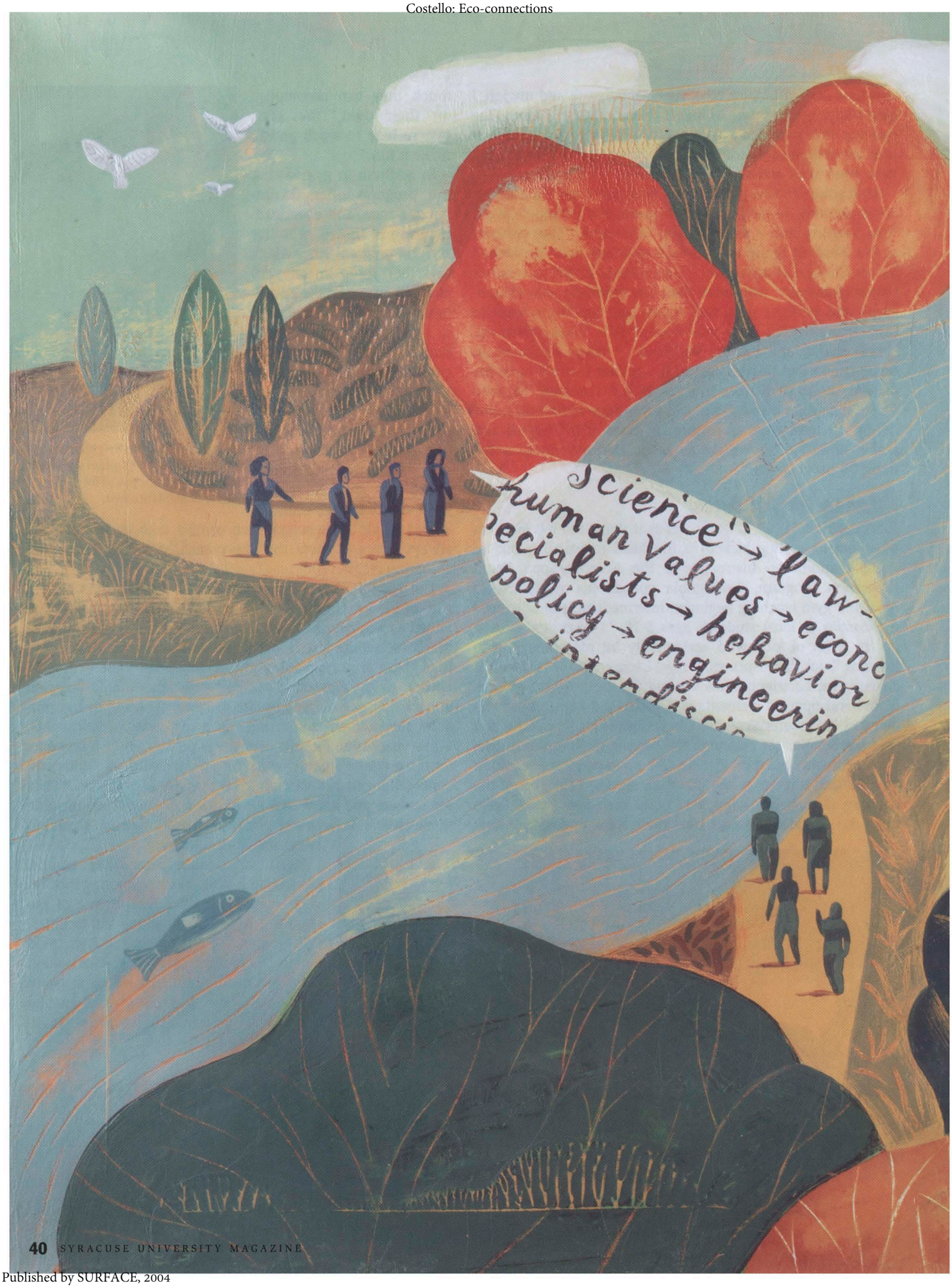
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Illustration by Curtis Parker

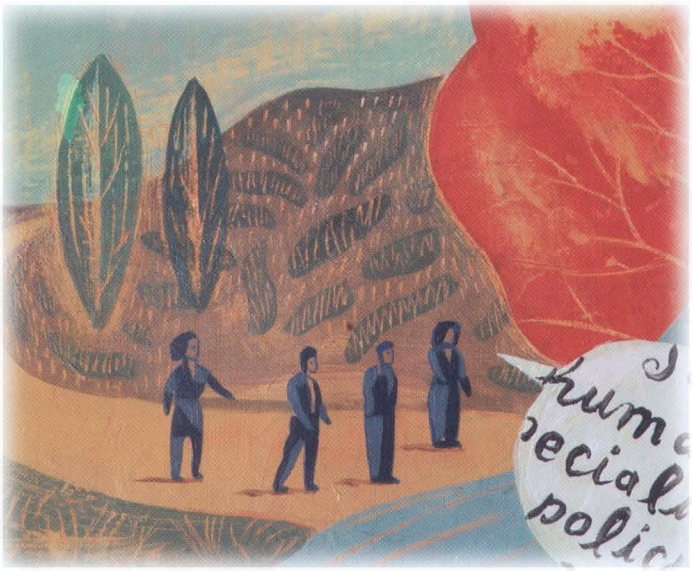
Eco-Connections

An Academic Plan initiative unites faculty in collaborative, interdisciplinary efforts to address environmental issues

By Margaret Costello

ENVIRONMENTAL PROBLEMS SEEP THROUGH THE world regardless of boundaries. Pollution from power plants in China drifts thousands of miles and falls as acid rain in New York's Adirondacks. Health agencies regularly issue warnings about the consumption of various species of fish because of toxic mercury levels. Chemicals released from aerosol cans erode the ozone layer. Residue from water softeners leaks into groundwater and diminishes its quality. "These problems demand the expertise not only of scientists, but also of lawyers, policymakers, economists, engineers, and specialists concerned with human values and behaviors," says Rachel May, director of the Office of Environment and Society, a collaborative effort of Syracuse University and the State University of New York College of Environmental Science and Forestry (ESF). "In the environmental field, there are few, if any, questions left that aren't interdisciplinary. The human impact on every ecosystem in the world is undeniable. The natural, political, and cultural forces affecting the environment are all related, and the only way to make progress is by looking at all of these factors together."

The mission of the Office of Environment and Society is to do just that: integrate disciplinary perspectives to address global environmental problems and to promote research in such key areas as water resources, biodi-



versity, human and built environments, and climate change. The office is an offshoot of the EnSPIRE (Environment and Society: Partnership for Interdisciplinary Research and Education) committee, an initiative of the University's Academic Plan. Among the committee's accomplishments this year were establishing the office and hiring May as its director. May's background as an internationally known scholar in Russian language and translation studies and her recent research and teaching in urban ecology help bridge the divides between academic disciplines and between a private and a public institution. Much of what May does is intellectual matchmaking. Throughout the year, she organized meetings and seminars that gave faculty members from diverse fields opportunities to talk about their research with each other. "My main goal is to promote collaboration among faculty from the different schools at SU and from ESF," May says. "The faculty members are very excited, and a number of connections were made."

In addition to creating more opportunities for personal interactions, the EnSPIRE committee developed web resources for faculty members and students from both institutions to seek out interdisciplinary collaborations. The committee launched a web site (*enspire.syr.edu*) that it hopes will be a primary source for information on environmental courses, lectures, and events on the two campuses. The site features an electronic newsletter that contains information about grant competitions and application guidelines, profiles of faculty interested in environmental issues, and details about upcoming events. It also contains an online directory, listing more than 160 SU and ESF faculty members and their particular environmental interests. "We needed an easy way for students and faculty to become better informed about the environmental courses and programs offered here," says committee member Rosemary O'Leary G'88, a public administration professor at the Maxwell School and a former environmental lawyer for the state of Kansas. "We have two campuses that are rich in environmental expertise, but we're scattered all over. For example, one of our best environmental law scholars, Elletta Callahan G'84, teaches at the Whitman School of Management. But who would look in management for a law class? We are trying to pull all these people together."

PLANTING A SEED

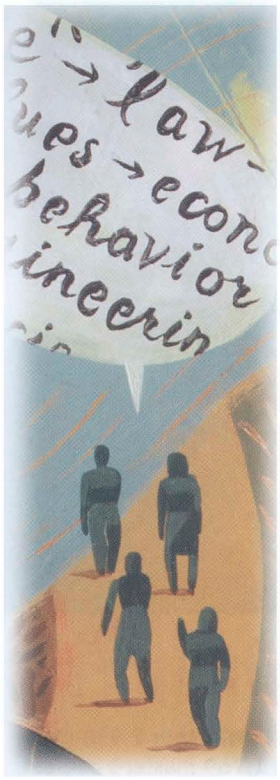
This year, the Office of Environment and Society initiated a seed grant competition to encourage faculty collaborations. Interdisciplinary research teams received awards of up to $25,000 to help develop research proposals to apply for large external grants from such organizations as the National Science Foundation (NSF) and the Environmental Protection Agency. "The seed grant program is an impressive and groundbreaking initiative because it involves the support of two institutions," says Alumni Associate Professor and EnSPIRE chair Geoffrey Seltzer of the Department of Earth Sciences in the College of Arts and Sciences. "Its creation helps develop the culture of collaboration and interaction between the institutions."

Vice Chancellor and Provost Deborah A. Freund has been working for several years to build this collaborative culture on the Hill. She says the seed grant program empowers faculty members to take risks and initiate partnerships. "If you look back in time, what was viewed as way out 30 years ago is old news today, so you have to be willing to push those boundaries of comfort through interdisciplinary activities," Freund says. "Faculty must be encouraged to pursue multidisciplinary work and be given time to talk about it. With talk comes understanding of other people's disciplinary language and methods. From there, you build trust and acceptance. Then the sparks start to fly and good things happen."

CHANGES TAKING ROOT

When religion professor Ann Grodzins Gold of the College of Arts and Sciences heard about the seed grant competition, she began to brainstorm ideas for collaboration. For years, Gold had been interested in studying the ties between environmentalism and religion in India. One phenomenon that interests her is "sacred groves"—mostly small areas surrounding shrines to Hindu deities—where trees and other forms of life remain protected in spite of heavy deforestation outside the groves' boundaries. "Some people have seen this as a religious or cultural way of ensuring environmental sustainability," says Gold, who has dedicated her career to studying Hindu traditions in a village in northern India. "Right now, there's great debate on whether sacred groves are the havens of biodiversity. Scientists are out there now comparing trees and other life forms in the groves with those in government forests and elsewhere."

Gold believed working with such scientists would inform her work on the cultural and religious implications of these ancient groves. Through the networking of Rachel May, Gold connected with ESF biology professors Jose Fragoso and Kirsten Silvius. "They had a proposal on biocomplexity in the Amazon and were interested in working with indigenous peoples in Brazil to explore the relationship between religion and conservation," Gold says. "I've been doing research on religion and the environment for 10 years, but not in the Amazon. I would really



learn a lot from talking with people there about how religious practices and values are linked to their use of the environment."

The Amazon biodiversity project was one of two proposals that received seed grant funding. The project demonstrates how EnSPIRE's seed grant program is helping forge new connections, while strengthening existing collaborations. The second grant was awarded to a team led by Myron Mitchell, an ESF environmental and forest biology professor, and University Professor Charles Driscoll of the civil and environmental engineering department at the L.C. Smith College of Engineering and Computer Science. They hope to develop an interdisciplinary graduate program in water resources. "Each campus has a strong water resources program, but if you put the two programs together, the strength becomes really significant," Mitchell says. "This kind of collaboration is a great way for students to learn, and also to recognize that there's a broad community associated with their areas of interest. It's clear that students are looking for this. We have complex problems that cannot be solved by disciplines working in isolation."

For example, if a scientist discovers that acid rain is destroying spruce and maple trees, killing fish and other wildlife, and contaminating freshwater sources, that knowledge alone does little to correct the problem. The issue must be articulated effectively to members of the public, who then can demand action from policymakers and legislators. "You can't expect scientists to do all these things," Mitchell says. "They have limited capacity. These efforts need to be supported by those people who can do the job—politicians, journalists, economists, and others."

Students understand that environmental work requires knowledge in several areas, which they can explore through joint degree or interdisciplinary programs, such as the one imagined by the water resources project team. The team intends to apply for NSF's Integrative Graduate Education and Research Traineeship Program award, which would fund several graduate students, a lecture series, and research in the interdisciplinary field of watershed analysis. Project team members are excited about integrating not only diverse academic fields, but also studying New York's various water resources. These areas include pristine waters such as some found in the Adirondacks, rural, urban, and suburban systems, as well as Onondaga Lake, the Finger Lakes, the Hudson River, and the Great Lakes. "The power of a new graduate program in water resources could be in linking the study of these systems," Mitchell says. "The future of environmental research lies in the collaboration of people who have different expertise and approaches. Having the opportunity to do this is exciting for our students and faculty."

REAPING THE BENEFITS

During this academic year, EnSPIRE laid the groundwork for bigger and better projects in the future, especially with the launching of the seed grant competition. "Hopefully, these seed grants will also yield positive results in securing external grants, thus showing that they are an effective investment," Seltzer says. "Our challenge is to capitalize on the momentum that was developed this year and to build from there."

Many faculty members involved with EnSPIRE are already brainstorming ideas for future activities. The committee was inspired by the turnout for a speech by environmental activist Robert F. Kennedy Jr., who appeared as part of the University Lectures series at the committee's suggestion. "Kennedy did a tremendous job at uniting some of the different perspectives about water resources and has a good grasp of the science because he works so often with scientists," May says. "We would like to bring in other speakers to address such issues as biodiversity, indoor air quality, and climate change." In addition to a speaker series, the committee hopes to develop a center to support faculty members who want to team-teach or create interdisciplinary courses.

Most importantly, the committee wants to continue encouraging faculty members to look outside of their individual disciplines and find areas for collaboration. "Interdisciplinary research, like what we're doing with EnSPIRE, is a big puzzle," O'Leary says. "We need to look at the cultural, ethical, historical, scientific, and policy pieces. If you leave a piece out, then you don't have the complete picture. We have incredible potential, but we need to think big." This cultural change is beginning to happen on campus. "I've made connections with faculty at other schools and ESF and attended two workshops this spring," says College of Law professor David Driesen, an environmental law expert. With some support from EnSPIRE, he organized the Economic Dynamics of Environmental Law and Static Efficiency Conference at the law school last fall. "Several of the participants from our campus were involved because of connections made through EnSPIRE," says Driesen, who serves on the committee.

For Ann Grodzins Gold, the opportunity to work with EnSPIRE has infused her with new enthusiasm and a desire to broaden her research. "Interdisciplinary work is always a challenge," she says. "As somebody who has spent an entire research career working in the same little village, it's a big deal for me to go to another place in India. So to go to a completely different culture, where I don't know the language, is quite daunting, and it's also exciting. The Amazon project is a completely new turn and will expand my horizons enormously—not only in terms of geography, but also in my ability to collaborate with natural scientists. We hope the project will make a real contribution to understanding sustainable ecologies in the context of complex cultural worlds."