.: H.S. dip. or equiv. Previous recept. exp. nec. Interest & involvement in art or related areas highly pref. Letter & resume to Esther Smith by 6/15. Min. full-time equiv.: $401.78

SEARCHER, GR18 (C2108) Olin Libr.-E
Search materials for bibliographic info. using both online database & card catalogues. Input records for online database. May req. eve. hrs.
Req.: H.S. dip. or equiv. Addit'l. ed. may be substituted for exp. Previous libr. exp., pref. in tech. svcs. Reading knowl. of 1 or more Slavic Langs. Lt. typing. Min. full-time equiv.: $444.37

Temporary

Experienced & skilled individuals specifically interested in temporary work should mail application to 160 Day Hall.

RECORDS ASST. (C2106) Mann Libr.-E
Input data into NOTIS database. File catalog cards, shelve books, update serials holdings. 19 hrs./wk. until 12/28/88.
Req.: H.S. dip. or equiv. Able to accurately perform highly detailed & repetitive tasks. Med. typing. Letter & resume to Laurie Worsell.

DATA ENTRY OPERATOR (C1913) Computer Services-E
Key enter or key verify data via CADE keystations. F-t. 6 months only.
Req.: H.S. dip. or equiv. Data entry &/or keypunch exp., pref. CADE system exp. Med. typing.

CHIMES ASST. (C1604) Campus Affairs-E
Asst. w/corresp. & other contacts w/donors, visitors, alumni & others. Participate in org. & continued maint. of chimes offc. files related to ongoing projects. Search out info. related to nec. supplies, etc. Provide staff asst. Asst. w/mtg. arrangements & maintain comm. Casual position, approx. 15 hrs./wk. for 1 yr. Letter & resume to Laurie Worsell.

Barton Blotter:

Computers, components stolen

Computers and components valued at a total of $7,721 were stolen in four incidents on campus, according to the morning reports of the Department of Public Safety for May 22 through June 5.

Two of the computers were taken from Upson Hall and the other two were stolen from McGraw and Sage halls. They were among 22 thefts reported involving losses of $10,683 in cash and valuables.

Other losses included $500 and $246 microwave ovens, a $300 jacket, $135.54 in unauthorized phone calls, $100 worth of computer diskettes, and a tape deck and speaker worth $410. Also, two wallets were reported stolen, with losses of $167 in cash and valuables.

Property damage totaling $3,480 was reported on campus in 10 incidents of criminal mischief and one attempted burglary in which $1,000 worth of damage was done to a ceiling in McGraw Hall. A window worth $1,000 was kicked in at the northeast entrance of Noyes Center, and a $500 window in the recreation room of the center was broken with a rock. Both incidents took place sometime during May 24 or 25.

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, Ithaca, NY 14850.

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

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

DANCE

Cornell Folkdancers

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

Instruction and request dancing, June 12 and June 19, 7:30-9:30 p.m., North Room, Willard Straight Hall.

EXHIBITS

Johnson Art Museum

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

A Reunion Tour of the museum and its collections will be held free of charge on June 11 at 2:30 p.m. Featured will be two reunion shows and the museum's contribution to the city of Ithaca's centennial celebration, the exhibition "Artist of Ithaca: Henry Walton and His Odyssey."

"Elsie Dinsmore Popkin: Cornell Reunion Exhibition," a one-woman show featuring landscapes in pastel by Elsie Dinsmore Popkin, Class of 1958, will be on view through June 30.

" '63 Creates: Interior Visions," organized by Nancy McAfee, Class of 1963 and an instructor in the education department of the Cleveland Museum of Art, featuring a selection of works in various media by Class of 1963 artists Thomas H. Beeby, Barbara Burger, Alan Chimacoff, N. Penney Dennings, Fred Faudie, Elizabeth Graham, Mary Margaret Hanse, Richard Allen Heinrich, Nancy Lockspeiser, Madeleine Meehan, Nan Rick and Pat Sutton will be on display through June 30.

"Artist of Ithaca: Henry Walton and His Odyssey," an exhibition of approximately 65 prints, watercolors, and oil paintings by Henry Walton, a 19th-century artist who spent the most productive years of his career in Ithaca, through June 26. In addition to accurate, minutely detailed lithographs and paintings of town views, Walton also created meticulous portraits of men, women and children.

"New York State Artist Series VIII," the eighth exhibition in a continuing series focusing on contemporary artists working in New York State, through July 3.

"New Photography 2," featuring works in color by three contemporary photographers — Mary Frey, David Tavener Hanson and Philip Lorca diCorcia — through June 11. The exhibition was organized by John Szarkowski, director of the Department of Photography of The Museum of Modern Art, New York City, and an A.D. White Professor-at-Large here.

Recent acquisitions in a variety of media will be on display through June 26 in celebration of the museum's 15th anniversary. In addition, two original three-dimensional models of the museum and drawings of the building by its architect, I.M. Pei, will be on view.

"Knots and Nets," featuring more than 70 works that trace the use of knots and nets from functional and ceremonial objects of the 18th, 19th and 20th centuries to contemporary art objects of unexpected form and scale, July 12 through Sept. 4. Works by well-known crafts artists Joanne Segal Brandford, Tim Harding, Diane Itter, Rebecca Medel, John McQueen and Jane Sauer will be on exhibit.

Registration is required by June 15 for workshops and a symposium on July 15 and 16 in conjunction with the exhibit. Three separate full-day workshops with five of the featured artists will be held on July 15, 9 a.m. to 5 p.m. Diane Itter and Jane Sauer will co-teach "Knots: Two-Dimensional and Three-Dimensional Constructions"; Joanne Segal Brandford and Rebecca Medel will conduct "Nets: Working with a Finite Strand"; and John McQueen will lead a knotted baskets workshop entitled "Natural Connections." A fee of $40 and a $5 registration charge is required for each workshop; participants may register for one workshop only.

A one-day symposium, featuring presentations by each of the featured artists in the exhibition, will be held July 16, 9:30 a.m. to 4:30 p.m. The presentations include "Defining Space and Catching Light," by Joanne Segal Brandford; "The Garment as Vessel," Tim Harding; "Imagery and the Knotted Structure," Diane Itter; "Baskets as Art and Other Oxymorons," John McQueen; "Open Structures," Rebecca Medel; and "Knotting in the Third Dimension," by Jane Sauer. A panel discussion entitled "Concepts and Contexts: Why Knots and Nets?" and a question-and-answer period will conclude the symposium.

Olin Library

"Alexander Pope Tercentenary," early editions and portraits celebrating the 300th anniversary of the celebrated English poet will be on view through July 30, Monday-Friday, 8 a.m. to noon and 1 p.m. to 5 p.m.

FILMS

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

Thursday, 6/9

"Bringing Up Baby" (1938), directed by Howard Hawks, with Cary Grant and Katherine Hepburn, co-sponsored by Alumni Affairs, 8:30 p.m., Uris.*

Friday, 6/10

"Fitzcarraldo" (1982), directed by Werner Herzog, with Klaus Kinski, Claudia Cardinale and Jose Lewgoy, 7 p.m., Uris.*

"Rope" (1948), directed by Alfred Hitchcock, with James Stewart, John Dall and Farley Granger, co-sponsored by Alumni Affairs, 10:15 p.m., Uris.*

Saturday, 6/11

"Fitzcarraldo," 9:30 p.m., Uris.*
"Rope," 7:30 p.m., Uris.*

Sunday, 6/12

"An American in Paris" (1951), directed by Vincente Minneli, with Gene Kelly and Leslie Caron, 8:30 p.m., Uris.*

Monday, 6/13

"Every Man For Himself" and "God Against All" (The Mystery of Kaspar Hauser), directed by Werner Herzog, with Bruno S., 8:30 p.m., Uris.*

Tuesday, 6/14

"On The Waterfront" (1954), directed by Elia Kazan, with Marlon Brando, Karl Malden and Eva Marie Saint, 8:30 p.m., Uris.*

Wednesday, 6/15

"Chinatown" (1974), directed by Roman Polanski, with Jack Nicholson, Faye Dunaway and John Huston, 8:30 p.m., Uris.*

Elsie Dinsmore Popkin's "Reynolda Daffodils II," (1987) and other pastel landscapes by the artist, Class of 1958, are on exhibit at the Johnson Museum of Art.

Thursday, 6/16

"Les Miserables" (1935), directed by Richard Boleslavski, with Frederic March, Charles Laughton and Sir Cedric Hardwicke, 8:30 p.m., Uris.*

Friday, 6/17

"Trading Places" (1983), directed by John Landis, with Eddie Murphy, Dan Aykroyd, Ralph Bellamy and Don Ameche, 7:30 p.m., Uris.*

"Modern Times" (1936), directed by Charles Chaplin, with Charles Chaplin and Paulette Goddard, 9:45 p.m., Uris.*

Saturday, 6/18

"Modern Times," 7:30 p.m., Uris.*
"Trading Places," 9:45 p.m., Uris.*

Sunday, 6/19

"The Red Shoes" (1948), directed by Michael Powell and Emeric Pressubrger, with Moira Shearer, Marius Goring and Anton Walbrook, 8:30 p.m., Uris.*

Monday, 6/20

"Coming Home" (1978), directed by Hal Ashby, with Jane Fonda, Bruce Dern and Jon Voight, 8:30 p.m., Uris.*

Tuesday, 6/21

"Shoot the Piano Player" (1960), directed by Francois Truffaut, with Charles Aznavour, Nicole Berger and Marie Du Bois, 8:30 p.m., Uris.*

Wednesday, 6/22

"The AIDS Film Project," co-sponsored by AIDS Task Force, 8:30 p.m., Uris.*

Thursday, 6/23

"Some Like It Hot" (1959), directed by Billy Wilder, with Jack Lemmon, Tony Curtis and Marilyn Monroe, 8:30 p.m., Uris.*

LECTURES

Communication

"Listening: Multiple Perspectives," T. Dean Thomlison, professor of communication and assistant dean, College of Arts and Sciences, University of Evansville, Indiana, June 17, 8 p.m., Warren Hall 145. This is the keynote address for a two-day interdisciplinary conference on the theory of effective listening. For details, call Judi Brownell, assistant professor of communication in the School of Hotel Administration, 255-8371.

Summer Session

"Is There a Crisis in Higher Education?" Max Black, Susan Linn Sage Emeritus Professor of Philosophy, June 9, 8:15 p.m., Kaufmann Auditorium, Goldwin Smith Hall.

Theory Center

"Simulations of Specificity and Activity of Receptor and Calcium Binding Proteins," Harel Weinstein, Physiology and Biophysics, Mt. Sinai School of Medicine, June 9, 1:30 p.m, A106 Morison Room, Corson/Mudd.

MUSIC

Bound for Glory

Records from the studio, WVBR-FM93, May 29.

Johnson Museum

Vita Talandis, soprano, accompanied by pianist Timothy LeVan will present a concert June 12 at 2 p.m. at the Herbert F. Johnson Museum of Art. The program will feature both classical works and Lithuanian songs and arias with "Va godendo" (Serse) by Handel and selections from Hayden, Mozart, Giordano, Scarlatti and Lotti and "Attendo, attendo . . . Addio del passato" from La Traviata by Verdi and several songs and arias by Gruodis, Budriunas, Jakubeans, Dvarionas and Karnavicius.

Summer Session Harpsichord Jamboree

An informal harpsichord jamboree will be given by participants in the summer harpsichord workshop June 17 at noon in Barnes Hall auditorium. Six participants will perform a program including pieces by Bach, Rameau and Scarlatti. The harpsichord workshop is taught by Joyce Lindorff, Mellon postdoctoral fellow, department of music, and is sponsored by the Center for Eighteenth-Century Music and the university's summer session.

RELIGION

Catholic

Mass: Every Saturday, 5 p.m., every Sunday, 10 a.m., Anabel Taylor Auditorium.

Daily Masses will be announced on a weekly basis.

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)

Worship will be at the Hector Meeting House, Perry City Road, at 10:30 a.m. Rides available in Anabel Taylor parking lot at 10 a.m.

Jewish

Conservative/Egalitarian Services: Friday 7:30 p.m., Saturday 10 a.m., Anabel Taylor Hall Founders Room.

Orthodox Shabbat Services: Saturday 9:15 a.m., Anabel Taylor Edwards Room Young Israel, 106 West Ave. Call 272-5810 for time.

Continued on page 12

Progress reported on status of women, minorities

Cornell's efforts to increase campus representation of women and minority-group members have yielded generally good results over the last five years, according to a report presented recently to the trustees.

Both women and minorities have increased their numbers in the Graduate School, professional schools and tenure-track faculty positions, the report indicated. Women slipped slightly from 45.7 percent of undergraduate enrollment to 44.8 percent over five years, however. Minority-group members increased from 15.9 percent of undergraduate enrollment to 19.4 percent, but this includes a slight drop in black undergraduates — from 4.7 to 4.5 percent.

"Generally, we've either held our own or increased our representation," said Joycelyn R. Hart, associate vice president for human relations, who presented the Annual Report on the Status of Women and Minorities at Cornell. Hart was appointed a year ago to the new position, which oversees equal-opportunity and affirmative-action programs.

"Where we've had some difficulties, we follow national trends and, in fact, have done better than some of our sister institutions have," Hart commented later.

She said one cause of some slippage was the increased number of institutions actively competing for a limited pool of women and minority-group members. "We've done as well as we have because of the variety of programs and support mechanisms we've been developing for more than 20 years." she said.

Besides recruitment efforts, Hart told the trustees of staff training to discourage prejudice. programs to fight sexual harassment and to improve child-care options.

"We've invested lots of energy this year talking about human relations, building a community that's more multiracial and multicultural and doing aggressive faculty recruiting, especially in the Arts College," Hart said.

Although the outcome won't be clear for some weeks, Hart said a high number of offers were made this spring to members of minority groups — most of them blacks — to join the Cornell faculty. It seems likely that the result will exceed the hiring goal set recently by the faculty to increase its own numbers of women and minority-group members, she asserted, adding:

"One thing that's really encouraging is that the faculty itself has taken the lead in recruitment -- seeing it mainly as a faculty problem, not an administration problem."

The report also notes that, in academic non-faculty jobs, women rose from 41.7 to 43.6 percent over the past five years; minorities, from 10.2 to 12.3 percent.

As for non-academic positions, women's share of executive/administrative/managerial jobs rose from 35.5 to 40.2 percent; professional jobs from 46.6 to 50.3 percent; minorities' share, from 4.7 to 4.5 percent of executive/administrative/managerial jobs and 5.6 to 6.0 percent of professional jobs.

Copies of the 41-page report are available at Hart's office in 303 Day Hall.

Trustees *continued from page 1*

Law Librarianship.

• Election of the first 12 Board of Trustees Fellows, a new position for former trustees and friends "who have demonstrated an extraordinary capacity to serve Cornell with distinction."

• Reappointment of the board's chairman and vice chairman, Austin H. Kiplinger and Stephen H. Weiss, as well as honoring retirees and reconstituting board committees.

• Approval of the selection of two new deans — David I. Lipsky for the School of Industrial and Labor Relations and Russell K. Osgood for the Law School.

The new graduate-student housing will be on the present Cornell Quarters site between Maple Avenue and Mitchell Street.

Paleen called plans for new graduate-student housing "the first step to meeting serious student needs while also removing a little of the unhealthy pressure student demand creates on the local housing market."

According to John F. Burness, vice president for university relations, the approved plan included revisions reflecting talks held over several months with the Bryant Park Civic Association and other community groups. Specific revisions included adding access for vehicles via Maple Avenue and adding the married-student apartments, which some local leaders had urged to preserve the area's "family character."

Rhodes told the trustees that, while immediate need was driving the new project, it would fit into a long-range campus-housing plan that was being developed and would be completed in six to eight months.

Another immediate step will be taken this summer to improve graduate-student housing when 100 kitchens are renovated and roofs are improved in the Hasbrouck and Pleasant Grove apartment buildings, at a cost of about $750,000, he said.

Rhodes also noted that a center for graduate-student social life had been provided in Sage Hall in response to student requests.

In discussing the previously announced state allocation for Cornell's statutory colleges, Provost Robert Barker said that Cornell must leave unfilled about 45 jobs to make up for the state's rejection of some $2 million to meet the increased cost of utilities. He added that the state's own revenue shortfall of about $900 million — announced after the budget was made — might lead to further, unspecified cuts in Cornell's spending for the College of Agriculture and Life Sciences, College of Human Ecology, School of Industrial and Labor Relations and College of Veterinary Medicine.

When Weiss — who is chairman of the Membership Committee as well as vice chairman of the overall board — explained the plan for trustee fellows, he noted that there was a negative aspect to the board's 1983 decision to streamline itself by reducing membership from 62 to 42. Loyal, hard-working alumni and friends could much less often be rewarded with the honor of trusteeship, Weiss said: The new fellows approved by the board are expected to serve on board committees, attend board meetings and be in every way like trustees — but without a vote.

The first 12 fellows, elected for from two to four years, are Robert H. Abrams, Barber B. Conable Jr., Fred J. Eydt, Mary Falvey Fuller, Christopher B. Hemmeter, John F. Mariani Jr., Dale Rogers Marshall, George Peter, William E. Phillips, Frank P. Scruggs II, Daniel G. Sisler and Roger J. Weiss. All are Cornell alumni except Peter, the first employee-elected trustee, who has been part of campus governance for 20 years and a board member for 10. Peter, director of laboratory operations at the National Astronomy and Ionosphere Center, will finish his board tenure June 30.

The board also voted trustee-emeritus status, an honor with a lifetime term, to five retiring members, who are welcome to participate in board activities as and when they want. They are Samuel C. Johnson, Albert J. Kaneb, Frances L. Loeb, Curtis S. Reis and Edward A. Wolfson.

The board elected five trustees-at-large to four-year terms. From the field of labor, they elected Paul F. Cole, secretary-treasurer of the state AFL-CIO. As general trustees-at-large, they elected Robert A. Cowie, Paul R. Tregurtha, Richard F. Tucker (incumbents whose terms expire June 30) and Ronald P. Lynch, whose wide alumni service has included the vice chairmanship of the Cornell University Council's administrative board.

Other new members welcomed, but not elected, by the board included alumni trustees Joseph H. Holland and George Slocum, student-elected trustee Bethany Dreyfus, employee-elected trustee Dwight Widger and faculty-elected trustee Jennie T. Farley.

Before closing down board business for the academic year, the trustees passed a resolution congratulating the City of Ithaca on its centennial. With Ithaca Mayor John Gutenberger seated in the audience in the board room atop the Johnson Museum, the 42 trustees pledged, on behalf of faculty, students and staff, "Cornell's continuing dedication to the service of the community, for its own sake, and as an important element in the mission of the university in the world at large."

— Sam Segal

CALENDAR

continued from page 11

Korean Church

Every Sunday, 3 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

Natural Resources

"Ideology of Nature: Landscape Preservation and Social Conflict in the Hudson Valley," Michael K. Heiman, visiting assistant professor, natural resources, June 9, 1 p.m., 304 Fernow Hall.

Cornell Waste Watchers

"Implementing a Full-Scale Recycling Program at a Major University: Rutgers University's Successful Mandatory Program," Ray Ching, recycling coordinator, Rutgers University, New Brunswick, N.J., and president, Association of NJ Recyclers, co-sponsored by the Cornell Waste Management Institute, June 23, 2:30 to 4 p.m., Edwards Room, Anabel Taylor Hall.

SYMPOSIA

Geological Society of America

A centennial symposium to commemorate the founding of the Geological Society of America at Cornell University will be held on June 9 from 3 to 5 p.m. in Uris Auditorium. The program will open with comments by President Frank H.T. Rhodes and Michael Wahl, executive director, Geological Society of America. Speaking will be Wallace Broecker, Newberry Professor of Geology, Columbia University on "Abrupt Changes in Climate in the Past: Implications for the Future," and Michel T. Halbouty, chairman of the board and chief executive officer, Michel T. Halbouty Energy Co., on "The Role of Energy in the Reindustrialization of America."

Science education

A symposium on science education, June 14-17, Kaufmann Auditorium, Goldwin Smith Hall.

"Why is Science in Trouble? The Need for Science Education," Carl Sagan, the David Duncan Professor of Astronomy and Space Sciences, July 14, 3 to 5 p.m.

"Science for Non–Scientists," Frank Westheimer, educator, University of California, San Diego, June 15, 9 to 10:30 a.m.

"Science for Non–Scientists," Walter Sullivan, science writer, New York Times, June 15, 11 a.m. to 12:30 p.m.

"Science Without Tears: Teaching Science to Non-Science Majors," Zafra Lerman, professor of science education, Columbia University, June 15, 4 to 4:30 p.m.

"Science for Scientists: Interdisciplinary Science," Alfred Romer, physics emeritus, St. Lawrence University, June 16, 9 to 10:30 a.m.

"The Case for Physics: Do We Teach For Understanding," Lillian C. McDermott, professor of physics, University of Washington, Seattle, June 16, 11 a.m. to 12:30 p.m.

"The New Frontiers of Science: Ethics and Science Education," Daniel J. Kevles, historian, California Institute of Technology, June 17, 9 to 10:30 a.m.

"Misconceptions and Educational Strategies in Science and Mathematics," Joseph D. Novak, professor of science education and biology, Cornell, June 17, 2 to 2:30 p.m.

MISC

Cornell Waste Watchers

Cornell Waste Watchers, a group of staff, students and faculty working for an expanded university-sponsored recycling program and for solid-waste reduction on campus, meets bi-weekly on Thursdays at 4 p.m. in Room 314 of Anabel Taylor Hall. Meetings are scheduled for June 9, July 7, July 21. The group will also meet on Tuesday, June 21. For more information, call Paul Aeschleman at 255-7832.

Cornell Reunion Run

The Annual Cornell Association of Class Officers Reunion Run will be held on June 11 at 8 a.m., beginning on East Avenue at Day Hall. Registration will be held in Barton Hall on June 10 from 11 a.m. to 2 p.m. There is a $9 entry fee and awards will be presented immediately after the event. Call 255-4850 for more information.

Library Tours

Tours of Uris Library for summer session students will be conducted on June 27 at 3 p.m., June at 28 at 4 p.m., June 29 at 4 p.m., June 30 at 3 p.m. and July 1 at 3 p.m. Staff members also give tours to summer visitors to Cornell. The tours, which present the history and architecture of Uris Library, are held every Monday, beginning June 27 at 4 p.m., excluding July 4. All tours begin in the main lobby of the library.

Recycling Forum (Cornell Waste Watchers)

A forum concerning recycling and solid waste, June 23, 7:30 p.m., Kaufmann Auditorium, Goldwin Smith Hall. Ellen Harrison of Cornell's Waste Management Institute will moderate the forum. Frank Proto, chair of the Solid Waste Committee, Barbara Eckstrom, solid waste manager and Harold Craft, associate vice president of facilities and business operations at Cornell will be the forum speakers. Ray Ching, recycling coordinator at Rutgers University, will share the successes of his program.

Willard Straight Hall

New York State Wine and Cheese Tasting Program for reunion weekend, June 11, 2 to 4 p.m. in the lobby and browsing library, Willard Straight Hall. Representatives from local wineries in the New York State Finger Lakes region will be on hand with samples of their best vintages for tasting by visiting alumni and guests. An array of New York State's finest cheese will accompany the wines. Admission is free. For more information call Cheryl Chambers at 255-4311.