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Biological 'Time-Bomb' Ticking Away in Gypsy Moths

By YONG H. KIM

Gypsy moths carry a deadly biological "time-bomb" waiting to be detonated. And scientists at the Boyce Thompson Institute for Plant Research at Cornell are trying to find the trigger mechanism to set off the explosive on command.

Large numbers of gypsy moths are infected with a peculiar kind of virus that produces no recognizable symptoms at first; but for reasons not well understood, the virus becomes destructive to its host, much like the herpes simplex virus that causes cold sores in humans.

Such a virus, if activated, could wipe out the gypsy moths, which are the most serious insect pests affecting hardwood forests.

"When this virus becomes activated, it's lethal," says BTI virologist Alan Wood.

"That explains why gypsy moth populations, after several years of rampage, crash practically overnight."

At least one in every 10 gypsy moths is infected with this virus, which is ready to seize an opportune time to become virulent — a phenomenon not previously seen in the world of caterpillars and moths (lepidopteron), according to Wood.

In his most recent study, Wood has made another major discovery. He found that infected gypsy moths pass on the virus to their offspring. This finding makes scientists even more convinced that they may be able to turn this virus into a killer at the right time.

Brought into Massachusetts from Europe more than a century ago, gypsy moths have since stripped millions of acres of forests in the Northeast. Regarded as one of the most

serious defoliators of hardwoods, especially oak, the critter is known to attack more than 100 species of trees, shrubs, and ornamentals.

Still on the march, the gypsy moth is expanding its range. Pockets of infestations now exist throughout the Northeast, in parts of the Midwest as far west as Wisconsin, and on the Atlantic seaboard as far south as South Carolina. Gypsy moths are now showing up in the northwestern part of the United States, including northern California, Oregon and Washington.

Within infested areas, gypsy moth populations fluctuate widely in almost unpredictable fashion. BTI's Wood is convinced that gypsy moth population crashes that occur usually several years after "boom" periods are due to the epidemics caused by latent vi-

rus infections in the moths.

When the virus is in its dormant mode causing no visible damage, scientists call that behavior the "latent" or "persistent" state. When the latent virus becomes activated and destructive, that phenomenon is called the "productive state."

What prompts the latent virus to become deadly remains a scientific mystery. Wood believes that when gypsy moth populations undergo physiological stress, such as food scarcity or seeking out new food sources beyond the infested areas, the virus transforms itself into a lethal one.

"People carrying the herpes simplex virus develop cold sores following a stress, such as a fever," Wood explains. "The gypsy moth

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Extension-Type Aid of Sort Given to Farmers Now Being Tried for Manufacturers in Southern Tier

The kind of practical guidance that the Cornell Cooperative Extension system has provided agriculturists during the past 75 years is now available to manufacturers in the Southern Tier of New York State.

A \$323,000 one-year pilot project will make it easier for the region's small and medium manufacturing firms to draw upon the expertise of the Cornell Manufacturing and Productivity Program (COMEPP) in the College of Engineering.

The pilot project will make available innovative technologies and engineering practices to manufacturers and will conduct studies and training in ways to overcome manufacturing productivity problems.

The Cornell project is part of a larger, statewide effort coordinated by the New York State Science and Technology Foundation to develop the New York State Industrial Innovation Extension Service. The aim of the project is to apply the lessons of agricultural extension to industrial innovation.

At Cornell, a \$143,000 state contract will be combined with an equal amount of university support. Cornell Cooperative Extension will work with the College of Engineering to coordinate the project, working in partnership with the university's emerging program in industrial innovation and regional development.

Manufacturing firms ranging in size from 10 to 250 employees, are most likely to lack risk capital, staff time and in-house management teams necessary to keep up with the new technologies and innovations, according



Herschel Blackburn

Berdell Boss

to Charles Yohn, director of corporate relations in the engineering college.

University faculty and students, on the other hand, are often very familiar with the problems facing these smaller, middle-aged firms but unaware of specific opportunities to assist firms. It's a question of getting the two together, Yohn said.

This is why the Cooperative Extension system is perfectly suited to the task, noted Lucinda Noble, director of Cornell Cooperative Extension.

The project will make use of extension's existing contacts, staff, and organization. Two full-time people and one part-time person will coordinate the project, Noble said. Derwood G. Burns, an extension specialist in community issues at Cornell will oversee the extension part of the project, she said.

At first, the staff will essentially spend its

time knocking on doors and letting the business community know about the project.

For its brain power, the project will rely on the four-year-old Cornell Manufacturing Engineering and Productivity Program led by John A. Muckstadt, professor of operations research and industrial engineering. Known by the acronym COMEPP, the program tries to put into practice the belief that it is not enough to simply improve existing technologies in isolation.

"Rather," Muckstadt said, "it is imperative to consider the entire manufacturing process as a strategy to improving a corporation."

For example, he said, students and professional engineers from Cornell would work with companies to implement the latest technology in production planning areas such as improving material management. This would include reducing inventories and cutting production lead times, he said.

"Some of these things are very complicated to effect, requiring quite a bit of expertise," Muckstadt noted. Most of the production improvements available to firms involve extensive use of computers. The use of computers for controlling the manufacturing system from concept to finished product is one of the major themes of COMEPP's work.

The students would most likely take on internships with the firms that seek assistance in order to implement the proposed improvements. The companies won't be the only beneficiaries, Muckstadt said. In return for their efforts the students would gain hands-on experience in manufacturing.

Two staff people have been hired to provide leadership for the pilot project. They are Berdell G. Boss, project manager, and Herschel Blackburn Jr., industrial extension specialist. Both have engineering degrees and several years of experience in manufacturing.

Two-Day Symposium Will Honor Africana Center's James Turner

Writers Gwendolyn Brooks, James Baldwin, and Toni Cade Bambara are scheduled to take part in a two-day symposium May 9 and 10 at Cornell in honor of James E. Turner, director of the university's Africana Studies and Research Center.



TURNER

Turner is stepping down June 30 after 17 years as director of the center established in 1969. He will be succeeded by Robert L. Harris Jr., an historian at the center since 1975.

The program in Turner's honor will include readings of original works by Brooks, Baldwin, Bambara, and others. The writers will also take part in panel discussions with leading scholars in Black studies, including Barbara Sizemore, Maulana Karenga, and John Henrik Clark.

All events are free to the public. Detailed schedules are available at the center, 310 Triphammer Road.

"In its 17 years under Professor Turner's Leadership," according to the planners of the symposium, "Cornell's Africana Studies and Research Center has become one of the

most highly regarded models for Black studies organization and achievement in the United States."

"Respected by theorists and practitioners in the field of Afro-American and African Studies, Professor Turner serves on the executive boards of TransAfrica Black American Lobby for Africa and the Caribbean, the National Council of Black Studies, and the African Heritage Studies Association, of which he has served as president. In addition, he is a member of the editorial boards of several journals in the field," the symposium organizers pointed out.

In 1981, the center ranked third among the top 15 colleges and universities in Black studies in a report titled "The Professionalization of Achievement in Black Studies." The report was based on a study by Gerald A. McWorter of the Afro-American Studies and Research Program at the University of Illinois.

Turner, who was 29 when he became director of the center, holds a B.A. (1966) from Central Michigan University, an M.A. (1968) and a certificate of specialization in African Studies (1969) from Northwestern University, and a Ph.D. (1975) from the Union Graduate School, Cincinnati, Ohio.



HARRIS

"I am delighted that Robert Harris has agreed to serve as the second director of Cornell's Africana Studies and Research Center. His enthusiasm, commitment, and knowledge of the center and of Cornell will provide the continuity of leadership needed to sustain and enhance the center's efforts in the field of black studies," Rhodes said. "I should also like to thank James Turner for his devoted service as the first director of the center and for his role in bringing the Africana Studies and Research Center at Cornell to the position of leadership it now enjoys."

A specialist in Afro-American history, Harris joined the center as an assistant professor in 1975 and was named an associate professor with tenure in 1982.

Harris currently is working on a study of the United Nations and its espousal of human rights as related to the struggle of black

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New Program Provides Incentives For Students to Become Teachers

Top math and science students at Cornell now have a new incentive to consider careers as high school teachers.

A \$500,000 grant from the Andrew W. Mellon Foundation will support 10 to 12 students a year in a pilot project that begins this fall, according to Joe P. Bail, chairman of the Department of Education.

Bail said the students being attracted to the program, especially those at an Ivy League school, traditionally get high paying jobs in industry upon graduation.

"Their salaries are often more than double what they would receive as starting teachers," Bail said.

"The program," Bail said, "responds to a growing problem that is just beginning to get nationwide attention. Fewer and fewer of the so-called 'best and brightest' are choosing careers as secondary school teachers."

There are a number of reasons for this, he said explaining that in many cases the sky-

rocketing cost of higher education has forced students to accumulate heavy loan commitments.

One of the features of the six-year pilot program to start this fall at Cornell is financial support, including loan forgiveness of up to \$2,500 a year for needy students, provided they teach for two full years after graduating. The financial support, which also includes a work-study component, is intended to prevent an after-graduation debt load too great to repay on a secondary school teacher's salary.

Of equal importance to the financial attraction, is an intensive intellectual program integrating learning theory, pedagogical methods, and on the job teaching experience directly with the student's major degree program, Bail said.

Students will enter the program in their junior years each year over the next three years under the Mellon funding. The students will be graduated with both a bachelor's degree in their major subject and a master's degree in teaching. This means their college careers will total five years.

The program is designed to establish a model for other schools to approach the problem of attracting as many of the nation's intellectually gifted students to secondary school teaching as possible.

Application deadline is Monday, May 12. Forms and information sheets are available at the Department of Education Office in Roberts Hall, the Office of Financial Aid in Day Hall, the Department of Mathematics in White Hall, and the offices of the Division of Biological Sciences in Stimson Hall.

Safety Series Starts On Page 3 Today

The first in a series of three articles about the Department of Public Safety is on page 3 of today's edition.

The organization and its complexity is explored from the perspective of Elaine Main, assistant director of public information at Wartburg College, Iowa, where the safety operation consists of one officer in a blue sedan. Main is studying at Cornell this term and doing free-lance work with the News Service.

Greater Awareness About Suicide May Be Factor in Decrease Here

Suicide is the second-leading cause of death among people ages 15 to 24 nationwide, behind only accidents.

Springtime — with the pressures accompanying final examinations, changes in personal relationships, and the uncertainty of the job market, among other factors — can be a time when college students in particular are under tremendous stress, says Nina Miller, executive director of Suicide Prevention and Crisis Service of Tompkins County.

"It's not school pressures that cause suicides, but academic pressures can make students less able to handle other kinds of stress, such as failure in a relationship or if their parents are getting a divorce," Miller says.

At Cornell, there have not been any student suicides since one student committed suicide in 1982, Miller says. In 1981, three Cornell students committed suicide; in 1977, five students took their own lives.

"There is greater awareness on campus now about the danger signals of suicide and what can be done to help people who are severely depressed," says Stephen Campbell, acting director of Psychological Service at Cornell's Gannett Health Center.

About 150 faculty, students, staff, and community members have attended a seven-year-old crisis prevention course offered by Psychological Service each semester through the university's Experimental College, which offers informal, non-credit courses. The course teaches people how to detect a potential crisis and what referral action to take.

Alert faculty and students who are sensitive to the danger signals of potential suicide victims can help people get help before it's too late, Campbell says.

"The calls for help are often subtle — expressing thoughts of worthlessness or concentrating on past events and avoiding discussion of the future," Campbell explains. "When people are depressed, they need to know that others care."

Among the suicide danger signals identi-

fied by Joyce Marsh, a psychiatric social worker at Gannett, are:

- Talking directly or indirectly about committing suicide, including statements such as "I don't know what I might do," or, "I can't take it any longer."

- Signs of depression, including spontaneous crying, insomnia, loss of appetite, inability to concentrate, irritability, fatigue, or lack of interest in personal appearance or sexual desire.

- Expressions of worthlessness or hopelessness.

- Making final arrangements, such as dividing belongings among friends.

- Isolation or withdrawal from others.

- Increased use of alcohol or drugs.

If people encounter someone exhibiting some of these signals, they should talk openly with them about suspected suicidal thoughts or gestures, listen while giving reassurance and withholding judgment, and help the person find help, Marsh says.

"If a person you are with is at risk, don't leave them alone," Miller adds. "Go with them to the clinic. Be an 'active' friend."

There are many places to turn for help for yourself or a friend, she says. They include:

- Psychological Service at Gannett Health Center, 255-5208 days, 255-1111 nights and weekends.

- Cornell Public Safety, 255-1111, in cases of emergency.

- The Suicide Prevention and Crisis Service, 272-1616, a 24-hour counseling service.

- Tompkins County Mental Health Center, 274-5422 days, 274-4411 nights and weekends.

"People in these offices can assess and monitor the situation and take whatever action may be necessary to ensure the person's safety," Marsh says. "If you have reason to believe someone is considering suicide, it is best to alert professionals on campus before there is a crisis. And remember that these resources are available not only to others but also to you for consultation and support."



Study time is logged at the feet of the founder's statue.

Enrollment in Cornell's ROTC Program Up 80% in Past Decade

Enrollment in Cornell's ROTC program has increased 80 percent during the past decade, reaching a 20-year record high 543 cadets and midshipmen, including 100 students from nearby colleges and universities.

In 1960, the last year that ROTC was required, enrollment reached more than 2,000 students. Participation dropped to only 254 students during the most active periods of opposition to the Vietnam war.

Students in ROTC rate the learning of leadership skills as the primary non-monetary benefit of the program. They suggest, however, that there should be a consistent policy among Cornell's schools and colleges regarding academic credit for ROTC courses.

Other improvements suggested by ROTC students include reducing the rivalry among the service branches and a smaller time commitment required of freshmen.

Those findings and recommendations are included in a 34-page report released this week by the University ROTC Relations Committee (URRC), chaired by Pete Minotti, associate professor of vegetable crops. Cornell is one of 37 colleges and universities that are hosts to the ROTC programs of all three military branches.

"ROTC is on a high right now," Minotti said. "Aside from the high cost of a Cornell education and the scholarship incentive, students are looking for a way to participate in our society rather than rebel, and more and more high-quality students are participating in ROTC."

"A sense of adventure combined with job

security also play a role," he added.

"There are some concerns, though," Minotti said. "We hope that this report will give ROTC leaders and Cornell faculty and administrators a better understanding of the entire military program on campus."

The URRC study was initiated last spring after the father of an ROTC student claimed that the naval science program here was too demanding.

"The program is indeed time-consuming but students are rewarded both financially and otherwise for their commitment," Minotti said. "Students said they are happy in the program and that they would recommend it to others."

The key frustration for many of the ROTC students who responded to a survey is the inconsistent policy among Cornell's schools and colleges regarding credit for ROTC courses, Minotti added.

Currently, the agriculture, hotel, human ecology, and industrial and labor relations schools and colleges grant credit for all ROTC courses, except drill and leadership labs. The arts college and College of Architecture, Art, and Planning grant credit only for sponsored ROTC courses — those ROTC courses offered within academic departments and taught by faculty members rather than military personnel. They include courses such as navigation, ship systems, and organizational behavior and small group processes.

The engineering college awards credit for sponsored courses and a limited number of non-sponsored ROTC courses. Most Navy

courses are sponsored in an academic department, while nearly all Army and Air Force courses are not.

"Clearly this inequitable policy of the individual colleges in awarding credit for ROTC courses frustrates many of the Army and Air Force students (in the arts and architecture colleges), but resolution of the problems ultimately resides with the academic policy committees of the individual colleges rather than with central administration or the URRC," the report states.

The Army and Air Force place no restrictions on course majors while the Navy does not award scholarships to students majoring in agronomy, art, floriculture, music, natural resources, and certain other disciplines. The Navy is considering making all majors acceptable if certain course requirements such as calculus and physics are met, according to the report.

In 1969, a faculty committee recommended that courses taught by regular faculty be substituted for those taught by military officers for academic subjects for which credit is awarded. "This recommendation ... may or may not reflect the consensus of faculty opinion today," according to the report.

Among the report's highlights:

- Women make up 20 percent of ROTC members; 10 percent are minorities.

- The Navy, with 212 midshipmen, is the largest of the three units, but the Army (159 members) and Air Force (172) are growing at a rate faster than that of the Navy.

- About 65 percent of students beginning the Air Force or Navy programs are eventually commissioned while the corresponding figure for the Army is about 30 percent.

- One-half of ROTC students are from the College of Engineering, 32 percent are enrolled in the College of Arts and Sciences,

11 percent are from the College of Agriculture and Life Sciences.

— About 95 percent of the midshipmen and 81 percent of the cadets are supported by competitively awarded military scholarships that provide full tuition, an allowance for textbooks and supplies, and \$100 a month for other expenses. In all, ROTC units paid \$1.9 million to Cornell for tuition during the fall 1985 semester.

In return for scholarship support, students agree to earn a bachelor's degree, accept a commission if offered, and serve on active duty for up to four years with additional service in the reserves.

— More than 90 percent of the ROTC students who responded to a survey were satisfied with their ROTC experience and would recommend ROTC to others.

— On average, students spend 10 hours a week in ROTC courses and activities, and another five hours in preparation.

— As a group, ROTC students have cumulative GPAs slightly higher than those of non-ROTC students in similar programs.

The report recommends that the URRC, a standing committee of the Faculty Council of Representatives, continue in its present form, because it "provides a conduit through which the university and the units may communicate in both a formal and informal manner."

The URRC consists of three military department heads, six elected faculty members, two appointed administrators (vice provost and dean of students), three ROTC students, and four non-ROTC students.

Copies of the URRC's full report are available by contacting Vice Provost James W. Spencer's office, room 303 Day Hall, at 255-5030.

16 Demonstrators Are Charged

Public Safety officers arrested 16 protesters who refused to leave Day Hall when requested to do so Monday. On Tuesday, seven protesters staged a one-hour sit-in at Day Hall; no arrests were made.

The demonstrators were protesting Cornell's investments in companies that do business in South Africa. Many carried signs urging the university to divest itself of such holdings.

Monday, 13 students were charged for failure to comply with an order under the Campus Code of Conduct, according to Public Safety. Three other persons not affiliated with Cornell were charged with simple trespass under New York state law, and were given appearance tickets for May 12 in Ithaca City Court.

Monday's arrests occurred in two stages; nine protesters (eight students and one person not affiliated with the university) were charged twice, according to Public Safety.

At 3:50 p.m., officials asked about 30 protesters who were sitting in the bursar's office adjacent to the Day Hall lobby to leave the building. About 15 obeyed the order; another 15 (12 students and three not affiliated with Cornell) remained and were charged.

At 5 p.m., the building's closing time, about 50 protesters who were sitting in the Day Hall lobby were asked to leave the building. Forty obeyed the order; 10 (nine students and one person not affiliated with Cornell) remained and were charged. Of the 10, nine had been charged one hour earlier for refusing to leave the bursar's office.

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Department of Public Safety

An Irony: Safety Officers Work Hard to Keep Jobs Dull and Not to Act Like 'Miami Vice'

This is the first of three articles on the Department of Public Safety.

By ELAINE MAIN

Cornell's public safety officers use more energy than the flashy cops on "Miami Vice" to keep their jobs dull.

William Evans, university service officer, could arrest the student who is hanging out of the window ledge, buoyed by a six-pack of beer. Instead, he talks to the student with all the feelings of a concerned parent.

"Do you know what will happen if you fall out of that window? I'll have to go down and pick up the pieces. We don't want that to happen, so why don't you just crawl back in ...?"

And the incident is over.

"We talk a lot," Evans says about his fellow officers. "We can do a lot of work with personality and quick observation."

Patrolman Al Jenkins looks for the abnormal when he drives along East Avenue and Triphammer Road on a normal class day.

"Let's check more carefully that guy who's looking at Fall Creek from the bridge. Nope, no problem. He's with a girl and they're chatting."

Further down the road, Jenkins says, "These vehicles in the delivery zones I recognize. Let's drive through the parking lots; look for cars with gas leaks. Now we'll circle by Fuertes Observatory and Moakley House. Anything out of place? Any roof holes? With these burglar alarm systems tied to doors and windows, roof break-ins are more likely."

Evans and Jenkins spend much of their shift keeping things quiet, which is the opposite of the Cagney and Lacey image of law enforcement.

"Often, employees enter public safety with the TV concept of a cop," said William McDaniel, director of Cornell's department of public safety. "They envision high-speed chases and shootouts."

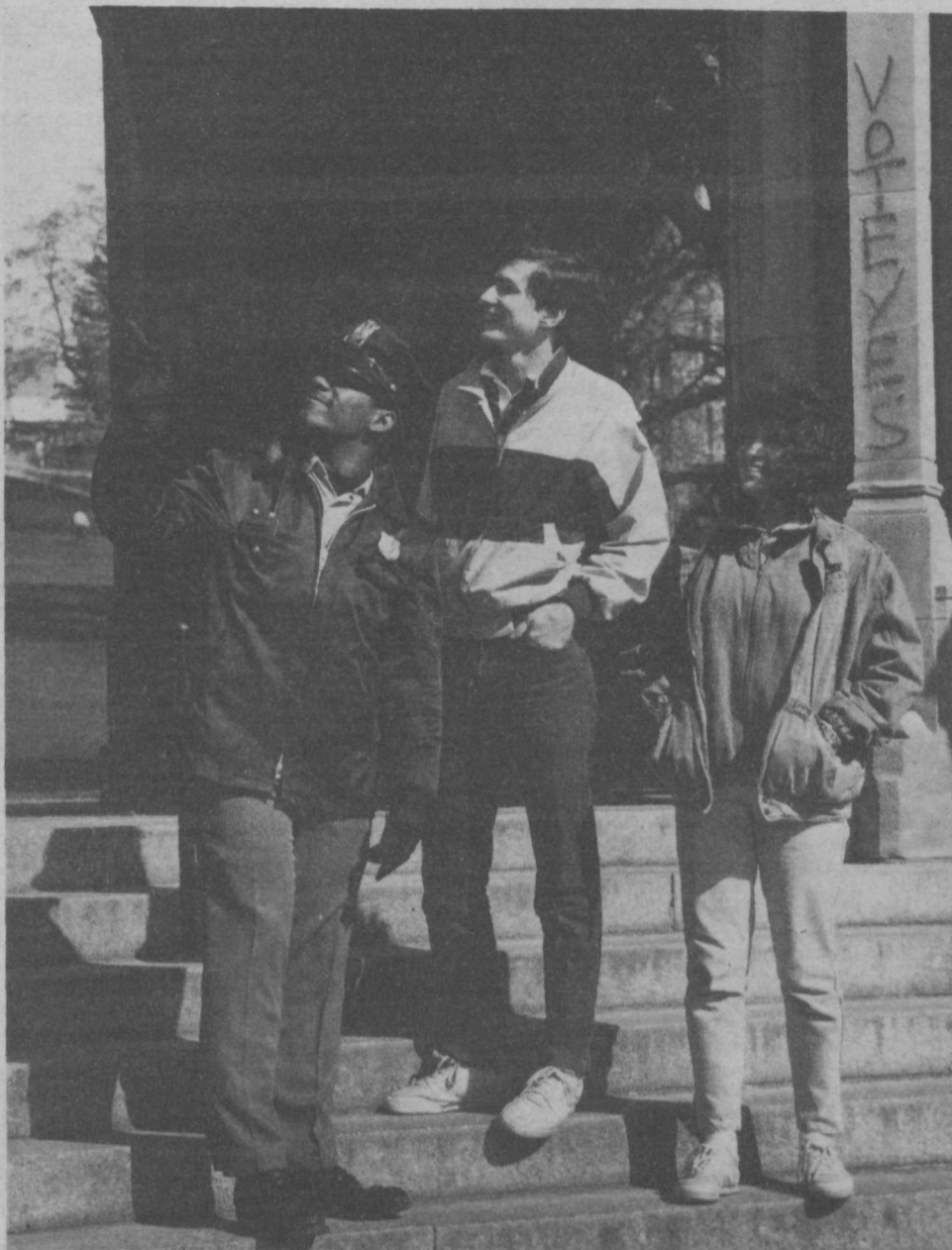
McDaniel says the sign of a good public safety officer is the absence of crime on the beat.

"We try to prevent excitement from happening. We will never play a glamour role."

More than 90 percent of an officer's time is spent in noncriminal services — driving circles that total 50 miles a night, directing families to the admissions office, outlining the parking options to visitors, talking students into better behavior.

Joe Carsello, who spends part of his day in a traffic control booth, holds the longevity record for university service officers, so he understands the boredom that causes some officers to move on to other jobs.

"Sometimes new people don't know that much of our work is very ordinary," Carsel-



William Evans, university service officer, likes students, and he is a persuasive talker, as freshmen Garry Miller (center) from Concord, Mass., and Stacy Baskin from Staten Island, N.Y., learn. Evans talks students out of potential problem situations.

lo said. "What you bring to the job is your own way of doing the work. You've got to like people and know how to communicate, or you shouldn't be in this work."

In a few cases, officers can point to statistics that prove crime has decreased due to their work.

Ted Pless, crime prevention manager, can verify a drastic drop in criminal incidents

around Beebe Lake after four "bluelights" (emergency phones topped with identifying lights) were placed in the area. The department's other crime prevention activities range from bicycle registration and lighting surveys to alcohol and rape awareness programs.

"Usually we can't prove in black and white that we've prevented crime. We keep



One-third of the callers who use Cornell's 114 emergency phone lines ask for information, according to Ted Pless (above), crime prevention manager. Signs will be installed under all the Blue Lights so that visitors know the phones are for more than emergencies.

statistics about reported crimes and see if those numbers increase. But we don't know how many crimes go unreported," Pless said.

Reports of crime fall short of actual criminal activity. Thus, officers can't prove by those statistics that they are individually instrumental in preventing crime in their sectors of campus.

Seven years ago, the department began combatting the failure to report crime with a Campus Watch program. Initially, the number of reported crimes increased markedly. Now, the "honeymoon" is over. The harder job remains, that of encouraging crime reports in a campus whose population changes nearly 40 percent each year.

"Crime reports are so important in solving crime," said Randall Hausner, assistant director of public safety. "Yet, people think of all kinds of reasons why they shouldn't report crime. They don't think the crime is solvable. Or they don't like police officers. Or they don't think the crime was big enough. Or the item stolen wasn't valuable enough."

Officers realize that crimes go unreported. So, when they come on duty, they judge how much action has taken place in their sectors by the crimes reported since their last shift. Consciously or unconsciously, it's a way of measuring how well they are doing. The less activity, the better!

NEXT: An emotional dilemma for Public Safety officers.

Psychologist Says Disrupted Family Life Takes a Toll on Children

By JOSEPH SCHWARTZ

It's 10 p.m. Do you know where your parents are?

That twist on a famous saying underscores a major problem in American culture today, according to a Cornell psychologist. A disrupted family life is taking its toll of marriages, parent-child relationships, and the well-being of the children themselves.

Urie Bronfenbrenner, the Jacob Gould Schurman Professor of Human Development and Family Studies in the College of Human Ecology, maintains that the American family is under siege.

"The United States has the highest rate of teen-age pregnancy of the industrialized nations, the highest divorce rate in the world, and a growing adolescent drug abuse and alcohol problem," Bronfenbrenner pointed out.

Bronfenbrenner made his remarks in a talk at the 10th annual Social Trends and Outlook Conference at Cornell last week. His talk — "The American Family — Who Cares?" — focused on the impact of modern family stresses on children.

Bronfenbrenner outlined the causes of modern family stress: an increasingly mobile society, two-career households, single-family households, and other changes in the post-World War II industrialized nations. These changes are unraveling the social fabric that once provided guidance and emotional support to the young and old.

"We can't turn these changes around, but we can react to them by turning our attention back to the family and children. For example, we've all heard the question, 'Do you

know where your children are?' It is equally important for children to know where their parents are," Bronfenbrenner said. "Parents should report in to their children just as children should report in to their parents."

Why is this important? "Children need stability in their lives. They have to know they can depend on their parents to be there if they need them," Bronfenbrenner said.

Unfortunately, parents aren't always around. Among two-parent families with children under 18, almost 60 percent of all mothers have jobs out of the house. But of course the figure for fathers is much higher, which has more impact because fathers account for much more of the variation in children's character and competence than mothers do.

"Mother isn't always home, and when she does come home, she is as tired as daddy after a day of work. Children come home to an empty house, or they're shifted from one baby-sitter to another. All of this disruption can cause alienation in a child," Bronfenbrenner said.

More often than not, an alienated child can't relate to the family or to school.

"As a result, the child turns to the streets, and that's where the trouble begins," he said.

What can be done about this? On the family level, Bronfenbrenner's cure is rather simple. He suggested, "Just show your children that you are there for them. Take time out each day to be with them. It's not the beautiful weekend every two weeks that counts; it's that favorite story

you read to them every night, or the walks you take together."

The family is not entirely to blame, according to Bronfenbrenner. Employers can do their part to reduce family stress by recognizing the commitment of parents to their children.

"Companies should make it easier for parents to spend time with their children by allowing more flexible time and parental leave. This will not only benefit the family, but also will benefit the company," Bronfenbrenner stressed. "Two major employee problems in this country are absenteeism and high turnover. Yet those problems are generally linked to family problems. So if you can help the family stay together, you will have a more dependable work force."

Communities, too, can play a role. Unlike countries such as France, Australia, and Canada, the United States hasn't accommodated the disruption of traditional family and neighborhood structure that occurred after World War II.

"We have fewer support systems for people than most industrialized countries and, at the same time, we have the highest rate of teen-age pregnancy and other forms of social deviance among our children of any country in the world," Bronfenbrenner said.

Another recent and rapid change is the marked rise of adolescents in the workplace. Today, more than 40 percent of the nation's high school students are working more than 20 hours during the school week. Most of these youngsters are from middle-class and well-to-do families, but the kind of work they do is both dead-end and dull. The re-

sults are poorer school work and greater involvement in peer group activities, such as smoking, early sex, and drug use.

These problems are not unknown in other industrialized nations. "But the problem in the United States is that we are slow to accommodate these changes," he said. "Other industrialized countries are making concerted efforts to provide services that support the needs of their families and their youth, and those efforts are working."

For example, rifts between the young and old in Switzerland are reduced by a law that requires day-care centers for children and centers for the elderly be located next to each other. In Australia, the government supplies posters that list places where people can get in touch with counselors for personal problems, as well as telephone numbers for doctors, ambulances, and the police; those posters include that information in 16 languages. In the Soviet Union, factories "adopt" groups of children from schools, day-care centers, and children's wards in hospitals.

Some communities in the United States are catching on as well. Flint, MI, strengthens the bonds between the community, the families, and the schools by getting parents involved in the schools. Working parents visit classes to talk about their jobs and how schooling helped them land those jobs. High school students type teaching materials to free more teaching time for their teachers.

"Communities can help parents provide support that is being lost in industrialized economies. We must strengthen the links between the home, the peer group, and the school," Bronfenbrenner said.

Calendar

All items for publication in the Calendar section, except for seminar notices, should be submitted (typewritten, double spaced) by mail or in person to Fran Appgar, Central Reservations, 531 Willard Straight Hall, who prepares the Calendar notices for these listings. She must receive the notices at least 10 days prior to publication. Items should include the name and telephone number of a person who can be called if there are questions, and also the subheading of the calendar in which it should appear (lectures, dance, music, etc.).

Seminars only should arrive at the Chronicle office, 110 Day Hall, no later than noon Friday prior to publication.

All deadlines will be strictly enforced.

*Admission charged.

Announcements

E.A.R.S.

Empathy, Assistance and Referral Service (EARS) has expanded its hours. Friday hours have been extended to 5-11 p.m. Regular hours Sunday through Thursday, 3-11 p.m. and Saturday, 7-11 p.m. continue unchanged. E.A.R.S. provides short-term peer counseling on a walk-in as well as telephone basis. EARS is located in 211 Willard Straight Hall, and the phone number is 256-EARS. All services are free and completely confidential.

Writing Workshop

Writing Workshop Walk-in Service. Free tutorial instruction in writing. Mon.-Thurs., 3:30-6 p.m. & 7:30-10 p.m.; Sun. 3-8 p.m., 174 Rockefeller Hall and Sun.-Thurs. 10 p.m.-midnight in 340 Goldwin Smith Hall.

Alcoholics Anonymous

Faced with a drinking problem? Perhaps Alcoholics Anonymous can help. Open AA meeting every Monday, Tuesday, and Thursday at noon in the Anabel Taylor Hall Forum and every Wednesday at 12 noon in 314 Anabel Taylor Hall.

Faculty Tennis Club

The Cornell Faculty Tennis Club will soon begin its 1986 season. Membership on an annual fee basis is open to faculty and staff and members of their immediate families. The Club maintains eight courts for members only from May to September. Information and applications for membership are available from the Club secretary, Michelle Bogard, 120 Baker Laboratory.

Making Peace With Your Parents

A one-day workshop with Let Davidson on completing unfinished business and experiencing acceptance, appreciation and love for your parents. Meets Saturday, May 10, 9:30-6:30. Call 272-4131 for information and registration.

Exit Interviews for May Graduates

Students who expect to graduate in May and who have received student loans from Cornell University must attend an exit interview meeting. Meetings will be held throughout the month of May. Appointments must be made by calling 255-7234. Students will not receive either a diploma or a transcript if they fail to attend.

Informational Meetings for GSL Recipients

Informational meetings will be held at the following locations to discuss your rights and responsibilities after you leave Cornell: Monday, May 5, 12:20 p.m., Uris G94; Monday, May 12, 5 p.m., Uris G94; Thursday, May 15, 9:05 a.m., Uris G94. Due to limited space, appointments must be made if you expect to attend one of the meetings in Room G94. For appointments, please call 255-7234.

Cornell Sailing Club

The Cornell Sailing Club is open to the Cornell and Ithaca communities and accepts members of all levels of competency. Sailing lessons are offered for those who have never sailed as well as for more experienced sailors who wish to improve their skills. The Club is located at Myers Point and is open from May 25th to September 28th. Please call Nigel Quinn, Vice-President Membership, at 255-6049 or 255-1880 (evenings) for further information.

David Chrystall Memorial Prize

The prize of approximately \$250 is awarded annually to a member of the senior class for the best essay or treatise dealing with diplomacy, international relations or the preservation of peace.

Entries for 1986 must be submitted by May 13 to R. Hsia, Department of History, 260 McGraw Hall.

Dance

'Dance Concert' Will Close Season

Theatre Cornell will wind up its 1985-6 season with "Dance Concert '86," a variety of choreographic styles, all danced by students and faculty.

Dancing will be to the live music of David Borden, The New Mother Mallard Band, and members of the Ithaca Art Ensemble, with Gerald Wolfe, conductor.

"Dance Concert '86" will be performed May 8, 9, and 10 at 8 p.m. and May 11 at 2:30 p.m. in the Willard Straight Theatre. Tickets are available at the Theatre Cornell Box Office in 101 Willard Straight Hall from 1-6 p.m., Monday through Friday, noon to 3 p.m. on Saturdays, and one hour before all performances. Special group rates are available. For reservations and information call 255-5165.

Exhibits

Herbert F. Johnson Museum

"Masters of Contemporary Art in Poland," through May 18; "Pen, Brush, and Folio: The Art of the Medieval Book," through June 1; "Fukusa: Japanese Gift Covers from the Shojiro Nomura Collection," through June 15; "Michael Baum," through June 15; "Wingtrace/The Sign of Its Track," May 10 through June 22. The Museum is

located on the corner of University and Central Avenues. The Museum is open Thursday through Sunday, 10 a.m.-5 p.m. Admission is free. Please call 255-6464 for further information.

Films

Unless otherwise noted, films are sponsored by Cornell Cinema.

Thursday

May 8, 4 p.m. 301 Uris Library. "The Jewel in the Crown, Part 14: A Division of the Spoils." South Asia Film Series. Sponsored by the South Asia Program.

May 8, 8 p.m. *Uris Hall Auditorium. "28 Up," (1985), directed by Michael Apted. Documentary. Ithaca premiere.

Friday

May 9, 8 p.m. *Anabel Taylor Auditorium. "Volunteers," (1985), directed by Nicholas Maeyer with Tom Hanks and John Candy.

May 9, 10 p.m. *Uris Hall Auditorium. "The Kiss of the Spider Woman," (1985), directed by Hector Babenco with William Hurt and Raul Julia.

Saturday

May 10, 7:30 p.m. *Uris Hall Auditorium.

"The Kiss of the Spider Woman."

May 10, 8 p.m. *Anabel Taylor Auditorium. "The Year of Living Dangerously," (1982), directed by Peter Weir with Sigourney Weaver, Mel Gibson and Linda Hunt.

May 10, 10 p.m. *Uris Hall Auditorium. "28 Up."

Sunday

May 11, 2 p.m. Johnson Museum. "Provincial Actors," (1980), directed by Agnieszka Holland with Halina Labonarska and Tazewsz Huk.

May 11, 8 p.m. *Uris Hall Auditorium. "Bringing Up Baby," (1938), directed by Howard Hawks with Katherine Hepburn and Cary Grant.

Monday

May 12, 8 p.m. *Uris Hall Auditorium. "The Seven Samurai," (1954), directed by Akira Kurosawa with Toshiro Mifune and Takashi Shimura.

Tuesday

May 13, 8 p.m. *Uris Hall Auditorium. "Sunday, Bloody Sunday," (1971), directed by John Schlesinger with Peter Finch and Glenda Jackson.

Wednesday

May 14, 8 p.m. *Uris Hall Auditorium. "Catch 22," (1970), directed by Mike Nichols with Alan Arkin, Art Garfunkel, Martin Balsam and Jon Voight.

Thursday

May 15, 8 p.m. *Uris Hall Auditorium. "Maedchen in Uniform," (1932), directed by Carl Froelich. Co-sponsored with the Language House.

Friday

May 16, 8 p.m. *Anabel Taylor Auditorium. "Joshua Then and Now," (1985), directed by Tod Kotcheff with James Woods and Alan Arkin.

May 16, 10 p.m. *Uris Hall Auditorium. "Nightmare on Elm Street," (1984), directed by Wes Craven with John Saxon.

May 16, Midnight. *Uris Hall Auditorium. "Tommy," (1975), directed by Ken Russell with Ann Margaret, Roger Daltrey and Oliver Reed.

Saturday

May 17, 7:30 p.m. *Uris Hall Auditorium.

"Nightmare on Elm Street."

May 17, 8 p.m. *Anabel Taylor Auditorium. "Alamo Bay," (1985), directed by Louis Malle with Ed Harris, Amy Madigan and Ho Nguyen.

May 17, 9:30 p.m. *Uris Hall Auditorium. "Sheer Madness," (1985), directed by Margarethe Von Trotta with Hanna Schygulla and Angela Winkler.

Sunday

May 18, 8 p.m. *Uris Hall Auditorium. "The African Queen," (1951), directed by John Huston with Katherine Hepburn and Humphrey Bogart.

Lectures

Thursday

May 8, 12:20 p.m. 102 West Ave. Ext. "Ritual Change Among the Ngaju (Kalimantan)," Anne Schiller, SEAP Graduate Student, Department of Anthropology. Sponsored by the Southeast Asia Program.

Friday

May 9, 12:15 p.m. 360 Uris Hall. Brown Bag Lunch. "The Fetus and the Eunuch: The Transformation of Medical Student Culture in 19th Century Paris," Dr. Leonard Groopman, New York Hospital. Sponsored by the Western Societies Program.

May 9, 7 p.m. One World Room, Anabel Taylor Hall. Student tribute to Dr. James E. Turner, Director of the Africana Studies and Research Center.

May 9, 7:30 p.m. One World Room, Anabel Taylor Hall. "The Africana Studies Paradigm: Education and Culture": poetry reading. Introduction by Henry Louis Gates, Jr., Cornell University; moderated by Eleanor Traylor, Montgomery College. Participants include Haki Madhubuti, University of Illinois, Chicago; Kenneth A. McClane, Cornell University; Sonia Sanchez, Temple University.

Saturday

May 10, 9 a.m. Hoyt Fuller Room, Africana Studies and Research Center. "The Black Studies Movement in Historical Perspective," John Henrik Clarke, Distinguished Professor Emeritus, Hunter College, City University of New York. Sponsored by the Africana Studies and Research Center.

May 10, 9 a.m. Hoyt Fuller Room, Africana Studies and Research Center. "The Study of Classical African Civilization," Yosef ben Jochannan, Distinguished Egyptologist, Cornell University. Sponsored by the Africana Studies and Research Center.

May 10, 10 a.m. Hoyt Fuller Room, Africana Studies and Research Center. "The Africana Studies Paradigm: Imperative in Education." Moderator: Locksley Edmondson, Cornell University. Participants include Molefi Asante, Temple University; Leonard Jeffries, City College, C.U.N.Y.; Maulana Karenga, University of California, Riverside; James Stewart, Pennsylvania State University. Sponsored by the Africana Studies and Research Center.

May 10, 11:30 a.m. Hoyt Fuller Room, Africana Studies and Research Center. "Africana Studies in the School and Community: Academic and Cultural Excellence for the African-American Child." Moderator: William E. Cross, Jr., Cornell University. Participants include Ron Daniels, Kent State University; Barbara Sizemore, University of Pittsburgh; Donald Smith, Baruch College, C.U.N.Y. Sponsored by the Africana Studies and Research Center.

May 10, 2 p.m. Kaufmann Auditorium, Goldwin Smith Hall. "African-American Writers: Visions and Meanings." Moderator: Anne Adams Graves, Cornell University. Participants include Toni Cade Bambara, author; James Baldwin, author; Gwendolyn Brooks, poet. Sponsored by the Africana Studies and Research Center. Supported in part by a grant from the New York Council for the Humanities.

May 10, 3:30 p.m. Kaufmann Auditorium, Goldwin Smith Hall. "Africana Model: The Challenge & Prospects for Academic Excellence and Social Responsibility." Moderator: Abdul Nanji, Cornell University. Participants include Howard Dodson, Director, Schomburg Research Center; Tilden LeMelle, Provost, Hunter College, C.U.N.Y.; William Strickland, W.E.B. Du Bois Library, University of Massachusetts, Amherst; Ronald Walters, Howard University and Congressional Black Caucus. Sponsored by the Africana Studies and Research Center.

Music

Music from 17th and 18th Century France

Mary Cyr, viola da gambist from Montreal, will join Rebecca Harris-Warrick, baroque flutist, and Sandara Mangsen, harpsichord to perform music from 17th and 18th century France at 8:15 p.m. Saturday, May 10.

On the program are works by Marais, Francois Couperin and his uncle Louis Couperin, Leclair, Rameau, and Morel.

Cyr, associate professor of music at McGill University, has performed widely in Canada, the United States and abroad. She has recorded the Bach sonatas for viola da gamba and harpsichord. In 1982 she won the Noah Greenburg award for her direction of Buxtehude cantatas. She is also responsible for the discovery of a "lost" cantata of J.P. Rameau.

Harris-Warrick holds a DMA degree from Stanford University in the Performance Practice of Early Music and is an expert on the performance of the music and dance of 17th and 18th century France.

Sandra Mangsen is a doctoral candidate at Cornell in musicology. She holds an M.Mus. in performance from McGill University, where she was an assistant professor in 1983-84. She has made a special study of Rameau's "Pieces en Concerts" and of the art of accompaniment in music of the baroque period.

According to Mangsen, the works on this program illustrate the transition from a distinctly French 17th century style to the more international manner of the mid-18th century via infusion of ideas from the "new" Italian idioms.

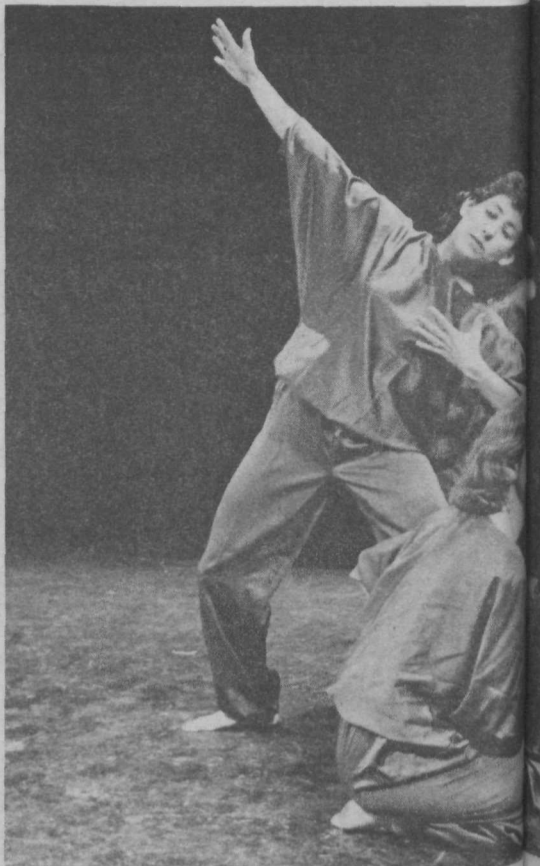


MARY CYR
Viola da gambist

Trombonist Aiken in Recital

Alex Aiken, trombonist, will give a recital in Barnes Hall at 8:15 p.m. Monday, May 12.

Aiken will perform "Sonata No. 1 for Cello Solo" by Antonio Vivaldi. The cello part, now played by the trombone, was edited (for cello) by Leonard Rose. In this and the following piece "Concerto for Trombone" by Henri Tomasi, Ai-



Dancers in "Barriers," choreographed by Kare Lynette Klawon and Tina Giess (on her knees) concluding production of the season for Theatre Cornell box office from 1 to 6 p.m. and all performances.

ken is accompanied by Richard Montgomery, piano.

For Aiken's own composition "Fromage, for Brass Quartet" he will be joined by two trumpeters: Jennifer Widom and Douglas Chrisman and another trombonist Ed Thieberger. Walter Ross is the last composer with his "Prelude, Fugue, and Big Apple" for bass trombone and electronic tape.

This concert is free and open to the public. It is sponsored by the Music Department at Cornell.

Klezmer Concert Is Tonight

The B'nai B'rith Hillel Foundation, in cooperation with Balinkie Productions, will present a concert by the Klezmer Conservatory Band at 8 p.m. today in Anabel Taylor Auditorium. The New York Times called the Boston-based band "an upbeat and exultant ensemble."

"Klezmer" music is a kind of Jewish jazz that originated in Eastern Europe, and has undergone a revival during the last several years.

The concert is made possible in part by funds from the Marjorie and Irwin Nat Pincus Fund in honor of Anne Pincus '74, and by the Student Finance Commission. Tickets will be \$8 at the door.

Every Sunday

Anabel Taylor Edwards Room, 9 p.m. Sing with the Makhela Hebrew Choir.

Thursday

May 8, 3:30 p.m. Arts Quad. Gamelan (under the sun): Martin Hatch, director. Sponsored by the Department of Music.

May 8, 8 p.m. *Anabel Taylor Auditorium. Klezmer Conservatory Band concert. Buy your tickets early! Tickets are \$7.50 in advance and \$8 at the door. For more information call 255-4227. Sponsored by B'nai B'rith Hillel Foundation.

May 8, 8:15 p.m. Barnes Hall. Trevor Stephenson, fortepiano. An all Mozart program. Sponsored by the Department of Music.

Friday

May 9, 3:30 p.m. Arts Quad. Gamelan (under the sun): Martin Hatch, director. Sponsored by the Department of Music.

May 9, 9 p.m. One World Room, Anabel Taylor Hall. "Ours Is Not To Be Silent, But To Sing Forth Until Freedom Rings," concert by the original Harambee Singers. Sponsored by the Africana Studies and Research Center.

Saturday

May 10, 8 p.m. *Martha Van Rensselaer Auditorium. Nicaraguan benefit concert by Puerto Rican songwriter Luis Rojas and his band. Proceeds from the concert will help finance the construction of a health clinic to serve 1500 Nicaraguans displaced by the contra war. Tickets are \$5 and are available in advance at Ithaca Guitar Works, Borealis Books, McBooks, Rio de Lana, the Commons Coffeehouse, and the CUSLAR office. Tickets will also be sold at the door. Sponsored by CUSLAR.

May 10, 8:15 p.m. Barnes Hall. DMA Recital: Sandra Mangsen, harpsichord. Works by Morel, Louis and Francois Couperin, Marais, Leclair, Marais, Rameau. Sponsored by the Department of Music.

Sunday

May 11, 8-11 p.m. Anabel Taylor Commons Coffeehouse. Bound for Glory with Carla Sciaky. Broadcast live on WVBR-FM93.

Monday

May 12, 8:15 p.m. Barnes Hall. Alexander Aiken, trombone. Works by Vivaldi, Ross, Aiken, Tomasi. Sponsored by the Department of Music.

Religious Events

Friday

May 9, 7:30 a.m. Anabel Taylor Founders Room. Women's Rosh Chodesh Minyan.



—Jon Crispin

(from left) Ann Barksdale, Karen Purcell, the numbers in "Dance Concert '86," the. It will be performed today, Friday and aight Theatre. Tickets are available at from noon to 3 p.m., and one hour before

Religious Services

ry Saturday, 5:00 p.m. Anabel Taylor Audi- n. Mass.

ry Sunday, 9:30, 11 a.m., 5 p.m. Anabel Auditorium. Mass.

n.-Fri., 12:15 p.m. Anabel Taylor Chapel. Mass.

Christian Science

ry Thurs., 7 p.m. Anabel Taylor Founders

Episcopal (Anglican)

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

Great Commission Students

ry Sunday, 10:30 a.m. Multi-Purpose i. Robert Purcell Union.

Worship Service.

ry Wednesday, 7:30-8:30 p.m. G-03 Found- Discussion group/fellowship.

Jewish

ly Minyan. Mon.-Fri., 7:30 a.m.; Sun., 8:30 Young Israel House, 106 West Ave.

ry Friday, 5:30 p.m. Anabel Taylor Found- om. Shabbat Services (Conservative/Egali-).

ry Friday, 5:30 p.m. Anabel Taylor Chapel. at Services (Reform).

ry Friday, 5:30 p.m. Young Israel House, est Ave. Shabbat Services (Orthodox).

ry Saturday, 9:15 a.m. Anabel Taylor Ed- Room. Shabbat Services (Orthodox). Kid- to follow.

ry Saturday, 10 a.m. Anabel Taylor Found- om. Shabbat Services (Conservative/Egali-). Kiddush to follow.

Korean Church

ry Sunday, 3 p.m. Anabel Taylor Chapel.

Muslim

nday-Thursdays, 1 p.m. Anabel Taylor 218.

ay, 1 p.m. Anabel Taylor Edwards Room.

ry Sunday, 11:15 a.m. Anabel Taylor Cha- protestant Cooperative Ministry.

Sunday

y 11, 11 a.m. Sage Chapel. Speaker: Robert nson, Director, Cornell United Religious

Sunday

y 18, 11 a.m. Sage Chapel. Service of giving for Year Ended.

Saturday

y 10, 1 p.m. Hoy Field. Men's Baseball-West (2).

Sunday

y 11, 12:30 p.m. Hoy Field. Men's Baseball-Chester.

Tuesday

y 13, 1 p.m. Hoy Field. Men's Baseball-Itha- ege (2).

's Trophy Games.

Saturday

y 17, 1 p.m. Hoy Field. Men's Baseball-Ho- (2).

Saturday

y 31 Ithaca Flood Control Channel. Men's weight Crew-Pennsylvania.

Seminars

Chemistry, Molecular and Cell Biology:

Membrane Signalling Through a Family p-Dependent Regulatory Proteins," Paul eiss, Pharmacology, University of Texas Science Center, Dallas, 4:30 p.m. Friday, 6, 204 Stocking.

ational Affairs Group: "Terrorism: A to Your Freedom?" James Finn, editor of m at Issue, the magazine of Freedomhouse, nization supporting democratic principles

and human rights worldwide, 4:30 p.m. Thursday, May 8, Hollis E. Cornell Auditorium, Goldwin Smith Hall.

Mechanical and Aerospace Engineering: "Free Convection in a Two-Dimensional Loop Filled Either with a Porous Material or a Fluid," Professor Luc Robillard, University of Montreal, 4:30 p.m. Tuesday, May 13, 282 Grumman.

Pharmacology: "Role of Calcium-Dependent Membrane-Binding Proteins in the Mechanism of Exocytosis," Carl Creutz, Pharmacology, University of Virginia, 4:30 p.m. Monday, May 12, D101L Schurman.

Plant Biology: "'Sink to Source' Translocation in Pea," Douglas Hamilton, Plant Biology, Cornell, 11:15 a.m. Friday, May 16, 404 Plant Science.

Rural Sociology: "Socio-Cultural Factors Affecting the Promotion of Aquaculture Technology Among Thailand's Marine Fisherman," Jane Brass, master's candidate in development sociology, 3 p.m. Tuesday, May 13, 32 Warren.

Vegetable Crops: "Biotechnology as a Survival Strategy for Small Farms," August Schumacher Jr., Massachusetts commissioner of food and agriculture, 4 p.m. Friday, May 9, 143 Plant Science.

Seminar notices, unlike other calendar notices, do NOT go to Central Reservations in Willard Straight, but should be delivered to the Chronicle office, 110 Day Hall, in writing by noon Friday before publication. Each notice can be run only once, so on Thursday events please note whether you wish it published the day of the event or the week before. Please include the name and telephone number of someone who can be reached if there are questions.

Theatre

Friday

May 9, 8:15 p.m. *Statler Auditorium. The Cornell Savoyards present a Gilbert and Sullivan double-bill of "Trial by Jury" and "The Sorcerer." Tickets are available at the Statler Box Office, Monday through Saturday, 12-5 p.m. For reservations and information, call 255-7263 or 255-1004.

Saturday

May 10, 8:15 p.m. *Statler Auditorium. "Trial by Jury" and "The Sorcerer."

Sunday

May 11, 2 p.m. *Statler Auditorium. "Trial by Jury" and "The Sorcerer."

Barton Blotter

Six thefts of cash amounting to \$535.50 were among a total of 13 thefts on campus last week, according to the morning reports of the Department of Public Safety for the period April 28 through May 1. The total loss of cash and valuables was set at \$2,143.

A wallet with \$250 in American currency and \$100 in Canadian money was reported stolen from Olin Library. Other cash thefts were \$30.50 taken from Phillips Hall, \$105 from Willard Straight Hall, \$30 from Martha Van Rensselaer Hall, and \$20 from a wallet stolen in Barton Hall.

Other thefts included \$680 in stereo equipment taken from a car parked in the North Lot of West Campus, two rugs valued at \$135 taken from Mennen Hall, and seven rugby shirts worth \$205 stolen from Bailey Hall.

Four persons were referred to the judicial administrator: three on charges of forgery concerning parking permits and one for failure to comply.

Daniel M. Baldwin of 149 Pine Tree Road was charged with trespass in Barton Hall.

The SPCA picked up a pig at 109 McGraw Place. It was discovered later to have been taken from the Swine Barn on Pine Tree Road. Safety is investigating the incident.

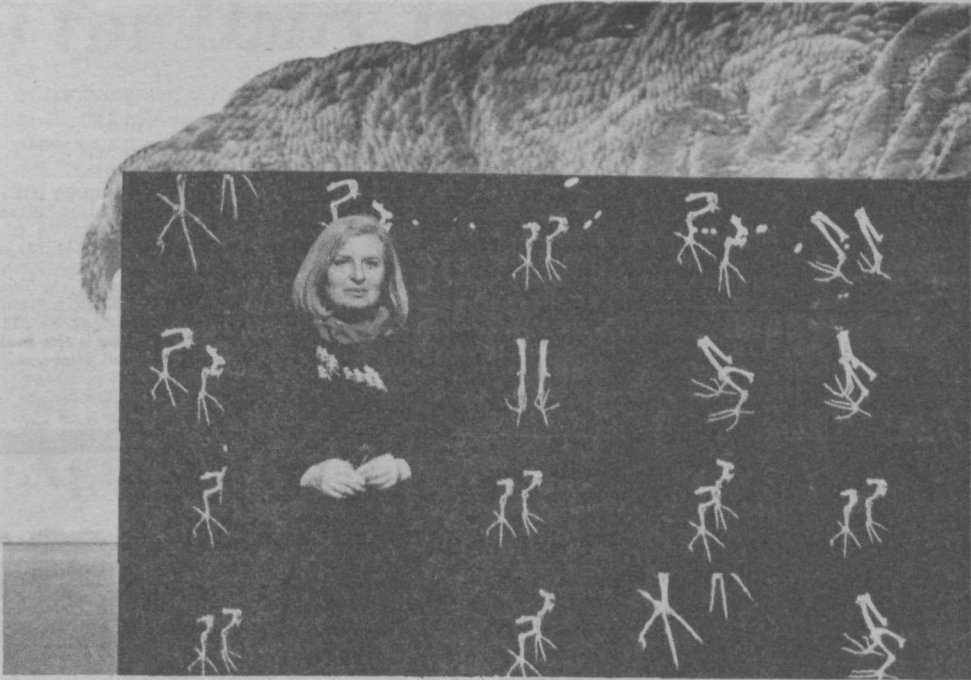
National Suspends Cornell Frat

The charter of the Psi Chapter of the Pi Kappa Phi fraternity at Cornell has been suspended by its alumni organization for an indefinite period. The current undergraduate membership of the Cornell chapter will be disbanded at the end of the spring semester.

Lawrence Thayer of Ithaca, president of the Cornell Pi Kappa Phi alumni organization, announced that the alumni of the chapter voted April 19 to suspend the chapter's charter and to disband its current membership of 21.

"The alumni believed that the chapter had shown poor leadership qualities, had continual low membership numbers, and had not contributed positively to the Cornell community or to its national organization over a period of several years," Thayer said. "After several attempts to improve the qualities of the chapter, the alumni group saw no alternative course of action that would provide for a strong Pi Kappa Phi chapter at Cornell."

Thayer said that some of the members of the chapter had been involved in an incident on March 1, 1986, where four Ithaca High School students allegedly were served alcoholic beverages at the fraternity's chapter house at 722 University Ave.



Artist Joyce Cutler-Shaw and "An Alphabet of Bones" from her exhibit, "WingtraceThe Sign of Its Track" at the Herbert F. Johnson Museum of Art from May 10 through June 22.

Pigeons to Herald Artist's Show

About 200 racing pigeons — some entrusted with messages of peace — will be set free on the steps of Cornell University's Herbert F. Johnson Museum of Art at 1 p.m. Saturday, May 10.

Their ascent into the skies above Ithaca will mark the opening of an exhibit of works by California artist Joyce Cutler-Shaw. The exhibit runs through June 22.

The flight of the birds, a central image of Cutler-Shaw's work since 1974, symbolizes her definition of the artist as a "messenger of human events, survival, and life's fragility."

The public is invited to witness the event. Refreshments will be served and souvenirs of the "wing poems" by the artist will be distributed.

The birds, compelled by their training, will fly to their various home lofts throughout the Ithaca area.

Spectators will be free to enter the museum and examine an exhibition of Cutler-Shaw's work, including a 37-foot work titled

"Wingwall," composed of cascading paper wing collages. Another work, "Wing-scrolls," includes writings and images that trace the evolution of the messenger bird.

The exhibition also includes a series of 100 drawings titled "An Alphabet of Bones."

According to art critic Moira Roth of Mills College in California, Cutler-Shaw's "life and art appears to be her deeply felt desire and active search, for communication with others, for community and self-identity, and for a home, intellectual and emotional, for herself. Cutler-Shaw constantly sends out messages to the world."

Cutler-Shaw's exhibit featuring the release of messenger birds was first held near the Hall of Birds at the San Diego Museum of Natural History in December 1984.

The show was expanded for its presentation at the Johnson Museum and for an exhibition at the National Academy of Sciences in Washington, DC, from January through March.

Gypsy Moths

Continued from Page 1

virus acts up whenever the insect is stressed."

"If we can find out what turns the virus against its host, we would be able to destroy the insect before it causes unacceptable levels of damage," Wood points out.

Based on this hypothesis, Wood plans to establish in his laboratory a large gypsy moth colony infected with the latent virus. These infected insects will be put through a variety of stresses to see which one makes the virus destructive.

"We plan to put the insect through every conceivable kind of stress to pinpoint which stress serves as the trigger," Wood says.

"We hope to find the one that is environmentally safe as well as economical."

In Wood's view, mixing the insect's food with certain kinds of chemicals produced by

trees or shrubs that are not preferred by gypsy moths may be one possibility to induce stress. For example, tannin, a natural chemical found in pine needles, may be a good candidate.

"We could set off such a chemical trigger just before insect damage becomes serious," Wood says. "We want to have those viruses turn against their hosts when we want them to, rather than waiting for Mother Nature to do it."

Discussing another way of pitting the virus against its host, Wood says that live viruses could be sprayed just before gypsy moths lay their eggs late in the season. Because the viruses are now known to be transmitted through the eggs, many of the young larvae emerging from the eggs in the following spring would be infected.

"Then we could throw in the chemical switch to activate those viruses," Wood says.

Working with Wood on this research are insect physiologist Patrick Hughes and research associate John Burand, both at BTI, and Grieg Steward, an undergraduate majoring in neurobiology in the College of Arts and Sciences, and entomologist Warren T. Johnson in the College of Agriculture and Life Sciences, both at Cornell.

Harris

Continued from Page 1

Americans for racial justice and equality.

In 1983-84, he was a W.E.B. Du Bois Institute postdoctoral fellow at Harvard University. While there he completed a pamphlet, "Teaching Afro-American History," published by the American Historical Association in 1985.

He is first vice president of the Association for the Study of Afro-American Life & History, founded in 1915, and is on the board of directors of the New York Council for the Humanities.

He holds a B.A. (1966) from Roosevelt University and a Ph.D. (1974) from Northwestern University.

Number 18

Cornell University

**University Personnel Services
Day Hall
Ithaca, New York 14853**

Please Note:

Job Opportunities is a publication of Staffing Services and is distributed each Thursday through the Cornell Chronicle. Job Opportunities lists current vacancies with the University, consistent with the University's commitment to promotion from within, affirmative action and equal opportunity employment. Employee Transfer Applications: Em-

ployees who wish to transfer to other jobs within the University should complete a separate Employee Transfer Application form for each position and submit the form(s) to Staffing Services. Individuals with official University layoff status are given preference in referrals. Applicants: Applications for employment are available at Cornell University's

employment office at East Hill Plaza at the intersection of Ellis Hollow Road and Judd Falls Road in Ithaca, from 9:00 a.m. to 12:00 noon, Monday through Friday. Completed applications can be submitted through the mail to University Personnel Services, Staffing Services, 160 Day Hall, Ithaca, NY 14853.

This listing is also available on CUINFO, Cornell University's computerized information service. For further details on CUINFO, contact the Information

and Referral Center.

Full-time jobs are 39 hours per week unless otherwise indicated. Jobs listed as SO, U1 and U2 are represented by bargaining units.

May 8, 1982

transfer application, resume and cover letter. Outside applicants with training and/or experience in the following areas are encouraged to apply: biochemistry, chemi-

TECHNICIAN: GR21
Job Number: T186
Department: Diagnostic Laboratory
Description: Perform a variety of serological tests, sue culture, fluorescent antibody and viral isolation procedures. Prepare clinical specimens, media, buffers, other reagents.

Requirements: Bachelors degree or related field. 1 years related word experience. Apply by May 16, 1982. Minimum Biweekly Starting Salary: \$512.32

COMPUTER OPERATOR, GR20
Job Number: T181
Department: Dining Services
Description: Assist system manager. Perform routine computer operations tasks; issue accurate and timely reports; audit input for accuracy; schedule repairs of hardware; resolve billing complaints.

Requirements: Associates degree or 2 years related experience. Good human relations and communication skills. Discipline and attention to detail. Apply by May 15, 1986. Minimum Biweekly Starting Salary: \$468.29

TECHNICIAN, GR20
Job Number: T185
Department: Veterinary Microbiology
Description: Perform purification and characterization of monoclonal antibodies against feline leukemia, salmonella, and other potential oncogenic viruses. Maintain sue culture, inoculate and bleed experimental animals. Requirements: Bachelors degree in biology with courses in microbiology, virology and immunology. Open microbiological techniques (eg: sterile technique, virus collection, purification of antibodies, elisa, fusion). Essential. Apply by May 16, 1986. Minimum Biweekly Starting Salary: \$482.33

TECHNICIAN, GR18
Job Number: T183
Department: Equine Drug Testing and Research
Description: Perform analysis of blood and urine samples in the field drug testing labs at Yonkers and Roosevelt Raceways. Assist laboratory director as needed. Time, regular; 1:30pm - 10:00pm daily including weekends and holidays during seven day racing season. Requirements: Associates degree or equivalent in chemistry or related field. Familiarity with general laboratory procedures, thin layer chromatography preferred. Minimum Biweekly Starting Salary: \$431.43

TECHNICIAN, GR18
Job Number: T182
Department: Equine Drug Testing - Finger Lakes Race Track
Description: Perform analysis of blood and urine samples in a field drug testing lab at Finger Lakes Race Track. Routine record keeping and laboratory maintenance. Assist lab director as needed. 39 hours per week including weekends and holidays. Requirements: Associates degree or equivalent in chemistry or related field preferred. Experience with layer chromatography. Familiar with gas chromatography. Minimum Biweekly Starting Salary: \$431.43

TECHNICIAN, GR21
Job Number: T173
Department: Veterinary Pathology
Description: Process tissue and carry out photomicrographs using electron microscopy, light microscopy and immunoelectron microscopy; prepare materials used in the laboratory. Requirements: Bachelors degree or equivalent in biology. 1 year experience in electron microscopy preferred. Minimum Biweekly Starting Salary: \$512.32

Part-time

SECRETARY, GR20
Job Number: C183
Department: Chemistry
Description: Provide administrative/secretarial support to a Nobel Prize winning professor and his research group. Administer seminars sponsored by the department; maintain communication between research group and professor during his frequent absences; manage production of manuscripts and research proposals; arrange travel. Part-time regular; Monday - Friday, 9:00am - 1:00pm. Requirements: Associates degree or equivalent. Heavy typing. Minimum 2 to 3 years experience. Knowledge of Cornell's manuscript and grant proposal processing system desirable. Ability to read German and/or Russian and general knowledge of chemistry helpful. Minimum Biweekly Starting Salary: \$468.29

DELIVERY DRIVER, SO18
Job Number: G181
Department: Residence Life - Endowed
Description: Operate and maintain department of Residence Life Dodge Step Van and one-ton Ford stake bed truck with hydraulic lift. Daily pick-up of coin-op laundry machine money. Monday - Friday, 8am - 12 noon flexible. Requirements: High school diploma or equivalent. Valid NYS Class V driver's license with good driving record. Must be in good physical condition and able to lift 100 lbs on a regular basis. Good interpersonal, oral and written communication skills. Knowledge of Cornell campus desired. Minimum Starting Salary: \$5.41/hour

NIGHT SUPERVISOR, GR18
Job Number: C189
Department: Music Library
Description: Supervise and assist in circulation procedures; provide information and reference assistance to patrons in Music Library; responsible for security of Lincoln Hall during evening and weekend hours; assist with processing operations utilizing RLIN terminal. Other duties as assigned. Part-time, regular; 20 hours per week. Hours to be arranged evenings and weekends. Requirements: Degree in music with emphasis in music history; reading skills in one foreign language, preferably German. Medium typing. Experience supervising other staff. Good interpersonal and organizational skills. Minimum Biweekly Starting Salary: \$418.85

Temporary

TEMPORARY OPPORTUNITIES: Individuals qualified for temporary work in the following areas are encouraged to apply: clerical, secretarial, word processing. If you have experience or skills in these or related areas and are interested in learning more about these opportunities, please call Laurie Worsell at 255-5226

TEMPORARY TECHNICIAN
Job Number: T184
Department: Entomology
Description: Prepare in vitro systems, emphasizing cell cultures, for studies of arthropod-transmitted parasitic diseases. Full-time temporary until September 1, 1986. Requirements: Bachelors degree or equivalent in biological sciences. Cell culture experience preferred, but not required. Apply by May 16, 1986. Minimum Starting Salary: \$5.86/hour

Continued on Page 8

Please Post

Job Opportunities

Cornell University is an equal opportunity, affirmative action employer.

Administrative/Professional

The minimum salaries listed are for recruitment purposes only.

ASSISTANT UNIVERSITY COUNSEL
Job Number: P184
Department: University Counsel
Description: Preparation of pleadings, motion papers and legal memoranda for state and federal courts and administrative agency adjudication as well as corporate matters, including contracts negotiations, drafting, and advising University clients on a broad range of problems. Requirements: Minimum of two years experience required. Admission to practice in New York strongly preferred. Strong interest in litigation but willingness to acquire skills in a broad range of corporate matters preferred. Please respond postmarked by June 1, 1986 with detailed resume and references to the Office of University Counsel, 500 Day Hall, Cornell University, Ithaca, NY 14853.

ASSISTANT DIRECTOR OF CORPORATE RELATIONS
Job Number: PA1510
Department: Engineering Dean's Office - Corporate Relations
Description: Work with the Directors of the Submicron Facility and the School of Electrical Engineering to organize, develop and direct programs to obtain broad industry support for the education and research activities of both; and work closely with the Director of Corporate Relations of the College of Engineering and the University Director of Corporate Level to coordinate these activities with other development activities of the College and University; and perform other duties as assigned by the Director of Corporate Relations. Requirements: Assist in organizing, developing and directing broad industry support for educational and research activities. 3 years industrial experience and a Bachelors degree in microelectronics or electrical engineering required. Please send cover letter and resume to Ralph D. Jones by May 23, 1986.

AUDITOR II
Job Number: P189
Department: New York Medical Center
Description: The Auditor II serves under the supervision of the University Auditor, performs audits within all areas of the University's operations including cash, investments, inventories, receivables, payables, payroll, grants and contracts and computer services. Evaluate internal controls and determine compliance with University procedures. Draft reports outlining results of audits for key University administration. Provide direction and supervision to audit staff or other personnel in the performance of some audit assignments. Requirements: Bachelor's degree and two years experience in auditing or related business experience is required. Send cover letter and resume to Ralph D. Jones no later than May 16.

ASSISTANT MEN'S BASKETBALL COACH
Job Number: P188
Department: Physical Education & Athletics
Description: Assist in the planning and operation of the men's intercollegiate basketball program. Duties include coaching, recruiting, scouting and other administrative matters relative to the program. Instruct physical education courses as assigned. Requirements: Bachelors degree in physical education or equivalent. Credentials should reflect proven success in coaching basketball, recruiting and working with student athletes. Please send cover letter and resume to Ralph D. Jones by May 18, 1986.

ASSISTANT WOMEN'S BASKETBALL COACH
Job Number: P187
Department: Physical Education & Athletics
Description: Assist in the planning and operation of the women's intercollegiate basketball program. Duties include coaching, recruiting, scouting and other administrative matters relative to the program. Requirements: Bachelors degree in physical education or equivalent. Credentials should reflect proven success in coaching basketball, recruiting and working with student athletes. Please send cover letter and resume to Ralph D. Jones by May 18, 1986.

ASSISTANT MEN'S BASKETBALL COACH
Job Number: P186
Department: Physical Education Athletics
Description: Assist in the planning and operation of the men's intercollegiate basketball program. Duties include coaching, recruiting, scouting, and other administrative matters relative to the program. Requirements: Bachelors degree in physical education or equivalent. Credentials should reflect proven success in coaching basketball, recruiting and working with student athletes. Please send cover letter and resume to Ralph D. Jones by May 18, 1986.

RESEARCH SUPPORT AIDE
Job Number: PT181
Department: Classics
Description: Supervise daily running and instruct lab for Aegean Dendrochronology project; quality control. Requirements: Bachelors degree or equivalent in archaeology or relevant field. Previous participation in the Dendrochronology Project helpful. Prior supervisory experience; capacity for leadership; ability to handle specialized computer programs; speaking knowledge of French, German, Greek or Turkish useful but not required. Please send cover letter and resume to Cynthia Smithbower by May 16, 1986.

BUDGET ANALYST (Repost)
Job Number: PA4610
Department: Administrative Services
Description: Provide budget forecasting and preparation, financial sensitivity analysis, prepare monthly re-

ports, income trend analysis in support of \$50 million department budget. Requirements: Bachelor's degree or equivalent. Two years experience in accounting and/or budgeting. Knowledgeable in computers (Lotus 1-2-3, Symphony). Excellent verbal and written communication skills. Please send cover letter and resume to Ralph D. Jones.

Clerical

CURRENT EMPLOYEES should submit an employee transfer application, resume and cover letter. Also, if you are interested in a career development interview, please contact Esther Smith at 5-6874 to schedule an appointment.

OUTSIDE APPLICANTS should submit an employment application and resume. Applications and resumes typically remain active for three months; typing test scores remain on file for one year. The clerical section uses an automatic referral system whereby outside applicants are referred to positions for which they are considered qualified and competitive. Unless otherwise advertised, requests to be referred to a specific position will not be accepted. Applicants who are referred to a department for review will be contacted by the department if an interview is necessary.

NOTE: OPEN INTERVIEWING FOR OUTSIDE APPLICANTS interested in clerical positions will be conducted every Wednesday afternoon from 1:00 - 6:00pm. in our East Hill Plaza Employment Office. No appointment is necessary, however a short wait may be required. Call Esther Smith or Lauren Worsell if you have any questions.

ADMINISTRATIVE AIDE, GR20 (Repost)
Job Number: C139
Department: Veterinary Microbiology - James A. Baker Institute for Animal Health
Description: Prepare and maintain personnel and payroll records for Baker Institute staff (65 employees). Provide secretarial support for 5 professors and support personnel (12). Type scientific grants, manuscripts, etc. Other duties as assigned. Requirements: Associates degree or equivalent. Heavy typing. Minimum 2 to 4 years related work experience. Knowledge of Cornell (Statutory College) payroll and personnel procedures essential. Knowledge of veterinary/medical/chemistry terminology valuable. Word processing skills (Xerox 860) valuable. Good grammar, punctuation and editing skills needed. Minimum Biweekly Starting Salary: \$468.29

ADMINISTRATIVE AIDE, GR20
Job Number: C1811
Department: SCR/Microscience and Technology
Description: Provide administrative/secretarial support for the Program Director, including work relating to other academic or administrative responsibilities of the Director. Requirements: Associates degree or equivalent. Medium typing. Minimum 3 to 5 years executive secretary and/or administrative aide experience. Ability to work independently. Excellent organizational, interpersonal and communication (writing and editing) skills. Minimum Biweekly Starting Salary: \$468.29

WORD PROCESSING OPERATOR, GR20
Job Number: C184
Department: Media Services
Description: Operate computer/word processing equipment specializing in text enhancement. Photo typesetting capabilities; interpret graphic designer specs; manipulate various software packages from several pieces of equipment; integrate text and graphic. Requirements: Associates degree in graphic design or computer science or equivalent. Minimum 2 to 3 years related experience in telecommunication, text merging and graphic design on an electronic publishing system utilizing Xerox 860, 16/8 8010 and IBM PC, Ethernet Network Systems. Typesetting experience a must. Minimum Biweekly Starting Salary: \$482.33

ACCOUNTS ASSISTANT, GR20
Job Number: C186
Department: Endowed Payroll Office
Description: Maintain NYS disability records and direct bank deposits; type tax reports; provide administrative and secretarial support for office. Requirements: Associates degree or equivalent. Medium typing. Minimum 3 years experience in a payroll or accounting office. Excellent organizational, communication and interpersonal skills essential. Minimum Biweekly Starting Salary: \$468.29

SECRETARY, GR20
Job Number: C181
Department: Public Affairs Regional Office Southeast Regional Office (Coral Springs, Florida)
Description: Type correspondence, forms, vouchers and other records; provide file maintenance and receptionist support; handle meeting and travel arrangements for Director of Southeast Regional Office; interaction by phone and in person with alumni. Special projects as needed. Public Affairs Regional Office Southeast Regional Office (Coral Springs, Florida). Requirements: Associates degree or equivalent. Medium typing. Minimum 2 to 3 years secretarial experience. Excellent organizational, interpersonal and communication (written and oral) skills. Ability to work independently. Ability to use IBM XT or equivalent desirable. Minimum Biweekly Starting Salary: \$468.29

ADMINISTRATIVE AIDE, GR20
Job Number: C182
Department: German Literature
Description: Provide administrative/clerical assistance for department. Type correspondence in English and German for 7 professors, including classroom and other materials; handle petty cash; prepare payroll vouchers; coordinate work study students; act as receptionist; copy; file; answer phone. Other duties as assigned.

Requirements: Associates degree or equivalent. Medium typing. Some university experience helpful. Knowledge of German and shorthand helpful but not essential. Minimum 1 to 3 years secretarial experience. Word processing. Minimum Biweekly Starting Salary: \$468.29

ACCOUNTS ASSISTANT, GR18
Job Number: C185
Department: Endowed Accounting - Controller's
Description: Responsible for reconciliation of University bank accounts; perform various accounting functions such as preparation of journal vouchers, deposit cash receipts and process accounts payable vouchers; provide clerical support to Enterprise Accounting section; prepare miscellaneous accounting analyses. Requirements: Associates degree in business or equivalent work experience. Medium typing. Experience with IBM PC, Lotus 1-2-3/Symphony. Good communication skills. Ability to work well with a variety of individuals and to be accurate and pay attention to details. Minimum Biweekly Starting Salary: \$418.85

SECRETARY, GR18
Job Number: C1810
Department: NYSSILR - Extension Buffalo
Description: Provide secretarial support in Buffalo Extension Office. Type class materials and correspondence; maintain bookkeeping records, program records, and mailing lists; process course registrations; work with computer and word processing equipment. Other duties as assigned. NYSSILR - Extension Buffalo. Requirements: High school diploma or equivalent. Secretarial school desirable. Medium typing. Minimum 1 to 2 years related experience. Bookkeeping and record keeping skills. Good interpersonal skills essential. Minimum Biweekly Starting Salary: \$431.43

SECRETARY, GR17
Job Number: C188
Department: Mathematical Sciences Institute
Description: Type correspondence and highly technical mathematical manuscripts using Greek, German, and script symbols; run photocopier and collator to duplicate manuscripts; act as receptionist for the Institute's Statistical Consulting Service. Requirements: High school diploma or equivalent. Business or secretarial school preferred. Heavy typing. Experience with technical typing preferred. Familiarity with word processors. Knowledge and/or ability to learn word processors and TRIAD. Minimum Biweekly Starting Salary: \$397.60

ADMINISTRATIVE AIDE-LEGAL, GR22
Job Number: C175
Department: University Counsel/Secy of Corporation
Description: Provide administrative support to staff lawyers and secretary of the corporation. Prepare legal documents, reports, correspondence; make travel arrangements. Other duties as assigned. Requirements: Associates degree or equivalent. Heavy typing. Minimum 3 to 5 years executive and/or law office experience preferred. Ability to use Macintosh computer and Xerox 645 Memorywriter. Good language usage and punctuation important. Ability to work under pressure. Organizational ability. Minimum Biweekly Starting Salary: \$524.21

SECRETARY, GR20
Job Number: C179
Department: Vice President University Relations Office
Description: Process all typed material, often with multiple revisions, work under tight deadlines for distribution of material to media sources. Back-up phone and calendar work; order office supplies; maintain subscriptions. Other duties as assigned. Requirements: Associates degree or equivalent. Heavy typing. Minimum 3 to 5 years secretarial experience. Exceptional typing skills; word processing proficiency (Displaywriter experience preferred). Knowledge of Cornell and related systems. Organizational skills. Ability to work without detailed direction. Minimum Biweekly Starting Salary: \$468.29

General Service

ANIMAL ATTENDANT, SO18
Job Number: G182
Department: Veterinary Medical Teaching Hospital - Statutory
Description: Milk cows; clean and maintain milking equipment; feed and care for large animals; wash and disinfect stalls; unload trucks, haul hay, straw, wood shavings and other supplies; other duties as assigned. Tuesday - Friday, 4am - 12:30pm; Saturday, 4am - 11:30am; must work holidays; Sunday and Monday off. Requirements: High school degree or equivalent. Valid NYS Class V drivers license. Good reading and writing skills. 3 to 5 years experience working with dairy animals essential and pipeline or parlor milking experience required; ability to detect estrus. Able to lift 100 lbs. Pre-employment physical given. Minimum Starting Salary: \$5.41/hour

Technical

Outside applicants for technical positions should submit an employment application, resume, transcripts and a list of laboratory techniques and equipment, or computer languages and hardware with which you are familiar. This information will be kept active for six months. For each position that you are qualified and wish to be a candidate for, submit a cover letter, including position title, department and job number, to Cynthia Smithbower. Current Cornell employees should submit an employee

Biotechnology Held Essential for Dairy Industry Growth

By YONG H. KIM

The competitive position of the dairy industry in the Northeast will depend heavily on the use of new products created through modern biotechnology, according to a Cornell agricultural economist.

Robert J. Kalter, professor and chairman of Cornell's Department of Agricultural Economics, says that research has led to new biotechnology products, such as bovine growth hormone that will cut production costs substantially for dairy farmers.

"Quick adoption of biotechnology products by the dairy industry will give it a competitive advantage over other food sources," he said.

Kalter made that prediction in a talk at a recent seminar on "Agricultural Research Policy" held under the sponsorship of the University of Minnesota. Kalter is a faculty member of the College of Agriculture and Life Sciences.

Milk and other dairy products, he said, are in constant competition for the consumer dollar with non-dairy beverages and food items.

"Fruit juices, soft drinks, coffee, and non-dairy snacks are all alternatives that consumers consider buying each time they enter the supermarket," Kalter said. "Therefore, dairy farmers will need to adopt cost-reducing technology to stay competitive with other products produced by the food system."

Citing such a competition now taking place between the red meat and poultry industries as an excellent example, Kalter said, "Increased efficiency in poultry production has resulted in lower consumer prices, and the market has seen a major displacement of red meat from the consumer's food basket."

Per capita red meat consumption continued to decline in 1984, while poultry and fish

continued to make relative gains in American diets. Poultry showed the greatest gain — up 74 percent since 1964, Kalter noted. In 1984, red meat consumption was near its 1964 level, but eggs were down 18 percent. Fish consumption has gained rapidly since 1982.

A similar situation, he said, took place in the late 1950s when margarine began seriously affecting butter consumption.

Early adoption of biotechnology products, Kalter contended, will help dairy farmers in the Northeast and Midwest to remain competitive against large dairy operations in the West and Southwest. California, Wisconsin, and New York are the top three dairy states in the nation.

"Biotechnology offers major benefits to all dairy farmers by improving production efficiency," Kalter said. "It is of particular interest to small- and medium-sized operations because it is not a capital intensive innovation, compared to many technological advances made in the past."

"As a result, smaller operators will be financially able to adopt new biotechnology products without incurring large debts," Kalter explained. "The principle ingredient for successful use of products like bovine growth hormone will be management ability."

Called "bovine somatotropin," the growth hormone is a product made through genetically engineered microorganisms. Considered a major research breakthrough, the growth hormone technology has the potential for an unprecedented increase in the efficiency of dairy production; it requires fewer animals and less total feed to produce the same quantity of milk.

Although biotechnology will cut production costs by boosting efficiency, the current milk surplus, Kalter argued, is not the result

of adopting new technology, but rather is directly linked to government price support programs for milk.

Efforts to restore a free market system to the dairy industry in terms of bringing supply and demand into balance will result in fewer dairy animals and a reduction in farm operators, he said.

"However, adoption of cost-reducing technologies will be instrumental in increas-

ing consumption of dairy products by lowering consumer prices," Kalter stressed.

"Hence, the problem of overproduction will be reduced."

"Continued market pressure resulting from consumer demand and preferences will spur efforts to develop more efficient production techniques essential to the survival of the dairy industry," Kalter concluded.

Scientists Here Dispute Claims Against Bovine Growth Hormone

By YONG H. KIM

Cornell scientists say that nothing in their studies supports claims being made by a coalition of environmentalists, farmers, and animal rights activists opposed to the commercial introduction of bovine growth hormone, a biotechnology product that promises to boost the production efficiency of dairy animals.

In a recent petition calling on the Food and Drug Administration to prepare an environmental impact statement on growth hormone, the Foundation on Economic Trends of Washington, D.C., charged that the use of growth hormone "will damage the environment, cause unnecessary suffering to cows, and wreak havoc on the dairy economy." The foundation, which is headed by Jeremy Rifkin, a critic of biotechnology, is joined in the petition by a Wisconsin farm group called the Wisconsin Family Farm Defense Fund, the Humane Society of the United States in Washington, D.C., and Wisconsin's Secretary of State Douglas LaFollette.

In a rebuttal against this and other claims made in the petition, animal scientist Dale E. Bauman and agricultural economist Robert J. Kalter, both in the College of Agriculture and Life Sciences, called those assertions totally erroneous and unfounded.

Bauman, who has pioneered the growth hormone technology, countered: "These groups cited our studies in making these claims, but our actual research data do not back such allegations."

In their petition, the groups cited Kalter's study on the economic implications of growth hormone for the nation's dairy industry and contended that, among other things, "entire dairy communities will be economically and socially devastated by the widespread commercial use of bGH (bovine growth hormone)."

"They used our economic study to support their claims in such a way that it sounds as if we were making those allegations," Kalter complained. "We were taken completely out of context."

The central issue in this controversy is bovine growth hormone, or "bovine somatotropin," created through genetically engineered microorganisms. This laboratory-produced product has the ability to boost cows' milk yields dramatically, just as the natural one secreted by the pituitary gland in cattle does. In a series of studies conducted over the past several years, Cornell's Bauman and his colleagues have discovered that the hormone has the potential for an unprecedented increase in the efficiency of dairy production.

The petitioners claimed that the use of bGH "will require an increase in total feed requirements," thus affecting agricultural land use, with adverse effects on the environment.

Bauman said he was astonished that his "studies were cited as a basic for that claim."

"Our results show exactly the opposite effects on total feed requirements," he pointed out. "Because of the dramatic increases in efficiency achieved with bGH treatment, the

same quantity of milk is produced with less total feed and fewer cows."

Citing the economic study conducted in 1984 by Cornell's Kalter, the groups also charged that bGH will have adverse economic and social impacts, claiming that, "within five years, nearly one out of every two dairy farms will be eliminated."

Calling that claim "totally off the wall," Kalter said, "There is nothing in our study that says anything remotely like this."

"Over the past two decades — from 1964 to 1984 — the nation has seen a 77 percent decline in the number of dairy farms," he pointed out. "This has happened without the hormone technology, and the trend is expected to continue regardless of the hormone, although bGH may speed up the process a little."

Reacting to still another claim that the growth hormone will create "additional surpluses for an industry already plagued by overproduction," Kalter said that the new technology may produce "a few bubbles" in the short run, but the root cause of the surplus problem lies squarely in the long-standing government price support program.

Kalter, chairman of Cornell's Department of Agricultural Economics, argued that poorly designed government programs have caused the surplus problem to persist even without bGH technology.

"Surpluses would disappear and milk consumption would increase if we let market forces operate more efficiently," he contended.

In yet another claim, the groups opposing the use of bGH contended that "animals injected with bGH will be under greater physiological stress and will be subject to a host of diseases, including mastitis, crippling lameness, fatty liver disease, and metabolic disorders including ketosis and acetoneemia. Their resistance to infections and contagious diseases will also be lowered which will increase the probability of sickness and suffering."

Rebuffing these claims as totally groundless, Bauman said: "Scientific evidence does not support the idea that bGH treatment would induce physiological stress or health abnormalities."

In collaborative studies conducted with scientists at USDA's Agricultural Research Service and the College of Veterinary Medicine at Cornell, "we have never observed any health abnormalities or evidence of stress," Bauman said.

A nutritional biochemist in Cornell's Department of Animal Science, Bauman emphasized that "because the discovery is new, it has not yet been examined under a broad range of environmental and husbandry conditions. Such studies are a prerequisite to FDA's regulatory review process."

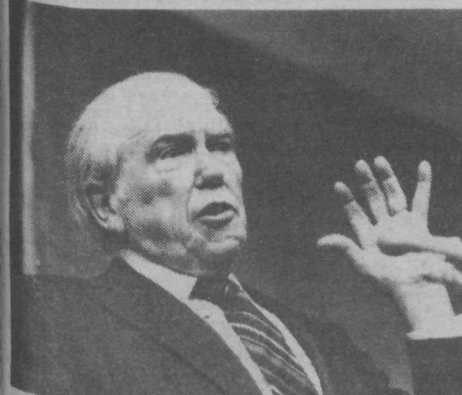
Citing numerous technological advances made over the past several decades that have dramatically improved production efficiency of today's dairy animals, the Cornell scientist stressed that the bGH technology is yet another research milestone that has the potential to ensure an abundance of food at costs affordable to consumers.

Fraser Says U.S. Corporations Beginning To See Benefits in Democratizing Workplace

American corporations are coming to recognize the benefits of democratizing the workplace, according to Douglas Fraser, former president of the United Auto Workers and a long-time advocate of worker participation.

Speaking Saturday at the 40th anniversary celebration at the School of Industrial and Labor Relations here, Fraser said quality of work, efficiency and labor harmony have all improved in plants where workers have had a greater say in the affairs of the workplace.

"Corporations are, at long last, recognizing what I knew decades ago," the labor leader said. "Employees have knowledge, creativity and ingenuity to contribute if asked."



DOUGLAS FRASER

By increasing worker participation, managers are saying "We are going to use your brains aside from using your hands," Fraser said.

"The alternative to that is to have the traditional authoritarian environment where the boss knows everything and the workers are stupid and you don't even ask them what their opinion is," he said.

During his nearly 10 years as president of the UAW, Fraser introduced as a bargaining issues plans by which workers would be given greater say in the affairs of the workplace. In 1979, after one such bargaining session, Fraser became the first union president to become a member of the board of a major U.S. corporation.

When he was elected to the Chrysler board he was roundly criticized by both business and labor leaders. However, Fraser said this weekend, that the experiment was an advance for increasing the power of workers.

"I take some comfort from the fact that some of those same labor leaders who criticized me are now themselves serving on boards of companies with which they have collective bargaining agreements," he said.

Any mechanism by which the workers have an effective voice should be tried, he said. Both the workers and the company will accrue whatever benefits result from such experiments.

"The insidious thing about democracy is once you practice it and experience it you don't want to give it up again."

Mann Library Open to Public

The extensive resources and services at Cornell's Albert R. Mann Library are now available to the public.

The new service, named "Cornell ASSIST," will provide up-to-date, comprehensive information on a wide range of subjects, including agriculture, biotechnology, the social sciences, and the life sciences. ASSIST stands for Agriculture and Social Sciences Information Service Team. It is designed to serve researchers as well as businesses involved in production, manufacturing, marketing, consulting, education, legislation, legal services, and New York State's agricultural industry, among others.

Mann Library is the resource center for the College of Agriculture and Life Sciences and the College of Human Ecology. The new service enables people with no connection to Cornell to use the services of its extensive library system at a nominal charge. Cornell ASSIST fulfills Cornell's role as New York state's land-grant university.

"As a land-grant college, we are obligated to make our resources available to the public," says Jean Currie, an information specialist with Mann Library. "Over the years,

we've had questions and requests from the general public, but we've never had the staff to answer the questions in depth. Now, Cornell ASSIST will provide that service."

The staff members will obtain information on research reports, patents, and foreign publications. They also will provide consultation on the management of information for agriculture and the social sciences, identify literature available on a particular subject, and offer workshops on state-of-the-art information technologies.

In addition to the resources at Mann Library, Cornell ASSIST is linked to all other libraries on campus. It also has computer access to more than 200 national and worldwide computer data banks for fields, such as biology, chemistry, biotechnology, agricultural economics, consumer affairs, education, technology transfer, food science, family life, ecology and the environment, horticulture, and nutrition. Rates charged for using Cornell ASSIST will vary, depending on the service rendered.

For more information on the service, contact Jean Currie at the library, or call 255-7960.

Program Friday to Honor John W. DeWire, Retiring from Faculty After 40 Years

John W. DeWire, professor of physics and nuclear studies and university ombudsman, will retire from active faculty service July 1, after 40 years at Cornell.

A program to mark his contributions to the university will be held Friday, May 9, in room 200 at Baker Laboratory.

The program will begin at 2:30 p.m. with a lecture on the subject, "A New Astrophysical Observatory: The Fly's Eye Detector," by Eugene Loh, chairman of the department of physics, University of Utah.

After this lecture, a reception will be held in the Baker Lab lobby at 3:45. The program will resume at 4:30 with remarks by Robert R. Wilson, director of the Laboratory of Nuclear Studies from 1947 to 1967, and by Bernard Gittelman.

After work at the Los Alamos Laboratory during World War II, DeWire came to Cornell as a research associate in the Laboratory

of Nuclear Studies in 1946. He played a leading role in the development and construction of five Cornell electron accelerators — the 300 Mev synchrotron in 1947, three synchrotrons from 1 Gev to 12 Gev in energy, and most recently the CESR storage ring built in 1977-79. He became associate director of the laboratory in 1968 and served in that capacity as associate to Boyce McDaniel until 1984.

DeWire was a senior scientist with the Alexander von Humboldt Foundation at the University of Bonn in 1974-75. He is a long-time member of the Board of Trustees of Associated Universities, Inc., which operates Brookhaven National Laboratory and the National Radio Astronomy Observatory.

Although he will leave regular faculty service on July 1, DeWire will continue to serve as university ombudsman for another one-year term.

The Week in Sports

Baseball Has Home Front to Itself with Five Games

By JOHN HERON
Sports Information

As the only Cornell team competing at home this week, the Big Red baseball team will play five games at Hoy Field in the span of four days in its final home stand of the season. Cornell will play West Chester in a doubleheader at 1 p.m. Saturday and a single game Sunday at 12:30 p.m. The Red will meet Ithaca College at 1 p.m. Tuesday for a doubleheader.

Although the variety of contests is limited on East Hill, several other squads will compete in all-important post-season events. The men's and women's track teams will travel to Annapolis for the Heptagonal outdoor championships Saturday and Sunday. The women's crew will row in the Eastern Sprints at Lake Waramaug, Connecticut, Sunday.

After splitting a pair of doubleheaders last weekend, the Big Red baseball team will continue to drive toward the .500 mark when as it winds down its 1986 schedule. Cornell lost 6-0 in the first game of a twinbill at Dartmouth last Saturday, but won the second game 10-7. Last Sunday, the Big Red fell to Harvard 4-3 in the opener, but came back to take the second game 8-6 in a game that went nine innings. Cornell entered Tuesday's game vs. Oneonta with a 16-24 slate and it finished with a 10-8 record in the EIBL.

A pair of freshmen infielders lead the team in hitting. Joe Catone (.324) went 4x8 last week to raise his average and move past classmate Scott Kenney (.322). Catone also tops the team in walks (13) and is tied for the lead in stolen bases (4). Kenney (.322) went 5x15 last week including a double. Two other players are also hitting better than .300. Junior catcher Guy Leach (.312) continued his torrid hitting with a 6x14 effort last week, while senior outfielder Joe Cossu (.312) went 5x12. Cossu is second on the squads in runs scored (17). He trails junior first baseman Mark Smith (.292) who has scored 23 runs. Smith leads the Red in four other offensive categories including at-bats (137), hits (40), triples (7) and the team lead in home runs (3). Smith already holds the record for most



Grant Whitney
Cross Country



Candi Calhoun
Track

triples in a career, and he is one shy of the single season mark. Senior Joe Darlak tops the team in two-base hits (7).

Senior southpaw Larry Brown leads the pitching staff with four victories, including one last weekend. Brown has also struck out 32 batters (first on the club) in 40.3 innings of work. Meanwhile, senior righthander Gary DiGiuseppe has a 3-3 mark, leads Cornell in complete games (4), and is third in ERA at 4.69.

Last year, all the pieces fell into place for the Big Red men's track team at the Heps championships. Cornell captured its first conference title since 1978 by edging out Dartmouth. The victory was clinched in the final two events in which the Big Red rallied for the go-ahead points.

Three individual Heps champions return from last year. Junior Darren Roach took first in the triple jump with a leap of 50-11 1/4, while senior Tim Tribble cleared 6-11 to win the high jump. Several other athletes should be among the top finishers in their respective events. Senior Grant Whitney, who is coming off a very big win in the 5,000 meters at the Penn Relays, will be a strong candidate to score in several distance events. In beating a national field at the Penn Relays, Whitney clocked the fastest time in the East this year (13:36.9) and qualified for the NCAA championships.

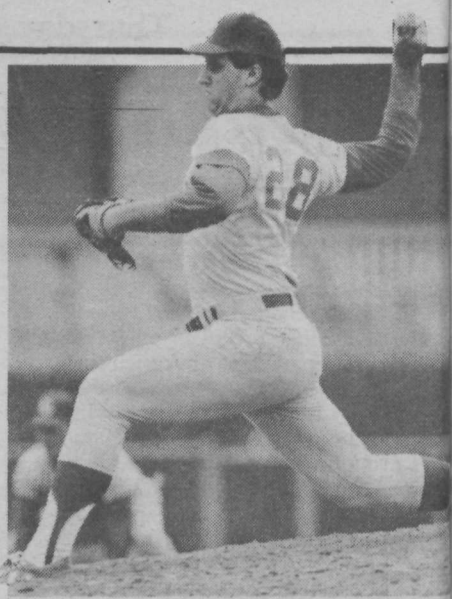
Junior Erik Bernstein, who has set both personal and school records in the javelin

this season, could be the man to beat in his specialty. Senior Curt Hampstead has clocked impressive times both indoors and outdoors this year. He should be a factor in the 110 high hurdles. In 1985, senior Mike Hazen was runnerup in the Heps pole vault competition; he looks to move up a notch in his final league competition. In addition, the sprints and relays should be very strong with senior Todd Pressley, freshman Xavier Washington, and sophomore John Bayne leading the way. Pressley anchored the 400-meter relay team which won the Heps title last season, while Bayne placed third in the 400 meters.

The women's track squad has made giant strides since last season when it finished seventh at the Heptagonals. The key to this year's success has been the performances by the middle and long distance runners. Junior Sarah Day leads the way in the distance categories. She has an excellent opportunity to score points in several events. Freshman Mary Jo Krolewski has also turned in some fine efforts in the 3,000 and 5,000 meter runs. Sisters Suzanne and Elise Jones will join sophomore Candi Calhoun in the middle distance races. Calhoun has had an excellent outdoor campaign, lowering her time markedly in the 800 meters.

Sophomore Christina Wort, who placed seventh in the 400 meters at the 1985 Heptagonals, and junior Kerry O'Toole should lead the Big Red sprinters. Junior Dana Stone, who holds the school mark in the discus, finished fifth in the shotput at the conference meet a year ago. She could be an important figure in the Big Red's bid for its best finish at the Heptagonals. Cornell's best showings were in 1983 and 1984 when it placed sixth on each occasion.

The Cornell women's crew, which tied a school record for dual meet wins in season (five), will be out to improve on its third place finish in the petite finals at the 1985 Eastern sprints. Cornell has not made the championship finals since 1983, when it captured fifth place, but the first varsity boat has performed well lately. Senior Laura Eds-



Gary DiGiuseppe on the mound.

berg was moved to stroke last week, and s rowed along with Stephanie Maxwell, Cini Brown, Bonnie Light, Hope Jones, Audrey Friedberg, Kathleen Daley, and Maureen Murphy. Patti Lein is the coxswain for the first varsity boat.

For the third time in the last four years the Big Red women's lacrosse team capped its season by winning the New York state championships last weekend at William Smith College. Cornell earned the right to play in the title game with a 12-6 victory over Oneonta in the quarterfinal game and a 12-1 triumph in the semifinals against William Smith. Sophomore Julie Inferna had an outstanding tournament, scoring 10 goals and seven assists, including the deciding score in the championship contest. Inferna tallied four goals against both William Smith and Colgate, and her seven points in the semifinals was a team-high for the season.

Several seniors closed out their collegiate careers with notable performances. Kate Howard-Johnson led the offensive parade against Oneonta, scoring five goals to tie a career high. Jenny Graap accumulated nine goals and three assists in the tournament, while Kim Foster scored three times in the semifinal game. Goaltender Ellen Grant appeared in two games and made four saves in 43 minutes of play. The team finished with a 6-8 overall record for the season.

Brief Reports

Management Orientation Program May 22 and 23

The spring 1986 Management and Professional Orientation Program will be held Thursday, May 22, and Friday, May 23, from 8:30 a.m. to 4:30 p.m. in the boardroom of the Johnson Museum.

The program offers selected midlevel management and professional staff with an executive perspective on the major issues and challenges facing the university.

(A paragraph from another story was inadvertently added to a story about this program in the May 1 issue of Networking, making it appear that a charge is made for this program. That is not the case; deans, directors and department heads nominate people for the program.)

Junior Physics Major Lowenstein Fellow

Steven Flank, a junior and physics major at Cornell, is one of six students who are Lowenstein Fellows on Capitol Hill in Washington, D.C., this term in a pilot program.

The program honors Allard K. Lowenstein and is sponsored by the Americans

for Democratic Action Education Fund Inc.

Flank said he hopes to learn during his time in the capital how technology can be applied to politics.

Correction

Incorrect information provided to the Chronicle last week resulted in a time being stated incorrectly for graduating seniors to attend one of the mandatory "exit interviews" for those who have NDSL and university loans.

The last such session will be at 9:05 a.m. (not p.m.) May 15 in Urin G94. (One other session will be at 5 p.m. May 12, also in Urin G94.)

CRESP to Mark 15th Anniversary

The Center for Religion, Ethics and Social Policy, headquartered at Cornell, is celebrating the 15th anniversary of its founding with an open reception today. Refreshments will be served between 4:30 and 6 p.m. at the Andrew Dickson White House at the corner of East Avenue and Tower Road.

More commonly known as CRESP, the independent non-profit organization was founded in 1971 after the social turmoil during the late 1960s and early 1970s.

The center has been the origin of a number of social-action projects on campus and throughout the Finger Lakes area. These include the Eco-Justice Project, the Alternatives Library, Learning Web, Citizen's Network, the Committee on U.S. /Latin American Relations, Centerpeace, Displaced Homemaker's Center, the Center for Local Food and Agriculture, and the Community Dispute Resolution Center.

While CRESP receives some funding from the university, it is administratively independent of Cornell. Its main offices are in Anabel Taylor Hall on campus, with satellite offices in downtown Ithaca.

CRESP coordinator Philip B. Snyder, Ph.D. '75, said funding for annual budget of about \$500,000 comes from foundations, local, state, and federal agencies, individuals, and churches. Snyder said more than 750 persons volunteer their services to CRESP programs annually.

Snyder said, "The center endeavors to generate ideas and actions to promote a viable

Campus Store Has Textbook Deadline

The Campus Store has sent a note to faculty members reminding them that May 15 is the deadline for textbook requisitions for the fall semester.

Members of the faculty who have not received the notice or who have questions should call Richard W. McDaniel, director, at 255-1994.

Bridge Closed Today

College Avenue at the Cascadilla Bridge entrance to the Cornell campus will be closed to vehicular traffic today. Motorists are requested to use alternate routing to the campus. Pedestrian traffic will remain open. The bridge will be closed at 6 a.m. and remain closed until 6 p.m. while electrical and test work is accomplished.

SAGE CHAPEL

Johnson to Discuss The "Bitch Goddess"

The Rev. Robert L. Johnson, director of Cornell United Religious Work, will preach at Sage Chapel at 11 a.m. Sunday, May 11. His sermon topic will be: "Worshipping the Bitch Goddess."

Johnson is an ordained minister in the United Methodist Church and a graduate of the University of North Carolina at Chapel Hill, Union Theological Seminary in New York City, and Harvard Divinity School. For 18 years, he served as director of the Wesley Foundation at Chapel Hill, N.C., and served in recent years as president of the National Institute for Campus Ministries. He serves now on the editorial board of the journal, Religion and the Intellectual Life and is vice president of the Association for the Coordination of University Religious Affairs. As Director of CURW, he is responsible for the administration of Sage Chapel services.

Music for the service will be provided by the Sage Chapel Choir under the direction of Donald R. M. Paterson, university organist and Sage Chapel choirmaster.

Job Opportunities

Continued from Page 6

TEMPORARY RESEARCH SUPPORT AIDE (Five positions) (Repost)
Job Number: T132

Department: Communication Arts
Description: Interview to survey environmental issues and new communication technology throughout the Adirondacks and Canada. Three weeks in July.

Requirements: Prefer graduate students with a social science background. Please send cover letter and resume to Karen Clifford.

Minimum Biweekly Starting Salary: \$5.25/hour lodging and transportation

TEMPORARY COLLECTION REPRESENTATIVE (Two positions) (Repost)
Job Number: C222

Department: Bursar
Description: Perform duties involved in the collection of delinquent student loan accounts. Duties include researching student loan accounts, "skip tracing", initiating telephone and written communication with delinquent loan accounts, making suitable repayment arrangements with delinquent borrowers. Tuesday, Wednesday, Thursday, 4:30 p.m.-8:30 p.m.

Requirements: High school diploma or equivalent. Ability to effectively communicate via the telephone and letter. Person must be self-assured and possess the maturity to effectively present the University's position with diplomacy and tact. Please send cover letter and resume to Esther L. Smith.

Meltdown Affects Grain Prices

The meltdown at the Soviet nuclear reactor in the Ukraine has created some "fall-out" of its own in U.S. grain markets. Prices of grains such as corn, wheat, and soybeans literally jumped overnight after news of the disaster reached the West, and they have been on a roller coaster ever since.

After the accident, grain prices rose dramatically and quickly fell, but they will increase again if commodities experts learn there is extensive radioactive contamination of Soviet agricultural regions, a Cornell agricultural economist predicts.

On April 26, the Chernobyl nuclear reactor melted down, spewing a cloud of high-level radiation into the atmosphere. Prevailing winds spread that cloud across much of Europe, Scandinavia, and the Soviet Union itself. Carried by the jet stream, traces of that radioactive cloud reached the western United States this week.

As commodity experts tried to assess the impact of the disaster on the world market for grains, prices for those products shifted quickly and drastically.

Last week, prices of November soybean

futures increased by more than 6 percent between Monday and Wednesday — from \$5.0975 per bushel to \$5.4175. By Thursday, May 1, soybean prices dropped to \$5.2475 per bushel. Normally, daily fluctuations in prices of soybeans and other grains vary by a few cents.

Other grain prices followed a similar pattern — an unusually large increase followed by a decrease. Hard red winter wheat, for example, jumped 37 cents per bushel between Monday and Wednesday, and then fell by 11 cents Thursday, and by another 12.5 cents on Friday, May 2.

This week, grain prices stabilized slightly above pre-disaster levels, but they probably will move again as more news is released of the situation, says William G. Tomek, a professor of agricultural economics in the College of Agriculture and Life Sciences.

"Grain traders react quickly to news," Tomek explains. "In this case, the shifting prices reflect the market's assessment of radiation damage to Soviet wheat fields in the Ukraine."