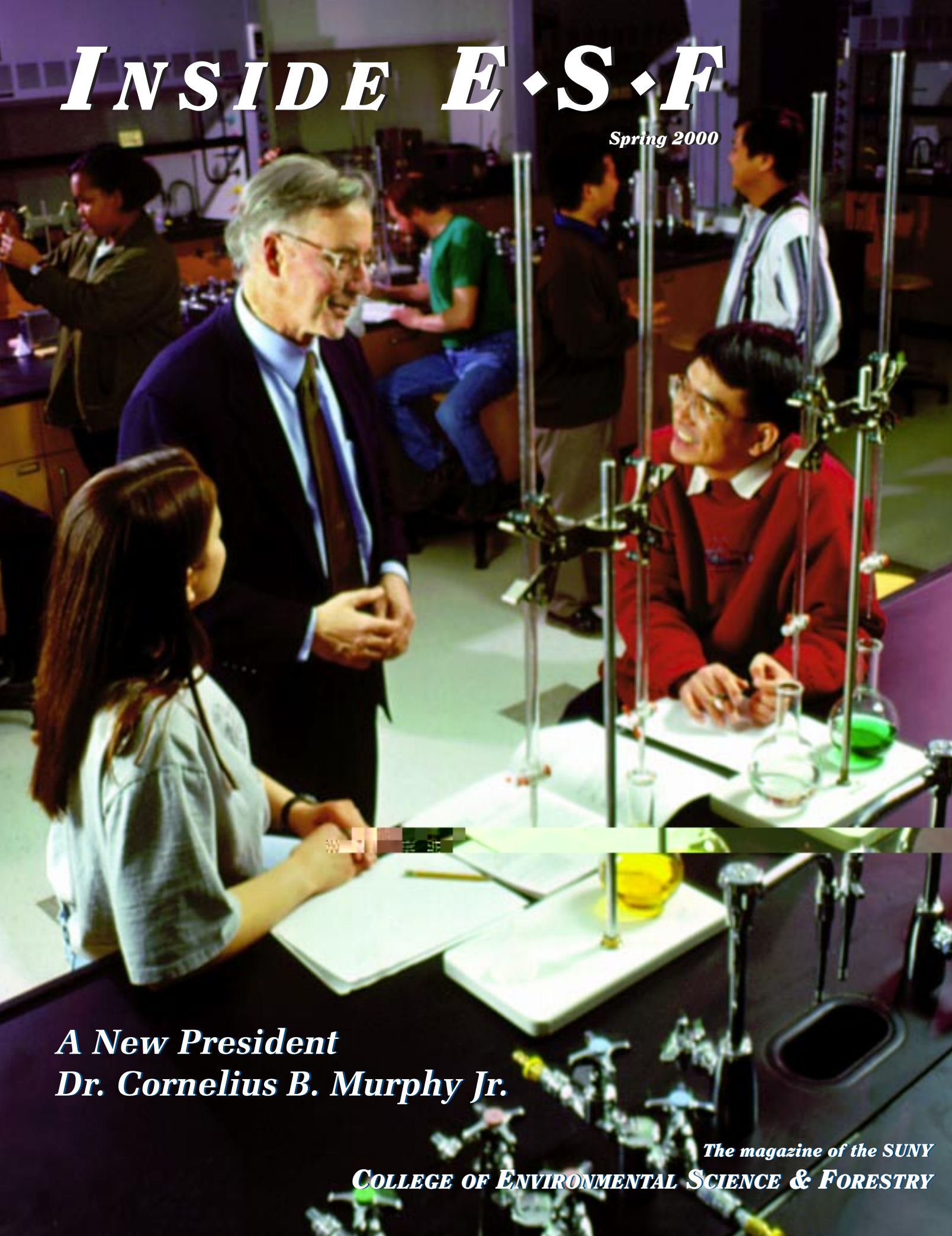


INSIDE E·S·F

Spring 2000



*A New President
Dr. Cornelius B. Murphy Jr.*

*The magazine of the SUNY
COLLEGE OF ENVIRONMENTAL SCIENCE & FORESTRY*

In This Issue

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SUNY-ESF

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Dr. Cornelius B. Murphy Jr., standing at left, meets students in the William D. Gooden Laboratory for polymer and analytical chemistry following his appointment as the third president of the College of Environmental Science and Forestry. Photo by Dan Vecchio.

The State University of New York College of Environmental Science and Forestry offers a diverse range of accredited programs and degree options in chemistry, construction management and wood products engineering, environmental and forest biology, environmental resources and forest engineering, environmental studies, forest resources management, forest technology, landscape architecture, and paper science and engineering.

The College's mission is to be a world leader in instruction, research, and public service related to: understanding the structure and function of the world's ecosystems; developing, managing, and using renewable natural resources; improving outdoor environments ranging from wilderness, to managed forests, to urban landscapes; and maintaining and enhancing biological diversity, environmental quality, and resource options. As such, ESF has maintained its unique status within SUNY's 64-school system as one of only five specialized colleges and one of only eight doctoral-granting institutions.

ESF takes affirmative action to provide equal opportunity for all people and to build a campus community that reflects a wealth of diversity.

An Open Letter To The New President

by Charles A.S. Hall

I welcome with joy our new president, Neil Murphy.

For the record, I spent a fair amount of time evaluating each presidential candidate and Neil was my clear, enthusiastic choice. My view was reinforced by meeting four of his employees, who were universal in their great admiration and enthusiasm for Neil as a leader and a person. I argued strongly in his behalf to my department.

So, Neil, a personal welcome. I believe that you will maintain the good will that is a wonderful legacy of the Whaley years. And I am excited by what else I think you can accomplish as president.

As the new president you will inherit a plate of obvious institutional strengths and weaknesses. The strengths include a skilled and dedicated faculty; remarkably eager, courteous and (often) very bright students; a cheerful staff willing to pitch in; an excellent reputation within the relatively small world within which we are known; and, in general, a great spirit of cooperation.

The problems include, as you know, the need for our excellence to be more widely understood, appreciated and supported; by all New Yorkers particularly by the SUNY administration and board of trustees; relatively low dollar support from Albany given that we are a major research university; a faculty, student body and mission needing both diversification and, perhaps, a unifying direction; and assistance with the enormous demands upon the time of many of our professors. I address each of these below from my perspective as a faculty member and systems scientist.

I have no idea how our external relationships might be improved. A nationally ranked football or basketball team might help us with the general populace and the legislators upon whom we depend for financial support. My colleagues at Penn State, Michigan and Berkeley feel pretty well supported by their respective legislators. But our woodsmen's team, excellent as it might be, does not seem to fill that function.

I can speak to some other issues you will face at ESF:

Teaching: Modern education emphasizes disciplinary work, and it is difficult to learn all the special techniques



Charles A.S. Hall

required to become a professional in science or management. Part of ESF's specialness should be that we offer students a broader perspective on how specialties fit into the larger social and natural environment. I cannot think of any major environmental issue that has a purely technical solution, be it climate change, landscape change, sustainable development, biodiversity or making low-environmental-impact paper.

We do a good job at encouraging interdisciplinary work in some graduate programs, but not with undergraduates where it is most important. Let other colleges produce the technicians — our students and faculty should be leaders who are technically sound but who, in addition, use an integrative systems perspective to look over the horizon.

One way to double our visibility to the state and our student applicant pool and provide us with many interesting research issues is to become "The Environmental College" for cities as well as rural areas. Many excellent students are in urban areas, who want to come to ESF.

I spent a recent weekend interviewing high school kids for our multicultural scholarship program, and most were from urban or near-urban areas. There were 14 wonderful kids visiting the college, all with excellent academic records and wonderful environmental foci and experience. One of them, for example, answered readily a conceptual question about calculus (and volunteered its inverse solution) that few of our seniors are able to. Most were far from affluent. Unfortunately, we had only five scholarships to offer, and I would have liked to offer 14. We are faced with a somewhat similar problem with graduate admissions — the best applicants have the least money. So, of course, we need more money for scholarships. Much more.

The ESF faculty and staff involved with these visiting high school students had concluded earlier that for this program to succeed, we need a good mentoring program.

Continued on next page

Fortunately, many faculty members have volunteered for this mentoring which would include bi-weekly meetings and freshman-year research projects. But why not mentor all students?

Our first two years are focused on basic chemistry, physics, math and distributional requirements — hard courses not closely related to why students choose ESF. Why not give each freshman an independent project in the area they are most interested?

In addition, there is a lot we can do to integrate our science curricula better and prepare our students for the difficult environmental issues that lie ahead. Then, maybe all our students can answer my calculus question when they are seniors!

ESF is in an exceptional position to generate students who will become future Ph.D. or other high-level professionals. Various studies show that small colleges produce proportionately more undergraduates who become our main research scientists. *Change Magazine* ranked ESF 11th among the thousands of life science programs in the nation in the proportion of its undergraduates that went on to earn Ph.D.s. The main inspiration successful Ph.D.s give for initiation into the demanding world of science is their experience working as an undergraduate with one special professor — his or her first mentor.

But mentoring takes time, and time is something most professors barely have. The main fact of my life is the near impossibility of doing well everything expected of an ESF professor — at least if you take your responsibilities seriously. Although I am a moderately successful researcher, I entered my profession with a desire to teach, and that remains true today. But for me to teach and mentor effectively means that I have students in my office essentially 80 percent of the time I am there. If I spend that time with students, I am not writing grant proposals, research papers or administrative reports.

Fortunately, I have tenure, and my professional position does not depend upon number of publications or the amount of money I bring in. I sure am glad that I am not a starting professor! Something has to give for those young faculty. How can that be changed?

Recent edicts from Albany tie the money a SUNY unit receives to how many students each faculty

member teaches in class. I cannot come up with a better formula for encouraging poor teaching! Fortunately, Provost Tully has been successful in helping Albany understand that quantity teaching is not quality teaching, that ESF has really special students in part because we have many field trips and laboratories, and because we take time to involve students in our research.

Research: The new reality is that, nationally, only about 10 percent of grant applications to major federal agencies are funded. I have a drawer full of National Science Foundation proposals with evaluations of “very good,” “excellent” and “funding recommended” that did not quite reach that upper 10 percent.

The net effect of the process is that professors all across the nation waste 90 percent of their proposal writing time, while a few well-oiled research machines receive the lion’s share of the funding. This is time spent not doing research and not mentoring students. National funding agencies act as a major detriment to good undergraduate teaching because they force us to waste so much time writing proposals that will, in all probability, not be funded. What can we do?

Directions: I am on a biology faculty committee charged with determining what kind of faculty positions will be most important to the future. We were quite surprised that each of the five positions we initially came up with could not be filled within the biology department but were interdisciplinary or transdisciplinary.

This confirms my long-held suspicions that one of the greatest barriers to effective teaching and research is our departmental structure. Our past attempts at formal interdisciplinary operations more or less withered on the vine. Some individuals choose to continue the process informally, but there is little explicit reward for interdisciplinary work, especially at the undergraduate level. So we need to develop collegewide professors, courses, symposia and lectures.

There are many other things I could mention, but the above seem most critical.

I add my voice to the hundreds of others welcoming you to your important new job!

Hall, a professor of environmental and forest biology, joined the faculty in 1987.

Cornelius B. Murphy Jr. Named President Of SUNY-ESF

The State University Board of Trustees appointed Dr. Cornelius B. Murphy Jr. as the third ESF president at its February 29 meeting in Albany, N.Y.

Murphy's appointment is effective May 15. He succeeds Dr. Ross S. Whaley who will become a SUNY University Professor.

"I am convinced that Dr. Murphy, with his leadership skills, creative thinking, environmental and scientific background, and strong ties to the campus and the community, will prove to be an excellent ESF president," SUNY Chancellor Robert L. King said in recommending Murphy to the board.

Murphy is chairman of the board of O'Brien & Gere Ltd., the largest design, engineering and consulting firm based in Central New York. He began his career with O'Brien & Gere 30 years ago.

Murphy called his appointment "the fulfillment of a life-long dream."

"This is indeed an exciting opportunity for me, and I look forward to working with the students, the faculty, and staff at the school."

Murphy was selected from among four finalists recommended to King by the ESF Board of Trustees following a national search.

"We are delighted that SUNY officials agreed with the recommendation of both the search committee and the ESF Board of Trustees and selected Neil Murphy to be our next president," said Curtis H. Bauer '50, ESF trustee chair who also chaired the college presidential search committee.

"Dr. Murphy was a stand-out candidate who, throughout the search and campus interviews, earned the overwhelming support of campus constituent groups."

The 15-member search committee received more than 40 applications in response to national advertisements for the position, and, Bauer said, committee members actively pursued

prospective candidates suggested by a variety of professional contacts as well as by members of the ESF community.

The committee selected eight semi-finalists and conducted confidential in-person interviews. Following these, the committee selected four finalists for the position. Each finalist was invited for a two-day on-campus interview. The interviews began January 20 and concluded February 3, 2000.

"Dr. Murphy is ideally suited to lead the College of Environmental Science and Forestry," said SUNY

Trustees Chairman Thomas F. Egan. "His professional experience and his long association with the college make him uniquely qualified to lead this outstanding college."

Murphy, who resides in Marcellus, N.Y., brings to ESF an array of expertise in technical areas that reflect the college's focus in research and academic efforts: environmental science and engineering management, hazardous waste management, environmental assessment, limnology, and industrial wastewater treatment.

He earned his bachelor's degree in chemistry from St.

Michael's College in 1966 and a Ph.D. in chemistry as a NASA Fellow at Syracuse University in 1970. Murphy has studied at the Syracuse University School of Management and was a National Science Foundation trainee at Clark University. He was awarded an honorary Doctor of Science degree from Clarkson University in 1997.

Murphy worked his way to the top echelons of O'Brien & Gere's leadership after he joined the company as a lab technician in 1970. He was the first person with a doctoral degree to be hired by the company.

Murphy's early work centered around research and development, ultimately leading him to direct the company's activities in that area. In 1982,

Continued on next page



Dr. Cornelius B. Murphy Jr.

Campus Update, continued

he became senior vice president of O'Brien & Gere Engineers Inc. and was instrumental in the organization's aggressive entry into the hazardous waste market.

His strong advocacy of blending the scientific and engineering disciplines was critical to O'Brien & Gere's emergence as a leading firm in the Northeastern United States in the management of hazardous waste sites. He was also a driving force in the development of the company's two textbooks on hazardous waste management.

Murphy has been affiliated with a number of civic and community associations, including Success by Six, the Boy Scouts of America Hiawatha Council, the SUNY Upstate Medical University Foundation and the Metropolitan Development Association Vision 2010 Steering Committee.

Murphy and his wife, Joanne, have four children, Tracy, Megan, Maureen and Michael.

Scholarship Honors ESF's Ross S. Whaley

A \$175,000 scholarship fund has been established to honor Dr. Ross S. Whaley, the outgoing president of ESF.

The scholarship fund was established by the ESF Board of Trustees and the College Foundation Board of Directors to honor Whaley for his accomplishments as president.

Whaley's tenure as college president will end May 14.

"We believed this would be a particularly nice way to honor Ross, who is so supportive of meritorious students," said J. Warren Young, a foundation director and a leader in the campaign to establish the endowment. "People who know Ross well wanted a permanent honor for him."

Curtis H. Bauer, chair of the ESF Board of Trustees, called the scholarship endowment a "good way to honor a man who devoted 16 years to the college."

"ESF is on the cutting edge of major innovations in the field of natural resources. Scholarship is where a lot of these ideas and techniques come from," said Bauer, who is also a member of the ESF Class of 1950. "The endowment seemed like a natural way for the college to train the people the world needs."

The first Whaley scholarships are expected to bring two freshmen students to campus next fall. The scholarships will be awarded based on the students' academic achievements and community service.

Initial contributions quickly exceeded the foundation's goal of \$100,000. Those donations came from 115 individuals close to Whaley and the college. Members of the public who wish to contribute to the fund may do so by contacting the ESF Office of Development.

Contributors to the fund will be recognized this spring during an event that will celebrate Whaley's tenure at the college. He has been president of ESF since April 1984.

ESF's Baker Laboratory Revamped For Engineering

An East Syracuse contractor has begun work on the first phase of a \$23 million overhaul of Baker Laboratory.

The building, which will be completely renovated, contains faculty offices and laboratories for the college's Faculty of Construction Management and Wood Products Engineering. Also housed in the

building are academic computing facilities and the analytical and technical services department.

The renovated Baker Laboratory will provide the college with a center for engineering and technology and a new home for the college's Faculty of Environmental Resources and Forest Engineering, with its specialties in water resources, mapping sciences and geographical information systems.

"We are thrilled to see space in Baker opening up to expand our teaching, research and outreach opportunities," said Dr. George H. Kyanka, chair of the wood products faculty.

Murnane Building Contractors Inc. was awarded an \$8.5 million contract for the first phase of the project, which will be a renovation of a one-story wing on the west side of the building. Work on this phase is expected to last two years.

The project includes construction of two multimedia lecture halls, a "smart" classroom outfitted for computer use and distance learning, and two construction management and planning studios. It will also modernize facilities tailored to the needs of Kyanka's department for materials science testing, including a modern dry kiln, a wood identification laboratory, shop facilities and a laboratory that will allow for humidity and moisture conditioning of wood samples.

When completed, the one-story wing will also include temporary facilities for operations that are normally housed in the four-story section of the building. Work on that larger section will begin after the first phase is completed.

Urban Renewal

by Claire B. Dunn

In 1920, Professor Laurie Cox undertook ESF's first study in a city setting. Today, a new academic initiative is leading an urban renaissance.



On Friday and Saturday nights, cars creep through the narrow streets of Syracuse's historic Armory Square, in search of parking spaces. People stroll the streets debating their options: a Thai restaurant, an Irish pub, a microbrewery, or the venerable pasta place that has been here since this now bustling neighborhood on the fringe of downtown began inching back from the brink of decay.

This is the hub of the city's nightlife and an emerging center for the arts .

It is also an urban success story — the rebirth of a blighted neighborhood — in which the College of Environmental Science and Forestry had a role. A group of undergraduate landscape architecture students, under the tutelage of Distinguished Professor George W. Curry, took on the neighborhood as an urban design studio project in 1979.

“You can see it's had a real economic benefit for the city of Syracuse,” said Curry's colleague, Cheryl S. Doble, an associate professor in the Faculty of Landscape Architecture. “The old buildings were preserved. They maintained some of the fabric and history of this community. There was more to it, of course, than just the work George's students did. But it was one of the pieces.”

The work in Armory Square stands as testament to one of ESF's greatest strengths: searching for solutions to the unique problems generated by the tendency of *Homo sapiens* to gather in one place. It is also part of the college's rich history of involvement in urban environmental affairs, a history that is not always apparent to casual observers who believe ESF is focused strictly on forested wilderness. That urban legacy

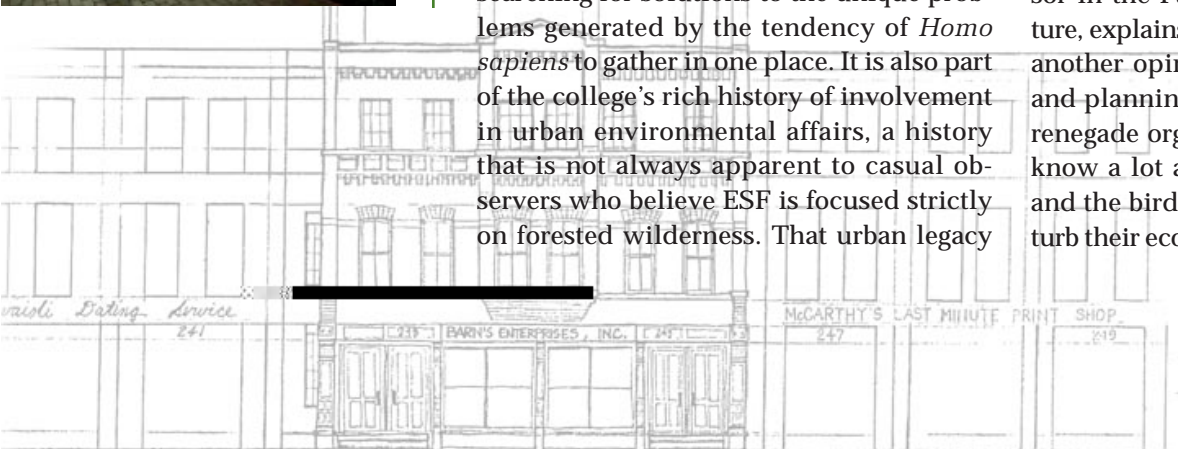
has evolved into a new academic elective concentration that will be offered to students next fall: the study of urban environmental issues.

The reasons for ESF's focus on urban affairs are as varied as the disciplines involved in the new initiative.

Dr. William P. Tully, provost and vice president for academic affairs, explains: “Urban centers have their own natural resources and are great collectors of energy, water, and other natural and man-made resources. The city processes, consumes and uses these resources, then manages the distribution of excess and waste materials, often affecting the urban environment. Our faculty includes experts in the management of natural resources and the scientific evaluation of how the quality of a community can be improved by good design and management. This impressive array of expertise at ESF actively informs policy, planning and design of urban environments and can lead urban centers in re-creating themselves. The goal of our new Urban Environment Initiative is to earn for ESF a reputation as a center of excellence in urban environmental science and design.”

Emanuel J. Carter Jr., an associate professor in the Faculty of Landscape Architecture, explains: “Natural scientists might have another opinion, but we in design, policy and planning tend to think that the largest renegade organism on the planet is us. We know a lot about the rabbits and the deer and the birds. And as long as we don't disturb their ecosystem, they're going to be fine.

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An Urban Sampler

There are hundreds of studies in New York's cities

...these are just some of them.

1 Allan P. Drew led a multidisciplinary team of students and faculty in developing a long-term tree management plan for the Burnet Park Zoo.

2 Called the "most polluted lake in the U.S.," Onondaga Lake is also "most studied." Beginning with Robert D. Hennigan in the 1960s more than 30 college researchers and their students have looked at some facet of the lake's ecosystem. Among the recent projects, biochemist Gregory L. Boyer looked at last summer's "worst ever" algae bloom and diagnosed it was not toxic algae killing the lake's ducks.

3 George W. Curry's urban design students have worked in locations all over Syracuse, including Armory Square, Clinton Square, the Central New York Regional Market, and Fayette Park.

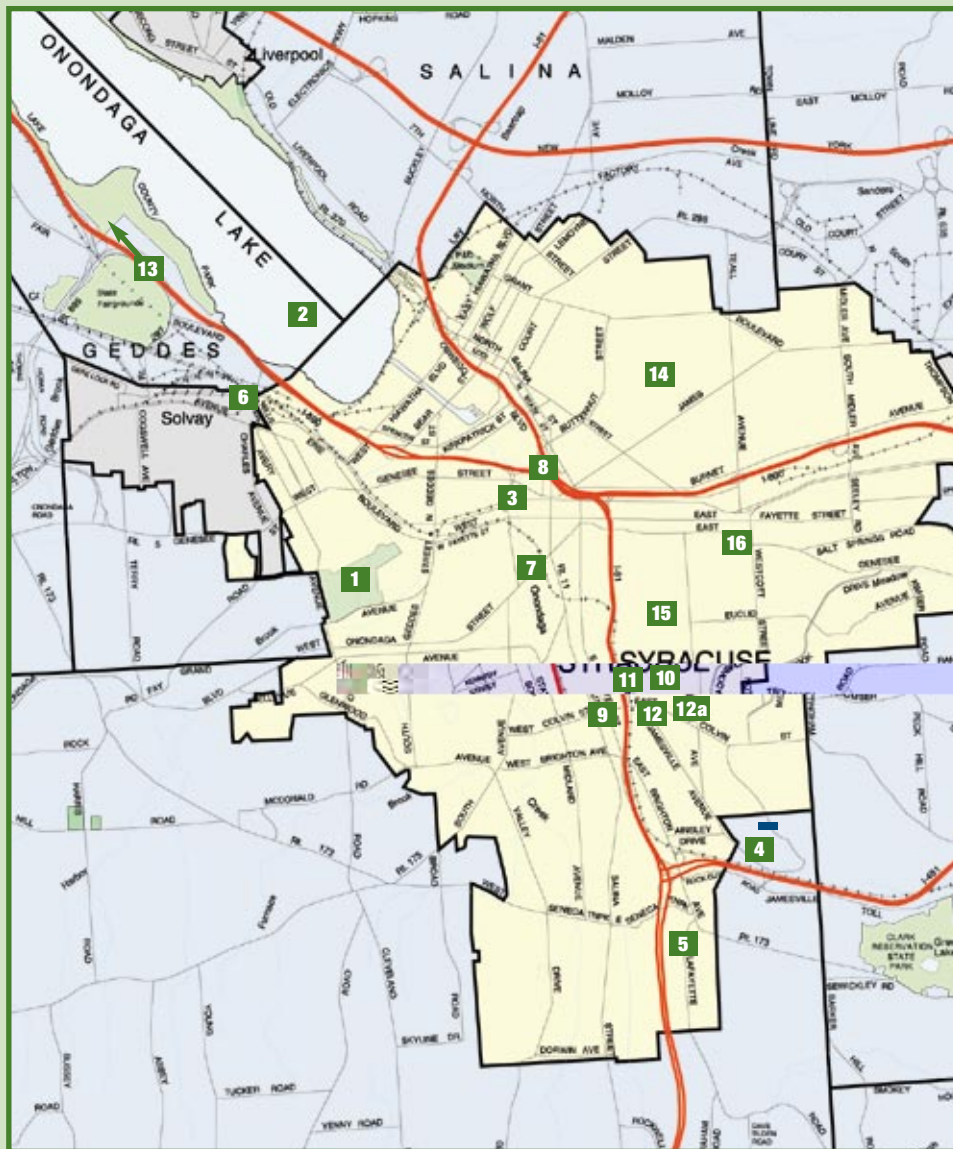
4 Richard J. McClimans received a patent in 1999 for a process he developed to create "biotech soil" using ash from the Onondaga County Resource Recovery Agency incinerator.

5 Charles A. Maynard, William A. Powell and Zizhuo Xing are working to develop a blight-resistant American chestnut, once a popular street tree in the eastern United States.

6 Solvay Paperboard, a division of Southern Container Corp., is a new breed of paper production facility: a "mini-mill" typically located in urban areas. ESF graduates and college faculty developed a series of training courses for all plant employees.

7 Onondaga was one of the first counties to obtain federal funding in the early 1970s to do pediatric blood lead testing. James M. Hassett developed a model for mapping childhood exposure to lead using data from the county Health Department. David L. Johnson, who also worked on the project, said the studies showed a correlation between high levels of lead in blood and the age of the child's home.

8 George H. Kyanka took core samples from underground timber pilings for several bridges in the Armory Square district to check for deterioration.



Beyond The Borders

William F. Porter in collaboration with other ESF scientists and government officials developed a three-pronged deer management program for the town of Irondequoit outside Rochester, N.Y. The program is a model other communities struggling to control deer populations may use to manage their herds.

ESF hosted the first national Urban Forestry Conference in Washington, D.C. Lee P. Herrington, also a member of the U.S. Forest Service's original Pinchot Consortium initiative in urban forestry, was conference general chair.

Francis X. Webster studies insect pests like cockroaches, hoping to perfect a chemical attractant that can be used — instead of insecticides — to bait and trap these urban scourges.

Norman A. Richards is developing a street tree management program with the city of Watertown in the wake of severe damage by the recent ice storm. The work builds on expertise Richards advanced in more than 18 years of studying urban trees in Syracuse.

Urban Renewal, continued



Map provided by the Planning Agency of Syracuse and Onondaga County.

9 Emanuel J. Carter's students recently have worked in the Gateway neighborhood down the hill from the ESF campus, and along South Avenue, a major corridor through the city's south side.

10 For more than 22 years, ESF has been the home of a U.S. Forest Service Urban Forestry Cooperative Research Unit — one of the first such units created. Several full-time scientists, including Gordon Heisler, pursue cooperative studies with ESF faculty and students as well as individual projects.

11 In 1976, student members of The Wildlife Society chapter at ESF worked with children from the Dr. Martin Luther King Jr. School, creating the Backyard Nature Program.

12 Larry W. VanDruff, a pioneering urban wildlife researcher, uses grey squirrel populations in Oakwood Cemetery both as research subjects and in field exercises with his classes. VanDruff has done similar work in New York's Central Park and the Mall in Washington, D.C.

12a Johnson has studied trees in Oakwood Cemetery, investigating the ability of trees to collect particles from the air. He studies the types of substances found on leaves and needles and looks into where they go from there.

13 John J. Howard, a state Department of Health employee based at ESF, works in several area locations, including the Three Rivers Game Management Area in Lysander, studying insect-borne diseases like Lyme disease. See *Inside ESF* Winter 2000.

14 In one of the earliest documented urban studies at ESF, Laurie Cox analyzed Syracuse parks in 1920 and suggested ways the city could preserve its historic trees.

15 Kyanka and Robert W. Meyer undertook a study for Crawford & Stearns architects of the wood trim and other wood components used in Syracuse University's Crouse College. The study will ensure the use of authentic materials in the historic structure's renovation.

16 Some of Cheryl S. Doble's students are working in the Fayette Street neighborhood, with architecture students from Syracuse University. On the east side of Syracuse, landscape architecture students worked with Eastside Neighbors in Partnership to develop a park for children.

As soon as you interfere with that, and you build with reckless sprawl — which is what we do in this country — you mess it all up.”

Dr. David L. Johnson, a professor in the Faculty of Chemistry who frequently works in urban settings, explains: “In cities, we don't let things happen naturally. We collect the leaves and scrape them off to the side of the road. We compost them and people spread them in their backyards as mulch. Just think about the possibilities of human intervention in this natural process.”

Curry is the college's unofficial dean of urban affairs and his department has long been a hot spot for urban activity. He has a list of 24 projects dating back to 1972 in which his students have participated.

“The bulk of the citizens of this state live in urban and suburban environments,” Curry said. “If part of our mission is to serve them in the places they live, work and play, it makes sense for us to do urban work. We're having an effect on people's lives on a 24-hour-a-day basis.”

The revitalization of Armory Square helps tell the tale.

Twenty-five years ago, Armory Square was on a downhill slide. “In the 1970s, the biggest story of the day was how many pigeons were in the Hogan block,” said Vito Sciscioli, Syracuse commissioner of community and economic development, referring to a block within the neighborhood. “It was in deplorable condition.”

Then local investors took an interest in the neighborhood and some of Curry's students started sketching. “They really provided a lot of the thoughts about how that area could look,” Sciscioli said. “A combination of design talent and private investment interest all converged.”

Sciscioli said even he was pessimistic at first. “There was some doubt in my mind whether a city the size of Syracuse could sustain a chunk of urban activity that big,” he said.

But it worked. “It's the biggest bright spot in the city's central business district and there's no doubt about it,” he said.

Continued on next page



The college's influence has crept into other neighborhoods in every corner of Syracuse. ESF students have worked downtown, along Gifford Street and on the city's north side. A current urban design studio has landscape architecture students in Eastwood. And just off campus, some of Doble's students are in the Fayette Street neighborhood, alongside architecture students from Syracuse University.

Carter, who quickly grows passionate about Americans' tendency to disperse across the countryside and live as far as possible from each other, has recently been involved in projects in two of Syracuse's struggling neighborhoods. A city planner by training, Carter has spent most of his career

improved housing. The goal in both cases was to entice reinvestment in the neighborhoods and bring empty storefronts and empty lots back to life.

A major element in these projects is partnership — with Syracuse University, the city government, or a grass-roots organization like Eastside Neighbors in Partnership. "These partnerships are really critical," Doble said.

"No one group has a lot of resources, so it's difficult for them to get anything done alone. Together, they can really make a difference. One group alone really would struggle," she said.

In addition, she said, the ties that develop among the various contributors encourage

“Natural scientists might have another opinion, but we in design, policy and

in urban areas. He has worked extensively in Montreal and Fairmount Park, the nation's largest landscaped park, in his hometown of Philadelphia. In addition, he has helped in dozens of smaller cities in New York state.

Most recently, he and his graduate students have established a presence in the Gateway neighborhood down the hill from the ESF campus, and along South Avenue, a major corridor through the city's south side. "Both those neighborhoods were 'red-lined' in 1937 by the federal government, meaning no federally backed mortgages were available for people to buy homes," he said. "People with money and choices went elsewhere."

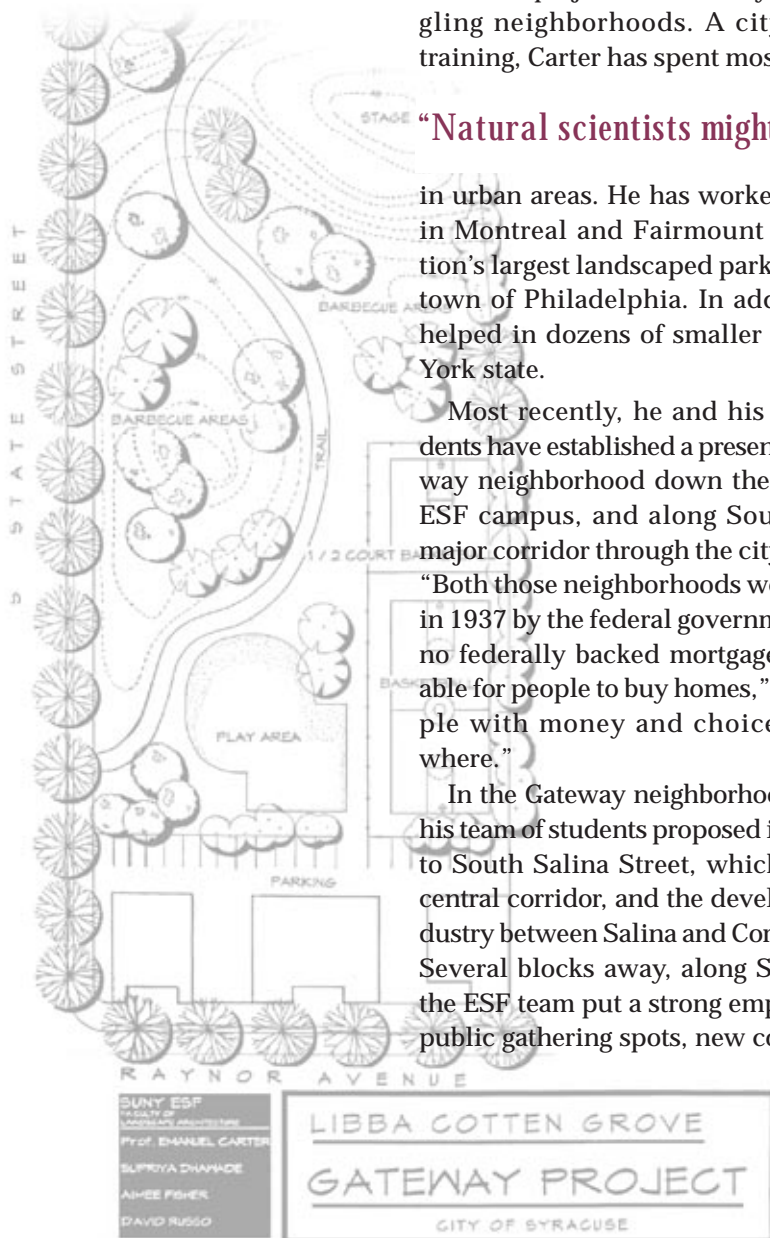
In the Gateway neighborhood, Carter and his team of students proposed improvements to South Salina Street, which is the area's central corridor, and the development of industry between Salina and Cortland Avenue. Several blocks away, along South Avenue, the ESF team put a strong emphasis on new public gathering spots, new commerce and

students to learn about the residents' concerns. And, in turn, the residents learn the best steps to take to change their neighborhood for the better.

Partnerships are an integral part of ESF's new Council for Community Design Research, based in landscape architecture. The council works in partnership with communities, elected officials, agencies and not-for-profit organizations to provide technical assistance, educational programs and research projects that build a community's ability to manage a sustainable future.

"To me, urban doesn't have to mean Syracuse or Rochester or New York City," Doble said. "It's anywhere there's a density of settlement. It could be a village in the Adirondacks."

Syracuse's Eastside Neighbors in Partnership, a neighborhood association that does comprehensive community development, now features a park that caters to the interests of very young children. Its design was based in clumps of clay handed



to neighborhood kids several years ago by some of ESF's urban design students.

"They asked the youngsters to use the clay to build a park," said Jim Dessauer, the association's senior coordinator. "Those plans became the basis for the development of East Fayette Street Community Park."

"It's a win-win situation," Dessauer said of the group's relationship with the college. "The students are getting good experience in community design and the community benefits as well."

Although much of the college's urban work is concentrated in the Faculty of Landscape Architecture, which has its roots in a discipline called "city forestry," there are threads that tie into nearly all of ESF's disciplines.

planning tend to think that the largest renegade organism on the planet is us."

— Emanuel J. Carter Jr.

Faculty members see it as an opportunity for specialists from different parts of campus to learn from each other and work together.

"The natural scientists are starting to see we don't speak a different language," Carter said. "The urban initiative isn't just the designers and the planners. It's the foresters and the ecologists and others who care about it."

Tully said urban environmental courses are offered by several faculties, including environmental studies, environmental and forest biology, forestry, chemistry, construction management and wood products engineering, landscape architecture, and environmental resources and forest engineering. Students in any of these areas may elect a study concentration on the urban environment.

Visiting Assistant Professor Myrna Hall is designing a cross-disciplinary class in urban ecology that is proposed for next fall. Her involvement in urban issues goes beyond the list of class offerings. She is actively involved with a team of ESF faculty and staff members in recruiting students of color as part of ESF's \$100,000 USDA grant

to support multicultural scholars. The committee has recently hosted on campus 14 highly qualified minority students from around the country, including several from New York City.

In conjunction with these recruitment efforts, teachers at Kennedy High School in the Bronx are now designing an urban ecology unit and assisting with a Hudson River module to be included in the Environmental Studies Project run by ESF's Office of Continuing Education.

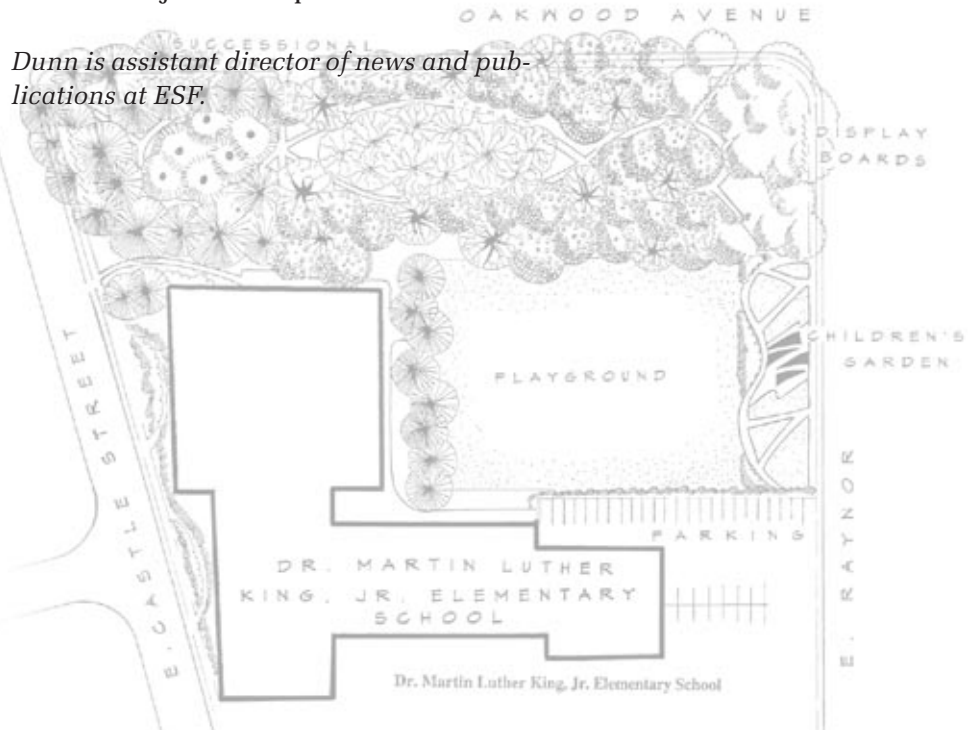
The urban component was featured on the ESF display that traveled to Albany for the annual SUNY Day, a public education effort on behalf of the entire statewide university system. The college has asked SUNY to provide



\$160,000 in mission review money to support the new urban studies.

"If ESF is really going to be the college of the environment, with half the world's population living in urban areas, environmental science has to focus on urban areas," Hall said. "Hopefully, it will increase diversity on this campus, not only with the people, but with the subjects we explore."

Dunn is assistant director of news and publications at ESF.



Weed Sprouts 'Startling Discovery'

by Claire B. Dunn

An ESF chemist and a DeWitt teen-ager, examining a weed they found in the chemist's backyard, have discovered a new chemical compound that could be used in the battle against cholesterol.



The discovery by Dr. José Giner and Jason Berkowitz, now a freshman at Tufts University, will be reported in an upcoming issue of the *Journal of Natural Products*.

Giner was helping Berkowitz, then a Jamesville-DeWitt High School junior with an interest in chemistry, with a research project when they made the discovery during the summer of 1998. They were analyzing the latex present in a small weed that grew in the yard of Giner's university-area home.

Their discovery was two-pronged. In addition to finding the new compound, they also found a hydrocarbon fraction in the latex that is chemically identical to the pheromone that houseflies use as a sexual attractant. The substance has been found before, but only in the flies themselves. This marks the first time it has been seen in a plant.

"It was actually very exciting when I learned it was publication material. That was always my objective," Berkowitz said.

Giner called the discovery a thrill.

"Sometimes you find new things and interesting things in your backyard. My backyard, in this case," he said. "This summer, the plant was elevated from a weed to a desired plant in my backyard. I wanted to be sure I had enough of it."

The new compound is the more startling discovery. They found it in a small weed commonly known as petty spurge. The plant's scientific name is *Euphorbia peplus*, so Giner and Berkowitz named the discovery *peplusol*.

Its structure indicates it could be used to develop a medication that could inhibit the formation of cholesterol.

Giner said *peplusol* belongs to a class of chemicals that helps researchers understand the synthesis of cholesterol in the human body.

The chemical identical to the housefly pheromone could be used as an environmentally safe insecticide that works by luring male houseflies into a trap, where they die.

The reason for the pheromone's presence in the plant is unclear. "We're wondering what the function of this is," Giner said. "It could be used as a tool for pollination."

Latex is a defense mechanism. It contains a natural rubber that protects the plant against predators, mostly microorganisms. The latex contains a number of toxic chemicals, some of which are being investigated as anti-cancer and pain-relief medications.

"It has a lot of medicinal interest," Giner said. "Every toxin is a medicine waiting to be discovered."

The pending publication was a nice detail to add to college applications, Berkowitz said.

"It was an incredible opportunity for me, living near a university," he said. "I was doing college-level research as a high school junior."

He spent up to three to six hours a week working with Giner during the course of a year. The toughest part was learning the procedures and lab techniques.

"Dr. Giner had to teach me everything. In the beginning, it was kind of a rough ride," Berkowitz said. "It was a challenge. But that's what drives me most of the time."

Dunn is assistant director of news and publications at ESF. This photo originally appeared in The Post-Standard Monday, November 29, 1999. The Herald Co., Syracuse, NY © 1999. All rights reserved.

Preserving A Piece Of History

by Paula Meseroll

Campus Profile



Susan E. Anagnost

Susan E. Anagnost, a research associate in the Faculty of Construction Management and Wood Products Engineering, spends much of her time studying wood rot in utility poles. Her experience in determining the amount and type of rot in wood landed her a place on a team working to restore a historic

covered bridge — and an appearance in a segment of the PBS “Real Science!” show.

When Carl Schoder of Schoder Rivers Engineering, a contractor to Essex County, N.Y., working to restore a historic covered wooden bridge in the Adirondack town of Jay, needed experts to help determine the amount of decay in the structure, he contacted William B. Smith, associate professor of wood products engineering at ESF. Aware of Anagnost’s expertise in identifying wood decay, Smith asked her to work with him on the bridge.

“Bill (Smith) knew I had worked a lot on projects concerning utility poles,” says Anagnost, who earned her master’s and doctoral degrees at ESF. “There have been a number of projects here at ESF over the last 20 years on utility poles. I worked on them as a student and later as a research associate, looking at decay at the ground line.”

“My first thought was for Susan to be involved in this project because she is the premier wood anatomy microscopist in the Northeastern United States,” Smith says. “She’s the best person to take samples and identify wood to species and to fungal deterioration. The project was a lot of work and

it took three things to do it well: experience, knowledge and skill. Susan has them all.”

Built in 1857 of timbers hewn from locally grown red and white pine, the Jay Covered Bridge spanned the east branch of the Ausable River. At 160 feet, it was claimed to be the longest such bridge in New York state and was also a well-known tourist attraction. The bridge was in constant use by local vehicular traffic until early 1997, when it was determined to be unsafe.

“The bridge was very badly decayed, especially at the ends where it was resting on the banks of the river,” Anagnost says. “On one side of the river, there’s a sawmill, so there were lumber trucks that used the covered bridge quite often. Firetrucks and school buses also used the bridge.”

To avert a tragedy, the bridge was closed to traffic, then dismantled into four large sections and placed at the side of the river. A temporary one-lane bridge was put up in its place — but not without a lot of dissension. When the covered bridge was taken down, many local people were upset because they thought it would never be restored.

“The county is trying to restore it, keeping as much of the original bridge as possible,” Anagnost says. “We found a few spots where there was more decay, but it was in amazing condition. So they

Anagnost examines an increment core removed from one of the beams of the Jay Covered Bridge.





The Jay Covered Bridge

probably will be able to keep some of the original timber. We don't yet know how much — we plan to do some more sampling of parts of the bridge we could not reach before."

The roof and siding of the bridge had been replaced over the years, but for the most part, the structural beams were still original timbers. After it is restored, the bridge will be open to foot traffic only, says Anagnost.

The ESF scientist never expected that her work on the bridge would be featured on a television show, so she was more than a little surprised when approached about doing the episode of "Real Science!"

Produced by Syracuse University graduate Chris Million, "Real Science!" uses high school students as interviewers — in this case, Leah Camilleri, a senior at Marcellus High School. Anagnost's appearance on the program gave her a close-up look at how television shows are made.

"We did the taping in two parts," she says. "The first part we did in the lab at ESF and I showed how we examined our samples with the light microscope and scanning electron microscope, with Leah asking me questions."

If the show has a relaxed, unscripted look, that's because it was — since much of Anagnost's on-camera interaction with Camilleri was unrehearsed.

"She asked me good questions and we thought of other questions as we went along," Anagnost says.

When Camilleri was unable to travel to the bridge to film there, Anagnost and several ESF students went to Jay with the film crew. Anagnost was filmed working at the bridge, without speaking, since the voice-over was to be dubbed in later.

"Doing the show was fun, very different," she says. "It was the first time I'd ever done any TV and it was interesting to see how you tape everything one way, then repeat it all. We just kept repeating things until it came out right."

Anagnost, who plans more work on the bridge as soon as funding is secured, is pleased that her scientific skills have been put to good use in the restoration of the structure, a source of great pride to the people of the small Adirondack town.

"Working on the bridge was very exciting because it is historically significant," she says. "And I feel that we're helping out the local community."

Meseroll is a free-lance writer based in Syracuse.

More "Real Science!"

Dr. Susan E. Anagnost of the Faculty of Construction Management and Wood Products Engineering, and Dr. Robin W. Kimmerer of the Faculty of Environmental and Forest Biology will be featured on upcoming segments of "Real Science!"



Robin W. Kimmerer

The show about Anagnost will feature her work to preserve the historic Jay Covered Bridge. The show about Kimmerer will feature the work she does with native communities to help preserve native plants.

"Real Science!", which airs on the Public Broadcasting System, is seen at different times in different cities. In Central New York, WCNY has scheduled the 13-show series for 11 a.m. Sundays, beginning May 7. Kimmerer's segment is the 10th in the series and Anagnost's is the 13th. People outside the Syracuse area who are interested in seeing the shows should check their local listings.

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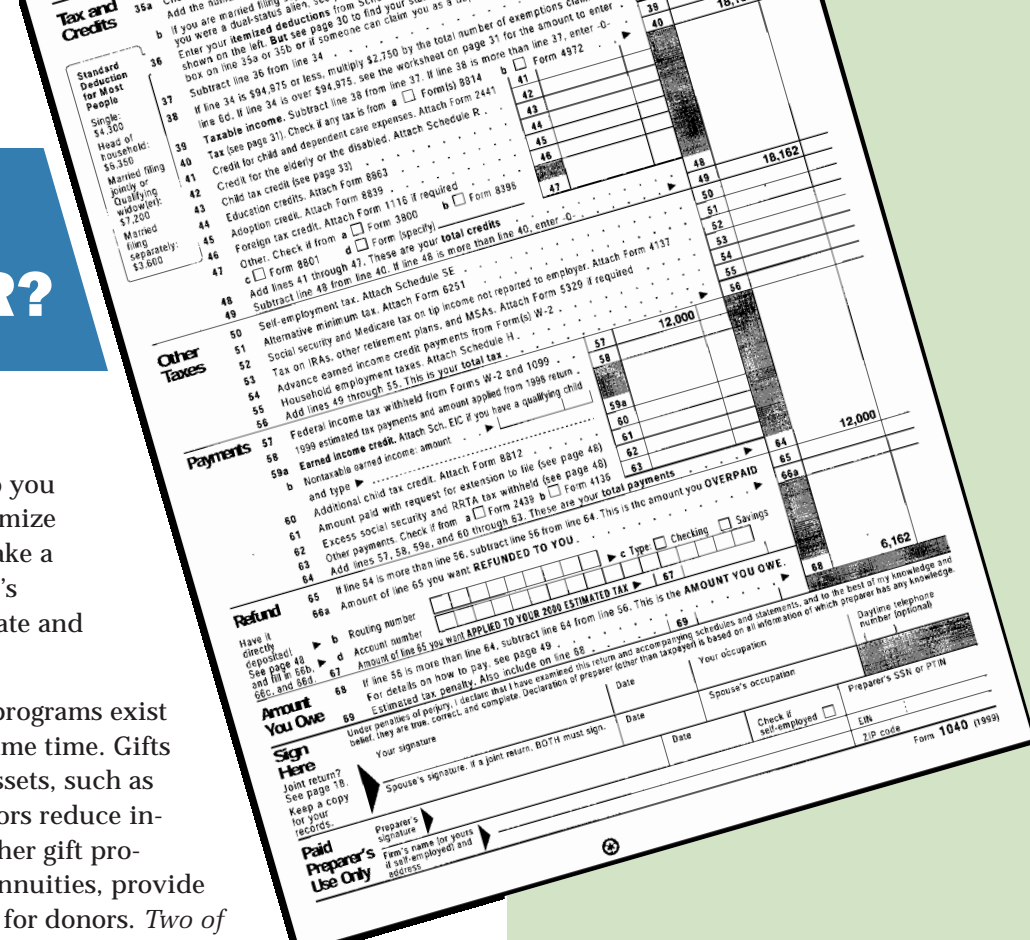
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On Campus

Books and Monographs

Bentley, William R., M.B. Malmsheimer, and J. Cairo. *The Role of Research, Education and Extension in Sustaining America's Forest Resources: Why You Should Care. National Association of Professional Forestry Schools and Colleges and USDA Cooperative State Research, Education and Extension Service.* Syracuse, N.Y. 16 pages. 1999.

Hall, Charles A.S., editor, *Quantifying Sustainable Development: The Future of Tropical Economies.* Academic Press, San Diego, Calif. April 2000.

Of Note

Duggin, Michael J., co-chair, International Symposium on Optical Science and Technology, August 2000. San Diego, Calif.

Harden, Gregory, ESF trustee, first nominee to the Central New York Business Hall of Fame. February 2000.

Sardon, Richard C., appointed to the International Wetland Council.

Campus Calendar

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|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| April 29 | ESF Spring Open House for prospective students. Syracuse campus. Additional information: Office of Undergraduate Admissions, 315-470-6600. |
| May 13-14 | Commencement weekend. Syracuse campus. |
| May 20 | Ranger School graduation. |
| May 30-July 21 | Summer Program in Field Forestry. Wanakena campus. |
| June 1-3 | Senior Alumni Reunions. Syracuse campus. Additional information: Office of Alumni Affairs, 315-470-6632. |
| June 4-30 | Summer Program in Environmental and Forest Biology. Session I. Cranberry Lake Biological Station. |
| July 2-28 | Summer Program in Environmental and Forest Biology. Session II. Cranberry Lake Biological Station. |
| August 4-5 | Ranger School Alumni Reunion. Wanakena campus. |
| August 16-19 | Council of Eastern Forest Technology Schools Annual Meeting. Ranger School, Wanakena campus. Additional information: C. Westbrook, 315-848-2566. |
| August 20-22 | Orientation and Registration. Ranger School. |
| August 23 | Classes begin. Ranger School. |
| August 24-27 | New Student Orientation and Registration. Syracuse campus. |
| August 28 | Classes begin. Syracuse campus. |