

Cornell CHRONICLE

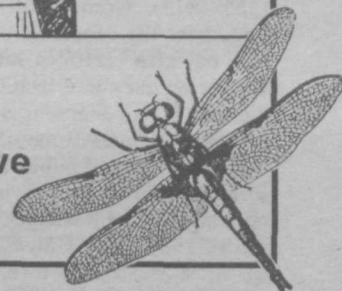
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Holly Carson Lau, center, leads her modern dance class through an exercise expressing joy and grief in the basement studio of the Performing Arts Center.

Jill Peltzman

Panel suggests enhancing role of dean of students

Cornell's dean of students should be a tenured faculty member reporting directly to the provost and thus better able to integrate students' non-academic life into the university's educational mission, according to the preliminary recommendations of a review committee.

The committee, appointed seven months ago by Provost Robert Barker and Senior Vice President James E. Morley Jr., said relocating the office would "elevate the stature and authority" of the deanship. It also recommended that the dean have a five-year term and be chosen by a search committee of faculty, staff and student members named by the provost.

When Dean of Students David W. Drinkwater announced his resignation last spring, Barker and Morley told the committee that the departure afforded an opportunity "to consider the role of the Dean of Students Office and the relationship of students' experiences outside the classroom to their overall academic performance."

In releasing the preliminary recommendations and presenting them to Barker and Morley, the review committee listed eight "values, premises, objectives" on which its recommendations were based. All eight either affirmed, or asked strengthening of, the current functions of the deanship. In only one detail did the review committee recommend moving an operation out of the dean's office — off-campus housing, which it said should come under the Department of Residence Life.

"Students in general should be pleased with the strengthened role recommended by the report," said committee member Xenia Young, a graduate student in biochemistry. "And graduate students should like the recommendation that a faculty member hold the job. There is a special bond between faculty and graduate students and, until now, the

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Search begins for a research vice president

A search-advisory committee has been formed to fill the position of vice president for research and advanced studies, from which Joseph M. Ballantyne will retire on June 30.

Ballantyne, who has headed Cornell's research and graduate education programs for four and a half years, will return to teaching in the School of Electrical Engineering, where he was the director from 1980 to 1984 and where he has been a faculty member since 1964.

Co-chairmen of the search-advisory committee are Robert Barker, the provost, and Malden Nesheim, the vice president for budgeting and planning. The committee includes Barbara A. Baird, associate professor of chemistry; David L. Call, dean of the College of Agriculture and Life Sciences; S. Gordon Campbell, professor of veterinary microbiology and associate dean for academic affairs in the College of Veterinary Medicine; John L. Ford, associate professor and chairman of the Department of Human Service Studies; and John Forrester, associate professor of city and regional planning.

Also, David Gries, professor of computer science; Martha P. Haynes, associate professor of astronomy; Amy R. McCune, assistant professor of ecology and systematics; N. David Mermin, director of the Laboratory of Atomic and Solid State Physics; Anil Nerode, professor of mathematics



Joseph Ballantyne

Jill Peltzman

and director of the Mathematical Sciences Institute; Karl Shell, the Robert Julius Thorne Professor of Economics; William B. Streett, professor of chemical engineering and dean of the College of Engineering; and Larry P. Walker, associate professor of agricultural and biological engineering.

The committee will serve in an advisory capacity to the provost, who will appoint the next vice president, Barker said. He noted that the search will focus on the campus, but will not exclude possible candidates from other institutions.

The provost invited the Cornell commu-

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Symposium to highlight patenting of new animals

Price-gouging by patent-holders of genetically engineered animal models, such as OncoMice with human cancer genes, shouldn't be a concern, according to economist William Lesser.

He thinks governments will control royalties on valuable animal models, including those for human AIDS.

Lesser will lead the first international symposium on animal patents since the U.S. Patent and Trademark Office allowed patents on higher animals on Dec. 5 and 6. Legal, economic and social issues of patenting animals are on the agenda.

Representatives of government, industry,

agriculture and universities will discuss issues ranging from the practical and economic considerations to the ethical problems behind the new legal protection for new animals.

"Many people around the world were shocked when, on April 3, 1987, the Board of Patent Appeals and Interferences of the U.S. Patent Office declared higher animals patentable subject matter," said Lesser, an associate professor of agricultural economics and organizer of the symposium.

The patentability of multicelled animals was widely anticipated after the 1980 patent

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New counseling book explores psychological pain of infertility

Most health care professionals specializing in fertility problems are ill-prepared to deal with their patients' emotional pain, which resembles the grief caused by the death of someone close, says a Cornell sexuality researcher.

"No rituals exist to legitimize the grief of the infertile couple who mourn the baby they never conceived," and the couples and their medical doctors usually are not aware that counseling is needed, Constance H. Shapiro writes in her new book, "Infertility

and Pregnancy Loss: A Guide for Helping Professionals." She calls infertility an "invisible disability" and notes that it affects one in every six American couples of child-bearing age.

Even when medical treatments overcome a couple's fertility problems, many couples are unprepared for the "emotional responses ranging from panic to ecstasy" that are raised by the pregnancy, Shapiro writes. She is an associate professor and director of

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Briefs

■ **Lecture nominations:** The University Lectures Committee is accepting nominations from the faculty for the Messenger Lecture Series and for the University Lectures. Nominations and inquiries should be addressed to Judy Bower, coordinator, University Lectures Committee, 315 Day Hall (255-4843). Nominations not only should document the candidate's professional stature, but also establish his or her ability to deliver an excellent lecture to a general audience. The Messenger Lecture Series brings to campus some of the world's foremost scholars and public figures to deliver a series of three or six lectures. The first opening for a Messenger Lecturer is in the fall of 1989. The University Lectureship is the most prestigious forum that Cornell can offer a visitor invited to deliver a single lecture. Approximately 12 University Lecturers are selected each year.

■ **Nature grants:** Cornell Plantations will receive \$36,500 and the Cornell Laboratory of Ornithology will receive \$6,000 from \$5.3 million in grants that New York state has awarded to 77 nature facilities, according to a Nov. 10 announcement by Governor Mario M. Cuomo. The funds were appropriated in the 1988-89 budget to the Natural Heritage Trust under its zoos, botanical gardens and aquariums program. They are awarded to assist public and not-for-profit institutions in maintaining their natural collections — usually live animals or plants — or to expand public use and appreciation of these resources.

■ **Bloodmobile date:** The Tompkins County Red Cross Bloodmobile will be at Morrison Hall at Tower and Judd Falls roads from 10 a.m. to 3:45 p.m. on Dec. 5. For appointments to donate blood, call 273-1900. Walk-ins also are welcome.

■ **Gift wrapping:** The Education Department of the Herbert F. Johnson Museum of Art will present a two-part Eye Openers program for children entitled "The Art of Japanese Gift Wrapping" on Dec. 3 and 10. On both days, there will be workshops for ages 7 and 8 from 10 a.m. until noon and for ages 9 and 10 from 1 until 3 p.m. A \$10 fee will be charged. Enrollment is on a first-come, first-served basis. For more information and to register, call the Education Department at 255-6464.

■ **Meals with Morley:** Employees may sign up for breakfast or lunch with Senior Vice President James E. Morley Jr. by calling the Office of Human Resources at 255-3621. The meals will be held each month during the academic year. Dates and places include a Dec. 16 lunch at the ILR Conference Center and a Jan. 24 breakfast at Hughes Dining Hall in the Law School. Other dates will be announced.

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Cornell Chronicle

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PORTABLE GREENHOUSE — A tree-sized greenhouse, designed at Boyce Thompson Institute and situated near the Cornell Orchards, is ascended by Leonard Weinstein, director of the Ecosystems Research Center. The plastic and tubular metal greenhouse can be carried to mountain tops in sections and assembled to study the effects of air pollution on trees in their natural environment.

Jill Peltzman

Obituaries

Henry G. Booker

Henry G. Booker, a member of the Cornell faculty from 1948 to 1965 who was involved in the development of radar, died of a brain tumor on Nov. 1 at his home in La Jolla, Calif. He was 77.

An authority on electromagnetic theory and radio wave propagation, Booker also was instrumental in developing the radio telescope that Cornell operates for the National Science Foundation in Arecibo, Puerto Rico.

He was director of the School of Electrical Engineering and associate director of the Cornell Center for Radiophysics and Space Research from 1959 to 1963. He was named the IBM Professor of Engineering and Applied Mathematics at Cornell in 1962.

He left Cornell in 1965 to become the first chairman of the Department of Applied Physics and Information Science at the new campus of the University of California at San Diego. He served as chairman until 1971, and in 1978 he retired as a professor emeritus. However, he continued to teach and also serve as a consultant to the Rand Corporation up to a few months before his death.

Booker was born in Barking, Essex, England. He received a B.A. degree in 1933 and a Ph.D. degree in 1936 from Cambridge University and then became a research fellow at Christ's College.

During World War II, he was in charge of theoretical research at the Telecommunications Research Establishment in England and was involved in the development of electronic devices, including radar systems, that were critical to the defense of Britain.

He moved to this country in 1948 with his American-born wife, Adelaide Mary McNish of San Francisco, whom he had met while he was a visiting scientist at the Car-

negie Institution in Washington, D.C., in 1937. Booker became a naturalized citizen of the United States in 1954. They celebrated their 50th wedding anniversary on July 9 of this year.

Survivors include his wife, Adelaide; two sons, Dr. John R. Booker of Seattle, Wash., and Navy Cmdr. Robert W. Booker of Annapolis, Md.; two daughters, Mary A. Booker of Cheriton Fitzpaine in England and Alice M. Booker of Roanoke, Va.; and six grandchildren.

Arthur H. Peterson

Arthur H. Peterson, a key figure in the financial operation of Cornell under four of its presidents, died Nov. 24 of cancer at the Friends Home Inc., in Greensboro, N.C. He was 78.

Peterson, who retired from Cornell in 1977 with the titles of controller emeritus and professor of business administration emeritus, joined the Cornell administration in 1939 as assistant to the treasurer for the state-supported colleges.

In a series of appointments for the state-supported colleges, he was named bursar in 1941, assistant director of finance in 1945, associate director of finance and professor of business administration in 1947, director of finance in 1951 and controller in 1953.

When the offices of the controllers for the state and the endowed units of the university were combined in 1956, Peterson was named university controller, a title he held until 1976, when he was named university treasurer and chief fiscal officer.

Upon Peterson's retirement, President Dale R. Corson said, "Over the years Pete has been asked to take over everything that has gone wrong. He has done so and made them right."

Known as a man of a few but pointed words, Peterson worked on 12-month ap-

Notables

A book by government Professor Michael Goldfield titled "The Decline of Organized Labor in the United States" (University of Chicago Press, 1987) was one of 12 books included on Princeton University's 1987 list of "Noteworthy Books in Industrial Relations and Labor Economics." The books were chosen by a committee from the Firestone Library's Industrial Relations Section at Princeton University and recommended for acquisition worldwide by libraries without special labor collections. Consequently, they are selected to include a well-balanced range of subject matter and items of special merit.

Doctoral candidate Mary Susan Lindee has won the 1988 Schuman Prize of the History of Science Society in a nationwide competition with other graduate students in the history of science. The \$500 cash prize was awarded for her research article, "Sexual Politics of a Textbook: the American Career of Jan Marcet's 'Conversations on Chemistry.'"

Former CIA director William E. Colby to speak here today

William E. Colby, director of the Central Intelligence Agency from 1973 to 1976, will lecture on the topic of "Covert Action in a Democracy" tonight at 8:15 p.m. in the Bache Auditorium of Malott Hall.

His talk will be followed by a response from Charles R. Beitz, a professor of political sciences at Swarthmore College.

Colby's visit to campus is sponsored by Cornell's Program on Ethics and Public Life. Its director, Henry Shue, said, "Colby's insights and experience should be particularly useful in addressing the debate over whether a democracy should have any covert action at all or at least substantial accountability to its citizens."

Colby left the CIA in 1976 following 25 years of service with the federal government. A lawyer, he is a consultant on international and domestic political matters to various corporations, governments and investment organizations.

pointments over his entire career, putting in at least 55 hours a week and often many more. He never had a leave of absence for any reason and took only eight sick days during his 37.5 years as a Cornell administrator.

Peterson was born in Bemus Point, N.Y. He earned a bachelor of arts degree from Oberlin College in 1932 and a master's degree from Cornell in 1933. Before returning to Cornell, he worked as an accountant with Frederick Loeser and Co. in Brooklyn and as an auditor and assistant comptroller of Brown Thompson Inc. of Hartford, Conn.

Survivors include his wife, Helen Stone Peterson, at the Friends Home; two sons, George E. Peterson of Washington, D.C., and Arthur H. Peterson Jr. of Marion, Ohio; and three grandchildren. Services were held Nov. 25 in Greensboro.

C.K. Poe Fratt

A scholarship fund has been established in memory of C.K. Poe Fratt, a member of the Class of 1953, who died Nov. 22 in New York City at the age of 57. He was an active alumnus of the university and served as an alumni-elected member of the university's Board of Trustees from 1977 to 1982.

Fratt earned a bachelor of science degree in mechanical engineering from Cornell in 1955 and an M.B.A. degree from Stanford University in 1959. He was a partner in the national accounting firm of Peat Marwick Main & Co.

Fratt was an outstanding football lineman during his undergraduate years and was named the varsity's Most Valuable Player in 1953.

Memorial donations may be made to the C.K. Poe Fratt Memorial Scholarship Fund, c/o Director of Development, Cornell University, 726 University Ave., Ithaca, N.Y. 14850.

Global outlook is key for new Human Ecology dean

The difficulties facing the urban underclass, youth without education or the prospect of a job and the growing population of elderly who lack anyone to care for them are problems present in all regions of the world.

They also are problems that are being studied by faculty in some of the six academic departments in the College of Human Ecology. "The content of human ecology is tailor-made for a global perspective," said the college's new dean, Francille M. Firebaugh, who added that she hopes to facilitate interdepartmental and international research efforts on these and other topics. She also said that she plans to give greater international research experience to Cornell Cooperative Extension associates who have responsibilities in her college.

"International components are important at every turn," Firebaugh said in an interview. A college that studies nutrition, consumer economics, health and human services, and the textile and apparel industries must conduct its research and teaching from an international viewpoint if it is going to fulfill its mission of using academic knowledge to help improve peoples' lives, she said.

"Some components of this college already have an international focus," Firebaugh noted. "We need to increase the experience of our faculty abroad, especially in the Third World, and we need to convey those experiences in our courses and provide more foreign-study opportunities to our students."

Firebaugh's commitment to international study included consulting on higher education in India and Malaysia and on agricultural research and extension in Egypt. She also taught English in Afghanistan while her husband worked there on a U.S. Agriculture Department project just prior to the Soviet invasion.

The College of Human Ecology, one of four state-supported units, includes 1,200 undergraduate students, 93 faculty members and a \$2.3-million-a-year research program in six areas: consumer economics and housing, design and environmental analysis, human development and family studies, human service studies, textiles and apparel, and nutritional sciences.

Firebaugh pointed out that, since its in-



Jill Peltzman
Francille M. Firebaugh, a specialist in family resource management and the new dean of the College of Human Ecology.

ception, the College of Human Ecology has had a rich international tradition, ranging from the work of college founders Flora Rose and Martha Van Rensselaer, who helped improve women's education and child welfare programs in Belgium in the 1920s; through long-term research agreements between the college and agencies in the Philippines, Ghana and Liberia; to cur-

rent efforts examining the relationship between nutrition and cancer in China and comparisons of children's acquisition of language in Japan and India.

Firebaugh praised President Frank H.T. Rhodes and her predecessor as dean, Jerome M. Ziegler, a professor of human service studies at Cornell, for their commitment to international study and research. The Col-

lege of Human Ecology must build on that climate to expand its efforts in foreign study and to increase the number of foreign students who study in the college, she said.

For example, only 16 of 1,286, or 1.2 percent, of the undergraduate students enrolled in the college for 1988-89 are from outside the United States. Among graduate students, however, 63 of 185, or 34 percent, are from other countries.

Firebaugh is just completing her first semester as a Cornell dean, having joined the Ivy League institution from Ohio State University, where she most recently was vice provost for international affairs. She previously served OSU as a professor and director of the then-School for Home Economics, acting vice president and dean of agriculture, associate provost, and acting provost and vice president for academic affairs.

At Ohio State, Firebaugh was responsible for uniting various international affairs functions of the university and for "increasing the reality and the profile of international affairs" at the Big 10 university, she said.

She is a specialist in family resource management and the co-author of two books: "Home Management: Context and Concepts" and "Family Resource Management."

The new dean said "it was the faculty" that brought her to Cornell to receive her Ph.D. in 1962, "and it's the same quality of faculty that was influential in my coming this time. The content of college has changed — it's enlarged and richer — but my interest in the content of the college was great then and is great now.

"I want to maintain and enhance a climate that encourages international activities and views those activities favorably in tenure and promotion reviews," Firebaugh added.

"We must have a curriculum with a world view that contributes to the students' global perspective, we must have faculty members and graduate students engaged in international research, we must have faculty members engaged in development assistance in the Third World, and we must have foreign students and faculty who enrich the programs of the college."

—Mark Eyerly

Cornell helping to shape China's first hotel program

Tourism is China's fastest growing industry, but its standards leave some travelers wishing that they had stayed home.

"Few of China's hotel or restaurant employees have any idea of international standards, and mediocre food, facilities and service is common," according to Thomas P. Cullen, associate professor in the School of Hotel Administration. "No university in China had addressed its most serious problem in hospitality education, that of the lack of qualified and trained teachers."

To meet the challenge, one of China's top universities, Zhongshan (Sun Yat-sen) University in Guangzhou (Canton), has embarked on that nation's first teacher training program for the hospitality industry by sending two graduate business school students to Cornell's Hotel School.

"Since the reopening of China to the West, no industry has grown in terms of the number of jobs provided and foreign currency earned as rapidly as tourism," said Cullen, who arranged the link with China.

From virtually zero in 1976, when China's Cultural Revolution ended, tourist arrivals have climbed annually and are expected to reach between 10 and 12 million by the year 2000, not counting the millions of overseas Chinese who visit relatives, he noted. By that year, China estimates its annual earnings from tourism will reach between \$8 and \$10 billion.

China has built many restaurants and first-class hotels in the past 10 years, but "staffing those hotels and restaurants has received less attention" than the construction work, Cullen said.

The professor spent this past summer at Zhongshan University, which China classifies as one of its 18 first-rank universities, arranging for a faculty training program at Cornell. He recommended that China develop its own hospitality educators rather than rely on teachers from abroad because

he believes "there is a question as to the transferability of foreign management practices to China's management. Just as Japan has successfully tailored Western ideas to its culture, China in the long run must do the same to be successful."

The Ho Educational Foundation of Hong Kong agreed to provide funds for two graduate business school students from Zhongshan to spend the current academic year in the Hotel School here: Li Shan, who is specializing in food and beverage management, and Zeng Yi, who is studying hotel management.

Their Cornell studies will be accepted towards their master's degree in management in China. Upon graduation, they will become the nucleus of a hospitality industry faculty. The program may be expanded to include three or four master degree students in later years.

Cullen's fascination with Asia goes back to 1966 when he toured the region with the Cornell Glee Club. He earned his B.S., M.S. and Ph.D. degrees in the Cornell Hotel School, writing his Ph.D. thesis in China in 1982-83 while working at Beijing's Second Foreign Language Institute and the Shanghai Institute of Tourism.

Cullen worked in Tokyo in the 1960s and 1970s, first as maitre d' in the Imperial Hotel's Garden Restaurant, and briefly as a singing waiter with the restaurant band. Later he was manager of the Tokyo American Club when it was rebuilding its facilities next door to the Soviet Embassy, and then worked five years for the New Otani Hotel, one of Tokyo's largest, developing its hotels in Los Angeles, Hawaii and Bulgaria.

Cullen also spent five years with Intercontinental Hotels, traveling to Europe, Africa, the Middle East, the South Pacific and Southeast Asia as a troubleshooter.

—Albert E. Kaff



Jill Peltzman
Hotel School student Li Shan prepares a meat dish, as fellow student Zeng Yi, center, and Associate Professor Thomas Cullen look on at the Divi Executive Tower & Ithaca Ramada Inn, where hotel students do some of their training.

Trustee committee hears arguments on divestment

Cornell's review of its South Africa investment policy entered its second phase on Nov. 29 as the Board of Trustees' Investment Committee heard arguments for and against divestment.

There was a brief summary of the three reports whose development constituted the first phase of the policy review, but most of the two-hour open meeting at the Cornell Medical College was given to the pro-divestment arguments of two Cornell professors and the anti-divestment arguments of a former corporate official.

The earlier reports — by the university counsel, university treasurer and the trustees' Proxy Review Committee — were completed before Thanksgiving as fact-finding support for the Investment Committee, which will make recommendations in mid-January on Cornell's South Africa investment policy. The full board will vote on those recommendations at its Jan. 27-28 meeting.

The current policy review was agreed upon three years ago when the board adopted a selective-divestment policy limiting investments in companies doing business in South Africa to those with highly rated social-responsibility records there.

Investment Committee Chairman Robert G. Engel said the trustees' review should be not a debate on apartheid — which he said everyone despises — but an effort to identify the Cornell policy that best contributes to ending it. He added that, as his committee continues its deliberations, it will welcome further campus comments, which may be submitted through the University Treasurer's Office in Room 441 of Day Hall. Copies of the three earlier reports are also available there, as well as in Room 110 of Day Hall and the reference desks of Uris, Olin and Mann libraries.

The testimony before the Investment Committee dwelt mainly on two issues: whether the social accomplishments of American companies in South Africa can justify whatever perceived or actual support their presence lends to the government, and whether Cornell is somehow tainted by holding a small fraction of its investments in companies with South African operations.

Since January 1986, those investments

have dropped from \$130 million to \$42.1 million, or from 18.2 to 4.2 percent of the total portfolio. Subtracting the \$7.6 million in companies that already have pledged to leave South Africa, leaves only 3.5 percent of a portfolio of \$1 billion in companies that have not announced plans to end their South African operations. Moreover, because South African operations account for only about 1 percent of the business of those companies, Cornell's South Africa-related investment can be calculated as less than \$500,000.

George Schroll, a member of the board of the Industry Support Unit, which monitors social programs of American companies in South Africa, called himself an anti-apartheid activist and said: "If divestment could end apartheid, I'd urge you to do so today." But Schroll, formerly an executive with Colgate-Palmolive Co., said the aim of divestment, or selling shares, is to prod disinvestment, or corporate departure from South Africa. He asserted that disinvestment is a failure because successor companies often do less good than their predecessors.

For example, after Eastman Kodak Co. left South Africa, more Kodak film is available there through the company that bought out Kodak for 15 percent of its value, and General Motors Corp.'s successor, unlike GM, sells to the military.

Schroll, who has visited South Africa 24 times, said the U.S. companies' progressive programs are so effective that they have aroused strong opposition from politically conservative whites. He cited white determination to oust an integrated child care center set up by Colgate-Palmolive Co. and said that the American companies "must be doing something right."

Urging divestment were Africana Studies Professor Locksley Edmondson and Associate Professor James E. Turner.

Edmondson allowed that American businesses relieve black unemployment in South Africa and help to alleviate some social problems. He also said that it was too soon to know that disinvestment would work against apartheid. But he said there is no doubt about the opposite proposition: "The presence of foreign corporations in South Africa has not had a significant impact in

destroying the system of apartheid."

Edmondson and Turner asserted that signs of social progress cited by the American companies actually mask a tightening of control by the South African government. Improvements in health care, child care, wages, housing and amenities that go with the rise of a black middle class are carrots to get blacks to "buy into apartheid," Edmondson said.

"Indeed, change has gone decidedly for the worse," Turner said, citing emergency restrictions on the press, more politicization of the judiciary, more persecution of young people and redeployment of troops formerly in Angola to bolster the internal army — a move that some anti-divestment advocates see as proof of government softening.

Edmondson said that "South African President Botha could no more eliminate apartheid than the pope could eliminate Catholicism." Despite such reforms as recognizing black unions, allowing some urban integration and fostering some black-middle-class development, "The ultimate rationale is to maintain white minority power in changing circumstances," Edmondson said.

While Schroll said the best chance of real change is through continuing actions and lobbying by American companies, Edmondson said the real promise lies in the "contradictory pressure" of recurring black protest and external economic pressure, which together already have begun to create the "white voices of reason" that can facilitate transition to a multiracial polity.

Edmondson and Turner, more than Schroll, gave extended attention to Cornell's own possible actions, as distinct from disinvestment in South Africa.

When Trustee Paul Tregurtha asked for specific examples of resistance that Cornell faculty members may have met in Africa because of current investment policies, Edmondson cited no specific cases, but said "many colleagues" had reported concern among African scholars. While Edmondson said he knew of no cases of potential minority faculty recruits rejecting Cornell because of its investment policy, he added that some recent faculty recruits were "rethinking" their decisions.

Turner responded to Trustee Jack

Neafsey's question about what might follow a full-divestment decision by saying that, with the issue behind it, Cornell could approach southern Africa just as any other part of the world where it conducts academic programs and from which scholars go to Cornell.

With many companies having pulled out in the last three years, Cornell is better able now "to find a financially responsible way to move these remaining investments in a phased way that will not be costly or injurious to the overall financial health of the university and its programs," Turner added.

Edmondson said that, whatever the board's decision, "The Cornell community has benefited significantly from involvement in the [policy-review] process." He concluded with a quotation from an open letter from Professor Philip Lewis, a spokesman for Faculty and Staff Against Apartheid.

The quotation said, in part: "Divestment would make Cornell a better institution because it would enhance efforts within the campus community to improve race relations, because it would foster a propitious climate for building the strong programs in African and Afro-American studies that our recent successes in recruiting black faculty have made possible, because it would put the university in a convincing, unambiguous position for pursuing its African initiatives."

The financial report completed before Thanksgiving was summarized by George Huxel, vice president for finance and the university treasurer, who reported the drop in South Africa-related holdings.

In summarizing the legal report, University Counsel Walter Relihan said there had been no new divestment-related cases adjudicated by the State Court of Appeals since three years ago. He added that the very lack of such cases probably makes it more probable that courts would allow bodies such as Cornell's trustees to include social, ethical or political considerations — along with financial ones — in making investment choices. He concluded that the trustees' main concern should be policies that "will advance the purposes of the institution" in the short and long term, not what is going on inside South Africa.

— Sam Segal

Study on commercialization of biotechnology under way

Two Cornell professors have launched a three- to five-year study of the most effective ways to finance and manage the transfer of discoveries in biotechnology from the laboratory into medical and agricultural products for the marketplace.

One of their goals is to advise the U.S. government and American industry on how to remain competitive with Japan and Western Europe in commercializing one of the world's newest industries.

John Freeman, a professor in the Johnson Graduate School of Management, and Stephen Barley, an assistant professor in the School of Industrial and Labor Relations, received an \$89,000 grant from the National Science Foundation to study the commercialization of biotechnology in the United States. They both teach organizational behavior.

Barley and Freeman said their study will be the first large-scale organizational analysis of how biotechnology has been commercialized in the past.

In biotechnology, scientists are learning how to alter and transfer genes to improve the productivity of plants and animals and enhance such qualities as disease resistance. From their laboratories come improved crop plants, pharmaceuticals, substances for medical diagnosis, agricultural chemicals.

"You can develop a new semiconductor device, set up a manufacturing operation and put the product on the market almost immediately," said Freeman, who earlier conducted research in the microelectronics industry. "But biotechnology is more complicated. Its products often require extensive testing to determine that they are safe, approval by the Food and Drug Administration, and substantial capitalization — often more than a laboratory or an individual entrepreneur can arrange."

Barley said biotechnology "is not only widely recognized as being at the vanguard of high technology, but it illustrates how scientific breakthroughs can spawn industrial development. Although the industry

revolves around extensive collaboration by universities, venture capitalists, established corporations and small entrepreneurial firms, little is known about how the sector has actually developed."

According to Freeman, the stakes are big because "biotechnology is the goose that will lay the next golden egg. Every major economic power in the world — particularly Britain, France, Germany, Switzerland and Japan — has targeted this industry for economic payoffs in the next century."

"The United States currently is the world leader in biotechnology, but that leadership is not unassailable. The United States can maintain its lead if biotechnology receives favorable treatment from government and industry," he said.

Freeman and Barley will compile lists of all companies in biotechnology and study how each of their products was developed, tested, financed and marketed — or why it failed.

Their studies will result in recommenda-

tions on what government and industry should do to achieve the most effective development of the biotechnology industry.

Barley pointed out that little data now is available "on the types of organizational relationships associated with commercial success" in biotechnology.

"We intend this project as the first phase in an ongoing program of research aimed at better understanding the processes and problems involved in the commercialization of science and technology," Barley said.

Early in this century, chemistry and physics led to the development of new industries, but "biotechnology represents the first large-scale spinoff of biological research," he added.

Freeman pointed out that biotechnology promises "an economic potential and a potential for saving lives. Government policies can help or hinder the development of these products. This is a high-stakes business."

— Albert E. Kaff

Patents *continued from page 1*

on a novel bacterium, "but the decision came much sooner than many had expected," he noted.

So far, only one animal patent — for a genetically engineered mouse that is an animal model of human breast cancer — has been granted in the United States, but at least 20 more patent applications are believed to be under way.

Animal models duplicate the disease process and allow studies of causes and treatments without endangering human patients. The U.S. Congress has responded to the issue with a variety of legislative initiatives, including bills that would exempt farmers from royalty payments on patented animals, delay new animal patents for two years or ban them altogether.

"Potentially, patented animals are a multimillion-dollar business," Lesser said. "Among the possibilities are farm animals

that are genetically engineered to be more disease resistant, faster growing and able to use feed more efficiently, while producing leaner meat. A bit further along are changes in the configuration of animals — bigger pigs, for example — and increases in litter size, especially in cattle."

Seafood and poultry also are targets for genetic engineering that could lead to patents, Lesser said, but one of the most promising areas is animal models of human diseases. "The biggest search right now is for an animal model for human AIDS," he said, adding that the only laboratory animals now known to harbor human immunodeficiency virus — certain non-human primates — are too rare and expensive for widespread use.

More information on the animal patents symposium is available by calling 255-4595.

— Roger Segelken

Search *continued from page 1*

nity to submit written suggestions for nominees as well as comments on the needs of the institution.

Barker, who served briefly as research vice president before becoming provost, said Ballantyne "has done an outstanding job in what have been difficult times for all universities. Federal funding has changed dramatically — and not always upwards — and there has been an increase of regulatory activity affecting research."

The provost added that "Joe Ballantyne has had to face the issues of philosophical concern to modern research universities: Who should pay for research? What research is appropriate and what is not? Who owns the rights to discoveries? How to balance the risks and hazards with the benefits to society?"

"At the same time, society's expectations of research universities have changed,"

Barker continued. "Cornell and other universities have new, closer research relationships with industry. The research vice president made certain this need to cooperate with industry does not threaten the university's basic commitment to open, non-proprietary, non-classified research."

During Ballantyne's tenure as vice president, Cornell's annual expenditures for research increased steadily from \$170 million in fiscal 1983-84 to \$259.5 million in 1987-88.

Ballantyne said, "I appreciate the patience, support and cooperation of the faculty and staff with whom I have worked as vice president. Almost never has anyone said no when I asked them to help out in some way. However, I feel it will be in the best interests of the faculty and the institution for a different person to assume this role."

Statler's new executive chef brings taste of New England

Veteran New England chef Brian F. Halloran has been appointed executive chef for the new Statler Hotel, and he said he will offer diners a variety of regional American cuisine and the provincial French cooking that he learned in France.

Halloran's appointment to the hotel, which is operated by the School of Hotel Administration, was announced by Hans Weishaupt, the hotel's managing director, and was effective Nov. 21.

Halloran, 36, comes to Cornell after working for 12 years in New England restaurants. During the past seven years, he was concurrently the executive chef of Locke Ober, a 125-year-old Boston restaurant specializing in continental cuisine and grossing \$5 million annually, and of Clarke Cooke House of Newport, R.I., which features contemporary French menus and grosses \$2.5 million annually.

"Hailing from New England and having worked in Nantucket, Cape Cod, Boston and Newport, seafood is one of my fortes," Halloran said in an interview conducted in the Hotel School's kitchen laboratory. "Also I will be poking around to see what upstate New York has in its food history, learning from books and talking with people about dishes that are indigenous to the Finger Lakes."

Halloran said he views his move from professional restaurants into an academic hotel as an "opportunity to share in a teach-

ing and educational environment. When the opportunity to come to Cornell knocked on the door, I saw it as an opening to do something other than just cooking for the affluent. Service to others is one of my goals.

"Cornell's Hotel School is extremely prestigious. When I told friends that I was moving to Cornell, they responded with admiration. My ego was pumped up."

Halloran spoke about the increasing awareness of health issues among Americans and said, "I want to bring a good-health approach to the hotel's food, what I would call spa cuisine."

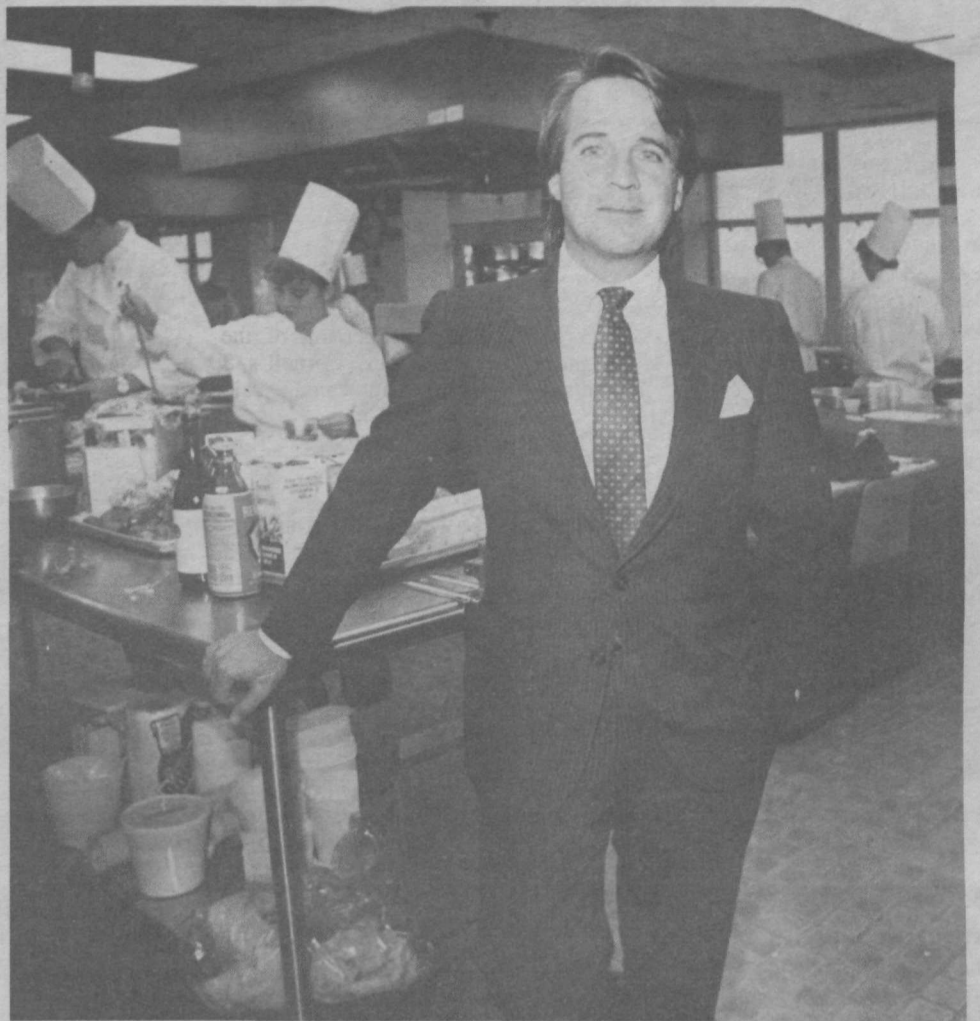
Halloran has demonstrated cooking on a number of television programs, including ABC's "Good Morning America," and has been written about in *Look* magazine.

He attended the Peabody School of Culinary Arts in Norwood, Mass., received an associate degree from the hotel school at the University of Massachusetts and earned a certificate from Roger Verge, a master of French provincial cooking, in Moulin Mouglin, France.

Halloran has taught in the New England Culinary Institute in Vermont, the Swinburne Institute in Newport, R.I., and the Sakonnet Vineyards in Tiverton, R.I.

The Statler Hotel expects to open its dining facilities and some guest rooms in mid-January. Grand opening of the entire hotel is scheduled for April.

—Albert E. Kaff



Jill Peltzman

Brian F. Halloran, new executive chef for the Statler Hotel.

Bacterial 'missing link' may help plants fix nitrogen

What may be a missing link in the evolution of microorganisms, a bacterium that is both photosynthetic and nitrogen-fixing, has been discovered at the Boyce Thompson Institute for Plant Research.

Bacteria that "fix," or convert, nitrogen in symbiosis with legumes are widely known, as are those that derive energy from the sun through photosynthesis. But the newly discovered organism is the first known to combine the two capabilities.

Studying this bacterium could help genetic engineers to develop ways to incorporate nitrogen-fixation capabilities into crop plants that now lack them. Expanding plants' capability to fix nitrogen from the air would enormously decrease the need for chemical fertilizers.

The BTI scientists propose a new genus and species name for the organism, and are preparing a publication describing recent work that demonstrates that the bacterium has photosynthetic capability.

The scientists are Joan M. Ellis, Mariangela Hungria, Bertrand D. Eardly, Nancy W. Rizzo and Allan R.J. Eaglesham. BTI is an independent research laboratory based at Cornell.

The scientists have tentatively named the bacterium *Photorhizobium thompsonum* — combining the prefix "photo-" with the name rhizobium given to nitrogen-fixing bacteria. The bacterium was discovered serendipitously in sand used as growth medium in a BTI greenhouse.

"This is a completely new organism with characteristics of rhizobia as well as those of photosynthetic bacteria," said Eaglesham, the BTI plant physiologist who was studying nitrogen-fixing nodules on plant stems when the surprising bacterium turned up.

"It may represent a primitive evolutionary form that could give hints of how nitrogen-fixing bacteria evolved and how the ni-



Newly discovered photosynthetic nitrogen-fixing bacterium produces nodules on the stem of an *Aeschynomene scabra* plant.

trogen-fixing nodulation in plants began."

The ability of certain plants to fix nitrogen has been a subject of intense study by agricultural scientists.

In this process, leguminous plants such as soybeans and others in the pea family attract nitrogen-fixing microorganisms that are held in root nodules, allowing them to thrive in soil with little available nitrogen.

The rarer growth of nitrogen-fixing nodules on plant stems has been studied at BTI for about 10 years. Stem nodules do not normally appear on agriculturally important crops, but do occur on some plants living in flooded conditions, particularly weedy plants of the genera *Aeschynomene* and *Sesbania*. Stem nodulation is believed to aid plants when water cuts off most of the oxygen and nitrogen needed by root nodules.

Eaglesham and his BTI colleagues discovered the new bacterium while attempting to save *Aeschynomene indica* plants without nodules that were suffering from nitrogen deficiency.

Rather than destroy the dying plants, they transplanted them into sand from another greenhouse and flooded the roots with water. Within two weeks, nitrogen-fixing nodules appeared on the stems.

A subsequent series of tests showed that the nodules were caused not by a previously identified nitrogen-fixing bacterium in the sand, but by a completely new and different form that fixes nitrogen and conducts photosynthesis. The plant physiologists traced the sand to Virginia.

Then they learned that another *Aeschynomene* species, *A. virginica*, is native to fresh and brackish tidal waters from New Jersey to southern Virginia.

"Bacteria that produce nodules in *A. virginica* may have been present in small amounts of soil, which mix with sand dur-

ing mining, and may be 'promiscuous' enough to form nodules on other *Aeschynomene* species," Eaglesham said.

"It is an amazing coincidence," he continued. "The growth medium we have been using all along for plant studies of all kinds happens to be 'contaminated' with a microorganism that causes stem nodulation."

The plant physiologist said the bacterium does not fit in any one taxonomic classification. It doubles its numbers in less than six hours like the so-called "fast" bacteria of the genus *Rhizobium*, produces enzymes characteristic of the "slow" *Bradyrhizobium* genus, and conducts photosynthesis.

"This is some intermediate form," Eaglesham said. "Most known photobacteria are photosynthetic only under anaerobic conditions."

"They live in marine environments or water-logged soils and turn on their photosynthetic abilities when there is no oxygen. This organism is photosynthetic in aerobic environments."

Photorhizobium thompsonum may be an evolutionary link to the first bacteria that tried to form nodules on plants, Eaglesham speculated.

He noted that, even now, early stages of nodulation are more of a pathogenic interaction than a symbiotic relationship. The first plant cells that are penetrated by nitrogen-fixing bacteria collapse and die as the plant tries to contain the "infection."

A nitrogen-fixing bacterium that is particularly adept at penetrating plant stems and can produce some of its own food and energy from light would seem to have a competitive advantage — both during the evolutionary development of plant nodulation and in the future, as scientists attempt to expand nitrogen-fixing capabilities to more plant species, Eaglesham said.

—Roger Segelken

'89-90 tuition between \$13,900 and \$14,100 expected at the privately supported units

University budget planners are assuming that 1989-90 tuition for undergraduates in privately supported units will be between \$13,900 and \$14,100, an increase of between 6.1 and 7.6 percent from the current level of \$13,100.

Provost Robert Barker will discuss this and other planning assumptions with the Board of Trustees' Executive Committee when it meets on Dec. 8 in New York City. Among the other assumptions are that:

- The student activity fee will remain at \$39.50.

- The university's general-fund contribution to financial aid will rise to about \$18 million from the current \$15.6 million.

- There is likely to be some increase in the self-help and student-contribution components of financial aid.

Final recommendations on tuition for undergraduates in the privately supported units will be made to the full board in March; on tuition for the statutory units, in the spring semester.

Until then, tuition and other budget considerations will continue to be discussed with a number of constituencies.

The deans, the University Assembly's Budget Policy Committee, committees of the faculty and the Provost's Planning and Policy Committee will discuss tuition and other budget constituencies.

Holiday decorations policy reminder

Members of the Cornell community are reminded of the university's policy governing holiday decorations.

University Senate legislation adopted in 1972 states that Cornell cannot sponsor or provide direct support for the display of religious symbols.

Any area which gives the impression that a symbol is associated with the university should not be used for the purpose of display. In particular, the external surface of buildings cannot be used for such displays; however, individuals are not prohibited from having private displays in their own offices or living

quarters.

Stars displayed at Christmas time are considered religious symbols, according to the legislation. Decorated trees, however, are not considered religious symbols unless the decorations include such religious symbols as stars.

Decisions concerning application of the guidelines are made by the vice president for campus affairs. Questions should be addressed to William D. Gurowitz, 313 Day Hall, telephone 255-4166.

Gurowitz has requested that decorations be non-electrical.

CALENDAR

All items for the calendar should be submitted (typewritten, double spaced) by campus mail, U.S. mail or in person to Chronicle Calendar, Cornell News Service, Village Green, 840 Hanshaw Road, Ithaca, NY 14850.

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

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

DANCE

Cornell Folkdancers

The Cornell community and general public, including beginners, are welcome to join in folkdancing. Admission is free.

Dec. 4, Martha Van Rensselaer Hall, auditorium, instruction and requests from 7 to 11 p.m. For more information, call Wies van Leuken: 257-3156.

Israeli Folkdancing

Israeli folkdancing, Dec. 1, 8:30 p.m., Edwards Room, Anabel Taylor Hall.

EXHIBITS

Johnson Art Museum

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

"Contemporary Art in Czechoslovakia: Selections from the Jan and Meda Mladek Collection," featuring the work of 12 Czech artists and including sculpture, painting, collage and reliefs, on view through Dec. 23. Artists represented in the show include Vladimir Janousek, Magdalena Jetelova, Jiri Kolar, Stanislav Kolibal, Eva Kmentova, Karel Malich, Jiri Naceradsky, Karel Nepras, Ladislav Novak, Adriana Simotova, Otakar Slavik and Ales Vesely.

"Nature Transcribed: The Landscapes and Still Lifes of David Johnson (1827-1908)," an exhibition of 40 paintings and eight drawings by the 19th-century American landscape painter David Johnson, which will be the first retrospective exhibition of the artist's work, through Dec. 23.

"Transformations: Louis I. Kahn's Library Projects," an exhibition of original sketches, office drawings and photographs exploring the designs of Louis I. Kahn for three self-contained school libraries, through Dec. 16. The exhibit, co-sponsored by the School of Architecture, attempts to trace the evolution of Kahn's design process.

FILMS

Films sponsored by Cornell Cinema unless otherwise noted. An (*) means an admission charge.

Thursday, 12/1

"Buddhism: Footprints of the Buddha — India," sponsored by the South Asia Program Film Series, 5 p.m., L04 Uris Library.

"Mickey One" (1965), directed by Arthur Penn, with Warren Beatty, Hurd Hatfield and Alexandra Stewart, 8 p.m., Uris.

"The Marriage Dinner" and "The Lemon Grove Incident," sponsored by CUSLAR, 8 p.m., Anabel Taylor.

Friday, 12/2

"The Whales of August" (1987), directed by Lindsay Anderson, with Bette Davis, Lillian Gish and Vincent Price, 7:30 p.m., Uris.*

"Robo Cop" (1987), directed by Paul Verhoeven, with Peter Weller and Nancy Allen, 9:45 p.m., Uris.*

Saturday, 12/3

"Robo Cop," 9:45 p.m. and midnight, Uris.*

"Stormy Monday" (1988), directed by Mike Figgis, with Melanie Griffith, Tommy Lee Jones and Sting, 7:30 p.m., Uris.*

"Platoon" (1987), directed by Oliver Stone, with Willem DaFoe, Tom Berenger and Charlie Sheen, 7:15 p.m. and 9:45 p.m., Anabel Taylor.*

Sunday, 12/4

"The Passion of Remembrance" (1986), directed by Sankofa Collective, co-sponsored with CCPA, 2 p.m., Johnson Museum.

"Singin' in the Rain" (1951), directed by Gene Kelly, with Gene Kelly, Donald O'Connor and Debbie Reynolds, co-sponsored with the Ithaca Youth Bureau, 2 p.m. and 8 p.m., Uris.*

Monday, 12/5

"A Star is Born" (1954), directed by George Cukor, with Judy Garland and James Mason, 8 p.m., Uris.*

Tuesday, 12/6

"Sunset Boulevard" (1950), directed by Billy Wilder, with Gloria Swanson, William Holden and Erich von Stroheim, 8 p.m., Uris.*

Wednesday, 12/7

"The Bad and the Beautiful" (1952), directed by Vincent Minnelli, with Kirk Douglas, Lana Turner and Dick Powell, 8 p.m., Uris.*

Thursday, 12/8

"Good Morning Babylon" (1987), directed by Paolo Taviani, with Vincent Spano, Joaquim De Almeida and Greta Scacchi, 8 p.m., Uris.*

LECTURES

Astronomy

"Relativity, Pulsars and Atomic Time," Joe Taylor, Princeton University, Dec. 1, 8 p.m., auditorium, Rockefeller Hall.

Baker Lecture Series

"Stereochemistry and Mechanisms," Jeremy Knowles, Harvard University, Dec. 1 and 6, 11:15 a.m., Baker.

English

"The Black Feminist as 'Other' in Literary Theoretical Discourse," Valerie Smith, English and Afro-American studies, Princeton University, Dec. 2, 1 p.m., Guerlac Room, A.D. White House. Part of the Toni Morrison Lecture Series.

Ethics & Public Life

"Covert Action in a Democracy," William E. Colby, former director of the Central Intelligence Agency, and a response by Charles R. Beitz, professor of political science, Swarthmore College, Dec. 1, 8:15 p.m., Bache auditorium, Malott Hall.

Music

"The Ballade and Women's History," Jeffrey Kallberg, Dec. 2, 4:15 p.m., Grout Room, Lincoln Hall.

Plant Pathology Graduate Colloquium

"Potential of Wetland Agriculture in Central America — Lessons from the Past," B.L. Turner II, geography, Clark University, Dec. 1, 10:10 a.m., Whetzel Seminar Room, 404 Plant Science.

Southeast Asia Program

"Women, Exchange of Gifts, and Money: A Case Study of the Market Economy in the Kei Islands," P.M. Laksono, SEAP graduate student, anthropology, Dec. 1, 12:20 p.m., 102 West Ave.



Gloria Swanson and William Holden star in "Sunset Boulevard," a film classic to be shown by Cornell Cinema on Tuesday. Check the listings under "Films" for details.

MUSIC

Department of Music

Cornell students will perform chamber music on Dec. 1, 8:15 p.m., Barnes Hall. Violinists Manek Mistry, Yao-Song Chen and Bruce Anderson, violist Karen Mohlke, cellist Nathan Siemers and pianist Yumi Asaoka will play compositions by Johann Sebastian Bach, Cesar Franck and Johannes Brahms.

The Cayuga Chamber Orchestra and the Cornell Chamber Singers, with guest conductor Susan Davenny Wyner, will perform Handel's "Messiah" on Dec. 2, 8:15 p.m., Bailey Hall. Featured will be soloists Janet Brown, soprano; Xiu-Ru Liu, alto; Gerald Graham, tenor; and Thomas Paul, bass.

Javanese music by the Cornell Gamelan Ensemble, with Philip Yampolsky, director, and guest artist Sumarsam, Dec. 3, 7:30 p.m., Barnes Hall. The 16-member orchestra uses about 30 instruments, consisting mainly of bronze hanging gongs, gong-chimes and drums but including also stringed fiddle and pentatonic xylophones. Co-sponsored by the Southeast Asia Program.

Sage Chapel Christmas Program, with director and conductor Donald R.M. Paterson, will be given on Dec. 4, 8:15 p.m., Sage Chapel. The program will feature ancient and modern carols, soloist soprano Nanette Hanslowe, readings by President Frank H.T. Rhodes and by professors Donald Eddy and Kenneth Kennedy and by students, handbell change ringing directed by Chris Heller and organ pieces played by Paterson.

Musica Nova, Cornell's new group devoted to 20th-century music, will give its first performance on Dec. 6, 8:15 p.m., Barnes Hall. The group is directed by Edward Murray, conductor of the university orchestra and a member of the music department faculty. The program will include Manuel De Falla's "Harpsichord Concerto," with Joyce Lindorff as soloist; Anton Webern's Symphony, Op. 21, in its chamber version; a song cycle of Hindemith to a text of Georg Trakl, "Die junge Magd," sung by mezzo-soprano Marina Gilman; Roger Reynold's new work for marimba, "Autumn Island," featuring Gordon Stout; pieces from Bela Bartok's "Mikrokosmos;" and Falla's "Psyche," for mezzo-soprano and chamber ensemble.

Bailey Hall Series

The 1988-89 Famous Artist Series will feature the Chung Trio, Dec. 4, 8:15 p.m., Bailey Hall. The program will include the Shostakovich Trios No. 1 Op. 8 and No. 2 Op. 67 and the Tchaikovsky Trio in A Minor, Op. 50, a highlight of the romantic repertoire.

Bound for Glory

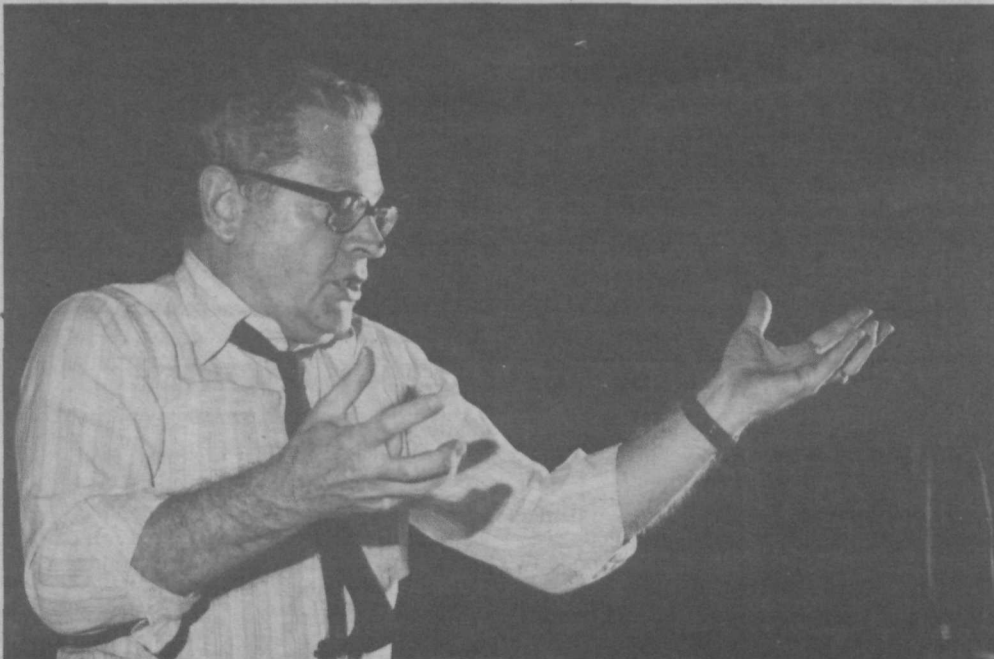
John Kirk, multi-instrumentalist/singer, will play three live sets in the Commons Coffeehouse, 8:30, 9:30 and 11:30 p.m., Dec. 4. Bound for Glory can be heard from 8 to 11 p.m. on WVBR-FM93.

Renaissance Holiday Music

The Whiton Chorale, directed by Jayne Demakos Widerstrom, Dec. 3, 8:15 p.m., Anabel Taylor Chapel. Donations \$4-\$6.

Risley Hall

Open reading of Handel's "Messiah," Dec. 10, 8 p.m. in Risley Hall. Sing, perform or just watch. Instrumentalists are requested to bring music stands; scores will be provided. For further information, call Ed Cyrus at 255-0445.



Donald R. M. Paterson will conduct the Sage Chapel Christmas Program this Sunday.

READING

Medieval poetry reading, Dec. 5, 4 p.m., coffeehouse, Temple of Zeus, Goldwin Smith Hall. Professors Kaske, Ahl, Wetherbee and others will read short selections of poetry in medieval languages. Translations will be provided.

RELIGION

Sage Chapel

Robert L. Johnson, director of University Ministries, will deliver the sermon at Sage Chapel on Dec. 4. Services begin at 11 a.m. Music will be provided by the Sage Chapel choir, under the direction of Donald R.M. Pater-

Catholic

Mass: Every Saturday, 5 p.m., every Sunday, 9:30 and 11 a.m., and 5 p.m., Anabel Taylor Auditorium. Daily Masses Monday through Friday, 12:20 p.m., Anabel Taylor Chapel.

Christian Science

Testimony Meeting: Every Thursday, 7 p.m., Anabel Taylor Founders Room.

Episcopal (Anglican)

Every Sunday, 5 p.m., Anabel Taylor Chapel.

Friends (Quakers)

Sunday, 10 a.m., adult discussion; 11 a.m. meeting for worship, Edwards Room, Anabel Taylor Hall.

Jewish

Morning Minyan: Young Israel House, 106 West Avenue. Call 272-5810. Reform Services: Friday evenings 5:30 p.m., Anabel Taylor Chapel. Conservative/Egalitarian Services: Friday 5:30 p.m., Saturday 9:45 a.m., Anabel Taylor Hall Founders Room. Orthodox Shabbat Services: Friday evenings, Young Israel, 106 West Ave. Call 272-5810; Saturday 9:15 a.m., Edwards Room, Anabel Taylor Hall.

Korean Church

Every Sunday, 1 p.m. Anabel Taylor Chapel.

Muslim

Sunday through Thursday, 1 p.m., 218 Anabel Taylor Hall. Friday 1 p.m. Anabel Taylor Edwards Room.

Protestant

Protestant Cooperative Ministry: Every Sunday, 11:15 a.m., Anabel Taylor Chapel. Baptist Campus Ministry (SBC): Every Saturday, 7 p.m., in the Forum, Anabel Taylor Hall.

Zen Buddhism

Zazen meditation: Tuesdays at 7 p.m. and Thursdays at 5:10 p.m. in the chapel or the Edwards Room, Anabel Taylor Hall. For more information or to arrange beginner's instruction, telephone Ian Dobson: 347-4303.

SEMINARS

Applied Mathematics

"Urn Processes in the Analysis of Search Trees," Jose Luis Palacios, New Jersey Institute of Technology and University of Caracas, Venezuela, Dec. 2, 4 p.m., 322 Sage Hall.

Astronomy

"Local Large-Scale Structure and Bulk Flows," Nick Kaiser, University of Toronto, Dec. 1, 4:30 p.m., 105 Space Sciences.

Atomic & Solid State Physics

"Quantum Hall Effects in Wide Parabolic GaAs-GaAlAs Wells," Elisabeth Gwinn, Harvard University, Dec. 6, 4:30 p.m., 700 Clark Hall.

Biochemistry, Molecular & Cell Biology

"Transcription Factor-RNA Polymerase II Interaction Regulating mRNA Synthesis," Jim Ingles, University of Toronto, Dec. 2, 4:30 p.m., 204 Stocking Hall.

"A Mobile Group I Intron in the Nuclear rDNA of *Physarum Polycephalum*," Donna Muscarella, biochemistry, molecular & cell biology, Dec. 5, 12:20 p.m., 125 Riley-Robb.

Biophysics

"What Cholesterol Does to a Model Membrane," Jack Freed, chemistry, Dec. 7, 4:30 p.m., 700 Clark Hall.

Boyce Thompson Institute

"Protein Traffic Across Membranes," Gunther Blobel, cell biology, Rockefeller University, Dec. 7, 2 p.m., Boyce Thompson Institute Auditorium.

Chemical Engineering

"Characterization of Structure and Lithographic Properties of Ultrathin Polymer Films," Curtis W. Frank, chemical engineering, Stanford University, Dec. 6, 2 p.m., 145 Olin Hall.

Chemistry

Title to be announced, James Economy, IBM, Dec. 1, 4:40 p.m., 119 Baker. General chemistry colloquium.

"The Mechanism of the Bio-Claissen Condensation, the First Step of Polyhydroxybutyrate Synthesis," Satoru Masamune, MIT, Dec. 5, 4:40 p.m., 119 Baker. Organic chemistry seminar.

Ecology & Systematics

"Colony-Level Foraging Dynamics and Intraspecific Interactions in Harvester Ants," Deborah Gordon, zoology, University of Oxford, England, Dec. 7, 4:30 p.m., Morison Seminar Room, A106 Corson/Mudd Hall.

Environmental Toxicology

"Vitamin E as a Biomodulator of Retrovirus-induced Immune Suppression and Tumorigenesis," Kimberly Kline, division of nutrition, University of Texas, Austin, Dec. 2, 12:20 p.m., 304 Femow Hall.

Floriculture & Ornamental Horticulture

"Insect Pest Management on Greenhouse Crops," John Sanderson, entomology, Dec. 1, 12:15 p.m., 404 Plant Science Bldg.

Genetics

"Mitotic Mutants of *Drosophila*," Maurizio Gatti, University of Rome, Dec. 6, 4 p.m., 105 Bradfield Hall.

Genetics & Development

"Mesenchymal Cell Movements and Assembly During Avian Development," Drew Noden, anatomy, Dec. 5, 4 p.m., 135 Emerson Hall.

Geological Sciences

"Reverse Offsets and Active Strike-Slip Faults," Yves Gaudemer, Dec. 1, 4:30 p.m., 1120 Sneek Hall.

History & Philosophy of Science & Technology

"Maxwell's Early Scientific Work," Peter Harman, visiting scholar, Harvard University, Dec. 1, 4:30 p.m., 165 McGraw Hall.

Immunology

"The Source and Significance of $[Ca^{2+}]_i$ Oscillations in Stimulated Mast Cells," Paul Millard, pharmacology, Veterinary Medicine, Dec. 2, 12:15 p.m., G-3 Vet Research Tower.

International Nutrition

"The Role and Scope of International Programs in the College of Human Ecology," Francille Firebaugh, dean, College of Human Ecology, Dec. 1, 12:40 p.m., 200 Savage Hall.

Mechanical & Aerospace Manufacturing Engineering

"Jet Engine Turbine Blading," Robert R. Spole, Therm Inc., Dec. 1, 4:30 p.m., B14 Hollister Hall.

Microbiology

"Untangling Gene-Product Functions in the nif Regulon of *Klebsiella pneumoniae*," Gary P. Roberts, bacteriology, University of Wisconsin, Dec. 1, 4:30 p.m., 124 Stocking Hall.

"Temporal Development of Immunity in Balb/c Mice Infected with Brucella Abortus Strain 19," Luis Araya, microbiology, immunology & parasitology, Veterinary Medicine, Dec. 5, noon, G-3 Vet Research Tower.

Natural Resources

"The Social Impacts of World Heritage Listing and Related Natural Resource Development in Australia," Roy Rickson, Griffith University, Brisbane, Australia, Dec. 5, 12:15 p.m., 304 Femow Hall.



An archival photograph of the Cornell Gamelan Ensemble, which will perform on Saturday in Barnes Hall. See the listings under "Music" for details.

Title to be announced, Norman Myers, consultant in environment and development, Dec. 6, 12:20 p.m., 304 Femow Hall.

Neurobiology & Behavior

"Genes in Queens and Drones: A Worker's View of Reproduction in Honey Bee Colonies," P. Kirk Visscher, neurobiology & behavior, Dec. 1, 12:30 p.m., Morison Seminar Room, Corson/Mudd Hall.

Ornithology

"Mate Choice in Insects: It Doesn't Take a Big Brain to be Smart," Thomas Eisner, Jacob Gould Schurman Professor of Biology, neurobiology & behavior, Dec. 5, 7:45 p.m., Laboratory of Ornithology, 159 Sapsucker Woods Road.

Peace Studies

"Negotiations and Arms Conflict: The Lessons of the Columbian Peace Process," Marc Chemick, New York University, Dec. 1, 12:15 p.m., G-08A Uris Hall.

Pharmacology

"G-Protein Mediated Regulation of Phospholipase C," T. Kendall Harden, pharmacology, University of North Carolina, Dec. 5, 4:30 p.m., G-3 Vet Research Tower.

Plant Biology

"Alpha-amylase Gene Structure and Tissue-Specific Hormone-Inducible Expression in Rice," Tsai-Mei Ou-Lee, plant biology, Dec. 2, 11:15 a.m., 404 Plant Science.

Pomology/Vegetable Crops

"Vegetable Production in the United Kingdom," LeRoy Ellerbrock, vegetable crops, Dec. 1, 4:30 p.m., 404 Plant Science Bldg.

Poultry Biology

"Eye Growth and Optics in Chickens," Howard Howland, Neurobiology & Behavior, Dec. 1, 4:30 p.m., 300 Rice Hall.

Psychology

"Recognizing Solid Objects in a Two-Dimensional Image," Daniel Huttenlocher, computer science, Dec. 2, 3:30 p.m., 202 Uris Hall.

Science, Technology & Society

"Science, Power and Policy," an STS series, "The Politics of Animal Patenting," Daniel J. Kevles, California Institute of Technology, Dec. 5, 12:40 p.m., 609 Clark Hall.

Stability, Transition & Turbulence

"Turbulence Measurements in a Helium Jet," N.R. Panchapakesan, mechanical & aerospace engineering, Dec. 6, 1 p.m., 282 Grumman.

Toxicology

"Vitamin E as a Biomodulator of Retrovirus-Induced Immune Suppression and Tumorigenesis," Kimberly Kline, nutrition, University of Texas, Austin, Dec. 2, 12:20 p.m., 304 Fernow Hall.

SPORTS

Thursday, 12/1

Women's Basketball, Colgate, at home, 7:30 p.m.
Men's Wrestling, at Lehigh, 7:30 p.m.

Friday, 12/2

Men's Polo, Yale, at home, 7:30 p.m.

Friday, 12/2 - Saturday, 12/3

Men's Varsity Basketball, at Stanford Tournament

Friday, 12/2 - Sunday, 12/4

Men's Squash, at Williams Invitational

Saturday, 12/3

Men's Wrestling, Cornell Invitational
Men's Fencing, at Vassar with MIT and St. John's, noon
Women's Fencing, at Vassar with Stanford, MIT and St. John's, noon
Women's Swimming, at Columbia, 12:30 p.m.
Men's Swimming, at Columbia, 4 p.m.
Women's Hockey, at New Hampshire, 4:30 p.m.
Women's Basketball, Long Island, at home, 5 p.m.
Women's Polo, Yale, at home, 8:15 p.m.

Sunday, 12/4

Men's Track, at Syracuse Relays
Women's Track, at Syracuse Relays
Men's Varsity Hockey, at Harvard, 2 p.m.
Women's Hockey, at Providence, 3 p.m.

Monday, 12/5

Men's Jr. Varsity Hockey, Niagara Jr. Bs, at home, 7:30 p.m.

Tuesday, 12/6

Women's Basketball, Niagara, at home, 7 p.m.

Wednesday, 12/7

Men's Varsity Basketball, Binghamton, at home, 7:30 p.m.

SYMPOSIA

Western Societies Program

Symposium on Animal Patents, Dec. 5-6, Kaufmann Auditorium, Goldwin Smith Hall. The legal, economic and social issues of animal patents will be discussed. For more information call 255-4595.

Continued on page 12

Bugs are stars in interactive videodisc laboratory

To teach about the role of insects in everyday life, Cornell educators have crammed into one interactive video program thousands of poems and songs, photomicrographs, old movie clips, paintings and bits of bug lore.

Program users encounter everything from a grasshopper-shaped poem by e.e. cummings and the Matisse painting "Boy with Butterfly Net" to the giant locusts that took over Chicago's Loop in "The Beginning of the End." The result, say developers, is an entertaining and informative combination of field trip, laboratory, library and museum on videodisc.

"The Cultural Influence of Insects," produced by hypermedia pioneer Geri Gay and Cornell entomologist Edgar M. Raffensperger, was demonstrated for the first time at an educators' symposium on interactive media design on Nov. 17.

"We are trying to overcome the formidable image of libraries," said Raffensperger, who spent 12 years gathering materials of all kinds for the Cornell entomology course on which the program is based. "We'd like to get away from the old 'lab-stool syndrome' of students having to peer through microscopes for hours. Perhaps we also can avoid some of the name-calling," said the scientist, whose discipline can't resist labeling a cricket a *Gryllus bimaculatus*.

An animated cricket, in fact, is a guide in one of three ways students can choose to use the interactive program, which is set in and around a Victorian farmhouse that is bugged in more ways than one. The only humans in the video program are a world-traveling airplane pilot, his graduate student passenger, and an elderly lady who occupies the house where the plane lands.

"We use the exploration of the house as a kind of organizational metaphor, with various categories of information in different rooms and places outdoors," explained Gay, an assistant professor of communication and director of Cornell's Interactive Media Center. The center develops and evaluates interactive learning programs for higher education through a major grant from International Business Machines Corp.

Users of the insects-in-culture program can direct the student visitor to move — robot fashion — by touching instructions for right, left, straight ahead or turn around.

"The attic of this old farmhouse, for example, just happens to contain dozens of paintings — insects in art," Gay said. "Touch a ceramic honeybee in the kitchen, via the touch screen, and you reveal a mass of information on bee society. A radio plays such songs as 'Flight of the Bumblebee' and 'A Taste of Honey.' A television in the living room shows how insects are depicted in the mass media, as in the classic movie 'The Fly.'"

Alternatively, program users can browse through the interactive video as if it were a sight-and-sound encyclopedia, jumping from insects in religion to fear of insects to the diseases they cause.

Or, students who would rather learn from a cricket than from a pedantic professor can use the animated figure as a kind of intelligent, intuitive tutor that leads them through all the information. "You seem to be interested the structure of insect wings," the cricket says. "Would you like more on dragonfly wings?"

Among the other areas of interest to explore at this video Victorian house:

- The pantry contains not only food but insects that thrive in it, including red flour bugs in the flour. That discovery leads to material on insects as destroyers of food supplies.



Screen image of a butterfly collection from a new interactive video program on the role of insects in daily life.

- The pesky insects are in the garden, too, and program users are invited to eradicate them with a blast of ZZZorch insecticide. If they do, the program responds with a discussion on the environmental ethics and risk analysis of integrated pest management.

- Aquatic insects in the farm pond illustrate the evolution of species.

- A microscope is ready, at a touch of the screen, for close-up views of any insect in the teaching program.

- For the musically inclined, a virtual orchestra of insect sounds can be synthesized into buzzing, clicking, humming and chirping "songs."

- Touching the video bookshelves activates a collection of insects in poetry, including Robert Burns' ode "To a Louse," recited by a Scotsman: "Oh wad power the giftie gie us To see ourselves as others see us!"

"With my Pennsylvania Dutch accent I could never do Bobby Burns justice in class," said Raffensperger, who teaches the nation's only college course on insects in culture and has assembled more than 100 poems and 70 musical numbers on the topic.

Raffensperger plans to use the randomly accessible insect images and other portions of the interactive video in his lectures, and has no fear of being replaced by a teaching machine.

"Hypermedia allows for performances the instructor is not capable of in the classroom. Each videodisc holds the

equivalent of more than 50,000 color slides, and the instructor can use any one or a hundred of them. We can put a program like this in the library for the students to pursue beyond class, or distribute it to colleges where the course is not taught."

Although the videodisc program is designed for college-level students, it should be equally useful for high schoolers, according to Gay. She offers a vision of the near future in which students on assignment will use accessory equipment at videodisc centers to assemble information, images and sounds — with color printers and tape recorders — and return to class with multimedia reports.

Gay, who has been experimenting with educational interactive video since 1981, has produced teaching programs in every area from German language and bird identification to the physics of windsurfing. The insects-in-culture program, however, is the most complex program so far at Cornell, which is one of a half dozen U.S. universities specializing in hypermedia.

Funding for production of the videodisc program, estimated at \$30,000 to \$50,000, came from IBM and from Cornell's President's Fund for Educational Initiatives. Assisting in the production were Michael Oltz, computer programming; Margie Wilson, image digitizing and graphics; Ron Hess, design and video work; and Michael Tolomeo, video production.

—Roger Segelken

Dean of students continued from page 1

perception, at least, has been that the dean of students is not also the dean of graduate students."

The committee said it plans to present its final report about Feb. 15 and that, until Feb. 1, it welcomes comments, which may be presented in writing at Room B-40 of Day Hall. Copies of the preliminary report are available there, too.

The chairman of the review committee, Dean David B. Lipsky of the School of Industrial and Labor Relations, emphasized that the students, faculty and staff on his committee had approached the review with open minds and had looked at all points of view before they reached a consensus.

They agreed that the dean of students should "strive to bridge the gap between students, on the one hand, and faculty and administrators, on the other," and also be "an advocate for student concerns in the same sense that the dean of the faculty is an advocate for faculty concerns."

"It is the committee's view that the dean of students position must be strengthened if the values of community integration and student advocacy are to be served effectively," the report said.

The report's nine recommendations seek to promote such integration and advocacy, while also assuring that the deanship supports the educational mission of the university.

Currently the dean reports to an administrative officer, Vice President for Campus Affairs William D. Gurowitz. By having the dean report to the provost — the university's highest academic and administrative

officer besides the president — the committee meant to assert the importance of non-classroom student interests, services and programs.

"This is the most important thing that's been said about non-academic aspects of student life in the 17 years I've been here," said William P. Paleen, director of residence life and a committee member. "It says our educational mission has two parts — academics and personal development — and that they must both be considered essential."

Besides recommending the five-year term for a tenured professor reporting to the provost, the committee also suggested that the dean become a member of the president's executive staff and have "regular contact with the president, provost, vice presidents and deans."

Two further recommendations were that the dean should "convene regular meetings" with assistant and associate deans to discuss non-academic concerns and that he or she should oversee an information-gathering process that could give the university a continuous and accurate reading of student opinion.

Lipsky said that the committee had heard much praise for the work of the dean's office and that its charge was not to evaluate performance, but to suggest what the office ought to be. The committee said that, while the dean's office should give up responsibility for off-campus housing, it ought to keep its principal functions, which the committee listed as programs for student counseling, development and growth; new-student pro-

grams, including some of the orientation activities; fraternity and sorority life; and graduate-student programs.

Whether specific programs within these general areas properly serve Cornell's academic mission was not their concern, Lipsky said. That question can be addressed by an advisory committee that Lipsky's committee said should be established "for reviewing the policies, programs and services of the Dean of Students Office . . ." They recommended that the advisory group have a broad campus membership and be headed by a faculty member to be named by the provost.

Over the months, the 10-member review committee interviewed Drinkwater and his staff and a wide range of Cornell students, faculty and staff. They also reviewed reports and letters and surveyed literature on how the dean-of-students function is performed at a variety of universities.

Having a tenured faculty member as dean of students is not unusual, Lipsky said. Approaches range from eliminating the of-

fice to having elaborate, all-professional staffing to having some mix of faculty, staff and volunteers provide services.

The report said that choosing a faculty member who already has tenure "will help promote the authority, independence and security of the dean of students and permit him/her to be a more effective advocate of student concerns."

Cornell's deanship has been kept vacant pending this review since Drinkwater left July 1 to become headmaster of Friends Academy in Locust Valley, Long Island. Associate Dean Howard Kramer has been serving as acting dean.

Committee members besides Lipsky, Paleen and Young are Associate Deans Isaac Kramnick of the College of Arts and Sciences and Richard N. White of the College of Engineering; Robert L. Johnson, director of Cornell United Religious Work; Margaret I. Lacey, director of dining services; and undergraduates Steven A. Biellak, Shari Prussin and Matthew A. Munich.

—Sam Segal

Barton Blotter: Laser printer, redwood sign stolen

A laser printer worth \$4,200 was taken from Hollister Hall and the incident was among 21 thefts of cash and valuables on campus, according to the morning reports of the Department of Public Safety for Nov. 14 through 27. Total losses were set \$8,955.

Other thefts included \$1,400 in cash and other items taken from the Helen Newman

Hall, a \$500 redwood sign stolen from the entrance drive to the Water Filtration Plant, two video cassette recorders worth \$700 taken from Statler Hall, \$330 in laundry stolen from University Hall No. 1 and a parking permit worth \$135.

Nine persons were referred to the judicial administrator on various charges.

Cornell asks state to delay pesticide notification law

The university has asked for a delay of at least four months in enforcement of the state's new regulations on prior notification of pesticide applications because the regulations "could greatly limit the flexibility of farmers and curtail the effectiveness" of the statewide Integrated Pest Management program.

David L. Call, dean of the College of Agriculture and Life Sciences, disclosed on Nov. 28 that Cornell had made the request to the New York State Department of Environmental Conservation "to allow for proper joint educational efforts." The pesticide notification law is scheduled to go into effect in January.

Speaking at the opening session of the Governor's Conference on Agriculture and the Environment in Albany, Call said the new regulations represent a typical area of disagreement between researchers and regulators over environmental issues.

"Here we clearly have common long-term goals, but a difference of opinion in how to reach these goals," he said, urging state agencies and legislative bodies to work more closely with research and educational institutions to develop better programs for tackling environmental issues.

Call said that education based on sound cooperative research between the university and the state can lead to faster and lower-cost solutions to environmental problems than enforcement of what he called "arbitrary standards."

Citing the issue of pesticide residues as another example, Call said, "To some, any pesticide residue is bad. To others, a residue below a conservative, health-based safety standard is totally acceptable."

As for water-quality issues, he said, "Some public statements suggest that much of New York State's groundwater is contaminated with pesticides. Our research shows that only in isolated, specialized situations are pesticides found in groundwater . . . and in almost all cases within acceptable tolerance."

Call said, "We must dispel the notion

that there is direct conflict between modern agricultural practices and a clean environment." Protecting environmental quality is one of the primary goals of the College of Agriculture and Life Sciences, he said, adding, "We want a prosperous, growing agricultural industry in New York. At the same time, we correctly insist that agriculture protect the environment that is so important both to the agricultural sector and to all of the citizens of the state."

Through its research, extension and teaching programs as the land-grant university of New York State, Cornell is working to protect the land, water and air, which are basic resources for agriculture, while helping farmers earn their livelihood, Call pointed out.

When the nationwide Land Grant system started more than a century ago, agricultural production was its major mission because about 35 percent of the population was involved in food production and the standard of living in the rural areas lagged behind the rest of the nation. Since then, Land Grant institutions such as Cornell have expanded their mission to encompass wide-ranging consumer and environmental issues, he said.

"We've done this by supporting research in the agricultural sciences to include the full spectrum of the food system, from the most basic biotechnological processes to the impact of food consumption on health, nutrition and consumer well-being," he said.

To explain the breadth of Cornell's research and extension efforts geared to address some of the pressing environmental problems, Call cited these examples:

- Cornell is continuing its efforts to protect the land through soil conservation in close cooperation with the U.S. Department of Agriculture's Soil Conservation Service and New York State's Soil and Water Conservation Districts.

- Cornell researchers were among the first to identify the causes and impact of acid rain on New York's ecosystem.

- In recent years, Cornell has placed a major emphasis on the use of a variety of



David L. Call

environmentally sound pest control techniques known as "Integrated Pest Management" (IPM), conducted jointly with the State Department of Agriculture and Markets. "Not only do these techniques protect the environment and consumers, but also increase profitability for our New York State agriculture," he said.

- Cornell was the first to identify groundwater problems on Long Island. As a result, Cornell established the New York State Water Resources Institute to protect water resources with the support of the Legislature and the governor.

The College of Agriculture and Life Sciences "takes seriously the broader mandate, and has been concerned with the 'environmental issues surrounding the food system,'" Call said. "Better environmental programs which are based on sound research and are implemented with strong education efforts will benefit the agricultural community, the food industry and all the citizens of the state. The challenge is to bring . . . resources together and design even better programs to deal with environmental issues."

—Yong H. Kim

BTI lecture topics: protein 'traffic,' disease control

Two Boyce Thompson Institute Distinguished Lectures in the Life Sciences this month will cover how proteins find their way into the right "compartment" in cells, and new approaches to biological control of plant disease.

- Gunther Blobel, a professor of biology at Rockefeller University, known for his discovery of an RNA particle required to transport proteins across cellular membranes, will lecture on "Protein Traffic Across Membranes" on Dec. 7 at 2 p.m. in the institute's auditorium.

- R. James Cook, leader of the U.S. Agriculture Department's Root Disease and Biological Control Research Unit at Pullman, Wash., will discuss "Biological Control of Plant Pathogens: New Approaches to Solve Some Old Problems" on Dec. 13 at 2 p.m., also in the institute's auditorium. Cook is known internationally for his research on biological control of soil-borne pathogens of wheat.

Animal and plant cells are composed of smaller compartments bounded by cellular membranes, and each compartment is occupied by a different set of proteins. Blobel will discuss current research on how those proteins know where to go in the cell and how they cross the membranes to get there.

"Blobel likens the situation to the Post Office," said BTI President Ralph W.F. Hardy. "Both the cell and the Post Office have a 'sorting' problem. That problem is solved in the cell because proteins have 'signals,' or 'ZIP codes,' which direct them to appropriate 'addresses,' or subcellular compartments."

As for Cook's lecture, Hardy said, "Increased use of biological control of plant disease as an environmentally acceptable alternative to chemical pesticides is of particular interest at this time. Biological control may have relatively low cost and be effective where other methods are either unavailable or infeasible."

The Agway Foundation is the sponsor of the upcoming lectures.

Princeton radio astronomer to give Thomas Gold Lectures

Superdense spinning stars, ripples in space-time called gravity waves, and Einstein's general theory of relativity are the ingredients in a public lecture to be delivered by Princeton University radio astronomer Joseph H. Taylor Jr. tonight in the Schwartz Auditorium of Rockefeller Hall beginning at 8 p.m.

The lecture is part of the second Thomas Gold Lecture Series, which was established to honor Gold, a professor emeritus of astronomy, upon his retirement.

As part of the series, Taylor also is delivering two technical colloquia. On Nov. 28, he discussed "Fourteen Years of Observing the Binary Pulsar 1913+16" at a joint physics and astronomy department colloquium. On Dec. 6, he will discuss "High Precision Timing of Millisecond Pulsars" in an Astronomy Department colloquium that begins at 4:30 p.m. in Room 105 of the Space Sciences Building.

Taylor is the James S. McDonnell Distinguished University Professor of Physics

at Princeton.

His research has included studies of spinning stars called pulsars using such instruments as the Arecibo Observatory radio telescope.

Pulsars are the remains of stars slightly larger than our sun that have collapsed into dense, spinning objects made of neutrons. Pulsars are so named because they emit rhythmic pulses of radio waves as their beams of energy sweep the sky like the beam from a searchlight.

Thomas Gold was the first astronomer to propose that the then-mysterious pulsars were spinning stars, after they were discovered by British astronomers in the late 1960s.

The objectives of Taylor's studies include using measurements of the orbits of twin pulsars to test Einstein's general theory of relativity, which predicts how the orbits should shift and the orbiting stars should fall toward one another.

—Dennis Meredith

Infertility *continued from page 1*

the social work program in the Department of Human Service Studies in the College of Human Ecology. She also is the author of the book "Adolescent Pregnancy Prevention."

Shapiro's book draws on her experience in counseling more than 100 infertile couples to describe the psychological problems facing infertile couples and to offer counseling suggestions to physicians, nurses, social workers, clergy and counselors who work with such couples.

During their first year of engaging in sexual intercourse without using birth control, more than 80 percent of American couples will conceive, Shapiro said in an interview. The remaining couples are classified as having fertility problems. Of those who seek specialized medical treatment for their infertility, about half will conceive, she added; of those who do not seek help, only 5 percent eventually conceive.

Additionally, one in five pregnancies in the United States ends in a miscarriage, one in 80 ends with a stillbirth and two in 100 are ectopic, resulting in a total of more than 1 million unsuccessful pregnancies a year.

Most couples and their doctors focus on the medical aspects of infertility and pregnancy losses and on possible treatments, including surgery to repair damage to reproductive organs or in-vitro fertilization and artificial insemination, Shapiro said. Usually there is little counseling for either the stress of infertility or the stress of the treat-



Constance H. Shapiro

ments, which can be quite expensive and require the couple to make extended visits to clinics far away from their friends and relatives.

In most cases, the failure to conceive or to give birth is "a brutal and unanticipated

shock" with emotional stages of denial, anger, bargaining, grief and acceptance comparable to those that are part of coping with a death, Shapiro said. Most couples fantasize about a child when they decide they want to have children and before they learn

that they are infertile. In some cases, this failure is a couple's first crisis.

The struggle against infertility threatens the partners' self-esteem, creates stress and intrudes into nearly all aspects of their lives: lovemaking's goal changes from sexual pleasure to procreation, sexual activity becomes scheduled rather than spontaneous and the woman's menstrual cycle becomes a monthly reminder of failure.

Those whose treatments are successful then may need counseling help to prepare for their baby. "Many couples believe they will be tempting fate if they furnish the nursery, make purchases for the baby or allow their family or friends to have a shower," Shapiro writes.

In her book, she suggests that health-care professionals recognize the "chronic mourning" that is typical of couples experiencing fertility difficulties, that they help patients respond assertively to friends and relatives who dismiss their emotional pain and that they encourage people to take short vacations from their infertility by occasionally suspending examinations and treatments.

"Infertility represents the loss of a dream," Shapiro said. "A couple's friends and siblings are having babies, and it reminds them in subtle but resonating ways that they can't have what others have so easily."

Shapiro's book is published by Jossey-Bass Inc., San Francisco.

—Mark Eyerly

Job Opportunities

In compliance with the Immigration Reform and Control Act of 1986, Cornell University is now required to check the identity and employment eligibility of all new hires.

Effective June 1, 1987, if you accept a position, you must show documents on or before your first day of work, that indicate your identity and employment eligibility; for example, a state issued driver's license and a birth certificate. For more information, contact Staffing Services, 255-5226.

-WINTER HOLIDAY SCHEDULE: Due to the Winter Holiday, there will be no 'Job Opportunities' list on December 22, December 29, January 5 or January 12. Therefore, requisitions received after noon on Thursday December 8 through noon on Thursday, January 12 will be posted in the January 19 issue of 'Job Opportunities.'

THE HIRING FREEZE WILL BE DECEMBER 1, 1988 THROUGH JANUARY 2, 1989.

-Interviews are conducted by appointment only.

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

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

-Requests for referral &/or cover letters are not accepted unless specified in the ad.

-Cornell University is an Affirmative Action/Equal Opportunity Employer.

-This listing is also available on CUINFO. Terminals are situated in main lobbies of Day Hall & Gannett Clinic, & the Olin, Mann & ILR Libraries.

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

-Minimum salaries listed are for recruitment purposes only.

-S=Statutory; E=Endowed

Administrative and Professional

SR. SYSTEMS PROGRAMMER/ANALYST (PT4509) CCS-E

Design, implement, install, document & maintain systems software or significant subsystems in VM-based systems, primarily VM/XA.

Req.: BA or equiv. w/related computer courses. 3-5 yrs. exp. w/VM operating system & significant subsystems; knowl. of hardware concept related to software issues; knowl. of IBM/370 assembler lang. essential. Letter & resume to Judi Baker by 12/16.

TECHNICAL CONSULTANT III (PT4511) Theory Center-E

Support graphics applications. Develop software tools & support svcs. for nat'l. users of supercomputer graphics software workstation hardware.

Req.: BS or equiv. combination of ed. & exp. 3-5 yrs. related exp. Strong comm., interper., org. & planning skills. Detailed knowl. of mainframe operating environ. req. Ext. exp. w/graphics hardware & software req. Able to develop graphics programs on mainframe or microcomputers. Letter & resume to Judi Baker by 12/16.

SYSTEMS PROGRAMMER/ANALYST III (PT4520) Computer Sci.-E

Provide prgrmg. support for Lang. Environ. project. Work closely w/grad. students, research associates & faculty. Prgrmg. incl. Polya lang. under UNIX using X or NeWS window system.

Req.: BS in math or computer sci.; adv. (grad-level) work in research area. 3-5 yrs. exp. e.g., knowl. dealing w/large, complex systems; exp. w/complex LE systems advantageous; fully proficient in 3 months. Letter & resume to Judi Baker by 12/16.

TECHNICAL CONSULTANT III (PT4522) Theory Center-E

Provide full range of consulting svcs. to researchers working on parallel systems.

Req.: BS in computer sci. or equiv. 3-5 yrs. of computer systems, prgrmg. or consulting exp.; exp. w/UNIX, C, FORTRAN; exp. w/parallel computer system highly desir.; exp. w/kernel desir.; strong interper., comm. & writing/editing skills desir. Letter & resume to Judi Baker by 12/16.

PUBLICATIONS COMPUTER SPECIALIST (PT4528) Univ. Relations/Publications Serv.-E

A Macintosh specialist to administer Publication Services' computer network & provide user & tech. support for editors, graphic designers & support persons.

Req.: BA/BS. Strong & enthusiastic bkgnd. in Mac environ. w/emphasis on systems software; substantial (3-5 yrs.) exp. w/Microsoft Word & PageMaker. Skill in managing multiple, sometimes conflicting demands. Letter & resume to Judi Baker.

RESEARCH SUPPORT SPECIALIST III (PT4505) Vet. Pathology-S

Mgmt. of daily operation of Tissue Culture Unit of Cancer Cell Biology Labs; participation in long range planning & execution of research activities.

Req.: MS req. 3-5 yrs. exp. in advanced tissue culture techniques. Letter & resume to Judi Baker by 12/16.

SYSTEMS PROGRAMMER/ANALYST II (PT4523) Theory Center-E

Assist in developing, modifying, installing & analyzing complex software programs & pkgs. for academic systems on large & small-scale computer systems.

Req.: BA/BS or equiv. 2-3 yrs. prgrmg. & machine arch. exp.; knowl. of system utility programs, system control lang. e.g., JCL, REXX, & shell scripts; knowl. of operating systems, e.g., VM/CMS, MVS, & UNIX & mainframes, e.g., IBM 3090-600E. 2 major prgrmg. lang., e.g., FORTRAN, PASCAL C & low level lang. ASSEMBLER. Letter & resume to Judi Baker by 12/16.

TECHNICAL CONSULTANT II (PT4521) Theory Center-E

Provide consulting svcs. & prep. tech. documentation for researchers working on parallel systems.

Req.: BS w/coursework in computer sci. or

equiv. 2-3 yrs. computer systems, prgrmg. or consulting exp.; exp. w/UNIX, C & FORTRAN; gen'l. knowl. of prgrmg. issues related to parallel computing desir.; strong interper. & comm. skills & writing/editing skills desir. Letter & resume to Judi Baker by 12/16.

FARM MANAGER II (PT4516) Farm Services, Geneva-S

Mgmt. of Farm Services Unit. Maintain all research farms incl. roads, grnds., maintenance & operation of greenhouses on a 50 acre campus. Supv. & coord. field & greenhouse service work for research depts., assist Bldgs. & Properties Unit as needed & ensure safe usage of pesticides.

Req.: AAS plus substantial exp. BS in plant sci. or related field pref. 3-4 yrs. related exp. w/crop production; operation & maint. of farming & heavy equip. essential. Strong comm. skills. Valid NYS class I restricted driver's lic. & pesticide applicator's cert. w/in 3 months of employment. Letter & resume to Judi Baker by 12/16.

RESEARCH SUPPORT SPECIALIST II (PT4513) Plant Pathology, Geneva-S

Plan & coord. interdisciplinary research/extension demonstration project involving low-input approaches to apple production in Hudson Valley. Plan experiments, establish field plots & collect data.

Req.: BS w/4-5 yrs. exp. in crop production or IPM. NYS driver's lic., pest applic. lic. req. Exp. w/ IPM for Horticultural Crops or w/commercial agriculture essential. Letter & resume to Judi Baker by 12/16.

DEVELOPMENT ASST. (PA4504) Univ. Development-E

The CU Fund Development Asst. works w/Dir. in the planning & implementation of Univ's. annual campaigns for alumni support. Direct design & implementation & product of reg'l. Tower Club.

Req.: BA or equiv. exp. Min. 2 yrs. related exp. Exc. written comm. & org. skills w/direct exp. in direct mail &/or familiar w/production of written & oral visual materials. Able to communicate w/diverse tech. staff & w/public. Good w/numbers & business skills. Letter & resume to Cynthia Smithbower by 12/8.

ASST. DIRECTOR FOR ARTS & SCIENCES (PA4502) Career Center-E

Counsel Arts & Sci. students on career issues. Serve as liaison & primary counselor to 4-6 academic depts.; interact w/dept. chairperson, dir. of undergrad. studies & key faculty. Organize career programs for these depts. Provide workshops & programs about job hunting. Prep. written materials concerning relationship between liberal arts education & careers. 10 month position.

Req.: MA in counseling or related areas or equiv. 2 yrs. exp. w/college students, pref. in career office. Interest in liberal arts issues. Exc. writing, org. & interper. skills. Letter & resume to Cynthia Smithbower.

PROJECT COORDINATOR II (PC4535) Agricultural & Biological Engineering-S

Make arrangements for conferences & workshops, assist in publicity of activities; produce & distribute a quarterly technology transfer newsletter, handle finances & acctg., coord. keeping of attendance records. Until 12/31/89.

Req.: BA/BS w/some course work in sci. &/or engr. Min. 2 yrs. related exp. Exc. org., comm. (written/oral) skills; exp. w/PC incl. WP & databases. Attention to detail. Letter & resume to Esther Smith by 12/9.

ASSOCIATE DEAN (PC4407) Graduate School-E

Report to Grad. Dean & be resp. for coord. of admin. functions of Grad. School. Counsel & guidance of grad. students & grad. faculty & continuing computerization function; assist Dean in implementation & ongoing review of Grad. legislation & policy & represent School on campus & at nat'l. mtgs.

Req.: PhD plus min. 3 yrs. admin. exp. at Univ. level pref. & understanding of grad. ed. Exp. w/IBM mainframes & microcomputers desir. Familiar w/admin. computing pref. Letter & resume or call in confidence to Esther Smith 607-255-8081.

Clerical

REGULAR EMPLOYEES Submit employee transfer application, resume & cover letter.

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

BUILDING ATTENDANT, GR16 (C4533) Olin Library-E

Perform libr. security functions incl. working at exit & stack control desks; resp. for opening, closing & making regular rounds of bldg.; perform collection mgmt. duties as assigned.

Req.: H.S. dip. or equiv. Some college bkgnd. &/or exp. in academic libr. Some public svcs. exp. desir. Strong org. & comm. skills. Must be able to work independ. & work well under pressure. Min. Biweekly: \$448.50

SALES ASST., GR17 (C4536) Campus Store-E

High level of customer svcs. at main branch of CU Campus Store working at central book info. desk. Answer customer inquiries relative to availability & location of particular titles; assist customers in ordering specially requested books. M-F, 8:30-5:30, some wknds.

Req.: H.S. dip. or equiv. 1-2 yrs. of college study pref. Strong interper. & comm. (written/oral) skills. Must be able to work independ. of direct superv. Lt. typing. Min. Biweekly: \$467.98

TELEPHONE OPERATOR, GR17 (C4528) Telecommunications-E

Provide caller related assistance when Univ. is open. Operate Telex when req. Fall, winter, spring, 9:30-6; Summer, 8:30-5.

Req.: H.S. dip. or equiv. req. CRT & keyboard skills req. Min. Biweekly: \$467.98

CRT OPERATOR, GR17 (C4510) Animal Science-S

Resp. for data entry & verifying work using CRT. Will be expected to enter at least 562 cow units & verifying at least 671 cow units per productive work hour.

Req.: H.S. dip. or equiv. In lieu of CRT exp.-keypunch exp. would be beneficial. Lt. typing. Min. Biweekly: \$467.98

WORD PROCESSING OPERATOR, GR18 (C4534) Univ. Development-E

Produce mass mailings, proposals, newsletters, charts & special projects in support of CU fund raising & public affairs efforts.

Req.: H.S. dip. or equiv. Sec. school desir. Min. 1 yr. related exp. Knowl. of Wordperfect & IBM compatible machines. Accuracy, good command of grammar, punctuation, spelling & proofreading are important. Knowl. of letter & proposal formats helpful. Business exp. helpful. Heavy typing. Min. Biweekly: \$487.50

OFFICE ASST., GR18 (C4526) AVP Fac. Plan & Const./Sr. Vice Pres.-E

Provide variety of highly confidential sec./clerical functions in extremely fast-paced office that serves CU's varied publics.

Req.: H.S. dip. req. Min. 1 yr. sec./clerical exp. Knowl. of univ. highly desir. Knowl. of (or desire to learn) Mac computer pref. Able to exercise independ. judgment essential. Lt. typing. Min. Biweekly: \$487.50

SECRETARY, GR18 (C3401) Rural Sociology-S

Provide sec., clerical & admin. support for 5 professors & Grad. Field Rep. Type; make travel arrangements, mng. calendars; prep. class & research files & records; libr. searches; copying; WP.

Req.: H.S. dip. or equiv. Busn./sec. school desir. Min. 1 yr. sec. exp. prefer at CU. Familiar w/academic depts. having numerous & post grad. degree candidates. Exc. interper. & org. skills. WP exp. req. Med. typing. Min. Biweekly: \$487.50

SECRETARY, GR18 (C4511) Rural Sociology-S

Provide sec., clerical & admin. support for professors. Type; travel arrangements; mng. calendars; prep. class & research files; libr. searches; WP & copying.

Req.: H.S. dip. or equiv. Sec. school desir. 1 yr. sec. exp. pref. at CU. Familiar w/academic depts. Exc. interper. & org. skills. WP exp. req. Med. typing. Min. Biweekly: \$487.50

SECRETARY, GR19 (C4524) Human Ecology Office of Student Svcs.-S

Provide sec. support to staff; prep. corresp., reports, charts, lists & numerous program materials. Receive phone & mail inquiries & greet frequent visitors. Schedule student appts. Respond to inquiries concerning College policies, academic & career programs; interface w/employers to receive & publicize job vacancies & on-campus interviews. Supv. student employees. M-Th., 8-5; Fri., 8-4.

Req.: AAS or equiv. Min. 2 yrs. sec. exp. Knowl. & exp. w/IBM PC using Wordperfect. Interest in students. Able to cope w/high traffic office. Med. typing. Min. Biweekly: \$510.90

SERVICE COORDINATOR, GR19 (C4523) CIT-MOS-E

Receive & prioritize service requests to service dept. Insure calls & carry-in transactions handled in timely fashion. Enter & maintain maint./service contract records. Provide clerical support for Service unit of MOS.

Req.: AAS or equiv. Min. 1 yr. related exp. Familiar w/micros./office systems technology desir. Exc. interper. & comm. skills. Able to work in fast-paced, service-oriented environ., understanding of tech. info. Med. typing. Min. Biweekly: \$510.90

ADMIN. AIDE, GR19 (C4522) CIT-Academic Computing-E

Provide admin. support for Computing Resources Ctr. Work at Help Desk & Software Lending Libr., as needed. Assist patrons of CRC. Serve as liaison to microcomputer user groups.

Req.: AAS or equiv. Min. 1 yr. related exp. w/microcomputers & assoc. software. Exc. comm. skills. Lt. typing. Min. Biweekly: \$510.90

OFFICE ASST., GR19 (C4518) CIT-MOS-E

Provide consulting on micros & office tech. Process orders & sales transactions as an integral part of MOS marketing operation. Provide 1st-level support on order configuration & post-sales info.

Req.: AAS or equiv. Min. 1 yr. related exp. Sales/mktg. pref. as well as knowl./interest in micros & elec. tech. Exc. comm./interper./org. skills. Able to work w/public in fast-paced environ. Lt. typing. Min. Biweekly: \$510.90

SECRETARY, GR19 (C4124) Psychology-E

Serve as dept. recept.; oversee work-study students; serve as sec. to faculty & admin. mgr.; process dept. billings; advise/major applications & maintain records; mail; maintain mailroom & supplies; sign out AV equip.

Req.: H.S. dip. or equiv. AAS in sec. sci. or equiv. pref. Min. 2 yrs. exp.; knowl. of WP (on Mac) pref. Exp. typing, proofreading, org. & interper. skills. Knowl. of CU desir. Med. typing. Min. Biweekly: \$510.90

ACCTS. ASST., GR19 (C4515) HDFS/Family Life Dev. Ctr.-S

Maintain acctg. Resp. incl. 10-20 active college, state & restricted fund accts. representing \$2M budget.

Req.: AAS in acctg. or equiv. Min. 2 yrs. offc. exp. desir. Exp. w/Stat. acctg. system desir. Familiar w/Mac pref. Med. typing. Min. Biweekly: \$510.90

ADMIN. AIDE, GR19 (C4508) Theatre Arts-E

Provide sec. & admin. support to mgmt. staff & faculty. Prep. corresp., grant appls., news releases, etc.; coord. travel arrangements & accommodations for guest artists; coord. receptions, luncheons, etc.

Req.: AAS req. PC trng. courses helpful. Min. 2 yrs. gen'l. offc. exp., exp. w/PC's & WP pro-

grams. Exc. org. & comm. skills. Knowl. of CU systems & operations highly desir. Arts bkgnd. desir. Med. typing. Letter, resume & expected salary to Esther Smith by 12/9. Min. Biweekly: \$510.90

ACCTS. ASST., GR20 (C4507) Payroll Office-E

Maintain NYS Disability records & Direct Bank Deposit program; sort & distribute appt. forms; mail monthly payroll reports. Act as dept. sec.

Req.: AAS or equiv. Min. 2 yrs. exp. in a payroll or acctg. offc. Exc. org., comm. & interper. skills are essential. Med. typing. Min. Biweekly: \$534.30

ACCTS. COORD., GR21 (C4504) Public Affairs Records-E

Monitor & analyze CU gift transactions specifically to compile & generate gift data conforming to criteria of gift surveys, reports & inquiries; coord. flow of gift data w/acctg.; investment offc., Public Affairs plus other CU depts. & colleges; incl. mainframe/PC entry & retrieval.

Req.: AAS in acctg. Min. 2 yrs. related exp. Able to supv., schedule work, meet deadlines & work under pressure w/minimal supv. Good interper., org. & comm. skills. 1 yr. exp. w/on-line computer system helpful. CRT exp. pref. Knowl. of CU acctg. pref. Lt. typing. Min. Biweekly: \$557.70

ADMIN. AIDE, GR21 (C3905) VP, Research & Advanced Studies-E

Provide sec. & admin. support. Type heavy vol. of corresp., tech. reports for VP & Exec. Staff Asst.; proof/edit/compose letters as approp. Resp. for outgoing mail & filing system, VP's travel, screen calls; daily schedule; reception of visitors; resp. for supplies.

Req.: AAS or equiv. Ext. exp. in resp. admin./sec. position. Min. 2 yrs. exp. Advanced WP & computer skills (IBM PS/2 using Micro-soft word). Wordperfect desir. Able to transcribe dictation quickly & accurately from micro-cassette & hard-copy & tolerate interruptions w/ease. Exc. org. & comm. skills. Able to handle a number of projects simultaneously. Flex. when working w/tight deadlines & heavy workloads. Careful attention to details. CU exp. in busy environ. pref. Knowl. of travel procedures, familiar w/vouchers, acctg. & Diners Club. Heavy typing. Min. Biweekly: \$557.70

ADMIN. AIDE, GR21 (C0203) Internat'l. Agriculture Program-S

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

Req.: AAS or equiv. Min. 2-3 yrs. related trng./exp. Familiar w/computer programs. Able to communicate effectively (oral/written). Exc. interper. skills. Strong org. skills. Confidentiality essential. Some internat'l. exp. pref. Able to set priorities & work independ. in a complex, active environ. Heavy typing. Min. Biweekly: \$557.70

SENIOR STAFF ASST., GR22 (C4509) Career Center-E

Provide admin. & sec. support to Sr. Assoc. Dir. for Career Planning, Sr. Counselor & Counselor. Coord. Nat'l. Testing Exams & CU Lang. Placement Testing program, incl.; hiring of part-time staff, supv. of proctors, maintain payroll, coord. registration process.

Req.: AAS or equiv. BA desir. Prefer knowl. of testing. Min. 2 yrs. of admin. offc. exp. Outstanding org. skills. Med. typing. Letter & resume to Esther Smith by 12/9. Min. Biweekly: \$581.09

ASST. TO DIRECTOR/ADMIN. AIDE, GR22 (C4514) Univ. Press-E

Draw up contracts; maintain key data on all books; set up meetings; make grant reports; handle dir.'s corresp., travel arrangements, traffic when absent; minutes of staff mtgs. Exc. entry to publishing.

Req.: AAS or equiv. BA desir. Min. 3-4 yrs. exp. Exc. comm., typing & spelling skills; some WP. Heavy typing. Letter & resume to Esther Smith by 12/9. Min. Biweekly: \$581.09

ADMIN. AIDE, GR22 (C4529) Computer Science-E

Provide direct admin./sec. support to Chairperson. Provide dept. interface w/CU admin. & govt. & industrial contacts.

Req.: AAS or equiv. Min. 3 yrs. related sec. & admin. exp. In-depth knowl. of an academic dept. functioning in a univ. environ. incl. high-level research as well as gen'l. ed. Med. typing. Min. Biweekly: \$581.09

General Service

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

CUSTODIAN, SO02 (G4540-G4551) Statler Hotel-E

Maintain highest standards of cleanliness in hotel public areas & offices. Restock guestroom housekeeping closets for room attendants. Shift subject to change. Some evs. & wknds.

Req.: H.S. dip. or equiv. Basic reading & writing skills. Able to lift 50 lbs. & climb 8 foot ladder. Min. hourly: \$5.75

HEAD WAITERSON, SO02 (G4568-G4576) Statler Hotel-E

Under gen'l. supv., serve meals to guests in fine dining room according to established rules of etiquette & service. Help in set up & cleaning of dining room. Shift subject to change. Some nights & wknds.

Req.: H.S. dip. or equiv. Able to read & write. Min. 1 yr. exp. as waitperson in fine dining setting. Min. hourly: \$5.75

FOOD SERVICE WORKER, SO02 (G4526-G4539) Statler Hotel-E

Provide adequate supply of garnishes, salads, desserts, fruit dishes, etc. for hotel's food outlets

December 1, 1988

Number 45

Office of Human Resources

Cornell University

160 Day Hall

Ithaca, New York 14853-2801

& banquets. Shift subject to change. Some nights & wknds.

Req.: H.S. dip. or equiv. Basic reading & writing skills. Min. 1 yr. food prep. exp. req. Min. hourly: \$5.75

DISH MACHINE OPERATOR, SO02 (G4508-G4525) Statler Hotel-E

Maintain consistent supply of clean dishes, glassware, flatware, pots & silver. Keep work area & garbage area at an acceptable level of neatness & cleanliness. Clean vegetables for daily functions. Shift subject to change. Some nights & wknds.

Req.: H.S. dip. or equiv.; able to read & write; basic math skills (inventory & recording). 1 yr. dish machine exp. pref. Min. hourly: \$5.75

CUSTODIAN, SO02 (G4503) Residence Life-E

Provide gen'l. custodial care of bldgs. & grounds in assigned area. Mon.-Thur., 7:30 a.m.-4 p.m.; Fri. 7:30 a.m.-3 p.m.

Req.: H.S. dip. or equiv. Able to operate a variety of heavy power equip., lift 50 lbs. & climb an 8 ft. ladder. Basic reading & writing skills. Daily contact w/students. Min. hourly: \$5.75

CUSTODIAN, SO02 (G4407) Residence Life-E

Provide gen'l. custodial care of bldgs. & grounds in assigned area. Mon.-Thur., 7:30 a.m.-4 p.m.; Fri. 7:30 a.m.-3 p.m.

Req.: H.S. dip. or equiv. Able to operate a variety of heavy power equip., lift 50 lbs. & climb an 8 ft. ladder. Basic reading & writing skills. Daily contact w/students. Min. hourly: \$5.75

Union signs 3-year pact with Cornell

Cornell's security employees union has reached agreement with the university on a new three-year contract effective Dec. 1, according to a joint announcement from the university and the union.

The contract was ratified by the members on Nov. 28, two days before the current contract expires. Negotiations began in early October. The Cornell University Security Employees Union represents 56 patrol and service officers in the Department of Public Safety and nine security guards in the Johnson Museum of Art.

Marge Swiercz Clark, manager of employee relations at Cornell, said the parties were able to "amicably negotiate an agreement that serves the employees and the Cornell community well."

James Morrisette, president of the union, said he was pleased with the results of the negotiations and is "looking forward to the next three years."

Both parties declined to release details of the new agreement.

Graduate Bulletin

1988 Income Tax Information for Graduate Students: The Sage Graduate Newsletter will be available in January at graduate student registration in Sage Hall and will include information on 1988 income taxes for assistantships or fellowships.

Spring registration will be in Sage Hall Lounge Jan. 16 through 20, 8:15 a.m. to 4:15 p.m. Bring student ID card and registration admission form sent by the university registrar.

Course enrollment: Students who have not completed pre-course enrollment may bring completed and signed course enrollment forms to registration and complete course enrollment during the registration process. Course enrollment forms are available in graduate field offices or in Sage Graduate Center. Course enrollment will continue through Feb. 10.

Pre-course enrollment forms may still be left at Sage Graduate Center, but names will not appear on initial class lists.

Jan. 13 is the deadline for completing all requirements for January degrees.

Graduate Student Council general meeting, Dec. 5, 5:15 p.m., The Henry, Sage Hall.



PRIZE-WINNING SHOT — This picture of an Australian black swan in the rain has earned Scott Camazine, a graduate student of neurobiology and behavior, one of 14 prizes in the Wildlife Photographer of the Year Competition. Camazine won a cash prize of about \$550 and photo supplies in the category of Composition and Form — Animals. The Natural History Museum of London, one of the contest's sponsors, will exhibit the prize-winning photos.

Briefs continued from page 2

■ **Benefits deadlines:** Dec. 15 is the deadline for employees to return Select Benefits enrollment forms to Employee Benefits, 130 Day Hall, for endowed employees or to Statutory Business Services, B-22 Mann Library Building, for statutory employees. Dec. 15 also is the deadline for employees to submit new enrollment information for the endowed health care program to Employee Benefits, 130 Day Hall. Employees may add dependents without a statement of health and/or change options.

■ **Parking curtailed:** Most parking will be prohibited on campus between 2 and 5 a.m. from Dec. 1 to April 1 to facilitate snow removal. Vehicles in violation of the parking prohibition will be ticketed and, in some cases, towed. Overnight parking is permitted in the following designated areas: the easternmost bay of A lot, the westernmost bay of B lot, the easternmost bay of K lot,

the westernmost bay of Wilson lot, the section of Tower Road extending from East Avenue to Wing Drive, the left section of the ground level of the garage for G permit holders and dormitory lots.

■ **Lot closed:** The Phillips/Upson Hall parking lot will be closed starting today for about two weeks while electrical lines are installed at the Engineering College/Theory Center building construction site. Displaced parkers may use the garage during this period.

■ **Weather calendar:** The 1989 Ithaca Weather Calendar, which provides a statistical profile of local weather conditions and related information, is now on sale. A project of the Cornell Chapter of the American Meteorological Society, the calendars are available at \$4 each in 1113 Bradfield Hall or by calling 255-3034.

Executive trustees to meet on Dec. 8

The Executive Committee of Cornell's Board of Trustees will discuss the 1989-90 operating budget plan for the private colleges at Cornell during an open session on Dec. 8 at 2:30 p.m. in the Board of Governors Room (Whitney 117) of New York Hospital, 525 East 68th St., New York City. Other items scheduled to come before the board's Executive Committee include personnel, financial and facilities matters.

The Buildings and Properties Committee of the board will meet in open session at 9 a.m. on Dec. 8 in the Vanderwerker Room of the Memorial Sloan-Kettering Cancer Center, 1275 York Ave.

Members of the public who wish to attend the open meeting of the Executive Committee may obtain tickets beginning at 9 a.m. on Dec. 6 at the Information and Referral Center in the Day Hall lobby.

Job Opportunities continued from page 10

& ordering; customer svc.; prep. day-end deposits; assist w/setting up & cleaning svc. area. M-F, 7 a.m.-3:30 p.m.

Req.: H.S. dip. or equiv. Exp. w/cash handling in fast paced, high pressure environ. Possess genuine enthusiasm & positive attitude towards job & maintain a "customer first" attitude at all times. Min. Biweekly: \$448.50

RESERVATIONIST, GR21 (G4507) Statler Hotel-E

Resp. for guest room reservations & assignment of hotel rooms for conference & transient guests; coord. clients' needs w/hotel's staff.

Req.: AAS in hotel admin. helpful. Min. 3 yrs. exp.; hospitality industry bkgrnd. essential (e.g., meeting planning, food & beverage & sales). Knowl. of computer/WP equip. Med. typing. Letter & resume to Esther Smith. Min. Biweekly: \$557.70

Technical

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

ILLUSTRATOR, GR17 (T4515) Statler Hotel-E Assist Graphic Supv., provide support to artists, administration & supv. Create menu design, advertisements, radio commercials & other artwork. Some nights & wknds.

Req.: H.S. dip. or equiv. Graphics Arts trng., food & beverage menu knowl. helpful. Apply by 12/16. Min. Biweekly: \$467.98

TECHNICIAN, GR18 (T4527) Food Science-S To conduct research on physical & functional properties of proteins on foods-surface active properties, foaming, gelation, protein separation & purification, etc.

Req.: BS in sci. & exp. in lab research. Min. 1 yr. related exp. Knowl. of protein chemistry, separation & analyses, some exp. w/physical properties, measurements & functional properties, spectrophotometric analysis, chromatography, electrophoresis desir. Min. Biweekly: \$487.50

TECHNICIAN, GR19 (T4502) Plant Pathology-S

Conduct experiments on mechanisms of insect transmission of plant viruses. Perform plant virus & protein purifications, serological assays, electrophoresis, maintain experimental records & summarize data. Hire, train & supv. student assts.

Req.: BS in bio. sci. 2 yrs. lab exp. req., coursework in plant bio., biochem. & microbiol. desir. Computer exp. helpful. Letter & resume to Judi Baker by 12/16. Min. Biweekly: \$510.90

TECHNICIAN, GR19 (T4524) Poultry & Avian Sci.-S

Test both hake & mackerel using various storage conditions particularly frozen & to evaluate store of new commercial food products for retail & institut'l. use developed by New Products Developer.

Req.: BS in food sci. or closely related degree. Min. 2 yrs. related lab exp. Letter & resume to Judi Baker by 12/16. Min. Biweekly: \$510.90

DRIVER/EQUIP. INSTALLER, GR20 (T4514) CIT-Micros & Office Systems-E

Install, set up, test & remove non-functioning equip. from customer sites. Provide preliminary on-site svc. diagnosis. Track service parts inventory & re-install serviced units in customer locations. Assist in preventive maint.

Req.: H.S. dip. or equiv. AAS in electronics pref. 2-3 yrs. exp. w/micro technology & offc. systems incl. hardware & software. Interest in expanding knowl. of electronics tech. desir. Mechanical aptitude nec. & valid NYS driver's lic. Apply by 12/16. Min. Biweekly: \$534.30

CHIEF CERTIFICATION INSPECTOR/LAB TECH., GR20 (T4504) Plant Pathology-S

Serve as head inspector in NY certified seed potato program. Provide customer & lab tech. assts.

Req.: BS w/emphasis in plant sci. pref. 2-3 yrs. related exp. Knowl. of potato diseases, pests & crop production desir. Computer literate; detail oriented, good comm./interper./org. skills. Some travel req. Driver's lic. req. Apply by 12/16. Min. Biweekly: \$534.30

TECHNICIAN, GR20 (T4119) Neurobiology & Behavior-E

Assist in isolation & synthesis of mRNA coding for acetylcholine receptor channel; assist w/microinjection of mRNA into frog oocytes; prep. frog oocytes; record solutions & patch clamp pipettes; order gen'l. lab supplies & assist in lab maint.

Req.: BS in bio. or equiv. 1-3 yrs. biology lab exp. plus mRNA handling & cloning techniques. Min. Biweekly: \$534.30

TECHNICIAN, GR21 (T4519) Vet. Pathology-S

Assist in application of electron microscope techniques incl. TEM, freeze fracture & freeze etch to study muscular dystrophy. Involves tissue culture & immunocytochem. Resp. for mgmt. of supplies & lab equip. & for direction of student help.

Req.: BS in bio. pref. 3 yrs. exp. in research lab w/emphasis on electron microscopy & cytochemical methods & cell culture techniques. Apply by 12/9. Min. Biweekly: \$557.70

TECHNICIAN, GR22 (T4503) Pharmacology-S

Conduct & carry out experiments. Analyze results of research aimed at understanding role of calcium in secretion from mast cells. 9-12 months.

Req.: BS in biochem., cell bio., chem., physiology or similar subject. 3 yrs. related exp. pref. Letter & resume to Judi Baker by 12/16. Min. Biweekly: \$581.09

TECHNICIAN, GR24 (T4002) Plant Biology-S

Upkeep of SEM, freeze-fracture & ancillary equip.; assist in SEM course; assist in user equip. trng.; research service when time permits; order supplies & bookkeeping, assist w/TEM; gen'l. lab upkeep.

Req.: BS in bio. 3-4 yrs. exp. w/SEM or equiv. Familiar w/freeze-fracture technique. Exp. & knowl. of TEM & computers desir., not essential. Min. Biweekly: \$639.59

CHESS OPERATOR, GR24 (T4525, T4526) CHESS-E

Develop equip. Correct malfunctions of equip. & software problems associated w/instrument control. Interact w/user groups on technical & scientific problems. Implement safety codes. May assist in experimental programs. Some evs. & wknds.

Req.: BS or equiv. in tech. field such as engr. or physics. Good mechanical & experimental skills. Prgrmg. exp. helpful. Min. Biweekly: \$639.59

RESEARCH ASST. Boyce Thompson Institute

Supporting work in plant molecular biology lab incl. solution prep., bacterial cell manipulations & gen'l. lab maint. Exp. in isolation & analysis of proteins & nucleic acids & familiar w/recombinant DNA techniques pref.

Req.: BA/BS in bio., biochem. or related field & lab skills. Contact Dr. David B. Stern, c/o Personnel Dept., Boyce Thompson Inst., 607-254-1225. Min. annual salary: \$12,275.

Part Time

SR. RECORDS ASST., GR18 (C4532) Olin Library-E

Resp. for verifying & validating name, subject & series of authority headings, correcting machine-readable bibliographic & authority records, pre-input searching & inputting. 20 hrs./wk. 12 month term appt.

Req.: H.S. dip. or equiv. AAS or equiv. pref. Min. 1 yr. related exp. Able to do detailed work accurately. Working knowl. of NOTIS & RLIN cataloging systems & USMARC bibliographic & authorities formats desir. Med. typing. Min. full-time equiv.: \$487.50

OFFICE ASST., GR18 (C4525) Nuclear Studies-E

Assist in maintaining acctg. records, provide sec. assistance to staff & faculty, provide gen'l. office assistance. M-F, 9 a.m.-2 p.m.

Req.: H.S. dip. or equiv. Min. 1 yr. sec-/acctg. exp. incl. WP. Tech. typing exp. pref. Med. typing. Min. full-time equiv.: \$487.50

TECHNICIAN, GR20 (T4120) Neurobiology & Behavior-E

Conduct high resolution electrical recordings from isolated brain cells of mice & rats. Dissect specified brain regions. Maintain cells grown in primary tissue culture. Prep. recording solutions; patch clamp pipettes for recording. Order lab supplies, maintain lab. 20 hrs./wk.

Req.: BS or equiv. 1-3 yrs. bio. lab plus exp. in immunocytochemistry & tissue culture. Min. full-time equiv.: \$534.30

Temporary

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

PUBLICATION DESIGNER (C4530) Ag. Engineering

Publication design from 12-100 pages using Aldus Pagemaker w/Mac.

Req.: AAS or equiv. Exp. w/Mac & Pagemaker essential. Knowl. of MacPaint &/or MacDraft pref. 2-6 months. Call Laurie Worsell at 255-2192.

ACCTS. ASST. (C4501) Human Ecology Admin.

Provide acctg. support to Student Svcs. Resp. for spreadsheet & database mgmt., acctg. payable & payroll. 20 hrs./wk.

Req.: H.S. dip. or equiv. Min. 1 yr. acctg. exp. Familiar w/CU acctg. system helpful. Exp. w/spreadsheet or database programs helpful. High level of accuracy & ability to be self-directed req. Lt. typing. Call Laurie Worsell at 255-2192.

SUMMER EVENTS COORD. (PA4501) Summer Session

Develop, coord. admin. of, & monitor summer events (lectures, concerts, performing arts, tours, etc.). Resp. for recruiting, trng. & supv. of student assts.; plan, schedule & monitor logistical aspects of events, maintain events reports & records. 10-19 hrs./wk. Until August.

Req.: Requires high level interper. & org. skills. Knowl. of CU highly desir. Must be able to work independ. Letter & resume to Cynthia Smithbower by 12/16.

SECRETARY (C4325) Human Service Studies

Type coursework, corresp. & provide gen'l. secretarial support for routine office functioning. Distribute mail, run campus errands.

Req.: H.S. dip. or equiv. Heavy typing. Knowl. of Wordperfect essential. Min. 1 yr. offc. exp. req. Temp., p/t. 15-20 hrs./wk., until 3/89. Call Laurie Worsell at 255-2192.

Academic

4-H YOUTH LEADERSHIP SPECIALIST Cooperative Ext.-New York City

Req.: MA w/3-5 yrs. demonstrated exp. in urban youth leadership programs. Salary commensurate w/qualifications. Send letter of intent & resume to Tatiana Fabrikant, 15 East 26th Street 5th Floor, New York, NY 10010-1565.

HOSPITALITY MARKETING PROFESSOR Hotel Admin.

Send letter of application, resume & names & addresses of 3 references to Dr. David C. Dunn, Assoc. Dean for Academic Affairs, School of Hotel Admin., Cornell University, Ithaca, NY 14853.

ASST. PHYSICAL SCIENCES LIBRARIANS Physical Sciences Library

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

Chung Trio is next in Bailey Hall Famous Artist Series

The Chung Trio will continue the 1988-89 Bailey Hall Famous Artist Series on Dec. 4, beginning at 8:15 p.m., with a concert that will include the Shostakovich Trios No. 1 Op. 8 and No. 2 Op. 67 and the Tchaikovsky Trio in A Minor, Op. 50.

Tickets for the concert are on sale at the Lincoln Hall ticket office, which is open Monday through Friday between 9 a.m. and 1 p.m. The phone number there is 255-5144.

The trio's members — violinist Kyung-Wha Chung, cellist Myung-Wha Chung and pianist Myung-Whun Chung — are from a large family in Seoul, Korea where six of seven children studied music.

Kyung-Wha made her violin debut with the Korean Philharmonic at the age of 9. In 1961, she came to New York's Juilliard School, and in 1967 she won first prize in the prestigious Leventritt competition, launching her musical career. Her European appearances this season include concerts with the English Chamber Orchestra, the London Symphony and Amsterdam's Concertgebouw Orchestra.

Her sister, Myung-Wha, who at age 13 was the youngest musician ever to win the Korean National Competition, also came to New York in 1961. She gained wide attention as the first-prize winner of the Geneva International Music Competition. This season, she will appear with the London Symphony at Royal Festival Hall and will tour Italy with the London Mozart Players.

Brother Myung-Whun started his musical studies at the piano. By the time he entered the Juilliard School to study conducting, he had won the Silver Medal at the 1974 Tchaikovsky International Competition in Moscow. As a conductor, he divides his time between orchestras and opera. He has appeared with the Boston and Cleveland orchestras and with the philharmonic orchestras of New York and Los Angeles. He made his debut at the Metropolitan Opera in 1986.



The Chung Trio — from left, cellist Myung-Wha Chung, pianist Myung-Whun Chung and violinist Kyung-Wha Chung — will be in Bailey Hall Dec. 4 at 8:15 p.m. for a concert of music by Shostakovich and Tchaikovsky.

Appointments & Promotions

The following academic and administrative appointments and reappointments have been made by President Frank H.T. Rhodes effective July 1, 1988, or as noted.

John M. Blakely, professor in the Department of Materials Science and Engineering, College of Engineering, appointed chairman of the department through June 30, 1993.

W. Keith Bryant, professor in the Department of Consumer Economics and Housing, College of Human Ecology, appointed chairman of the department from June 30, 1988, through June 30, 1992.

P.C. Tobias deBoer, professor in the Sibley School of Mechanical and Aerospace Engineering, College of Engineering, appointed acting director of the school through Dec. 31, 1988.

Nelly Furman, professor in the Department of Romance Studies, College of Arts and Sciences, appointed director of the Women's Studies Program through June 30, 1992.

Riccardo Giovanelli, senior research as-

sociate at the National Astronomy and Ionosphere Center, appointed acting director of the Arecibo Observatory from May 5, 1988, through Dec. 31, 1988.

Ronald R. Hoy, professor in the Section of Neurobiology and Behavior, Division of Biological Sciences, College of Arts and Sciences, appointed chairman of the section through June 30, 1991.

Anthony T. Kirsch, professor in the Department of Anthropology, College of Arts and Sciences, appointed chairman of the department through June 30, 1990.

David B. Lewis, associate professor in the Department of City and Regional Planning, College of Architecture, Art and Planning, appointed chairman of the department through June 30, 1991.

Philip E. Lewis, professor in the Department of Romance Studies, College of Arts and Sciences, appointed acting chairman of the department through June 30, 1989.

Christopher Pottle, professor in the School of Electrical Engineering and associate dean for Computing and Computer Re-

lated Issues, College of Engineering, reappointed associate dean through June 30, 1990.

Henry Shue, professor in the College of Arts and Sciences, reappointed director of the Program on Ethics and Public Life, Science, Technology and Society, through June 30, 1993.

Nicholas L. Sturgeon, professor in the Department of Philosophy, College of Arts and Sciences, appointed chairman of the department through June 30, 1993.

David K. Wyatt, professor in the Department of History, College of Arts and Sciences, appointed acting chairman of the department through June 30, 1989.

The following faculty members have been promoted to associate professor or professor, effective July 1, 1988, or as noted.

C. Barry Carter, associate professor in the Department of Materials Science and Engineering, to professor.

John Duxbury, associate professor in

the Department of Agronomy, to professor.

Nelly Furman, associate professor in the Department of Romance Studies, to professor.

Michael S. Isaacson, associate professor in the School of Applied and Engineering Physics, to professor.

Robert A. Milligan, associate professor in the Department of Agriculture Economics, to professor.

Karl J. Niklas, associate professor in the Section of Plant Biology, Division of Biological Sciences, to professor.

E. John Pollak, associate professor in the Department of Animal Science, to professor.

Elizabeth A. Regan, associate professor in the Department of Psychology, to professor.

Michael L. Thonney, associate professor in the Department of Animal Science, to professor.

Roger T. Trancik, associate professor in the Department of Floriculture and Ornamental Horticulture, to professor.

CALENDAR

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Cooperative Extension Forum

"Evaluation: How Do You Rate Success?" moderated by Tina Winstead, Dec. 5, 9 a.m., 401 Warren Hall. An overview of veterinary extension programming at Cornell will be presented by Michael Brunner, senior extension associate, veterinary medicine. Other speakers will be Jennifer Greene, assistant professor, human service studies; William Umscheid, senior extension associate, 4-H youth development; Moncrieff Cochran, associate professor, human development and family studies; and David Dik, assistant director, cooperative extension.

English

"Vested Interests: Cross-Dressing and Cultural Anxiety," Marjorie Garber, director of the Center for Literary and Cultural Studies and professor of English, Harvard University, "Cross-Dress for Success," Dec. 1, 4:30 p.m., "The Surgical Construction of Gender," Dec. 2, 4:30 p.m., both lectures in the Guerlac Room, A.D. White House.

THEATER

"Ain't No Use Goin' Home, Jodie's Got Your Gal and Gone - Sayings from The Life and Writings of Junebug Jabbo Jones - Volume III," starring John O'Neal, Dec. 1-3 at 8 p.m., Black Box Theatre, Center for the Performing Arts, 430 College Ave. (Please note that the play has been postponed from the previously printed schedule.) For more information call 254-ARTS.

MISC.

Alcoholics Anonymous

Meetings, open to the public, will be held Monday through Friday, 12:15 p.m. and Thursday evenings, 9:30 p.m., in Anabel Taylor Hall. For more information, call: 273-1541.

E.A.R.S.

Empathy Assistance Referral Service provides trained peer counseling. Call 255-EARS Sunday-Thursday, 3-11 p.m., or walk-in 211 Willard Straight Hall, Friday and Saturday, 6-10 p.m. All services are free, non-judgmental and confidential.

Gay Men's Association

The Gay Men's Association holds a discussion meeting each Wednesday from 7:15 to approx. 9:30 p.m. in Loft II, Willard Straight Hall. Discussion topics include: coming out to parents and people on the job, friendships with heterosexual men, gay parenting, long-term relationships, safe sex, and being gay and religious. For further information, call the Gay, Lesbian and Bisexual Coalition office at 255-6482.

Hebrew Speaking Club

Hebrew Speaking Club meets Tuesdays, 8:15-9:30 p.m., in G-34 Anabel Taylor Hall.

Hillel

Meeting of Student Struggle for Oppressed Jewry, Thursdays, 5 p.m., G-34 Anabel Taylor Hall.

Chanukka Party, Dec. 3, 9 p.m. Anabel Taylor Hall. Call 255-4227 for more information.

Shoals Christmas Bazaar

The Shoals Marine Laboratory 3rd Annual

Christmas Bazaar will be held Dec. 6 and 7, 10 a.m. to 2:30 p.m., G14 Stimson Hall. Items include posters, mugs, books, T-shirts.

Undergraduate Research Forum

Undergraduate researchers Dec. 1, 5 p.m., first and second floors of Ives Hall. A chance to find out about undergraduate research. Speakers will make presentations of their research. For reservations call 255-5004 or 277-7318.

Unions & Activities Craft Fair

Annual Holiday Craft Fair, through Dec. 2, 10 a.m. to 6 p.m., Memorial Room, Willard Straight Hall.

Waste Watchers

A group of faculty, staff and students working with Cornell on managing its solid waste. Meeting to be held Dec. 13, 4 p.m., in the Forum (behind the Coffee House) in Anabel Taylor Hall. For more information call Lucy Gagliardo 277-3044; 539-6313 after 6.

Writing Workshop

Writing workshop walk-in service: free tutorial instruction in writing. Monday-Thursday, 3:30-5:30 p.m. and 7-10 p.m. and Sunday 2-8 p.m., 174 Rockefeller Hall; Sunday-Thursday, 10 p.m.-midnight, 340 Goldwin Smith; Sunday-Thursday, 8-11 p.m., Noyes Center, Browsing Library; and Sunday-Thursday, 8-11 p.m., Clara Dickson Hall, Computer Room.