

# CORNELL Chronicle

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## CORNELL LIFE

"Well, we're now one step closer to graduation!" one new student said as she climbed out of the pool after passing the Freshman Swim Test.

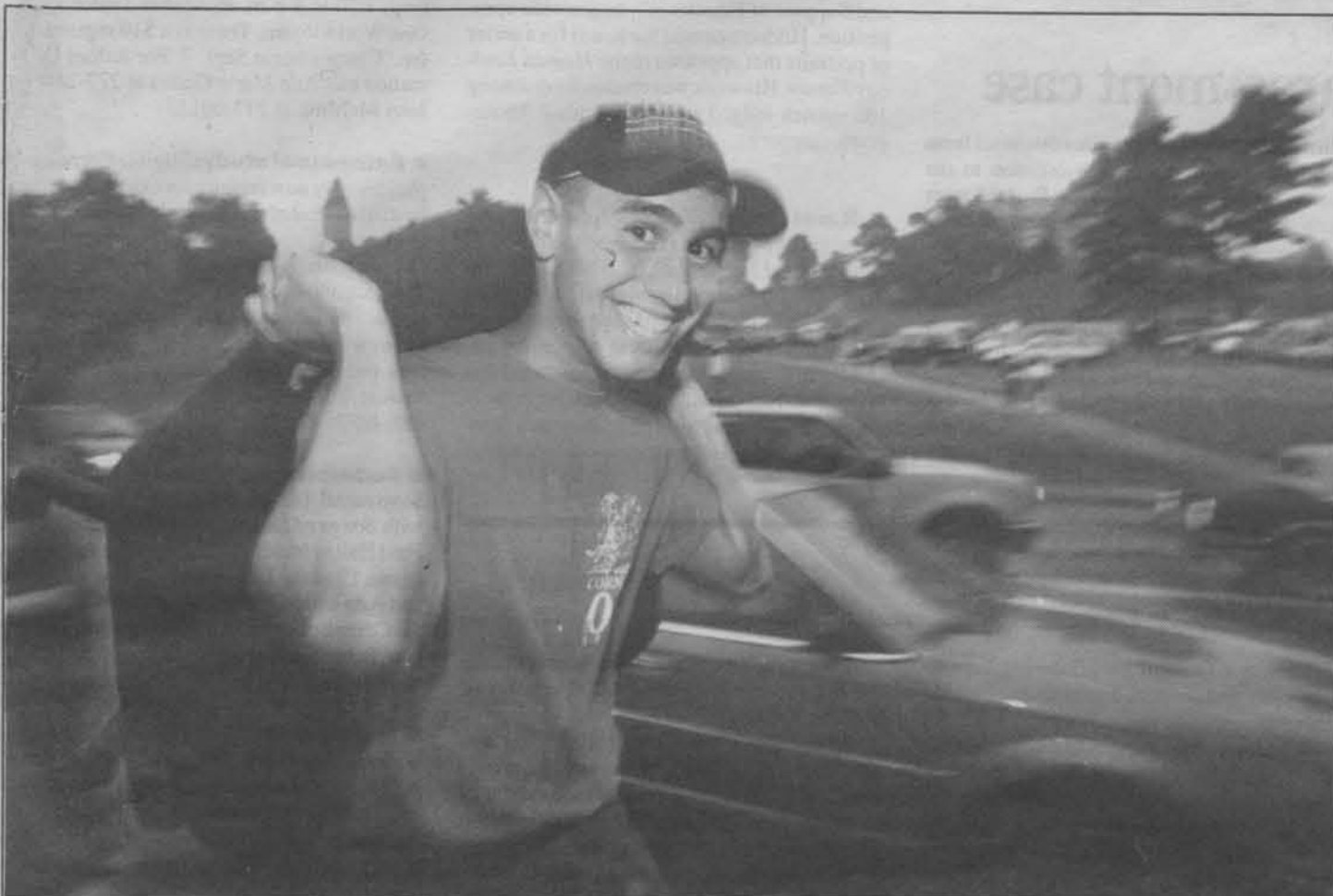
## CHIMES

The McGraw Tower chimes, the largest chime instrument in North America and the oldest continuously played set of bells on an American college campus, need some renovation.

3

9

## Class of '97 joins the 'extended family' of Cornellians



Peter Morenus/University Photography

Orientation counselor Jeffrey Lawrence, a sophomore in the College of Agriculture and Life Sciences from Elma, N.Y., carries a chair through the rain last Friday as he helps a new student move into a residence hall.

## Rhodes, deans tell students to get involved

By Ericka Taylor

Don M. Randel, the Harold Tanner Dean of the College of Arts and Sciences, told new Arts and Sciences students and their families on Saturday just how he realized that the academic year was fast approaching:

"I had my first performance-anxiety dream," he said.

Students and faculty are generally uniformly nervous about the new year to some degree, Randel said. The important thing is to determine what to do with this nervousness.

On Saturday, all of the university's more than 5,000 new freshmen, transfers and graduate and professional students were given advice on everything from ways to handle their nervousness to healthy attitudes to develop, when the academic deans addressed the newest members of their student bodies and President Frank H.T. Rhodes gave his annual universitywide convocation.

Rhodes welcomed new students as "members of the extended family called Cornell," and he said that while the "university is based in a small, upstate New York community, it is literally part of a worldwide community."

Before addressing the students directly, Rhodes offered encouragement to their parents. "Yes, you have prepared your sons and daughters well for this new experience, or they would not be here. Yes, they will change; and yes, they will still need you."

The traditional makeup of a successful parent of a college student is one with an "open heart, mind and wallet," Rhodes said. But he had his own additions to the list. "Stay in touch," he said, be it with calls, packages or letters. "Recognize and accept change and be reassured that those you lose as children, you will gain as friends."

Rhodes encouraged new students that they could "prosper, succeed and flourish here. Don't be overwhelmed by the size, complexity and sheer brain power. You can succeed if you do your part."

Students also should reach out to new experiences and new people in order to explore

Continued on page 6

## Orientation '93

Some 5,000 new students and their families attended orientation, which began Aug. 20.

President Frank H.T. Rhodes and the academic deans welcomed the new students, and Professors James B. Maas and Andrea Parrot delivered lectures.

Activities were planned by students on the Orientation Steering Committee, including senior co-chairs Karley Ausiello and Janice Kam, Fred Archer III, Michela Barba, Billie Huntley, Sarah Klinowski, Andrew Molnar and Will Tseng, and juniors Maria Carracino, Allison Halpern, Michael Rollins, Andy Yang and Brook Yules.

For more coverage of orientation, please turn to Pages 6 and 7.

## 46 nations and 48 states represented in freshman class

By Sam Segal

The new freshman class, representing 48 states and 46 nations, is somewhat larger than last year's class and virtually matches its high-achievement profile.

"Although we still have two more years before the college-age pool resumes its growth, we have once again drawn a class of the highest quality," says Susan H. Murphy, dean of admissions and financial aid.

"And while enrollment is larger," she added, "both the financial aid budget and housing

accommodations are ample for the class."

Forty-seven percent of the new class has demonstrated need for financial aid, down one percentage point from last year's figure.

The enrollment, unofficially, is 3,247 — up by 288 from last year's, largely because of a surge in College of Engineering enrollment. Students come from every state but North and South Dakota; the male-female split is 55-to-45 percent (changed from 52-to-48); and 27 percent of the students are from minority groups (down from 28 percent).

Continued on page 6

## Theory Center gets \$13 million toward new IBM supercomputer

A \$13 million federal grant, announced earlier this month by Gov. Mario Cuomo, will enable the Cornell Theory Center to accelerate large-scale parallel computing technology with a new IBM supercomputer.

The Department of Defense's Advanced Research Projects Agency (ARPA) and the National Science Foundation (NSF) will provide \$13 million for Theory Center research on an IBM Scalable POWER Parallel Systems supercomputer. The 64-processor supercomputer currently installed at the Theory Center will grow to a 512-processor next-generation model, making it the most powerful installation of the IBM Scalable POWER Parallel Systems product line, operating at more than 100 billion calculations per second.

The system will be purchased with funding from federal agencies, New York, Cornell and industrial partners.

At an Aug. 10 news conference in New York City, Cuomo said, "Today's announcement of a \$13 million grant to the Cornell Theory Center is another step in the A New New York program that is building New York into the high-technology center of the nation. It will enhance Cornell as a premier facility for supercomputing and provide researchers with still more tools as we push the horizons of our knowledge and expertise."

The system will be used by scientists and engineers across the nation for research in a wide variety of disciplines — at speeds exceeding 100 gigaflops (billions of floating-point operations per second). The Theory Center also plans to use the new system to introduce commercial users to the scalable computing advantages of RISC-based, parallel computing.

The NSF is supporting the Cornell Theory

Continued on page 8



Photo courtesy of IBM

Gov. Cuomo (left) discusses high-technology issues at a news conference in New York City announcing a \$13 million federal grant to the Theory Center. With him are Theory Center staff (from left) Allison Loperfido, staff writer; Peter Siegel, director of the National Supercomputer Facility; and Malvin Kalos, Theory Center director.



## NOTABLES

The Clyde A. Duniway Prize, awarded to an outstanding history major, has been given to **Sujay Rao '93**. Also, **Stephen E. Rowe '93**, has been awarded the George S. Lustig Prize, given to an outstanding senior history major planning to continue in the field.

**Joan K. Davidson**, a Cornell alumna, has been nominated by Gov. Mario M. Cuomo to serve as commissioner of the New York State Office of Parks, Recreation and Historic Preservation. "She is superbly qualified to lead our effort to keep our park system the best in the nation," Cuomo said. Since 1977,

Davidson has served as president of the J.M. Kaplan Fund in New York City, a fund that in part supports urban design, historic preservation, environmental protection and land-use planning. She also has chaired numerous committees, including the Gracie Mansion Conservancy and the New York State Council on the Arts. Davidson majored in English and graduated with a bachelor of arts degree in 1948.

**Stephen D. DeGloria**, associate professor in the Department of Soil, Crop and Atmospheric Science, has been named by the Soil and Water Conservation Society (SWCS)

as a recipient of the 1993 Commendation Award. This honor is given to SWCS members for professional achievement and for service to the society at the state or regional level. DeGloria was recognized for his contributions to the Empire State Chapter of SWCS and for his achievements through publications, technical reports and presentations, and academic research activities in the area of soil science and conservation.

**Chris Hildreth**, director of University Photography, has received the Silver Medal for his entry in the Council for Advancement and Support of Education's nationwide competition. Hildreth earned the honor for a series of portraits that appeared in the *Human Ecology Forum*. His work was chosen from among 103 entries judged in the Individual Photograph category.

**Karel Husa**, Kappa Alpha Professor Emeritus of Music, has received the National Federation of Music Clubs (NFMC) Citation. This award represents the highest honor given by the NFMC for "distinguished service to the musical, artistic and cultural life of the nation." The organization's president stated that Husa, who received the 1969 Pulitzer Prize in music, "has a worldwide reputation as a composer, conductor and teacher of composition."

## Statement on sex harassment case

Don M. Randel, the Harold Tanner Dean of the College of Arts and Sciences, issued this statement on Aug. 23:

"In the course of the academic year 1992-93, Professor Thomas F. Lynch of the Department of Anthropology was charged with violations of the University's policy on sexual harassment. Professor Lynch was suspended with pay by the Dean of the College of Arts and Sciences, and hearings were held by the Professional Ethics Committee of the College in accordance with its published procedures. The Committee found that violations had oc-

curred, and it recommended his dismissal from the faculty. Appeals of this decision to the Dean of the College and to the Provost were denied. The University's dismissal procedures governing tenured members of the faculty were set in motion by the President's determination pursuant to University policy that further proceedings were warranted. Subsequently Professor Lynch elected to retire from the University effective June 30, 1993, as he was eligible to do, and no further proceedings will be initiated. This is the only comment that University officials will have on the matter."

## OBITUARIES

**Robert G. Engel '53**, a just-retired member of the board of trustees, died of a heart attack on Aug. 24 while visiting friends in Texas. He was 61.

Engel, a retired executive at J.P. Morgan & Co. and chairman and chief executive of Allied Capital Partners, served on Cornell's board from 1971 to 1976 and again from 1978 until June 30 of this year. He served on the audit, nominating, membership, development, executive and investment committees during his tenure and had been named a Presidential Councillor.

He was a member of the advisory councils for the Johnson Graduate School of Management and the Glee Club.

His other university activities included memberships on the Cornell University Council, the administrative board of the Laboratory of Ornithology, the joint board of the New York Hospital-Cornell Medical Center, and the board of overseers for the Medical College and Graduate School of Medical Sciences.

He was a football player during his college years and remained an active booster of athletics.

In addition, he was president and chairman of the executive committee of the board of trustees at the Cathedral Church of St. John the Divine in New York City.

He is survived by his wife, Jane; two daughters, Jennifer Engel Young of Ithaca and Elizabeth Hunter Engel of Manhattan; a son, Robert A. of Manhattan; and two grandsons.

A memorial service will be held on Friday, Sept. 17, at 4 p.m. at the Cathedral of St. John the Divine, 1047 Amsterdam Ave., in New York City. A delegation from the university will attend the service.

The family suggests that, in lieu of flowers, memorial contributions, if desired, be made to Cornell University, in care of Jean Gortzig at 55 Brown Road, Ithaca, N.Y. 14850-1266; the Engel Foundation Inc., Box 42, 80 Wearimus Road, Ho-Ho-Kus, N.J. 07423; or the Cathedral of St. John the Divine (in memory of Robert Engel), 1047 Amsterdam Ave., New York, N.Y. 10023.

The Cornell Laboratory of Ornithology's Library of Natural Sounds lost its foremost contributor of audio recordings Aug. 3 when a research plane carrying **Theodore A. Parker III** struck a mountainside in the cloud forest of Ecuador.

Parker, 40, a research associate at Louisiana State University, died while conducting an aerial, rapid assessment survey of natural habitats.

Parker rarely returned from an expedition without adding more recordings to the approximately 10,000 he had already archived at Cornell, said Gregory F. Budney, curator of the Library of Natural Sounds (LNS) and a longtime associate of Parker's.

"Ted Parker was the single greatest contributor of recordings to the collection. He and Al Gentry were field biologists without peer," Budney said. "He always carried a tape recorder, and he knew bird sounds like no one else in the world. Ted Parker left us an incredible legacy, and it's our job to preserve it and see that it is made available to other biologists."

Of the 5,100 species of birds and other animals represented in the LNS collection, some 1,600 were recorded by Parker. He was a member of the board of administrators of the Laboratory of Ornithology as well as a steering committee member of the LNS, which, with more than 90,000 tapes, is the world's largest archive of animal recordings.

Parker had made another 10,000 recordings that were to be deposited at LNS, Budney

said, noting that the sound recordist was known for his ability to identify 4,000 species of birds by their calls alone.

At the time of the plane crash, Parker was helping conduct a tree-top survey of biological diversity along the mountainous coast of Ecuador, near Guayaquil, for Conservation International's Rapid Assessment Program. That conservation program, which was established by Parker, tries to determine which tropical habitats contain the greatest variety of flora and fauna.

Peter H. Raven, director of the Missouri Botanical Garden, told Associated Press: "It's always a risk in this business, and these guys pushed the envelope as much as anybody." Another American, Alwyn Gentry, 48, senior curator at the Missouri Botanical Garden, was among the five killed in the crash.

— Roger Segelken

**Graeme Jennings**, former fencing coach here, died from injuries suffered in a two-car accident in Ovid on Aug. 21.

Jennings was assistant coach for three years before being named head coach in 1988. The fencing program was cut following the 1992-93 season.

"It's very sad. He was a wonderful fencing coach and did an outstanding job for Cornell under some very difficult circumstances," Athletic Director Laing Kennedy told the *Ithaca Journal*.

Before joining Cornell, Jennings was a coach at the University of Chicago and had helped coach the U.S. Olympic team.

**Richard A. Huff**, 28, a graduate student in computer science, died the week of Aug. 15 in his apartment on Maple Avenue.

An investigation is being conducted by the Tompkins County Sheriff's Department, said Scott C. Hamilton, senior investigator in the Cornell Police Department.

At Cornell since 1988, Huff was a doctoral student in the parallel compiling group in the computer science department. His adviser, Keshav Pingali, associate professor of computer science and of the Advanced Computing Research Institute, said Huff was "a very good student" who was to receive his doctorate in December.

Huff's hometown address was in Santa Clara, Calif. A memorial service will be held in Los Gatos, Calif., on Sunday.

Huff is survived by his parents, Charles E. Huff and Sandy Badger of California, and a sister, Wendy Huff.

## BRIEFS

**Breakfast with Rhodes:** There are a limited number of openings available for students to have breakfast with President Frank H.T. Rhodes. Those interested are invited to call his office at 255-5201 to make a reservation. The breakfasts are held from 7:30 to 8:30 a.m. in the Elmhurst Room of Willard Straight Hall. Reservations are made on a first-come, first-served basis. Those with reservations will be reminded by mail a few days in advance of the breakfasts.

**English classes:** Registration for free English classes sponsored by the Cornell Campus Club will take place on Thursday, Sept. 2, from 7:30 to 9 p.m. in Anabel Taylor Hall's One World Room. There is a \$10 registration fee. Classes begin Sept. 7. For further information call Ann Marie Dullea at 277-2488 or Joan McMinin at 277-0013.

**Extramural study:** Eligible Cornell employees may now register for extramural study by mail instead of registering in person. Classes begin today, and mailed registrations for the fall semester must be received on or before Sept. 3. For more information, or to receive the non-academic employee registration form and the new *Extramural Study: A Guide to Policies and Procedures*, call the School of Continuing Education and Summer Sessions at 255-4987.

**Auditions:** Auditions for the Cornell Savoyards' fall production of *Trial by Jury* with *Songs of Law* will be held on Aug. 30 at Ford Hall at Ithaca College; and on Aug. 31 in Room 12 of the Community School of Music and Arts and in Room 116 of Lincoln Hall on the Cornell campus. Auditions are from 7 to 10 p.m. Bring a prepared piece; accompanist will be provided.

**Watch your step:** Temporary crosswalks, sidewalks and walkways will remain in place at two major points on campus until construction projects are completed this fall. Harry MacPherson, director of construction management, says East Avenue between Campus and Tower roads, and Thurston Avenue near Balch Hall are two bottlenecks where drivers and pedestrians are urged to take extra caution.

East Avenue will be closed to vehicular traffic through mid-September for replacement of a 70-year-old steam line. The ditch for the steam line will also carry a new water line and other utilities, according to Jerry Zygmuntowicz, project manager. Pedestrian traffic is being maintained around and across the site. The road is scheduled to reopen in mid-September; the project should be completed in October.

On North Campus, Balch Drive has been realigned to improve vehicular and pedestrian access in the area and to provide improved parking near Alumni House. All the sidewalks adjacent to Balch Hall have been completed. Temporary walkways and crosswalks in the vicinity of Noyes Lodge and Alumni House are now in place, MacPherson explained, and new sidewalks will be constructed as soon as possible. The overall project should be completed by Oct. 15.

In the meantime, MacPherson said that pedestrians should observe all posted walkways for their own safety, and motorists should be especially careful in the area of Triphammer Bridge and the intersection of Thurston and Wait avenues.

**New stop signs:** Two additional stop signs have been installed at the intersection of Route 366 with Judd Falls Road and the entrance to the synchrotron laboratory. The change follows a traffic study completed by the State Department of Transportation in response to local concerns.

## CORNELL Chronicle

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## CORRECTION

Due to an editing error, the Aug. 5 *Chronicle* incorrectly referred to Johnson Graduate School of Management alumnus Isamu Ueda, who was elected to the Japanese Diet, as "she." Ueda received a Johnson School M.B.A. in 1986.





Cornell Police officer Penny Guerra rides over wooden risers as fellow officers act as spotters during a recent training session for policing by bicycle. Ithaca Police officer William Vint waits his turn.

Sharon Bennett/University Photography

## Cornell police take to two wheels

By Nancy Rosen

A Cornell Police officer on campus responds to any number of calls on a typical day, including burglar alarms, Campus Store shoplifters or motorists locked out of their cars. To handle these problems and to achieve community-oriented policing, six officers are riding on a bicycle patrol.

"If you look at the roadway system, the patrol car covers maybe 40 percent of the campus on routine patrolling," said Officer Frederick Myers, a member of the bike patrol. "A bike patrol officer could cover that area plus the quads and trails, which is equivalent to 100 percent of campus."

It is anticipated that the bike patrol will be more effective than car-based officers at regulating other bicyclists, as well. For example, after a cyclist rolls through a stop sign and cuts through a quad, the bike patrol officer could follow, Myers said.

Cornell Police's inventory for the program includes two 21-speed mountain bikes that are equipped with police equipment.

To prepare for the bike patrol program, Myers and three other officers representing Ithaca College, the Ithaca Police Department as well as Cornell attended the International Police Mountain Bike Association Conference in Florida. The four-day course instructed the officers on the basics of policing via bicycle and on laws covering bicycle riding and how to ride according to standards set down by the Legal American

Wheelman, a cyclist advocate organization.

The officers who participated at that conference in turn taught a four-day course at Cornell from Aug. 10 through 13, sponsored by the Finger Lakes Police Mountain Bike Association. Police officers from Cheektowaga, East Syracuse, Schuylers County, Manlius and Ithaca attended. Campus police from the State University of New York at Binghamton, Albany and Cortland attended as well.

Topics covered included bicycle safety, equipment and maintenance, nutrition and fitness, vehicle and traffic laws, and bicycle riding at night. They were also instructed on bicycle-motor vehicle crashes because traffic and bicycle handling skills were formulated on how to avoid crashes of this kind.

"A crash analysis helps law enforcement officers understand what the most common and serious types of accidents are, and that understanding helps cyclists avoid dangerous situations," said Lois Chaplin, a Cooperative Extension associate involved with the program.

"One of the goals of the program is make the connection between education and law enforcement," Chaplin continued. "The officers learned how to teach handling skills to young children. Police cyclists are an excellent resource for a community organization that wishes to teach children these skills."

The Cornell Police force consists of 42 officers and 13 civilians (including dispatchers) serving the campus.

## Faculty to review financial aid policies

By Sam Segal

Meetings of every academic department are being set up this fall to gather faculty views on future financial aid policy.

The effort, arranged over the summer by the new dean of the faculty, Peter Stein, responds to a decision at a meeting in May of the Faculty Council of Representatives.

The FCR Committee on Admissions and Financial Aid sought FCR views on the extent to which Cornell policy should meet students' established financial need. But the 50 or so attending faculty agreed that the importance of the question justified going beyond the FCR to poll faculty views and approved a resolution by faculty trustee Joseph Calvo that the issue be brought to the faculty at the department level.

"Faculty members don't go to FCR meetings or to meetings of the full faculty, but they do go to department meetings," says Stein. "The notion was that on a matter of such importance, we ought to go to where they sit — to their nests."

So, in July, the committee's co-chairs — Gerald Feigenson and Gail Scott White — along with Stein and Calvo recruited 25 faculty volunteers, each of whom agreed to lead three departmental discussions during the fall semester. Stein says the goal is to give every faculty member a chance to participate in a discussion of such vital concern to the university.

The sessions will begin with a 20-minute presentation of the history of Cornell financial aid and the critical choices that recent developments have raised. Discussions will follow, and each session will end with a vote on the options presented.

In FCR discussions over the last few years, faculty have generally favored keeping a strong and generous financial aid program. But with flat revenues and rising student need —

increased still further by the recession — undergraduate financial aid has claimed an increasingly large percentage of the general-purpose operating budget. For a decade, the percentage increase for that aid has averaged about twice the increase in tuition. For the last academic year, the increase was originally budgeted for about 6.5 percent; but an overrun of almost \$3 million made the actual increase closer to 18 percent.

At the departmental meetings, faculty will be asked to register their degree of support or opposition for several options that will be presented as being not necessarily mutually exclusive.

One set of options would alter the admission and financial aid policy through one or more of the following four approaches:

- Making ability to pay a potential positive factor (need-conscious admission).
- Reducing the number of admitted students offered aid (admit/deny).
- Reducing the average grant size.
- Reducing the number of aid-receiving students by denying aid to, for instance, foreign students or those enrolled in study abroad.

Another kind of option would keep the current admission and financial aid policy but would try to control the financial aid budget by limiting tuition increases to the rate of inflation. Though some details are still undetermined, it is possible that this approach would favor capping the number of faculty and limiting the faculty salary-increase pool, administrative costs and support-service costs to the increase of general inflation. (Stein noted that under this option, differences between endowed and statutory colleges would be significant.)

## CORNELL Life

### Taking the plunge

The deck around the pool at Helen Newman Hall was filled last Friday with women from the Class of '97. Six at a time they lined up across the deep end of the pool and when given the Ready, Go! jumped in.

The 75-yard Freshman Swim Test was simple enough for most of them. And after what had been a long and exhilarating day — up since 4 or 5 a.m. to drive to Ithaca, move into a room, unload, unpack, shop at the mall for what was left behind, register, get a computer network I.D., maybe buy a computer and open a checking account; after all of this, it was nice to take a dip in the pool.

Some parents, brothers and sisters looked on; but for the most part, the day-old freshmen were on their own for the first time.

"Well, we're now one step closer to graduation!" one woman said, as she climbed out of the pool triumphantly.

The non-swimmers among them were not so blithe. If they failed, their gym classes would be swim lessons for one or two semesters. "I don't want to take swim class when there are so many better classes to take," one woman said, sitting on a bench to rest after her third, still unsuccessful attempt.

Another woman said she dreaded going in over her head because she had almost drowned once when she was 5 years old. She had been up all night worrying about the test, she said.

#### This is not a race

Still, when her turn came to take the plunge, she did it. She stood at the pool's edge with the others and looked down her lane to the other end, 25 yards away. It might as well have been France, and this the English Channel.

This is *not* a race, shouted Fred DeBruyn, director of aquatics and a scuba diving instructor. You should see the men, he added as an aside. They're even worse. We tell them it's not a race, but as soon as they're in the water they try to whip through as fast as they can. So, he said, take as long as you need. Swim any stroke you like, but we want to see one length on your front, one on your back and a third one any way you want.

The woman afraid of drowning took a deep breath and jumped in. She put one arm in front of the other and started swimming, and though trailing behind the swimmers in the next few lanes, she managed, in short, thrashing strokes, to swim to the shallow end. Prohibited from resting, she pushed off from the wall, lying on her back and moving her arms as if she were making angels in the snow. Swimming that way, she made it back to the deep end.

But the third leg undid her.

"Roll over on your back; it'll be easier to breathe," DeBruyn shouted to her as she started to sputter. She stopped, treaded the water, then panicked, and grabbed onto the side of the pool, disqualifying herself.

#### There is a strategy

Painful as it was to watch someone so frightened, that moment was also a joyous one, for the sun suddenly broke through the clouds and a host of cherubs descended from On High, carrying a golden ribbon that said: There is a strategy to taking the Freshman Swim Test, just like any other test.

One length of doing the crawl can leave you winded if you haven't been swimming in a while. So why do so many people do it? Why don't they pick a gentler, slower stroke that keeps the head above water? Like the sidestroke. It's cultural. Americans swim the crawl. It's what we think of when we think of swimming. Europeans prefer the sidestroke.

So, to pass the Cornell Freshman Swim Test, consider floating on your back and wiggling your way like a jellyfish. You can do that for two lengths and try a slow, steady doggie paddle for the third. Hey, it's legit. And it's not undignified, either.

Because the Freshman Swim Test is not about showing up Pablo Morales; it is about surviving in the water. And it is less a test of proficiency in strokes than a test of creativity; it's about devising a way to propel yourself from one end of the pool to the other without swallowing too much water.

What's that? You couldn't care less about swimming and this is all quite tiresome?

Then think about the freshman who gives up, at 3 a.m., on an essay for a Freshman Writing Seminar, because he's exhausted and burned out from trying to do the thing *perfectly* instead of just doing it at all.

— Carole Stone



# Molds in fruit-based drinks can pose health risk

By William Holder

Unseen and untasted by consumers, toxin-producing molds contaminate some fruit-based drinks and could pose an uncertain health risk, according to a Cornell scientist.

But it is almost impossible to assess the likelihood that any particular fruit drink is contaminated, because detecting small quantities of these heat-resistant molds is extremely difficult, said Don F. Splittstoesser, professor of food science and technology at the Agricultural Experiment Station in Geneva.

After more than 20 years of experience in working with these molds, which produce cancer-causing mycotoxins, Splittstoesser is convinced that they pose risks that warrant

better detection methods.

His investigations of heat-resistant molds have included baby food fruit purees, lemon pie filling, cherry pastry filling, apple juice, Concord-based grape juice and spaghetti sauce.

"Spoilage caused by these molds is not always apparent to the consumer," he said, "especially in beverages where there is little obvious change in flavor and texture. It is likely, therefore, that children, the aged and other consumers could unknowingly ingest fruit-based foods which contain mycotoxins."

"As far as we know, the molds are not an acute public health problem, but there's always the potential for a problem," he added.

Commercial processing conditions for fruit products usually do not destroy these heat-

resistant spores. Increasing the heat beyond normal processing temperatures of 80 to 90 degrees Celsius, he explained, would lead to caramelization and other adverse effects.

"We need improved methods to detect spores," he said. His studies with *Neosartorya* spores, which are very heat resistant and produce a variety of mycotoxins, show that they exist in a highly dormant state and often fail to germinate and produce colonies even when cultured on rich media. Current detection methods rely on germination, so dormant spores easily can elude an investigator.

"I think sometimes there are spoilage problems that even the processor doesn't recognize," Splittstoesser said. "And consumers may drink something that's just a little spoiled

without noticing any problem."

If the spores could be made to germinate, he explained, that would solve problems of detection and treatment since the germinated spores are sensitive to the heat of pasteurization.

Heat-resistant molds were largely unknown in the United States before the late 1960s, Splittstoesser said. A spoilage outbreak in a grape-based drink led him to the first detection of such molds in New York, which he reported in 1971. His investigation of New York orchards and vineyards showed that the molds are prevalent in soil, weeds, leaves and decaying vegetation.

Reports of contamination have increased in recent years, probably because there are more fruit-based drinks on the market, he said.

## 'Primitive' farming holds lessons for sustainability

By Roger Segelken

In seemingly chaotic experimental gardens, 20th century agronomists are rediscovering principles of a "primitive" farming system that might restore sustainability to agriculture.

The focus of Cornell's American Indian Agricultural Project is the Three Sisters — corn, beans and squash — planted together in earthen hills. It's something like the way indigenous people of the Northeast once fed a civilization without chemical fertilizers, pesticides or fossil fuels.

"This is not to deny the incredible productivity of modern agriculture," said Jane Mt. Pleasant, a Tuscarora Indian who is a Ph.D. soil scientist, assistant professor in the College of Agriculture and Life Sciences and coordinator of the American Indian Agriculture Project. "But there is trouble ahead for an energy-intensive system that degrades the soil and water and depletes our resources." For example, world reserves of the fertilizer ingredient, phosphate, will run out in about 50 years, even before petroleum reserves are gone, she notes. "We are failing to balance resources with productivity. We are exceeding the carrying capacity of the land."

Beginning about 800 years ago, American Indians in what is now New York sustained a thriving confederacy of nations by farming. Iroquois farmers inherited 7,000 years' of corn-growing knowledge in North America, and they continued to improve dozens of corn varieties through sophisticated, selective breeding, according to Mt. Pleasant. Similar care went into breeding and cultivating beans and squash. Corn stalks in each hill supported vining bean plants, a legume that enriched the



Summer students in the Cornell Environmental Sciences Undergraduate Research Experience, Deborah Katz (left) and Miriam Litfin (right) help American Indian Agriculture Project Coordinator Jane Mt. Pleasant monitor "Three Sisters" crops at the Indigenous Preservation Network Center.

soil with nitrogen, while large-leaved squash plants helped block weeds. Post-harvest crop residues were returned to the hills as organic matter. The Iroquois lacked draft animals to plow the soil, so erosion was seldom a problem.

Now, modern agronomy is "inventing" sustainable agriculture practices, Mt. Pleasant observes, and traditional techniques are getting new names: no-till (planting without plowing), ridge tillage (although farm machinery can't duplicate the Three Sisters hills) and intercropping.

"This is going to look like an overgrown field if you're used to planting one crop at a time," Mt. Pleasant warns on the way to test plots at the Indigenous Preservation Network Center, 12 miles southeast of Ithaca. Closer inspection reveals rows of hand-formed hills, each with three corn plants and various combinations of bean and pumpkin plants spaced at different intervals. The experiments should show the effects of spacing and different combinations of the Three Sisters on crop produc-

tivity, soil, and erosion- and weed-control.

Helping design and carry out the experiments are students in the Cornell Environmental Sciences Undergraduate Research Experience, a program of the National Science Foundation. The study also is supported by the College of Agriculture and Life Sciences and the American Indian Program.

"Our modern, energy-intensive, large-scale system of agriculture has been in place for only 40 or 50 years, and already it is showing signs of stress," Mt. Pleasant said. "A sustainable system that worked for 500 years must have something to share with the future."

CORNELL  
Research

## Scientific discovery is messy, fallible, authors say

By Larry Bernard

The stereotype of science being either all good or all bad is wrong and dangerous, and the public never will understand science until it understands that, a Cornell researcher says.

Science is not a fiendish devil but more like a bumbling giant, like the Golem, the mythical East-European Jewish creature created out of clay that has the potential to wreak destruction but does not know its own strength, Trevor Pinch argues in a new book, *The Golem: What Everyone Should Know About Science* (Cambridge University Press, 1993). Pinch, Cornell associate professor of science and technology studies, teaches the sociology of science and studies the history and sociology of science. He co-wrote the book with Harry Collins, professor of sociology and director of the Science Studies Center at the University of Bath, England.

The metaphor of science as golem is meant to illustrate that science has the potential for great power, but that it could be nasty if it gets out of control. "The public tends to see it one way or another. But science is not all good or all bad. The personality of science is neither that of a chivalrous knight nor that of a pitiless

juggernaut. We're trying to steer a middle course," Pinch said.

The authors use seven case studies in the history of science to show that science is fallible and messy, each its own chapter that can be read in any order: the chemical transfer of memory by James McConnell and Georges Ungar; experiments that "proved" Einstein's theory of relativity; cold fusion; Louis Pasteur and the origins of life; gravitational radiation; the sex life of the whiptail lizard; and the missing solar neutrinos.

By displaying science, the authors show that the process is rife with human fallibility. For example, the cold fusion experiments, still unresolved, had two University of Utah scientists claim to create energy through cold fusion, but they were ostracized from the scientific community. Pinch used the Cornell Cold Fusion Archive for this study.



Pinch

"This is a typical controversy," Pinch said. "Experiments are rarely clear-cut, and theories are challenged. With cold fusion you had real conflict among the so-called 'experts.' But it's wrong to view the Utah scientists as demons. They may have got it wrong, but they're more like failed innovators."

"Scientists are not gods. It's dangerous for people to believe science will deliver what it cannot," Pinch continued. "The public should not be surprised that experts disagree. The model is that science is all about certainty and truth, but that really doesn't describe it. Science is made by humans — like the golem — and thus has human fallibility."

This view is not anti-science, the authors argue: "Scientists are neither gods nor charlatans; they are merely experts, like every other expert on the political stage. They have, of course, their special area of expertise, the physical world, but their knowledge is no more immaculate than that of economists, health policy-makers, police officers, legal advocates, weather forecasters, travel agents, car mechanics or plumbers. The expertise that we need to deal with them is the well-developed expertise of everyday life; it is what we use when we deal with plumbers and the rest."

## Mollusk fossils yield clues to mass extinction

By Larry Bernard

Environmental change causes not only extinction but origination of species, a study of East Coast seashells by a Cornell researcher has found.

A study of mollusks along the Eastern seaboard, particularly in Florida, also shows that evolution may have occurred there faster than scientists have thought, said Warren D. Allmon, adjunct professor of geology and director of the Paleontological Research Institution on West Hill.

By analyzing fossils in Florida and elsewhere, researchers have found that a mass extinction did wipe out species 3 million years ago, but the number of kinds of shelled animals has not changed in the region for at least that long.

Allmon, with co-authors Gary Rosenberg of the Academy of Natural Sciences of Philadelphia, and Roger Portell and Kevin Schindler of the Florida Museum of Natural History, reported their findings in the cover story of *Science* on June 10.

"The seashells that wash up on the beaches of Florida and elsewhere along the Eastern seaboard are the products of millions of years of turbulent evolutionary change," Allmon said. "But the number of species has not changed. This implies that many new species arose to take the place of those that became extinct."

"Seashells" are mollusks, mainly clams and snails. Because they are hard, they fossilize readily, and their history can be studied.

Scientists previously believed that a "regional mass extinction," similar to the event which eliminated the dinosaurs but much smaller in effect, took place in the Western Atlantic Ocean approximately 3 million years ago, and that this event reduced the number of species in the region to a level lower than that of the Eastern Pacific, along the West Coast of the Americas.

Some scientists have claimed that this extinction event was due to sharp temperature decreases associated with the beginning of the ice age. But the number of species has not changed.

By counting the number of species in the Western Atlantic today, the researchers also found that there are not fewer species of snails there than in the Eastern Pacific, contrary to what has been commonly believed.

Among the implications are that evolution may be happening much more quickly along the East Coast than was previously believed and that environmental changes cause not only extinction but origination of species.

Fossil shells from the "spectacular" shell pits of Sarasota, Fla., played a special role in the research, said Allmon, who teaches geology and biology at Cornell.

These deposits are among the greatest accumulations of fossils throughout the world and have been studied by paleontologists for many years; the shells are quarried for construction fill.

The Paleontological Research Institution is a private research organization founded in 1932. It houses one of the largest fossil collections in North America and publishes one of the oldest paleontological journals in the world.



# Perfumes' key may come from plant tissue cells

By Roger Segelken

Plant cell lines developed by a Cornell food science student are producing "natural" chemical precursors of beta-damascenone, the compound with the warm-apple-pie smell that occurs, in its synthetic form, in the world's costliest perfumes.

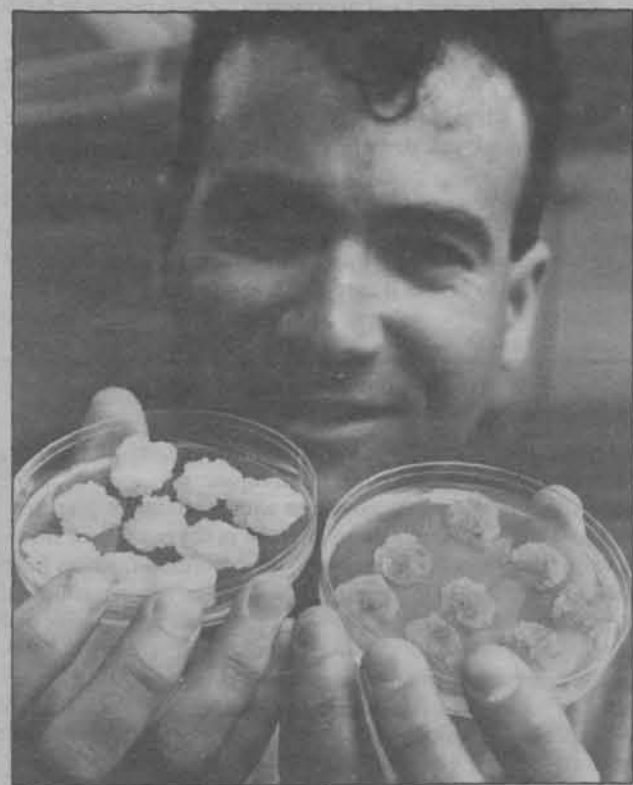
The original plant cells for the Cornell beta-damascenone tissue-culture system came from the petioles (or leaf stems) and immature fruit of Concord grapes, Kenneth B. Shure reported on Aug. 24 at the national meeting of the American Chemical Society in Chicago. Shure presented his results at a session on fruit flavors.

Although beta-damascenone occurs in many fruits, flowers and even some animals, the compound has proved difficult to extract for commercial purposes, according to Terry E. Acree, Cornell professor of food science and technology. A tissue-culture system for producing beta-damascenone or its precursors could become a natural source of the valuable chemical for the food and fragrance industries, Acree predicted.

Shure is a food science graduate student in Acree's laboratory at the Agricultural Experiment Station at Geneva. He chose tissue samples from Concord grape plants growing in 1992 at the station, then cultured the cells with a variety of growth media and growth regulators for six months before finding a cell line that out-produces actual fruit in terms of beta-damascenone precursors.

By themselves, the precursors have no odor, Shure noted. Only after heating in acidic conditions — when apples are baked in a pie or cooked into applesauce, for example — do the precursors become the volatile beta-damascenone that attracts everything from pollinating insects to hungry humans.

"Beta-damascenone is found in the flowers and fruits of a great many plants — apples, grapes, tomatoes, passion fruit, strawberries, even tobacco — but not in citrus fruits," Acree said. The compound has been found in the muscle tissue of some fish, probably because they ate plants, he reported. "If



*Peter Morenus/University Photography*  
**Resembling applesauce, the tissue cultures developed by food science graduate student Kenneth Shure from Concord grapes yield a chemical precursor for the world's most precious perfumes.**

beta-damascenone has an evolutionary function, it seems to be to attract organisms involved in reproduction, including pollination and seed dispersal."

So it's not surprising that beta-damascenone's allure earns it a place in the most expensive perfumes, Acree said. But the fragrance-makers must buy a synthetic form of beta-damascenone because the extremely potent, natural plant compound occurs in such low concentrations that it cannot be readily extracted in quantity. Although synthetic beta-damascenone alone is "nature-identical" (that is, chemically identical to the natural compound), it usually retains chemical artifacts from the synthesizing process and can never be called "natural," the food scientist said.

By comparison, the precursors from plant-cell cultures become beta-damascenone free of synthetic artifacts when they are heated. Other than determining that the precursors are glycosidic, or sugar-based, the Cornell researchers have yet to precisely identify the compounds.

Furthermore, the Cornell tissue cultures, which look like fast-growing blobs of applesauce in petri dishes, are producing only minuscule amounts of precursors — between one and 10 nanograms (billionths of a gram) per gram of plant material. Commercial production would require 100 to 1,000 nanograms per gram, Acree said.



*Sharon Bennett/University Photography*  
**Vasudha Ravichandran (left), a research associate and textile chemist, and Professor Kay Obendorf, in their lab with a model of the molecular structure of ultrahigh-strength polyethylene fibers.**

## Acid treatment improves polyethylene fibers

By Susan Lang

Cornell textile chemists have come up with a comparable but cheaper way of improving the adhesiveness of ultrahigh-strength polyethylene fibers than traditional methods.

By treating the fibers with chlorosulfonic acid, the researchers have tripled the fibers' ability to adhere to the matrix materials for fiber-reinforced polymer composites for use in products from bullet-proof vests, marine ropes, kayaks and power boats to automobile, aircraft and machine parts and hydraulic cylinders.

"Unlike other capital-intensive treatments that ultra-high strength polyethylene fiber producers use to improve the adhesiveness of these composites, the acid treatment is a simple and inexpensive way that small manufacturers could use themselves," said Vasudha Ravichandran, a Cornell research associate and textile chemist. Ravichandran described the method at the American Chemical Society meeting on Aug. 24 at the Symposium on Protein, Cellulose and Synthetic Fibers. The work was done by Ravichandran and Kay Obendorf, both in the department of textiles and apparel in the College of Human Ecology.

The technique involves treating the fibers, in this case Spectra 1000 filaments (produced by Allied Signal), with chlorosulfonic acid, which triggers chemical reactions on the

fibers' surface that alter their chemical properties. Specifically, the surfaces produced reactive sites, or acid groups, for covalent bond formation with epoxy resins.

Using different types of measurements, the fiber scientists concluded that the treatment resulted in superior interfacial adhesion between the polyethylene fibers and epoxy resins without adversely affecting the fibers' other mechanical properties, including strength.

The researchers next hope to develop an even less expensive method by using a vapor of the acid instead of a liquid treatment. By doing so, they hope much less acid will be required for the treatment.

The research was supported by U.S. Department of Agriculture Hatch Funds.

**CORNELL**  
*Research*

## 33 percent of private water is contaminated

By Susan Lang

Between one-quarter and one-third of private water supplies in New York test positive for microbiological contamination, putting at risk the health of infants, the elderly, the ill or pregnant drinkers, according to two Cornell studies.

That's the bad news. The good news is that microbiologically contaminated water can be easily purified, drilled wells are much less likely to be contaminated than dug wells, and only 1 to 3 percent of wells have nitrate levels above the drinking water standard.

"There is no reason to believe that the ground water itself is contaminated," said Ann Lemley, an environmental chemist and associate professor in the department of textiles and apparel in Cornell's College of Human Ecology. "Rather, the contamination is the result of homeowners neglecting their water supply, which needs some protection and which should be tested every year or so."

Microbiologically contaminated drinking water can cause chronic diarrhea and compromise the immune system, Lemley said, resulting in increased vulnerability to infection and disease. Water becomes microbiologically contaminated when organisms from human or animal waste enter it.

In one study, Lemley and Linda Wagenet, an extension associate in the same department, tested approximately 800 private water supplies as part of 29 Cornell Cooperative Extension rural educational water clinics held throughout New York. Graduating senior John Schwartz, a natural resources major from Trout Creek, N.Y., worked on the project for the past three summers.

The data were used to establish the state's first database on private drinking water supplies. The study — the first look in 15 years at the quality of private water supplies in New York — will be published in the fall issue of the *Journal of Extension*.

The researchers found that 19 percent of the wells were microbiologically contaminated; of the dug wells or springs, 43 percent were contaminated.

"This sampling, however, is from those concerned enough

about their water to come to a workshop," said Lemley, who also researches chemical residues in drinking water, waste water treatment and household hazardous wastes. "These consumers were probably already taking better care of their water because of their interest in it."

In the second study, a random sample of 244 private wells in three upstate New York counties, 32 percent of the wells were contaminated with bacteria. This study will be published or presented during the next year.

In New York, some 2 million people upstate and 300,000 on eastern Long Island use private water supplies, either wells or springs. Private water supplies are not regulated; there is little or no well registration; and well drillers are not subject to registration or regulation in most New York counties, Lemley said.

"The only time most private water supplies are tested is when property is transferred," she said. "Yet, private water shouldn't mean free water. People need to take care of their water supplies with regular testing and shock chlorination every time their pump or well is worked on."

Shock chlorination involves flushing the entire water system with chlorine bleach to kill any microorganisms that may have entered the system during maintenance or repair work.

The studies found that dug wells are twice as likely to be contaminated than drilled or driven wells, because surface water, which is more likely to be contaminated, gets into them. Consumers can identify dug wells by their covers, which usually are about two feet across and are made of cement or wood; drilled wells are topped by a pipe that should extend one foot above the ground.

Testing water annually is especially important if pregnant women, infants, elderly, cancer patients, or other ill or high-risk persons are drinking it. If the water is not tested, these people should use bottled water, especially if the well is a dug well, Lemley said.

In addition, Lemley recommends that septic tanks be pumped every two to three years to prevent the solids from overflowing to the absorption field and contaminating the ground water.



## O R I E N T A T I O N 1 9 9 3

## Get more sleep, be sensitive in relationships, students are advised

By Mark Eyerly and Ericka Taylor

Cornell may be the only university at which freshmen arriving for orientation are told: "You are walking zombies." Then again, Cornell is the only university that can offer psychology Professor James B. Maas as an orientation lecturer. "If you need an alarm clock to wake up, you're pathologically sleepy," Maas told a capacity audience of new students

and their parents in Bailey Hall on Saturday. "You put yourself in jet lag without even going to Europe."

During his lecture, "Sleep Alert: Everything You Should Know About Sleep But Are Too Tired To Ask," Maas elicited laughter by showing scenes of people suffering from narcolepsy (falling suddenly into dream sleeping because of excitement) and sleep apnea (heavy snoring interrupted by repetitive, life-threatening breaks in breathing).

But he also elicited murmurs of surprise when he told the newest Cornellians that they needed eight to nine hours of sleep a night. Less sleep than that for people ages 17 to 25 leads to deficiencies in memory and creativity, he said.

Maas said that 100 million Americans are chronically sleep deprived and that many people think they are alert when they are not, something that has troubling implications for driving cars and piloting airplanes, he pointed out.

He suggested midday napping as a strategy for restoring mental acuity. Naps should never be longer than 15 to 20 minutes, though, or one will enter deep sleep and wake up feeling exhausted rather than refreshed, Maas added.

Other good strategies include exercise, eating at the same times from one day to the next, and going to sleep and arising at the same times day to day.

"The one-third of life we spend sleeping determines the health and productivity of the other two-thirds," Maas said.

Then, assessing the turnout for his lecture and referring to a concurrent talk on sexuality that Assistant Professor Andrea Parrot was giving in Kennedy Hall, Maas added: "I thought I was the only one who knew that you need more sleep than sex."

Those who did choose sex over sleep may have stayed awake contemplating the implications of Parrot's lecture, "Sex, Lies and Stereotypes: Does This Reflect the Cornell Student's Experience in Intimate Heterosexual Relationships?"

Parrot shocked her audience with the news that gonorrhea can be contracted without having intercourse. She was answering her own question as to when couples should discuss their sexual history — it's a good idea to do so before kissing; gonorrhea of the throat can be spread through that simple act.

Potential sexually transmitted diseases are not the only problems plaguing intimate heterosexual relationships. Just as serious are the issues of sexual assault and rape.

The Anita Hill hearings and the William Kennedy Smith trial made the double standard society sets for women and men even more obvious, Parrot said: "People develop attitudes about his entitlement and her responsibility." The woman whom Mike Tyson was convicted of raping "had a stellar reputation," and although he was punished, popular opinion on the matter asked, "What did she expect [from] going to a man's hotel room at two in the morning?"

Parrot said that it's not uncommon for two people to have drastically different perceptions of the sexual encounter they just had. "He'll walk away thinking he had a great time, and she believes she's just been raped."

Parrot's advice to men: "When a woman says no, believe her. If you think you're getting conflicting messages, stop and check it out."

Parrot also encouraged students and their families to avoid desensitization. The more people accept sexist jokes and violent pornography as "just the way things are or part of the fabric of society," the harder it is to make any positive change.

## Meeting of the minds



Sharon Bennett/University Photography

Don M. Randel (center, back to camera), the Harold Tanner Dean of the College of Arts and Sciences, confers with the college's associate deans and other top administrators prior to Saturday's college convocation. "Cultures redefine themselves," Randel told the new students and their families. "Your generation is to be the salvation of my generation, because you can change your way of thinking. The belief that the time of change has ended has the smell of death about it."

Freshman class *continued from page 1*

Despite the larger-than-anticipated enrollment, Campus Life Director Margaret Lacey says campus housing will accommodate the freshmen. She says the fit was made possible through close coordination of her office with the offices of admissions and financial aid and personalized efforts by program houses to interest incoming freshmen.

While the College of Engineering this year enjoyed a higher acceptance rate from those applicants it admitted, the overall university yield — students accepting admission offers — remained at last year's level of 46 percent.

More and more high schools do not keep or

report class standings. But among new freshmen from schools that do, 81 percent were in the top decile (down from 84). Their SAT scores are virtually the same as those of last year's class, with 87 percent scoring above 600 on math (up a percentage point from 86) and 50 percent scoring above 600 on the verbal tests (down one point). There are 138 Cornell Tradition Fellows and 52 Cornell National Scholars.

The percentage of freshmen choosing not to list any racial/ethnic identity keeps rising, reaching 13 percent this year. Among those listing an identity, the only minority group

whose numbers rose was Asian-Americans, whose 547 students make up 17 percent of the class, up from 16 percent last year. African-Americans, at 119, dropped from 5 to 4 percent; Hispanic-Americans, at 169, from 6 to 5 percent; American-Indians declined in number from 13 to 9. For the first time, Cornell invited students to identify themselves as coming from more than one ethnic or racial group, and 49 did so.

International students, at 234, represent just over 7 percent of the new class, an all-time high for the university. Canada provided the largest number, followed, in descending or-

der, by Hong Kong, South Korea, Malaysia, Taiwan, India and Japan.

In accordance with recruitment planning, there was an increase in the number of freshmen from outside the Northeast, rising from 29 to 31 percent of the class. Alumni children, at 349, represent 11 percent, up from 10; and faculty/staff children, at 41, are down by 5, remaining at just over 1 percent.

Also enrolling are 483 transfer students, 249 men and 234 women. Of these, 208 come from two-year and 275 from four-year institutions, 60 are from minority groups, 56 are international students, and 42 are children of alumni.

Get involved *continued from page 1*

the richness of Cornell beyond the horizon.

Asking for help was another suggestion, as was seizing opportunities. "Life's little sabbatical will never happen again," Rhodes said. "These are four golden years; don't squander them. Make no small plans; set no small goals. Embrace all that these years have to offer."

In the School of Industrial and Labor Relations, Dean David B. Lipsky encouraged students to take the initiative with faculty. "Knock on [professors'] doors. You will find them very responsive."

And Arts and Sciences Dean Randel advised students to communicate with the faculty and with each other. "Intellectual activity requires human engagement."

Randel also told students not to be quick to judge anything, be it a book or a person, and not to be afraid of change. "Cultures redefine themselves," he said. "Your generation is to be the salvation of my generation, because you can change your way of thinking. The belief that the time of change has ended has the smell of death about it."



Peter Morenus/University Photography

President Frank H.T. Rhodes and his wife, Rosa, speak with freshman Vimala Ramachandra and her brother, Anand '92, at a reception for new students. The Ramachandras are from Cleveland.

## Welcome . . .

- Welcome to a marvelous new experience.
- Welcome to the roar of Schoellkopf on brisk fall afternoons.
- Welcome to the silence of the Plantations after the first snowfall.
- Welcome to the dust and inconvenience of road crews.
- Welcome to stately old buildings, the gentle valley and the tranquil lake.
- Welcome to fulfillment.
- Welcome to a remarkable place called Cornell.

From President Frank H.T. Rhodes' address to new students and their families.





**EZ-LINK** is Cornell's electronic information network, designed to bring information you need to your desktop—the personal computer or workstation that you use—whether you are in a class, office, lab, or at home. Cornell Information Technologies (CIT) supports Cornell's faculty, staff, and students in their use of information technologies. With EZ-LINK, CIT is working to build an *information network* that helps people get to what they need—where, when, and how they need it.

CIT is actively developing and supporting new tools that make it easy for people to exploit the vast resources available over networks. Researchers from Cornell and universities worldwide collaborate on projects easily and quickly using electronic mail. A graduate student works in the convenient, quiet space of home using CIT's EZ-REMOTE and Bear Access to connect to Cornell's on-line library catalog. An undergraduate uses the *UPI* and *USA Today* news feeds available in Network News to stay in touch with events in Bosnia. An administrator uses Gopher to navigate the network and instantly locate an important report from another university, retrieve it, and print it right on the office printer.

This publication is all about EZ-LINK—what it is, what people are doing with it, how you can use it, and why it's an important part of the strategic direction for information technologies at Cornell. It describes three central areas of change:

- ...moving from mainframes to the desktop,
- ...the many options for connecting to the network,
- ...and the Bear Access suite of network services.

Transition to the Desktop...

Access to the Network...

Making it Easier with Bear Access...

**EZ-LINK** Helping People Connect...

### **Jeanne Hogarth, Associate Professor**

Jeanne Hogarth states with conviction that the greatest productivity gains in her department have come because of access to network services. "...I don't see how we can hire a county agent without putting a computer on their desk and hooking them up to this network."

She is talking about CENET, the Cornell Cooperative Extension computer network. CENET links Extension staff in all fifty-seven New York counties and New York City, providing an Internet connection, e-mail, electronic bulletin boards, and access to library resources using the *Mann Gateway*.

In her research, Hogarth examines how people plan financially for their retirement. Increasingly, resources for her work are available *only in electronic form* on CENET—where current information like the Consumer Price Index (inflation) figures are posted so that county agents with network access can easily incorporate them into their budgets and analyses.



*Increasingly, resources for  
Hogarth's work are  
available only in  
electronic form ...*

**EZ-LINK**  
Cornell Information Technologies • Fall 1993



# Transition to the Desktop...

Within the past few years, CIT has made many changes to the core set of services it provides, focusing on tools that allow easy access to network services. As information technologies have improved and evolved, the arcane commands of mainframe computers have given way to intuitive, more graphical interfaces on personal workstations. Applications like electronic mail have become simpler to use and easier to integrate with other desktop programs (like word processing and spreadsheets) that are now part of most workstation environments.

Cornell is rapidly moving toward this distributed, network-based environment. Mainframes—the familiar CORNELLA, CORNELLC, and VAX5 systems—are giving way to specialized servers capable of doing similar tasks faster and cheaper. These servers work with clients—specialized software that resides on your desktop workstation—to provide access to services in your Macintosh or PC environment including electronic mail, network navigation tools, library resources and databases, and connections to data archives all over the world.

In light of this, Cornell's DEC VAX system (VAX5) will be removed from service on November 1, 1993, and CORNELLA, one of the IBM mainframe systems, will be no longer be available for general use as of that date. In addition, general computing applications, such as electronic mail, will migrate from CORNELLC, another IBM mainframe system, whenever possible.

Large and powerful computers such as mainframes will not disappear. However, instead of providing access to personal computing, they are becoming servers used to store large collections of data, such as the Cornell Library's Online Catalog.

**...hundreds of people would never have used any of these things if not for Bear Access.**



## **Muthu Govindaraj** **Assistant Professor**

"These days I work through e-mail. E-mail reaches the person, whereas if I make a telephone call then most of the time I don't get that person and somebody has to convey the message. Then they will call me back, and I will not be here."

Muthu Govindaraj, Assistant Professor of Textiles and Apparel, specializes in computer modelling of flexible material and the development of control systems for apparel production. For him, network computer services are an indispensable professional tool.

Govindaraj says e-mail and *Gopher* have opened new channels of communication and are much easier than the telephone or ordinary mail. He has used *Gopher* to access the directory server of a Czechoslovakian university where he once studied and found the e-mail addresses for several former colleagues. He says without *Gopher* and e-mail he wouldn't have contacted them at all.

Govindaraj is a regular user of the Online Catalog, the Mann Gateway and other library resources available over the network. He praises the Bear Access software for making everything seem so simple—"I'm sure there are hundreds of people who would never have used any of these things if not for Bear Access".

## Getting Started With Bear Access

Bear Access software requires certain hardware, memory, and operating systems. CIT has helpful documents to read before you install the package on your machine or use it in one of CIT's public labs. These publications are available at no charge at the CIT Service HelpDesk.

The publication *Getting Started with Network Identities* helps you determine if your equipment can run Bear Access and EZ-REMOTE, if you need to upgrade, and, if necessary, approximately how much an upgrade will cost.

The *Bear Access Guides for the Macintosh and PC* explain how to obtain, install, and configure Bear Access as well as how to use each of the network services available on the Bear Access menu.

# Access to the Network...

## Your Network ID

To use the network services available at Cornell, you need a Network Identity (Network ID). Members of the Cornell community can get one at the CIT Service HelpDesk at no charge. Special arrangements for work groups and departments to have their Network IDs assigned on site can be made.

## Your Workstation

These days, most Cornell faculty, staff, and students use a desktop workstation. Technical staff from the CIT Service HelpDesk and CIT Sales can explain what hardware and software configurations are popular at Cornell and what you'll need to connect to the network. Network services are tailored primarily for Macintosh and IBM workstation-based personal computing, although access to UNIX and other host computing systems is available through special accounts for research and instructional computing.

Many members of the Cornell community have found that investing in their own workstations makes sense—it saves time, and they can take advantage of significant educational discounts on Bear Access capable configurations available through CIT Sales.

## Your Network Connection On Campus

### ...in offices and departments

Many staff and faculty work in offices that have direct connections to the campus network. Other departments and colleges are in the midst of installing these high-speed network connections in their campus offices. If you have this type of connection, it's simply a matter of having the proper hardware installed in your desktop workstation and your network wall jack activated. Once you've gotten your Network ID and installed Bear Access on your workstation, you're ready to connect.

If your office does not yet have a direct connection to the campus network, you can use your telephone line, a modem, and CIT's EZ-REMOTE service with your desktop workstation. See *Your Network Connection from Off Campus* below for more information.

### ...in CIT public labs

All CIT labs are equipped with workstations directly connected to the network. Many students find it convenient to use the network services available through Bear Access in the labs when they need to work on campus. CIT's general purpose labs are located in B101 Carpenter, Clara Dickson (off the ballroom), and Uris Library (tower room). Instructional labs are in G83 Martha Van Rensselaer, B8 Sibley, and B7 Upson. Lab schedules and facility descriptions are available at the CIT Service HelpDesk.

### ...in networked dorms

Two of the residence halls on campus (Donlon and Dickson) have a number of rooms wired with direct network connections. Students in these rooms have already signed up to participate in this *Campus Network Pilot Project*. In the future, direct network connections will be installed in additional on-campus residence halls. If your dorm room is not directly wired to the network but you have a phone line, you can use a modem and EZ-REMOTE service to connect to the network (see below).

## Your Network Connection from Off Campus

CIT's high-speed, fee-based service, EZ-REMOTE, allows members of the Cornell community to connect their properly configured desktop or portable workstation to the campus network from any place that they have access to a telephone line—around campus, around Ithaca, even around the world. EZ-REMOTE/low, a slower-speed version of the same dial-up system, is also available at no charge for the casual network user. For more information about EZ-REMOTE, contact the CIT Service HelpDesk and ask for EZ-REMOTE: *Your Off-Campus Link to the Campus Network* (Product Brief-12), a CIT publication that describes this service in detail.

**EZ-LINK**



# Making it Easier with Bear Access...

## What is Bear Access?

Bear Access is a suite of applications that provides access to a variety of services and resources reachable over the Internet, a global network to which Cornell is connected. Bear Access includes an interface that makes it simple for you to move between services. CIT has developed Bear Access interfaces for three different computing environments: Macintosh, DOS, and Windows. You need a Network ID—along with a connection to the campus network—to use it.

## Electronic Mail

Electronic mail (e-mail)—the most popular of the network services—allows you to send messages (and even enclose documents and images) to your friends and colleagues at Cornell and other institutions. With your Network ID, the Bear Access mail program (*Eudora* for Macintoshes or *NuPOP* for PCs), connects to a server that collects your incoming mail in a private mailbox until you connect to the server and move it to your desktop system to then read and respond.

## Library Resources

The Library Resources button in Bear Access extends the scholar's reach to numerous Library-sponsored information services including on-line catalogs and databases. Included in this group are the Cornell Online Catalog of library holdings acquired or catalogued since 1973; the Medical College Catalog; the Mann Gateway, an easy-to-use link to numerous general and specialized databases; and GEOREF, a database produced by the American Geological Institute (AGI) covering worldwide technical literature on geology and geophysics.

## Information Sources

Information is in great supply—and demand—out on the Internet and there are a number of tools that work in different ways to help you get information. Bear Access offers several options for locating, searching, retrieving, and manipulating information.

**CUINFO** is Cornell's on-line guide to campus-wide information and a window to world-wide information resources available on the Internet. In Fall 1993, CUINFO, Cornell's on-line guide, moves from its old mainframe home to a new one that makes it easier for you to get the information you need. Based on a standard tool called *Gopher*, developed by the University of Minnesota, you can access not only CUINFO but other information servers throughout the world.

Access to **Network News** opens the door to up-to-the-minute electronic *news feeds* from commercial services like Clarinet (UPI) and Americast (USA Today) as well topical information posted in nearly 5000 Internet-based newsgroups. This method of accessing information is more interactive than *Gopher*; if you choose to join a particular newsgroup, you will be able to both read and post articles, questions, and concerns on your group's particular topic.

Information on every subject imaginable is available *out there* on the Internet. When you find programs and files you can use, the **File Transfer Protocol (FTP)** button makes it easy to move them to your own system. This is yet another tool for accessing software and information from around the world. One based here at Cornell contains items like Bear Access software, virus protection software, and other utilities that you can transfer from the server to your own desktop.



*If the paper's due at 3 pm,  
they can finish  
at 2:55 pm—it's in.*

## John Ruffing Graduate Student

"My students and I communicate by e-mail; they turn in their assignments by e-mail—send me a message, attach the paper. They don't have to leave their room. If the paper's due at 3 pm, they can finish at 2:55 pm—it's in."

John Ruffing, a doctoral student in Middle English in the College of Arts and Sciences, teaches a course on writing in the electronic age that includes a study of electronic media. Students explore the Internet, subscribe to mailing lists, download files, and use applications like *Gopher*. Ruffing is also involved in a project to create an electronic edition of Freud's corpus in German, and has been surveyor and computer consultant for an underwater archaeological operation in Ireland for six years.

E-mail is his lifeline of communication in all areas of work. There's been a massive e-mail correspondence about editorial details on the Freud project that he feels wouldn't have received such attention otherwise. For the Irish archaeological operation, e-mail is used to transmit map data and arrange equipment for field work. The e-mail link meant that a lengthy strike by Irish postal workers left the project's communications essentially unaffected. In any case, as Ruffing points out, the cost of achieving the same results by phone, fax and ordinary mail would have been prohibitive.



*...I Have a  
Dream, can now  
be downloaded  
from an  
archive...*

## Tom Weissinger Librarian

The librarian at the John Hendrik Clarke Africana Library, was once asked to find Martin Luther King's *I Have A Dream* speech. The original text can be located in paper form, of course; but now, using file transfer programs, it can now be downloaded from an archive Weissinger found on the Internet.

Weissinger enjoys telecommuting from his home workstation, searching Cornell's Online Catalog and the databases available through the *Mann Gateway* for potential acquisitions or just browsing for reference. The entire bibliography of the Martin Luther King Project—centered at Stanford University—is also searchable electronically. Using telnet, Weissinger has also connected to other library catalogs with strong Africana collections, such as Yale and Northwestern.

## Other Bear Access Services

**Who I Am** connects to the central Network ID directory at Cornell. If you have a Network ID, you can list your preferred electronic mail address and other information such as a postal address and a phone number. *Who I Am* allows you to update and change your own information at any time.

**Just the Facts** displays student information like current course schedules, grades, bursar and CornellCard accounts, and financial aid information (for undergraduates). In some cases, it allows electronic updates to local, home, emergency, and billing addresses. In addition, *Just the Facts* lets students exchange e-mail with the bursar, University Registrar, and Financial Aid offices, all the harbinger of future, even more extensive electronic student services.



# EZ-LINK

## Helping People Connect

**M. Stuart Lynn**  
**Vice President for Information Technologies**

*EZ-LINK....Making Technology Work For You* depicts the range of services now available over Cornell's information networks.

CIT is committed to helping Cornell lead in the effective and efficient use of information technologies to further the University's vision and goals. A key factor in fulfilling this mission is helping to ensure a productive communications infrastructure for each member of our community, that is, EZ-LINK.

### EZ-LINK – What It Means

EZ-LINK is not just about a communications network – it is also about access tools, information sources, support, and service.

Bear Access makes it easy for the Cornell community to access information sources across campus, national, and worldwide networks. Tools that facilitate communication across the campus and worldwide are increasingly critical to work, study, scholarship, and service. These include not just the familiar telephone or standard e-mail tools (such as *Eudora* or *NUPop*); but also video-distribution services (now under review by a campuswide task force) and emerging network-based videoconferencing tools: CU-SeeMe, a CIT-developed package is one such that has gained much national attention and growing use in a variety of applications.

Users of the network require support. CIT staff work with their college and departmental counterparts to support them in supporting you. Besides working together to improve this support, we can also engage colleges and departments in joint planning on how to leverage information technologies to create a more productive and effective working environment—and to translate plans into results.

In the future, campus networks and the worldwide Internet must be accessible from every office, classroom, laboratory and residence hall. We have come a long way over the past two years, but we still have some way to go. This is a shared journey among campus units and CIT. The College of Arts and Sciences project to extend network connections throughout much of Rockefeller, McGraw, and Goldwin Smith, bringing high-speed access to many faculty who until now have been in relative electronic isolation, is an example of such cooperation.

### Towards A National Information Infrastructure

EZ-LINK also serves as Cornell's gateway to the emerging *National Information Infrastructure*, or the NII as it is becoming known. The NII is both the electronic highway and the *goods and services* available over that highway (the information sources and collaborative tools) that some expect will ultimately reach into every home, office, and classroom in the country.

In Washington, spearheaded by the Clinton/Gore administration, there is a growing movement towards the NII. This movement is largely bipartisan, although there are continuing debates revolving around the relative roles of federal and state governments, the private sector, and higher education. However, a broadly-based consensus appears to be emerging embodied in HR1757, the National Information Infrastructure Act recently passed by the House. Most observers expect the Internet will continue to play a key role as the NII emerges over the next decade. As the Internet and the NII emerge, they will take advantage of the evolving technologies that integrate voice, video, and data communications media into a high-speed integrated digital communications infrastructure, at a level of speed and function that we can only hint at today.

### Challenges for Cornell

One challenge for Cornell will be how and at what pace we can and should take advantage of the potential of this emerging infrastructure. How do we exploit this potential to improve service to students; enrich the learning process; extend the scholar's reach; connect with the community; speed the transfer of information and knowledge; and manage our resources—human, financial, and capital—more effectively? Used poorly, information technologies can add cost without adding value. Deployed wisely, however, they have enormous potential to change for the better much of what we do.

EZ-LINK as it is today is but one step in this direction. It will only improve with time. Please let us know how it works for you.

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# EZ-LINK



## How to Get Help From CIT

...to register for your Network ID  
...to find out about Bear Access  
...to get information about CIT's services  
**CIT Service HelpDesk**

124 CCC  
607-255-8990  
8 am to 6 pm  
Monday through Friday  
helpdesk@cornell.edu

...to arrange for network installation  
services

**Network Resources Service Teams**

Endowed Academic Units: 5-1999  
Statutory Academic Units & All Libraries 5-4555  
Administrative Units: 5-0001

...to purchase or upgrade equipment  
**CIT Sales**

110 Maple Avenue  
607-255-4941  
9:30 am to 4 pm  
Monday through Friday



### Cal Landau & Maxine Singh Southeast Regional Office Public Affairs

Few Cornellians depend quite so heavily on network computer services as the Cornell Southeast Regional Office in Miami, Florida. There, Cal Landau, Director, and Maxine Singh, Administrative Assistant, coordinate fund-raising and alumni activities for the Division of Public Affairs. They are one of ten satellite offices—nine in the United States and one International Office housed in Ithaca when not on the road—responsible for the day-to-day public affairs programs in development, alumni affairs, college unit programs, and continuing education and career-related programs in the various regions.

The pair communicate with the head office in Ithaca largely by e-mail and say it has allowed them to work much faster. Landau says people are extremely conscientious about responding to e-mail: "...it's as if people feel it's a requirement or you die if you don't answer your electronic mail." Singh and Landau use *EZ-REMOTE* to connect to *Bear Access*, *Eudora*, and mainframe applications based in Ithaca.

In times past Singh had to order alumni data from Ithaca, where it was printed in paper form and physically mailed to her. Now, she can use Cornell's IRIS (Inquiry and Reporting Information System) program to electronically retrieve data for the counties in their region.



O R I E N T A T I O N 1 9 9 3



Chris Hildreth/University Photography  
Libe Slope became a parking lot last Friday as students moved into the residence halls.



Sharron Bennett/University Photography  
Brian Gandel, 17, of Baltimore, gives a goodbye hug to his mother and father, Barbara and Dr. Larry Gandel, after they helped him move into his room in Founders Hall.



Sharron Bennett/University Photography  
The back of T-shirts worn by orientation counselors.

Making it feel like home



Sharron Bennett/University Photography  
Agus Kusumah from Indonesia checks in at the International Students and Scholars Office in Barnes Hall. Student assistant Christine Song gives him directions for getting around campus.



Peter Morenus/University Photography  
Freshman Allison Myatt practices her clarinet outside Barton Hall before auditioning for the Big Red Band.



# Tradition Fellowship honors Sen. Lack

By Kristin Costello

Recognizing State Sen. James J. Lack's support of legislation and programs for education and labor, Saul G. Kramer, a 1954 graduate of the School of Industrial and Labor Relations and a 1959 graduate of the Law School, has established the Sen. James J. Lack Cornell Tradition Fellowship in the senator's honor to benefit a student in the ILR School.

The Cornell Tradition is an alumni-endowed program that awards fellowships to Cornell students who have demonstrated a commitment to helping themselves through work, academic achievement and voluntary community service. Once selected, Cornell Tradition Fellows are expected to continue that commitment throughout their college careers. The program offers qualified students up to \$2,500 each academic year to replace their loan obligations. Since its inception in 1982, more than 2,500 Cornell Tradition fellowships, totaling \$10 million, have been awarded to Cornell students.

This fellowship will provide assistance to undergraduate students in the ILR School who completed their secondary school education as residents of the 2nd Senatorial District of New York in Suffolk County during Lack's term in office. In the event that no qualified candidates are found from that district, or Lack is no longer in office, preference will be given to an undergraduate in the ILR School.



David B. Lipsky (left), dean of the School of Industrial and Labor Relations, stands with Saul Kramer (center), an alumnus who has established a Cornell Tradition Fellowship in honor of State Sen. James J. Lack (right).

Lack, a Republican-Conservative for the 2nd District in Suffolk County and the chairman of the Majority Steering Committee, is chairman of the Senate Labor Committee, a member of the New York State Job Training Partnership Council and a member of the Commissioner of Labor's Youth Employment Advisory Council and Task Force on Displaced Homemakers.

Lack has been a guest lecturer at Columbia University Graduate School of Journalism, the State University of New York at Stony Brook, the New School for Social Research and elsewhere.

He also has served as president of the Better Business Bureau of Metropolitan New York and treasurer and founder of the National Association of Consumer Agency Adminis-

tration, among other affiliations.

Kramer, a partner in the law firm of Proskauer Rose Goetz & Mendelsohn in New York City, is a labor lawyer and active supporter of Cornell's ILR School. He has served as a chair of the school's advisory council and member and former chair of the ILR Founders Fund Committee. In 1984, he received the Groat Alumni Award for exemplary achievement in the field and in service to ILR.

ILR School Dean David B. Lipsky said that he is pleased that "one of the ILR's most distinguished alumni has designated a gift for the Cornell Tradition program. It is a fitting way," he said, "to honor a public servant who is a valued friend of the ILR School and has done so much for education and employment relations in New York."

# CU policy exceeds family leave act

By Nancy Rosen

University policies are being revised to comply with and in some cases exceed the federal Family and Medical Leave Act, signed by President Clinton in January, according to University Human Resource Services.

"Cornell already had a generous department leave policy in place for non-academic staff," said Beth I. Warren, associate vice president for human resources. "All we had to do was modify that policy slightly to be in compliance with the federal law and broaden its applicability to promote a philosophy of flexibility within the workplace."

The act allows for up to 12 weeks unpaid leave for medical and family reasons such as childbirth, the adoption or foster care of a child, caring for an ill family member or the employee's own serious health impairment. This leave is available each calendar year.

Under the act, health benefits continue in force during the leave, with no change in employer and employee contributions to the health-care premium. Employees are entitled to be returned to the same position, if it is available, or to a position with equivalent salary, benefits and conditions of employment.

In several notable ways the Cornell policy is more generous than the federal act regarding the definition of family, coverage of part-time and temporary staff, for staff belonging to bargaining units and for couples working in the same organization.

Cornell is revising separate policies that cover academic and non-academic appointments, respectively, to comply with or exceed the new law.

To qualify for a family and medical leave, any employee, whether holding an academic or non-academic appointment, must have 12 months of service with the university.

## New policies

Under the new Cornell policies:

- Academic and non-academic employees may take a family leave after one year's service. In addition, non-academic employees must have worked 1,040 hours during the previous twelve-month period.

- The university allows a family and medical leave to apply to the care of a family member or the like; this allows coverage to include anyone who is considered "family" by the staff member. Federal law limits the definition to immediate family members.

- Cornell allows each spouse to each take a 12-week absence for the birth of a child, adoption or foster care of a child. Federal policy requires only, when both spouses work for the same employer, that their combined leaves total 12 weeks.

- For academic employees, vacation is a separate entitlement in addition to the unpaid, 12-week family leave. Paid vacation can be used, at the request of the non-academic employee and with supervisors' approval, to substitute for unpaid family and medical leave.

- "Family leave" and "medical leave" are separate entitlements for academic employees at Cornell. Family leave allows 12 weeks unpaid leave for the birth or adoption of a child or to care for a family member with a serious health condition. While the Family and Medical Leave Act allows the employee's own serious health impairment to be included as part of the 12 weeks' unpaid leave, at Cornell an academic employee's absence due to non-work related illness or injury is covered by the university's Short-term Disability/Salary Continuation Policy for Academic Staff and is in addition to the 12 weeks' unpaid family leave.

Temporary non-academic employees also are guaranteed a family and medical leave, if they have met eligibility requirements. However, temporary employees will not be guaranteed their jobs back if their leaves end after the period they were hired for.

University Human Resource Services is asking that employees, when possible, provide at least 30 days notice of an intention to take a family and medical leave.

# New position focuses on ecology of Great Lakes

By William Holder

The State Legislature has funded a new position to improve public understanding about the ecology of the Great Lakes that will be administered by Cornell Cooperative Extension and located at the University at Buffalo, the largest and most comprehensive campus in the State University of New York system.

The new hybrid position can be viewed as a model for possible future efforts to bring greater cooperation between the statewide Cooperative Extension program and the SUNY system, according to Michael Voiland, program leader of the Sea Grant and Marine Extension Program at Cornell.

Voiland credited State Sen. John Sheffer, an Amherst-area Republican, and State Rep.

Francis Pordum, a Hamburg Democrat, with leading the effort to gain a state appropriation for the New York Sea Grant Institute, a SUNY-Cornell consortium, for the position.

Helen M. Domske, the new extension associate, will develop programs intended to heighten public awareness of problems in the Great Lakes and ongoing efforts to improve Great Lakes ecosystems, Voiland said.

She will report both to Cornell Cooperative Extension's Sea Grant and Marine Extension Program and to the Great Lakes Program at the University at Buffalo, where she will serve as associate director.

Domske was most recently curator of education at the Aquarium of Niagara Falls. Responsible for developing a wide-ranging educational program, she has produced 15 audio-

visual programs, including "Yipes! Stripes!! ... Zebra Mussels" and "Great Lakes - Great Challenges." She also has served as an instructor in environmental science and in aquaculture at the University at Buffalo and Niagara County Community College.

"Buffalo is home to a host of federal and state programs and institutions involved with Great Lakes ecosystems, so the area presents unique opportunities for a specialized extension program," Voiland said.

Joseph V. DePinto, director of the Great Lakes Program at the University at Buffalo, added, "The Great Lakes Program has education and service missions intended to bring the latest scientific and technical information on this ecosystem to its constituency in an understandable manner."

## Theory Center *continued from page 1*

Center through a cooperative agreement to develop a broad range of scientific and industrial applications on IBM Scalable POWER Parallel Systems, including computational fluid dynamics, biomedical and industrial applications for macromolecular modeling, sedimentary basin process modeling and large-scale environmental modeling.

"The NSF, Cornell University, New York and IBM have been partners in the Cornell Theory Center since its inception seven years ago," said Mel Ciment, acting assistant director in the Computer and Information Science and Engineering Directorate at the NSF. "The choice of Cornell as the first academic location for the placement of the 512-processor Scalable POWER Parallel System is very appropriate and continues this tradition of partnership into the new era of scalable parallel processing."

ARPA's main interest is to establish a set of common system services and environments on parallel systems which will work throughout other federally funded research sites across the United States in an effort to develop the optimal parallel computing environment.

Malvin Kalos, director of the Theory Center, said, "The Cornell Theory Center is delighted that our collaboration with IBM will produce a world-class computing machine with the highest performance. There will be a

vastly increased ability to study in detail the implications of very large data bases, such as the U.S. Census, satellite observations of our ecosystem and epidemiology data bases."

He added that software will span an "enormous range of performance, from a single workstation to a teraflops (trillions of floating-point operations per second) machine."

The Theory Center was the first to purchase the IBM SP system after it was introduced in February, with 16 processors shipped in March and another 48 in May. Members of the scientific and technical communities can access the system via the high-speed INTERNET to do research on Grand Challenge problems.

Grand Challenge problems are those identified by the federal government as vital to the nation's future, including fluid dynamics, plasma physics, ground water and air pollution analysis, drug design, ozone mapping and seismic analysis.

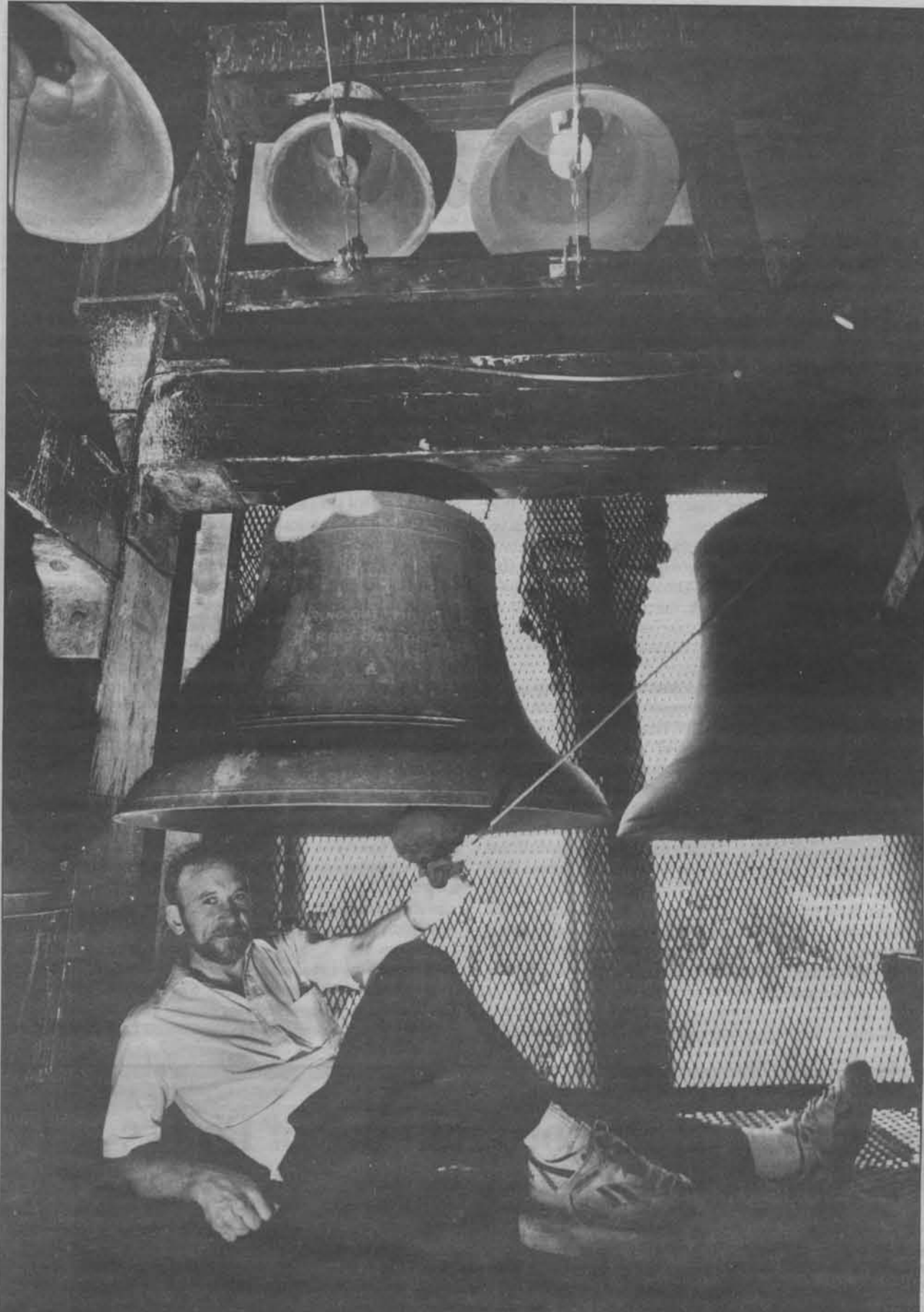
Finding solutions requires significant, high-performance computational capabilities. Applications currently being pursued at the Cornell Theory Center include modeling sedimentary basins to predict where oil is present, interactive access to large data sets, exploring particle methods used in aerospace engineering, dissolution of natural gas, turbulent combustion and orthopaedic biomechanics.

Irving Wladawsky-Berger, general manager for IBM POWER Parallel Systems, said, "I am convinced that scalable parallel systems will give rise to many new sophisticated applications of great value to science and industry. And, the very attractive price/performance of these systems will enable us to bring the benefits of supercomputing to a large number of users and businesses. I view our partnership with the Cornell Theory Center, NSF, ARPA and New York as being absolutely essential to achieving this vision, both through the extensive efforts to develop new parallel applications, as well as the focus on technology transfer and education at all levels."

The Cornell Theory Center, one of four NSF-sponsored national supercomputer centers, also has received funding from New York, the National Institutes of Health, industrial partners and the university. New York provides annual operations support for the Theory Center in addition to support for capital equipment expenditures.

POWER Parallel Systems was designed to bring the price/performance leadership of RISC-based technology into the large system commercial and technical markets. The organization is involved in high-performance computing application management; high-performance strategies; systems development; software development; and services and support.





Chimes adviser Bob Feldman inside the McGraw Tower belfry.

Sharon Bennett/University Photography

## Renovation planned for historic chimes

By Nancy Rosen

"Ring out the old — ring in the new; Ring out the false — ring in the true" reads the inscription on the first of the nine bells presented as a gift by Jennie McGraw to Cornell in 1868. One hundred and twenty-five years later, it is time to ring in the new.

"The renovation plan came out of a need to find a way to improve this musical instrument and, at the same time, preserve the historic bells and the traditional way of playing them," said Monica Novakovic, who oversees the largest chime instrument in North America and the oldest continuously played set of bells on an American college campus.

The main impetus for the renovation is due to the most serious shortcoming of the chimes: the rough tuning of the bells, most of which were cast before modern bell-tuning standards were established. Because Cornell's chimes were tuned improperly after they were cast, the strike note — or major tone — decays quickest, letting the not-too-pleasant partial tones sound more predominantly, giving a dissonant effect. As Novakovic put it, "You hear a lot of 'waaaaaah.'"

As part of the \$1 million project to revamp the chimes and McGraw Tower, 17 of the 19 bells will be tuned, two will be recast and two new bells will be added, to bring the total up to 21 bells. In addition, the bell frame, transmission, clappers, playing console and automatic clock chime will be rebuilt.

### Fund raising

To initiate the fund-raising activities, alumni chimesmasters and those sitting on the Cornell Chimes Advisory Council, which is overseeing the project, have been asked for contributions. All other alumni will be invited to contribute before the planned start of the project in the summer of 1995.

One bell will cost as much as \$50,000 to cast, tune and install. It will cost about \$10,000 to tune, refit with hardware and reinstall each of the old bells. Design and construction of a new bell frame, playing console and practice stand each have five-figure price tags.

The chimes hold great sentimental value for those who have played them. More than 172 people have done so. Robert Feldman, a chimesmaster in the 1960s and currently chimes adviser, proposed to his wife in the tower after his six o'clock concert. Another chimesmaster was married in the belfry.

"It was a terribly important part of my life, and it has been ever since," said Phyllis McClelland Dittman '43, the first woman chimesmaster. "Cornell to me is the bells. I have my degree with distinction, but I have a picture of the chimes tower hanging on the wall." Her daughter, Lane McClelland '70, M.B.A. '73, J.D. '74, was a chimesmaster as well, one of two parent-child combinations to serve as chimesmaster.

"Any change that's made tinkers with my memory, but it has to be done. For heaven's sake, what else goes on for 125 years without needing major renovation?" Dittman asked.

In general, chimes are intended to have only nine to 14 bells to play simple, single-note melodies. Cornell's chimes, however, can play three-note chords. There now are some 2,000 songs in the chimesmasters' repertoire.

## Program helps improve the lives of developmentally disabled

By Susan Lang

Thirty years ago, Jodi, a 39-year-old woman with developmental disabilities, would have been institutionalized. Twenty years ago, she would have been placed in a large community residence. Instead, eight years ago, persons with developmental disabilities, including Jodi, were placed in smaller group homes.

Yet, Jodi hated her group home. But because of her limited abilities, she was unable to express her frustration and unhappiness. She began "acting out" — screaming, scratching her face and being disruptive. She spent hours in "time out," was hospitalized several times and tried to run away. Jodi was viewed as "a problem" and moved to a more restrictive residence. Her behavior became worse.

Today, however, thanks in part to a new Cornell "traveling road show" that trains professionals in "person-centered planning" — a revolutionary way to deliver services to persons with developmental disabilities — Jodi no longer must live in a group home where her daily life is determined by care givers.

Rather, she lives by herself in a two-bedroom apartment in a familiar neighborhood near her family. She chooses her daily activities and how much help she'll need for the day. Although she is not highly functional, Jodi comes and goes as she pleases walking or using a bus, invites friends over, volunteers at a nearby day-care center and goes bicycle and horseback riding.

Living alone for the first time in her life,

she will soon be able to make an informed decision about whether she'd like a roommate. If she does, she won't have to move again because she has the extra bedroom.

Jodi's life turned around when the professionals who worked with her learned about person-centered planning. The Human Service Administration Program in the College of Human Ecology is the first program to offer simulation trainings in the new approach.

### Teaching professionals

It teaches professionals how to listen to the persons they serve and develop plans around their needs and desires rather than those of an agency; how to foster natural supports as a means of becoming less reliant on paid supports; how to focus on social integration into a community rather than merely physical integration; and how to offer individuals respect, dignity, competence, personal growth and a valued place in their communities.

"In the past, persons with developmental disabilities would have been forced to conform to existing programs and residences. Their activities and the services they received would have been determined by the organization's staff," explains Ron House, senior lecturer and director of the Human Service Administration Program. He teaches a graduate course called Management of Public and Non-Profit Organizations.

"But today, as more organizations shift to a person-centered plan that takes a holistic view of the person as someone who needs a

social life beyond the confines of the community residences and has desires to go out, travel, find a different job and so on, quality of life is greatly improved," he added.

Twenty years ago, most of the individuals with developmental disabilities in New York were released from institutions and placed in group residences in communities. Today, some 31,000 persons with developmental disabilities in New York live in about 4,700 community residences across the state. Only about 5,000 remain institutionalized.

To train professionals in the new way to deliver services, House and a team of professionals worked more than a year to convert the concepts of person-centered planning into educational training materials that provide a realistic simulation in managing a program and solving the problems of converting a community residence into a person-centered service organization.

He was already familiar with the effectiveness of simulation trainings because he developed a similar program, the first of its kind. Since the early 1980s, House and Guy Caruso, a human services consultant in Syracuse; Cheryl MacNeil, a consultant in Albany; and Chris Luizzo, a consultant in Latham, N.Y., have trained nationally more than 500 professionals working in community-residence management.

Provided with case studies, participants role play and make decisions as well as learn what the consequences are of those decisions. Tasks at hand not only include mapping per-

sonalized plans for individuals but also rewriting mission statements of the sample community residence, restructuring its programs and funding, and changing how the staff perceives the residents.

So far, about 100 persons have participated in four person-centered planning training programs throughout New York; in September, it will be offered in Islip and Commack on Long Island, and in Binghamton, Middletown and Loch Sheldrake, N.Y. This coming year, the trainings will be offered nationally.

### Cutting costs

Although maintaining persons in group homes may cost 10 to 20 percent less at a first glance, person-centered planning may prove equivalent or even less expensive in the long run. In Jodi's case, her frequent crises, including several that required hospitalization, were costly in that many professionals had to put in extra time for her. Now that she is more content and in control of her life, many of these expenses have abated.

"Before, we had a restricted view of the individual; we provided housing and basic services for persons with developmental disabilities, but the rest of their lives were neglected," House said. "Now, we look at the person in a much broader sense, and can offer them new and different experiences, more individualization, and more power and control. What most of us take for granted is now available to a much greater extent to individuals with developmental disabilities."



## COMMENTARY

## Overhauling the Supreme Court appointment process

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By Gary J. Simpson

With reverberations from the wrenching confirmation battle over Clarence Thomas still being felt, senators have good reason to be grateful to President Clinton for having chosen a candidate for Supreme Court as inviting of general Senate acclaim as Ruth Bader Ginsburg. They have no excuse, however, for putting off any longer a basic overhaul of the process by which people are appointed to the court.

The appointment of Justice Thomas vividly illustrated that the president's powers of persuasion have become so formidable that the president's power of nomination now comes close to being a power of appointment. Given the available evidence about Justice Thomas at the time of his confirmation vote, many of the 52 senators who voted for him must have had serious doubts about his integrity and competence. Apparently, however, they put these doubts aside out of concern for their political future if they went against the publicly and privately expressed wishes of a popular president, which George Bush was at the time. To a large and troubling extent, the quality of the justices and the direction of the court have come to depend on the values, judgment and dedication to the common good of the president alone.

Make no mistake about it: Justice Thomas' confirmation was no aberration. It simply showed how far an obvious trend had gone. The history of Supreme Court appointments in the 20th century is one of unprecedented presidential domination of the process. Since 1900, the Senate has rejected nominations to the high court at a rate of only one out of 10. Prior to 1900, the rejection rate was much higher, approximately one out of four.

I propose the following reforms to try to re-establish a process in which the president and senate have roughly equal say. Some of these proposals are rather dramatic, but so is the imbalance of power that needs to be redressed.

#### 1. A constitutional amendment should be adopted

requiring Supreme Court nominees to win the approval of two-thirds of the Senate rather than half. If such an amendment is adopted, the president typically would be obliged in selecting a nominee to reach out to a fair number of senators other than those whose membership in the president's party makes them exceptionally vulnerable to persuasion. Since the amendment process is notoriously difficult and slow, the Senate in the interim might take a step in the same direction by adopting a rule that it cannot act on a Supreme Court nomination unless two-thirds of the Senate Judiciary Committee has voted to approve the nominee.

2. Senators should repudiate the notion that Supreme Court nominees deserve the "benefit of the doubt." Implicitly and explicitly, senators often have given nominees the benefit of the doubt. Sometimes they do so with regard to the ultimate question of whether the nominee should be confirmed. Other times they do so with regard to a matter on which the nominee's record is ambiguous or silent. In either case, allowing the nominee the benefit of the doubt gives disproportionate weight to the president's judgment.

3. The Senate Judiciary Committee should stop questioning nominees about their views on issues likely to come before the Court. The first set of Thomas hearings showed how asking nominees questions of this sort can make it difficult for senators to vote in accordance with their best judgment. In response to such questions, Justice Thomas claimed openmindedness and denied that his speeches and writings were as indicative of his future voting patterns as they seemed. By doing so, he essentially forced senators to call him a liar or publicly treat him like one if they wished to base their prediction of his likely votes on those speeches and writings — the most reliable indicators of his future votes. While questioning Justice Thomas about Anita Hill's allegations was warranted, questions about his views on issues apt to come before the Court should have been reserved for witnesses conversant with his written and oral record.

If this proposal seems radical, keep in mind that it conforms to Senate practice until 1955. Indeed, until 1925,

nominees were not only not asked their views on issues likely to come before the Court; they were not even asked to appear at the hearings.

4. The questioning at the hearings should be turned over to non-senators skilled in cross-examination and well-versed in constitutional law and the ways of the court. For senators to cast an informed and independent vote on a nominee, the hearings must reveal as clearly and fully as possible information relevant to whether the nominee should be confirmed. Few senators, however, have the substantive expertise and cross-examination skills needed to ensure such informative hearings. Also, as the Democratic senators' questioning of Justice Thomas in the hearings on the Hill allegations made all too clear, senators are too vulnerable to political inhibitions to be counted on to ask the tough questions whenever they are needed.

5. The Senate Judiciary Committee should be more alert to the need for expert testimony. Such testimony can be crucial to casting an informed and independent vote. Yet, as illustrated by the hearings on the Hill allegations, the committee can be remarkably insensitive to the need for it. By deciding not to call expert witnesses on sexual harassment, the committee invited each senator to judge the credibility of Hill's account by whatever psychological theory seemed most agreeable, however discredited or downright lunatic such theory might be.

Because the Supreme Court's work is of such high national importance, ill-advised appointments can have serious harmful effects. And thanks to the Constitution's virtual guarantee of life tenure to Supreme Court appointees, they can have these deleterious effects for a long time. Although sweeping reform is rarely the Senate's preferred method of doing business, the appointment of Justice Thomas should leave no question that a major revamping of the appointment process is long overdue.

Gary J. Simpson is a professor at the Law School. This article, which appeared in the Aug. 6 issue of the New York Law Journal, is adapted from his essay, "Thomas' Supreme Unfitness," which appeared in the Cornell Law Review.

## City and Regional Planning awards a record number of Ph.D.s

By Carole Stone

The Department of City and Regional Planning normally graduates four or five Ph.D.s a year, but last year it graduated 12, and this year the number is likely to be higher: on Aug. 20, the first of three degree-granting dates for 1993-94, the department graduated eight Ph.D.s.

Is this a sign of new interest in city and regional planning? Are more undergraduates interested in cities, suburban sprawl and Mid-

western flood plains?

More than a sign of new interest in the built environment, the increase in Ph.D.s seems to be a sign of new interest among administrators in encouraging students to finish degrees they started years ago.

One student of city and regional planning who earned his Ph.D. last January began studying for it in 1972 — when Richard Nixon was still in the White House. So when Professor Pierre Clavel ran into Armando Gonzalez-Caban at commencement ceremonies last Janu-

ary, he barely recognized his former student: the last time he had seen him was in class in 1975, he said. "He looked much older, and his hair is gray now," Clavel said.

When he left Cornell, Gonzalez-Caban moved to Riverside, Calif., where he worked for the U.S. Forest Service. His recently-completed dissertation is titled "Fire Management Costs and Sources of Variability in Prescribed Burning Costs in the Forest Service's Northern, Intermountain and Pacific Northwest Regions."

The Department of City and Regional Planning is by no means the only department at Cornell where students have been known to take more than seven years to complete a Ph.D. And at universities all across the country students, faculty and administrators have been discussing, debating and sometimes fighting over what is called the "time-to-degree" problem.

Inadequate funding and insufficient advising are a major part of the problem, according to many, including Bill Bowen, former president of Princeton University and now the director of the Mellon Foundation.

Nationwide, between 50 and 60 percent of graduate students who begin Ph.D. programs finish them, and the rest do not, said Alison Casarett, former dean of the Graduate School at Cornell.

As head of the Mellon Foundation, Bowen introduced a program at 10 universities that supports graduate students for 18 months, relieving them of teaching and other responsibilities so they can concentrate on their studies. A goal-oriented advisory process is part of the Mellon program in most of the schools.

Cornell is participating in the Mellon program in the College of Arts and Sciences with students in English, history, government, comparative literature and medieval studies.

It is not accidental that so many ABDs, or graduate students who have finished All But Their Dissertations, are finishing Ph.D.s in city and regional planning these days. By her own admission, a few years ago, Casarett "got angry."

The former dean of the Graduate School

looked at the number of students "in the pipeline" and told the department it would not receive the Graduate School's support for new students until some of the continuing students finished up, she said. The Graduate School then provided special funds to help this happen.

"The longer a student is away, the less is the probability that he or she will finish, and this is a waste of the teaching and advising time and other Cornell resources that have gone into the student, as well as a waste of the student's time," Casarett said.

Some students who returned to finish their Ph.D.s probably did so because of the pressures of the job market. Fifteen years ago a master's degree was sufficient for many positions in the field, but today a Ph.D. is practically a necessity in many parts of the profession, especially international development work, according to Associate Professor Susan Christopherson, CRP's graduate faculty representative.

At about the same time that City and Regional Planning made a push to "clear the pipeline," it also revised its policies on supporting graduate students. Now, it practically guarantees four years of funding, instead of two. Departmental support usually includes teaching assistantships and occasional research assistantships.

This new policy is "sure to pay dividends in the future, although I don't know if we're actually seeing the products of it, yet," said department Chairman Richard Booth. "One thing is sure, we had to ensure funding for longer periods of time to give students a reasonable chance of getting through."

Time-to-degree statistics show that women and members of minority groups tend to take longer to finish their degrees, and foreign students supported by their governments take less time, Christopherson said.

"Some of the women are single parents who cannot continue to study and support a family at the same time," she said, adding that sometimes personal idiosyncrasies account for a student taking an unusually long time to finish a degree but that most of the time the reasons are professional.

## Congratulations



Supreme Court Justice Ruth Bader Ginsburg (left) and Attorney General Janet Reno, both graduates of Cornell, greet participants at an American Bar Association ceremony held in their honor on Aug. 8. Ginsburg and Reno, two of the nation's top female lawyers, were honored by the ABA's Commission on Women in the Profession. Ginsburg told the gathering that having two women on the Supreme Court will make a difference because women "look at life a little bit differently," and Reno called for a "crusade against violence," according to USA Today.



# CALENDAR

from page 12

• **Graduate Faculty Meeting**, Friday, Sept. 10, 4 p.m., General Committee Room, Sage Graduate Center. This meeting is solely for the purpose of voting on August degrees.

• **Fulbright Grants for Study Abroad**: Applications are available for the 1994-95 academic year; contact R. Brashear, director of graduate admissions, Sage Graduate Center, 255-3912. Applicants must be U.S. citizens; completed applications are due mid-September.

• **Teaching Assistant Workshop**: Saturday, Sept. 11; registration forms are available at graduate field offices or the Office of Instructional Support, 14 East Ave., Sage Hall, phone 255-8427. There is no charge to students.

## lectures

### Geological Sciences

"Earth, Science and Society," a series of lectures to celebrate the contributions of Professor Jack E. Oliver, Aug. 28, 10 a.m. to noon, Statler Auditorium:

• "Growing Up in the Golden Age of Science," Frank Press, former president of the National Academy of Sciences and Green Senior Fellow at Carnegie Institution of Washington.

• "Earth Science in the Nineties: Models, Magritte, Mindsets, Media, Money, Manpower, Malthus and Metamorphosis," Charles Drake, former member of the President's Council on Science and Technology and professor at Dartmouth College.

• "Universities: Trashing a National Treasure," Frank H.T. Rhodes, Cornell president and professor of geological sciences.

## music

### Department of Music

Continuing Cornell's tradition of giving free Barnes Hall concerts, the music department starts with three major performances spanning from the Renaissance to contemporary music.



Bilson

• Soprano Judith Kellock and composer/pianist Martin Amlin will present music by Debussy, Amlin and Schumann on Saturday, Aug. 28, at 8:15 p.m. in Barnes Hall. The featured compositions are Debussy's Baudelaire Songs, Amlin's Piano Preludes and the premiere of Heavenly Feast, and Schumann's Liederkreis, opus 39, arranged in the original style and format.

• William Cowdery, keyboard artist and one of today's leading Bach scholars, will perform all *Goldberg Variations* by Johan Sebastian Bach on Aug. 29 at 4 p.m. in Barnes Hall. *Goldberg Variations*, the popular name for *Aria with [30] Different Variations*, BWV 988, is named after Bach's pupil Johann Gottlieb Goldberg, a harpsichordist in the service of Russian Count von Keyserlingk.

• Malcolm Bilson, known around the globe for his fortepiano performances and Classical interpretation, will play works of Chopin and Schubert on Aug. 31 at 8:15 p.m. in Barnes. Bilson will start his program with Schubert's *Sonata in E-flat major*, opus 122 and end with his *Sonata in D Major*, opus 53. Chopin's *Ballade in A-flat Major*, opus 47 and *Nocturne in E-flat Major*, opus 9 no. 2 are also featured.

### Cornell Folk Song Club

Folksingers Steve Gillette and Cindy Mangsen will appear in concert Sept. 4 at 8 p.m. in Kaufmann Auditorium, Goldwin Smith Hall. Gillette is probably best known as co-author of "The Ballad of Darcy Farrow," popularized by John Denver and now a sort of "folk standard." Mangsen is well-known to folk audiences as a singer of traditional songs. Advance tickets for the concert are \$6 and are available at Borealis Books, Rebop Records and the Commons Coffeehouse in Anabel Taylor Hall. For information, call 273-2132 or 272-3471.

### Bound for Glory

• Aug. 29: Jack Hardy and Wendy Beckerman, two of New York City's finest songwriters, will be splitting the evening in the Commons Coffeehouse in Anabel Taylor Hall. Sets are at 8:30, 9:30 and 10:30 p.m. Admission is free, and children are welcome. Bound for Glory can be heard Sundays from 8 to 11 p.m. on WVBR-FM, 93.5.

## readings

### Risley Residential College

As part of its orientation activities, Risley Residential College will present an open reading of Carl Orff's *Carmina Burana* on Aug. 28 at 7 p.m. in Risley's Great Hall. For information on participation, call Mark Handel at 253-0657, the Risley Service Center at 255-5365 or Matt Gilbertson at 255-9520. No tickets or reservations are required.

## religion

### Sage Chapel

Robert Johnson, director of university ministries, will give the sermon Aug. 29 at 11 a.m. Music by the Sage Chapel choir, under the direction of Thomas Sokol, and William Cowdery, Sage Chapel organist. Sage is a non-sectarian chapel that fosters dialogue and exploration with and among the major faith traditions.

### African-American

Sundays, 5:30 p.m., Robert Purcell Union.

### Catholic

Weekend Masses: Saturday, 5 p.m.; Sunday, 9:30, 11 a.m. and 5 p.m., Anabel Taylor Auditorium. Daily Masses at 12:20 p.m. in Anabel Taylor Chapel. Sacrament of Reconciliation, Saturday, 3:30 p.m., G-22 Anabel Taylor Hall.

### Christian Science

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

### Episcopal (Anglican)

Sundays, worship and Eucharist, 9:30 a.m., Anabel Taylor Chapel.

### Friends (Quakers)

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

### Jewish

Morning Minyan at Young Israel, 106 West Ave., call 272-5810.

Reform: Fridays 6 p.m., chapel, Anabel Taylor Hall; Conservative/Egalitarian: Fridays, 6 p.m., Founders Room, and Saturdays 9:30 a.m., Founders Room, Anabel Taylor Hall; Orthodox: Friday, call 272-5810 for time, and Saturday, 9:15 a.m., Edwards Room, Anabel Taylor Hall.

### Korean Church

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

### Muslim

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

### Protestant Cooperative Ministry

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

## Sage Chapel preachers listed

The fall schedule of Sunday preachers at Sage Chapel on campus includes a world-renowned church leader involved with the Billy Graham Evangelistic Association, chaplains from three other Ivy League institutions and a distinguished astrophysicist from Harvard University.

All services are held at 11 a.m. on Sundays during the academic year.

Dr. Leighton Ford, president of Leighton Ford Ministries, will preach on Sept. 12. Cited by *Time* magazine as being "among the most influential preachers of an active gospel," he for many years was featured as the alternate speaker to Billy Graham in his televised broadcasts and in his own television and radio spots in the United States, Canada and Australia.

He is the author of nine books and currently serves as a board member for World Vision U.S., the Duke University Comprehensive Cancer Center and Gordon-Conwell Theological Seminary.

Other speakers will be:

**Aug. 29:** Robert Johnson, director of Cornell University Ministries.

**Sept. 5:** John A. Taylor, Unitarian/Universalist university chaplain.

**Sept. 19:** William G. McMinn, dean of the

Cornell College of Architecture, Art and Planning.

**Sept. 26:** Janet Cooper Nelson, Brown University chaplain.

**Oct. 3:** Robert Johnson, director of Cornell University Ministries.

**Oct. 10:** No service; fall recess.

**Oct. 17:** Michael Buckley, S.J., of Boston College.

**Oct. 24:** Joseph Williamson, dean of the chapel, Princeton University.

**Oct. 31:** Michael Paley, director of Earl Hall, Columbia University.

**Nov. 7:** David Patterson, Hebraic studies, Oxford University.

**Nov. 14:** Alan Merten, dean of the Johnson Graduate School of Management.

**Nov. 21:** Roger C. Cramton, the Robert S. Stevens Professor of Law here.

**Nov. 28:** No service; Thanksgiving recess.

**Dec. 5:** Owen Gingerich, astrophysicist from Harvard University.

**Dec. 12:** Robert Johnson, director of Cornell University Ministries.

The services at Sage Chapel are under the administration of Cornell United Religious Work in consultation with the Sage Chapel Advisory Council.

### Sri Satya Sai Baba

Sundays, 10:30 a.m., 319 N. Tioga St. For details call 273-4261 or 533-7172.

### Zen Buddhist

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

## seminars

### Astronomy & Space Sciences

"The Origin of the Earth's Petroleum," Thomas Gold, space sciences, Sept. 2, 4:30 p.m., 105 Space Sciences.

### Chemical Engineering

"Non-Isothermal Parison Inflation in Blow Molding," John Tsamopoulos, SUNY Buffalo, Aug. 31, 3:45 p.m., 165 Olin Hall.

### Ecology & Systematics

"Cavity-adoption, Nest-lining and Timing of Breeding: Life-history Linkages in the Tree Swallow," David Winkler, ecology & systematics, Sept. 1, 4 p.m., A106 Corson Hall.

### Electrical Engineering

"General Information Session," Ronald Kline, electrical engineering, Aug. 31, 4:30 p.m., 219 Phillips Hall.

### Genetics & Development

"Polymorphism and Divergence in the *obscura* group of *Drosophila*," Monserrat Aguade, Univer-

sity of Barcelona, Aug. 30, 4 p.m., conference room, Biotechnology Building.

## theater

### Department of Theatre Arts

• **Stage crew meeting:** Come meet the faculty and staff in the theater department, ask questions and learn about how you can become involved behind the scenes of one of the region's outstanding theaters, Aug. 31, 7:30 p.m., Proscenium Theatre, Center for Theatre Arts.

• **Auditions:** Sign up in Green Room 101 for auditions for fall productions, Sept. 1 and 2, 7 to 10 p.m., room TBA.

## miscellany

### ACSW Meetings

The Advisory Committee on the Status of Women regularly holds brown bag luncheons open to the entire community on the fourth Tuesday of each month. For more information, contact Risa Lieberwitz, associate professor of industrial and labor relations, ACSW chairwoman, at 255-3289.

### Alcoholics Anonymous

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

### Bowling Leagues

Ladies, men and mixed bowling leagues are now forming at Helen Newman Lanes. Most leagues bowl short seasons (26, 28, 30 weeks). Sign up as a team, a couple or an individual. Call 255-4200 for information.

### Cornell Cooperative Extension

Cooperative Extension of Tompkins County is offering a "Landscape Solutions Workshop" to help homeowners assess, evaluate and plan property improvements. The class will meet Sept. 22 from 7 to 9 p.m. at the Cooperative Extension Education Center, and site visits are Sept. 25 from 9 a.m. to noon. The fee is \$12. To register, call 272-2292.

### Folk Guitar Lessons

The Willard Straight Hall Program Board once again will present Phil Shapiro's group folk guitar lessons. There are eight one-hour lessons on Monday evenings, starting Sept. 6, in the North Room of Willard Straight Hall. The beginner class is at 7 p.m., and the intermediate class is at 8 p.m. Registration is at the first lesson; just come and bring a guitar. The course costs \$40, payable at the first lesson. For information, call Phil at 844-4535.

### Sustainable Agriculture Seminar

Agricultural Engineering is presenting a one-credit option sustainable agriculture seminar this fall on Wednesdays from 4 to 5 p.m. in 400 Riley-Robb. The seminar will connect people with complementary interests in sustainable agriculture and food systems, and will introduce students to the field's breadth of research and production. Call Steven Hall at 255-8426 for information.



Folksingers Steve Gillette and Cindy Mangsen will appear in concert Sept. 4 at 8 p.m. in Kaufmann Auditorium, Goldwin Smith Hall. Advance tickets for the performance are \$6 and are available at Borealis Books, Rebop Records and the Commons Coffeehouse in Anabel Taylor Hall.



# CALENDAR

August 26  
through  
September 2

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

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

Notices should also include the subheading of the calendar in which the item should appear.

## dance

### Cornell International Folkdancers

All events are open to the Cornell community and general public. Admission is free, unless stated otherwise. No partner needed. For further information, call 277-3638.

Aug. 29: Line, circle and couple dances taught from 7:30 to 8:30 p.m.; request dancing, from 8:30 to 10:30 p.m., North Room, Willard Straight Hall.

### Cornell Jitterbug Club

Beginning swing and jitterbug classes will be taught by Bill Borgida and Cindy Overstreet. The classes are open to all ages, no partner is needed and a fee will be charged. Call Bill at 273-0126 for information.

- Six-week beginning jitterbug series starts Sept. 15 at 7:15 p.m. in the Edwards Room, Anabel Taylor Hall.

- Six-week West Coast swing class begins Sept. 29 at 8:30 p.m. in the Edwards Room, Anabel Taylor Hall.

- Four-week accelerated beginner series starts Sept. 30 (call for more information).

## 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. and Wednesdays to 8 p.m. Admission is free. Telephone: 255-6464.

- "Jack Squier: Sculpture Retrospective, 1953-1993," through Oct. 17. Squier, a professor in Cornell's art department, has created an impressive portfolio of work over the past four decades in a variety of media.

- **Weekend Walk-in Tours:** Every Saturday and Sunday during the academic year from 1 to 2 p.m., the museum offers a free tour of either a special exhibition or an aspect of the permanent collection. Please check at the museum for topics and speakers.

- **Workshop:** "Explore the Treasures of the Print Collection," each Wednesday from Sept. 8 through Oct. 6, 5:30 to 6:30 p.m. Each class will be devoted to discussing prints in a separate medium: intaglio, lithography, relief (woodcut), screenprint, and unusual and combination techniques. The class will look at master works by the great graphic artists, including Durer, Rembrandt, Canaletto, Goya, Whistler, Matisse and Picasso. A fee of \$75 for museum members and \$85 for non-members will be charged. Enrollment is limited to 15, and registration is requested by Sept. 1.

### Willard Straight Hall Gallery

"The Jews of Russia, 1881-1917," a photographic exhibit, will be on view beginning Sept. 1 in the Gallery and International Room in Willard Straight Hall.

## films

Films listed are sponsored by Cornell Cinema unless otherwise noted and are open to the public. All films are \$4.50 (\$4 for students), except for Tuesday night Cinema Off-Center (\$2) and Sunday matinees (\$3.50), and are held in Willard Straight Theatre except where noted.

### Thursday, 8/26

Cornell Comedies: The Student Film Show, with guest speaker Marilyn Rivchin, lecturer in theater arts, 7 p.m., free for new students with ID.

"Groundhog Day" (1993), directed by Harold Ramis, with Bill Murray, Andie MacDowell and Chris Elliot, 10 p.m.

### Friday, 8/27

"One Way Street" (1992), directed by John Hughes, with guest speaker Susan Buck-Morss, Cornell government professor, 7 p.m., half-price for new students with ID.

"Strictly Ballroom" (1992), directed by Baz Luhrman, with Paul Mercurio, Tara Morice and Gia Carides, 7 p.m., Uris, half-price for new students with ID.

"2001: A Space Odyssey" (1968), directed by Stanley Kubrick, 9:05 p.m., Uris, half-price for new students with ID.

"Vertigo" (1958), directed by Alfred Hitchcock, with James Stewart and Kim Novak, 10 p.m., half-price for new students with ID.

"Groundhog Day," midnight, Uris.

### Saturday, 8/28

"The Seven Samurai" (1954), directed by Akira Kurosawa, with Takashi Shimura and Toshiro Mifune, 7 p.m., half-price for new students with ID.

"Groundhog Day," 7:30 p.m., Uris, half-price for new students with ID.

"Strictly Ballroom," 9:50 p.m., half-price for new students with ID.

"Citizen Kane," 11 p.m., half-price for new students with ID.

"2001: A Space Odyssey," midnight, Uris, half-price for new students with ID.

### Sunday, 8/29

"Histoire(s) du Cinema" (1989), directed by Jean-Luc Godard, presented by Pentangle, 7:30 p.m., Uris, free.

"Citizen Kane," 8 p.m., half-price for new students with ID.

### Monday, 8/30

"Strictly Ballroom," 7:50 p.m.

"Groundhog Day," 10 p.m.

### Tuesday, 8/31

"Vertigo," 7:20 p.m.

"Strictly Ballroom," 10 p.m.

### Wednesday, 9/1

"Once Upon a Time in China III" (1993), directed by Tsui Hark, with Jet Li, Rosamund Kwan and Max Mok, 7:30 p.m.

"Dragon: The Bruce Lee Story" (1993), directed by Rob Cohen, with Jason Scott Lee, Lauren Holly and Robert Wagner, 10 p.m. (\$2 with "Once Upon a Time in China III")

### Thursday, 8/2

"Man Bites Dog" (1992) b&w, directed by Remy Belvaux, with Benoit Poelvoorde, Andre Bonzel and Remy Belvaux, 7:50 p.m.

"Beauty and the Beast" (1991), directed by Gary Trousdale and Kirk Wise, with the voices of Robby Benson and Angela Lansbury, 10 p.m.

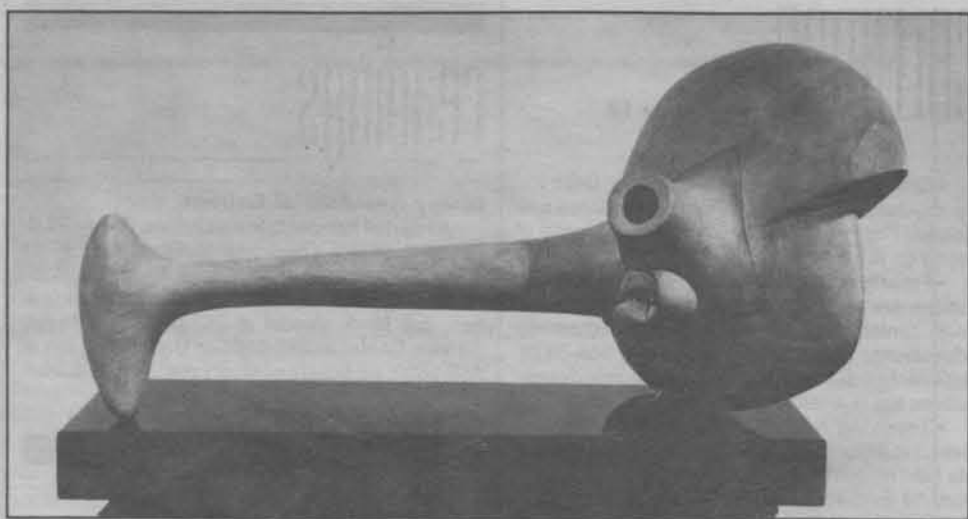
## graduate bulletin

- **Late Registration:** Bring student ID card to the Registrar's Office, 222 Day Hall, and go to the Graduate School for course enrollment.

- **Course Enrollment:** Forms are available in graduate field offices and at Sage Graduate Center. Return completed form in person by Sept. 17 to the Graduate School. Students who completed pre-course enrollment forms last spring do not need to complete a course enrollment form; if there is a change in their schedule they should complete a Course Drop and Add form.

- **1994 Summer Support:** Dec. 15 is the deadline for U.S. citizens and permanent residents for filing documents with the Graduate Fellowship Office for 1994 summer awards. This includes: 1993-94 Free Application for Federal Student Aid (FAFSA), 1992 Federal Income Tax Form, Financial Aid Transcript from institutions attended prior to Cornell, and Selective Service Compliance form.

Continued on page 11



"Oracle II" (1963), part of the Jack Squier retrospective on view at the museum through Oct. 17.

## Squier retrospective on display at the Johnson Museum of Art

The Herbert F. Johnson Museum of Art is presenting the exhibition *Jack Squier: Sculpture Retrospective, 1953 - 1993* through Oct. 17. Squier, a professor in Cornell's department of art, has created an impressive portfolio of work over the past four decades in a variety of media.

This exhibition will present an exciting selection of sculptures, providing the viewer with an in-depth look at this acclaimed artist's development and accomplishments.

Squier's sculptural materials range from wood to fiberglass, and he has made both figurative and abstract works. Early in his career he concentrated on abstract forms while experimenting with plastic resins as an alternative to bronze casting.

Over time, Squier's work began to include the human figure, and he went on to produce an impressive collection of sculptures and reliefs using both bronze casting and plastic resins.

This diverse artistic evolution has influ-

enced his teaching, as he urges students to concentrate on both figurative and abstract subject matter to gain a complete understanding of forms in space.

Squier has been a member of the Cornell community since receiving his M.F.A. here in 1952, and he has been a professor of sculpture in the College of Architecture, Art and Planning since 1965. He was twice featured in solo shows at the White Museum, the Johnson Museum's predecessor, where he served as curator of sculpture from 1959 to 1962.

Squier has made an important contribution to a community he describes as "busy and productive... with musicians, poets and scientists probing the boundaries of traditional academic disciplines."

His work is held by several major public and private collections, including the Whitney Museum of American Art and the Museum of Modern Art, and has been displayed throughout the United States and internationally.

## Lectures, open house scheduled to honor Cornell geophysicist

By Larry Bernard

Jack E. Oliver, the Cornell geologist and seismologist whose contributions to the scientific knowledge of Earth span five decades, will be honored with a symposium, "Earth, Science and Society," on Saturday, Aug. 28, followed by an open house in the department of geological sciences.

All events are free and open to the public.

Oliver, 69, the Irving Porter Church Professor of Engineering who recently was appointed professor emeritus of geological sciences, will be feted with lectures by three prominent scientists and educators for his contributions to the field. These Oliver Lectures will be in the Statler Auditorium on the Cornell campus:

- 10:15 a.m., Frank Press, former president of the National Academy of Sciences, now a senior fellow at the Carnegie Institution in Washington, D.C., "Growing Up in the Golden Age of Science."

- 10:45 a.m., Charles L. Drake, professor of earth sciences at Dartmouth College and former member of the President's Council of Advisors on Science and Technology, "Earth Science in the Nineties: Models, Magritte, Mindsets, Media, Money, Manpower, Malthus and Metamorphosis."

- 11:15 a.m., President Frank H.T. Rhodes, a professor of geological sciences, "Universities: Trashing a National Treasure."

Following the lectures, Larry D. Brown, Cornell professor of geological sciences, will describe geological research here.

The open house, from 1 to 3:30 p.m., will be in the department on the first floor of Snee Hall. It will feature exhibits, descriptions of Cornell research around the world, tours of laboratories, demonstrations and videos.

Oliver has been at Cornell since 1971. Former chair of the geology department, he was elected to the National Academy of Sciences in 1984. He has written a book, *The Incomplete Guide to the Art of Discovery* (Columbia University Press, 1991), and numerous research papers.

Oliver also has won numerous awards.

Among them was the Bucher Medal of the American Geophysical Union in 1981 for "his insights and scientific intuitions in initiating major research programs leading to new discoveries regarding the deep structure and the evolution of the Earth's crust."

He also has received the medal of the Seismological Society of America; the Kaufmann Medal of the Society of Exploration Geophysicists; the Woollard Medal of the Geological Society of America; and the Hedberg Award of the Institute for the Study of Earth and Man at Southern Methodist University in Dallas, Texas. He holds an honorary doctor of science degree from Hamilton College in Clinton, N.Y.

Oliver's research focused principally on seismic wave propagation, the physical properties of the Earth's crust and the deep structure of the Earth beneath the tectonic plates. He used earthquake-induced surface waves to study the Earth and helped devise the theory of plate tectonics. More recently, he has been involved with using seismic waves to explore deep structures of the Earth's crust.

He has taught many undergraduate and graduate courses at Cornell, including a course in earth science for non-science majors and a graduate seminar on the history of science and the art of discovery.

Oliver earned an undergraduate degree in 1947, a master's in 1950 and a doctorate in geophysics in 1953, all from Columbia University. He was on the faculty there until 1971, when he came to Cornell to head its newly reorganized geological sciences program. He helped found the Consortium for Continental Reflection Profiling (COCORP) at Cornell, a National Science Foundation-sponsored research project to profile the Earth that inspired similar programs all over the world. Oliver also founded the Institute for the Study of the Continents (INSTOC) at Cornell.

He was a member of the U.S. delegation at international discussions in Geneva on the nuclear test ban treaty in 1958 and 1959, and is past president of the Seismological Society of America and Geological Society of America.