

CORNELL Chronicle

Volume 27 Number 41 July 25, 1996

TREE RINGS TELL A STORY

Dendrochronology is used to identify the exact year logs were cut at an archeological site in Turkey.

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AMERICA'S PAST EXAMINED

New books from two Cornell historians look at 17th- and 20th-century America.

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Cornell's statutory colleges fare well in state budget allocation

By Jacquie Powers

The Executive Committee of the State University of New York Board of Trustees, meeting in Buffalo on Monday, July 22, approved a 1996-97 financial plan that allocates \$120,418,200 in state appropriations to Cornell's four statutory colleges. That allocation represents a shortfall of \$2.4 million from the \$122.8 million level required to support base-level programs plus cover the increased costs of operations, according to Nathan Fawcett, director of statutory college affairs at Cornell.

The SUNY trustees' action came after the New York State Legislature passed a 1996-97 budget on July 13, after more than three months' delay, that restores \$51.9 million to the SUNY operating budget, prohibits a SUNY tuition increase for undergraduate New York state residents, restores

full funding for the state's Tuition Assistance Program (TAP) and increases unrestricted direct institutional support for the endowed sector of Cornell (Bundy Aid).



Dullea

The restorations to the SUNY operating budget leave a remaining gap in SUNY's financial plan of \$46.7 million, which must be closed through management efficiencies, early retirements and program reductions.

"Although the shortfall of \$2.4 million will require further program economies on the part of the statutory colleges, we are very pleased that the Legislature — with the strong leadership of Assemblyman Martin Luster and Senator

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Book warns of societal breakdown threatening Americans of all ages

By Susan Lang

The process that makes human beings human is breaking down as disruptive trends in American society produce ever more chaos in the lives of American children. The gravity of the crisis threatens the competence and character of the next generation of adults — those destined to be the first leaders of the 21st century, according to five leading Cornell professors in a new book.

"The signs of this breakdown are all around us in the ever growing rates of alienation, apathy, rebellion, delinquency and violence among American youth," says first author of the new book, *The State of Americans: This Generation and the Next* (Free Press, 1996), Urie Bronfenbrenner, the Jacob Gould Schurman professor emeritus of human development and family studies and of psychology. "The causes of this breakdown

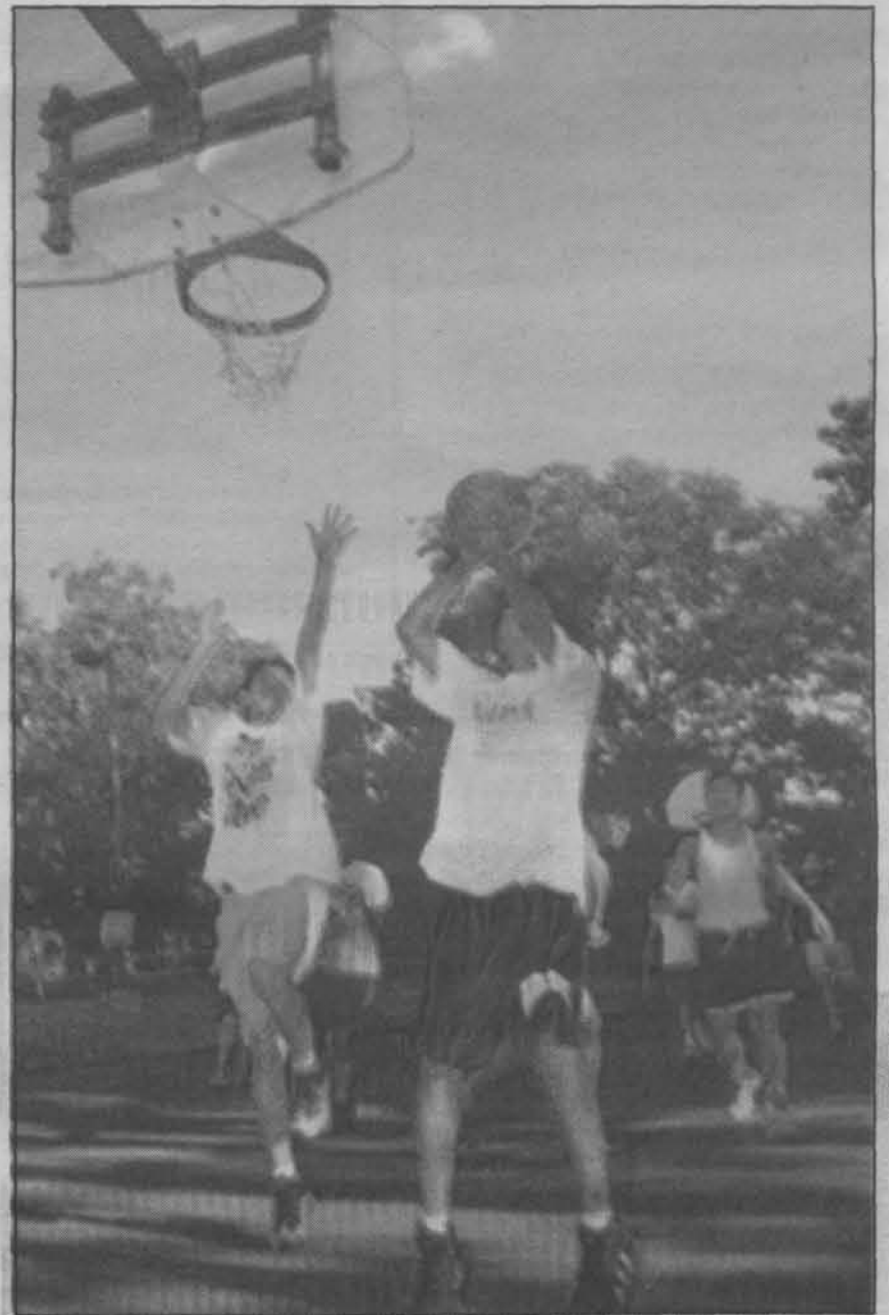
are, of course, manifold, but they all converge in their disruptive impact on the one institution that bears primary responsibility for making and keeping human beings human in our society: the American family."

The status of American children and families as they move through their life course is, in Bronfenbrenner's words, "ever more desperate." The book presents, for the first time, a wide array of data to show how relationships among these devastating trends can be recognized and systematically examined.

Co-authors are Peter McClelland, professor of economics; Elaine Wethington, associate professor of human development and family studies; Phyllis Moen, the Ferris Family Professor of Life Course Studies; and Stephen J. Ceci, the Helen L. Carr Professor of Developmental Psychology, all at Cornell. The book was written with the help of Helene

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Going for the goal



Robert Barker/University Photography

They may not be the "Dream Team," but Summer College students take advantage of a break in their studies by playing basketball on the West Campus courts between the Class of '26 and Sperry halls Friday evening. See the story on Summer College programs on Page 3.

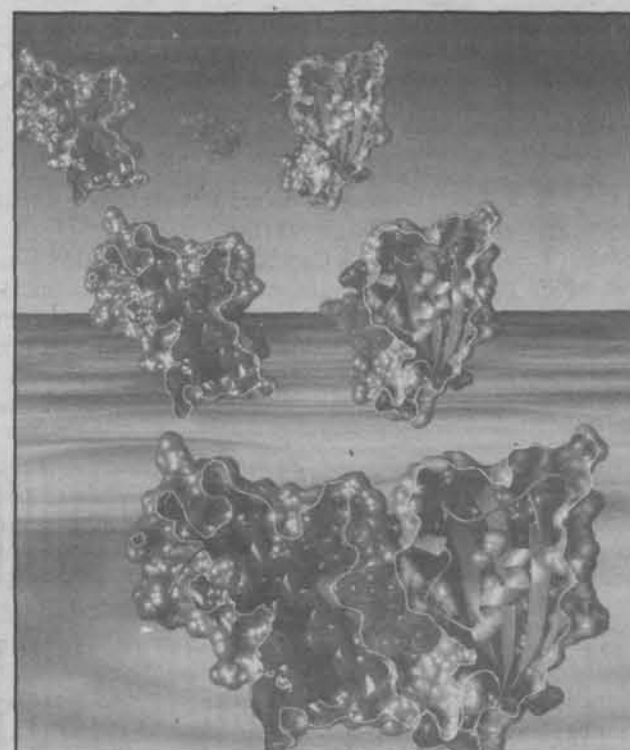


Photo by Richard Gillilan, Cornell University
Structure of rapamycin interacting with human FRAP and FKBP12, generating a potent immunosuppressive effect.

Discovery may lead to improved cancer treatments

By Larry Bernard

Scientists led by a Cornell chemist have determined the structure of a key protein that binds to a powerful immunosuppressive agent, opening the door to improved cancer treatments and human gene therapy.

The protein, called FRAP, binds to one side of rapamycin, a small, naturally occurring molecule that is known to shut down the immune system. The other side of rapamycin binds to another protein called FKBP12. When all three are bound together, the cell cycle is shut down.

"This is a fascinating story of cell signaling and how information is used and eventually may lead to making a better immunosuppressive drug," said Jon C. Clardy, Cornell professor of chemistry who led the work. "It's important also in understanding how proteins interact and how that information can be used to control genes and other cellular processes."

Clardy and co-authors Jungwon Choi, former Cornell postdoctoral associate now in Korea, and Jie Chen and Stuart Schreiber of Harvard University, reported their work July 12 in the journal *Science*. Their work was funded by the



Clardy

National Institutes of Health.

FRAP appears to be an important regulatory protein and is related to a growing family of such proteins, Clardy said. Acting as a sort of checkpoint during the cell cycle, this protein halts the cycle in a very specific place. "It's like slamming the brakes on and the motor's still running. Everything comes to a halt," he said.

That effect means that immune cells, which may be mounting a response to certain treatments, get stopped in their tracks so that therapies can be administered. But also, it means that the molecule can perhaps stop cancer cells from dividing as well. "It causes all cells to arrest. It's a very interesting effect," Clardy said.

The structure also has implications in gene therapy. "It's not that hard to introduce new genes. What's hard is turning them on," Clardy said. "Small molecules such as rapamycin may be a good technology for getting a gene to turn on." Such uses may include targeting a defective gene and replacing it with a good gene.

The researchers used supercomputer resources of the Cornell Theory Center to make simulations of the structure of the molecule binding with the two proteins. Richard Gillilan, Cornell visualization specialist, produced pictures to illustrate the mechanism. Data for determining the structure were collected using the X-ray source at CHESS, the

Continued on page 4

LETTER

Concerned about effect on allergies of rice technology

I write in response to the lead article in the June 13, 1996, *Chronicle*, "Super-resistant rice plant technologies will benefit developing countries." I agree that, in plant-science terms, it is exciting news that useful genes have been successfully transferred from a monocot to a dicot, and that it is useful that this will increase rice plant's resistance to certain insect damage and to drought. But that is only part of the story. From an allergy perspective, it is alarming that foreign proteins from potato and barley will occur in rice. Cooked rice is one of the most easily accepted and digested (and nourishing) foods for persons with other grain allergies. Thus such changes as praised in this article are not unmitigatedly good—and your article should have had this more balanced perspective.

— Dooley Kiefer '97
Ithaca

Professor Ray Wu replies:

The potato protease inhibitor (PINII) is naturally present in potato and tomato. Thus, eating transgenic rice will not cause a person who has never had any allergies to potato or tomato to suddenly develop an allergic reaction. Similarly, the HVA1 protein is normally present in barley and rice; therefore, it will not pose any problems either.

Actually, even if someone is allergic to potato or tomato, they still should be able to eat transgenic rice harboring the PINII gene without triggering an allergic reaction. This is because the PINII gene is put into rice plants in such a way that the protein is produced in the leaves, stem and root but not in the rice seed. Consequently, anyone who has an allergy to potato or tomato can eat the rice grains (seeds), because they will not be eating the PINII protein.

CORRECTION

A photograph on Page 1 of the July 11 *Chronicle* refers to a biodiversity preserve in West Danby as Cornell's. While Cornell researchers, in fact, have access to and use the preserve, it is being obtained and will be managed by the Finger Lakes Land Trust in partnership with the Cornell Institute for Research in Chemical Ecology.

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Cornell in times past



Division of Rare and Manuscript Collections/Carl A. Kroch Library
A Cornell modern language class in the late 1940s: The use of Gray Audograph dictating machines in the new Modern Language Laboratory (1949) made it possible to cut 10 inexpensive records at a time for use in the lab and the classroom. Recordings were made from "live" material: foreign language broadcasts picked up on the all-wave radio in the lab, high-quality transcriptions and other sources. See the story about today's intensive language classes on Page 6.

BRIEFS

■ **Steamline work:** Delays can be expected at the intersection of Garden Avenue and Campus Road through mid-August because of utilities work in the area. Vehicular and pedestrian traffic will be affected, according to Frank Perry, project manager. A section of the underground steam line and an 8-inch sanitary sewer line will be replaced, Perry added.

■ **Area residents can take courses:** Area residents who are not enrolled in a Cornell degree program may continue their education by applying for admission to virtually any course that Cornell offers. Courses can be taken for credit, or for non-credit at a reduced tuition charge. A late-afternoon and evening course roster is available. The fall registration period is Aug. 29 through Sept. 6 from 8:30 a.m. to 4 p.m. in B20 Day Hall. Classes begin Aug. 29. For information, call 255-4987, e-mail <exmu@sce.cornell.edu> or write Cornell University School of Con-

tinuing Education and Summer Sessions, B20 Day Hall, Ithaca NY 14853-2801.

■ **Shoemobile on campus:** The Department of Environmental Health and Safety has announced that the Iron Age shoemobile will be on campus Friday, Aug. 2. The shoemobile, which provides a large selection of safety shoes and the convenience of on-campus shopping, will be at the Environmental Health and Safety Building, 201 Palm Road (east of Cornell Orchards, off Route 366), 7:30 to 11 a.m. and noon to 3 p.m. Employees eligible to receive departmental reimbursement should bring an L order with an authorized signature, using Iron Age Safety Shoe as the vendor and including the maximum monetary amount allowed. Employees may go to the shoemobile on work time with supervisory approval. For information, call the Department of Environmental Health and Safety office at 255-8200.

OBITUARIES

■ **Michael R. Welker** of Voorheesville, N.Y., who had completed his junior year at Cornell as a civil and environmental engineering major, died Saturday, July 13, after being struck by a train in Syracuse, N.Y. He was 20.

Welker was spending the summer in Ithaca working in the engineering office of the city of Ithaca as part of the CIVITAS volunteer program, through Cornell's Public Service Center. He had been a Dean's List student for the past four semesters.

A funeral for Welker was held July 17 at St. Matthews Church, Voorheesville.

He is survived by his parents, Reinhard and Donna Welker, and a sister, Amy.

A memorial service at Cornell, coordinated through Cornell United Religious Work, the Department of Civil and Environmental Engineering and Phi Kappa Psi fraternity, currently is being planned for the fall.

NOTABLES

■ **John Laragh, M.D.**, master professor of medicine and attending physician at The New York Hospital-Cornell Medical Center, is the 1996 recipient of the Bristol-Myers Squibb Award for Distinguished Achievement in Cardiovascular/Metabolic Research. Laragh is director of the Cardiovascular Center at the New York Hospital-Cornell Medical Center and for the past 21 years was also its chief of the Cardiology Division. The award, given by an independent international panel of distinguished scientists, cites Laragh's discovery of the renin-angiotensin-aldosterone hormonal system for control of blood pressure, body sodium and potassium content; his demonstration that abnormalities in the system are a fundamental cause of hypertension, heart attack, stroke and heart failure; and his introduction of techniques to analyze the renin factor and to treat it with specific drugs.

A ceremony to mark the 10th anniversary of the Ans van Tienhoven Travel Award, given by the Albert R. Mann Library, is scheduled for July 26 from 12:30 to 1:30 p.m. in the pavilion at Stewart Park. **Philip Herold**, Cornell geographic information systems specialist at Mann Library, is the recipient of this year's award. Herold will use the award to visit the University of Connecticut's Map and Geographic Information System (MAGIC) and the New York Spatial Data Clearinghouse. Herold, who has worked at Mann Library since 1995, is making spatial data available via the World Wide Web. The Ans van Tienhoven Travel Award, named for the wife of Ari van Tienhoven, Cornell professor emeritus of animal physiology, who established the award to recognize the contributions of librarians and the spouses of faculty to the academic environment.

Two Cornell alumni were aboard Paris-bound TWA Flight 800 that exploded after takeoff from New York's JFK Airport on July 17.

Alumni reported to have been aboard TWA Flight 800 are:

• TWA Capt. **Steven E. Snyder**, who was serving as a check pilot on the flight. He earned a bachelor of science degree from Cornell's College of Agriculture and Life Sciences (CALS) in 1960.

He was a member of Phi Kappa Sigma fraternity and served in the Air Force ROTC.

• **Tracy Anne Hammer**, a member of the Class of 1989. Hammer also was a CALS student; her major was animal science.

She was a member of Kappa Delta sorority and was employed in Campus Dining Services for four years, serving as a student supervisor during her senior year.

A doctoral student in microbiology and veterinary science at Michigan State University, she was en route to Paris to present a speech at an international conference on animal genetics.

ILR's Labor Documentation Center renamed for Theodore Kheel

By Darryl Geddes

A major resource center at Cornell's School of Industrial and Labor Relations (ILR) containing millions of documents related to organized labor, industrial relations and management thought has been renamed in honor of Theodore W. Kheel, the influential New York City lawyer, arbitrator, negotiator and mediator.

The Kheel Center for Labor Management Documentation and Archives is the centerpiece of the school's Martin P. Catherwood Library, one of the world's largest repositories of labor relations materials.

The Kheel Center collects materials pertaining to all areas of industrial and labor relations. Its holdings contain almost 34 million manuscript letters and documents, 45,000 collective bargaining agreements, 300,000 union constitutions and pamphlets and 315,000 photographs, as well as oral history interviews, motion pictures and video and audio tapes.

"In renaming this resource for Ted Kheel, we are recognizing his key role in the development of the field as well as his continued commitment to the School of Industrial and Labor Relations," ILR School Dean David B. Lipsky said.

Kheel's gift of \$1 million pushed the ILR School's fundraising campaign past its \$20.5 million goal. His earlier contributions made it possible for the school to establish the Institute of Collective Bargaining. Most recently, Kheel's support has led to the establishment of an institute at the school to study conflict resolution. The institute will begin operations in August.

Kheel will further enhance the center's stature as a major repository in the field when he donates his papers to the ILR School. The documents will be a valuable resource and provide an up-close look at a career that has spanned more than half a century.

Kheel has negotiated both here and abroad on behalf of dozens of companies and unions, including the National

Football League. Kheel served presidents Kennedy, Johnson and Ford as mediator or arbitrator of major national disputes involving railroads, airlines and shipping. In New York City, he served mayors O'Dwyer, Impellitteri, Wagner, Lindsay and Beame in resolving disputes in virtually every industry.

Kheel serves as president of the Earth Pledge Foundation and is founder and chairman of the new dispute resolution organization Prevention and Early Resolution of Conflicts (PERC). Through a strategic alliance with the university, PERC has entrusted its educational and research agenda to the Cornell/PERC Institute on Conflict Resolution.

Kheel's ties to Cornell are not solely professional; they're also familial. He earned his undergraduate and law degrees from Cornell in 1935 and 1937, respectively. His wife, Ann Sunstein Kheel '36; his brother, Julian Kheel; two of his six children, Ellen Kheel Jacobs and Robert J. Kheel; two grandchildren, Beryl Jacobs and Daniel John Kheel; and son-in-law Arnold S. Jacobs are all Cornell graduates.

Freshman gains confidence from CU summer programs

By Darryl Geddes

When Judith Cruz begins her freshman year at Cornell this fall, she will feel very much at home.

Cruz, who lives in the Gramercy Park section of New York City, will have spent two summers at Cornell before she becomes a Cornell freshman.

She attended Cornell Summer College last year and is participating in the Prefreshman Summer Program this year. Summer College offers students the opportunity to take college-level courses for letter grades and credit and provides students with an early feel for college life. The Prefreshman Summer Program is designed to help underrepresented students prepare for the challenges of the freshman year. Both programs run from June 22 to Aug. 6.

"These programs have given me tremendous confidence as I enter my freshman year at Cornell," Cruz said.

By participating in these Cornell pre-college programs, Cruz has saved herself some of the anxiety that can fill freshman year.

"I think I'm going to be more comfortable with myself and my surroundings, especially since I've experienced Cornell," she said. "I certainly know what kind of academic work is expected of me. I also know some faculty members, the campus and where resources are."

Not only is Cruz participating in Cornell's prefreshman program this year, she's also serving as a mentor to five Summer College students from New York City. Like Cruz, all are attending Summer College on scholarship funds raised by Cornell alumnus Jon Kopita '87.

Raymond Delgado of Brooklyn earned his Summer College application by being one of the brightest students at his high school. Summer College, he said, provides a great overview of college life.

So far the task causing the most trouble for Delgado is not the challenging English class assignments, but rather that of managing time. "Keeping track of all the things I'm supposed to do has been difficult," said

the Rice High School student, "but I'm doing well." Students have to meet for classes, study sessions and career exploration seminars and complete homework assignments, while still managing to find time to hang out with friends.

The downside to Summer College for this 19-year-old is the curfew, which requires students to be in the residence hall by 11 p.m. Sunday through Thursday and by 1 a.m. Friday and Saturday.

As a mentor, Cruz is available to offer Delgado and other students advice on how to make the most of their Summer College experience and prepare for the college application process.

One piece of good advice might be to follow in Cruz's footsteps.

Cruz was selected to attend Summer College in 1995 out of 40 or so qualified students from Washington Irving High School.

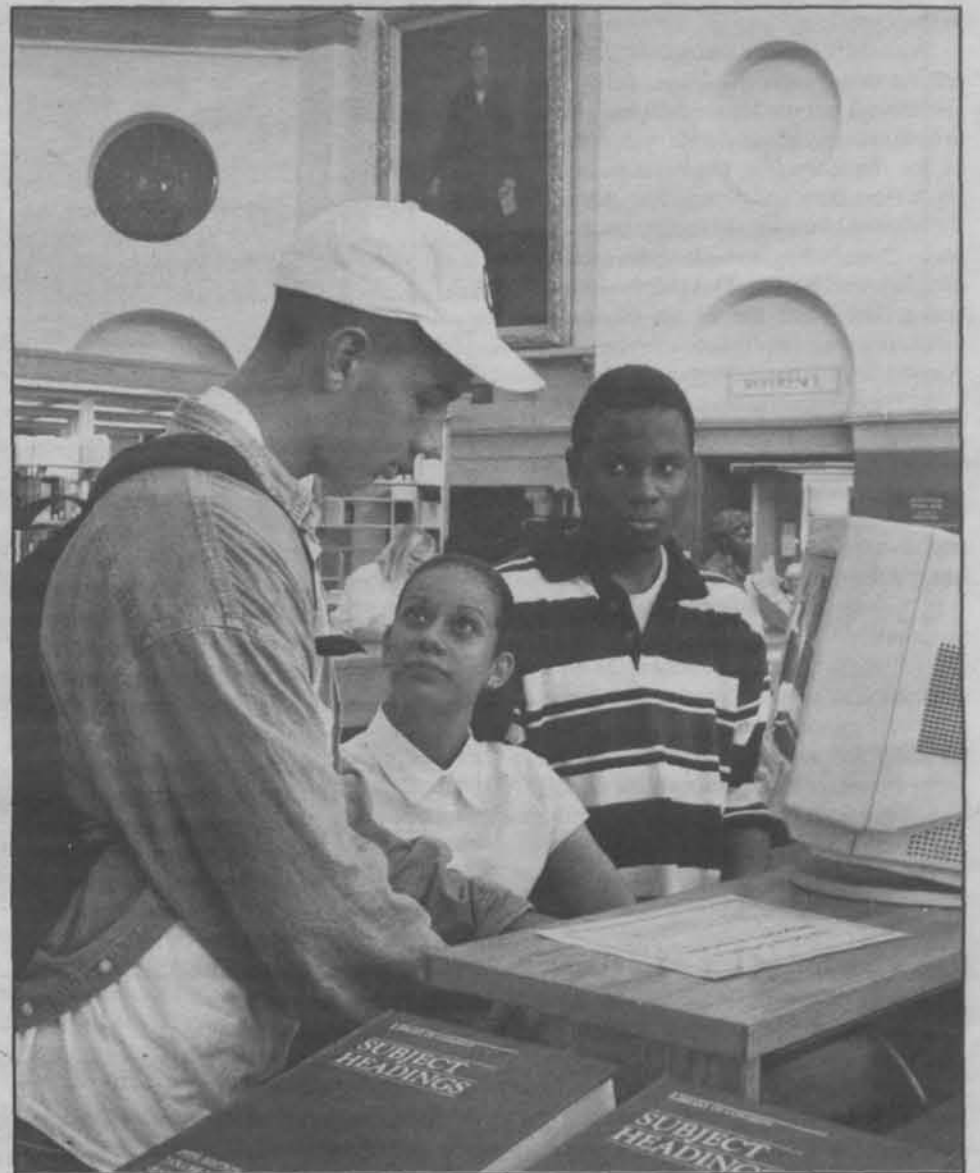
Her arrival on campus last year marked the first time she had been away from her family in New York City for any significant period of time.

"Summer College for me was such a rewarding and enriching experience," she said. "Until then, I had never really understood what college would be like. No one in my family ever went to college. This program was crucial in enabling me to better understand what college was all about."

Cruz said the benefits of Summer College continued to reap dividends when she returned to high school. "My performance improved, especially in assignments where I had to do research papers," she said. "The Summer College course in critical writing and research gave me the knowledge I needed to excel."

When it came time to apply to colleges, Cornell was at the top of her list. "After Summer College, I knew Cornell was the place I wanted to be," she said.

But other schools wanted her, too. An outstanding high school transcript coupled with a résumé rich in extracurricular offerings, including service on a New York City mayoral committee, brought acceptance letters from Swarthmore, Colgate, Columbia,



Adriana Rovers/University Photography
Incoming freshman Judith Cruz, center, shows Summer College students Stephen Nesbit, left, and Marc Polite how to find research-paper information on the Internet through Bear Access, at Uris Library.

Wellesley and others.

Cruz's decision to come to Cornell was heavily swayed by her Summer College stay. "Many students only get a peek at college life when they visit for a tour or interview," she said. "It's difficult to summarize the college feeling and expectations of a particular school after such a short visit. I was fortunate to have two summers here."

As the first in her family to attend college, Cruz admits to feeling some pressure

to perform well and get the most out of her college life. "I really see myself as a role model to my sisters, especially my 10-year-old sister," she said.

Her sister recently graduated from primary school and, as valedictorian, gave the graduate address. Her theme was "it is better to be a leader than a follower," but the 10-year-old noted that being a follower may not be all that bad—especially when one follows someone like her sister, Judith.

Bond rating services' high marks show Cornell's good financial health

By Jacquie Powers

Two investment rating services have given Cornell University's bonds high ratings, indicating they consider the university to be in good financial health.

Standard & Poor's Corp. recently announced it had assigned its AA rating on the Dormitory Authority of the State of New York's \$132 million revenue bonds series 1996, issued for Cornell. At the same time, Moody's Investors Service issued a Aa rating on the bond series.

Additionally, Standard & Poor's affirmed its ratings on the authority's bonds, issued for the university, as follows:

- \$285.5 million revenue bonds series A, E, 1984, 1985, 1986, 1990A, 1993 at AA.

- \$60 million multimodal variable rate series 1990B at AA/A1-plus.

"I am pleased at this reaffirmation of the overall financial strength and stability of Cornell," said Frederick A.

Rogers, senior vice president and chief financial officer. "This reflects well on the work of the past five years to adapt to changing economics in higher education and is a real endorsement of the current leadership and directions of the university."

The Moody's report noted that "overall balance sheet liquidity remains above average, but not extraordinary. Endowment has grown significantly in the past three years, in part because of investment performance, but also because the university is receiving the proceeds from its concluding \$1.5 billion capital campaign, of which \$1.2 billion has been received in cash."

The Standard & Poor's rating "reflects a stable enrollment, strong student quality, consistent operating surpluses, a large endowment, and improved liquidity," the report said. It also "reflects the expectation that Cornell will continue to be a selective institution, generating sufficient surpluses to support operating needs," the report said. The university's

financial outlook got a boost in December, when Cornell officials announced the completion of a record-breaking capital campaign that raised \$1.5 billion for endowment, student financial aid, program enhancement and various capital projects.

Enrollment has remained stable at about 19,500, and no growth is planned for the foreseeable future. The university remains highly selective, Standard & Poor's reported, accepting 33 percent of undergraduate applicants in 1996, and enrolling students with average SAT scores of 1350. The graduate programs also are very selective, with the medical school accepting 3 percent of applicants, the veterinarian school 15 percent and the law school 27 percent.

Cornell's fiscal operations historically have been strong, with balanced budgets, strong enrollment, robust research and donor support. Total endowment at fiscal year-end 1995 was \$1.6 billion, an increase of 26 percent from 1994.

Societal breakdown *continued from page 1*

Hembrooke, Pamela Morris, Tara White and Alanna Gelbwasser, research associate, graduate students and undergraduate student, respectively, all at Cornell.

This interdisciplinary group – which includes experts in economics, psychology, developmental psychology, sociology, biology and education – points out that the disruptive trends, which started largely in the 1960s and 1970s, have escalated to “a critical stage that is much more difficult to reverse.”

“The main reason is that forces of disarray, increasingly being generated in the broader society, have been producing growing chaos in the lives of children and youth, not only in the home but also in other settings as young people move beyond the family into what are often disrupted and disruptive child care arrangements, classrooms, schools, peer groups, neighborhoods and entire communities,” the authors write in their preface.

With 148 figures that detail these and related trends, this 305-page, fully referenced book is intended for decision-makers in both the private and public sectors as well as for the interested public. The authors show the nature and compelling gravity of the crisis confronting the nation. Each of the seven chapters begins with a brief introduction, followed by numerous graphs and tables and a descriptive list of the trends, and concludes with implications for the future. A summary of these chapters follows:

- “Youth” documents beliefs and behaviors that threaten the development of youths’ competence and character, such as trends regarding trust, truancy, cheating, delinquent behavior, drug and alcohol use and religious attendance, and beliefs about out-of-wedlock births and planning for the future.

- “Crime and Punishment” focuses on the prevalence and social impact of violence committed by youth. It details such trends as rates of homicides, youth violence and incarceration rates by gender and race, and government spending for justice and corrections compared to that for higher education.

- “Economic Developments” shows how the American dream is faltering with “pieces of the American pie” becoming increasingly unequal. Its scope ranges from trends



Frank DiMeo/University Photography

The authors of *The State of Americans: This Generation and the Next* are, from left: Phyllis Moen, professor of life course studies; Peter McClelland, professor of economics; Urie Bronfenbrenner, professor emeritus of human development and family studies; Stephen Ceci, professor of developmental psychology; and Elaine Wethington, associate professor of human development and family studies.

in wages, income, poverty, welfare benefits, education and employment to trends in the federal deficit and expenditures and consumer-saving patterns.

- “American Families” depicts profound structural changes that have been occurring in the family and how family structure (such as divorce, single parenthood, out-of-wedlock births) affects children and their income, education, sexual activity, teen parenting and poverty.

- “Poverty and the Next Generation” traces the changing nature of American poverty for families with young children and the impact that growing up in poverty has on

children as they grow older. It summarizes trends among children living in poverty, government benefits and their relation to family structure and poverty.

- “American Education” looks at test scores, international comparisons, television viewing, adult literacy and wages by literacy levels.

- “Changing Age Trends” shows how today’s social trends are occurring within an aging population that is transforming the country. It discusses age changes in life expectancy, health status by age, the need for assistance by age, nursing homes, gender and racial differences, financial trends,

employment and government expenditures.

The authors deliberately avoid policy recommendations, choosing instead to let the various data series highlight a set of interrelated national problems. The book concludes with a summary of problems, emphasizing particularly those linked to economic and cultural trends. The latter are particularly worrisome, as the authors note: “Something is terribly wrong. . . . Something has gone awry. . . in a society in which more and more teenagers are becoming unwed mothers, in which teenagers murder teenagers with impunity, in which civility, community and safety are fast disappearing.”

While such problems are not easily alleviated or solved, they must become the focus of a national agenda, the authors conclude, driving home their point by citing Erich Fromm’s chilling observation: “The history of man is a graveyard of great cultures that came to catastrophic ends because of their incapacity for planned, rational, voluntary reaction to challenge.”

Yet, Bronfenbrenner adds: “It is still possible to avoid that fate. We now know what it takes to enable families to work the magic that only they can perform. The question is, are we willing to make the sacrifices and the investment necessary to enable them to do so?”

U.S. Sen. Daniel Patrick Moynihan called the book “a first-rate analysis of the varied societal problems that have beset us since the 1960s. *The State of Americans* is a culmination of decades of research by leading scientists on disparate topics molded into a singular vision of the present and the future.”

William Julius Wilson, the Lucy Flower University Professor of Sociology and Public Policy at the University of Chicago, said about the book: “We are experiencing dramatic social and economic changes that will profoundly affect the future of the nation. *The State of Americans* is by far the best and most accessible work that documents and analyzes these trends. This book is so interesting, clear and well organized that many readers will find it difficult to put down.”

The project was supported by the Bronfenbrenner Life Course Institute.

State budget *continued from page 1*

James Seward – was able to close as much of the gap in SUNY’s operating budget as it did,” said Henrik N. Dullea, vice president for university relations. “And we are also pleased that we were able to reach agreement with SUNY that the allocation to the statutory colleges at Cornell of the remaining shortfall will be fair and equitable.”

The \$2.4 million shortfall is substantially less than appeared possible soon after the presentation of Gov. George Pataki’s executive budget last December. Although this relief is welcome news, Fawcett noted, “SUNY has advised campuses to plan a contingency reserve in the event the state requires a mid-year expenditure reduction to maintain a balanced financial plan. As the statutory college deans work with their departments to implement a 1996-97 financial plan, they will be considering the colleges’ shares of the shortfall allocated by SUNY, potential mid-year adjustments, as well as any financial pressures stemming from other college income sources,” he said.

In addition to funds received through the SUNY operating budget, the statutory colleges also receive state support through special legislative initiatives and through grants and contracts with other state agencies. The new budget includes a number

‘Although the shortfall of \$2.4 million will require further program economies on the part of the statutory colleges, we are very pleased that the Legislature – with the strong leadership of Assemblyman Martin Luster and Senator James Seward – was able to close as much of the gap in SUNY’s operating budget as it did.’

– Henrik Dullea

of such initiatives for the statutory colleges at Cornell, including the Labor Studies Program and the Program in Employment and Workplace Systems (PEWS), a continuing Workers Compensation Study and a new Women and Work Institute in the School of Industrial and Labor Relations; the North Country Agricultural Development, Farm Family Assistance, Agriculture in the Classroom, Grape Entomologist and Golden Nematode programs in the College of Agriculture and Life Sciences; the Rabies Control Program and supplemental funding for the Mastitis and Avian Diseases programs in the College of Veterinary Medicine; and the Parent HIV/AIDS Education program in the College of Human Ecology, among others.

On a universitywide level, special state

funding for programs at Cornell included new support for the Program on Breast Cancer and Environmental Risk Factors in New York State, increased funding for the NYS International Education Task Force and ongoing support for the Theory Center in Science and Engineering and the Center for Advanced Technology in Biotechnology.

In addition to Assemblyman Luster and Senator Seward, Dullea cited “the special assistance we received at this legislative session from key members of the Legislature that resulted in either new or increased funding for programs here at Cornell: Edward Sullivan, chair of the Assembly Higher Education Committee; William Parment, chair of the Assembly Agriculture Committee; Catherine Nolan, chair of the Assembly Labor Committee; John R. Kuhl, chair of

the Senate Agriculture Committee; Kenneth LaValle, chair of the Senate Higher Education Committee; and James Wright, chair of the Senate Alcohol and Drug Abuse Committee, who played a major role in the expansion of the North Country Agricultural Development program.”

At least one contract program, the Equine Drug Testing Program conducted for the State Racing and Wagering Board, has been cut by approximately \$150,000, which will require immediate steps to reduce program expenditures.

The restoration of TAP funding schedules will benefit eligible students in both the statutory and endowed divisions of Cornell. The state’s ability to hold SUNY tuition constant also will benefit statutory college students. The statutory college tuitions approved earlier by the Cornell Board of Trustees anticipated an increase in SUNY tuition of \$250 for resident undergraduate students and proportional amounts for other students. Proposals will be prepared for consideration by the Cornell board that will delete the SUNY portion of the planned increases in tuition. When the board has acted on those proposals, students and their families will be advised of the process that will be followed to adjust statutory rates and billings.

Discovery *continued from page 1*

Cornell High Energy Synchrotron Source.

The rapamycin molecule, discovered 20 years ago in a microbe from a soil sample on Easter Island, is “exquisitely shaped” to fit the two proteins, Clardy added. Clardy’s group had earlier determined the structure of rapamycin and FK506, another potent immunosuppressive agent bound to FKBP12. Following the cellular pathway, they found that

rapamycin and FKBP12 bind together and look for another protein to work with – the protein that ultimately turned out to be FRAP. Rapamycin alone would not bind to FRAP; it needs FKBP12 first. The current report describes how the whole system works.

“Our data provide a structural framework for understanding the rapamycin-based dimerization of FKBP12

and FRAP,” the authors write in their report. “Because rapamycin-induced protein dimerization can form the basis for regulating gene transcription and other cellular processes, such structure-based modifications of the interaction might have important practical consequences. The structure also provides insights into structural features and possible regulation of (this) family of proteins.”

CORNELL RESEARCH

Researchers precisely date wood from ancient tomb in Turkey

By Jill Goetz

A team of Cornell researchers has identified the exact year that logs were cut at an archaeological site in Turkey, a finding that has major implications for understanding the history of the Greeks, Egyptians and other ancient civilizations.

Reporting in the journal *Nature* (June 27), Peter I. Kuniholm, professor of the history of art and archaeology, with other researchers in Cornell's Aegean Dendrochronology Project and at the universities of Heidelberg and Reading have constructed a tree-ring sequence spanning 1,503 years from the ring growth patterns preserved in wood and charcoal samples at 22 sites throughout the eastern Mediterranean. They identified this exact "window," from 2200 B.C. to 718 B.C., by analyzing variations in the width of annual tree rings (which are altered by changes in climate and moisture) from the wood and charcoal remains of ancient tombs, gates and buildings unearthed at these sites.

Using dendrochronology techniques they have perfected, along with radiocarbon dating, the researchers were able to determine the exact year that some of those logs were chopped down. They report that logs used to build the inner chamber of the Midas Mound Tumulus, a massive tomb named for King Midas of the Phrygians and located at the Gordion archaeological site, were cut in 718 B.C.

"That is not plus-or-minus anything; it is a date to the year," said Cornell doctoral student Maryanne Newton, one of the *Nature* article's co-authors. "That level of precision, based on the fact that trees put on a single growth ring per year, is unique."

The researchers supplemented their dendrochronology work with radiocarbon "wiggle-matching," a process in which the radiocarbon profiles of the timbers are superimposed on a calibrated time scale and moved until the lines match up, and their knowledge of an earlier climatic event.

Previous research has shown that the major second millennium B.C. eruption of Thera, a volcanic island in the Aegean Sea, had global effects that likely influenced climate patterns as far away as the western United States. Volcanic ash from Thera blocked the sun and caused cooler, wetter weather conditions worldwide. Rings from American bristlecone pine trees revealed extensive frost damage attributable to the eruption.

But in the desert conditions of the Near East, Thera had the opposite effect: It spurred massive growth. Reduced exposure to sunlight and increased soil moisture led to tree rings in juniper, cedar and



Charles Harrington/University Photography
Doctoral student Maryanne Newton holds two samples of ancient wood in the Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology in Goldwin Smith Hall. Each pin in the left sample is separated by 100 rings, thus representing another 100 years of tree growth.

pine samples from Porsuk, a site in central Turkey, that were three to eight times wider than normal. Porsuk is about 840 kilometers downwind of Thera.

Archaeologists had long believed the Thera eruption had occurred around 1500 B.C., but more recent studies have strongly suggested the eruption occurred earlier, in 1628 B.C.

The "Porsuk event," as Newton calls the growth spurt in the Porsuk trees, was dated to 1628 B.C. — lending further evidence that this was the year of the Thera eruption.

The findings reported by the Cornell team move back the Aegean Late Bronze Age by as much as a century. This age has long captured the popular imagination, Newton said, because it encompassed such

cultures as the Minoans, Mycenaeans, Egyptians and Assyrians — sophisticated civilizations that have been depicted in countless works of classical literature and film. The new chronology also has implications for historical accounts concerning such figures as Queen Nefertiti and Akhenaten, the Egyptian pharaoh.

The researchers determined that wood from a shipwreck containing a gold scarab inscribed with the name of Queen Nefertiti was cut down in 1316 B.C. The jewelry would not have been made until Nefertiti was queen, so the timber confirms that she held the throne by then — which supports earlier historical findings.

Elsewhere, juniper and cedar logs from the walls of the Middle Bronze Age pal-

ace at Acemhöyük were determined to have been cut in 1752 B.C., and the Warsama Palace at Kültepe contained logs cut in 1810 B.C.

"Because documents preserved on clay in these buildings provide links with rulers from Assyria and Syria," the authors write, "the new fixed dendrochronology provides important evidence towards the resolution of a century of debate over Assyrian and Mesopotamian chronology."

To visualize such chronologies, one need only visit the Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology, located on the ground floor of Cornell's Goldwin Smith Hall. Pinned on the walls of a narrow lab cluttered with microscopes and maps, books and statues, computers and cabinets filled with charcoal samples are long, colored strips of paper depicting various chronologies. One orange strip on the wall runs from circa 500 B.C. to 50 A.D.; a blue strip pasted below begins at 362 A.D. and stretches around the corner to the present. Such simple displays belie the sophisticated technologies that are used at this and other dendrochronology labs around the world to date ancient artifacts.

Cornell's dendrochronology lab is funded by the National Science Foundation and National Endowment for the Humanities and is the headquarters for the Aegean Dendrochronology Project. The project's ultimate goal is to connect early chronologies like the one described in *Nature* to the present, to create an "absolute chronology." By way of explanation, Newton offers this scenario:

"You go to a forest today and take a sample from a tree that you know grew to 1996. By counting 200 rings, you know that the tree is 200 years old and started growing in 1796. Then, you compare the pattern of its rings with those from a piece of wood from a building you know was built in 1860. You keep doing the same with earlier and earlier samples of wood."

While the researchers stress that they have not yet achieved an absolute chronology, they believe their latest findings have brought them considerably closer and will enhance their understanding of the relationship between pivotal cultural events of the past and present.

"Often the different dating systems which have been used in interpreting the history and archaeology of the Near East have had profound effects on how we understand cultural interactions," Newton said. "What we announce in *Nature* is the beginning of the process of bringing some order to our understanding of the cultures and histories of our shared past."

Research find may force a reassessment of how photosynthesis works

By Blaine P. Friedlander Jr.

Plant biologists have long held the view that photosynthesis — the process by which cells in green plants convert the energy of sunlight into chemical energy and use carbon dioxide to produce sugars — needs two intermediate light-dependent reactions for successful energy conversion: Photosystem II and Photosystem I.

But according to a new study reported this month, that dogma may have gone for a walk, and scientists may have to rethink some aspects of how photosynthesis works.

"Scientists have thought they understood photosynthesis for a long time, and this revelation flies in the face of what we know," said Thomas G. Owens, Cornell associate professor of plant biology. "What does this all mean? No one knows yet."

The Z scheme is the classic example of how scientists describe the light-dependent reactions of photosynthesis. When photons — particles of light — enter a plant cell,

their energy is used to power two sequential light-dependent reactions. In Photosystem II (PSII), the light energy is used to split water, producing oxygen and electrons. In Photosystem I (PSI), these electrons are used to produce compounds that ultimately react with carbon dioxide to produce carbohydrates, lipids, proteins and nucleic acids — the fundamental components of life.

But Owens and researchers from the Oak Ridge National Laboratory in Tennessee found that in some cases photosynthesis can occur in the absence of PSI, they report in the July 19 issue of the journal *Science*. The report, "Oxygenic Photoautotrophic Growth Without Photosystem I," was authored by James W. Lee, C.V. Tevault and Elias Greenbaum, all of the Oak Ridge National Laboratory, and Cornell's Owens.

The scientists from Oak Ridge used artificially developed mutants of a green alga to find this new life process. "It is a very important discovery; I didn't believe any of this stuff when it was first reported. I thought it was

impossible, but cooperation between the two labs showed it was possible," Owens said.

Owens does not know how this discovery will fit into the larger puzzle of plant biology. As an analogy, he describes that when the laser was first discovered, no one had a clue that it could be used for reading CD-ROM disks or making the grocery store checkout faster. "The framework that we have for evaluating this discovery is incomplete," he said. "No one knows where it will lead."

The Oak Ridge researchers explained they found that mutant algal cells were able to grow and survive in near-normal conditions. "No pun intended, but this sheds new light on photosynthesis," Greenbaum said. "This is speculation, but this could be a crude prototype of primordial photosynthesis."

Does this mean that PSI is unnecessary for normal photosynthesis? Owens gives an emphatic "no." This is just a biological alternative that had not been found until the Oak Ridge experiments.

Look out Ninja Turtles; here come the naked mole-rats

By Roger Segelken

Slavishly devoted to a charismatic figure, wearing more hair on their toes than on their wrinkled heads, living in the underground among scores of near-identical gang members with really gross personal hygiene – they're the kind of cult parents pray their children won't join.

Which is why Cornell biologist Paul Sherman, co-author of two new books about naked mole-rats for children and young adults, expects one of the world's weirdest animals will appeal to kids and spark their scientific curiosity.

Naked Mole-Rats (Carolrhoda Books, 1996) and *The Naked Mole-Rat Mystery: Scientific Sleuths at Work* (Lerner Publications, 1996), co-written with Ithaca children's book author Gail Jarrow, focus on subterranean dwellers of eastern Africa that have puzzled scientists for some 150 years.

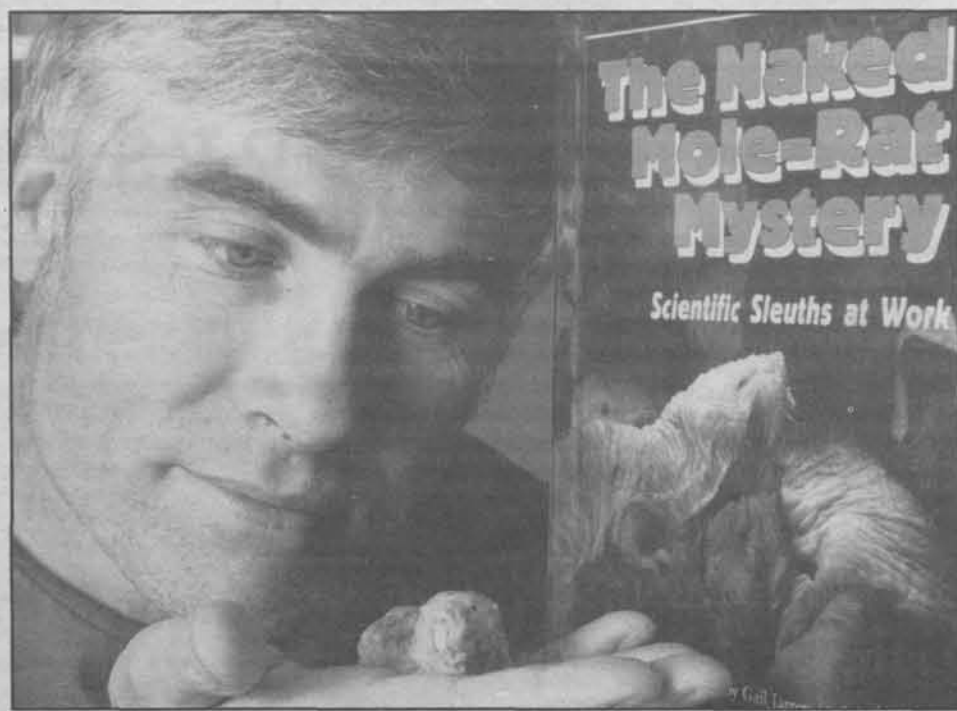
First at the University of California at Berkeley and then at Cornell, Sherman established one of the first laboratory colonies of *Heterocephalus glaber* (or "different-headed hairless") and edited the first scientific book (*Biology of the Naked Mole-Rat*) about rodents that burrow through the rock-hard soil of Ethiopia, Kenya and Somalia. Now that naked mole-rats are displayed at many zoos, the Cornell professor of neurobiology and behavior attempts to tell the skeptical public why biologists find beauty in such an ugly animal.

"Naked mole-rats are unique among mammals because of the way they look and act, the way their bodies work and the way they live. They give birth and nurse like mammals, they keep warm like reptiles, they live in colonies like social insects," Sherman said. "For scientists, the big mystery question is why – why have these animals become eusocial (truly social), living in large, family groups where only a few of the colony members reproduce and all the others work to raise the young?"

Working with naked mole-rats for 17 years, Sherman has heard all the descriptions of their appearance. Some labels are merely unkind, while others are downright obscene, he said, adding, "Probably the most charitable thing you can say is that they look like hot dogs that were left in the microwave too long."

The mole-rat's protruding teeth make it look like a miniature walrus, but they come in handy for the animal's life work: excavating labyrinths of tunnels and chambers beneath the surface of the sun-baked surface and gnawing the plant roots that comprise its diet. The few hairs on its otherwise naked body have a purpose, too: Between the toes, the hairs serve as tiny whisk brooms to sweep excavated dirt from the burrow, while lip hair helps keep soil out of the mole-rat's mouth. Facial hair enables the animal to navigate as it runs, with tiny eyes closed, through the dark tunnels – when it's not running backward at equal speed, that is.

As if bizarre appearance weren't enough,



Adriana Rovers/University Photography
Paul Sherman, professor of neurobiology, poses with a naked mole-rat and with one of the children's books he co-wrote with Gail Jarrow.

the naked mole-rat has adopted some odd habits. It regularly rolls in feces and urine of the underground toilet chamber, for example, to refresh the colony's scent on its body. The scent of the colony, which can have up to 300 related members, tells who's family and who's foe when territorial disputes erupt.

Under the insect-like division of labor that prevails in naked mole-rat colonies, one female queen and no more than three male breeders are responsible for reproduction, while all other colony members are workers who help raise as many as five litters a year. Naked mole-rat colonies are

so inbred, Sherman and Cornell biologists H. Kern Reeve and Charles F. Aquadro discovered several years ago, that all colony members' DNA fingerprints are virtually identical. Therefore, solving a naked mole-rat crime with DNA evidence alone would be difficult.

Without giving away the solution to the mystery, it can be divulged that the reason for mole-rats' eusociality and for most of their strange traits has something to do with the environment. And with snakes that don't care how funny-looking the overcooked hot dogs are.

Language classes are hot summer items

By Nancy Kok '96

Once again, many students are taking a summer opportunity to learn a new language – rapidly – in Cornell's intensive language programs.

The university offers a wide variety of language instruction, from Chinese and Japanese to Swahili and Yoruba. Most classes meet four to five hours, four or five days a week, for six to nine weeks and stress development in all skill areas of language acquisition – speaking, listening, reading and writing.

The population of the students enrolled in the classes is diverse. This summer, there are more than 200 students in the intensive language sessions, and approximately three-quarters of them come from outside Cornell.

Nikki Davis, who graduated from Ohio University and is taking Yoruba, said she carried the flier about Cornell's African language program "for a few years" before deciding to apply. Davis, who is interested in traveling to Nigeria, says her Yoruba class has given her an appreciation of the culture.

Another student, Pechluck Pongchet from Chicago, researched several Chinese language programs before choosing Cornell's. Pongchet was attracted by the Asian Language program's "emphasis on speaking," she said. Like Davis, travel plans influenced her decision to take the course; she wants to visit China next year.

Other motivations students have for learning a new language quickly and thereby committing themselves to a heavy workload include employment in foreign countries and the desire to make themselves more marketable.

Most of the summer language programs include both in-class sessions with a teacher and work in the language lab or using language tapes every day. The classes themselves are conducted primarily



Adriana Rovers/University Photography
Julian Wheatley, director of the Chinese FALCON (Full-year Asian Language Concentration) program, second from right, talks with students preparing a language skit in their introductory Chinese course in 106 Morrill Hall. They are, from left to right, Tom Farrell, John Mark Crowley and Pechluck Pongchet.

rily in the foreign language, encouraging interaction between the instructor and students. Kenny Owen, a Cornell senior who is taking introductory Chinese and is a student in the FALCON (Full-year Asian Language Concentration) program said, "You have to be very alert in class. You must speak almost every other minute." Furthermore, students not only learn the language but gain a better understanding of its context. Rakey Cole, the instructor for the Mandinka class, said, "We try to make it fun for the students learning Mandinka. We put our language in the context of the culture."

Students must overcome many obstacles when learning a new language.

"One challenge is that many African languages have tones. This makes learning pronunciation difficult," said Akinloye Ojo, the instructor for Yoruba. Similarly, Julian Wheatley, director of the Chinese FALCON program and an instructor in the summer session, said, "[The students] are learning a language that is completely unrelated to their own language. They have no hints from their own vocabulary, so they have to pay attention to what they're doing."

Nevertheless, summer is the best time to learn a language, said Charles Jermy Jr., associate dean of the School of Continuing Education and director of Cornell's Summer Sessions.

"Students don't have any distractions," he said. "They don't have to worry about their calculus or economics classes. One can learn languages in extraordinary ways."

Indeed, Helena Pachon, a graduate student in nutrition studying Mandinka said, "The course is very consuming. I have learned a lot in just one week."

Intensive language classes started at Cornell in the 1970s with Chinese and Japanese. In the 1980s, African languages were added. Courses generally rotate, depending on the demand for the language and the availability of faculty. This summer, Cornell is offering intensive classes in Chinese, Japanese, Swahili, Yoruba, Mandinka, Sinhala and Nepali, as well as the regular summer session classes in Spanish, French and other Romance languages. For more information about intensive language classes, contact the Cornell University Summer Session, B20 Day Hall, or at 255-4987.

Program offers training on a CD-ROM

Cornell's Food Industry Management Distance Education Program has announced a new computer-based training program for retail food store managers and associates.

The CD-ROM program, on the topic of "Personal Hygiene," is the first of four programs planned on fundamental topics in food safety and sanitation.

Recent highly publicized foodborne-illness outbreaks have raised consumer and food industry concern about the safety of the food supply. Fast-paced lifestyles have increased consumer interest in the fresh and prepared ready-to-eat foods offered by many supermarkets. Because food protection practices build consumers' confidence in the safety of the foods they purchase, good personal hygiene is where consumer confidence begins.

The "Personal Hygiene" computer-based-training (CBT) program offers a high degree of interactivity combined with audio, video, text, animation and graphics to create and maintain interest and enhance the learning experience.

This CBT technology offers a self-paced learning environment consisting of training, reduced per-employee training costs and flexibility in terms of training time and location.

The program is presented in two sections. The first describes why personal hygiene is critical to food safety; the second describes how to practice good personal hygiene.

A testing module measures learner comprehension and can be used for pre-testing, post-testing or both.

The "Personal Hygiene" CBT also features a tracking option that records who has completed the program and their test scores.

For further information regarding the "Personal Hygiene" CBT program or to order copies of the program, call 255-3028 or fax 254-5122. The e-mail address is <distance-ed@cornell.edu>. The postal address is Distance Education Program, 247 Warren Hall, Cornell University, Ithaca, NY 14853.

Perinatal 'programming' is topic of symposium on campus Aug. 9-12

By Roger Segelken

New findings about the life-long consequences of sub-optimal development during and after pregnancy will be reported at an international symposium, "Frontiers in Maternal, Fetal and Neonatal Health: Programming for a Lifetime of Good Health," Aug. 9-12 at Cornell.

International medical researchers will present evidence that virtually all systems of the adult human – from the lungs, gastrointestinal tract and skeleton to the brain, kidneys, liver and the cardiovascular and immune systems – are "programmed," for better or worse, by early developmental factors that only parents and health care professionals can control.

"The likelihood of any of us getting coronary artery disease

at 50, for example, is programmed in our prenatal development," explained Peter W. Nathanielsz, M.D., the Cornell professor of reproductive physiology who organized the symposium. "Our tolerance for exercise at age 60 depends, more than we realized until recently, on development of our lungs 60 years-and-some-months before we climb on that treadmill. And it is too easy to blame brain damage on hypoxia (oxygen deficiency) during labor, when sub-optimal development may be the real cause," said Nathanielsz, the director of the Laboratory for Pregnancy and Newborn Research at Cornell's College of Veterinary Medicine.

Data from epidemiological databases, clinical investigations and experimental animal studies are beginning to demonstrate the critical effects of early development on

long-term health, said Nathanielsz, who will present his own laboratory's findings on the influences of the maternal environment and uterine activity on fetal hormones, fetal brain development and blood supply. "These are issues with enormous public-health implications, not only in the care of premature babies with some impairments, but in the well-being of all of us throughout our adult lives," he said.

David J.P. Barker, M.D., author of *Mothers, Babies and Disease in Later Life*, will open the symposium at 8:30 a.m. Aug. 9. Other topics include nutrition in pregnancy, the placenta, the cardiovascular system, GI tract, the brain, renal function, toxicology and the environment, hormones, lactation and the immune system. A discussion summarizing the presentations is scheduled for 11:15 a.m. Aug. 12.

Bland named director of ORIE school

By Larry Bernard

Robert G. Bland takes eight cards from a deck, ace through 8, and makes a perfect shuffle – taking the bottom four cards and interweaving them with the other four.

By doing so three times, the cards return to their original order.

"Students are always surprised at this. It

provides a good example to introduce the notion of a 'directed graph,' something of considerable interest in many of the mathematical sciences. The directed graph model of shuffling reveals almost instantly why three perfect



Bland

shuffles return the eight card deck to its original configuration," said Bland, Cornell professor of operations research and industrial engineering.

No magician, the Cornell engineering professor uses the device to help teach undergraduate students principles of mathematical modeling. "If you rotate a cube along a main diagonal," he says, holding a child's interlocking cube puzzle, "you get the same result. It's back to its original position in three turns."

The principle is the same one used in certain parallel architectures of microprocessors, he said.

Bland, who has been teaching at Cornell since 1978, took over as director of the School of Operations Research and Industrial Engineering (ORIE) on July 1 for a five-year term, replacing John Muckstadt, who stepped down after eight years as the school's director in Cornell's College of Engineering. Bland has a rich Cornell tradition, having earned an undergraduate degree in industrial engineering (1969) and an M.S. (1972) and a doctorate (1974), both in operations research.

He was a National Science Foundation Graduate Fellow from 1969 to 1972 and a Visiting Research Fellow at the Center for Operations Research and Econometrics in Belgium from 1975 to 1977. He was a Sloan Research Fellow from 1978 to 1982.

At Cornell, Bland was assistant professor in ORIE from 1978 to 1981 and associate professor with tenure until he became full professor in 1988. He served as the school's acting director in the spring of 1994 and associate director for Graduate Studies from 1988 to 1991. He is a member of the Society for Industrial and Applied Mathematics, The Mathematical Programming Society and the Institute for Operations Research and Management Science.

ORIE, which evolved from more traditional industrial engineering, is concerned with how to design and operate systems efficiently, allocating scarce, and therefore expensive, resources. Areas of study include probability and statistics, simulation, manufacturing systems engineering and mathematical programming.

ORIE has 18 faculty members, 75 to 100 B.S. graduates each year, 70 masters students and 35 doctoral students.

Into the swing of things



Charles Harrington/University Photography
Kent Salsbury '67 ALS is perched on a 40-foot tree and preparing to leap to a swinging bar during his Cornell Adult University High Ropes Course at the Cayuga Nature Center on July 18.

Research projects bring undergrads to Theory Center

By Faith Short

Fifteen undergraduates from colleges and universities across the country are on campus for a summer of research at the Cornell Theory Center (CTC).

The Supercomputing Program for Undergraduate Research (SPUR), in its seventh year, is offering students the opportunity to pursue a computational science research project at Cornell.

SPUR is funded by the National Science Foundation through its Research Experience for Undergraduates program.

Through a competitive process, these students were selected to work on a specific research project under the guidance of a Cornell faculty or staff member. CTC staff members are teaching the students how to use the center's high-performance computing resources, and they are providing consulting assistance throughout the program.

"We're excited about working with these impressive students," said Robert Feldman, SPUR coordinator. "In only nine weeks, they'll learn about high-performance computing, including visualization and parallel processing; make significant progress on their research projects; and give formal presentations on their work. And, if our past programs are an indicator, they'll discover that it can be fun, too."

A number of previous SPUR participants have continued their research beyond the summer at CTC, and some have presented their results at professional meetings and submitted their findings to scholarly journals. This year's topics in physics include solar magnetoconvection, characterization of spatiotemporal chaos and electrostatic properties of proteins.

For more information about SPUR, visit <http://www.tc.cornell.edu/Edu/SPUR/> on the World Wide Web.

Writer talks about her hardest subject: Her father

By Ailie Silbert '96

As a child, Patricia Bosworth wanted to marry her "daddy." Later, she decided she would be just like him. But by the time the author and magazine editor sat down to write Bartley Crum's biography, she merely wanted to understand her father's lifelong career and passion as a civil liberties lawyer and his complex life that ended in suicide.

In her July 17 lecture titled "Looking for My Father: A Daughter's Reflections on Writing about Bartley Crum," Bosworth told a David L. Call Alumni Auditorium audience about the experience of examining her own father's life. Her talk was part of a Wednesday-night series sponsored by Summer Sessions with the theme of fathers.

Bosworth, who taught classes on memoir and biography at Barnard, already has written two best-selling books about "romantic, self-destructive people" – actor Montgomery Clift and photographer Diane Arbus.

She said her experience in writing about these two idealists, who like her father had "chinks in their armor," was nothing compared with the struggle of writing about her own flesh and blood.

After 10 years of research into her father's life, and into her own emotional soul, Bosworth completed the biography of Bartley Crum two weeks prior to her Cornell lecture.

"I thought he was a crusader, and he thought he was a crusader," said Bosworth. But no matter how much she wanted to make her father a hero, she said, she had to come to grips with the fact that "he was not a saint, but a human being," noting that his thirst for fame and money was as strong as his idealism.

Crum had an extraordinary legal and political career, working for such people as President Harry Truman and Wendell Willkie. But despite the fact that he was more committed to the "world" than his family, he was a loving father and hus-

band, Bosworth said.

She said her father, a heavy drinker, had trouble sharing his emotions. He tried twice before to kill himself by overdosing on pills; and in the aftermath of these alarming attempts, he excused them as simple cases of confusing his medicines, she said.

When he did finally succeed in killing himself, he was driven to it in part because of continued FBI harassment, she said.

The harassment, which included bugging his telephones, began, Bosworth said, after World War II when Crum argued, against the desire of the U.S. State Department, that the 100,000 Jews in displaced person's camps in Europe be allowed to emigrate to Palestine.

The harassment became strongest, and resulted in blacklisting, when Crum spoke out against Sen. Joseph McCarthy and defended the "Hollywood Ten" before the House Un-American Affairs Committee.

"Not only was he a crusader against the blacklist, but also a victim," Bosworth said.

Exploring the life and legacy of America's premier 'cultural democrat'

By Jill Goetz

As *The New York Times* celebrates its 100th anniversary, displaying its famous pages at several Manhattan libraries and museums, it is worth remembering that if not for one man, those pages might never have included reviews of the Beatles.



Kammen

Gilbert Seldes – critic, editor, novelist, playwright, screenwriter – was the first American intellectual to lend legitimacy to popular culture; yet too few Americans recognize his name or appreciate his influence, according to Michael Kammen, a Pulitzer Prize-winning historian at Cornell. To set the record straight, Kammen has written the first Seldes biography, *The Lively Arts: Gilbert Seldes and the Transformation of Cultural Criticism in the United States* (Oxford University Press, 1996).

"If you told someone in 1920 that a day would come that *The New York Times* would have a regular film critic or would publish reviews of rock 'n' roll performances by groups like Van Halen or the Grateful Dead, people would have looked at you with disbelief," said Kammen, the Newton C. Farr Professor of American History and Culture and a member of the Cornell faculty since 1965.

Kammen said the idea to write this latest book came to him while researching his last one.

"Throughout the 1980s, I worked on a long book, *Mystic Chords of Memory*, about aspects of American culture between 1880 and 1980," said Kammen, president of the Organization of American Historians. "During that time I became increasingly interested in the changing relationship between high culture and popular culture. Whenever I encountered material pertinent to that complex and important relationship, I ran across references to Gilbert Seldes. I began to follow Seldes' writings closely and discovered that his 1924 book, *The Seven Lively Arts*, was the very first to insist that popular culture deserved serious attention from cultural critics."

Kammen discovered much more. "I also found that nothing of a biographical nature had ever been written about Seldes or about his immense influence as a critic. I found, in addition, that all of his papers – including journals and an unfinished autobiography – were in the possession

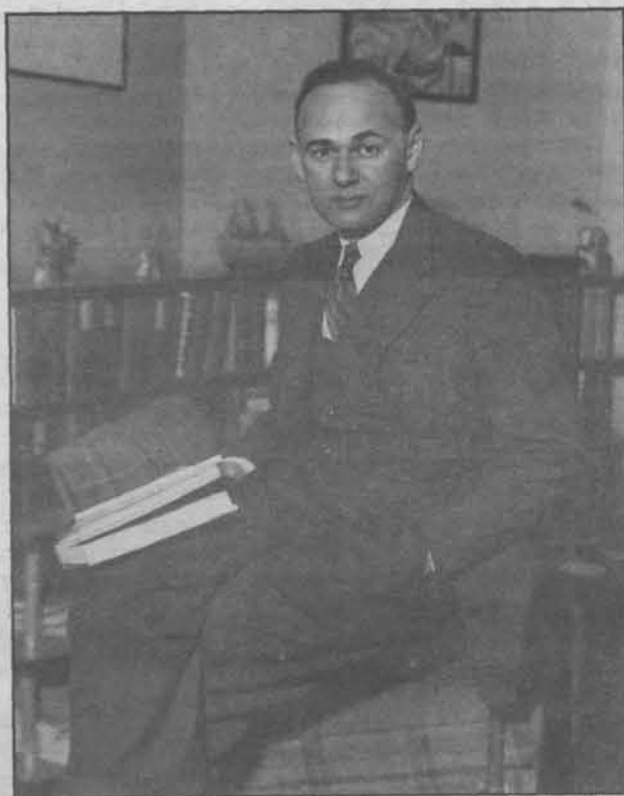


Photo courtesy of Marian Seldes

Critic, editor, novelist, playwright and screenwriter Gilbert Seldes in 1934.

of his children, who were quite willing to make this material available to me.

"The situation fulfilled a historian's fantasy: a treasure trove of unknown materials concerning a neglected yet significant person."

In the lead review of *The New York Times Book Review* on May 5, Arthur Schlesinger Jr., who was a close friend and confidante of the late Seldes, describes *The Lively Arts* as "a rich and stimulating work and a long overdue account of the intelligent and energetic man who almost single-handedly changed American attitudes toward the popular arts."

Gilbert Seldes began his career as an unabashed member of the cultural elite, Kammen writes. Educated at Harvard, he became the New York correspondent for T.S. Eliot's *Criterion* in London and wrote one of the first American

reviews of James Joyce's *Ulysses* for *The Nation*. When not socializing with the Fitzgeralds, Picassos, Joyces and Stravinskys, Seldes worked as managing editor of *The Dial*, the most influential literary magazine of its time.

But in *The Seven Lively Arts*, he presented a then-radical thesis: that vaudeville, musical revues, movies, jazz and comics should be taken as seriously as the ballet or the opera. Seldes became the nation's most ardent "cultural democrat," championing Charlie Chaplin, Al Jolson, Irving Berlin, George Gershwin, the Ziegfeld Follies and George Herriman's comic strip "Krazy Kat" in columns for emerging "middlebrow" publications like *The Saturday Evening Post*, *The New Yorker*, *Vanity Fair* and *Esquire*.

Seldes was more than an observer of the cultural scene, however. In the 1930s he adapted Aristophanes' *Lysistrata* and Shakespeare's *A Midsummer Night's Dream* for the stage (the first was successful, the second a flop). Later he made films, wrote radio scripts and became the first director of television for CBS News and the founding dean of the Annenberg School of Communications at the University of Pennsylvania.

Throughout his book, Kammen relates Seldes' personal development to the dramatic technological developments that were occurring around him. In his lifetime, 1893-1970, Seldes witnessed the transition from silent film to talkies and the emergence of the phonograph, radio, television and computer. He himself wrote in 1966, "In my own lifetime I have witnessed more changes in the modes of communication than occurred in all recorded history before."

In the 1950s and '60s, Seldes grew increasingly wary about the negative effects of mass media on the quality of the arts. He drew a sharp distinction between the flourishing of popular arts in the 1920s and the forcing of popular arts on the public *en masse* in the 1950s. In 1957 he warned that "with the shift of entertainment into the area of big business, we are being engulfed into a mass-produced mediocrity."

"The issues that Seldes raised and wrestled with for more than four decades are very much with us today," Kammen said. "Do popular and mass culture inevitably mean mediocrity – a degradation of taste? Should critics use very different standards in evaluating popular and mass culture? Does a democratic society unavoidably 'level down,' in terms of taste levels, or is it also possible to level up?"

"I would not claim that Seldes was infinitely wiser or more prescient than his contemporary critics," Kammen said. "But he was the first to frame these issues."

New book examines the roles of men and women in colonial America

By Jill Goetz

Some of the hottest debates raging in America today hinge on the extent to which governments can, or should, regulate human relationships. Should states hold parents accountable for their children's crimes? Restrict no-fault divorces? Prohibit same-sex marriages?



Norton

Addressing such questions, commentators often lament the loss of propriety that prevailed early in this century, when more families were intact, more morals adhered to. But rarely do they frame today's social ills in the context of centuries past.

That may change, thanks to a new book from a Cornell historian. In *Founding Mothers & Fathers: Gendered Power and the Forming of American Society* (Knopf, 1996), Mary Beth Norton, the Mary Donlon Alger Professor of American History, has documented gender roles and state-family relationships during the first half of the 17th century. An engrossing mix of political philosophy and social history, the book was published this spring and has been named a summer selection by the Book-of-the-Month Club and the History Book Club.

A reviewer in *The New York Times* writes, "To follow [Norton's] lead is to travel at high speed – and ground level – through a broad, colorful and richly variegated historical landscape. It makes, all in all, for an unusually engrossing ride."

For more than a decade, Norton analyzed transcripts from almost 10,000 civil and criminal cases from the courts of colonial New England and the Chesapeake (Virginia and Maryland) between 1620 and 1670. The transcripts introduced Norton to a colorful cast of characters whose unseemly actions landed them in court. She, in turn, introduces them to readers with lively, often humorous anecdotes as she explores the links among 17th-

'To follow [Norton's] lead is to travel at high speed – and ground level – through a broad, colorful and richly variegated historical landscape. It makes, all in all, for an unusually engrossing ride.'

– *New York Times* book review

century families, communities and politics.

The dominant view of the colonists, writes Norton, was that the family and state were inherently similar; government was modeled after the family. A stable society required stable families, and familial disruptions threatened social order. Therefore, family life was of paramount concern to colonial leaders; there was no discussion, as today, of a separation of private and public. "The family was the real – not just metaphorical – foundation of the state," Norton writes.

That foundation was inherently authoritarian and patriarchal, inspired by the writings of English political theorist Robert Filmer, who viewed the family as a "little monarchy."

"The English immigrants believed that heads of households [men] were crucial links in the chain of hierarchical authority that governed their society," Norton writes. "Because of the absence of other well-established, accepted hierarchical relationships in the colonies, those links became even more important in North America than they had been in the mother country."

But, as the book's title suggests, colonial women were not powerless; the "founding mothers" played an important, if seldom acknowledged, role in family and community life. Women who wielded power in their own homes, as mothers or as supervisors of servants, for example, were more likely to hold sway in the community in such positions as midwives.

Encountering in her research many more strong women in New England than in the Chesapeake, Norton surmised that demographics played a major role in the divergent status of women living in the regions. Very few women lived in the Chesapeake during the period; the area was populated almost solely by men, brought in to work the tobacco fields, she writes, and Chesapeake households were more likely to be populated by groups of men than by married couples. As a result, Norton believes, women had little presence or power within or without the home, and Chesapeake communities tended to be modeled on contractual relationships among groups of men rather than the traditional family unit.

Founding Mothers & Fathers fills a void in the existing literature, Norton said. "Most people have looked solely at either New England or the Chesapeake. This is one of the few books that compares life in the two regions."

In the final days of the 20th century, when conventional notions of the American family have been turned upside down, *Founding Mothers & Fathers* offers a glimpse of some of the first Americans to challenge these notions.

"If anyone had held a 'most dysfunctional family' contest in 17th century New England, the clan headed by Nicholas Pinion, an iron worker, would have won easily," Norton writes. Pinion family members were prosecuted 26 times over two generations, for offenses ranging from profanity to gossip, theft, absence from church and infanticide. Especially egregious, in the colonists' eyes, was Pinion's inability to control his wife.

"That was shown . . . by her physical and verbal attacks on Nicholas," Norton writes, "actions indicating the absence of appropriate wifely deference."

One of Pinion's daughters was charged because she tried to leave her husband. When he ordered her to return home, according to court transcripts, she, "contrary

to the duty of a wife," refused to do so, thus "casting contempt upon Authority whose had enjoined her return to him."

With intriguing parallels to contemporary discussions of sexual identity, Norton describes the case of Thomasine Hall, who as a young adult in London cut her hair and joined the army. In 1627, Hall traveled to Virginia as "Thomas"; the colonists quickly grew curious about their new neighbor, who had a penchant for switching gender identities. They would examine Hall while he slept, undress him on the street and issue court-ordered examinations.

"Those searchers being againe assembled," read the court transcripts, ". . . were againe desirous to search the said Hall, and having searched him . . . did then likewise find him to bee a man."

Ultimately, Virginia's highest court deemed Hall to be both a man and a woman, and ordered him to wear male clothing and a female apron and hat to advertise his/her dual-sexed identity.

Few American scholars are more equipped than Norton, a member of Cornell's faculty since 1971, to make sense of these complex legal cases, made even more inaccessible by their period spelling and punctuation and their reliance on a calendar that is now obsolete. Norton, a former student of political theory and intellectual history at the University of Michigan and of colonial social history at Harvard, is one of the nation's leading scholars of American women's history.

Her books include *Liberty's Daughters: The Revolutionary Experience of American Women, 1750-1800*; *Major Problems in American Women's History* and the American history textbook *A People and a Nation*, now in its fourth edition.

Looking to the colonists' experience is instructive, Norton believes, because it "raises a lot of questions about what happens when the state gets seriously involved in the internal affairs of families. It gives us a model from the past to contemplate in the political climate of the 1990s."

Edmondson elected president of the Caribbean Studies Association

By Jill Goetz

Locksley Edmondson, Cornell professor of political science and the recent director of the university's Africana Studies and Research Center, has been elected president of the Caribbean Studies Association, the world's leading scholarly organization on the Caribbean. He began his one-year term as president July 1.

The Puerto Rico-based organization, with more than 1,000 members, was established in 1975 to bring together scholars from the Caribbean nations and Caribbean specialists from other nations. Since its founding, one of the association's major functions has been organizing an annual conference in the region. In May 1997, that conference will be held in Colombia for the first time.

"Colombia is reaching out for a closer Caribbean identity," Edmondson said. "They already have a rich Caribbean



Edmondson

coastal culture, but they also want to expand Caribbean political and economic contacts."

Edmondson, who previously served as the association's vice president and on its executive council, said his priorities will include strengthening ties among the islands of the Caribbean and the nations of Central and South America; among the Haitian scholarly community and the broader Caribbean scholarly community; and among the scholarly organizations in the communities of the Caribbean Diaspora in North America, Europe and elsewhere.

Edmondson, who was raised in Jamaica, has taught at such distant campuses as the University of Waterloo in Canada,

Makerere University in Uganda and the University of the West Indies in Jamaica, where he was dean of social sciences from 1976 to 1980. He taught in Cornell's Department of Government from 1970 to 1973 and returned to the university in 1983 to serve in its Africana Studies and Research Center, one of the premier programs of its kind in the nation. He was the center's director from 1991 to 1996; on July 1 the center's first director, James E. Turner, returned to the post.

A specialist in politics and international relations concerning Africa and the Caribbean, Edmondson has served as president of the African Studies Association of the West Indies, on the bureau of the International Congress of African Studies and on the boards of the African Heritage Studies Association and the Trans-Africa Forum. He earned his undergraduate degree at the University of Birmingham in England and his master's and doctoral degrees at Queen's University in Kingston, Ontario.

CU research is the topic of a CNN report

Why is spider silk stronger than steel? Why are scientists looking to this super-fiber as a source of bio-inspiration for new high-performance materials? How will polymers based on spider silk change the way we build bridges, make seat belts and construct flak jackets?

Cornell scientists answer these questions and showcase their spider research in a special report on CNN's "Science and Technology Week," scheduled for broadcast this Saturday, July 27, at 11 a.m. and Sunday at 4 p.m.

The report on the biophysics of spider silk was taped during a June visit to Cornell by CNN's Atlanta-based science unit. Cornell biophysicist Lynn Jelinski, working with materials scientist David Grubb and a team of postdoctoral, graduate and undergraduate researchers, has made new discoveries about the molecular structure of spider silk. Their research, sponsored by the National Science Foundation, brings scientists a step closer to producing super-tough bio-inspired fibers.

Cornell researchers examine dragline silk — the thread that the spiders use to support themselves while hanging from the ceiling — and focus on a species that produces a metal-like form of silk, the golden orb-weaver spider. Using sophisticated physical tools that include magnetic resonance imaging (MRI) and synchrotron diffraction, the scientists developed a new model that explains the strength and toughness of spider fibers. This information will be useful in designing genetically engineered bacteria or plants that produce silk fibers.

Describing the 'Big Picture'



Robert Barker/University Photography

Alice Cook, professor emerita in the School of Industrial and Labor Relations and the university's first ombudsman (1969-71), joins a panel of speakers in the Founders Room of Anabel Taylor Hall July 12 to help new and veteran staff members put Cornell's past and present in context. Panelists for "Cornell: The Big Picture," including Cook, were: Peggy Haine, seated, at Cook's left, associate director of Communication Strategies; Gould Colman, university archivist (1972-95); George Peter, former employee-elected trustee and retired Cornell employee; and Tom Scott, professor emeritus of soil, crop and atmospheric sciences and university ombudsman from 1991 to 1994.

Study looks at methods and success of foreign investment in China

By Susan Lang

Although Hong Kong and Taiwan represent some 80 percent of the foreign investment in China and share a common language and culture with the mainland, American and Japanese foreign investments are much more profitable, according to a Cornell study.

And companies that manufacture in China and then sell to Chinese consumers rather than heavily export are the most profitable, says Peter Chi, Cornell professor of consumer economics and housing, who leads the study.

Chi, with Yigang Pan, associate professor of marketing at the Lundquist College of Business, University of Oregon in Eugene, and Chang Kao, research fellow at the First Institute of Chung-Hua Institution for Economic Research in Taiwan, have collected information on the 22,744 foreign manufacturing companies from 40 countries that were registered in China in 1991. After identifying a representative sample of 1,066 of those companies, the researchers have



Chi

and will continue to interview senior executives from the companies every year for five years, beginning in 1993; the researchers also have analyzed questionnaires from the executives.

The findings from the first phase of the research have been published in the *China Economic Review*, in the monograph, "The East, the West, and China's Growth: Challenge and Response," in a forthcoming issue of the *Journal of International Business Studies* and have been presented at the annual meeting of the Academy of International Business.

"Since China opened its doors to outside investment in 1978, direct foreign investments have expanded dramatically in recent years, up to some \$4.37 billion in 1991. We're seeking to determine who invests in China, how well they do and why, and in the near future, to assess how these foreign investments impact the Chinese economy and the well-being of the Chinese people," explained Chi, who teaches in Cornell's College of Human Ecology.

Other findings so far:

- Companies that focus on developing Chinese markets do substantially better than companies that primarily export Chinese-

produced products.

- By 1993, more than half of the American, Japanese and Hong Kong businesses in China had made a profit compared with only about one-third of the Taiwanese companies.

- Some 22 percent of the Japanese and 18 percent of the American companies had profits of more than 15 percent of revenues, compared with almost 8 percent and less than 2 percent of the Hong Kong and Taiwanese companies, respectively.

- Hong Kong (Macao), Taiwan and other Asian countries and the United States have a competitive advantage in receiving investment permits much faster than Japan and European union countries. However, once the initial stage is past, all the enterprises have to face the same competition in the rest of the manufacturing process. Further, the research indicates that the advantages of receiving permits in a shorter duration may not necessarily speed up the process of starting production, but speedy start of production will significantly shorten the duration needed to earn a profit.

- Compared with foreign enterprises established between 1984 and 1989, those established prior to 1984 tend to use more time to receive permits and to start produc-

tion, whereas those established after 1989 tend to use less time to do so.

- Nevertheless, companies that established a hold in China before 1984 tend to be more profitable than firms that established a Chinese connection in the later 1980s. This finding not only suggests the value of experience but also may be a reflection of the earlier favorable treatment foreign enterprises received in the early 1980s.

- Between 1993 and 1994, about 15 percent of sampled companies failed.

Chi suspects that American and Japanese companies have generally done better because they tend to have more experience in cross-national operations and because political tensions between China and Taiwan could undermine their business relationships.

Chi says that studies like his might not only help potential foreign investors decide whether to do business in China, but could help boost the Chinese economy. Doing so, he hopes, could be a key to resolving the human rights problems in China.

"If you improve the economic status of the people, human rights will follow," he said.

Next, Chi and his collaborators will further look at the impact of foreign investments on the economy and Chinese consumers.

Journal profile of Cornell can be seen online

@cornell.edu

Cornell is profiled in the Summer 1996 issue of *Cause/Effect*, the quarterly journal of Cause, a national association devoted to the management of information resources—technology, services and information—in colleges and universities. You can access the profile directly at <http://cause-www.colorado.edu/information-resources/ir-library/html/cem9627.html>. To view the entire on-line version of the *Cause/Effect* journal, including the cover photo of Cornell, go to <http://cause-www.colorado.edu/cause-effect/cem96/cem962.html>.

New Web sites

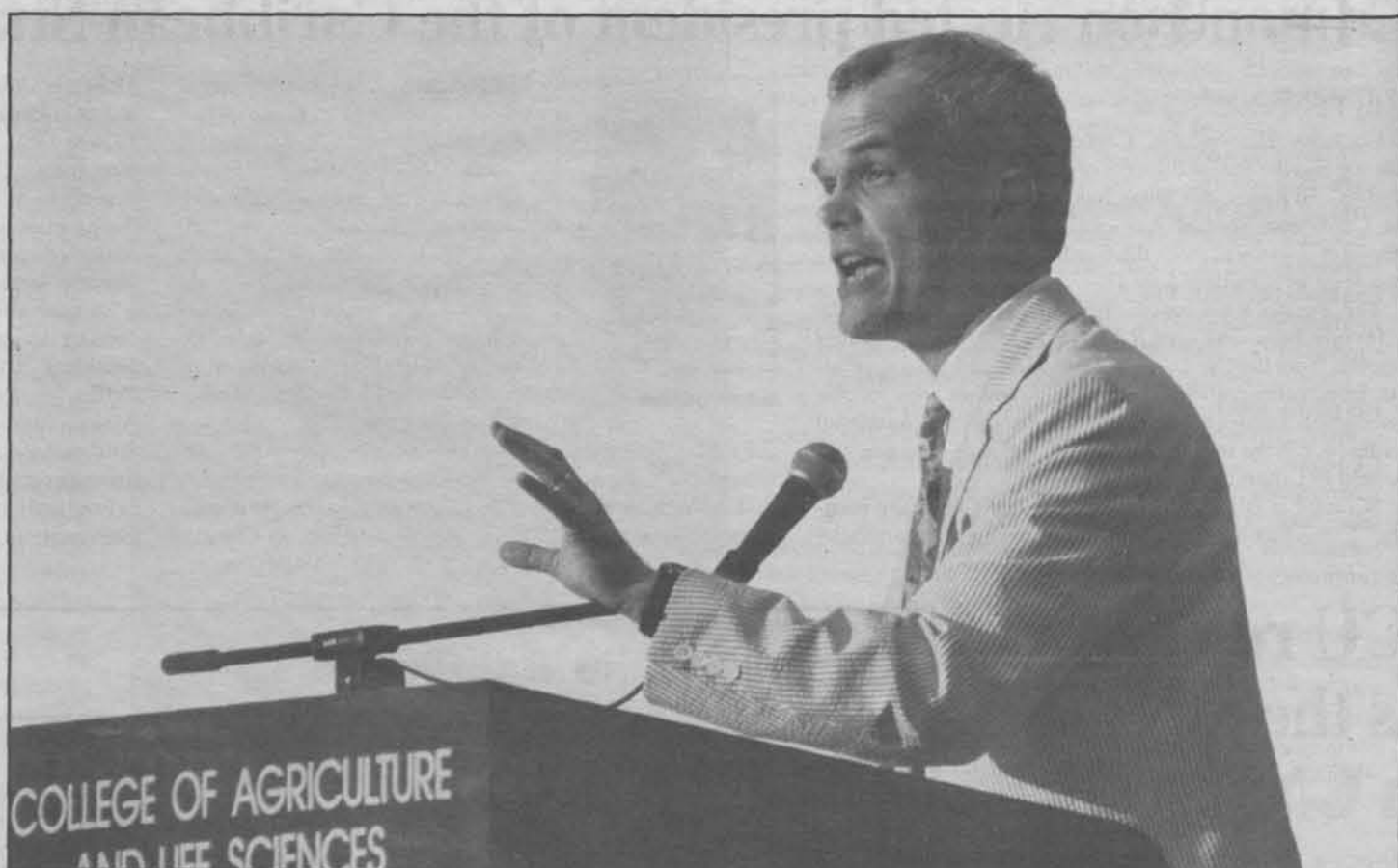
• **Project 2000 Homepage:** If you would like to learn more about Project 2000, a Web site now is available to introduce the project, answer questions, encourage involvement and provide additional sources of information. The site is accessible from the CUINFO home page <http://www.cornell.edu> or can be accessed directly at <http://www.cornell.edu/p2k/p2k.html>.

• **"How to Get New Newsgroups" Web page:** This Web page provides instructions on how to update the list of news groups (an electronic forum dedicated to a specific topic of discussion) recognized by the news programs (Win VN and News Xpress for Windows and NewsWatcher for Macintosh) available through Bear Access, and how to subscribe to a newsgroup once it appears within their lists.

You can reach this Web page from CIT Publications' Network News section <http://www.cit.cornell.edu/cit-pubs/netnews/> or you can reach it directly at <http://www.cit.cornell.edu/cit-pubs/netnews/new-newsgroups.html>.

• **"How to Protect Mailing Lists from Abuse" Web page:** This guide offers advice to electronic mailing list owners about protecting Cornell mailing lists from various forms of abuse. It covers the three most common types of abuse and gives suggestions for dealing with each. You can reach this Web page at <http://www.cit.cornell.edu/cit-pubs/email/protecting-lists.html>.

This column is compiled and edited by Daisy Dailey of CIT. Send questions or comments to citnews@cornell.edu.



Robert Barker/University Photography

Author and editor Richard Brookhiser lectures to a David L. Call Alumni Auditorium audience July 10.

Lecturer seeks to secure George Washington's pedestal

By Ailie Silbert '96

Founding father George Washington was indeed "first in war, first in peace and first in the hearts of his countrymen," conservative essayist and political speech writer Richard Brookhiser told a David L. Call Alumni Auditorium audience July 10.

Yet, citizens have lost a sense of why Washington, the only man unanimously and unhesitatingly elected president, is important to us today, Brookhiser said. Currently senior editor of *National Review* and a frequent political commentator, Brookhiser recently wrote the book *Founding Father, Rediscovering George Washington*.

Brookhiser was the second lecturer in a summer series on the changing perceptions of fathers, sponsored by the School of Continuing Education and Summer Sessions.

"It is almost an unbroken success story," said Brookhiser as he began the night's discussion on Washington's career.

The only "retreats" Washington ever made were with his troops during the Revolutionary War, but even during those grim retreats, his courage and posture gave men the faith to continue, Brookhiser said.

To illustrate this point, Brookhiser re-

'He is not a figure of fantasy.'

— Richard Brookhiser

lated an account written by a soldier who had been pressed against Washington's unflinching steed as he moved with a crowd of soldiers after an unsuccessful skirmish.

"The horse seemed to understand not to quit his post," the soldier wrote in his memoirs; horse and rider portrayed the behavior Washington expected of all his soldiers, Brookhiser said.

With the same awareness that led his men to victory, Washington realized that his presidential actions would create a standard of behavior and etiquette for his successors, Brookhiser said: "He commanded the army, and he obeyed Congress."

In return for his obedience to Congress, the president demanded that his countrymen obey the decisions made by their chosen representatives. Even if certain laws were disagreeable, they were to be followed until they were changed

through the proper congressional channels, Brookhiser said.

Thus, uprisings, such as the Whiskey Rebellion of 1794, were met by Washington with the discipline of a general and the wrath of a man Brookhiser said was known for his curbed, but explosive, temper.

Yet Washington never acted impetuously, according to Brookhiser; he was slow and deliberate with his decisions, taking time to consult with a cabinet filled by great intellectuals such as Alexander Hamilton.

But once Washington made a decision, he was inflexible, he said, relating an observation of Thomas Jefferson's.

"He is not a figure of fantasy," Brookhiser argued.

Unlike Abraham Lincoln or Martin Luther King Jr., he said, Washington had enough time to fight for his goals and to see his job completed; and he was able to choose when it was time for him to leave the presidency.

"The future of this country, because it is a republic, will be up to the citizens," Brookhiser said, relating the philosophy that helped Washington decide after his second term that America was ready to proceed without his guidance.

A filling history of Cornell's Hotel School is served up in a new book

By Darryl Geddes

Despite Ezra Cornell's decree that he would "found an institution where any person can find instruction in any study," instruction in hotel management at Cornell University almost didn't happen.

In the early 1900s, Cornell President Jacob Gould Schurman rejected the idea that Cornell should provide hotel management training as "absolutely out of the question."

But the perseverance of hotel owners and key Cornell faculty turned the tide, and in 1922 Cornell became the first school in the world to offer a bachelor's degree in hotel management.

The controversial start to the study of hotel management at Cornell and the growth of the major into a separate school are given careful review in the newly published *Hospitality Leadership: The Cornell Hotel School*. Written by Brad Edmonson, editor of *American Demographics*, and edited by John Marcham, former editor of *Cornell Alumni News*, this attractive 224-page book is a celebration of the history of one of the pre-eminent schools of its kind in the world today.

The book was published by the Cornell Society of Hotelmen for the Hotel School's 75th anniversary celebration, which gets under way next year.

Hospitality Leadership tells of the struggle a group of hotel owners encountered when they suggested the idea of training hotel managers to Cornell administrators in the early 1900s.

Cornell administrators, however, believed that such an education was purely vocational and had no part at a university. Besides, the university was not interested in funding the development of the new program.



After more haggling and further rebukes by Cornell, the American Hotel Association (AHA) agreed to fund and participate in the development of a hotel education program at the university within the College of Home Economics. Cornell began accepting applications from students for its new program in the spring of 1922.

Noteworthy in the Hotel School's history is the role of hotel industry giant E.M. Statler. Statler, who would later become the biggest benefactor of the program, first snubbed numerous attempts by Cornell to get him to support the program. His trepidation about the program led him to refuse to place Cornell students in summer jobs at his Hotel Pennsylvania, and when the AHA made its first payment to Cornell supporting the program, he threatened to leave the organization.

Not until 1927, when Statler attended the Hotel Ezra

Cornell weekend on campus, where students feted industry executives at a "hotel for a day," did he change his mind and offer his support to Cornell. The book links part of Statler's change of heart to an asparagus dish he tasted at a Cornell dinner hosted by hotel students. The hollandaise sauce originally planned for the asparagus soured, pressuring students into creating their own topping. The new experimental sauce so impressed the hotel impresario that he barged into the kitchen demanding to know the recipe. Coincidentally, the student who threw together the ingredients was the son of one of Statler's employees at his Hotel Pennsylvania.

The book traces the growth of the hotel program through Prohibition, the Depression and the war years, which saw the number of hotel students and graduates decline, as most men entered World War II. On the flip side, more women enrolled in the program, causing the annual "waiters' run" to be renamed the "waitresses' run." The event required students to race across campus carrying a bowl of water on a tray.

The war's end marked the beginning of the program's golden age. In 1949, E.M. Statler's widow, Alice, helped lay the cornerstone for the hotel program's separate home, Statler Hall, and within it a practice hotel, Statler Inn. A year later the Department of Hotel Administration became a separate school within the College of Home Economics, and in 1954 trustees gave it the status of a separate college.

Proceeds from the sale of the book will pay for scholarships and additional press runs.

A hard-bound cloth cover book sells for \$35, plus \$6 for domestic shipping and \$12 for international shipping. The book can be ordered through the Cornell University Resource Center at 255-7660.

'Cool climate' grape/wine symposium pulls a global bunch

By Linda McCandless

They uncorked 5,500 bottles of wines in the name of science last week. More than 700 grape growers, wine makers, researchers and technical consultants from around the world came to sniff, sip, spit and cluster at the 4th International Symposium on Cool Climate Viticulture and Enology July 16 to 20 in Rochester. The group participated in a full slate of technical presentations, seminars, workshops, wine tastings and regional wine tours.

Cornell's viticulturists, enologists and flavor chemists played prominent roles in organizing and hosting the symposium. At the Agricultural Experiment Station in Geneva, where much of Cornell's wine and grape research is conducted, vineyards were empty and wine labs dark until Monday, when many of the world's premier wine and grape experts toured the facility for the conference's final event.

The buzz word for growing grapes and making wines in cool climates is "terroir." "It represents everything from the environment to the human element that affects the development of flavor in wine," said Thomas Henick-Kling, associate professor of enology and extension at Geneva, one of the symposium's chief organizers. Comparing viticultural adaptations on a regional basis, developing unique flavors through vineyard and fermentation practices and introduc-

'I am meeting winemakers from all over the world.'

— Cameron Hosmer,
Finger Lakes winemaker

ing the latest genetic research on the development of grapevines specifically adapted to cooler climates were the primary concerns of many in attendance, he said.

"One can make great sparkling wines, Chardonnays, Reislings and Pinot in cool climates," said Henick-Kling. New York wines do very well in international wine competitions in those categories. Many of those in attendance had extensive experience with these grapes and wines and were extremely interested in sampling each other's wares.

"I am meeting winemakers from all over the world," said Cameron Hosmer, who has been making wines commercially in the Finger Lakes for 10 years. His comment, "Where else can I tap into this kind of expertise?" was echoed by many during the symposium who found much to discuss with their "cool climate" counterparts.

From a winemaking point of view, the world's "cool climates" can be roughly located between the 40th and 50th

parallels in the Northern Hemisphere and the 35th and 45th in the Southern Hemisphere. But Ian Cowell, of Tumbarumba, Australia, explained to a table of winemakers and researchers at a luncheon hosted by the Ontario winemakers on Wednesday that cool climate viticulture and enology had more to do with degree days, sunshine, water, temperatures, soil, cultivation practices, harvest times and the moderating influences of land and water masses than latitude. New York, Ontario, Oregon, Washington, Germany, Switzerland, Italy, South Africa, Chile, New Zealand and Australia were well represented at the conference.

At a press conference preceding the opening reception on Tuesday, July 16, Cornell's two newest grapes varieties were introduced by James Hunter, director of the Geneva Experiment Station, and grape breeder Bruce Reisch. Traminette and Marquis are cold-hardy and moderately disease-resistant. John Brahm, of Arbor Hill Grapery in Bristol Springs, N.Y., poured the first wine made exclusively from Traminette, a somewhat sweet wine in comparison to the drier Geneva Cellar made at the Experiment Station from the same variety.

Donald Ziraldo of the Ontario Vintners Quality Alliance and James Trezise of the New York Wine and Grape Foundation also introduced the first international wine route at the symposium, a 1,400-mile route between New York and Canada. Ontario has 24 wineries and New York has 115.

Vet College's leadership program attracts top students internationally

By Susan Lang

Some veterinary students around the world stand out as special, possibly destined for a leadership position in the veterinary or biomedical sciences. These students are not only at the top of their class but show other exceptional qualities that set them apart, such as being an Olympic-caliber athlete, a female Navy pilot who served in the Gulf War, a published author of numerous scientific papers, or a Ph.D. in molecular biology.

These are some of the students from this and last year's crop in the Leadership Program for Veterinary Students in the College of Veterinary Medicine at Cornell. After a highly competitive selection process, some two dozen veterinary students from around the globe come to Ithaca for the summer to be groomed as potential academic or research leaders in veterinary science.

"The program targets students who are the best of the best — they have superb academic records but also have achieved things in their lives that suggest they could be future veterinary medicine faculty members or leading research scientists in government or industry," said Douglas D. McGregor, M.D., associate dean for research and graduate education, professor of immunology, and director of the Leadership Program.

Amy Schein, 26, of Scarsdale, N.Y., is one of this year's 24 students. Although her fellow students came from the United Kingdom, Australia, New Zealand, Switzerland, Spain, the Netherlands and South Africa, Schein is one of the four Cornell veterinary medicine students in the program. She had a near-perfect (3.9) grade point average at Georgetown University where she was an English major and Japanese scholar and had spent a summer in the Israeli army in a basic training program. However, after spending a year in Australia touring wildlife conservation parks, visiting zoos and cleaning schools in an aborigine village where few whites ventured, and then working in the Bronx Zoo's histology laboratory, her future plans shifted toward veterinary medicine.

With only one science course in her undergraduate career, Schein attended and excelled in Columbia University's premed post-baccalaureate program for three years, catching up in the sciences and working as a teaching assistant.

"I really enjoyed teaching, though I don't know what field I want to go into yet," said Schein, who is entering her second year in the D.V.M. program. "In the meantime, though, there is so much new and interesting material I'm being exposed to. I'm keeping my mind open as I hear all the veterinarians who have gone into different fields telling us about the different options available."

Much of the new material Schein is exposed to comes from her research project. Each student is linked with a faculty mentor



Participants in the Leadership Program for Veterinary Students: Bottom row, from left: Amy Schein, Margaret Fleischli, Justine Swaney, Nyree Beeston, Michelle Dries, Jessica Geyer and Polly Peterson. Second row: Patricia Gearhart, Felicity Cole, Ilse van Vonderen, Allison Stewart, Sarina Hinsley, Suzanne McNabb, Jennifer Hess, Melissa Mazan (counselor), Tamara Gull and Linda Rhodes (counselor). Top row: Douglas McGregor (program director), Peter Eyre (counselor), Linda Griswold (graduate education coordinator), John Stein, James Flanders (counselor), Bernice Mangnall, Mark Doherty, Jonathan Goodwin, Ralph Senften-Rupp, Antonia Jameson, Constantin Von der Heyden, Alicia Uixera, Edwin van Duijnhoven and Allan Kaplan (program coordinator).

and active research project to give him or her the opportunity to apply investigative strategies and glean an insight into how a research laboratory uses its professional and material resources. Schein works with Bendicht Pauli, chair of the veterinary pathology department, studying adhesion molecules and cancer metastases.

The students also participate in a wide range of activities geared to developing leadership qualities — such as technical, communication and critical thinking skills — and to exploring ethical and professional issues. For example, they are trained in chemical and radiation safety; discuss biomedical ethics, the scientific method and leadership responsibilities; participate in a creativity workshop; and hear presentations on how to judge a good residency and research program and how to critically review scientific manuscripts.

They also participate in a career day during which research scientists talk about their careers. In addition, the students can speak privately with prominent veterinary leaders, such as deans and faculty members of other veterinary colleges, and industry and government research scientists.

In another component of the program, the students spent two full days in Washing-

ton, D.C., touring research facilities and meeting with senior scientists and administrators at the National Institutes of Health and the U.S. Department of Agriculture.

Constantin Von der Heyden, 21, came to the program from South Africa, where he played championship hockey, chaired numerous societies at his university, including the environmental awareness group and a snake club, and was one of seven students elected from a student body of 560 to serve on the student council.

"I'll probably do research or specialize — I want to do something that will really challenge me mentally. I can't see myself being a veterinarian, doing vaccinations and spaying by rote," said Von der Heyden, whose research project with Linda Nowak, associate professor of pharmacology, focuses on figuring out the molecular makeup of brain glutamate receptor channels. These receptor channels are found only in embryos and may play an important role in the developing embryo.

Felicity Cole, who came to the program from Sydney University in Australia, also has seen more of the world than most veterinary students. While in high school, she was chosen as one of the top 300 science students of Australia to be part of a national youth science

program. Later hired as a staff member of the program and then promoted to coordinator running the program, Cole toured Russia as a representative of the program.

"I've always loved animals and science, so it was a natural thing to combine the two in veterinary medicine. I love the challenge of medicine — it's like being a detective," said Cole, who works with Dr. David Robertshaw on respiratory physiology, specifically whether oxygen delivery to the tissues is inhibited by exercise-induced heat and alkalosis.

A final objective of the program is to allow students to participate in many interactive projects with one another. "The idea is get the students working together now so that in the future, when they are in leadership positions, they will form a professional network and continue to interact in solving problems on a global basis," concluded McGregor.

The program is supported by the National Institutes of Health, the U.S. Department of Agriculture, the Fundacion Purina, the Merck Foundation, the Richard King Mellon Foundation, the Wellcome Trust, the Robert W. Woodruff Foundation, the Dorothy Russell Havemeyer Foundation, the Florence Gould Foundation and the Marilyn M. Simpson Trust.

CALENDAR

July 25
through
August 8

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

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

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

dance

Cornell International Folkdancers

Open to the Cornell community and general public, all events are free unless noted otherwise. For information, call Edilia at 387-6547 or Marguerite at 539-7335 or send e-mail to David at <dhr1@cornell.edu>.

July 28: Israeli dances taught by Raven, 7 to 8 p.m.; request dancing, 8 to 9:45 p.m., North Room, Willard Straight Hall.

Aug. 4: Cha-cha and mambo taught by Marguerite Frongillo, 7 to 8 p.m.; request dancing, 8 to 9:45 p.m., North Room, Willard Straight Hall.

exhibits

Johnson Museum

The Herbert F. Johnson Museum of Art is open Tuesday through Sunday from 10 a.m. to 5 p.m. Admission is free. Telephone: 255-6464.

• "Prints of Darkness: Images of Death," through Aug. 4.

• "Methods and Media: 20th Century Sculpture From the Collection," through Aug. 11.

• "Class of 1951 Prints," through Aug. 11.

• "Three Cornell Artists," through Oct. 13.

• Brown Bag Lunch Tours: Thursday Noontime Gallery Talks: On July 25 join Mary Raddant Tomlan for a tour of "The Architecture of the Johnson Museum: Inside and Out." Bring your lunch; beverages will be provided.

• Sunday Afternoon Artbreaks: On Sunday, July 28, from 2 to 3 p.m., senior docent Barbara Hopkins will explore artistic and thematic elements of European and American paintings in a tour, "Splendidly Sensuous: A Tour of Two Galleries."

Summer Sessions

"Raw Art: Work by Summer College Students," featuring a wide range of media including photography, painting, drawing and water color, will open Tuesday, July 30, from 7 to 8 p.m. The exhibit will be on view in Hartell Gallery of Sibley Dome through Aug. 1.

films

Films listed are sponsored by Cornell Cinema unless otherwise noted and are open to the public.



Charles Harrington/University Photography

Members of the Apollo Ensemble perform in the Proscenium Theatre of the Center for Theatre Arts on July 11. The next concert sponsored by Summer Sessions in the Proscenium Theatre will be the Ithaca Opera Chorus Ensemble on July 30.

All films are \$4.50 (\$4 for students and children under 12). Films are held in Willard Straight Theatre except where noted.

Thursday, 7/25

"Sense and Sensibility" (1995), directed by Ang Lee, with Emma Thompson, Kate Winslet and Hugh Grant, 7 p.m.

"Rumble in the Bronx" (1995), directed by Jackie Chan, with Jackie Chan and Anita Mui, 9:45 p.m.

Friday, 7/26

"Sense and Sensibility," 7 p.m.

"Land and Freedom" (1995), directed by Ken Loach, with Ian Hart and Rosana Pastor, 9:45 p.m.

Saturday, 7/27

"Sense and Sensibility," 7:15 p.m.

"Rumble in the Bronx," 10 p.m.

Sunday, 7/28

"Rumble in the Bronx," 7:30 p.m.

Monday, 7/29

"Summertime" (1955), directed by David Lean, with Katharine Hepburn, 7:15 p.m.

"Sense and Sensibility," 9:30 p.m.

Tuesday, 7/30

"Dead Man Walking" (1995), directed by Tim Robbins, with Susan Sarandon and Sean Penn, 7:15 p.m.

"Rumble in the Bronx," 9:45 p.m.

Wednesday, 7/31

"Donkey Skin" (1975), directed by Jacques Demy, with Catherine Deneuve, 7 p.m.

"Dead Man Walking," 9 p.m.

Thursday, 8/1

"Dead Man Walking," 7:15 p.m.

"Rumble in the Bronx," 9:45 p.m.

Friday, 8/2

"North by Northwest" (1959), directed by Alfred Hitchcock, with Cary Grant and Eva Marie Saint, 7 p.m.

"Dead Man Walking," 9:45 p.m.

Saturday, 8/3

"Dead Man Walking," 7:15 p.m.

"North by Northwest," 9:45 p.m.

graduate bulletin

• **July 26 closing:** The Graduate School offices in Caldwell Hall will be closed Friday, July 26, at noon for a staff retreat.

• **Student notification:** Those students who were notified to submit, by July 26, a Committee Selection and Change form and/or a final undergraduate transcript must submit these by noon, July 26, or on Monday, July 29. Students not submitting on or before July 29 will have a "hold" on their fall 1996 registration.

• **August degrees:** Aug. 23 is the deadline for completing all requirements for an August degree, including submitting the thesis/dissertation to the Graduate School.

• **Fall 1996 registration:** Registration is in the Field House, Monday, Aug. 26, 9 a.m. to 1 p.m. for new students and 1 to 5 p.m. for continuing students with "holds." All new students and continuing students with "holds" must register in person. Continuing students with no "holds" do not need to go to the Field House. Students should check "Just the Facts" after Aug. 19 to

determine if they have a "hold."

• **Fulbright grants for study abroad:** Applications are available at the Graduate Admissions Office, B-30 Caldwell Hall, for fellowships for the 1997-98 academic year. Applicants must be U.S. citizens; completed applications are due mid-September.

• **Formatting theses and dissertations:** Templates for creating the thesis/dissertation are available for Microsoft Word 6. Text can be typed directly into the template. A self-taught course on "Writing a Dissertation with Microsoft Word 5 or 6" also is available. Contact Technology Training Services, (e-mail cit_training@cornell.edu) or (phone 255-8000). These tools will soon be available on the World Wide Web at <http://training.cit.cornell.edu/>.

lectures

Summer Session

"Father Figuring: The Essential Equation," Sandra Smokes, nationally syndicated columnist, July 31, 7:45 p.m., David L. Call Alumni Auditorium, Kennedy Hall.

music

Summer Session

All Summer Session events are free and open to the public.

• July 26, 7:30 p.m., Arts Quad: Squonk Opera will perform a musical blend of classical, jazz, funk and Indian influences with dance, humor, giant puppets and innovative props. Rain location: David L. Call Alumni Auditorium, Kennedy Hall.

• July 30, 7:30 p.m., Proscenium Theatre, Center for Theatre Arts: The Ithaca Opera Chorus Ensemble will perform selections from the operas of Strauss, Mozart, Verdi, Donizetti and others in a program titled "The Light and Dark Sides of Humanity."

• Aug. 2, 7:30 p.m., Arts Quad: PANGAIA Steel Band will perform contemporary and traditional calypso and soca music from Trinidad and Tobago. Rain location: Memorial Room, Willard Straight Hall.

religion

Sage Chapel

On July 28, Heidi Swarts, M.Div., doctoral student in the government department, and the Rev. Janet Shortall, assistant director of Cornell United Religious Work, will speak at 11 a.m.

The Rev. Robert L. Johnson Jr., director of Cornell United Religious Work, will speak Aug. 4 at 11 a.m.

African-American

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

Baha'i Faith

Fridays, 7 p.m., firesides with speakers, open

discussion and refreshments. Meet at the Balch Archway; held in Unit 4 lounge at Balch Hall. Sunday morning prayers and breakfast, 7 a.m.

Catholic

Weekend Masses: Saturday, 5 p.m.; Sunday, 10 a.m., Anabel Taylor Auditorium. Daily Masses: Monday-Friday, 12:20 p.m., Anabel Taylor Chapel. Sacrament of Reconciliation, Saturday, 3:30 p.m., G-22 Anabel Taylor Hall.

Christian Science

Sundays, 10:30 a.m., First Church of Christ Scientist, University Avenue at Cascadilla Park.

Testimony meetings sharing healing through prayer and discussion every Thursday at 7 p.m. Founders Room, Anabel Taylor Hall. For more information see <http://www.msc.cornell.edu/~bretz/cso.html>.

Episcopal (Anglican)

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

Friends (Quakers)

Sundays, 11 a.m., meeting for worship in the Edwards Room of Anabel Taylor Hall. Discussions most weeks at 9:50 a.m., 314 Anabel Taylor Hall.

Jewish

Saturday Services: Orthodox: 9 a.m., Edwards Room, Anabel Taylor Hall.

Korean Church

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

Lutheran

Sundays, 9:30 a.m., and Thursdays, 7 p.m., St. Luke Lutheran Church, Oak Ave. at College Ave.

Muslim

Friday Juma' prayer, 1:15 p.m., One World Room, Anabel Taylor Hall. Daily Zuhr, Asr, Maghreb and Isha' prayers at 218 Anabel Taylor Hall.

Zen Buddhist

Tuesdays, 5 p.m.; Thursdays, 6:45 p.m., chapel, Anabel Taylor Hall.

seminars

Neurobiology & Behavior

"Regulatory and Other Effects of Constant Light and Circadian Rhythm on Growing Chick Eyes," Tong Li, thesis defense seminar, July 26, 1:30 p.m., A106 Corson Hall.

theater

Babes in Arms

Ithaca's all-women performing collective, Babes in Arms, will bring its production of Judith Alexa Jackson's "WOMBman WARS" to Risley Theatre on campus July 27 at 8 p.m. For info, call Holly Adams at 277-1449.

miscellany

Alcoholics Anonymous

Meetings are open to the public and will be held Monday through Friday at 12:15 p.m. and Saturday evenings at 5 p.m. in Anabel Taylor Hall. For more information call 273-1541.

Book Sale

A summer book sale for the Durland Alternatives Library will be held Friday, July 26, from noon to 9 p.m. at Emma's, 307 W. State St. All proceeds will be used for library programs. Donations of books, cassettes and CDs will be accepted at Emma's on Thursday, July 25, from 6 to 9 p.m. Call 255-6486 for information.

Cornell Cooperative Extension

4-H Youth Fair: Through July 27, Lower Creek Road, just off Route 13 near NYSEG, open from 10 a.m. to 9 p.m. Daily activities include petting zoo, hands-on science activities, displays and demonstrations, game booths, music and food. For information, call Cooperative Extension at 272-2292.

Emotions Anonymous

This 12-step group that helps people deal with emotional problems meets for a discussion meeting on Sundays at 7:30 p.m. and a step meeting on Tuesdays at 8 p.m. at the St. Luke Lutheran Church, 109 Oak Ave., Collegetown. For more information call 387-0587.