

PHILANTHROPY

Students receive CEP awards

Seven Carolina undergraduates have received 2004/2005 awards from the Carolina Environmental Program to help them cover expenses associated with attending CEP field site programs



(left to right) Larissa Bulla, Patty Perrino and Cara Sipprelle, shown here at the North Carolina Aquarium on Roanoke Island (Manteo, N.C.) all received awards to attend the Fall 2004 session of the CEP Albemarle Ecological Field Site.

Brooke Willis and Cara Sipprelle have been designated as the 2004/2005 Colley Scholars. The Colley awards are for students interested in studies involving coastal North Carolina and attending the Morehead City Field Site and the Manteo, N.C.-based Albemarle Ecological Field Site. The Colley Award was established by Ann Colley of New York, New York, who has a longstanding interest in the North Carolina coast.

Allison Osborne has received the 2004/2005 Glaze Award to study at the CEP's Thailand Field Site. This award was established by founding CEP Director Bill Glaze, who retired in 2002.

Larissa Bulla and Patty Perrino each received awards from anonymous donors to attend the Albemarle Ecological Field Site.

Andrew Roe and Shelly Rogers have been designated as Ella Ann and Frank Holding Environmental Scholars, an award that provides funds to allow students to pursue internships at the Highlands Field Site. The Holding Awards were established by a grant from the Ella Ann L. and Frank B. Holding Foundation.

"These awards are wonderful because they allow our students to really focus while at the sites and to get the most out of the experience," said Greg Gangi, the CEP's director for student affairs. "The field sites are very intensive, and we want students to be able to dedicate as much time to their coursework, internships and research as possible, rather than having to hold down a job while they are there. As a result, new opportunities have opened up for many of our students."

Andrew Roe, a junior environmental science major, was excited and honored to hear that he had been selected to receive a Holding Award. "The Holding Award allowed me to focus all of my time and effort toward my studies and my internship with the Highlands-Cashiers Land Trust. The award has also made it possible for me to study and research environmental issues in New Zealand this semester at the University of Otago at Dunedin. I greatly appreciate Olivia Holding and the Holding family's thoughtful contribution to support the education of environmentally concerned students." ■

Carolina Environmental Program

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Upcoming 2005 CEP events

The 2005 Robert and Helen Siler Distinguished Lecture
UNC Department of City and Regional Planning:

A Contract With Our Future

featuring Robert F. Kennedy, Jr.

APRIL 20, 2005 • 7:30 PM
Auditorium, Sonja Haynes Stone Center
for Black Culture and History, UNC-Chapel Hill

Co-sponsored by the Carolina Environmental Program,
the James M. Johnston Center for Undergraduate Excellence
in Graham Memorial, and the Campus Y.

Free and open to the public, but reservation required
(919-966-9922) due to limited space.



Robert F. Kennedy, Jr.

CEP Annual Commencement Reception

MAY 15, 2005 • 1:00 PM
Miller Hall Lawn, UNC-Chapel Hill

Speaker: NC DENR Secretary Bill Ross

At Carolina, It's ... Water, Water, Everywhere *(continued from front page)*

mental outcomes such as spontaneous abortions. We are examining that linkage to see if it is real or not. When we announce our results in a few months, it is likely to have a significant impact nationally and internationally on the practice of water chlorination."

Across campus, the Environmental Finance Center (EFC), based in the School of Government, advises local and state governments on how to pay for environmental programs, including the financing of water and sewer services. One of nine environmental finance centers around the country, Carolina's main focus is water quality: drinking water, wastewater and, increasingly, storm water management.

"There are a lot of people working on water issues in North Carolina, but before we established this center, no one was focusing on the applied finance side," said EFC Director Jeff Hughes, an expert on water and wastewater treatment.

EFC faculty and staff look at everything from how to pay for upgrades to antiquated drinking water and wastewater treatment systems, to how to run lines to and from areas currently served by wells and septic systems that no longer work prop-

erly or aren't safe.

Hughes offered an example of a typical environmental finance challenge: "There has been a growing realization that the level of treatment at many of our country's wastewater plants may be inadequate. In addition, a lot of the sewer lines in towns and cities are falling apart and need to be improved. Addressing these issues will improve water quality, but won't always provide easy-to-see benefits to consumers. Unlike water and sewer system extensions, projects to correct these types of problems also do not generate additional revenue from new customers. In these cases, the Environmental Finance Center works with utilities to find grant money or commercial loans to get the capital they need, and to help them determine how to convey that cost back to the customer in an equitable manner."

When it comes to water, Carolina has come a long way, said Crawford-Brown. "The School of Public Health is no longer the sole place where water quality and quantity are being discussed on the campus. We do everything here. As far as water is concerned, UNC is back at the forefront, and that's where we intend to stay." ■

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RESEARCH

At Carolina, it's... Water, Water, Everywhere

UNC-Chapel Hill's expertise in water studies is stronger – and more interdisciplinary – than ever, and is benefiting from a renewed focus on this traditional strength



UNC faculty and students conduct water quality and quantity research on a world-wide basis.

Throughout history and throughout the world, water quality has been – and continues to be – one of the most pressing environmental issues we face. Recently, as development in watersheds has increased, water quantity, too, has become an important issue.

The environmental community at the University of North Carolina at Chapel Hill grew out of issues of water

environmental expertise into new areas such as air quality, health effects, environmental policy and marine sciences. While our water programs remained strong, emphasis was placed on developing these other areas. In the past two years, however, the university has renewed its commitment to water studies across the campus. The decision couldn't have come at a better time, said Carolina Environmental

Program Director Doug Crawford-Brown.

"After several decades without outbreaks of microbial diseases, people in the U.S. and around the world began to take water quality and quantity for granted. But we are starting to get outbreaks again, and running into problems of not having enough water in our watersheds. We now realize that these water issues never really went away: they're coming back to bite us because we haven't been paying enough attention. At UNC, we decided it was time for us to bring our focus on water back to the forefront and reemphasize this area where we have traditionally demonstrated world leadership."

Thanks to the development of new approaches to water issues across the Carolina campus, UNC's expertise in this area is stronger – and more interdisciplinary – than ever. The Department of Geography, for example, focuses on the effects of climate change on the availability of water in our watersheds. Two programs, in particular, illustrate the range of expertise now prevalent at Carolina.

The UNC Drinking Water Research Center (DWRC), directed by global drinking water authority Philip C. Singer, draws upon the university's long history of leadership in this area. Based in the School of Public Health, the DWRC brings together faculty from across the Carolina campus and at neighboring universities who are working on everything from characterizing chemicals and microbes in the water; to assessing the health impacts of those contaminants and developing technologies to remove them; to designing new distribution and treatment systems; to evaluating the management of these systems.

DWRC faculty work closely with the U.S. Environmental Protection Agency, American Water Works Association, Centers for Disease Control and Prevention, state regulatory agencies and water utilities. Internationally, they advise the World Health Organization, World Bank and other agencies on how to address drinking water issues, particularly in developing countries.

Researchers affiliated with the DWRC are finishing up a \$3.5 million, five-year study of the effects of disinfection byproducts in drinking water and their potential linkages to miscarriages. The study is jointly funded by the American Water Works Association Research Foundation and the EPA. According to Singer, who is a co-principal investigator: "When we chlorinate drinking water to protect us against pathogenic microorganisms, the chlorine also reacts with organic material in the water to produce low levels of compounds that have been linked to bladder cancer and to certain adverse reproductive and develop-

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Carolina Environmental Program

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Students dive into water quality issues

When it comes to water studies, even Carolina students are getting into the act. Graduate students are involved in research projects across campus and, in one of this year's undergraduate Capstone projects, a team of senior students focused on how leaking septic systems in communities in the Neuse River watershed are affecting water quality. The goal of the three-year project, which will be continued by other student teams, is to develop a plan for the Neuse River Basin and other basins that will reduce the impact of harmful microorganisms on human health.

This fall's team conducted a case study in Mebane, North Carolina, which includes an historically black community that has not received the level of sewage services available in much of the rest of that city – a situation that can lead to a significant level of microbes in the water and adverse health effects from exposure.

Becky Burns, a senior Environmental Studies major, was on the Capstone team. "Our group researched a variety of topics, including microbe types and sources, wastewater treatment, hydrology and environmental justice. It was interesting to watch the project progress as we went from broad to specific ideas, and it was valuable because it allowed me to spend an entire semester working with a group on an important environmental issue." ■

E D U C A T I O N

‘Nothing besides nature’

Mountain trails and ocean floor are classrooms for unique undergrad courses

By day, they hike through the spectacular Sierra Nevada mountains. Over lunch and dinner, they gather around the campfire to discuss biodiversity and mountain systems.

Not a bad way to study the environment.

It’s exactly what Professor Greg Gangi envisioned when he created a Burch Field Research Seminar called “The Walking Classroom: a Study of the Sierra Nevadas,” a unique, hands-



Photo by Andy Gerschutz

A UNC student investigates coral reefs in the U.S. Virgin Islands.

on summer learning experience that combines two Environmental Studies courses taught primarily along the trail. “We sometimes complain about the lack of an intellectual milieu on campus, and students have so many diversions, that I thought the idea of actually creating a classroom experience where there’s nothing besides nature would be an interesting experiment.”

And a successful one. Last summer, Gangi led

his second Sierra trip. He and three graduate assistants guided 24 Carolina students, including several incoming freshmen, as they backpacked 300 miles through one of America’s largest continuous wilderness areas. The Sierras showcase some of the greatest natural diversity and splendor in the world, including one of the world’s highest waterfalls and the bristlecone pines, considered the world’s oldest living organisms.

Before departing on the trip, students were required to complete a series of reading and writing assignments, including preparing presentations and concise summaries of books they’d discuss on the trail. Over the course of the six-week trip, instructors led curricula that focused on the natural history of the Sierra Nevadas and environment and society in the U.S.

“Academically, the students learned a lot about different aspects of biodiversity, particularly as they apply to the Sierra Nevada mountains and mountain systems in general,” Gangi said. “In addition, our goal was to build a strong sense of community within the Carolina Environmental Program, and inspire students to pursue environmental careers.”

Andrew Roe, a junior Environmental Sciences major who went on the trip in 2003, called it “one of the greatest experiences of my life. It’s one of the few classes where you actually get to get out and see the things you’re learning

about, from biology and stream ecology, to the politics of water issues.”

Each spring, Gangi also leads a popular class about coral reefs that culminates in a spring break trip to the Virgin Islands National Park in St. Johns, U.S. Virgin Islands, to snorkel amid the coral reefs.

“On this trip, students get to see the most diverse – and the most threatened – ecosystem on the planet,” he explained. “They get to spend time in a very beautiful place, while it plants a seed that we need to change our relationship with the planet – and I’ve seen that seed grow in a lot of students.”

For junior Caroline Jacobini, the coral reefs trip inspired a change in the direction of her studies. “Going to St. Johns made me realize how much I care about the environment, and that I want to focus my career on preserving it. It opened my eyes to different possibilities, especially toward the environment and sustainable development, so I decided to change my major to environmental studies and business.”

“These trips have really opened up the world for the students who go on them,” Gangi noted. “Going out to these places really inspires them and reminds them why they’re studying the environment. They become a lot more creative in thinking about what they might do with their lives.” ■

IN MEMORIAM: *Frances Lynn*

CEP, university, state loses pioneering environmental advocate, activist, scholar

The environmental community lost a dear friend and advocate on January 18th with the passing of Dr. Fran Lynn after an extended and valiant battle with cancer.

A pioneer in academia and environmental outreach, Fran was a faculty member in the UNC-Chapel Hill School of Public Health. Her vision and commitment led to the creation of UNC’s Environmental Resource Program (ERP), now part of the CEP, which she directed since its inception in 1985. She also served as associate director for outreach and public service for the Carolina Environmental Program and was an important figure in shaping the CEP’s identity.

“Fran built the link between research and public service that has been the CEP’s hallmark,” said Pete Andrews, former director of the Institute of Environmental Studies – the CEP’s predecessor – who hired Fran in the early 1980s when she completed her doctorate in health policy and administration. “When I met her, I was immediately taken by her intel-

lect, her creativity and her clarity of career focus. She had a passion to bring the university’s research and expertise to the needs of underserved communities all over North Carolina. To do this effectively, she built the Environmental Resource Program, and she persuaded several foundations to support this work for many years.

“Fran laid the groundwork for many things that the CEP went on to do, from the field sites that offer a combination of research, teaching and public service, to the Sustainable North Carolina project that she spearheaded, to the strong leadership role she played in the CEP and ERP’s outreach to eastern North Carolina in the wake of Hurricane Floyd. Through her 20-plus-year career at UNC, Fran was a wonderful example of the kind of spirit this university aspires to.”

The last major project Fran worked on at the CEP was to design the Sustainable Triangle Field Site, which will be dedicated in her memory.

“Fran was always interested in going into communities, hearing what their problems were, and then coming back to campus and finding ways to bring the resources of the university out to those communities,” said CEP Director Doug Crawford-Brown. “Her vision was to create a field site where students, faculty and community groups would get together to tackle problems, particularly of sustainability, in the Triangle area. This new field site embodies what Fran stood for here, which is that intersection between communities and the university.”

Fran was a mentor to many Carolina students and staff members. Many who had the privilege to work with Fran went on to lead other environmental organizations.

Fran will be greatly missed by her friends, colleagues, students and the many people she worked with around the state to help her fellow North Carolinians understand and address pressing environmental issues.

“Fran built the Environmental Resource Program as a way to make sure that people who had not been sufficiently at the table in environmental decisions were not only at the table, but had the resources to participate in those decisions.”

Doug Crawford-Brown

E D U C A T I O N

CEP appoints new curriculum chairs

In September, Carolina Environmental Program Director Doug Crawford-Brown appointed two members of the Carolina Environmental Faculty as co-chairs of the Environmental Science and Studies Curriculum. Within this curriculum, the CEP provides two undergraduate degrees: the BA in Environmental Studies and the BS in Environmental Science.



Phil Berke, professor of land use and environmental planning in UNC's Department of City and Regional Planning, now heads the BA in Environmental Studies.

"Phil works solidly in the environmental area, but also deals with issues of planning and the design

of future communities," Crawford-Brown noted. "By bringing his perspectives to the BA degree program, we can train students not just to bemoan past environmental problems, but to think about how they can design communities of the future to avoid these problems."

Berke said he looked forward to "attracting more students to environmental courses from across the spectrum of programs in the university, and to enhancing the use of analytical skills and the application of advanced technologies throughout the curriculum."



Jose Rial, professor of geophysics in the UNC Department of Geological Sciences, is leading the BS in Environmental Science, which he aims to make as scientifically sophisticated and challenging as possible.

"The CEP is the best thing that ever happened to interdisciplinary science instruction at UNC, so I welcomed the opportunity to help develop the curriculum," Rial said. "I also welcomed the challenge to help the program excel in instruction, research and outreach. I envision the CEP growing to become a school of the environment that will rival any other."

According to Crawford-Brown, "we wanted to link the BS degree more closely to the fundamental science disciplines, and to engage science students in debates

about major environmental issues. Jose is a strong scientist, and he also has a very strong interest in reforming undergraduate science education."

By bringing in these two co-chairs, Crawford-Brown said, "it spreads the responsibility for running the CEP's undergraduate degrees across campus and brings in two people who have a real passion for educating undergraduates. Having these two environmental specialists at the helm also connects our students more directly with graduate and professional opportunities in these areas." ■

P H I L A N T H R O P Y

Six join CEP Board of Visitors

This fall and winter, six men and women who share a strong commitment to environmental education, research and public service joined the Carolina Environmental Program's Board of Visitors to provide counsel and support to program leaders

Mimi Cecil is a familiar figure in the world of nonprofit leadership, especially in the areas of education, social inequities, the environment and the arts. A graduate of Vassar College and the University of Michigan Law School, Mrs. Cecil moved to Asheville in 1960 when her husband took over the management of Biltmore Estate, and she has been a dynamic force in our state ever since. In addition to the CEP, Mrs. Cecil has actively supported a number of environmental organizations, including the National Forest Foundation, Environmental Defense, Friends of the Smokies and the National Parks Conservation Association.

Charles T. "Chip" Hagan III, of Greensboro, is a partner at the law firm of Nexsen Pruet Adams Kleemeier, PLLC. He received his BA degree in economics from UNC-Chapel Hill in 1970 and his JD from Wake Forest University in 1977. He has been active in Leadership Greensboro and helped to form the Greensboro Venture Capital Fund, a loan fund for minority- and women-owned businesses. He serves on the boards of several Greensboro nonprofit organizations. In 1994, he helped form Leadership North Carolina, and remains on its Board of Directors.

Representative Daniel "Danny" McComas is a member of the North Carolina General Assembly, representing New Hanover County District 19 in the southeastern part of the state. He has been elected to five terms in the House of

Representatives, where he has served on several committees, including those overseeing finance, appropriations, ethics and environmental and natural resources. Rep. McComas is president of MCO Transport, Inc. of Wilmington. He serves on the board of directors of the Coastal Land Trust, the UNC-Wilmington Institute of Political Leadership, the NC Trucking Association and several other organizations.

Jim Parrott, of Raleigh and Kinston, is owner and president of Parrott Farms, Inc., a 200-year-old farm outside of Kinston. He has long been involved in forestry issues and serves on the Forestry Foundation Board for the School of Natural Resources at North Carolina State University. A former treasurer of the N.C. Museum of History Associates in Raleigh and board member of the North Carolina chapter of the Forest Landowners Association, he also participated in the Governor's Task Force on Forest Sustainability. Parrott Farms timberlands are certified by the American Tree Farm System and the N.C. Stewardship program and the farm served as a demonstration site in the Neuse River Crop Management Project from 1998 to 2002. Mr. Parrott is a 1969 AB graduate of UNC.

Trip Van Noppen is director of the Carolinas Office with the Southern Environmental Law Center (SELC), a nonprofit

legal advocacy organization with expertise in environmental law and policy across the Southeast. Before January 1998, he was a partner in the law firm of Patterson, Harkavy & Lawrence in Raleigh. He graduated with a BA from Yale University in 1975 and from UNC School of Law in 1980. His work with SELC emphasizes environmental litigation across many issues, including water quality, wetlands and coastal development. In his private practice, Mr. Van Noppen represented landowners and citizens groups in controversies regarding the location of hazardous waste incinerators, solid waste landfills and industrial facilities, and victims of pollution damage. He is a frequent speaker on environmental law topics.

John Wilson IV is the mayor of Manteo, North Carolina, a post he holds for the second time since 1979. An architect in his own firm, he at one time worked in the Office of the Architect of the Capitol in Washington, D.C. He holds degrees from George Washington University, Harvard and North Carolina State. Mayor Wilson has long been active in many environmental and preservation organizations in the state, including the Eastern Seaboard Trust, Manteo Preservation Trust, Governor's Coastal Futures Committee, Outer Banks Conservationists, Roanoke Island Commission, Historic Preservation Foundation of North Carolina and The Nature Conservancy. ■