



Blossoms pop from trees as spring comes to the Arts Quadrangle.

## New Electron Ring Proposed Here Would Be 7 Times Size of Present Ring

Physicists at the university's Wilson Synchrotron Laboratory are studying the feasibility of establishing a major national research facility in Tompkins County to investigate elementary particle physics.

The facility, if built, would include a horizontal, circular tunnel some three and one-half miles in circumference to house an electron storage ring; a second circular tunnel of about one-half mile in circumference to house a synchrotron; a five-story office and laboratory building, and eight smaller structures.

Called CESR II, the facility would be similar to (but several times larger and more powerful than) CESR I, the Cornell Electron Storage Ring now operated by the university as a federally funded research center.

A rural area northeast of the Tompkins County Airport and about three miles from the Cornell cam-

pus is under study as a possible site for the facility.

Projected cost of the project is approximately \$200 million in 1980 dollars.

Critical to the success of the project are two factors: The availability of federal funds for design and construction, and the development by Cornell researchers of high technology devices known as superconducting microwave cavities.

Although CESR II has been in the preliminary planning stage since 1979 and a conceptual engineering study has been completed, physicists at Cornell do not expect to make a formal request for federal funding until 1982, with 1984 set as the earliest possible starting date for construction and 1986 as the earliest completion date.

Microwave cavities are needed to accelerate electrons and particles of the opposite charge, positrons, around the storage ring at nearly the speed of light. Research efforts

underway at Cornell since 1969 are aimed at developing superconducting microwave cavities made of niobium metal and cooled nearly to absolute zero with liquid helium. Compared to conventional microwave devices made of copper,

the superconducting cavities have the potential of producing greater accelerating fields while consuming about 50 times less power.

A prototype superconducting cavity has been built and will be tested in CESR I, which began

operation in 1979. Research and development on the new devices is expected to continue through 1983. If successful, this would be the first major application of the technology

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## Biochemist Wins Award

Cornell biochemist Gerald R. Fink received the U.S. Steel Foundation Award in Molecular Biology from the National Academy of Sciences in Washington Monday.

The award, which carries a \$5,000 prize, was bestowed on Fink for his outstanding contributions to molecular biology, particularly his research on the genetics of yeast. He was cited for "opening vistas of genetic analysis by the development of new methods, in particular, the development and utilization of molecular cloning in yeast." Fink is

one of two researchers to receive the award this year.

Fink came to the State College of Agriculture and Life Sciences in 1967. He recently was named the American Cancer Society Professor of Molecular Biology, a lifetime endowment supported by the society.

Editor of "Gene" and "Molecular and General Genetics," Fink is the author of more than 50 scientific articles, and former associate editor of "Genetics" and the "Journal of Bacteriology." He has served on

several study panels including an American Cancer Society panel on virology and cell biology, a National Foundation panel on genetic biology, and a National Institutes of Health panel on environmental mutagenesis.

A native of Brooklyn, Fink earned the B.S. at Amherst College (1962), and the M.S. (1964) and Ph.D. (1965) in genetics at Yale University. Before coming to Cornell, he worked as a postdoctoral fellow at Yale and the National Institutes of Health.



# Council Adopts Campus Smoking Policy

## Lighting Up Prohibited in Many Places

A new university-wide smoking policy was passed by the Campus Council at its meeting last week.

Section I of the new policy prohibits smoking in the following: classrooms, laboratories and hallways of academic buildings; on campus buses and in university vehicles used by two or more persons; in all elevators, at all indoor athletic events; at all public lectures, concerts, movies and theatrical productions and in lobbies and corridors immediately adjacent to theaters and lecture halls.

Section II calls for the regulation and establishment of separate smoking and non-smoking areas or by prohibiting smoking in cafeterias, dining and lunch rooms;

medical facilities; libraries and museums; student, employee and faculty lounges; rest rooms.

Section III reads: "In offices that provide regular services to faculty, students, or employees, or where several people work in close proximity, the supervisors should establish guidelines to protect the rights of non-smokers. The guiding principles should be that no member of the community will smoke without the consent of those around them."

The policy also, among other things, proposes the establishment of a permanent commission to monitor implementation of the policies on smoking and recommends that the University Health Services start an education campaign about

the hazards of smoking and that clinics should be established to help community members give up smoking.

Copies of the complete policy can be obtained from the Campus Council Office, 165 Day Hall.

In other action, the Campus Council passed a resolution calling for the seating of the newly elected student trustees and the reaffirmation of all student trustee positions on the Board of Trustees.

A resolution was also passed concerning the United States' involvement in El Salvador which read "We strongly feel that the U.S. should withdraw military personnel from El Salvador, terminate all

assistance to the Salvadoran government, and respect the right of Salvadorans to determine their destiny." The resolution was included in a recent referendum held on campus.

The council also passed a resolution endorsing the May 3 national march on Washington, D.C., to protest U.S. involvement in El Salvador.

The last meeting of the Campus Council will be at 4:45 p.m. Thursday, May 7, in 251 Malott Hall.

On June 1, the University Assembly will take over the responsibility for campus governance. The Student and Employee Assemblies-elect have been meeting regularly to draft the by-laws and procedures which will govern the individual assemblies.

### Meetings on Budget Today

The Campus Council will sponsor two meetings today to gather ideas, opinions and expectations of Cornell community members concerning the university budget process.

At noon, a brown bag lunch will be held for faculty and staff in the Campus Council Conference Room, 103 Day Hall, and at 4:45 p.m. an open hearing in 251 Malott Hall.

# Intellectual Challenges Tops on Students' Minds

## Survey Shows Job-Oriented Studies Less Important

According to a survey by Cornell's Leonardo da Vinci Society, Cornell students are very concerned with moral and ethical issues and feel that "difficult intellectual challenges are a more important characteristic of their college education than are job-oriented studies."

The student-run society has released a description and analysis of the survey:

"The survey was widely distributed on campus in libraries and coffeehouses during the final two weeks of classes last semester. One hundred eighty surveys were completed and returned. The respondents were 70 percent undergraduate and 30 percent graduate students. The distribution of colleges represented was excellent: 28 percent from Arts, 27 percent from Agriculture and Life Sciences, 23 percent from Engineering, 9 percent from Human Ecology, and a scattering from the other colleges.

"According to survey results, Cornell students feel that difficult intellectual challenges are a more important characteristic of their college education than are job-oriented studies. Seventy-seven

percent think difficult intellectual challenges are 'very important' to 'essential,' while only 47 percent think this way about job oriented studies."

The society points out later in the analysis, "Although intellectual challenges may be important to Cornell students, only 4 percent of respondents said that this was the reason that they were at college. The greatest number (29 percent) mentioned 'career' as a motivating force."

The report goes on to state that "Cornell students are also very concerned with moral and ethical issues. Sixty-five percent consider them essential or very important in their college education. Two other answers that rated very high positive scores were 'small group interaction' (70 percent) and 'multicultural exposure' (70 percent). On the other hand, 61 percent of respondents rated 'competitive atmosphere' as not at all important or only slightly important.

"When students were asked to rank things in order of their value to their own learning process, 'lectures' came in first with 45 percent ranking them one or two. Surpris-

ingly, 'teaching assistants' ranked dead last, even behind such things as homework assignments and outside reading.

"The second part of the survey required short written responses. Because of the infinite number of responses possible, no one category in most cases received more than a 15 to 20 percent response. The most frequent complaint about the educational process at Cornell in particular, was 'large classes' (16 percent). The 'impersonal attitudes of pro-

fessors' as well as the 'impersonal system' together accounted for 22 percent of the responses. As one student put it, 'minds are processed like files in a filing cabinet.' (Although people complained about the competitiveness (16 percent), when asked for alternatives, only 5 percent said 'less competitiveness.' Instead, they offered solutions such

### Statler Schedules Annual Meeting

The annual meeting of the membership of the Statler Club will be held on Tuesday, May 12, in the Main Lounge of the club at 1 p.m.

Items to be voted on include officers for the 1981-82 year, and a proposal to adjust the dues structure for membership.

The nominating committee has proposed the following slate: president, David Rector; vice president, Jack Lowe; secretary treasurer, George Bantuvanis; directors, (1 yr.) Kenneth Robinson, and (4 yrs.) William McGuire.

The proposed dues adjustment is the first since 1975. Details will be posted on the club Bulletin Board in the lobby of Statler Inn.

### Garden Plots To Be Distributed

Cornell Garden Plots will be distributed on Saturday, May 9, beginning at 10 a.m. in the auditorium of Martha Van Rensselaer Hall.

Those who signed up in advance, should have received a postcard with the appropriate information. Those who have not signed up in advance should go to MVR at 1 p.m. at which time left-over plots will be distributed.

Land for the plots has been donated by the New York State College of Agriculture and Life Sciences.

as smaller classes (11 percent), 'more emphasis on learning, not on grade point averages' (9 percent), 'more discussion in class' (7 percent) and 'having professors interested in students' (6 percent).

### Evening Buses Out for Summer

The Evening Blue Light bus service on campus will be suspended for the summer at midnight Friday, May 15, according to William E. Wendt, director of Transportation Services. Until then, the service will operate on its regular schedule from 6:30 p.m. to 12:15 a.m. between the Dairy Bar, North Campus, West Campus, and Colletown.

The Blue Light bus will resume service on Wednesday, Sept. 2 with the start of fall term instruction.

### League Seeking Women Golfers

Women golfers of the Cornell community are invited to join the 1981 Cornell University Women's Golf League. Applications will be found at the Pro Shop, and need to be returned by May 11.

## Cornell Chronicle

Editor, Randall E. Shew. Staff writers, H. Roger Segelken, Robert W. Smith, Barbara Jordan-Smith, Martin B. Stiles. Photographers, Sol Goldberg, Russ Hamilton. Circulation Manager, Joanne Hanavan. (USPS 456-650)

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## Jobs

The following job openings are new this week. For information on vacant positions listed in previous issues of the Chronicle, contact Personnel Staffing Services, 130 Day Hall. Cornell is an affirmative action employer.

**Administrative/Professional**  
Registrar, CP4 (B&PA)  
Assistant Director, CP3 (Financial Aid Office) Clerical  
**Administrative Aide, GR20 (Chemical Engineering)**  
**Administrative Aide, GR20 (Financial Aid Office)**  
Secretary, GR18 (Biochem., Molec. & Cell Biology)  
Secretary, GR17 (Arts & Sciences Admissions) (2)  
Secretary, GR16 (Engineering)  
Administrative Aide, GR21 (Univ. Counsel/Sec'y of Corp.)  
**Service and Maintenance**  
Animal Attendant, GR16 (DCS/NYS College of Vet. Med.)  
Custodian, GR16 (Varied)

Cashier, GR15 (Varied)  
Sales Assistant, GR15 (Campus Store)  
**Technical**  
Research Equip. Tech., GR24 (Electrical Engineering)  
Field Assistant, GR19 (Seed & Veg. Sciences, Geneva)  
Technician (Experimentalist), GR21 (Physiology)  
Technician, GR21 (Neurobiology & Behavior)  
**Part-time**  
Bus Driver, GR20 (Bus Service)  
Administrative Aide, GR20 (Cntr. for Environ. Research)  
Building Guard, GR18 (Johnson Museum)  
Animal Attendant, GR16 (Lab. Animal Services)  
Building Guard, T2 (Johnson Museum)  
Technician, GR18 (Plant Pathology)  
Technical Assistant, GR16 (Entomology)  
**Temporary**  
Temporary Admin. Aide, T4 (ILR Extension, Long Island, NY)  
Temporary Secretary, T3 (Athletics)

Temporary Accounts Asst., T2 (Physics/LASSP)  
**Academic**  
Faculty Position: Animal Health Mgmt. (Preventive Medicine, NYS College of Vet. Med.)  
Faculty Position: Equine Sports Med. (Vet. Diag. Lab., Div. of Drug Testing & Toxicology, NYS College of Vet. Med.)  
Lecturer, Theatre  
Technician/Teacher (Theatre Arts, A&S)  
Research Assoc. IV, CA6 (Pomology & Viticulture, Geneva)  
page one stuff

The Job Opportunities list is mailed to all Cornell departments. In addition, it will be posted in the following places: Day Hall Information Desk, second floor lobby; at the Circulation and Reference Desks of all university libraries; in the Map and Newspaper Section, Olin Library; all college and technical libraries; Roberts Hall Post Office substation and in the Upper Activities Corridor, Willard Straight Hall.



# How Does Pollution Affect Vegetation?

## 130 Scientists to Discuss This Question Here

The question of how air pollution is affecting vegetation around the world will bring some 130 scientists from the U.S., Canada and 10 other countries to Ithaca May 5-7 for the 13th Annual Air Pollution Workshop.

Sponsored this year by the Boyce Thompson Institute for Plant Research and the university, the three-day workshop at the Sheraton Conference Center is a gathering of representatives from research institutes, industries and government in the largest international concentration of air pollution-vegetation specialists.

Gene E. Likens, professor of ecology and systematics at Cornell and a pioneer researcher in the problems of acid precipitation, will present the latest findings on the

scope and effects of acid rain in the opening address to the conference, beginning at 9:30 a.m. Tuesday, May 5.

Topics of technical sessions include crop loss assessment; local and regional effects of sulfur dioxide; physiological, biochemical and metabolic effects of air pollution on vegetation; and criteria for air pollution standards.

The workshop is unusual in that the participants do not belong to any single organization, but gather each year because of their common interest in the effects of air pollution on crops and forests, according to Leonard H. Weinstein, director of the Boyce Thompson Institute Program on Environmental Biology and one of the workshop organizers.

Among those attending the workshop will be plant pathologists and plant physiologists, agronomists, biochemists, ecologists and engineers.

Scientists from Australia, where major aluminum smelting facilities are being built and powered by coal-burning electric generators in the agriculture-rich Hunter valley, are expected to be interested in the American experience with pollution from aluminum smelting. Fluorides from aluminum smelting operations near the U.S.-Canada border at Massena, N.Y., are a current subject of international concern.

Also of concern at the workshop will be the harmful effects on plants of the gas, ozone. Although ozone in the stratosphere is of critical im-

portance to life on this planet because of its ability to absorb ultraviolet radiation from the sun, it can be a toxic agent to plants at ground level. Ozone pollution, produced in the lower atmosphere through the photochemical action of sunlight on nitrogen oxides and hydrocarbons from auto exhaust and power plants, is becoming more recognized as a regional problem because it moves with air masses from industrialized areas to rural areas. Few rural areas of the U.S. are escaping the effects of ozone pollution, Weinstein says.

Information being developed by some researchers attending the workshop will be used by the federal Environmental Protection Agency (EPA) to establish new or updated

air quality standards.

"We need a better understanding of how pollutants alter plant quality and productivity," says Weinstein, noting that current estimates of annual loss of crops to air pollution in the U.S. range widely from as "little" as \$132 million to as much as \$4 billion. As part of the National Crop Loss Assessment Network, Boyce Thompson is one of several institutes in the U.S. conducting field studies of pollution's effects on agriculture. "By the end of the program we will have a better estimate of crop losses," Weinstein adds.

More information on the workshop, which is open to the public, is available from John A. Laurence at 257-2030.

## Four Faculty Win Guggenheim Awards

Four university faculty members have been awarded 1981 Guggenheim Fellowships.

The professors and their research projects are:

—Calum M. Carmichael, professor of comparative literature and Biblical studies, studies in law and narrative in the Bible;

—Bruce Ganem, professor of chemistry, studies in organic synthesis;

—Roger M. Spanswick, professor of plant biology, research on membrane transport in plants;

—Saul Teukolsky, associate pro-

fessor of physics and astronomy, studies in relativistic astrophysics.

In the decade 1971-80 a total of 75 faculty received the prestigious fellowship. On several occasions Cornell was among the top three of the nation's institutions with respect to the number of fellows named that year.

A year-by-year tally of Guggenheim Fellowships received by Cornell faculty since 1971 is 1971 (6), 1972 (3), 1973 (10), 1974 (9), 1975 (6), 1976 (4), 1977 (2), 1978 (6), 1979 (8), 1980 (11) and 1981 (4).

## Student Information Study Is Continuing

A study team here has begun to review and develop an automated admissions system in the third phase of a project expected to bring a new student information system to Cornell.

The team consists of nine university administrators and three consultants from International Business Machines Corp.

Their work is the latest phase of a project expected to yield a new student information system that eliminates existing problems and

provides better services to students, faculty and staff, according to Vice Provost Larry I. Palmer.

He said it will probably be several years before a complete new student information system is in full operation.

The first phase of the project took place early in 1980 when the same study team approach was used to study the functions of Cornell registrars. The second phase, dealing with financial aid, was completed in mid-April.

## Labor Action Conference Here Friday, Saturday

"Labor in the 1980s: Organized and Mobilized" is the title for the fifth annual spring conference of the Cornell Organization for Labor Action here Friday and Saturday.

The COLA conference will be held at the New York State School of Industrial and Labor Relations Conference Center. It includes three major talks and a full day of workshops.

The program opens with a keynote address by Martin Gerber, vice president of the United Auto Workers (Technical, Office and Professional Staff Department), at 7:30 p.m. Friday.

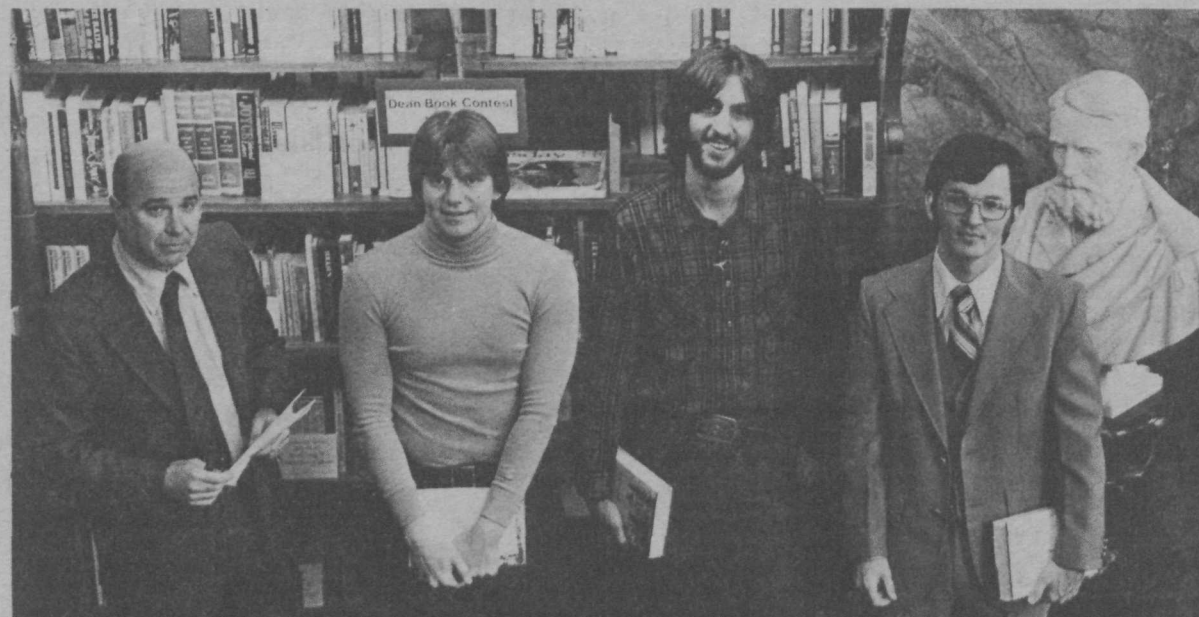
Saturday's featured speakers are

Humphrey Donahue, field organizer, region 7, AFL-CIO, at 9:30 a.m., and Roger Keeran, assistant professor of labor history in the ILR School, at the 7:30 p.m. dinner.

Five workshops are scheduled on Saturday: Labor Education and Political Action, both at 10:30 a.m.; Unions and Their Public Image and Safety and Health in the Workplace, both at 1:15 p.m., and Organizing the Unorganized at 3 p.m.

Workshops will be conducted by panels of trade unionists from national and state labor organizations.

For full details, contact either Judith Serlin (272-4431) or Heidi Higgins (533-4025).



Arts College Dean Alain Seznec, left, announces winners of the Arthur H. Dean and Mary Marden Dean Book Collection contest. From left are Seznec, Douglas Anderson, Eng. '81, third-place winner; Mason Weinrich, Ag. '82, first place, and Douglas Julius, Arts '82, second place.

## Book Contest Winners Named

For the second straight time, a student in the State College of Agriculture and Life Sciences has taken first prize in the Arthur H. Dean and Mary Marden Dean Book Collection Contest, held every two years.

Mason Weinrich, a junior majoring in neurobiology and animal behavior, won the first prize worth \$250 for his collection "Whales, Dolphins & Porpoises." Weinrich, who plans to work for his doctorate in biology and specialize in the humpback whale, has collected some 1,500 books on whales since he

was seven years old.

In 1979, when the awards were made last, the first prize also went to a student in the College of Agriculture and Life Sciences, for a collection on "British Biology in the Nineteenth Century."

Until 1979 and this year, the top prizes had all been taken by students in the College of Arts and Sciences. The contest was first held in 1966.

The other winners this year: — Second prize, \$175; Douglas Julius, Arts '82, "A Bibliography of

James Joyce;"

— Third prize, \$100; Douglas Anderson, Eng. '81, "A J.R.R. Tolkien Collection."

— Honorable Mention, \$50; Steven Aroesty, Arts '82, "American Railroadings;"

— Honorable Mention, \$50; Beth Stevens, Hum. Ec. '81, "Children's Fantasy Collection."

This year, 27 students entered a total of 30 collections. Each entrant received a copy of "A History of Cornell," by Morris Bishop.

## 'Health Awareness' Day Scheduled

The Cornell Chapter of Alpha Epsilon Delta, a premedical honor society, will present the third annual "Health Awareness Day" from 10 a.m. to 2 p.m. Friday, May 1, in the Memorial Room of Willard Straight Hall.

"The purpose of this program is to educate people in the Cornell and Ithaca communities about the current state of their health and their potential for better health by making them aware of preventive medical practices," said Miriann Turato '82, vice president of AED and coordinator of the program.

Audience participation will play a large role in this year's program,

Turato said. "A Yardstick to Wellness," is the theme of the Gannett Health Services' exhibit. Leg strength and cardio-pulmonary function will be measured on physical therapy machines. Staff members from Gannett will be present to administer a personal stress identification indicator and counsel members of the audience about stress in their lives.

The Alcohol Awareness Committee will demonstrate the affects of alcohol on judgment and reflexes with its breathalyzer and response machine. The American Cancer Society will, through the use of a lung machine, illustrate the effects of

smoking.

There will also be exhibits on sports medicine, nutrition, women's health, mental health and world health issues such as poverty and starvation.

Other highlights of Health Awareness Day include a demonstration of the workings of an ambulance, periodic cardio-pulmonary resuscitation (CPR) and first-aid demonstrations, Turato said.

As in previous years, Alpha Epsilon Delta will be collecting donations for the local chapter of the American Red Cross.



# Calendar

All items for publication in the Calendar section, except for Seminar notices, must be submitted by mail or in person to Fran Apgar, Central Reservations, 532 Willard Straight Hall, at least 10 days prior to publication. Seminar notices should be sent to Barbara Jordan-Smith, News Bureau, 110 Day Hall, by noon Friday 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, colloquia, etc.) ALL DEADLINES STRICTLY ENFORCED.

\*—Admission charged.

## Announcements

**My Indoor playcenter** Meets every Mon., Tues. & Fri., 9:30-11:30 a.m. at North Campus Multipurpose Room. For children of the Cornell Community from 6 months to 4 years of age in the presence of a parent. For additional information, please call 257-0736 or 273-3662.

**Cornell Women's Planning Forum**  
This organization is concerned with profession planning practice and the broad societal implications of planning and development as they relate to the needs of women. Group meets on the 1st and 3rd Wednesday of each month at 12:15 p.m. in room 318 West Sibley. Bring your lunch. All welcome.

**Ithaca Draft Information and Counseling Service**

New Hours of operation for the Spring Semester. Anyone with questions about conscientious objection, registration or the draft can stop by the office at 320 Anabel Taylor Hall, Mon.-Fri., 9 a.m.-3 p.m., Sat. 12 noon-2 p.m., or Tues. or Thurs. evenings, 7-9 p.m., or call 256-5187 for information or appointments.

**The Unmuzzled Ox Coffeehouse**  
A volunteer non-profit coffeehouse located in Collegetown at 111 Oak Avenue. It features live music (if performers are available), a relaxed atmosphere and great snacks. It is open every Fri. & Sat. at 9 p.m. The Ox is supported by Lutheran Campus Ministry and is open to all. Call 257-2250 for more information.

**Fleischmann Scholarship Award**  
Applications may be picked up in Human Ecology Counseling, N101 MVR. The \$1,000 scholarship will be awarded to a junior or senior who is a Human Ecology Major with a minor in journalism. The student must exhibit great promise in furthering an education in journalism. All applications may be returned to Human Ecology Counseling, N101 MVR no later than April 23, 1981.

**Human Ecology Students**  
Course Enrollment (preregistration) for Fall '81 Term is from Monday, April 13, to Friday, April 24. Check MVR student mail file, bulletin boards and TV Monitor for information.

**New Exercise Class**  
Class for women (students, staff, faculty and wives), with Nancy Cool, leader. Tues. and Thurs. 12:15-1 p.m. in Helen Newman Gym.

**Saturday**  
May 2, 9 a.m.-4:25 p.m. Anabel Taylor Hall. Conference on Cooperatives. Free admission, free breakfast and lunch. 15 workshops offered. Preregister as soon as possible by calling Judy Green, CRESP, at 256-6486. Sponsored by National Consumer Co-op Bank and Center for Religion, Ethics and Social Policy.

**Thursday**  
May 7, 9 p.m. Straight Loft 3. Class of 1981 Alumni Class officer elections. Please plan on attending if you are interested in alumni activities: Reunions, Fund Raising, Class Communications, and Social Activities. For more information, call 256-3516.

**Laboratory of Ornithology Book Sale**  
May 14-17 Books, Journals, Magazines, Reprints on ornithology, mammalogy, conservation, natural history and other biological subjects. Open 8:30 a.m.-5 p.m. Thursday; 8 a.m.-4 p.m. Friday; 10 a.m.-5 p.m. Saturday and Sunday. 159 Sapsucker Woods Road, opposite the airport off Rt. 13; on the Langmuir Lab. bus route. Low, low prices.

**1981 J.G. White Prizes**  
Through the generosity of James Gil-

bert White, Ph.D. '85, three prizes, established in 1914, are offered annually. Two prizes for excellence in Spanish will be awarded to Cornell undergraduates. To be eligible, students must be U.S. citizens or permanent residents and must not have resided for more than fifteen months in a Spanish-speaking country. One prize is open to juniors and seniors only in the College of Engineering. The other is open to any undergraduate. All candidates must have completed two terms of successful work in Spanish or be currently registered in a second term of Spanish.

A third prize for excellence in English will be awarded to an undergraduate from a Latin American country or Puerto Rico, whose mother tongue is not English and who has not resided for more than four years in an English-speaking country.

The prizes, of \$500 each, will be awarded on the basis of written and oral examinations administered by the award committee. General knowledge of language, including grammar and literature, will count as one-half of the overall examination; ability to speak fluently and correctly will count as the other half. Written examinations will take place on Thurs., May 7 at 7:30 p.m., in Goldwin Smith 156. Oral examinations for those who qualify will be scheduled the following week.

Students wishing to compete for the prizes should sign up at 278 Goldwin Smith by May 6. Faculty members are encouraged to submit the names of those students whom they deem as qualified candidates. Please address all correspondence to Mary G. Randel, White Prize Committee, 267 Goldwin Smith.

## Career Center

**Thursday**  
Apr. 30, 12:20 p.m. Career Center Seminar Room. Briefing: Filing an Application to Medical/Dental Schools: AMCAS and nonAMCAS.

Apr. 30, 4-5 p.m. Career Center Seminar Room. Applying to Grad/Professional School.

## Colloquia

**Thursday**  
Apr. 30, 4:30 p.m. 105 Space Sciences. Astronomy and Space Sciences: "The Origin of Matter in the Universe," Dr. Michael Turner, University of Chicago.

**Monday**  
May 4, 4:30 p.m. Clark Hall Bethe Seminar Room. Physics Department: "Physics of Magnetic Fusion," M.N. Rosenbluth, University of Texas.

**Tuesday**  
May 5, 4:30 p.m. 105 Space Sciences. Astronomy and Space Sciences Special Colloquium: "The Morphology and Evolution of Ganymede," Steve Squyres; Cornell.

**Thursday**  
May 14, 4:30 p.m. Phillips 219. School of Electrical Engineering and National Research and Resource Facility for Submicron Structures: "Telecommunication Research and Development in France," Dr. Maurice Bernard, Director of the Centre National d'Etudes des Telecommunications in France (CNET).

## Dance

**Every Thurs., 8-11 p.m.** Anabel Taylor One World Room. Israeli Folk Dancing.

**Every Sun., 7:30 p.m.** Straight North Room. International Folkdancing. Intermediate and advanced dances taught 7:30-8:30 p.m. Request dancing 8:30-10:45 p.m. Free.

**Every Tues., 7:30-10:30 p.m.** Martha Van Rensselaer Auditorium. Couples dancing, Scottish, English and International teaching and requests. Free. Singles welcome.

**Every Wed., 7:30 p.m.** Straight Memorial Room. International folkdancing. Beginners taught 7:30-8:30 p.m. Request dancing 8:30-10:45 p.m.

**Every Mon., 5:15 p.m.** Anabel Taylor 2nd floor auditorium. Appalachian Dancers. All interested in clogging welcome.

**Monday**  
May 4, 8-11 p.m. \*Martha Van



**Pianist Alfred Brendel will perform works by Haydn, Beethoven, Schubert and Liszt at 8:15 p.m. Monday, May 4, in Bailey Hall. Brendel's appearance is the final concert of the 1980-81 Bailey Hall Concert Series. Tickets are on sale at the Lincoln Hall Ticket Office (256-5144).**

Rensselaer Auditorium. Cornell Country Dance Club Contra Dance with live music. All welcome.

## Exhibits

**The Upstairs Gallery** Kenneth Evett: Watercolors of Italy, France, Maine and Arizona. DeWitt Office Complex, 215 Cayuga Street. Hours: Tues.-Fri., 11 a.m.-4:30 p.m.; Sat. 11 a.m.-1:30 p.m. Through May 31.

**Herbert F. Johnson Museum of Art** "Painting Up Front." Organized by Thomas W. Leavitt, the exhibit features work of ten New York City artists currently creating paintings with distinctive abstract shapes, through May 24; "Rene Magritte: Sixteen Photographs," through May 17; "Video Festival" 7th annual exhibit organized by the Ithaca Video Project, through May 3. "A Masterpiece Close-up: The Transfiguration by Raphael." May 1 through June 15, a unique photographic exhibit, consists of an almost full-size color reproduction of Raphael's work in the Vatican. Education Department: "Eye Openers: Images & Origins." May 2, 10:30-12 noon, families participate together in activities that will explore the exhibit "Painting up Front." May 9, 10:30 a.m.-12 noon, families travel through a world of landscape paintings. "Sundays Afternoons at the Johnson Museum," 1-3 p.m. May 3, Jill Aszling, Registrar, talks about "Peculiarities of Fine Arts Insurance." Workshop activity - design a gallery installation. May 10, 1-3 p.m. Jill Chambers-Hartz, Exhibitions Coordinator, explains the "How To's of Exhibition Organization." Workshop activity - composition in Contemporary Art. Gallery Events: Sun., May 3, 3-4 p.m. Gallery talk by Thomas W. Leavitt "Introduction to 'Painting Up Front.'" May 10, 3-4 p.m. Vas Prabh and Inez Wolins demonstrate "The Power of Color." Museum Hours 10 a.m.-5 p.m., Tues. through Sunday.

## Films

Unless otherwise noted films are under sponsorship of Cornell Cinema.

**Thursday**  
Apr. 30, 8 p.m. Anabel Taylor Auditorium. "Triumph of the Will" (1934), directed by Leni Reifenstahl. Free and open.

Apr. 30, 8 p.m. Uris Hall Auditorium. "Battle of Chile" Parts 1 & 2. This is a powerful portrait of the passions of a people divided and a nation on the brink of civil war. Sponsored by CUSLAR and Latin American Studies. Free and open.

**Friday**  
May 1, 7:30 p.m. Uris Hall Auditorium. Pentangle II Free Film Series: "Winifred Wagner" (1975), Hans Jurgen Syberberg, Germany. No short. May 1, 9:45 p.m. \*Uris Hall

Auditorium. "No Nukes" (1980), directed by Schlossberg, Goldberg, Potenza, with Bruce Springsteen, Jackson Browne, The Dooby Brothers, John Hall, Carly Simon, James Taylor, Bonnie Raitt, Crosby, Stills and Nash, etc. Co-sponsored by Student Coalition Against Nukes and Ecology Action of Tompkins County.

**Friday and Saturday**  
May 1 & 2, midnight \*Uris Hall Auditorium. "What's Up, Tiger Lily?" Directed by Woody Allen, with voices of Woody Allen, Louise Lasser, Japanese Cast.

**Saturday**  
May 2, 7:30 & 9:45 p.m. \*Uris Hall Auditorium. "No Nukes."  
May 2, 8 p.m. Anabel Taylor Auditorium. "Swastika" (1973), directed by Philippe Mora, documentary. Free and open.

**Sunday**  
May 3, 2:30 p.m. \*Statler Auditorium. "Our Hitler" (1977), directed by Hans Jurgen Syberberg.  
May 3, 7 & 9:30 p.m. \*Uris Hall Auditorium. "The Paper Chase" (1973), directed by James Bridges, with Timothy Bottoms, Lindsay Wagner, John Houseman. Co-sponsored by The Legal Fraternity, Phi Alpha Delta.

**Monday**  
May 4, 9 p.m. \*Uris Hall Auditorium. "La Chinoise" (1967), directed by Jean-Luc Godard, with Anne Wiazemsky, Jean-Pierre Leaud, Juliette Berto. With short: "The Red Nightmare." Film Club members only.

**Tuesday**  
May 5, 4 p.m. Morrill 106. Southeast Asia Film Series: "Wayang Kulit: Javanese Shadow Puppet Theatre." "Bali: Mask of Ranga" shows Balinese ceremonies involving trance states.

May 5, 8 p.m. \*Uris Hall Auditorium. "Green Fields" (1937), directed by Edgar G. Ulman, Jacob Ben-Ami, with Michael Goldstein, Herschel Bernardi. Co-sponsored by Department of Near Eastern Studies.

**Wednesday**  
May 6, 5:30 & 8 p.m. \*Uris Hall Auditorium. "Cabaret" (1972), directed by Bob Fosse, with Liza Minnelli, Michael York, Joel Gray.

**Thursday**  
May 7, 8 p.m. Uris Hall Auditorium. "Battle of Chile" directed by Patricio Guzman, Chile/Cuba. Spanish with English subtitles. CUSLAR and Latin American Studies.

**Friday**  
May 8, 7:30 p.m. Uris Hall Auditorium. Pentangle II Free Film Series: Cornell Filmmakers: Program of New Student Films.

May 8, 9:45 & 11:45 p.m. \*Uris Hall Auditorium. "Harold and Maude" (1971), directed by Hal Ashby, with Bud Cort, Ruth Gordon, music by Cat Stevens.

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**Friday and Saturday**  
May 8 & 9, 7:30 p.m. \*Statler Auditorium. "The Tin Drum" (1979), directed by Volker Schlöndorff, with David Bennent, Mario Adorf, Angela Winkler, Charles Aznavour.

May 8 & 9, 10 p.m. \*Statler Auditorium. "The Hound of the Baskervilles" (1980), directed by Paul Morrissey, with Peter Cook, Dudley Moore, Terry-Thomas.

**Saturday**  
May 9, 7:30 & 9:45 p.m. \*Uris Hall Auditorium. "Harold and Maude."

**Sunday**  
May 10, 7 p.m. \*Uris Hall Auditorium. "The Memory Of Justice" (1976), directed by Marcel Ophuls, documentary. Free.

**Monday**  
May 11, 9 p.m. \*Uris Hall Auditorium. "L'atolante" (1934), directed by Jean Vigo, and "Ecstasy" (1933), directed by Gustav Machaty, with Hedy Lamarr. Film Club members only.

**Tuesday**  
May 12, 8 p.m. \*Uris Hall Auditorium. "Aida" (1953), directed by Clemente Fracassi, with Sophia Loren, Ebi Stignani, Renata Tebaldi, Giuseppe Campora, Gino Bechi. Co-sponsored with Department of Music.

**Wednesday**  
May 13, 8 p.m. \*Uris Hall Auditorium. "The Garden of the Finzi-Continis" (1971), directed by Vittorio De Sica, with Dominique Sanda, Lino Capolicchio, Helmut Berger.

**Thursday**  
May 14, 8 p.m. \*Uris Hall Auditorium. "A Midsummer Night's Dream" (1968), directed by Peter Hall, with Diana Rigg, David Warner.

## Lectures

**Thursday**  
Apr. 30, 12:20 p.m. 102 West Avenue. Southeast Asia Program Thursday Luncheon Seminar: "People's Participation and the Development of Indonesia," Ismid Hadad, graduate student at Woodrow Wilson School of International and Public Policy, Princeton University.

Apr. 30, 7:30 p.m. Stimson Hall G-1. Jordani: Natural History Society: "Why Some Plants are Poisonous to Vertebrates," Dr. John M. Kingsbury.

Apr. 30, 8 p.m. Morrill 106. Cornell Linguistics Circle: "Changes in the Russian Language during the Soviet Period and Their Cultural Roots," Boris Gasparov, Columbia University Russian Institute.

Apr. 30, 8 p.m. Bradfield 101. 8th Dimock Lecture, Dr. George C. Papavizas. Sponsored by the Department of Plant Pathology.

**Friday**  
May 1, 12:20 p.m. Morrill 208 (CLC Lounge). Cornell Linguistics Circle: "The Semiotic Study of Oral Tests," Boris Gasparov.

May 1, 4:30 p.m. Goldwin Smith 242. "Political Theatre in the U.S.," Denny Partridge, director of the Modern Times Theatre. Sponsored by SOLSA, CUSLAR, Iranian Student Association, IAG, CAA, SFC.

May 1, 8 p.m. Morrill 106. Cornell Linguistics Circle: "The Abuse of Eiconicity," Robert Austerlitz, Columbia Univ.

**Monday**  
May 4, 4:30 p.m. McGraw 165. "The Masks of Memory: Hitler in the Post War World," John Weiss, History Department. Cornell Cinema, Western Societies Program and the History Department, co-sponsors.

May 4, 4:30 p.m. Lincoln 116. Lecture with musical examples: "Musical Readings of Some Fifteenth-Century French Poems," Dr. Don Randel, Music Department, Cornell University. Renaissance Colloquium, sponsor.

May 4, 7:30 p.m. Goldwin Smith Hollis E. Cornell Auditorium. "Our Hitler: A Film: From German," Discussion led by Robert Whalen, History Department.

May 4, 7:30 p.m. Anabel Taylor Auditorium. "Sexual Abuse of Chil-



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dren," Florence Rush, author and psychiatric social worker. Sponsored by Community Against Rape, Women's Law Coalition, Women's Studies, Smedley's Bookshop, Tompkins County NOW.

**May 4, 7:30 p.m.** Anabel Taylor One World Room. "Beyond Tomorrow: Ways Toward World Community." A discussion of a forthcoming book and the Center for World Community at Cornell.

#### Wednesday

**May 6, 4:30 p.m.** McGraw 165. "French Cinema During the Nazi Occupation, 1940-44: Images of Accommodation," Elizabeth Strebel, Cinema Department, SUNY Binghamton. Cornell Cinema, Western Societies Program and History Department, co-sponsors.

**May 6, 7:30 p.m.** Anabel Taylor One World Room. America and World Community, an interdisciplinary course: "Beyond Tomorrow: Ways Toward World Community," a discussion of a forthcoming book and the Center for World Community at Cornell.

**May 6, 7:30 p.m.** Uris Hall 202. "The Issue of Equal Pay for Work of Comparable Value: A Roundtable Discussion," sponsored by the Women's Studies Public Events Committee.

#### Thursday

**May 7, 4:30 p.m.** McGraw 165. "The Holocaust in France: Assessing Responsibility," Michael Marrus, History Department, University of Toronto. Co-sponsored by the Western Societies Program and the History Department.

**May 7, 4:30 p.m.** Goldwin Smith 156. "Paul Hindemith's Songs of the 1930's as Documents of Inner Emigration," Professor Donald O. White, Department of German, Amherst College. Sponsored by Department of German Literature.

**May 7, 4:30 p.m.** Morrill 111. "Lexical Change in Chinese Since 1949," Binghong Lu, Peking Language Institute, Peking, China.

**May 7, 7:30 p.m.** Stimson G-1. Jordani: Natural History Society: "Equine Ethology: Behavior in Your Own Back Pasture," Dr. Katherine A. Houpt.

**May 7, 8 p.m.** Morrill 106. "Conversations Analyses," Sanda Golopentia Eretescu. Cornell Linguistics Circle.

#### Friday

**May 8, 12:20 p.m.** Morrill 208 (CLC Lounge). "Cubist Speech in Buddhism," Allan Grapard, Asian Religions, Cornell University. Cornell Linguistics Circle.

#### Monday

**May 11, 7:30 p.m.** Anabel Taylor One World Room. America and World Community: an interdisciplinary course: "Beyond Tomorrow: Ways Toward World Community," a discussion of a forthcoming book and the Center for World Community at Cornell.

**May 11, 7:30 p.m.** Goldwin Smith Hollis Cornell Auditorium. "The Memory of Justice." Discussion led by Russell Osgood, Law School. Co-sponsored by the Western Societies Program and the History Department.

## Music

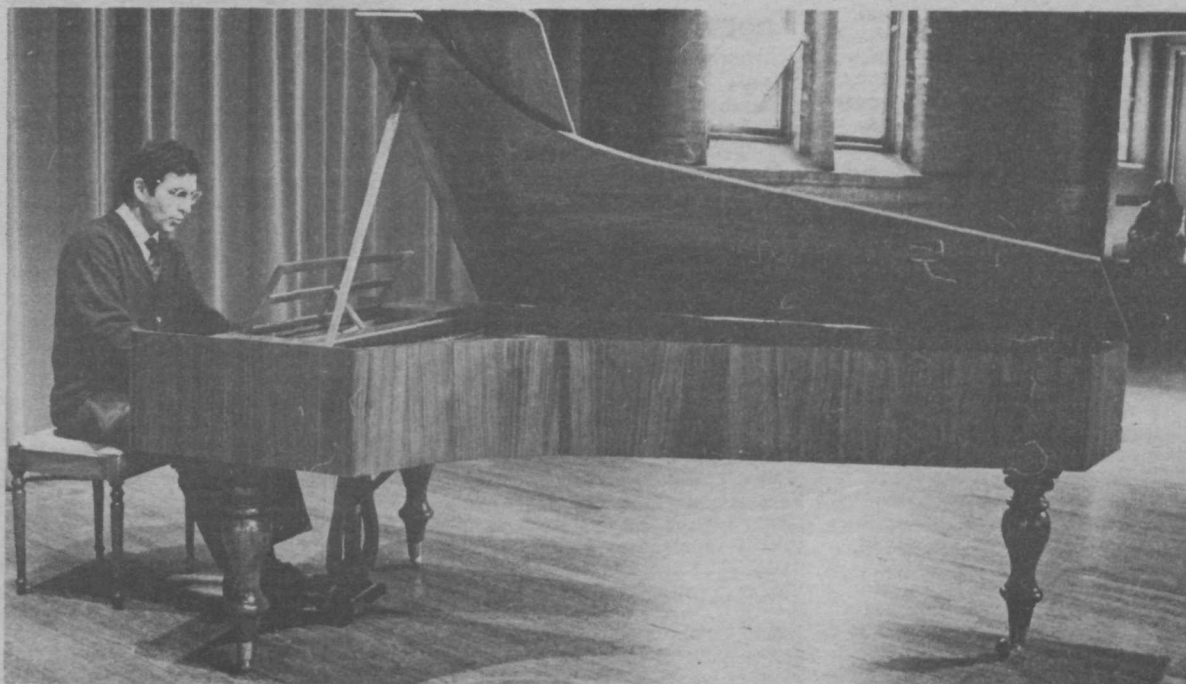
### Nothing But Treble

Nothing But Treble, the university's select women's singing group, will present a Spring concert at 7 p.m. Saturday, May 2, in Willard Straight Hall.

Motets and madrigals by Palestrina, Gibbons and other Renaissance composers will be included in the program, along with folk song settings by Vaughan Williams, Broadway arrangements, spirituals, barbershop and popular tunes.

Nothing But Treble, popularly known as NBT, was formed in 1976 as a madrigal group. Currently directed by Jeffrey Rehbach, NBT now consists of 15 undergraduate women who also sing with the Cornell Chorus, Chamber Singers or Sage Chapel Choir.

NBT performs frequently at Cornell for fraternity and sorority functions, faculty and trustee dinners, and alumni reunions, and also presents full-length concerts. During the past year, NBT has appeared with Cayuga's Waiters at Spring Fever and with the Hangovers at Fall Tonic in Statler Hall.



**Professor of Music Malcolm Bilson will present a special concert at 8:15 p.m. Friday, May 1, in Barnes Hall to inaugurate the University's recently acquired Graf piano. Acquisition of the Graf replica has been made possible by generous gifts from Charles Snitow, '28, and the national Cornell Friends of Music, Otto Doering, '62, chairman. Thomas McCobb of Oregon constructed the Graf. The concert is free and open to the public.**

On tour NBT has performed at the Old South Church and Quincy Market in Boston, the National Cathedral in Washington, D.C., Walt Disney World in Florida, and Cornell alumni functions throughout the East.

### Symphony Orchestra Concert

The Cornell University Symphony Orchestra will play its 1981 spring concert in Bailey Hall at 8:15 p.m., Saturday, May 2. It is open to the public without charge.

Conductor Edward Murray will open the program with a piece appropriate for the season, "On Hearing the First Cuckoo in Spring" by English impressionistic composer Edward Delius. Mark Taggart will be alto saxophone soloist in Ballade by Frank Martin, outstanding Swiss composer of the 20th century. Taggart is a graduate assistant in the music department, where he is studying for a doctorate in composition. He has appeared as soloist with the Cornell Wind Ensemble and performed in department recitals and chamber music concerts. Ballade was originally written for noted saxophonist Sigurd Rascher.

The Cornell Symphony will perform Symphony No. 4 by Danish composer Carl Nielsen. In expression of his philosophy that music and life are inextricable, he subtitled the Fourth Symphony "The Inextinguishable." It is extremely dramatic in character, and the final movement features a musical "battle" between two timpanists stationed at opposite sides of the orchestra.

### Several Concerts in May

A variety of concerts will be presented under the auspices of the music department during the early part of May.

On Tuesday, May 5, in Barnes Hall, the university's recently formed 18th Century Orchestra will take part in a concert of chamber music. The public is invited to attend the 8:15 p.m. event.

The orchestra, under the direction of Sonya Monosoff, plays on instruments of the period, originals or restored to their 18th century proportions, and uses 18th-century performance techniques. They will play Haydn's Symphony No. 91 in E flat Major. The program includes the Quintet in C Major, Opus 11, No. 1 by J.C. Bach and Quintet in C Major, D. 957 by Schubert, performed by chamber music students coached by Monosoff.

Other chamber music groups will play in Barnes Hall at 8:15 p.m. Thursday, May 7. That recital will consist of Variations on Trockne Blumen from Schubert's "Die Schone Mullerin," D. 802 for flute and piano; Sonata No. 1, Opus 25 for viola solo by Hindemith; and

Trio in B flat Major, Opus 8 for piano, violin and cello by Brahms. Performers are Elizabeth Rosdeitcher, flute; Jeffrey Eldredge, piano; Desiree Elsevier, viola; Kathryn Emerson, piano; Michael Marder, violin; Robert Kalish, cello.

A concert which should appeal to the entire family, according to director Martin Hatch, is the outdoor performance by the Cornell Gamelan at 3 p.m. Saturday, May 9. The ensemble will perform on the Arts Quadrangle, between Lincoln and Goldwin Smith Halls. Their program will consist of selections drawn from gamelan repertory known as "sorani" and "bonangan," which are designed to feature instrumental techniques of bronze bars, gongs and kettles. The pieces are especially for outdoor performance and for parts of indoor festivities requiring loud, vigorous accompaniment. If weather is inclement, the event will be in Barnes Hall at 8:15 Saturday night.

On Monday, May 11, Marice Stith will lead the combined Cornell bands in concert in the Memorial Room of Willard Straight Hall. Their program, known as a "Straight Break" concert, will give students an opportunity to relax briefly from their studies.

Another outdoor concert has been scheduled on the steps of Goldwin Smith Hall for Wednesday, May 13, at 5:30 p.m. by the Cornell Chorus. Peter Labornbarde is acting director, Michael Salmirs accompanist. The women's ensemble will sing madrigals, folksongs and favorite Cornell songs. In the event of rain, they will try again Thursday, May 14 - same time, same place.

#### Thursday

**Apr. 30, 8:15 p.m.** Barnes Hall. Sonya Monosoff, violin, and Peter Wolf, harpsichord. Works of Biber, J.S. Bach.

#### Friday

**May 1, 8:15 p.m.** Barnes Hall. Malcolm Bilson, piano. Works of Schubert, Beethoven, Schumann (Inaugural recital, 1826 Graf replica).

## Meetings

**Every Thurs., 7:30 p.m.** Anabel Taylor One World Room. Disarmament Study/Study Group breakfast. For more information contact Jack Lewis or Phil Bogdonoff, 256-4214. All welcome.

**Every Thurs., 12:30 p.m.** Anabel Taylor Forum. Alcoholics Anonymous.

**Every Thurs., 7:30 p.m.** Stimson G-1, Jordani: Natural History Society. All welcome.

**Every Fri., 7:30 p.m.** Goldwin Smith 162. Chess Club. All welcome.

**Every Fri. & Sat., 6:30 p.m.** Upson

Hall 111. Cornell Dungeons & Dragons Club.

**Every Sat., 12 noon-5 p.m.** Straight Loft 2. Cornell Wargamers meeting. All welcome.

**Every Mon., 4:30 p.m.** Anabel Taylor G-17. Committee on U.S. Latin American Relations.

**Every Tues., 7:30 p.m.** Anabel Taylor 314. Anthroposcopy Study Group of CRESPI will consider the topic: "Thinking Redeemed: Rudolf Steiner's 'Philosophy of Spiritual Activity.'" Everyone is welcome. For information call 272-3170 or see the secretary in Anabel Taylor Hall.

**Every Wed., 9 p.m.** Hebrew Club - Hug Ivri. All welcome. For information, call Michael 277-1268 evenings.

**Every Thurs., 4:30 p.m.** Straight 208. Community Against Rape.

#### Tuesday

**May 5, 4 p.m.** Straight Loft 3. Cornell Pro-Life Student Organization.

#### Wednesday

**May 13, 4:30 p.m.** Ives 110. Faculty Council of Representatives.

#### Wednesday

**May 20, 4:30 p.m.** Ives 110. University Faculty.

## Religion

**Mon. through Fri., 12:15 p.m.** Anabel Taylor G-19. Catholic Mass.

**Every Fri., 1 p.m.** Anabel Taylor Edwards Room. JUMA Prayers organized by the Muslim Educational and Cultural Assoc. of Cornell.

**Every Fri., 6 p.m.** Anabel Taylor Founders Room. Shabbat Services (Conservative).

**Every Fri., 6 p.m.** Anabel Taylor Chapel. Shabbat Services (Reform).

**Every Sat., 9:15 a.m.** Anabel Taylor Edwards Room. Shabbat Services (Orthodox).

**Every Sat., 10 a.m.** Anabel Taylor Edwards Room. Shabbat Services (Conservative).

**Every Sat., 5:15 p.m.** Anabel Taylor Auditorium. Catholic Eucharist.

**Every Sun., 9:30 a.m.** Anabel Taylor Chapel. Episcopal Eucharist Worship Service. Nursery and Church School provided. Faculty and students welcome. Coffee hour after.

**Every Sun., 9:30 & 11 a.m.** Anabel Taylor Auditorium. Catholic Eucharist.

**Every Sun., 9:45 a.m.** Anabel Taylor Edwards Room. Ithaca Society of Friends (Quakers) adult discussion followed by meeting for worship at 11 a.m.

**Every Sun., 10 a.m.** Straight North Room. Korean Church at Cornell.

**Every Sun., 10:30 a.m.** Straight Lofts 2 & 3. University Church of Christ. Worship Service and Bible study. Students and faculty welcome. Call 272-6242 for information. James E. Johnson, Jr., evangelist.

**Every Sun., 11:15 a.m.** Anabel Taylor Chapel. Protestant Church at Cornell. Coffee and conversation after.

**Every Sun., 5 p.m.** Anabel Taylor Auditorium. Catholic Eucharist.

#### Sunday

**May 3, 11 a.m.** Sage Chapel Inter-religious Service. David Drinkwater, Dean of Students, Cornell.

#### Sunday

**May 10, 11 a.m.** Sage Chapel Convocation. New Director of Cornell United Religious Works (to be announced).

#### Sunday

**May 17, 11 a.m.** Sage Chapel Inter-religious Service. Richard Murphy, University Catholic Chaplain.

## Religious Meetings

#### Saturday

**May 2, 4:30 p.m.** Straight North Room. Messianic Judaism at Cornell. For more information call Scott at 257-0521.

## Seminars

**Applied and Engineering Physics:** "Why is the Spectrum Colored?" Edwin H. Land, Polaroid Corp., 4:30 p.m. Monday, May 11, Rockefeller A.

**Biochemistry:** "Genetics of Protein Secretion in E. coli," Jonathan Beckwith, Harvard Medical School, 4:30 p.m. Friday, May 1, 204 Stocking Hall.

**Biochemistry:** "Control of Xenopus 5S ribosomal RNA Genes," Donald D. Brown, Carnegie Institute of Washington, 4:30 p.m. Friday, May 8, 204 Stocking Hall.

**Biological Sciences:** "The Effect of Exogenous Methionine on Protein Composition of Soybean Cotyledons grown in vitro," Lorraine Holowach, 11:15 a.m. Friday, May 8, 404 Plant Science.

**Boyce Thompson Institute:** "Structure of a Bacterial Photosynthetic Membrane," Ken Miller, Brown University, 3:15 p.m. Wednesday, May 13, BTI Auditorium.

**Campus Life:** "Cornell: The Albany-Washington Connection," J. Robert Barlow, 9 a.m. Thursday, May 7, 135 Emerson Hall.

**Center for Applied Mathematics:** "Finite Field Transform Approach to Algebraic Codes," Richard E. Blahut, IBM Fellow and courtesy professor of E.E. at Cornell, 4:30 p.m. Friday, May 1, 275 Olin Hall.

**Center for the Study of American Political Economy (CAPE):** "Oligopoly Theory and Policy Under Perfect Freedom on Entry," William Baumol, Princeton and NYU, 4 p.m. Thursday, April 30, 498 Uris Hall.

**Chemical Engineering:** "Applied Thermodynamics: From Pollution to Synthetic Fuels," Costa Tsonopoulos, Exxon Research and Engineering, 4:15 p.m. Monday, May 4, 145(A) Olin Hall.

**Chemical Engineering:** "Modeling the Topochemical Reduction of Hematin in Carbon Monoxide and Hydrogen Mixtures," Albert Sacco, Worcester Polytechnic Institute, 4:15 p.m. Monday, May 11, 145(A) Olin Hall.

**Computer Services:** "Compiling a Dictionary of Music," Don Randel, 3:30 p.m. Friday, May 1, G-14 Uris Hall.

**Computer Services:** "Data Communication Networks at Cornell," R. Cogger, 3:30 p.m. Friday, May 8, G-14 Uris Hall.

**Computer Services:** "Software Problems in Implementing Local Networks," Fred Schneider, 4 p.m. Wednesday, May 6, G-14 Uris Hall.

**Comparative Literature:** "Quattrocento Writings on the Arts," Michael Fitzgerald, NEH Fellow, 4:30 p.m. Thursday, April 30, 181 Goldwin Smith Hall.

**Cornell Plantations:** "The Public and Plant Collections Policy," Jane G. Pepper Pennsylvania Horticultural Society, 12:15 p.m. Wednesday, May 6, 404 Plant Science Building.

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# Calendar

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**Ecology & Systematics:** "Some Considerations of Nutrient and Trace Element Dynamics in Two Great Plains Gallery Forests," Keith T. Killingbeck, University of Rhode Island, 1 p.m. Wednesday, May 6, Rosenblatt Room, Langmuir Lab.

**Ecology & Systematics:** "Population Patterns through Twenty Years of Old-field Succession: Processes and Implications," Stewart T.A. Pickett, Rutgers, 4:30 p.m. Wednesday, May 6, Penthouse, Langmuir Lab.

**Education:** "Patterns of Absence, and Gains in Pupil Achievement," M. Ariffin Ibrahim, 4 p.m. Monday, May 4, Stone Hall Lounge.

**Electrical Engineering:** "Very High Speed Integrated Circuits (VHSICs) and System Applications," Larry Sumney, The Pentagon, 4:30 p.m. Tuesday, May 5, 219 Phillips Hall.

**Electrical Engineering:** "III. Optical Sources and Detectors," James Goley, Bell Laboratories, 4:30 p.m. Tuesday, May 12, 219 Phillips Hall.

**Food Science:** "Tofu in a World of Cheese," Kirk S. Kealey, 4:30 p.m. Tuesday, May 5, 204 Stocking Hall.

**General Chemistry:** "Measuring Drug-Induced Chemical Changes in Neurons," R. Mark Wightman, Indiana University, 4:40 p.m. Thursday, April 30, 119 Baker Laboratory.

**General Chemistry:** "Multi-Sulfur Molybdenum Sites in Enzymes and Coordination Compounds," Edward I. Stiefel, Exxon Research and Engineering, 4:40 p.m. Thursday, May 7, 119 Baker Laboratory.

**Genetics and Development:** "DNA Structure, Ecological Differentiation, and Reproductive Isolation," G. Ledyard Stebbins, University of California at Davis, 4:30 p.m. Thursday, April 30, 135 Emerson Hall.

**Geological Sciences:** "The Role of Surficial Geology in Defining Late Cenozoic Tectonic Environments," Bob Gienack, University of Pennsylvania, 4:30 p.m. Tuesday, May 12, 205 Thurston.

**Integrative Neurobiology and Behavior Training Grant, College of Agriculture and Life Sciences and the Section of Neurobiology and Behavior:** "Perspectives on Biological Clocks," Colin Pittendrigh, Stanford University, 4:30 p.m. Thursday, April 30, James Law Auditorium. Dr. Pittendrigh will also speak on "Pacemaker and Slave Oscillations in a Circadian System," at 12:15 p.m. Friday, May 1, 700 Clark Hall.

**Materials Science and Engineering:** "Glass Formation and Kinetic Phenomena," D.N. Uhlmann, MIT, 4:30 p.m. Thursday, April 30, 140 Bard Hall.

**Materials Science and Engineering:** "Structure of High Modulus Fibers of PPT," M. Panar, DuPont Research Labs, 4:30 p.m. Thursday, May 7, 140 Bard Hall.

**Materials Science and Engineering:** "Environmental Effects on the Strength of SIC," R. Tressler, Penn State, 4:30 p.m. Thursday, May 14, 140 Bard Hall.

**Mechanical and Aerospace Engineering:** "Turbulence and Refractive Effects on High Energy Laser Beams," George W. Sutton, AVCO-Everett Research Laboratory, 4:30 p.m. Thursday, April 30, 282 Grumman.

**Microbiology:** "Cellulose to Ethanol; Hop, Skip and a Jump," Douglas Eveleigh, Rutgers University, 4:30 p.m. Thursday, April 30, 124 Stocking Hall.

**Microbiology:** "Nutritional Studies of Moraxella non-liquefaciens; Development of General Method for Determining Growth Factor Requirements of Heterotrophic Bacteria," Elliot Juni, University of Michigan, 4:30 p.m. Thursday, May 7, 124 Stocking.

**Natural Resources:** "Evaluation of Program Alternatives in Fishery Management," Douglas Heimbuch, 4 p.m. Thursday, April 30, 304 Fernow Hall.

**Neurobiology & Behavior:** "Hormones: Internal Chemicals that Regulate Behavior," James W. Truman, University of Washington, 12:30 p.m. Monday, May 4, Hollis E. Cornell Auditorium. Dr. Truman will also speak on "Neural and Hormonal Factors Regulating the Metamorphosis and Behavior in Moths," at 12:30 p.m. Tuesday, May 5, Penthouse, Langmuir Lab.

**Neurobiology & Behavior:** "Sexual Differentiation," Cheryl Harding, National Science Foundation, 12:30 p.m. Monday, May 11, Hollis E. Cornell Auditorium. Dr. Harding will also speak on "Hormonal Activation of Male Social Behavior in the Zebra Finch," at 12:30 p.m. Tuesday, May 12, Penthouse, Langmuir Lab.

**Nutrition and Cancer:** "Nutrition, Immunity, and Autoimmune Disorders," Gabriel Fernandes, Sloan-Kettering, 12:15 p.m. Monday, May 4, N207 Martha Van Rensselaer.

**Nutrition and Cancer:** "Developmental Aspects of Chemical Carcinogenesis," Daniel Nebert, NICHD/NIH, 12:15 p.m. Monday, May 11, N207 Martha Van Rensselaer.

**Organic/Organometallic Chemistry:** Title to be announced. Professor R. Brubbs, Cal Tech, 8:15 p.m. Monday, May 4, 119 Baker Laboratory.

**Organizational Behavior:** "Current Research and Manpower Concerns at ARCO," Robert Miller, ARCO Oil & Gas, 12:15 p.m. Monday, May 11, 305 ILR Conference Center. Dr. Miller will also speak on "The Current Significance of Elliot Jaques: Theories on Conceptualizing Organizational Behavior Problems at ARCO," 3 p.m. Monday, May 11, 305 ILR Conference Center.

**Pharmacology:** "Comparative Aspects of Gentamicin Pharmacokinetics and Nephrotoxicity," Jim Edmond Riviere, Purdue University School of Veterinary Medicine, 4:30 p.m. Wednesday, May 6, G-3 Vet. Research Tower.

**Physiology:** "Neural Transmitter Modulation of Voltage-sensitive Calcium Channels," Kathy Dunlap, Tufts University, 4:30 p.m. Tuesday, May 5, G-3 Vet. Res. Tower.

**Physiology:** "Temperature Regulation During Sleep and Hibernation," Gregory Florant, Swarthmore College, 4:30 p.m. Tuesday, May 12, G-3 Vet. Res. Tower.

**Plant Breeding:** "Sexuality, Apomixis in Plants, and the Origin of Sex," G. Ledyard Stebbins, University of California at Davis, 12:20 p.m. Thursday, April 30, 135 Emerson.

**Plant Pathology:** "Web Blight of Beans in the Tropics," J.J. Calindo, 4:30 p.m. Tuesday, May 5, 404 Plant Science Bldg.

**Plant Pathology:** "Influence of Plant Resistance and Chemical Treatment on Poulution Development of Root Knot Nematodes (Meloidogyne sp.)," by C. Bonsi, and "Applications of Latex Agglutination in the Detection of Potato Viruses," D. Gallenberg, 4:30 p.m. Tuesday, May 12, 404 Plant Science Building.

**Plant Pathology:** "Role of Plant Viruses in the Development of Molecular Biology," Heinz Fraenkel-Conrat, University of California at Berkeley, 1:30 p.m. Thursday, April 30, 404 Plant Science.

**Reproductive Physiology-Endocrinology:** "Analysis of Bull Sperm Motility Using Quasi-Elastic Light Scattering," Tom Craig, 4:30 p.m. Wednesday, May 6, 348 Morris Hall.

**Reproductive Physiology-Endocrinology:** "Uterine Steroid Receptor Changes During Late Pregnancy Associated with Progesterone Withdrawal in the Rabbit," 4:30 p.m. Wednesday, May 13, 348 Morrison Hall.

**Rural Sociology:** "Economic Development Assessment in Northern New York," David W. Gross, regional extension specialist, 12:15 p.m. Friday, May 1, 32 Warren Hall.

**Statistics:** "An Alternative to the Usual T-Test," Lawrence D. Brown, 3:15 p.m. Wednesday, May 6, 105 ILR Conference Center.

**Theoretical and Applied Mechanics:** "Numerical Modelling of Crack Propagation Problems," Anthony Ingrassia, 4:30 p.m. Wednesday, May 6, 205 Thurston Hall.

**Vegetable Crops:** "Chilling Injury in Tomatoes," Matrid King, 4:30 p.m. Thursday, April 30, 404 Plant Science Bldg.

**Veterinary Microbiology 710/Antibody Club:** "Conjugation and Other Kinds of Gene Transfer in Pneumococci," Walter Guild, Duke University, 4:30 p.m. Thursday, May 14, Seminar Room, Boyce Thompson Institute.

## Sports

Friday

May 1, 4 p.m. Hoy Field. Men's Varsity Baseball-Navy.

May 1, 4 p.m. Cascadilla Courts. Men's Varsity Tennis-Navy.

May 1, 7-9 p.m. Teagle Pool. Water Polo Ivy League Championships at Cornell.

Saturday

May 2, 9 a.m.-12 noon Teagle Pool. Water Polo Ivy League Championships.

May 2, 10 a.m. Schoellkopf. Men's JV Lacrosse-Farmingdale.

May 2, 10 a.m. Flood Control Inlet. Women's Varsity Crew-Dartmouth.

May 2, 12 noon Flood Control Inlet. Men's Lightweight Crew-Dartmouth.

May 2, 1 p.m. Hoy Field. Men's Varsity Baseball-Princeton (2).

May 2, 2 p.m. Schoellkopf. Men's Varsity Lacrosse-Princeton.

May 2, 2 p.m. Cascadilla Courts. Men's Varsity Tennis-Princeton.

May 2, 4-6 p.m. Teagle Pool. Water Polo Ivy League Championships.

Monday

May 4, 4 p.m. Hoy Field. Men's Varsity Baseball-New Paltz.

Friday

May 8, 2 p.m. Cascadilla Courts. Men's Varsity Tennis-Dartmouth.

May 8, 4 p.m. Hoy Field. Men's Varsity Baseball-Dartmouth.

Saturday

May 9, 11 a.m. Cascadilla Courts. Men's Varsity Tennis-Harvard.

May 9, 1 p.m. Hoy Field. Men's Varsity Baseball-Harvard (2).

Monday

May 11, 4 p.m. Hoy Field. Men's Varsity Baseball-Mansfield.

Wednesday

May 13, 4 p.m. Schoellkopf. Men's Varsity Lacrosse-Pennsylvania.

Thurs. through Sun.

May 14-17 Hoy Field & Freeman Field. Men's Varsity Baseball. Cornell-Ithaca Collegiate Tournament.

## Theater

Thurs. through Sat.

Apr. 30, May 1 & 2, 8:15 p.m. \*Lincoln Drummond Studio. Theatre Cornell production: "The Understudy." The premiere of a new play by the Department of Theatre Arts' first playwright-in-Residence, Ronald Tavel, an outstanding young playwright who has received several theatre awards and has an impressive list of works produced.

Friday

May 1, 8:45 p.m. \*Anabel Taylor Auditorium. "The Bread and Roses Play," a love story with music about the Great Lawrence Textile Strike of 1912. Tickets on sale at the desk in Anabel Taylor Hall, Self-reliance Center downtown, and the door the night of the performance. Sponsored by CUSLAR, English Department, C.C.P.A., ILR Student Government, CRES.

Friday and Saturday

May 15 & 16, 8:15 p.m. \*Straight Theatre. Cornell Dance Concert.

Sunday

May 17, 2:30 p.m. \*Straight Theatre. Cornell Dance Concert.

## West Campus Bus To Be Discontinued

The West Campus bus route will be discontinued indefinitely at 10 a.m. Friday, May 15, according to William E. Wendt, director of Transportation Services at Cornell.

In an effort to reduce the Transportation Services budget, the Committee on Transportation Services of the Campus Council recently voted to eliminate the West Campus service due to low ridership and the increasing cost of gasoline, Wendt said.

The West Campus bus provided service between the B Lot and West Avenue from 7:50 a.m. until 9:50 a.m. Monday through Friday during instruction periods. An average of 44 persons per day used the service during the 1980-81 academic year, Wendt said.

# Sponsored Programs

The Office of Sponsored Programs, 123 Day Hall, 6-5014, wishes to emphasize that the information in this column is intended for post-doctoral research unless otherwise indicated

## POSTDOCTORAL RESEARCH GRANTS AVAILABLE FROM NOAA

Institutions of higher education are eligible to apply for six postdoctoral research grants in the areas of atmospheric, oceanic and fisheries sciences. Investigators must have received their Ph.D.s since January 1, 1979, or will have received them before the June 19, 1981, closing date for the receipt of proposals. Participants will receive up to \$40,000 per year and will be in residence at a suitable National Oceanic and Atmospheric Administration facility for up to one month each year of the grant.

Proposals must be sent to NOAA, Office of University Affairs, Room 5808, Main Commerce Building, Washington, D.C. 20230. For more information, call Dr. Earl Droessler at (202) 377-5020.

## DEPARTMENT OF EDUCATION

Office of Postsecondary Education - Cooperative Education Program. Applications are invited for new administration demonstration, research, and training grants under the Cooperative Education Program. Application deadline is May 22, 1981.

The Cooperative Education Program regulations contain five separate parts. Information and guidelines are available for examination in the Office of Sponsored Programs.

sored Programs.

The program does not fund internship programs, practicums, extended day programs, independent study or other types of experiential education programs.

Cooperative Education is an academic program which requires the cooperation of both the employer and the institution to provide the student with a superior education.

Application forms may be obtained by calling the Cooperative Education Branch at area code 202-245-2146.

Applications must be postmarked by May 22, 1981.

Additional information is available in the Office of Sponsored Programs.

## DEADLINES NATIONAL ENDOWMENT FOR THE HUMANITIES

Fellowships for independent study and research - June 1, 1981. Fellowships for college teachers - June 1, 1981.

Summer seminars for College Teachers - July 1, 1981.

Research Materials Program - Publications - May 15, 1981.

Research Resources - June 1, 1981.

Research Translation - July 1, 1981.

## US DEPARTMENT OF HEALTH EDUCATION AND WELFARE - PUBLIC HEALTH SERVICE

June 1, 1981. National Research Service Awards. All NIH renewals and competing applications. Research Career Development Awards.

# Graduate Bulletin

Corrections in course registration for spring semester, 1981, may still be made (with a \$10 late processing fee), through Friday, May 8th. As of Monday, May 11, any add/drop or changes to courses will require a petition in addition to the \$10 late processing fee.

May 21 is the deadline for submission of all materials for a May degree. No exceptions to this deadline will be made.

Check the Fellowship Notebook at your graduate faculty representative's office for information on the awards whose deadlines are listed below.

June 1: Council for International Exchange of Scholars, Fulbright Grants—these awards are intended primarily for postdoctoral candidates interested in pursuing either university teaching or advanced research abroad, although some grants may be available to predoctoral candidates. This deadline applies to proposals for the American Republics, Australia and New Zealand.

June 1: National Safety Council, Howard Pyle Safety Research Internship—internships designed to provide practical experience in applied research within the safety and health field, provide a stipend of \$900 per month for 3-4 months; research is conducted at the NSC in Chicago. A sample application is available at the Fellowship Office.

June 1: National Tax Association 1981 Doctoral Dissertation Awards—\$1000 and publication summary in the National Tax Journal and/or the Annual Conference Proceedings offered. Open to all graduate students at accredited U.S. institutions whose dissertation topic is concerned with the general area of government finance.

June 1: U.S. Department of Labor, National Council on Employment Policy, 1981-82 Dissertation Grant Program—open to doctoral candidates in fields related to policy and program issues in employment and training fields; all degree requirements except dissertation must be completed before the award becomes effective. Grants up to \$10,000 for stipend, dependents' allowance, travel, clerical assistance, computer usage, supplies, etc. are available. Applications must be submitted by the student through his/her school.

June 1: National Research Council Fellowships—provide an annual stipend of \$19,000 plus travel costs to faculty, postdoctoral candidates and advanced

graduate students in natural and social sciences, engineering, and mathematics. Applicants must present evidence of maturity needed to make effective use of the fellowship and must have received their terminal professional degrees less than ten years prior to application.

# Barton Blotter

An act of honor involving a red Buick damaged in the Hollister Hall Parking Lot last Thursday has been washed away.

Whoever struck the rear of the car while it was parked in the lot between 8 a.m. and 4:30 p.m. left a note on the windshield but the rain washed the ink away, according to the Department of Public Safety. Whoever left the note, presumably the person who struck the car, should contact Safety or call "Bob" at 256-5136 or 272-8171.

Safety reports an increasing number of thefts of clothing, watches and other valuables left unguarded outside the Grumman Squash Courts and at various locations around the many athletic facilities in and around Teagle Hall. All belongings should be locked in lockers and in the case of the Grumman Courts taken inside the courts while play is going on, if one does not have access to a locker, according to Safety.

During the period of Monday, April 20, through Sunday, April 26, more than \$2,000 in cash and valuables was stolen on campus. A speaker valued at \$500 was taken from Alice Statler Auditorium. Three mahogany panels costing a total of \$300 were taken from Noyes Center.

Other thefts included bikes, handbags, wallets, jewelry, two ice bags and five fire extinguishers.

An individual has been charged with six petit larcenies and thefts of cash and jewelry from University Hall No. 4 and turned over to the Judicial Administrator.

Two persons charged with shoplifting in the Campus Store, items of \$2 and \$6, were turned over to the Judicial Administrator.



# CESR II Would Have \$30 Million Annual Budget

Continued from Page 1

to an accelerator for elementary particle science.

As many as 400 scientists from the U.S. and other nations would be able to use CESR II in the quest for the truly elementary building blocks of all matter, known as quarks and leptons, and to understand the forces which bind matter together and govern its motion.

Described as a 50 x 50 GeV electron-positron collider, the facility would provide an available energy of 100 GeV (100 billion electron volts), the sum of the energies of the beams of electrons and positrons circulating in opposite directions inside the storage ring. Collisions between electrons and positrons in that energy range could produce evidence of new particles never before seen. A machine designed to operate in that energy range would complement other facilities that are part of the National High Energy Physics Program.

Extensive shielding around the accelerator would prevent radiation from escaping to the outside of the facility, according to Maury Tigner, director of operations at CESR I. "The accelerator is much like a doctor's x-ray machine and as such, does emit radiation when the power is switched on," explained Tigner, a professor of physics at Cornell and one of the planners for the new facility. "As in the case of a medical x-ray, the radiation from the accelerator is absorbed by a shield."

Planners estimate that the research center would have an annual operating budget of about \$30 million. Some 200 new, long-term jobs would be created if the facility is built.

Any formal request for funds for the proposed project would be made only after approval by the Cornell University Board of Trustees, according to Boyce D. McDaniel, director of the Wilson Synchrotron Laboratory.

"At this point," McDaniel said, "we are only testing the waters and seeking responses from the general physics community and the high energy physics community in particular."

If the ring is located in the area near the airport, a site that is in the western portion of the Town of Dryden, it could be built entirely on land now owned by the university. Alternate sites in the same area would involve running parts of the ring through some privately owned land. Cornell Senior Vice President William G. Herbster said it is the university's intention that additional land would not be purchased by Cornell unless necessary.

"We would much rather buy an easement through private properties than to purchase entire properties," Herbster said. "Leaving the properties in private hands also would keep them on the tax rolls. We do expect, though, that if this project happens, the amount of taxable new construction in the private sector as a direct result of CESR II would far exceed the value of any properties taken off the tax rolls."

Following are some questions and answers regarding the proposed CESR II.

**1. Why is the CESR II instrument needed?**

The CESR II instrument is needed to further an understanding of the basic structure of matter.

One of the primary aims of science is to discover the most basic structure of matter and to describe quantitatively the forces which govern its behavior. Accelerators are among the primary instruments by which elementary particle scientists study these forces and structures. An accelerator can be likened to the source of illumination used with a microscope. The fineness of detail that can be seen depends upon the wavelength of the light that is shone on the object being examined; the smaller the wavelength, the smaller the detail that can be discerned. The principle of accelerators is such that very large accelerators are required to produce illumination of very short wavelength.

Even at the finest level that we can now observe, one one-hundred millionth of the diameter of the atom, rich detail is still being revealed. To understand this detail, to push back the present frontiers of our basic knowledge, we'll need illuminating beams of smaller wavelength.

In 1979 the Nobel Prize in Physics was shared by Sheldon Glashow, Steven Weinberg, both Cornell graduates, and by Abdus Salam of Pakistan. These scientists codified a wealth of experimental detail about the submicroscopic world which has been gathered over the years. Their theories make definite predictions about new detail which should be seen when we are able to look into matter with substantially finer resolution. Should these theories prove correct they will provide us with a greatly deepened insight about the basic order of the natural world and into the forces which have molded its evolution. The CESR II instrument was conceived to allow U.S. scientists to test these ideas in the laboratory.

**2. Won't the present electron storage ring do the job?**

The dramatic new phenomena being sought require a resolution about ten times finer than that achievable with the present storage ring.

**3. Why can't the same research be carried out at other instruments in the U.S. or in Europe?**

There are no accelerators now in existence anywhere in the world that are powerful enough to address the questions that can be probed by the CESR II instrument. There are proposals, however, originating in the USSR, Japan, Western Europe and at three other laboratories in the U.S. which, if completed, will allow scientists to probe matter at the same or finer level of detail. CESR II is the only current U.S. proposal which will permit a substantial number of U.S. scientists to use illuminating beams of electrons and positrons to probe basic material structure. Other instruments proposed or under construction at the Brookhaven National Lab and Fermi National Accelerator Laboratory will allow complementary studies using illuminating beams of protons and/or antiprotons. These complementary experiments will help to gain a different view of the same basic phenomena and will be vital for our ultimate understanding of these matters. History has shown that a single approach will not yield the breadth of understanding necessary for further progress.

A proposal for an electron-positron accelerator superficially similar to the CESR II idea has been put forward at the Stanford

Linear Accelerator Center in California. That instrument by its very nature will allow access to only a very few scientists and will be limited in the rate at which it can acquire new data. If successful, the Stanford accelerator has the virtue that its operating principle might lead to considerably more powerful instruments of the future.

The Cornell CESR II would serve as the research tool for up to 400 U.S. elementary particle scientists and would be based on devices utilizing the principal of Microwave Superconductivity. The need for such a high technology was foreseen by Cornell scientists and engineers about ten years ago and has been under development here in Ithaca since then. This would be the first application of this technology to an accelerator for elementary particle science. This technology could have important applications in a wide variety of industrial activities. Laboratories in Europe and Japan have begun active developments in this field.

**4. Why this particular location rather than others in the Ithaca area?**

This location offers the possibility of placement on land entirely or predominantly owned by the university and is entirely compatible with current use of the land for ecological and agricultural research. As the installation would be completely compatible with agricultural or forest management use it could be placed at any flat location which is currently used for these purposes and where such use would be continuing.

**5. Besides the value of information gained from this instrument to theoretical science, what is the practical application of all this research?** The most general result of this type of research is a broadening and deepening of our understanding of the material world. It allows us to understand the complexity we observe in nature in simple terms. This following of our basic curiosity has led to our understanding of all material objects as being composed of the chemical elements whose most basic units are atoms. We've learned that even the cores of the chemical atoms, the nuclei, are not elementary but they in turn have a substructure and are composed of protons and neutrons. We've been able to follow even further and see that the protons and neutrons which provide the mass of all ordinary matter are also composite structures of a complex nature. It is this very substructure that we're now trying to unravel.

Our knowledge about the chemical elements has allowed us to use them to serve in medicine, in agriculture and in chemistry to create new and more useful materials. Our hard won knowledge about atomic structure and the electromagnetic forces that hold atoms together and govern their motion has spawned our electrical and electronics industries and has opened up that most remarkable progress in industrial productivity, medicine and medical instruments, agriculture and energy production that we have seen all around us in recent decades. While this knowledge, augmented with even newer understanding of the structure and forces governing the behavior of nuclei has led us into some problems, it has also given us the opportunity to make new advances in meeting basic human needs for health, food

and energy. Our knowledge about nuclear isotopes and radioactivity has provided new tools for the study of basic chemical and biological processes which have led to new methods of medical diagnosis and treatment and to deepened knowledge about plant growth. Not only has the basic physical knowledge gained by fundamental research had direct application to our everyday lives, but it has led to a deeper understanding of the forces and processes at work in the cosmos, about the birth and death of stars, about the building up of the elements and about the very processes by which our universe developed.

In addition to the new ideas and technological developments that have resulted from these researches, important technology has been developed directly by scientists pursuing elementary particle research with accelerators. Most prominently, the accelerators themselves having been developed originally for particle research, now find wide use in other types of research, in medicine and in industry. In industry accelerators are used to produce penetrating beams of x-rays for the examination of large metal parts such as large castings for hydroelectric generators or aircraft engines. These accelerators can also be used to take snapshots of the interiors of fast moving machinery. Accelerators are used for very fine material analysis problems in the laboratory as well as in the field. Special accelerators are now being developed for oil prospecting, an application in which the accelerator and auxiliary analysis apparatus are lowered into test wells where they send up information about the oil content of the rock into which the well is drilled. Many accelerators currently in use for elementary particle science research are used for other types of research much more closely related to daily life. For example, the CESR ring is being used by chemical, biological, geological and materials scientists to investigate topics varying widely from the properties of hemoglobin in the blood to the behavior of rocks deep beneath the surface of the earth to the behavior of exotic materials. Besides the many practical uses of the accelerators which were originally developed for elementary particle science, the information gathering and analysis techniques developed to interpret experiments done with these accelerators have been put to practical use. A premiere example of such uses is the development of the CAT scanner which is now in wide use in medical diagnosis. Other technologies developed by accelerator scientists promise to have wide use in industry. A good example of this is the wide attention now being given to uses of the phenomenon of superconductivity.

Thus one can easily see that the pursuit of basic knowledge can bring with it wide ranging practical effects as well as the opening up of new vistas in our understanding of the world around us.

**6. What is the expected useful life of this facility?**

The instrument itself will be capable of addressing frontier research questions for a period of at least 10 years. New developments could extend its life considerably. There has been some sort of major accelerator at Cornell since the early '50s. The basic accelerator

facility at Wilson Lab. has been in place with a lively research program since 1967.

**7. Is there a guarantee that once the facility is built it will continue to receive sufficient funding?**

Such facilities are usually built and operated under government contracts which are renewed at intervals of one to a few years. In principal such contracts can be closed out over a similar time span. Experience at Cornell and at other similar facilities shows that while important research results are flowing, the contracts are renewed.

**8. Why is the federal Department of Energy interested in this type of basic research?**

Both the new findings of elementary particle science and the technologies developed for pursuit of the science have had an enormous impact on energy production technologies over many decades. The DOE anticipates that this will remain so in the future.

It should be noted that our current plan is to present the proposal for CESR II to the National Science Foundation whose primary mission is to encourage basic scientific research.

**9. Will this device emit harmful radiation?**

The accelerator is much like a doctor's x-ray machine and as such does emit radiation when the power is switched on. As in the case of a medical x-ray facility, the radiation from the accelerator is absorbed by a shield placed around the accelerator.

**10. Noise?**

The instrument itself operates silently. The auxiliary pumps and fans needed to heat and cool the buildings will emit no more noise than any other facility equipped to house 300 to 400 people engaged in office work and electronics-type manufacturing activity.

**11. Will this facility produce dangerous waste products either in day-to-day operation, periodically or when decommissioned?**

As with a doctor's x-ray machine, the radiation emitted by the accelerator ceases when the power is switched off. After long use, typically several months, certain parts of the apparatus become mildly radioactive. This activity decays away to below the measurability level in a few months. In any event, these rather small parts could be disposed of at any time by standard techniques. Other materials are no different than those associated with any electronics manufacturing facility.

**12. Will this facility have damaging effects on the aesthetics of the environment in that area?**

It is our intention that any work done will at least maintain and, when possible, improve the general appearance of the area.

**13. Will radio frequency devices interfere with airport operations, radio and TV reception, heart pacemakers or any other type of electronic equipment used by people nearby?**

The radio frequency present within the facility will be confined within metal enclosures carefully sealed to contain it. Monitor and interlock devices developed over many years of experience will shut down the radio-frequency source if radio emissions are detected. The frequencies used are not in aircraft or media communication bands nor in the bands used to set pacemakers.



# Brief Reports

## Medical Insurance Has a New Form

A new, easier-to-use Major Medical Plan Claim Form is now available at 130 Day Hall.

The form, which has been completely redesigned to make it easier to claim benefits, has a complete set of easy-to-understand instructions, according to the Employee Benefits Section of University Personnel Services, the section responsible for the new form.

Claims filed after May 1, 1981 must be made on the new form.

For additional information or copies of the form, contact Pat Cooke in Employee Benefits at 6-3936.

## Livestock Show Set for May 3

A livestock show featuring a number of farm animals, which will culminate with a pig and beef roast and a square dance in the evening, will be held at the university, Sunday, May 3.

The annual Cornell livestock show consists of showmanship classes for dairy and beef cattle, horses, sheep, swine, goats and poultry. Other activities include a baby animal parade, and milking and tug-of-war contests between students and faculty members.

These events will take place in the Livestock Pavilion on Judd Falls Road, from 8 a.m. through 5:30 p.m., and are free and open to the general public. All of the animals to be shown belong to the university.

The pig and beef roast is at 5:30 p.m., and the square dance at 7:30 p.m. in the pavilion. The cost is \$4 for adults and \$2.50 for children; tickets for this event will be available in B-53 Morrison Hall or at the door during the day of the event. The admission fee for the square dance is 75 cents per person, with tickets available at the door only.

## Summer Softball Signups Scheduled

Any Cornell student, staff or faculty member interested in competing in the Summer Session Softball Program may pick up information sheets and team roster lists anytime at the office of Al Gantert, director of physical education in Teagle Hall, telephone 256-4286.

League play will start Monday, June 29. A pre-season meeting is scheduled for 5:15 p.m., Friday, June 19, in the Robison Hall of Fame Room in Schoellkopf Hall.

The deadline for submitting team rosters is 5 p.m., Thursday, June 18 at the Physical Education Offices in Teagle Hall. There is a \$15 entry fee for each team.

Persons not on a team should show up at the pre-season meeting June 19.

## International Business Risks To Be Discussed

Representatives of the United Nations, The World Bank and several corporations will discuss the risks of doing business internationally during a public conference sponsored by the Graduate School of Business and Public Administration at Cornell University on Friday, May 1.

The two-and-a-half-hour session is

open to all members of the Ithaca and Cornell communities. The event is scheduled in Bache Auditorium, Malott Hall on the Cornell campus from 10 a.m. to 12:30 p.m. A question-and-answer period will follow presentations by each of the panelists.

The guest authorities will speak on the changing nature of political, economic and social risks.

Speakers will include Hector Carem-Andruet, general manager for Latin America, General Foods Corp.; Hortensia Sampedro, vice president for country risk policy, Chase Manhattan Bank; Caryl Bernstein, former vice president for insurance, Overseas Private Investment Corp. (OPIC); G. Arthur Brown, deputy administrator, United National Development Programme; Ramanbhai Bhakta, economist, Financial Studies Division, The World Bank.

## East Ithaca Transit Adds Midday Service

Midday bus service will be added to the East Ithaca Transit System (EITS) schedule, according to William E. Wendt, director of Transportation Services.

Beginning Monday, May 4, three new commuter runs will provide service between central campus (Day Hall) and the Eastern Heights area.

Morning commuter service will be augmented by two runs which leave for the Eastern Heights area from Day Hall at 9:30 a.m. and 11 a.m. The bus will depart from the intersection of Eastern Heights Drive and Skyvue Road at 9:43 a.m. and 11:13 a.m. promptly for the Cornell campus.

Mid-afternoon service will depart Day Hall at 2 p.m. and leave from the corner of Eastern Heights Drive and Skyvue Road at 2:13 p.m.

The midday commuter service will not travel Tower Road but will otherwise follow the early morning and late afternoon commuter route from central campus to Eastern Heights.

"Significant ridership by commuters on the EITS led Town of Ithaca representatives to request increased service," Wendt said. "The anticipated positive passenger load and favorable midday traffic conditions will make the additional service possible while maintaining the established schedule with minimal disruption. Departure times from East Hill Plaza will be adjusted slightly."

Revised EITS schedules will be available on the bus. For more information, call the Office of Transportation Services, Cornell University, at 256-4628.

## Operations Research Expert to Give Talk

George B. Dantzig, an authority on operations research, will give the first D.R. Fulkerson Lectures here May 7 and 8.

The annual series has been established in memory of Fulkerson, who was the Maxwell Upson Professor of Engineering at Cornell from 1971 until his death in 1976. He was a member of the faculty of the School of Operations Research and Industrial Engineering at Cornell.

Dantzig is the Criley Professor of Transportation in Operations Research and Computer Science at

Stanford University. He is a member of the National Academy of Sciences and a recipient of the National Medal of Science.

His lectures here will be in Room B-14 of Hollister Hall. At 4:30 p.m. Thursday, May 7, he will discuss "Origins of Linear Programming." At 4:30 p.m. Friday, May 8, he will talk on "Energy/Economic Models and Large-Scale Methods."

He also will give a technical presentation on "Expected Number of Steps of the Simplex Method," at 12:30 p.m., Thursday, May 7.

## Minorities in ILR Conference Topic

"Minorities in ILR in the '80s: Striving to Achieve" is the title of a conference to be held at noon Saturday, May 2, in the New York State School of Industrial and Labor Relations Conference Center Room 200.

The program will begin with a buffet luncheon, followed by a 1:30 p.m. panel discussion on career pursuits. Closing remarks are scheduled for 3 p.m., with an informal mixer after that.

Participants in the program will be LaVerne Rolle Alian of the American Arbitration Association; Raymond Baird of the Human Resource Development Institute; Yvonne Brown of the Recruitment Training Program, Steven Brusch from Harvard Law School, Reginald Ingram Sr. of Alvin Ailey American Dance Center and Donald McBride of International Business Machines, Marketing Division.

The conference is sponsored by the Minority Industrial and Labor Relations Student Organization.

## Toxic Substances Topic of Seminar

Implementation of a new state law to protect employees involved with toxic substances in their place of work will be the subject of a seminar scheduled for 3:30 p.m. Tuesday, May 12, in Hollis Cornell Auditorium.

"Toxic Substances and Employees' Right to Know: An Implementation Plan for Cornell," is the title of the seminar presented by students in the Cornell Program on Science, Technology and Society. Students of June Fessenden-Raden, associate professor of biochemistry, molecular and cell biology, have been examining the right-to-know law, which went into effect in December 1980. Their findings are expected to be of interest to other educational institutions in the state, Fessenden-Raden noted.

Among the speakers at the seminar, which is open to the public at no charge, will be Dr. Nancy Kim, director of the Bureau of Toxic Substances Management in the state Department of Health.

## Health Requirement Forms Available

Fall registration of all continuing students with incomplete health requirements will be blocked by a medical "Hold" until all health requirements have been satisfactorily completed. Forms may be picked up at the Requirements Office, Gan-net Clinic, 256-4364.

## Spanish, English Prizes Available

Students wishing to compete for this year's J.G. White Spanish and English Prizes, worth \$500 each, must sign up for the appropriate examinations between 9 a.m. and 4 p.m., Wednesday May 6, in Room 278 of Goldwin Smith Hall.

The prizes are awarded on the basis of written and oral examinations in Spanish, for American students, and in English, for Latin students. The examinations will be given Thursday, May 7, in Goldwin Smith 156.

Two prizes for excellence in Spanish will be awarded to undergraduates. To be eligible, students must be U.S. citizens or permanent residents and must not have resided for more than fifteen months in a Spanish-speaking country. One prize is open only to juniors and seniors in the College of Engineering. The other is open to any undergraduate. All candidates must have completed two terms of successful work in Spanish or be currently registered in a second term of Spanish.

A third prize for excellence in English will be awarded to an undergraduate from a Latin American country or Puerto Rico, whose mother tongue is not English and who has not resided for more than four years in an English-speaking country.

## Chinese Cultural Evening Scheduled

An evening of Chinese cultural performances is scheduled for 8:30 p.m. Saturday, May 9, in the auditorium of Anabel Taylor Hall, by the Hong Kong Student Association.

Included in the second annual Hong Kong night will be performances of Chinese dances, a play, a movie, choir music, a Chinese song solo, recitals on the piano, violin and cello, as well as demonstrations of traditional Chinese musical instruments.

An exhibition of Chinese martial arts is also planned by the association, an organization of some 100 Cornell students. Refreshments will be served.

The event is open to the general public at no charge, and is sponsored by the Cornell Student Finance Commission.

## Rush to Lecture On Child Abuse

Psychiatric social worker and author Florence Rush will lecture on "The Sexual Abuse of Children" at 7:30 p.m. Monday, May 4, in the auditorium of Anabel Taylor Hall.

Rush, who has 25 years of experience in the field of psychiatric social work, was recently appointed to the Advisory Committee Devoted to the Treatment of the Sexual Aggressor by the Office of Mental Health, New York State Psychiatric Institute.

She is the author of "The Best Kept Secret: Sexual Abuse of Children," which is a study of child molestation through history.

Rush's lecture is being sponsored by the Community Against Rape, Women's Law Coalition, Women's Studies, Smedley's Bookshop and the Tompkins County Chapter of the National Organization for Women.

The lecture is free and open to the public.

## SAGE CHAPEL

### Dean of Students Chapel Speaker

David Drinkwater, dean of students, will speak at the Sage Chapel Interreligious Service at 11 a.m. Sunday, May 3. His topic will be "Where To Begin."

Before coming to Cornell, Drinkwater did post-doctoral research work at Harvard Graduate School of Education. He served as dean of students at Amherst College from 1973 to 1978 and from 1970 to 1973 was associate dean at the State University of New York College at New Paltz.

Drinkwater is a 1964 graduate of Oxford University, England and received his doctorate in modern history from Oxford in 1971.

He came to the United States in 1967 as a visiting lecturer at Florida Presbyterian College in St. Petersburg, and from 1967 to 1973 was an assistant professor of modern history at New Paltz.

Drinkwater's professional affiliations include the American Historical Society, American Association of Higher Education, American Association of University Professors, National Association for Foreign Student Advisors and the National Association of Student Personnel Administrators.

## Faculty Openings In STS Program

The Cornell Program on Science, Technology and Society has announced the availability of two part-time internal leave appointments in STS for tenured members of the faculty in the physical sciences or engineering.

The three-year appointments to STS are designed to enable faculty members to give special attention, by way of teaching and research, to problems that involve the interrelations of science, technology and society. Individuals who hold the appointments will be able to undertake research and participate in course development and teaching in areas of their expertise. Collaboration in STS seminars and other program activities will be expected.

Faculty members interested in immediate (or later) appointments should write or telephone Walter R. Lynn, director of the STS Program.

## Sophomores Receive Conference Awards

Two sophomores in the College of Arts and Sciences received Outstanding Delegation Awards at the Harvard Model United Nations Conference in Cambridge, Mass., earlier this spring.

They are Karl E. Dehus of Deerfield, Ill., and Iftikhar Mostofa of Dacca, Bangladesh.

During the three-day conference, students from schools in many areas of the United States took part "in rigorous debate on various issues in international politics."

Sponsored by the Cornell International Affairs Association and the Cornell International Relations Seminar, Dehus and Mostofa represented the country of Mozambique.

They debated the problem of Third World debt to developing nations, and sponsored three resolutions dealing with that topic.