



Step Towards Metallic Hydrogen

Metallic Xenon Produced

Scientists here have made for the first time xenon, the rarest of the stable rare gases, into a metal by applying tremendous pressures at low temperatures, the National Aeronautics and Space Administration has announced.

The work is considered an important step toward accomplishing the scientific world's dream of creating metallic hydrogen. It was done by David A. Nelson Jr. and Arthur L. Ruoff, with funding from NASA's Lewis Research Center, Cleveland, Ohio.

If hydrogen, nature's simplest and most abundant element, could be made into metallic pellets, it would provide an almost limitless supply of fuel for space travel. It also might provide a convenient fuel for proposed power plants utilizing controlled thermonuclear fusion, an achievement still some 20 to 30 years away, scientists say.

Ruoff, who has been doing high pressure research for more than a decade, is chairman of the materials science and engineering department and is the Class of 1912 Professor of Engineering at Cornell. Nelson is scheduled to receive his doctorate in January.

Nelson and Ruoff say they produced the new metal when pressures of 320,000 at-



Arthur L. Ruoff

mospheres were applied to solid xenon at 32 degrees Kelvin which is minus 402 degrees Fahrenheit.

Normally a gas, xenon when frozen solid does not conduct electricity. But at the pressures applied in the experiment at Cornell, the electrical conductivity of solid xenon increased by more than a hundred billion times; that is, it behaved as a metal. Only a very tiny amount of xenon is used in the experiment.

The enormity of the pressure used in the experiment is apparent when one considers that the pressure in the deepest part

of the ocean (about 35,000 feet down) is only about 1,000 atmospheres. The pressure used by Ruoff and Nelson was six times that used to produce synthetic diamonds in the laboratory.

Because xenon returns to the insulating state when the pressure is removed, no engineering applications are apparent. However, Ruoff says, "The production of metallic xenon is of considerable scientific interest. The development of these techniques is a step forward in high pressure research. The production of metallic xenon is the forerunner of other experiments, just as our production of metallic sulfur in 1977 by this technique set the stage for the production of metallic xenon."

He believes that his group now has the capability of making oxygen and krypton metallic as well as possibly nitrogen, argon and eventually hydrogen.

Ruoff notes that theorists have predicted that hydrogen and even diamond will become metallic at high enough pressures, perhaps several million atmospheres. One theorist predicts that hydrogen will remain metallic even after the pressure is released as long as it is kept at low temperatures. NASA is ex-

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Rhodes Reviews Retirement Laws

President Frank Rhodes last week reviewed with the faculty the implications of the Federal Law extending mandatory faculty retirement age to 70 on July 1, 1982.

The president outlined five options as possible ways of dealing with the financial, legal, human rights and academic issues involved during a discussion with the Faculty Council of Representatives. (A detailed report of his talk and faculty response to it is printed in the Bulletin of the Faculty on page 4).

The options (detailed in full below) are subject to further development and eventual ranking in order of preference, he said, based on insights the faculty provided at the FCR meeting and further consideration by the Faculty Committee on the Professional and Economic Status of the Faculty, and the Provost's Office.

The refined series of options, together with a critical evaluation of the costs and benefits of each will be reviewed with the FCR, the Dean's Council and the Board of Trustees some time in the spring, Rhodes said.

The president pointed out that, although the FCR had discussed this matter almost a year ago, the Federal legislation was not enacted until April of this year.

In his presentation of the issues he pointed out that public discussion of certain aspects of the matter is complicated and hampered by legal action now pending in the courts.

The University has appealed a court decision reinstating to active faculty status Professor Marvin D. Glock, Agriculture and Life Sciences. Glock was retired in June after having reached age 65. He obtained a preliminary injunction from the U.S. District Court based in part on the argument that the Agricultural College is subject to the mandatory retirement policy of the State University of New York which is age 70, rather than Cornell's policy of age 65.

Rhodes said the University has appealed the decision, not because of Professor Glock's reinstatement, but because "the

court's opinion made a number of comments on the relationship between Cornell and SUNY. We believe that these comments represent an inaccurate description of what the relationship is, both by legislative provision and by history, tradition and present practice."

The five options as he now sees them and outlined to the FCR are:

Option 1: Wait until 1982 and then implement existing legislation. This complies in full with the legal requirements which the University now faces. It provides time to develop an orderly system of retirement, replacement and review, and maximum flexibility in dealing with the very serious financial problems that we face. It has obvious disadvantages for those who reach the age of 65 during this period, and who may wish to continue in their faculty appointments.

Option 2: Increase mandatory retirement age to 70 effective July 1, 1979. The costs of this are substantial, both in financial terms of its impact upon curriculum, new recruitment, affirmative action, intellectual vigor, and long-term institutional financial equilibrium. It may also have an impact upon the present nature of tenure. Its obvious benefit is to those who reach the age of 65 before July 1, 1982.

"In the statutory colleges of Cornell, the impact of moving immediately to age 70 retirement for tenured faculty would be to reduce the options for bringing in new faculty and reallocating resources to higher priority areas. Assuming that there is no cutback in State funding during the next several years, the salaries for faculty in the statutory colleges continuing beyond age 65 would be paid by the State.

"In the endowed units there will be up to a maximum of 45 tenured faculty who will reach the current retirement age of 65 prior to June 30, 1982. Eight of these positions already have been pre-filled and if the remaining 37 positions were refilled at the assistant professor level, the

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More Women Receive Degrees Now

A marked increase in the number of women receiving degrees from Cornell during the 1970s has been reported by the Office of Institutional Planning and Analysis.

The number of degrees conferred on women has risen 68.9 percent since the 1971-72 academic year, though the total number of degrees granted has gone up only 15.4 percent, according to John W. Rudan, senior planning officer in IP&A.

Sally Sanderson and Barbara Davis, data analysts in IP&A, compiled and organized the data. Sanderson said they initiated the project in light of campus concern about affirmative action and Title IX efforts.

The increase is reflected in all degree programs except bachelor of fine arts, where the number of female recipients remained stable over the six-year period, and bachelor of science in the New York State College of Human Ecology, where the number of female recipients declined.

Rudan suggested that the explanation for the change in human ecology could stem from the fact that in 1969 the College of Home Economics altered its educational emphasis and its name, and may have become more attractive to male applicants. This may explain why males are an increasing proportion of those receiving degrees in

human ecology, he said.

Overall, there has been a slight decrease in the number of degrees granted to men during the period. Only in the undergraduate statutory colleges and in the Graduate School have there been any increases in degrees to men.

The data show degrees granted to women have increased both proportionately and numerically.

The most notable increase in the proportion of degrees awarded to women occurred in the professional schools. In 1977-78, the Graduate School of Business and Public Administration awarded 25 percent of its degrees to women, the Law School awarded 24.6 percent, and the New York State College of Veterinary Medicine, 33.8 percent. In 1971-72 the percentages of degrees conferred on women in those schools were 1.7 percent, 5.1 percent and 3.3 percent, respectively.

In the undergraduate schools

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Seniors' Gifts to Help Renovate Music Room

Some 500 members of the senior class have pledged financial support for the renovation of the Willard Straight Hall Music Room, according to Linda Rust, class gift committee co-chairman.

A total of \$3,832 was pledged to the senior class gift project during a three-night phonathon Oct. 30, Nov. 1 and Nov. 2, Rust said. She called the total pledged "terrific" and said "the \$5,000 goal is definitely in sight." She noted that nearly 200 seniors did not specify the amount of their gifts.

It is the hope of the class gift committee that work on the Music Room renovation can begin as soon as some of the money pledged is received, and that seniors will see the results of their giving before they graduate.

A new music system for the

room, which is on the south end of the lobby level of the Straight, is the top priority, according to Rust. It will be a movable component which could be used in the Memorial Room of the Straight as well.

If the \$5,000 goal is reached, the class gift will be used for replacement of the Music Room rug and refurbishing the furniture, in addition to the new music system. If more money is received, the class gift will include additions to the Music Room's record collection.

Letters will be sent to seniors who could not be reached during the phonathon, seeking their contributions also. Rust thanked the 41 seniors who called their classmates during the phonathon and "all who contributed, or will contribute, to the class gift fund."

Publication Schedule

The Chronicle will not be published next week because of the Thanksgiving holiday. It will be published Nov. 30. Items for the calendar for the Nov. 30 issue must be submitted to Fran Apgar, 32 Willard Straight Hall, by Monday, Nov. 20. Seminar notices for the Nov. 30 Chronicle must be at 110 Day Hall by noon, Wednesday, Nov. 22. All other copy must be at 110 Day Hall no later than noon, Monday, Nov. 27.

FCR and Council to Study Academic Calendar

The possibilities for major changes in the Cornell calendar will be studied by a joint committee of the Faculty Council of Representatives and the Campus Council.

Members of both groups unanimously endorsed the formation of such a committee at their respective regularly scheduled business meetings last week.

The membership of the study group, which will be jointly headed by a student and a faculty member, is being established by Robert McGinnis, chairman of the council, and Kenneth I. Greisen, dean of faculty.

Major changes in the academic calendar have been a subject of discussion for the past few years for several reasons. One is the mounting pressure

students say they feel during a fall term which has no substantial vacation break. Another is the increased concern for more economical use of campus facilities in light of mounting energy costs and the overall fiscal problems facing Cornell and higher education in general.

McGinnis said the committee would consider the feasibility of a trimester calendar or a return to the old calendar which extended the fall term into January. Other options also will be studied, he said.

Under current legislation major changes in the calendar are the primary concern of the FCR and the Council.

McGinnis said he did not see that the committee's efforts could result in any changes for at least two years.

More Women Receive Degrees Now

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and colleges, significant percentage changes have taken place in the School of Hotel Administration and the New York State College of Agriculture and Life Sciences. The percentage of

degrees to women in the Hotel School jumped to 29.1 in 1977-78 from 7.6 in 1971-72. In the Agriculture College, the percentage rose to 39.1 from 17.3.

Another notable increase oc-

curred in the College of Engineering. In 1977-78, 56 women out of a class of 510, or 11 percent, received degrees. In 1971-72, there were only 2 women in a class of 451, 0.4 percent, who received undergraduate engineering degrees.

DEGREES CONFERRED TO WOMEN (ITHACA ONLY)

COLLEGE	DEGREES	1971/72		1977/78		% DEGREES TO WOMEN 1971/72	% DEGREES TO WOMEN 1977/78
		WOMEN	TOTAL	WOMEN	TOTAL		
Arch, Art & Plan.	BS, BArch	4	47	8	39	8.5%	20.5%
	BFA	19	23	19	29	82.6	65.5
Arts & Sciences	AB	277	842	437	911	32.9	48.0
	BS	2	451	56	510	0.4	11.0
Hotel	BS	11	145	48	165	7.6	29.1
TOTAL ENDOWED UNDERGRADUATE		313	1508	568	1654	20.8	34.3
Agr. & Life Sci	BS	106	616	348	890	17.3	39.1
	BS	292	305	260	294	95.7	88.4
IALR	BS	15	112	40	158	13.4	25.3
TOTAL STATUTORY UNDERGRADUATE		413	1030	648	1342	40.1	48.3
B & PA	MBA, MPA, MPS	3	180	56	224	1.7	25.0
	JD	8	158	42	171	5.1	24.6
Vet	DVM	2	61	24	71	3.3	33.8
TOTAL FIRST PROFESSIONAL		13	399	122	466	3.3	26.2
Graduate School	MA, MS	122	449	148	493	27.2	30.0
	M Eng	0	118	9	137	0.0	6.6
	MPS & all other Masters	55	132	61	205	41.7	29.8
	PH.D & all other Doctorates	57	490	87	465	11.6	18.7
TOTAL GRAD SCHOOL		234	1189	305	1300	19.7	23.5
TOTAL ALL PROGRAMS		973	4126	1643	4762	23.6	34.5

SOURCE: Registrar's Office

Rhodes Reviews Mandatory Retirement

Continued from Page 1

additional cost to the University, if all remained until age 70, would be \$958,000 (1978-79 dollars) in 1982-83. Not all individuals will choose to work until age 70 and if it is assumed that 30 percent will retire at age 65 and 30 percent will continue until age 70, the University will still face an annual cost in 1982-83 of \$474,000 above the cost of replacing the faculty with assistant professors (see attached table)."

For comparison, it should be pointed out that a 1 percent increase in salary costs approximately \$510,000.

Option 3: Leave the decision on the age of mandatory retirement to the discretion of the dean of each college and the director of each unit. This has the benefit of allowing maximum discretion to individual schools and colleges, and of allowing accommodation to whatever differences may emerge in retirement ages between the statutory and the endowed colleges. It provides a partial solution to our more severe financial problems and follows the Cornell tradition of decentralized responsibility in academic planning. It has the disadvantage of unequal treatment between individuals in different colleges and of consequent litigation, which could be both costly and divisive.

Option 4: Individual faculty members would be granted the privilege of requesting an extension of their faculty appointments on a year-by-year basis beyond 65 to age 70, rather than to 68 as is now the position. Each college would then have the option of negotiating with individual faculty members regarding the extension and terms of appointment beyond age 65. This has most of the benefits of Option 3, as well as most of the disadvantages. It would allow, however, greater flexibility, including part-time appointments, phased retirement, special packages of retirement benefits for individuals, and the possibility of allowing individuals to work in areas of their greatest strength and interest.

Option 5: End present appointments at age 65, but renegotiate appointment of each individual on new terms and with new duties. This has the benefit of giving equal opportunity to all those who reach age 65 before 1982, but it also allows flexibility for the University in seeking to use them in areas in which they have the greatest expertise and commitment."

"Whatever option is finally selected prior to June 30, 1982," he said, the University must develop a longer-range program which would permit multiple retirement options for indi-

vidual faculty members. There are probably many faculty members who would welcome the opportunity to change their responsibilities as they approach the retirement age. We are, therefore, interested in developing a systematic review of an individual's plans and responsibilities at age 60, and again at age 65, with aim of a mutual decision on the responsibilities and nature of employment which is in the best interests of both the individual faculty member and the department or college. This could take various forms, including a renewal of the present appointment with the same general responsibilities, or a full-time appointment with more time devoted to teaching, administration, or research, if funding were available. For other individuals, it might involve a variety of part-time appointments, or early or phased retirement with negotiated adjustments in retirement benefits."

At the outset of the meeting Rhodes said he was pleased to have the opportunity to discuss the issue with the FCR "because it is one that is best addressed in partnership and not in competition. I say that because I think it is possible with good will and some prudence, to work out a solution that commends itself to both the faculty and the administration."

Number of individuals between the ages of 65 and 70, and the cost if all were replaced as Assistant Professors* (1978-79 dollars)

Year	1979-80	1980-81	1981-82	1982-83	1973-84	1984-85	1985-86	1986-87
Architecture:								
No.	1	1	1	2	2	1	1	1
Cost (\$1000)	14	14	14	26	26	12	12	12
Arts & Sciences:								
No.	9	16½	20½	26½	24½	18½	11	6
Cost (\$1000)	(3 prefills) 240	(1 prefill) 370	(1 prefill) 450	570	530	410	240	120
B&PA:								
No.	0	1	1	1	1	1	0	0
Cost (\$1000)		12	12	12	12	12		
Engineering:								
No.	4	6	10	12½	12½	8½	6½	2½
Cost (\$1000)	(2 prefills) 120	160	(1 prefill) 260	310	310	190	150	50
Hotel:				0				
Law:								
No.			2	3	3	3	3	1
Cost (\$1000)			27	40	40	40	40	13
TOTAL:								
No.	14	24½	34½	45	43	32	21½	10½
Cost (\$1000)	374	556	763	958	918	664	442	195

Assume that 70% will continue beyond age 65 but only 30% will continue until the age 70 the costs per year would be approximately as follows:

Year	1979-80	1980-81	1981-82	1982-83	1973-84	1984-85	1985-86	1986-87
Cost (\$1000)	262	350	435	474	459	285	164	58

*Exception: Five faculty positions in Arts and Sciences and three in Engineering have already been pre-filled, hence cost is \$40,000 per position (salary plus fringes).

Job Opportunities

The following are regular continuing full-time positions unless otherwise specified. Please do not inquire at individual departments. An equal opportunity employer. Individuals on lay-off status will be given preference in referrals.

(*) indicates new this week.

CLERICAL POSITIONS

- Library Asst. V, A-19 (U. Libraries, Olin)
- *Admin. Aide, A-18 (Computer Science)
- Admin. Aide, A-18T (Maint. & Svc. Ops.)
- *Admin. Aide I, A-18 (Univ. Counsel & Secy. of the Corp.)
- Admin. Clerk, A-16 (Sponsored Programs)
- *Admin. Secy., A-15 (Neurobiology & Behavior)
- *Head Account Clerk, A-15 (Purchasing)
- Admin. Secy., A-15T (University Development)
- Admin. Secy., A-15 (Personnel)
- Admin. Secy., A-15T (Chemical Engineering)
- Admin. Secy., A-15T (Center Int'l Studies)
- Admin. Secy., A-15 (Univ. Libraries)
- Library Asst. III, A-15 (Univ. Libraries, Olin)
- Admin. Secy., A-15 (Chemistry)
- Principal Clerk, A-14T (Design & Project Mgmt.)
- Principal Clerk, A-14 (A&S Admissions)
- *Dept. Secy., A-13 (Univ. Development)
- Dept. Secy., A-13 (Law School)
- Dept. Secy., A-13 (Admissions)
- Dept. Secy., A-13 (Univ. Development)
- Corres. Secy. I, A-13T (Univ. Development)
- Dept. Secy., A-13 (Cornell United Rel. Works)
- *Library Asst. II, A-12 (U. Libraries, Physical Sciences)
- Sr. Clerk, A-12 (Admissions Office)
- Library Asst. II, A-12 (Univ. Libraries, Fine Arts)
- Steno I, A-11 (COSEP, Minority Education Affairs)
- Admin. Aide, NP-12 (Hum. Dev. & Fam. Studies)
- Stat. Clerk IV, NP-10 (Physical Biology)
- Steno III, NP-9 (Veterinary Student Admin.)
- Admin. Secy., NP-8 (Ag. Engineering)
- Admin. Secy., NP-8 (Nutritional Sciences)
- *Stat. Typist, NP-7 (Coop. Ext. Admin., Ext. Field Ops. Office)
- Steno II, NP-6 (Education)
- Steno II, NP-6 (Hum. Dev. & Fam. Studies)
- Steno II, NP-6 (Div. of Nutritional Sciences)
- Steno II, NP-6 (Agronomy)
- *Steno I, NP-5 (Ag. Economics)

SERVICE & MAINTENANCE POSITIONS

- Control Mechanic (Maint. & Svc. Ops., Union)
- Refrigeration Mechanic (Maint. & Svc. Ops., Union)
- Sr. Exp. Mach., A-21 (LASSP)
- Asst. Managr II, A-20 (Graphic Arts Services)
- Experimental Machinist, A-19 (Lab Nuclear Studies)
- Cook I, A-15 (Residence Life)
- *Nurse's Aide, A-13 (Health Svcs.)
- *Stockkeeper I, A-12 (Graphic Arts Svcs., 35 hrs. week)
- Food Service Worker, A-11 (Dining Services)

TECHNICAL POSITIONS

- *Sr. Prod. Controller, A-21 (Computer Services)
- Sr. Comp. Operator, A-21 (Computer Services)
- *Programmer I, A-19 (Computer Services)
- Computer Operator II, A-19 (Computer Services)
- Synch. Op. Tech., A-19 (Lab Nuclear Studies)
- Sr. Tech. Aide, A-19 (Computer Services)
- Lab Tech. A-19 (Materials Science Center)
- Sr. Lab Tech. A-18 (Neurobiology & Behavior)
- *Sr. Lab Tech., A-18 (Neurobiology & Behavior)
- Sr. Lab Tech., A-18 (Biochem., Mol. & Cell Biology)
- Computer Operator I, A-17 (Computer Services)
- *Lab Tech., A-15T (Lab of Ornithology)
- Res. Tech. IV, NP-14 (Design & Environ. Analysis)
- *Lab Tech. II, NP-11 (Vet Microbiology, Baker Inst.)
- Lab Tech. NP.11 (Entomology)
- Lab Tech. II, NP-11 (Plant Pathology)
- Res. Tech. II, NP-10 (Div. of Nutritional Sciences)
- *Lab Tech. I, NP-8 (DCS-Mastitis Control, Kingston Lab)
- *Lab Tech. I, NP-8 (Div. Nutritional Sciences)
- Res. Tech. I, NP-8 (Plant Pathology)
- *Lab Tech. I, NP-8 (Div. of Nutritional Sciences)
- Sr. Arch. Engr. II, CPO7 (Design & Proj. Mgmt.)
- Sr. Res. Supp. Spec., CPO6 (Elect. Engineering)
- Comp. Tech. Admin. III, CPO6 (Computer Services)
- Sr. Comp. Staff Spec., CPO6 (Computer Services)
- Comp. Tech. Admin. II, CPO5 (Computer Services)
- Life Safety Svc. Mgr., CPO5 (Life Safety Svcs. & Ins.)
- Systems Programmer III, CPO5 (Agric. Economics)
- Res. Supp. Spec. III, CPO5 (Elec. Engineering)
- Elec. Engineer II, CPO5 (Design & Project Mgmt.)
- Applications Programmer II, CPO4 (Computer Graphics)
- Res. Supp. Spec. II, CPO4 (Mat'l Science & Engr.)
- Comp. Tech. Admin. I, CPO4 (Comter Services)
- *Res. Supp. Spec. I, CPO3 (Div. of Nutritional Sciences)
- Appl. Programmer I, CPO3 (Vet Computer Resource)
- *Res. Supp. Spec. I, CPO3 (Agronomy)
- Res. Supp. Spec. I, CPO3 (Animal Science)
- *Res. pp. Spec. I, CPO3 (Nat'l Resources)
- Res. Supp. Spec. I, CPO3 (Programmer)(Mat'l Science Ctr.)
- Appl. Programmer I, CPO3 (Computer Services)(3)
- Admin. Spvr., CPO3 (Media Services)
- Asst. Mgr.-Rad. Safety, CPO3 (Life Safety & Rad. Safety)
- Res. Supp. Spec. I, CPO3 (Food Science & Tech., Geneva)
- *Curatorial Asst., CPO2 (Lab of Ornithology)
- Ext. Supp. Aide, CPO2 (Plant Pathology)
- Res. pp. Aide, CPO2 (Div. of Nutritional Sciences)

ADMINISTRATIVE POSITIONS

- Promotion Manager (University Press)
- Asst. University Counsel (University Counsel)
- Director of Utilities (Utilities)
- Exec. Staff Asst. IV, CPO8 (V.P., Finance & Planning)
- Exec. Director, CPO8 (Office of Equal Opporntiy)
- *Sr. Administrator I, CPO7 (Media Services)
- Develop. Officer II, CPO6 (University Development)(2)
- *Assoc. Administrator, CPO6 (Media Services)
- Admin. Manager II, CPO5 (Utilities)
- Admin. Manager II, CPO5 (Cornell Plantations)
- Dining Manager II, CPO5 (Dining Services)
- Budget Analyst III, CPO5 (Finance & siness)
- Editor II, CPO4 (Media Services)
- Managing Editor, CPO4 (Univ. Relations, 10 mos. yr.)
- Dining Manager I, CPO4 (Dining Services)

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Council Asks Investment Report Be Made Public

The Campus Council has unanimously passed a resolution recommending "that the report of the trustee's ad hoc committee on investments in South Africa be made available to the public upon completion."

At a public hearing jointly conducted by the council and the trustee committee, Sept. 13, it was announced that the committee expected to make a report to the full board sometime in November. A report of the hearing appears on page 1 of the Sept. 14 Chronicle.

The resolution passed at the council's regular meeting last Thursday also states: "Such a recommendation is made in the spirit of the full and free flow of ideas that a University represents and in recognition of the great concern that the Cornell community repeatedly has expressed on this issue."

The action was taken after the council rejected a motion by

Student Trustee Gary S. Guzy, Arts '80, that the council endorse a petition with much the same wording already subscribed to by various campus groups including the Cornell Corporate Responsibility Project, the Committee on Religion, Ethics and Social Policy and the Cornell Chapter of the New York Civil Liberties Union.

Council Chairman Robert McGinnis said that while he supported the basic idea behind the petition it was inappropriate for the council to endorse the petition, and that the council should take its own stand as the chartered self-governance arm of the Cornell community.

McGinnis announced that the council's regular meeting of Nov. 23 has been rescheduled for Nov. 30 because of Thanksgiving. All council meetings are open to the public and start at 4:45 p.m. in 701 Clark Hall, unless announced otherwise.

Environmental Research Center Seeks Proposals

Cornell's Center for Environmental Research, the Water Resources Research Institute for New York, is soliciting pre-proposals and proposals for research on critical water-related problems.

Matching grants for such research are available on a competitive basis under a program sponsored by the Office of Water Research and Technology in the U.S. Department of the Interior.

Water conservation and water problems of urbanization are national concerns which OWRT has given high research priority. Protection of water quality against pollution; groundwater recharge; effects of pollutants on aquatic ecosystems; sources, transport

and fate of organics and viruses in surface and groundwaters; regional water- and land-use planning and management research; identification and removal of pollutants in drinking water and protection against flood damage have high research priority in New York, New England and the Mid-Atlantic region.

CER will accept preproposals, which will be screened by OWRT to identify those with low probability of funding, until Dec. 1. The deadline for proposals submitted to CER is Jan. 19, 1979.

For more information, advice and assistance in preparing proposals and preproposals, contact CER, 468 Hollister Hall. The telephone number is 256-7535.

Friendship House Founder To Give Sage Convocation

Catherine de Hueck Doherty, founder of the Madonna House Apostolate in Combermere, Ont., will be the speaker at the Sage Chapel convocation at 11 a.m. Sunday, Nov. 19. Her topic will be "The Power of Poverty."

Doherty, born in 1900 to a wealthy Russian family, married Baron Boris de Hueck at the age

of 15. In 1920, they went to Canada, after being forced to flee Communist Russia.

She then went to New York City where she worked as a laundress, a maid and a waitress, before finding work with a lecture bureau. Within a few years she rose to an executive position in the company and was once again wealthy. She was haunted by the words of Christ, "Sell all that you have and give to the poor, and come, follow me."

In 1930, she sold her possessions and went to live with the poor in the slums of Toronto, where she founded the first Friendship House. Four years later, Madonna House, a rural settlement house which developed into a training center for the lay apostolate, was founded.

Doherty is the author of a number of books including "Poustinia," "Sobornost," and her most recent "Strunnik," all published by Ave Maria Press, Notre Dame.

Doherty will also deliver a lecture Sunday at 8 p.m. in the Founders Room of Anabel Taylor Hall. Her topic will be "Christ or Chaos."



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Profile Grambow Helps Others Grow



Debbie Grambow

What ever happens to those little girls who play the piano, dance ballet, do needlecraft, and read books like "The Velveteen Rabbit?" All of them grow up, but some of them grow up to be women who go back and teach other little boys and girls how to grow up. One such grown up little girl is Deborah Grambow, a senior in the School of Human Ecology at Cornell.

While Debbie hails from Syracuse, her roots are here in Ithaca. Her parents met while both were studying at Cornell. After her mother graduated and her father earned his degree in veterinary medicine, Debbie's parents moved to Syracuse where they set up a practice and a family. Throughout her childhood, her parents brought the family to Cornell time after time for picnics and visits. Debbie became a true Cornell child, complete with the "CORNELL, 19???" T-shirt.

After graduating from high school, Debbie went to St. Lawrence, "because I wanted a small liberal

arts school where I could get to know everyone." But the strange magnetism of Cornell did not leave her alone. In the middle of her sophomore year, she transferred into Cornell's Human Development and Family Studies program. Her goal: to teach young children with learning disabilities.

In addition to all the theories she learns in class, Debbie has had the chance to work with real children with real problems. Last semester, she had the opportunity to work with two Ithaca grade school children. The two were quite different cases.

"For one, they just gave me a list of concepts that he had problems with ... in and out, up and down." Debbie said that as a member of a large family, he was used to adults but never had any chance to communicate with them. "His parents would just plop him in front of the TV and hope that he wouldn't ask any questions." Debbie said that once he found that she was willing to talk to him, he opened right up.

With her other child, Debbie never got a list. "What she needed was some attention, an adult friend. After a while, I sort of became a big sister to her."

Because of the credits she earned at St. Lawrence and summer school work, this will be Debbie's last semester at Cornell. She said that she is taking a course for fun during her last semester. "I really enjoy Wines (Introduction to Wines and Spirits). It's fun and relaxing," Debbie says the course is giving her real insights into wine and the winemaking process. "I look forward to it every week."

Since her undergraduate degree will not qualify Debbie for a teaching certificate, she plans to go on to graduate school. She said that she is interested in a special education learning disabilities program that is being offered at Syracuse University near her home. She took several courses there this summer and she says that they gave her an opportunity to talk to real teachers who had spent years working with children. Debbie said it taught her the differences between the theories and the real world.

A woman who wanted to be a ballet dancer when she was young comes to college and learns to be a teacher so that she can help children with learning disabilities. It is a story line that would fit well into a children's book. It is also a story line that describes Debbie Grambow.

Pete Diemer

Diemer is a senior and a student in Communication Arts 315, which is taught by the Chronicle editor.

Brief Reports

Financial Aid Counseling

Financial aid peer counselors will be available this week to answer questions concerning financial aid. The FAIR (Financial Aid Information Resource) Peer Program was initiated this year to help alleviate some mixups and frustrations associated with financial aid in the past.

Financial aid peer counselors are financial aid recipients who have been trained to explain the workings of financial aid in a direct, accurate, "first hand" manner.

This service is available beginning this week at: the bookstore Monday through Friday from 11 a.m. to 2 p.m., Noyes and North Campus Centers Monday through Friday from 3:30 to 6:30 p.m. and at Willard Straight Monday, Wednesday and Friday.

In addition to understanding and information, peer counselors will have forms, informative brochures, and advice.

Radio Stations Added

Two more stations have been added to the broadcast alert system that Cornell University will be using to announce cancellations of University business due to inclement weather. The addition of these stations will extend cancellation information to employees who live in the Schuyler County area. Every effort will be made to get the information on the air by 6 a.m. The newly added stations par-

ticipating in the alert system are WGMF (AM), Watkins Glen, 1500 kilohertz and WXXY (FM), Montour Falls, 104.9 megahertz.

Graduate School Dean Sought

Nominations are being sought for a half-time appointment as dean of the Graduate School for a five-year term effective July 1, 1979.

Provost W. Keith Kennedy said this week he would like all nominations turned in to his office by Thanksgiving. The appointment will be made from a current member of the Cornell Faculty.

William W. Lambert, current dean, has agreed to extend his term in the job for six months, through next June.

Bus Service Suspended

Users of the Northeast Transit bus service are reminded that because of the Thanksgiving Holiday there will be no service Thursday, Nov. 23, and Friday, Nov. 24. Regular service will resume Monday, Nov. 27.

Judicial System Hearing

A public hearing on the University's judicial system is scheduled for 4:30 p.m. today in Room G-08 of Uris Hall. The hearing is jointly sponsored by the Campus Council and its Codes and Judicial Committee and will deal primarily with the

recommendations by the committee. These are printed in detail on page 2 of the Nov. 9 Chronicle.

Painting Stolen

Officials at the Laboratory of Ornithology are seeking information that will lead to the return of a 6-inch by 15-inch painting of a red-tailed hawk, done in oils on weathered wood.

The painting, by Peggy Seeley of Jacksonville, disappeared from the laboratory gallery sometime Sunday (Nov. 12). It had been on display as part of an exhibition of the work of 31 local artists being featured at the laboratory through Jan. 6.

The painting may be returned to the laboratory, with no questions asked, according to Douglas Lancaster, laboratory director.

Watsbox Warning

A five minute warning tone has been added to Watsbox calls to alert callers to the duration of their conversation.

The warning tone is automatically released at five minute intervals. The sound is heard only by the caller.

The warning tone feature has been eliminated on all authorization numbers issued to persons who have indicated on their application forms that their calls would involve data transmission. Users who suspect that data transmission is being interrupted by this feature should contact the Telecommunications Center.

Bulletin of the Faculty

Publication of this bulletin is supervised by the secretary of the University Faculty.

FCR Meeting Nov. 8, 1978, Ives 110

The regular November meeting of the FCR was called to order by Speaker Russell Martin. There not being a quorum until well into the meeting, the one business item was reserved until the end.

Inconvenienced with a walking cast enclosing a broken ankle, suffered from an unruly bicycle, the dean reported the results of some recent voting.

Elected to the FCR Executive Committee were Professors Mary Morrison, Charles Wilcox and Roger Young, all tenured faculty, and Professor William Dills, non-tenured; to the Budget Committee, Professor Alfred Aman; to the Freedom of Teaching and Learning Committee, Professor Edgar Rafensperger, and to the Minority Education Committee, Professor Fred Somkin.

On the results of the referendum re the OPUF changes voted at the last Faculty meeting, the dean further reported that in the mail balloting, the Faculty overwhelmingly favored excision of all references to the Senate in the document and making appropriate references to the Campus Council, favored improved language and elimination of now obsolete passages, favored making some ex-officio members of the FCR voting members and, most importantly and by but a slim margin, favored lowering the quorum requirement to be met for the conduct of business at full Faculty meetings.

The speaker then introduced President Rhodes for remarks on mandatory retirement. Having spoken in the morning to residential groups in New York City about selling off some real estate around the Medical College, he was not engaged over the day in the most outstandingly popular subjects; none-the-less, he was glad to be present. He reminded the body of the FCR vote of a year ago opposing the then proposed denial to professors of the extension of mandatory retirement age from 65 to 70. The dean was requested at that time to communicate in urgency to the Trustees and the president about Faculty feeling. This the dean did; with the support of President Rhodes' response, he had also communicated the sentiment to our senators and representative in Congress.

Following passage of the measure in April, the University has been in active discussion about its own course. There has however, been little public discussion, this being limited by litigation.

The action of Congress raises, as of Jan. 1, 1979, the mandatory age of retirement to age 70 for all employees except University professors with tenure (and corporation executives); professors are to be included as of July 1, 1982. The reason for the professorial exemption lies in the special situation of the universities; one could argue that point, the President said.

Legally, the University is not required to change its way until that date. It now faces an interim injunction. Professor Marvin Glock was retired at 65 on June 30; based on a view of the relationship of the Agriculture College to SUNY, he appealed to the court that he be allowed to go on to age 70, as allowed by SUNY. Judge Munson ruled in Glock's favor.

The president said he was pleased to have Glock continue, but not with the rationale, for in it, the judge made some comments on the college relationship to SUNY which would not seem to be in accord with the legislative provisions for the college, with the history, traditions and present practices.

The administration posture is further complicated by talk that Congress will eliminate all mandatory retirement age; California and Connecticut have already done so and our own Gov. Carey says he wants to eliminate it.

The president read a portion of a letter from Dean Greisen summarizing a meeting last month of four Faculty committees with the provost on the issue. The dean felt that as representative a view of Faculty opinion as possible had been there gathered. A wide spectrum of view was voiced: there was concern over the reduction in hiring of new blood, of the erosion of retirement security by inflation, over the bad public relations engendered by continuance of the 65 limit, and concern over increasing costs at a time when we are undertaking drastic reduction in spending. There was wide support for incentives to encourage voluntary retirement and part-time employment after 60. Alluded to also was the threat to the tenure system if mandatory retirement were abandoned entirely.

In the statutory colleges, the impact would be to increase the difficulty of getting new members and to reduce the possibility of re-allocating resources from low priority areas to those of higher priority. But the state would presumably meet the costs.

In the endowed colleges the financial impact, at least, can be quantified. A tabulation handed out at the meeting showed that there will be 45 retirements before 1982, eight of which have already been pre-filled. If all the remaining 37 stay until 1982, the cost in 1982-83 will be \$958,000 over what it would cost to replace them with new young non-tenured members. If one were more realistic and said that 30 percent (SUNY runs at 25 percent) will retire at 65, and of the others, 30 percent stay until age 70, the cost in 1982-83 will be \$474,000.

He commended the legislation for its real benefits: for Faculty, a hedge against inflation, and the opportunity to continue a rewarding career at Cornell; for the University, the possibility of drawing on the professional skills and experience of our colleagues.

At the same time there are costs, which are particularly formidable at a time when we are trying to reduce spending by between \$4 and \$5 million in the next few years, which reduction plan allows positions to lapse with retirement, or to be replaced in higher priority areas by less expensive Faculty. If we now have to look elsewhere for savings, promotion to tenure will be hurt and the Affirmative Action program will be diminished, since most of our minority and women faculty are in the non-tenured ranks.

A second cost to the University will be an increased rigidity in program structure at a time when flexibility is necessary. There also will be competition for salaries by support services, fringe benefits, financial aid, etc. And tenure itself will come under scrutiny; whatever happens, all universities will of necessity have to strengthen their Faculty evaluations.

He listed five options for Cornell: (1) wait it out until 1982 to implement the legal requirements; that gives time for orderly planning and maximum flexibility, but is disadvantageous for those making it to 65 before 1982; (2) go to the polar extreme — extend retirement now; this is expensive to our finances, to the acquisition of new blood, and to Affirmative Action, but of obvious advantage to those reaching 65 before 1982; (3) the University takes no position; the deans and directors decide, in decentralized responsibility, who under them shall be permitted to stay on; there would be differences between schools, but it is well known that lawyers only improve with age, while scientists never do anything worthwhile after forty; this unequal treatment could lead to litigation and could only be divisive; (4) we might extend to the Faculty the privilege of requesting an extension of their stay on a year-to-year basis to age 70; this is followed to age 68 in some colleges already; this allows a phased retirement and part-time employment but has the same advantages and disadvantages as (3); finally, (5) which is

related to (4); tenure is ended at 65 but each member negotiates an appointment with his dean, carrying with it new duties and responsibilities; this gives equal opportunity and makes possible attractive situations of employment at age 70.

The President believes that Faculty members would welcome review by their dean well before they reach 65, to talk about balancing their interests with duties, to explore various forms of employment. Whatever course is selected, he concluded, the University has the obligation to do the maximum possible for the Faculty.

Following his discourse, Professor Galenson, sponsor of last year's FCR resolution on the retirement issue, had some comments and questions. He regretted that the president's remarks had not come a year earlier and he asked whether it was right to discriminate against the old to help the young — this in reference to the president's telegram to Congress last Fall on the hurt to young Faculty and Affirmative Action if the oldsters went on to 70. Judge Munson, Galenson said, went out of his way on this point to give the University some advice, implying that such discrimination might well be unconstitutional. Galenson further suggested, with this possibility in mind, that all professors retired at 65 before 1982 do so in protest and file an action against the University in the eventuality that the courts rule it unconstitutional. A substantial back pay settlement should give the University pause.

He asked the question: suppose Munson's view prevails and the University has a double standard retirement system — is that viable? He thought tenure was not an issue, at least not until all mandatory retirement is abandoned. He thought the figures on financial costs could not be right — how could there be a \$20,000 differential between an old professor and a young assistant professor.

Finally, he was particularly miffed over the Cornell legal staff; if we continue to litigate in the Glock case, get in some new blood.

It was hardly worthy of our spokesman to speak of a professor's peak productivity coming at age 50. True? Maybe yes, maybe no, but he doesn't accept the notion. Further, he castigated our legal people for citing a letter written privately to Glock by a Faculty member, obtained in some way, and cited at the hearing as Faculty opinion on retirement, presumably pro 65. They should have known of the FCR resolution in strong opposition to that view.

In response, the president would not comment on the discrimination of the old vs. the young; things are in litigation. He agreed with Galenson's tacit view that two retirement systems on campus would be bad business. He too regretted that he felt he could not speak earlier as he did today — it's a rule of life that most good things could be done earlier than they are, but he reminded the body that, contrary to Professor Galenson's claim, we did not know what Congress was going to do a year ago — the actual measure was not passed for another six months; and there was also the Glock suit. It was not from an unwillingness to talk that he did not.

He also allowed as how perhaps we should have better lawyers; one can always say that. So far as productivity vs. age goes, he was on the wrong side of 50 to comment. Provost Kennedy commented on the financial costs; the figures were based on salaries of real people. Between salary and fringe benefits, there can indeed be a \$20,000 differential between a young assistant professor and an elder type professor.

Professor Usher inquired how the figures might be offset in consideration of the fact that an old professor brings in grants more successfully than a younger person. It was not clear that this was so; upon volunteering to find the information, the president was cautioned by the provost and vicepresident Donald Cooke that it might be something of an operation to do so; he thus volunteered rather to determine the feasibility of getting the information.

Professor Gunkel pointed out the difficulty of even finding young people to fill open positions in some fields such as Ag Engineering; the same is apparently true in Chemical Engineering, the president noted.

In connection with questions regarding the financial costs in keeping professors on to 70, Dean Greisen pointed out that in SUNY, the 75 percent staying on after 65 manage to stick with it for an average of three years, so he thought the provost's figures on cost were optimistic.

Professor Blumen welcomed the president's remarks — he viewed it as a serious discussion, in contrast to the stellar production at the last Faculty meeting. He then constructively posed the question: can we accommodate extended retirement with but minimal damage to the University? He thought the problem was smaller than anticipated — we're really talking about less than thirty retirees; certainly some retire even before 65.

He considers Affirmative Action to not be an issue; don't press it. The problem there is not with the availability of positions but rather with qualifications of persons available.

He pointed out that one's experience with the past is only partial guide to the future; recent changes in Social Security and tax levies will greatly diminish the financial advantage to staying on full time. Most Faculty will be only marginally better off doing so. Thus, if they stay on, it will not be for monetary gain. Those staying will make a highly motivated, select, small group. It also means that, without motivation, more may choose not to stay on than has been the experience at the state universities.

He thinks there are other alternatives that could be aggressively pursued, part-time employment among them.

We can give options to our Senior Faculty which would give them more take-home pay, give them participation and association with their colleagues and graduate students. Such part-time employment would reduce the University cost to that of about three faculty members, not 45, or 12 as was suggested elsewhere. A simple back-of-an-envelope — any old envelope — calculation shows all this, and without any experts. A lot of Faculty would take it.

It would allow the Administration with grace and glory to give its senior Faculty a dignity they have not had in the past. Professor Blumen concluded.

The President would not comment on the remarks since he was in substantial agreement with much of what had been said.

Before the session ended, Professor Galenson read from a letter of MIT's Chancellor, which rejected the notion that Faculty be treated differently than other employees; MIT Faculty have the freedom to choose whether to go on to 70 or not. Committees were to be set up there to look at ramifications of that policy.

President Rhodes responded by saying that he preferred to look at the options first but appreciated the position his friend, the chancellor, had taken. Which more or less ended the discussion. Applause was accorded the president as he took his seat.

One small item — perhaps the most significant of the day — remained. The dean requested suspension of the rules to consider a non-agenda matter, namely, the appointment of a committee to consider (again!) the calendar. The rules were suspended by voice vote and he then requested permission to appoint an ad hoc committee to study the calendar. He had been requested by the Executive Committee to do this. The Campus Council is of like mind. Efficiency says the study should go jointly with that of the Council. Since the FCR, according to OPUF, is the only body that can authorize the appointment of such, he thus asked for authorization to appoint the joint study committee. There was no problem; the vote went without dissent. What comes now will be of great interest to all — Faculty and Students alike. One wishes the committee well.

P.L. Hartman, Secretary

Sponsored Programs Announces Funding Opportunities

The long term goal of the Development in Science Education (DISE) Program is to increase the quality and diversity of science education. It provides funding to originate, develop and experiment with new ideas having potential for improving science education. The five areas that will be specifically focussed on for the period August 1978 through March 1980 are: A. Science for early adolescent, B. Improving Access to Careers in Science, C. Science, Technology and Society, D. New Knowledge and New Skills — E. Education for Productivity, E. Technology as Applied to Learning.

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The DISE program has a two-phase competition. Preliminary proposals are screened and finalists selected. They may be submitted at any time but those received on or before Nov. 30, will be processed by February 1979.

More information is available in the Office of Sponsored Programs, 123 Day Hall.

The New York State Education Department has announced guidelines and deadlines for submission of proposals for "Community Service and Post-Secondary Continuing Education Programs" for fiscal year 1979. These programs, funded under Title 1A of the Higher Education Act, provide partial support for

projects in three priority areas.

The first priority is community service programs that relate post-secondary continuing education and work.

The second priority is continuing education programs which are directed at increasing the number of available post-secondary learning opportunities for the elderly and handicapped adults.

The third priority is resource material sharing to provide for the improved use of existing community learning resources across the several of the Regents eight post-secondary regions. Federal funds allocated to New York State are expected to be approximately \$1 million.

Preliminary proposals must be received in Albany by Dec. 15.

Final proposals will be requested for selected institutions following review of preliminary proposals.

For further information and proposal guidelines, interested faculty should consult the Office of Sponsored Programs.

Tinker Postdoctoral Fellowships offer professionals interested in Ibero-American studies an opportunity to pursue independent, interdisciplinary research in the social sciences combining their area of specialization with another field. Through this program the foundation seeks to further individual scholarship by sponsoring exceptionally promising scholars at an initial stage in their careers. They are not to be used for training or

retraining purposes or in direct continuation of dissertation research. Citizens and permanent residents of the United States, Canada, Spain, Portugal and the Latin American countries are eligible to apply. This annual competition is open to scholars and researchers who have completed their doctoral work within six years of the time of application. The fellowship carries a stipend of \$14,000 an up to \$1,000 for travel expenses. The deadline for the receipt of the application, written in English is Jan. 15, 1979. For further information regarding application procedures write the Tinker Foundation, 645 Madison Avenue, New York, New York 10022.

Christmas Decorations Courses Planned

Techniques for creating hand-made Christmas decorations ranging from straw angels to cone wreaths and evergreen kissing balls, will be taught in three courses at Cornell Plantations later this month and in early December.

"Old Fashioned Christmas Decorations," taught by Ronn Brown, will cover a variety of traditional decorations from other countries: St. Barbara's wreaths that hang on doors in Italy, Asia Minor and the Near East; star chains made of yarn that are hung on trees in Slavic countries; Swedish julebucks and angels made of straw that provide alternatives to manufactured ornaments.

Class members will make four decorations during the sessions, which will run from 7 to 9:30

p.m. on Wednesdays, Nov. 29 and Dec. 6. All materials, as well as written instructions and historical accounts, are included in the course fee of \$15.

"Cone Wreaths," taught by June Darfler, will use conifer cones as well as acorns, walnuts, horsechestnuts and other nuts to create a 15-inch wreath that can be used year after year indoors or out. Cones from white, red, Austrian, Jeffrey and Mugho pine, Norway and white spruce, Douglas fir and larch are among the cone types that will be used. All materials are included in the \$15 course fee. The course will meet from 7 to 9:30 p.m. Thursdays, Nov. 30 and Dec. 7.

In "Arranging Christmas Greens," taught by Jane Hardy, students will learn about ways of using evergreens to set the scene for Christmas while creating two seasonal decorations.

A variety of base materials that hold up well indoors and out (yew, white pine, juniper,

arborvitae and retinospora) will be provided to create a swag or festoon suitable for hanging over a doorway or mantle and a kissing ball 8 to 12 inches in diameter which is hung from the ceiling, originally with a spring of mistletoe attached at the base. The decorations will be accented with cones, dried fruits, berries and ribbons, which are all included in the \$15 course fee. The course will meet from 7 to 9:30 p.m. on Tuesdays, Dec. 5 and 12.

All courses will be held at Plantations headquarters, 100 Judd Falls Road. Advanced registration and payment of fees by mail or in person are required. Plantations staff prefer to receive telephone inquiries and visits concerning the education programs on Tuesdays and Thursdays between 8 a.m. and 4:30 p.m. The telephone number is 256-3020.

Tern Studies Is Ornithology Lecture Topic

Helen Hays of the American Museum of Natural History will speak on "Ternwatch: Tern Studies on Great Gull Island," at 7:45 p.m. Monday, Nov. 20, at the Cornell University Laboratory of Ornithology, 159 Sapsucker Woods Road.

Hays is the coordinator of a long-term study of terns nesting on Great Gull Island, a former military outpost in Long Island Sound.

The speaker for the Nov. 27 Monday evening seminar at the laboratory is Ken Rosenberg, who received his undergraduate degree from Cornell's Department of Natural Resources and is now a master's student in the Department of Zoology and Center for Environmental Studies of Arizona State University's Colorado River Laboratory. His talk, scheduled for 7:45 p.m., is titled "Bird Studies along the Lower Colorado River."

Both seminars are free and open to the public.

Comedy to Be At Straight

"Keep Your Eye on Emily," a comedy by Georges Feydeau, will be presented by the Willard Straight Theatre at 8:15 p.m. today through Saturday.

Tickets are \$4, \$3 for students and reservations may be made by calling the Straight Box Office at 256-5165. The box office is open from 3 to 6 p.m., Monday through Friday.

In a Feydeau farce, all events are regulated, explained, and justified—even the most extravagant buffoonery. The play, set in the Art Nouveau period in Paris, takes the audience through the world of a Parisian cocotte. There is every kind of humor, "from puns to sophisticated repartee, from kick-in-the-pants schtick to artistic parody," according to the Cornell University Theatre office.

Risley Theatre To Present Student Play

The premiere of a new play, "A Maxim," by Cornell student Stuart Flack, will be shown with "The Typists," by Murray Schisgal at 8:15 p.m. Thursday through Sunday, Nov. 17-19 in the Risley Theatre. Tickets are \$2 and may be purchased at the Willard Straight Ticket Office or at the door.

"A Maxim" is a comedy about excuses. It examines the question, "If life is a joke, is death the punch line?" "The Typists" explores the lives of two office workers, their dreams and the harsher realities, from their twenties to their sixties.

Paul Murphy directs the two plays. The casts include Bill Bensburg, Andy Greenberg, Ross Haarstad, Mitzie Johnson, Dave Kosson, Jerry Lazar, Helen Marts, Shauna Sullivan, Richard Tanner and Carla Zachson.

Two Concerts at Barnes

Two Cornell musical organizations have scheduled concerts in the University's Barnes Hall auditorium this weekend (Nov. 17-19). The public is invited, free of charge, to hear the Cornell Chamber Orchestra Friday evening (Nov. 17) and the Collegium Musicum Sunday afternoon (Nov. 19).

At 8:15 p.m. Friday, Edward Murray will direct the Chamber Orchestra in a program which features Mimmi Fulmer as soprano soloist. The concert opens with Handel's Concerto grosso, Opus 6, No. 1, with Ben Hilton and Debra Hansen, violins, Susan Winsor, cello, and Jennifer Williams, harpsichord. Murray will conduct the ensemble in a performance of Haydn's Symphony No. 22, subtitled "The Philosopher" because of the serious nature of the first movement. The symphony is scored uniquely for strings, two horns and two English horns.

Miss Fulmer will sing three

dramatic concert arias by Mozart: "Ah, lo previdi," "Vado ma dove?" and "Bella mia fiamma." A 1974 music graduate of Princeton and recipient of a master's degree in 1976 from the New England Conservatory, she has also studied with Jan DeGaetani at Eastman and is presently working with Carmen Savoca of the Tri-Cities Opera. She is currently teaching at Ithaca College.

At 4 p.m. Sunday, the Collegium Musicum will give a concert of old English music under the direction of John Hsu. The group consists of nine vocalists and a dozen instrumentalists who will play recorders, krumphorns, viols and shawms. They will perform madrigals by William Byrd, an excerpt from Purcell's "The Fairy Queen," Fantasias by Tomkins, Byrd and Ward, and other selections by Holborne, East, Lupo, Bevin, Johnson and Campion.

New Dowd Harpsichord To Be Played in Recital

Kenneth Cooper, young American virtuoso, will present the inaugural recital on Cornell University's new Dowd harpsichord at 8:15 p.m., Wednesday, Nov. 29. The Barnes Hall event is free of charge.

From the repertoire of the 18th century he will play J.S. Bach's Partita No. 4 in D Major, Bach's arrangement of Marcello's Concerto in D minor and several sonatas by Domenico Scarlatti. Twentieth-century composers represented are Bela Bartok, Virgil Thomson, Gyorgy Ligeti and Scott Joplin.

The prototype of the new instrument was built in 1707 by Nicholas Dumont and is privately owned in Paris. Cornell's is the first known copy to be made of a two-manual harpsichord dating

from such an early period and with extended range — nearly five octaves. William Dowd is one of today's foremost harpsichord makers. "Both the marvelous sound of the original and its dating from one of the most important periods of French harpsichord composition made me want very much to use the Dumont as a model," he wrote.

Kenneth Cooper is a director of Our Bach Concerts, a regular participant in Lincoln Center series and solo harpsichordist with Clarion Concerts Orchestra. In addition, he specializes in workshops on baroque performance practices at universities and summer festivals. Cooper holds a Ph.D. in musicology from Columbia University and has published many professional articles.

Job Opportunities

Continued from Page 2

- Reg. Director I, CPO4 (Public Affairs, NYC)
- *Admin. Spvr. II, COP3 (Coop. Extension Admin.)
- Admin. Spvr. II, CPO3 (Lab Nuclear Studies)
- Admin. Spvr. II, CPO3 (Computer Services, APS)
- Dining Spvr., CPO2 (Dining Services)(3)
- Dining Spvr., CPO2 (Statler Inn)
- Res. Admin. I, CPO2 (Res. Life & Int'l Student Aff.)
- PART-TIME AND/OR TEMPORARY POSITIONS**
- *Temp. Svc. Clerical (Coop. Ext. Admin., Geneva, temp.pt)
- *Temp. Svc. Clerical (Admissions Office, temp. ft)
- Temp. Svc. Clerical (NYSSILR, NYC, temp. pt)
- Temp. Svc. Clerical (Hum.Dev. & Fam. Studies, temp.ft)
- Temp. Svc. Clerical (Veterinary Pathology, temp.ft)
- *Admin. Secy., A-15 (Asst. Treasurer, perm. pt)
- Searcher I, A-13 (U. Libraries, Olin, perm. pt)
- *Steno II, NP-6 (Plant Pathology, 1 year, pt)
- Steno II, NP-6 (Rural Sociology, temp. ft)
- Steno II, NP-6 (Hum. Dev. & Fam. Studies, perm. pt)
- Bldg. Maint. Worker I, NP-7 (Animal Science,perm. pt)
- *sst. Boiler Op. Trainee, A-15 (Utilities, temp. ft)
- Asst. Boiler Op. Trainee, A-15 (Utilities, temp. ft)
- Temp. Svc. Svc. (Campus Store, casual)
- Temp. Svc. Tech. (Plant Pathology, temp. pt)
- Temp. Svc. Tech. (Biological Sciences, perm. pt)
- *Res. Tech. III, NP-12 (Ag. Engineering, temp. pt)
- *Res. Tech. II, NP-10 (DCS-Mastitis Control, 1 yr.pt)
- Res. Tech. II, NP-10 (Veterinary Pathology, temp.ft)
- Lab Tech. I, NP-8 (Food Science, 1 yr., 30 hrs.week)
- Programmer I, A-19 (Computer Services, temp.pt)(2)
- Jr. Lab Tech. NP-6 (Neurobiology & Behavior, temp. ft)
- Programmer I, A-19 (Psychology, temp. pt)
- Systems Programmer III, CPO5 (Computer Svcs., 1 yr.)
- Systems Programmer II, CPO4 (Computer Svcs., 1 yr.)
- Reg. Director, CPO4 (Univ. Develop., Cleveland, pt)
- Systems Programmer I, CPO3 (Computer Svcs., 1 yr.)
- Staff Writer II, CPO4 (Univ. Relations, perm. pt)
- Res. Supp. Aide, CPO2 (B&PA, temp. pt)
- ACADEMIC-FACULTY POSITIONS (Contact Dept. Chairperson)**
- *Lecturer (Learning Skills Ctr., COSEP, Chemistry)
- *Extension Assoc. II, CPO4 (NYSSILR, Albany)
- *Asst.-Assoc. Prof. (Ag. Engineering)
- Research Assoc. II, CPO4 (Lab Nuclear Studies)
- Faculty Position, Section of Surgery (Dept. Clinical Sciences)
- Asst. Prof. or above (several positions)(Cornell Law School)
- Research Assoc. II, CPO4 (Agronomy)
- Asst. Profs. Dramatic Literature, 18th Century, and American Studies (Dept. of English)

Current Tow List Publicized

A current Tow List has been compiled by the Office of Transportation Services to remind owners of their responsibility to abide by the University's Traffic and Parking regulations. The vehicles on the list are subject to being towed or immobilized for allegedly repeated violations of these regulations.

There are 200 vehicles on this list which has been compiled from Sept. 1 to Nov. 8, 1978, according to William E. Wendt, director of Transportation and Daniel N. Murphy, deputy director of operations, Public Safety. They urge the owners of these vehicles to reconcile their unpaid traffic and parking summonses with the Traffic Bureau. In addition, an estimated 200 vehicles from lists prior to Sept. 1, are also subject to tow.

Motor vehicles found in violation of traffic regulations and belonging to violators who have allegedly accrued several parking summonses may be towed from the campus at the owner's expense. Those violators who have not registered their cars with the Traffic Bureau and/or are believed to be in chronic violation of regulations are placed on a tow list such as the one below and are subject to immediate tow when found on campus.

Wendt and Murphy report that persons who have not responded to reminders to pay parking summonses may also have their cars towed when spotted on campus, even though their car may not be listed on the official list. Also, vehicles that have been towed and their owners still fail to pay previous tickets will remain on a tow list.

Vehicles parked illegally in Life Safety Zones (fire lanes, hydrants, service and loading areas, intersections, obstructing sidewalks, etc.) create a serious hazard to the welfare of Cornell community members and are subject to being towed at any time. Cars parked without valid permits in restricted parking lots deprive community members who have purchased permits of their opportunity to find parking in those areas.

When a car is towed, the actual

towing is done by a private towing firm. Owners of the cars must find their own way to the firm's lot and settle with the company to get their cars back.

- The Tow List follows:
- AAA 208 (Fla) XH 9587(Ok)
 - AAS 835(Md) X 1788(Mass)
 - AB 83542(Mass) YOY 912(NJ)
 - AHD 124(Fla) ZC 9312(ILL)
 - ALC 418(Md) 1D 27828(Fla)
 - BE 1679(Colo) 1D 91542(Fla)
 - BJM 737(Fla) 1JE 148(Tn)
 - BOL 015(Ont) 101 IQC(NY)
 - CJ 44963(Pa) 108 XQV(NY)
 - CKV 418(Ms) 109 GYF(NY)
 - CN 1579(CT) 117 GYF (NY)
 - DNV 789(Fla) 118 498 (Va)
 - DTH 173(Md) 123 GYF(NY)
 - DYD 355(Md) 128 EBM(NJ)
 - EBK 034(Md) 134 JSU(NY)
 - ETZ 706(Md) 134 309(ILL)
 - GBS 705(Md) 139 FXE(NY)
 - GF 9894(Mo) 149 91L(Pa)
 - GJ 241(TX) 17B V96(Tn)
 - GK 7524(MO) 170 BTO(NJ)
 - GTF 602(Ga) 174 DOR(NY)
 - H 29126(Oh) 182 AZW(NY)
 - JEB 84(ILL) 194 ATC(NJ)
 - K 1325N(Oh) 204 AZQ(NY)
 - K 5360Z(Oh) 2043 T (Ct)
 - LAH (NJ) 208 XZB(NY)
 - LV 8655(Ct) 209 IQC(NY)
 - MG 8815(Mo) 225 IWX(NJ)
 - MT 4917(Ct) 230 TOJ(NY)
 - M 2167H(Oh) 243 DEA(NY)
 - PE 2209(NY) 246 AIU(Mass)
 - PLN 786(Az) 248 IQA(NY)
 - PW 5191(ILL) 250 HEP(NY)
 - PZ 8164(Ct) 270 53T(Pa)
 - QO 448 (RI) 276 IQA(NY)
 - QU 4699(Wisc) 281 TPC(NY)
 - RDE 813(Va) 283 JG (NJ)
 - RNP 894(Tx) 284 IQB(NY)
 - RXU 865(Cali) 286 APS(Mass)
 - SBG 044(Mich) 293 RYY(NY)
 - T 61572(Pa) 2966 NP(NY)
 - UI 3270(Ct) 316 IFB(NY)
 - UOU 472(NJ) 343 TOT(NY)
 - WK 7415(Ct) 360 CKB(NY)
 - WM 3988(ILL) 36570 (Oh)
 - WNP 243(Mich) 367 IPY(NY)
 - WR 2210(Ct) 368 HFW(NY)
 - W 39331(Pa)

- 371 HYT(NJ) 658 ORM(NY)
- 378 HBK(NY) 669 FTB(NY)
- 383 FXI(NY) 67 RWG (NY)
- 383 GYJ(NY) 68 HOG (Tx)
- 393430 (Oh) 701 IQA(NY)
- 397 TOO(NY) 704 BTX(Mass)
- 425 TPB(NY) 717 AZV(NY)
- 4324 PJ(NY) 717 98V(Pa)
- 4329 PJ(NY) 729 AZQ(NY)
- 439509 (Mass) 73 NBR (NY)
- 440 OJH(NY) 7344 MM(NY)
- 459 FXI(NY) 739 GYF(NY)
- 462 CRT(NY) 75 JSU (NY)
- 462 FXE(NY) 752 IQA(NY)
- 472 JSQ(NY) 753 EFB(NY)
- 476 RBD(Cali) 75958 (Mass)
- 506 IPX(NY) 761 GYF(NY)
- 506 JSU(NY) 762 DJG(NY)
- 509 DXO(NY) 777 JCG(NY)
- 513 IAZ(NJ) 794 GYF(NY)
- 514 JSU(NY) 796 CYQ(NY)
- 526999 (DC) 814 ILG(NY)
- 527347(Mass) 850 FXH(NY)
- 529 IQA(NY) 8578 NG(NY)
- 537 EGF(NY) 858 HEW(NJ)
- 541 AZY(NY) 859 TOD(NY)
- 545 FXI(NY) 863 MRN(Cali)
- 554 FXJ(NY) 889 AZZ(NY)
- 555 HXR(NY) 893 LAS(NY)
- 558 TCZ(NY) 895B435(Que)
- 560 ILG(NY) 895 FXN(NY)
- 564 HYG(NJ) 912 BNU(NY)
- 565089 (Mo) 913 OVE(NY)
- 571 GYR(NY) 914 FXV(NY)
- 577259 (NY) 920 IUP(NY)
- 577259 (NY) 932 IPX(NY)
- 587 ZGK(NY) 933 GDW(NY)
- 588 TOR(NY) 939 HTL(NY)
- 59 AZT (NY) 944 GYF(NY)
- 59 PKO (NY) 95 IUP (NY)
- 610 NWA(NY) 95 JSU (NY)
- 611 ILG(NY) 953 INX(NY)
- 617 HSG(NY) 954 HLB(NY)
- 622 IQA(NY) 958 BAA(Mass)
- 626 SAX(NY) 959 IPY(NY)
- 634 SFD(NY) 975 AIA(NY)
- 642068 (NY) 97646Y (Cali)
- 644 FXH(NY) 986 AZZ(NY)
- 647 CIA(NY) 984 AZU(NY)
- 648 XWC(NY) 995 AZV(NY)

Sigma Xi Announces Grants Deadlines

Cornell University graduate students and advanced undergraduates have until Feb. 19 to apply for small research grants offered by the Cornell Chapter of the Society of Sigma Xi.

Applications should contain a brief description of the proposed research, including a detailed budget, and should be accompanied by a short vita of the applicant and two letters of recommendation.

Applications should be sent to Simpson Linke, Sigma Xi vice

president, 204 Phillips Hall.

Sigma Xi also is offering a first prize of \$250 and a second prize of \$100 for the best student-written popular articles on topics of current interest in the physical or biological sciences. The deadline for the essay contest is Feb. 1.

Additional information on the essay contest is available at 224 Phillips Hall, 239 Plant Science Building and G-20 Stimson Hall or by calling Linke at 256-4307.

Metal Created from Gas

Continued from Page 1

ploring the possibility of making metallic hydrogen.

To attain the conditions for producing metallic xenon, Nelson and Ruoff combined two sets of experiments carried out earlier in Ruoff's group at Cornell. They had observed earlier (Science, December 1977) that when a

diamond with a tiny spherical tip was pressed against another diamond, failure did not occur until a pressure of 1,600,000 atmospheres was reached. If larger tips were used, they failed at lower pressures.

In another experiment described at the Sixth AIRAPT International High Pressure Conference held in Boulder, Colo., in July 1977, Ruoff's group noted how they had used micro-fabrication techniques to place very tiny electrodes (called interdigitated electrodes) on the diamond anvils and how these were used to study a certain transition from insulator to metal in the high pressure region under diamond tip.

After these electrodes are placed on the diamond anvil, the anvil is placed in a vacuum system, which is then evacuated. The diamond is cooled to 32°K and xenon vapor is allowed to condense on it. The thickness of the xenon is measured by a special device known as a quartz thickness monitor. Then the indenter (also cold) is pressed against the sample.

To produce metallic hydrogen, even smaller tips and tinier electrodes are needed. The Cornell scientists are now working on electrodes with finger widths and spacing of only one-hundred-thousandths of an inch. They believe metallic hydrogen will be made unless the diamond anvils go metallic first.



Soprano to Sing In Bailey Concert

Spanish soprano Victoria de los Angeles will perform at 8:15 p.m., Thursday, Dec. 7, at Bailey Hall. Tickets for the performance go on sale at the Lincoln Hall ticket office (256-5144) starting Nov. 20. Her performance is the third of the Bailey Hall concert series.



Members of the Cornell College Bowl team present their \$1,000 scholarship award to Darwin Williams, director of COSEP, left. President Frank Rhodes attended the presentation last week. The students are, from left to right, Patrick O'Connor '80, Hallie DeChant '80, (Rhodes), Dan Segal '80, and Steve Cohen '80. The four-member team also received a trophy bowl and bronze medallions. Registration forms for the campus College Bowl 1979 competition are available at all three student union desks. Deadline is today.

College Bowl Award Aids Minorities

One of the most successful teams at the University in 1977-78, the College Bowl Team that went to the North American Championship Tournament at Miami Beach, has had its \$1,000 scholarship award designated for aid to minority students at Cornell.

"I am deeply touched by your request that the \$1,000 be used for financial aid to minority students," wrote Cornell President Frank Rhodes in a letter to Hallie DeChant of Cleveland, captain of the four-member team, and a

junior chemistry major. "This is a most generous gesture on your part, and one for which the entire Cornell community joins in thanking you."

Cornell team members were Steven D. Cohen of Brooklyn, a junior majoring in history and economics; Patrick J. O'Connor of Brooklyn, a junior majoring in mathematics and Romance studies; Daniel A. Segal of Tenafly, N.J., a junior anthropology major, and DeChant. All are residents of Telluride House at Cornell.

Cornell reached the semi-

finals of the spring tournament before losing to Stanford University in the general knowledge quiz, a popular television show in the 1950s and 1960s. Stanford defeated Yale University for the North American championships' then lost to an all-star team from Great Britain in the world championship round.

In addition to the \$1,000 scholarship, the Cornell team won a silver bowl and individual bronze medallions.

Sixteen North American teams participated in the Miami Beach tournament. Competition was begun last fall on some 250 campuses throughout North America. The Department of University Unions sponsored the Cornell team.

Art Fleming, Cornell alumnus and former host of the quiz show Jeopardy, emceed the Miami Beach competition, which was organized by the College Bowl Co. and the Association of College Unions-International.

Fall Sports Season Ends

Cornell's fall sports season will come to a close this weekend with just two events scheduled. On Friday night, the men's soccer team will meet Ivy League rival Pennsylvania, under the lights on Schoellkopf Field, starting at 7:30.

On Saturday afternoon, Cornell's varsity football team will also square off with Penn,

starting at 1:30. Both teams will be aiming at a first division finish in the Ivy League as they meet for the 84th time in one of the nation's oldest football rivalries.

On Saturday night, the winter sports season will officially get underway when the Cornell men's varsity hockey team meets the junior varsity in Lynah Rink, starting at 7:30 p.m.

Special Seminars

Agriculture and Life Sciences

AGRICULTURAL ENGINEERING WASTE MANAGEMENT SERIES: "Strategies for Wastewater Reuse in Israel," Hillel Shuval, Hebrew University, Jerusalem, 3:30 p.m., Friday, Nov. 17, Riley-Robb 105.

BIOMETRICS: "Optimal Designs for Estimation of the Logistic Function," James L. Rosenberger, Pennsylvania State University, 3:45 p.m., Thursday, Nov. 16, Warren 345.

ECOLOGICAL TOXICOLOGY: "The Coming of Age of Ecotoxicology," Walter G. Rosen, U.S. Environmental Protection Agency, Washington, D.C., 4 p.m., Wednesday, Nov. 29, Boyce Thompson Institute Auditorium.

EDUCATION: "The New National Institute of Education and Its Emerging Perspectives on Non-Formal Learning," Bob Wise, NIE, 3 p.m., Thursday, Nov. 16, Stone 307.

POMOLOGY: "Hormonal Physiology of Late-Blooming Apple Cultivars," Harry J. Swartz, 11:15 a.m., Monday, Nov. 20, Plant Science 114; "Studies on Apple Firmness Improvement," F.W. Liu, 11:15 a.m., Monday, Nov. 27, Plant Science b14.

Career Center Calendar

Nov. 16 — An admissions representative from the Colgate University M.A.T. Program will be at the Career Center to speak with prospective students.

Nov. 16 — "A Day in the Life of a Medical Student," an informal discussion with a medical student, 4:30 p.m., Career Center.

Nov. 16 — A representative from the World Bank will talk about the bank's Young Professionals Program. The bank is interested in people with MBA's, or master's degrees in Economic or Ag Ec. 4-5:30 p.m., Ives 117.

Nov. 17 — Resume Critique, 12:20 p.m., Career Center. Sign up in advance.

Nov. 21 — Resume Critiques, 3 and 3:45 p.m., Career Center. Sign up ahead of time.

VEGETABLE CROPS: "Sweet Corn Quality and Maturity," Stan Shannon, 4:30 p.m., Thursday, Nov. 16, Plant Science 404.

Arts and Sciences

ASTRONOMY: "Ionization Balance in HI Regions," Marcello Felli, Astrophysical Observatory of Arcetri, Florence, 4:30 p.m., Tuesday, Nov. 21, Space Sciences 105.

ORGANIC/INORGANIC CHEMISTRY: "Molecular Distortions and Organic Reactivity: Additions and Cycloadditions to Alkynes," K.N. Houk, Louisiana State University, 8:15 p.m., Monday, Nov. 20, Baker Lab 119; "How Do Enzymes Catalyze Reactions Involving O₂?" G. Hamilton, Pennsylvania State University, 8:15 p.m., Monday, Nov. 27, Baker Lab. 119.

Biological Sciences

BIOCHEMISTRY, MOLECULAR AND CELL BIOLOGY: "The Integration of a Genetic Marker into the Ribosomal DNA of Yeast," Jack W. Szostak, 12:30 p.m., Monday, Nov. 20, Riley-Robb 105. "SolidPhase Synthesis of Peptide Fragments of Human Growth Hormone and Related Model Peptides," Dick Noble, 12:20 p.m., Monday, Nov. 27, Riley-Robb 105.

ECOLOGY AND SYSTEMATICS: "Pleistocene History of the Eastern Deciduous Forest" Margaret B. Davis, University of Minnesota, Minneapolis, 10:10 a.m. Thursday, Nov. 16, Warren 245; "Historical Effects on Forest Communities of the White Mountains, New Hampshire," Margaret B. Davis, University of Minnesota, 4:30 p.m., Thursday, Nov. 16, Langmuir Penthouse; "The Role of Endothermy in Flight, Ball Rolling and Intraspecific Competition of African Dung Beetles," George A. Bartholomew, University of California, Los Angeles, 8 p.m., Thursday, Nov. 16, Laboratory of Ornithology; "Special Interpretation of Plankton Patchiness," Akira Okubo, SUNY, Stony Brook, 4:30 p.m., Tuesday, Nov. 21, Langmuir Penthouse; "Predation as a Way of Life: The Hunting Habits of Two Stinkbugs," Ted Evans, 12:15 p.m., Tuesday, Nov. 21, Martha Van Rensselaer 114; "Effect of Insect Predators on Population Parameters of *Oenothera biennis*," Sherry Kinsman, 12:15 p.m., Tuesday, Nov. 28, Martha Van Rensselaer 114.

NEUROBIOLOGY AND BEHAVIOR: "Studies in the Structure, Function and Development of the Cricket Auditory Nervous System," Ronald R. Hoy, 12:30 p.m., Thursday, Nov. 16, Langmuir Penthouse.

PLANT PHYSIOLOGY: "Adaptive Drought Tolerance in Cereals," Jay Cutler, 11:15 a.m., Friday, Nov. 17, Plant Science 404.

PHYSIOLOGY: "Control of Steroidogenesis in the Ovary," Joanne Richards, University of Michigan, 4:30 p.m., Tuesday, Nov. 21, Vet Research Tower G-3; "Evolution of Form and Function of the Male Reproductive Tract," M. Bedford, 4:30 p.m., Tuesday, Nov. 28, Vet Research Tower G-3.

Centers and Programs

COMPUTER SERVICES: "Computer-Assisted Instruction with PLATO," P. Zarnowski, 3:30 p.m., Friday, Nov. 17, Uris Hall G-14.

COMPUTER SERVICES BROWN BAG LUNCH SERIES: "APL and Public Libraries," 12:20 p.m., Tuesday, Nov. 21, Uris Hall G-14.

INTERNATIONAL STUDIES: "Local Organization in Tanzanian Rural Development," Louise Fortman, 12 noon, Wednesday, Nov. 22, Center for International Studies; "Changing Tenure Structure in Philippine Rice Farming," Randolph Barker, 12 noon, Wednesday, Nov. 29, Center for International Studies.

Engineering

CHEMICAL ENGINEERING: "A Single Stage Aerobic Process for the Conversion of Poultry Waste into Single-Cell Protein," F. Kargi, 4:15 p.m., Monday, Nov. 20, Olin Hall 145.

MATERIALS SCIENCE AND ENGINEERING: "Development of Steels for Cryogenic Applications," J.W. Morris, University of California, Berkeley, 4:30 p.m., Monday, Nov. 20, Bard 140.

OPERATIONS RESEARCH: "Meeting EPA Federal Fuel Economy Targets — Heuristic Applications of the Knapsack Algorithm," W.L. Maxwell, 4:30 p.m., Tuesday, Nov. 21, Upson 305.

PLASMA STUDIES: "Laser Fusion as a Power Reactor," Robert Conn, University of Wisconsin, 4:30 p.m., Tuesday, Nov. 21, Grumman 282.

THEORETICAL AND APPLIED MECHANICS: "Mathematical Problems in Modelling the Cochlea," Mark Holmes, Rensselaer Polytechnic Institute, 4:30 p.m., Wednesday, Nov. 29, Thurston 205.

Nutritional Sciences

NUTRITION: "Studies on Pyridoxamine (Pyradoxine) 5'Phosphate Oxidase," Donald B. McCormick, 4:30 p.m., Monday, Nov. 20, Savage 100.

NUTRITION: "Atherogenesis: A Postprandial Phenomenon," Donald B. Zilversmit, 4:30 p.m., Monday, Nov. 27, Savage 100.

Veterinary Medicine

MICROBIOLOGY/PATHOLOGY: "Human CNS and Ocular Invasion by *Toxocara* from Pet Dogs," Lawrence Glickman, 12:15 p.m., Monday, Nov. 20, Vet Research Tower G-3.

Space Study: Square Feet, not Light Years



Gregory Kasprzak and Mary D. Graham, a fourth year student in the College of Architecture, Art and Planning, measure Malott Hall to determine how each square foot of space is used.

Cornell has more than 12 million square feet of space in Ithaca and elsewhere and there is one man who knows better than anyone else where it is and for what it is being used.

Gregory Kasprzak of the Department of Design and Project Management, assisted by two students in the College of Architecture, Art and Planning, conducts surveys of space in endowed and statutory buildings at Cornell and maintains a computerized data bank where the information is available to anyone who needs to use it.

The inventory system was developed in the late 1960s to meet federal Higher Education General Information Survey requirements for reporting space use, but the data are now used for a variety of other purposes.

Jack Ostrom, University comptroller, stressed that one important use of the information is determining indirect costs of sponsored research, that is research supported by outside grants and contracts.

"As a major research university, Cornell is required to report how much of its space is used for

actual research purpose as opposed to instruction, public service or administration. The space inventory system is invaluable for this," Ostrom said.

For the past five years, the information also has been used to assign costs to the space occupied by colleges, centers and other major endowed units of the University, Ostrom said. The information, he added, is used for internal management, including budgeting.

In Cornell's statutory units, the space inventory data is used to determine budgets for utilities, maintenance and operating expenses, custodial staff and to determine the need for additional space or for renovation of existing space to make it suitable for other uses, according to Herbert Pallesen, statutory facilities coordinator.

The data is "massaged" with correction factors agreed upon by Pallesen's office and the State University of New York in order to determine actual costs more accurately.

"A greenhouse, for example, costs considerably more to heat than a classroom so we multiply

the gross square feet of greenhouse space by a correction factor to reflect utility costs more accurately," Pallesen said.

The Cornell data also must be translated into the system for space inventorying used by SUNY, a complicated proposition because SUNY has only 9 categories of space use while the Cornell system has 38.

"As the cost of space increases, there is a need to utilize what we have to the greatest extent possible," Kasprzak said. "People are turning to us more and more for the kind of data they need to make sure space is used efficiently."

The inventory contains data on building characteristics (type of construction, gross square feet, original costs, replacement costs) and data on how space is used on a room-by-room basis in each building. The room-by-room inventory is particularly difficult to compile, Kasprzak said, because a single room such as a department chairman's office can be used for administration, research, student advising and informal seminars.

In his office in the Humphrey

Service Building, Kasprzak stores floor plans of every building on campus and maintains a file system which includes smaller versions of the floor plans and computer printouts of the inventory data. Computer tapes containing the information are stored at Langmuir Laboratory.

But the system isn't perfect. The way space is used changes frequently, and Kasprzak isn't always informed of the changes. Especially in the endowed units, he said, the system still needs to be updated.

"Not many people know what we're doing or why, and sometimes they resent our coming in with our printouts and tape measures. We try to interfere as little as possible with their operations, but it is still disruptive. But perhaps now people will appreciate why we do it," Kasprzak said.

And maybe, when the use of space in a building changes, those involved will remember to notify Kasprzak at 256-4824 instead of waiting until he shows up with his tape measure.

Connie Bart

Graduate Bulletin

Students planning to complete requirements for a January degree are reminded that the deadline for meeting all requirements is Jan. 12, 1979. Students should keep in mind that the University offices, including the Graduate School, will close Friday, Dec. 22, and will not reopen until Tuesday morning, Jan. 2.

Applications for the following National Science Foundation Fellowship programs are available at the Fellowship Office, 116 Sage Graduate Center, or by writing to the Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418. Deadlines are rapidly approaching!

1. NSF Graduate Fellowships deadline: Nov. 30
 2. NSF Minority Graduate Fellowships deadline: Dec. 8
- Eligible graduate students who wish to apply for NSF Doctoral Dissertation Improvement Grants should contact the Office of Sponsored Programs, 123 Day Hall, 6-5014, for information.
- Upcoming deadlines are:
- Nov. 30: DAAD Traineeships in Germany.
 - Nov. 30: German Marshall Fund Fellowships.
 - Nov. 30: NSF Graduate Fellowships.
 - Dec. 1: American Association of University Women (International Fellowships for Graduate Study).
 - Dec. 1: American Society of Civil Engineers (ASCE) Research Fellowships.
 - Dec. 1: Ammann Research Fellowship in Structural Engineering (ASCE).
 - Dec. 1: Diuguid Fellowships.
 - Dec. 1: East-West Center Graduate Study Award.
 - Dec. 1: Oak Ridge Associated Universities Grants (for March 1979 appointment).

- Dec. 1: Sigma Delta Epsilon (Eloise Gerry Fellowship).
- Dec. 1: SSRC/ACLS Postdoctoral Research Abroad Grants.
- Dec. 1: U.S. Dept. of Labor Doctoral Dissertation Grants.
- Dec. 1: White House Fellowships.
- Dec. 5: Latin American/Caribbean Learning Fellowship for Social Change.
- Dec. 8: NSF Minority Graduate Fellowships.
- Dec. 15: American Association of University Women Doctoral and Postdoctoral Fellowships.
- Dec. 15: Dumbarton Oaks Center Grants.
- Dec. 15: Alice Freeman Palmer Fellowships-Wellesley College (applications due at the Fellowship Office, 116 Sage Graduate Center).
- Dec. 15: Philip Morris Marketing/Communications Competition.
- Dec. 15: Southern Fellowships Fund.
- Dec. 15: SSRC Postdoctoral Research Training Fellowships.
- Dec. 31: Arctic Institute of North America Grants.
- Dec. 31: National Gallery of Art Fellowships.
- Dec. 31: National Wildlife Federation/Environmental Conservation Fellowships.

- Dec. 31: National Wildlife Federation/American Petroleum Institute Fellowships.
- Jan. 1: Business and Professional Women's Foundation Fellowships (for April 1979 award).
- Jan. 1: Lady David Fellowships for Study in Israel.
- Jan. 1: Amelia Earhart Fellowships.
- Jan. 2: Schimke Scholarship (Wellesley College).
- Jan. 2: Shaw Fellowship (Wellesley College).
- Jan. 12: Metropolitan Museum of Art Fellowships.
- Jan. 15: American Home Economics Association Fellowships.

- Jan. 15: Andover Fellowships.
- Jan. 15: Calgary Institute for the Humanities Postdoctoral Fellowship.
- Jan. 15: Chicago Mercantile Exchange Fellowships.
- Jan. 15: Coro Foundation Fellowships.
- Jan. 15: Ford Foundation Fellowship-Soviet Studies/ Arms Security and Control.
- Jan. 15: Fortescue Fellowship in Electrical Engineering.
- Jan. 15: Kosciuszko Foundation Scholarship.
- Jan. 15: Lalor Foundation Postdoctoral Fellowship.
- Jan. 15: National Research Council-Canada/Associateships.
- Jan. 15: Omicron Nu Fellowships.
- Jan. 15: Sigma Delta Upsilon Grant-in-Aid.
- Jan. 15: Society for the Psychological Study of Social Issues (SPSSI).
- Jan. 15: Translation Center Fellowships.
- Jan. 22: Herbert H. Lehman Graduate Fellowships.
- Jan. 24: Belgian American Educational Foundation Fellowships (applications due at Fellowship Office, 116 Sage Graduate Center.)

Bulletin Board

Italian Literature Lecture

Vittore Branca, professor of Italian literature at the University of Padua in Italy, and president of the Cini Foundation in Venice, will give a slide lecture in Italian on the early illustrations of Beccaccio's "Decameron," at 4:30 p.m. Saturday in Uris 202. The lecture, which is open to the public, is sponsored by the Department of Romance Studies and the Italian Club.

8:15 p.m. Harpsichord Inaugural Recital by Kenneth Cooper. Works of Bach, Marcello, D. Scarlatti, Bartok, Ligeti, Joplin. Barnes Auditorium.

Exhibits

Olin Library, *History of Science Collections*: "Thomas Bewick, 1753-1828: Wood Engraver and Artist of Natural History and British Rural Life. 150th Anniversary of His Death," Nov. 1 through Nov. 30. Olin Library 215.

Olin Library, *Department of Manuscripts and University Archives*: Documents belonging to the collection of papers of Francois-Jules Harmand (1845-1921). Harmand spent many years in South-East Asia first as explorer, later as representative of the French Government. The exhibit includes hand-drawn maps, photographs and copies of diplomatic appointments and letters, through December.

Herbert F. Johnson Museum of Art: "William Baziotes: A Retrospective Exhibition," through Dec. 10; "Prints for Purchase," through Dec. 17; "Permanent Collection," through Dec. 17.

Olin Library: "EQUUS: The Horse and Civilization." For 5,000 years the horse has served man at work, war, sports and pleasure, through December.

Uris Library: "Main Street, The Heart of the American Town." Photographs of Upstate New York by Milo Stewart for the New York State Council on the Arts, through Dec. 15.

Announcements

Fencing-Men, Women. The Deadline on entries is Thursday, Nov. 30 at 4 p.m. in the Intramural Office, Grumman Squash Courts Building. Tournament begins at 6:45 p.m. on Monday, Dec. 4 through Friday, Dec. 8 in the Fencing Room, Teagle Hall. Minimum of six to enter. Teams: 3 fencers, 1 alternate on deck.

Calendar

Continued from Page 7

- 9:30 & 11 a.m. Catholic Mass. All Welcome. Anabel Taylor Auditorium.
- 2 p.m. *Cornell Cinema presents "The Fabulous World of Jules Verne." Co-sponsored by Ithaca Youth Bureau. Uris Hall Auditorium.
- 7:30-11 p.m. International Folkdancing. Teaching for intermediates 7:30-8:30 p.m., requests 8:30-11 p.m. All welcome. Straight North Room.
- 8 p.m. *Cornell Cinema presents "Limelight." Uris Hall Auditorium.

Monday, November 27

- 12:20 p.m. Agricultural Engineering Seminar: "Greenhouse Climate Research in Japan," Ido Seginer, Haifa, Israel. RileyRobb 400.
- 4:30 p.m. Geological Sciences Seminar: "Some Research Topics at Gulf, Including the Problems of Seismic Imaging," Patrick Love, Gulf Oil. Thurston 205.
- 7:30 p.m. America and World Community: "New Alchemy." A film about aqua, organic, alternative farming and a self-sufficient bio-shelter. Anabel Taylor One World Room.
- 8-11 p.m. Contra Dance with live music. All dances taught. Beginners welcome. Straight Memorial Room.
- 9 p.m. *Cornell Cinema presents "Wild in the Streets." Uris Hall Auditorium.

Tuesday, November 28

- 11:15 a.m. Baker Lecture Series: "Cryptates: The Chemistry of Macropolycyclic Inclusion Complexes and the Design of Molecular Receptors, Carriers and Catalysts. An Approach to the Chemistry of the Intermolecular Bond." Jean-Marie Pierre Lehn, Universite Louis Pasteur de Strasbourg, France. Baker 200.
- 4:15 p.m. Food Science Seminar: "The Implications of Toxic Elements to Health," Gilbert Stoewsand, Food Science and

- Technology, Geneva. Stocking 204.
- 4:30 p.m. Geological Sciences Seminar: "Structural Evolution of Southeast Canadian Cordillera," Ray Prince, Queens University, Kingston. Thurston 205.
- 4:30 p.m. Animal Science 640 Wildlife Nutrition Seminar, H. George Ketola, Poultry Science. Morrison 348.
- 5 p.m. Southeast Asia Film Series: "Dead Birds." A prize winning film made on the expedition on which Michael Rockefeller was lost. Morrill 106A.
- 7-9 p.m. Badminton Club meeting. Helen Newman Gym.
- 7:30 p.m. *Cornell Varsity Basketball-Niagara. Barton.
- 7:30 p.m. Folk dancing for Couples. Singles, beginners, all ages welcome. Martha Van Rensselaer Auditorium.
- 8 p.m. *Cornell Cinema presents "The Love Goddesses." Women's Film Series. Uris Hall Auditorium.
- 8:15 p.m. Department of Music presents DMA Recital: instrumental music of Jack Gray. Barnes Auditorium.

Wednesday, November 29

- 4:30 p.m. Mini-Micro Seminar Series: "MUMPS: An efficient Information-Management System," Fred Hiltz, N.Y.S. College of Veterinary Medicine, Cornell. Uris Hall G-14.
- 4:30 p.m. Biological Sciences Seminar: "Studies of Light Regulated Cyclic Nucleotide Metabolism in Frog Rog Outer Segments," Mark Bitensky, Pathology, Yale University. Clark 700.
- 4:30 p.m. Geological Sciences Seminar, Alan Gibbs, Harvard University. Thurston 203.
- 6:30 p.m. *Cornell JV Wrestling-Ithaca College. Barton.
- 7 p.m. Campus Qualifying Tournament for Intercollegiate Bridge competition. Straight North Room.
- 7:30 p.m. America and World Community: "Holistic Approach to Nutrition and World Community," Paul Buck, Food Science. Anabel Taylor One World Room.
- 8 p.m. *Cornell Wrestling-Army. Barton.
- 8 p.m. *Cornell Cinema presents "Stage Door." Uris Hall Auditorium.

Calendar

November 16-29

All items for the Chronicle Calendar must be submitted by mail or in person to Fran Apgar, Office of Central Reservations, 32 Willard Straight Hall, at least 10 (ten) days prior to publication of the Chronicle.

* Admission charged

Attendance at all events is limited to the approved seating capacity of the hall

Thursday, November 16

10 a.m.-5 p.m. Coalition for the Right to Eat "Fast for a World Harvest." An abundance of displays, demonstrations, and tables related to the problems of world hunger sponsored by a spectrum of organizations. Continual slide showing. Straight Memorial Room.

11:15 a.m. Baker Lecture Series: "Cryptates: The Chemistry of Macropolycyclic Inclusion Complexes and the Design of Molecular Receptors, Carriers and Catalysts. An Approach to the Chemistry of the Intermolecular Bond," Jean-Marie Pierre Lehn, Universite Louis Pasteur de Strasbourg, France. Baker 200.

12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G19.

12:15 p.m. Women's Studies Graduate/Faculty Colloquium: "Our Need to Control: Reflections on the Nature of the University," Richard Baer, Natural Resources, Project on Environmental Values. Uris Hall 494.

12:15 p.m. Center for International Studies Lecture: "Towards a Neo-Corporatist System," Marino Regini, Institute of Sociology, University of Main.

12:25 p.m. Rural Sociology 300 Film: "Rich Shall Inherit the Earth." Warren 32.

2 p.m. Preston Thomas Memorial Lecture Series: "The Design Connection: A Symposium on Energy and Technology in Architecture," Richard G. Stein. Anabel Taylor Auditorium.

3 & 8:30 p.m. Alternatives Library Tape of the Week: "The Alpha and the Omega," Bhagawan Shree Rajneesh. A masterful discourse on discipleship, God realization, human nature and more. Discussion to follow. Anabel Taylor 122.

3:30 p.m. Preston Thomas Memorial Lecture Series: "The Design Connection: A Symposium on Energy and Technology in Architecture," Sim Van der Ryn. Anabel Taylor Auditorium.

4 p.m. B&PA International Students Club Lecture by K. Suzuki, Mitsubishi, Japanese export marketing and financing strategy. Malott 253.

4 p.m. Open Prose and Poetry reading. Newcomers welcome. Goldwin Smith Temple of Zeus.

4 p.m. Natural Resources Seminar: "Baboons I View, and National Parks in East Africa," Glenn Hausfater, Neurobiology and Behavior. Fernow 304.

4 p.m. General information meeting regarding graduate study in management. Sponsored by the Office of Admissions and Student Affairs of the Graduate School of Business and Public Administration. Malott 224.

4:15 p.m. Society for the Humanities Colloquium: "Symbol, Classification and the Constraints of Group: Western Sociological Theory and New Directions in the Study of Classical Chinese Culture," Katrina C.D. McLeod, Sinology, Harvard. Co-sponsored by China-Japan Program. A.D. White House.

4:30 p.m. Bethe Lecture: "What in the World is Going On in Our Sun?" Robert H. Dicke, Albert Einstein University Professor of Science, Princeton University. Clark 700.

4:30 p.m. Microbiology Seminar: "Molecular Basis of the Salmonella-Microsome Test for Carcinogens," Graham Walker, MIT, Stocking 124.

4:30 p.m. Marathon Series Lecture: "Reality Sandwiches," Helen MacDonald. Current nutritional information, theories and misinformation. Martha Van Rensselaer N207.

4:40 p.m. Debye Lecture Series: "III. Expose of SimpleMinded Experimental Approaches to II," B.S. Rabinovitch, University of Washington. Baker 200.

6 p.m. A Break-Fast Service by the Cornell Catholic Community: "What the Fourth World Eats." An educational meal, with a discussion of ways people can get involved to help. Anabel Taylor One World Room.

7 p.m. The Christian Science Organization welcomes students, staff and campus visitors to the weekly readings and testimonies meeting. Anabel Taylor Founders Room.

7-9 p.m. Term Paper Clinic-Social Sciences. First hour: how to find material in the library; second hour: how to write the paper. Sign up at the reference desk, Uris Instruction Center, Uris Library.

7-9 p.m. Badminton Club meeting. Helen Newman Gym.

7:30-9 p.m. Be a Better Helper/Listener III. "Resources and Referrals," Grads for Grads and EARS. Sage Living Room.

7:30 p.m. Israeli Folk Dancing. Anabel Taylor One World Room.

8 p.m. Preston Thomas Memorial Lecture Series: "The Design Connection: A Symposium on Energy and Technology in Architecture," Ralph Erskine. Anabel Taylor Auditorium.

8 p.m. 1978/79 Noton Lecture Series: "Socrates, St. Paul and Some Other Philosophers in the Athenian Agora," Homer A. Thompson, Institute for Advanced Study, Princeton. Public cordially invited. Reception following in the Temple of Zeus. Goldwin Smith Hollis Cornell Auditorium.

8 p.m. Cuban Student Society Lecture by Julio HernandezMiyares, C.U.N.Y. Cuban-American Literature. Uris Hall G-92.

8 p.m. Finger Lakes Group of Sierra Club Lecture: "Challenge In The Adirondacks-Olympics, Bulldozers and Other Issues," Gary Randorf, Adirondack Council. Laboratory of Ornithology. Rides from Willard Straight at 7:30 p.m.

8 p.m. CUSLAR free films: "Controlling Interest" and "Bottle Babies." Free and open to the public. Uris Hall Auditorium.

8:15 p.m. *Faculty Committee on Music presents Murray Perahia, pianist. Works of Beethoven, Chopin, Schubert. Bailey Auditorium.

8:15 p.m. *Department of Theatre Arts presents "Keep Your Eye on Emily" by Georges Feydeau. Straight Theatre.

Friday, November 17

9 a.m. City and Regional Planning Lecture: "The Adirondacks as a Critical Area," Gary Randorf, Adirondack Council. West Sibley 115.

9 p.m. Preston Thomas Memorial Lecture Series Reception with exhibit of works by speakers. Sibley - Under the Dome.

12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G19.

12:15 p.m. Women's Studies Friday Seminar: "La questione femminile: Women and Feminism in Contemporary Italy," Karen Beckwith, Political Science, Syracuse University. I&LR Conference Center 105.

12:15 p.m. Alternative Agricultures Bag Lunch Seminar: "The Role of Transnational Corporations and Others in the Decline of Breast Feeding," Michael Latham, International Nutrition. All welcome. Sponsored by CRESA and Rural Sociology. Warren 32.

12:20 p.m. Cornell Linguistics Circle Colloquium: "Sinking in Lac Simon," Jonathan Kaye, University of Quebec.

1 p.m. SALAT-AL-JUMA (Friday prayer for Muslims). Anabel Taylor Edwards Room.

2 p.m. Preston Thomas Memorial Lecture Series: "The Design Connection: A Symposium on Energy and Technology in Architecture," Ralph Knowles. Anabel Taylor Auditorium.

3:30 p.m. Department of English Lecture: "Wordsworth and the Language of the Dream," Mary Jacobus, English Department and Fellow of Lady Margaret Hall, Oxford. A.D. White House.

3:30 p.m. Preston Thomas Memorial Lecture Series: "The Design Connection: A Symposium on Energy and Technology in Architecture," Cesar Pelli. Anabel Taylor Auditorium.

4:15 p.m. Coalition for the Right to Eat alternating business and learning exchange meeting. Anabel Taylor Forum.

6 p.m. Shabbat Services (Conservative). Anabel Taylor Founders Room. (4:29 p.m. candlelighting time).

6 p.m. Shabbat Services (Reform). Anabel Taylor Chapel.

7 p.m. Shabbat Services (Orthodox). Young Israel.

7 p.m. Cornell Dungeons and Dragons meeting. Upson 111.

7 p.m. *Greek-Turkish Friendship Night with music, dance, poetry and food from both nations. Sponsored by Turkish and Greek Student Associations. Big Red Barn.

7:30 p.m. Cornell Christian Fellowship meeting for prayer, singing and teaching. All welcome. Morrill 106.

7:30 p.m. Pentangle II Free Film Series presents "Os Fuzis" (Guerra, 1963, Brazil); short: "Funeral of Jan Palach" (anon., 1969, Czechoslovakia). Uris Hall Auditorium.

7:30 p.m. *Cornell Varsity Soccer-Pennsylvania. Schoellkopf.

7:30 p.m. Twig Bible Fellowship sponsored by The Way Ministry. Balch Unit 2 study lounge.

8 p.m. Preston Thomas Memorial Lecture Series Colloquium. Free and open to the public. Anabel Taylor Auditorium.

8 p.m. *Cornell Concert Commission in cooperation with John Scher and WVBR present "Boston." Barton.

8:15 p.m. *Cornell Savoyards present Gilbert and Sullivan's comic opera "The Pirates of Penzance." Tickets available at the Straight Box Office. Phone orders accepted at 256-3430. Statler Auditorium.

8:15 p.m. *Cornell Dance Office presents solo dance concert of original works by Katherine Litz. Tickets available at Strand ticket office, Nippenose, and the Cornell Dance Office. Strand Theatre.

8:15 p.m. Department of Music presents Cornell Chamber Orchestra conducted by Edward Murray with soprano soloist Mimmi Fulmer. Works of Haydn and Mozart. Barnes Auditorium.

8:15 p.m. *Department of Theatre Arts presents "Keep Your Eye on Emily" by Georges Feydeau. Straight Theatre.

9 p.m. Preston Thomas Memorial Lecture Series Reception with exhibit of works by speakers. Sibley - Under the Dome.

9:45 p.m. *Cornell Cinema presents "Julia." Uris Hall Auditorium.

10 p.m.-2 a.m. Tammany Niteclub with live music and refreshments. Risley.

12 midnight. *Cornell Cinema presents "Alice's Restaurant." Uris Hall Auditorium.

Saturday, November 18

9:30 a.m. Shabbat Services (Orthodox). Anabel Taylor Edwards Room.

10 a.m.-12 noon. Cornell Linguistics Circle Colloquium: "Abstract Phonology and Loanwords," Jonathan Kaye, University of Quebec. Morrill 106.

10 a.m. Shabbat Services (Conservative). Anabel Taylor Founders Room.

1:30 p.m. *Cornell Varsity Football-Pennsylvania. Schoellkopf.

4:30 p.m. Catholic Sacrament of Reconciliation. Anabel Taylor G-24.

5:15 p.m. Catholic Mass. All welcome. Anabel Taylor Auditorium.

6 p.m. *EID Dinner. Everyone welcome. Sponsored by Muslim Student Association. Anabel Taylor One World Room.

7 & 9:45 p.m. *Cornell Cinema presents "Julia." Uris Hall Auditorium.

7 p.m. Cornell Dungeons and Dragons meeting. Upson 111.

7:30 p.m. *Cornell Varsity Hockey-Cornell JV. Lynah.

8 p.m. *The San Francisco Mime Troupe presents a two act musical drama "False Promises/Nos Enganaron." Sponsored by CUSLAR, Third World Student Programming Board, University Unions Program Board, ILR College and Latin American Studies Program. Bailey Auditorium.

8 p.m. *The Rose Club presents "Zobo Funn Band." Straight Memorial Room.

8:15 p.m. *Cornell Savoyards present Gilbert and Sullivan's comic opera "The Pirates of Penzance." Tickets available at the Straight box office. Phone orders accepted at 256-3430. Statler Auditorium.

8:15 p.m. *Department of Theatre Arts presents "Keep Your Eye on Emily" by Georges Feydeau. Straight Theatre.

9 p.m.-1 a.m. North Campus Union Board and Program Board present "Crossroads" and hustle lessons. North Campus first floor lounge.

10 p.m.-2 a.m. Tammany Niteclub presents live music and refreshments. Risley.

12 midnight. *Cornell Cinema present "Alice's Restaurant." Uris Hall Auditorium.

Sunday, November 19

9:30, 11 a.m. & 5 p.m. Catholic Mass. All welcome. Anabel Taylor Auditorium.

9:30 a.m. Episcopal Eucharist Worship Service. Faculty, staff, and families welcome. Church School and nursery care. Coffee hour following service in Founders Room. Anabel Taylor Chapel.

10:45 a.m. The Lutheran Church Worship Service. Nursery care provided. Coffee hour following service. Church School prior to service at 9:30 a.m. 109 Oak Avenue.

11 a.m. Sage Chapel Convocation: Catherine De Hueck Doherty, Lay Apostolic Movement of Catholic Action (Friendship House), Combermere, Ontario, Canada.

11:15 a.m. Protestant Church at Cornell. Anabel Taylor Chapel.

1-2 p.m. Meditation as taught by the Living Master Sant Darshan Singh Ji. Straight Loft 2.

1 p.m. Medieval fighting practice. Risley front lawn weather permitting.

1:30-4 p.m. Appalachian Clogging Workshop, basic steps and combinations demonstrated and taught. All welcome. Martha Van Rensselaer Auditorium.

2 p.m. *Cornell Cinema presents "The Circus." Cosponsored with Ithaca Youth Bureau. Uris Hall Auditorium.

2 p.m. *Cornell Savoyards present Gilbert and Sullivan's comic opera "The Pirates of Penzance." Tickets available at the Straight Ticket Office. Phone orders accepted at 256-3430. Statler Auditorium.

3:30 p.m. Society for Creative Anachronism meeting and medieval dance practice. All welcome. Risley Dining Hall.

4 p.m. Collegium Musicum conducted by John Hsu. Works of Byrd, Purcell and other English composers. Barnes Auditorium.

8 p.m. *Cornell Cinema presents "Partner." Uris Hall Auditorium.

Monday, November 20

12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G19.

12:20 p.m. Agricultural Engineering Seminar: "Hillslope Soil Moisture Flow," John L. Nieber, Agricultural Engineering. Riley-Robb 400.

4 p.m. Jugatae Seminar: "Courtship of Utetheisa Ornatix (Arctiidae): Chemical Attraction and Seduction," Bill Connor, Neurobiology and Behavior. Caldwell 100.

4:30 p.m. DEA-Human Environment Relations Seminar: "Human Factors Research in a Medical Context," William Beck, Guthrie Foundation for Medical Research. Martha Van Rensselaer 317.

7 p.m. *Cornell JV Hockey-Clarkson. Lynah.

7:30 p.m. U.S.-China Peoples' Friendship Association Lecture: "Current Events in China: Domestic and Foreign Policies," Joan Hinton and Sid Engst. Question and answer period following. Goldwin Smith Hollis Cornell Auditorium.

7:30 p.m. Twig Bible Fellowship sponsored by The Way Ministry. Balch Unit 2 study lounge.

7:30 p.m. Yiddish Conversation. Anabel Taylor 314.

7:30 p.m. America and World Community: "America in Relation to the Developing Nations and the Global Village," J. Congress Mbata, Africana Studies. Anabel Taylor One World Room.

7:45 p.m. Ornithology Seminar. Lyman K. Stuart Observatory, 159 Sapsucker Woods Road.

9 p.m. *Cornell Cinema presents "La Dolce Vita." Film Club members only. Uris Hall Auditorium.

Tuesday, November 21

11:15 a.m. Baker Lecture Series: "Cryptates: The Chemistry of Macropolycyclic Inclusion Complexes and the Design of Molecular Receptors, Carriers and Catalysts. An Approach to the Chemistry of the Intermolecular Bond," Jean-Marie Pierre Lehn, Universite Louis Pasteur de Strasbourg, France. Baker 200.

12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G19.

12:20 p.m. Cornell Women's Caucus. All welcome. Ives 118.

4:15 p.m. Food Science Seminar: "Toxic Elements in Foods and Food Chains," Donald Lisk, Food Science. Stocking 204.

3:45-4:45 p.m. Zen-Buddhist Meditation Group meeting for meditation. For more information call Tim Larkin at 539-7299. Anabel Taylor Edwards Room.

4:30 p.m. Animal Science 640 Wildlife Nutrition Seminar: "Comparative Digestive Physiology," Harold F. Hintz, Animal Science. Morrison 348.

4:30 p.m. Geological Sciences Seminar: "Gas Glow in the Earth: Is it Related to Subsurface Uranium! or to Earthquakes?" Robert L. Fleischer, General Electric, Schenectady. Thurston 205.

5 p.m. Southeast Asia Film Series: "The Masked Dance," story of deposed Prime Minister of Thailand, Kukrit Pramoj, and the turmoil of Thai politics. All welcome. Morrill 106A.

7:30 p.m. Folk Dancing for couples. Singles, beginners, all ages welcome. Martha Van Rensselaer Auditorium.

8 p.m. *Cornell Cinema presents "Bush Mama." Women's Film Series. Uris Hall Auditorium.

Wednesday, November 22

8:30 a.m.-4 p.m. Last Day to Withdraw from classes. Day 105.

12:15 p.m. Catholic Mass. All welcome. Anabel Taylor G19.

12:30 p.m. Lutheran Eucharist Service. Anabel Taylor G15.

Thursday, November 23

Friday, November 24

7:30 p.m. *Cornell Varsity Hockey-Queens University. Lynah.

Saturday, November 25

5:15 p.m. Catholic Mass. All Welcome. Anabel Taylor Chapel

7:30 p.m. *Cornell Varsity Hockey-Waterloo. Lynah.

Sunday, November 26

9:30 a.m. Episcopal Eucharist Worship Service. Faculty, staff, and families welcome. Church School and nursery care. Coffee hour following service in Founders Room. Anabel Taylor Chapel.

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