

ENVIRONMENTAL SCIENCE & POLICY
WILLIAM & MARY
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WE NEED YOUR SUPPORT

Directing an expanding program during a time of federal and state budget cutbacks is a less-than-zero-sum game. For Environmental Science and Policy, we have been fortunate, indeed, to have had past funding for various program initiatives provided by the Andrew W. Mellon Foundation. Most recently, Mellon funded the creation of our new Center for Geospatial Analysis in Swem Library, and seeded the endowment of our innovative environmental post-doctoral program. The post-doctoral scholars function as junior faculty and are mentored by established faculty from separate disciplines as they hone their teaching and research skills with ENSP undergraduates. Our first scholar—Dr. Yuehan Lu—has completed almost two years with W&M and currently is interviewing for faculty positions. Our second scholar—Dr. Chris Marcoux—has completed one year of teaching and research at W&M and has a full slate at the College scheduled for 2010/11. Finally, our third scholar—Jes Therkelsen—will be joining W&M in Fall 2010. With a new scholar every year, the Mellon Environmental Post-doctoral Scholars program provides fresh faces, cutting-edge research, new courses, and exciting collaborative opportunities for students and faculty in Environmental Science and Policy.

The Mellon scholars program infuses ENSP annually with new teaching and research perspectives, but we still need to raise the matching funds to permanently endow the program. Any commitment you can make to us, no matter how large or small, is an important addition toward satisfying our obligation to meet the Mellon challenge and endow the program in perpetuity. Time is of the essence—we need your support now to make the Mellon scholars program a permanent fixture of Environmental Science and Policy.

So please contact the director of ENSP directly (jpswad@wm.edu) and/or use the online giving tool to help us continue our extraordinary growth. A small amount of annual giving can go a long way. You can give to ENSP directly at www.wm.edu/as/environment/support/index.php

Thank you for your ongoing support of our Environmental Science and Policy Program!

Randy Chambers
ENSP Acting Director

A female diamond-back terrapin eyes the open water




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The College of
WILLIAM & MARY

downstream

A NEWSLETTER FOR FRIENDS OF WILLIAM & MARY AND THE ENVIRONMENT



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WE NEED YOUR SUPPORT

2010:1



from the (acting) *director's chair*

My spring 2010 term as acting director fortunately was a short one, but I was audience to a tremendous year of activities in Environmental Science and Policy. Thanks in large part to preparatory efforts by ENSP director John Swaddle in 2009, the program has run fairly smoothly while he was on leave during spring. No one, however, looks forward to his return for fall 2010 more than I!

This year's newsletter—as in prior years—highlights an expanding Environmental Science and Policy program in transition. We will be graduating some 45 students in 2010 with degrees in ENSP, and the interest in environmental activities across the College continues to grow. In addition to new faculty (Brent Kaup in Sociology), we have just hired our third Mellon Environmental Post-doctoral Scholar to participate in undergraduate instruction and directed research. Our new Center for Geospatial Analysis (CGA) quickly has become a hub for interdisciplinary scholarship by the William and Mary community. In its new location in Swem Library, CGA fits nicely into both ENSP's scholastic mission and the library's broader objectives for data archiving, management, and analysis.

The College's new sustainability initiative largely is driven by undergraduates, many of whom are ENSP students. The "green fees" collected annually from students support various research and educational programs designed by students to explore ways to improve environmental performance. A new campus rain garden, experimental green roofs, public transportation analysis, and social choice initiatives are just some of the projects involving our ENSP students, some of whom also sit on sustainability working groups and advisory committees.

This spring, ENSP underwent program review by a group of faculty from other undergraduate institutions. The reviewers only had time in their schedule to meet with faculty, but came away from those interviews convinced that our students—through coursework, seminars, independent study, and internships—are given opportunities to confront the different perspectives,

scales, and methods of analysis brought to bear on environmental problems across disciplines. The external review validates our approach to environmental studies as a secondary major: we remain committed to giving our students a broad, holistic, interdisciplinary understanding of environmental issues to complement the more traditional, in-depth knowledge derived from their primary major.

Finally, we are losing two of our faculty in 2010. First, our "governess of environmental governance"—Maria Ivanova—is leaving to pursue other opportunities for her family in the U.S. or Europe. Maria brought a unique skill set with an international flair to our environmental program; she will be missed by both colleagues and students alike. Second, the walking library—Dennis Taylor from VIMS—is taking retirement to pursue well-deserved relaxation time wherever he can find it. In one course or another, Dennis probably has taught virtually every ENSP graduate over the last eight years, and we cannot overstate his value to our program. We wish both our colleagues well in their new pursuits.

Enjoy the newsletter—and if you're so inclined, tell Downstream from W&M what you're doing: web.wm.edu/environment/alumniupdate.php

by RANDY CHAMBERS, Acting Director of ENSP and Director, Keck Environmental Lab



Sittin' on the dock by the lake.



TONYA BOONE, *Environmental Business Management*



Cindy Bakert

Tonya Boone

Some of the hottest jobs in the environmental field are those in business management, so we are lucky, indeed, to have Tonya Boone as an ENSP program collaborator. With a Ph.D. in Operations and Technology Management from the University of North Carolina at Chapel Hill's Kenan-Flagler School of Business, Professor Boone joined the Mason School of Business in 2000. Prior to joining the faculty of the College of William and Mary, she was a faculty member at the Fischer College of Business at Ohio State University. Professor Boone has taught courses in Operations Strategy, Sustainable Business Operations, Quality Management, Systems Analysis, and Technology Management. She has been actively involved in the College Environmental Science and Policy (ENSP) program, and since 2007 has served on the ENSP executive committee.

Professor Boone draws on her undergraduate experience as an engineer in developing research projects. One stream of her research focuses on professional service environments—the role of experience, technology, and network relationships in supporting organizational performance. Currently, Dr. Boone is working on several projects including: sustainable product design; service supply chain strategies; inter-organizational knowledge transfer; and diffusion of environmental innovations. Dr. Boone's work has been published in some of the top academic management journals, including *Management Science*, *Journal of Operations Management* and *Decision Sciences*.

Professor Boone's special topics course, entitled Environmental Consulting (BUAD 492), joins the ranks of Sustainable Commerce and the Seas, Sustainability & Green Supply Chain (BUAD 480), and several other environmentally-minded courses offered by the Mason School of Business. In it, both ENSP and business school students act as consultants for local businesses, engaging them in projects dealing specifically with aspects of sustainability. Businesses that participated in the course's exchange include Aromas, Harbor Coffee, Morrison's Flowers, and The Green Leaf, as well as internal programs such as William and Mary Residence Life and campus dining services.

The class's major components are twofold. Using case studies of businesses – such as Ikea and Wal-Mart—students develop a better understanding of the consulting process and how to manage the consulting dialogue, yielding a positive experience for both the consultant and the firm.

In her course, Dr. Boone also addresses how sustainability manifests itself in business settings and how businesses implement and manage sustainability projects. Guest lecturers, such as speakers from the Virginia Department of Environmental Quality, provide valuable information on Commonwealth programs and policies, such as the Virginia Green Program that looks to reduce the environmental impacts of Virginia's tourism industry, and the Virginia Environmental Excellence Program that acknowledges organizations demonstrating excellence in environmental management systems. For the aspiring Business/ENSP double major, Dr. Boone's courses and mentoring are stepping stones toward professional development—and green jobs!

by CHRIS MAGGILO '10



Joel Pattison

*The Mason School of Business,
Miller Hall*



BRENT KAUP, *Environmental Sociology*

Our newest ENSP faculty member is Assistant Professor of Sociology Dr. Brent Kaup. Dr. Kaup studies how changing patterns of capital accumulation intersect with human uses and perceptions of nature. He examines the financial, material, and geopolitical factors that drive global increases in natural resource extraction and the effects such increases have upon power, autonomy, and resistance.

The broader impetus driving Dr. Kaup's work is to study, and potentially resolve, contemporary social and environmental problems. His most extensive work to date examines the socioeconomic and ecological challenges faced by the Bolivian state and its people as both have attempted to enhance their power and autonomy in a globally interdependent economy. In particular, Dr. Kaup has examined the struggles between the Bolivian state, its social movements, and trans-national energy firms to control—and reap the benefits from—the oil and natural gas reserves that lie beneath the country's soil.

More recently, Dr. Kaup has begun work on two new projects. In the first, Dr. Kaup is seeking to explain what drives changes in the markets of energy-producing natural resources by analyzing the struggles of trans-national energy firms, energy producing regions, and energy demanding regions to incorporate different sources of fuel into the global energy market. He intends to determine how these actors have worked and are working to restructure the political, economic, material, and environmental regulations governing the extraction, transport, and use of energy producing natural resources throughout the globe.

For his second new project, Dr. Kaup intends to complete a study of the privatization of garbage. Over the past twenty-five years, garbage collection has increasingly changed from a public provision to a private service. During this time, the garbage industry has become more consolidated and the size of dumps has dramatically increased. Through this project, Dr. Kaup will explore how the privatization of garbage collection, the consolidation of the garbage industry, and birth of mega-landfills have affected the people and places who are “down in the dumps” at the end of the trash commodity chain.

Dr. Kaup joined the College of William & Mary in August 2009 after completing his doctoral studies in Sociology at the University of Wisconsin – Madison, where he also received his Master's degree. Prior to pursuing his graduate studies, Dr. Kaup was based in Eugene, Oregon where received his Bachelor's degree in History and Sociology. While in Oregon, Dr. Kaup developed a fondness for the outdoors and everything green—things he now finds in abundance just outside his own front door. There, he is often found pondering how many invasive species he has in his yard and whether or not the native mosses can win the struggle against exotic plants in nature's survival of the fittest. Clearly, Dr. Kaup is a worthy addition to our interdisciplinary environmental science and policy program!

by CHRIS MAGGIOLO '10



*Assistant Professor of Sociology,
Brent Kaup*

JES THERKELSEN, *Mellon Environmental Postdoctoral Scholar*

Successful environmental policy depends upon good science, but too often, that science remains trapped in laboratories, in a world of test-tubes and technical language. With this challenge in mind, W&M faculty mentors Sharon Zuber (Visiting Assistant Professor of English and Film Studies), Dan Cristol (Professor of Biology), and John Swaddle (Professor of Biology, Director of ENSP) created a project entitled “From Test-tube to YouTube: Communicating science using modern media.” These faculty set out to find a new Mellon Environmental Postdoctoral Scholar who could negotiate the intersection of science and the humanities, with the goal of teaching how to communicate good science beyond the laboratory and academy walls.

Enter Jes Therkelsen: filmmaker, photographer, media consultant and activist. After graduating from Amherst College in 2002 with a degree in Geology, he received a Fellowship to teach environmental science and English at Athens College in Greece. On his return to the U.S., he worked as a geologist for the New Jersey Department of Environmental Protection until 2005, when he relocated to Washington, D.C., to study film and media arts at the Center for Social Media at American University. Graduating with an M.F.A. in film and media arts, his work has screened worldwide and focuses on issues of human rights, sustainable development, and environmental justice.

Jes has written, produced, and directed several films. As a 2008 Advocacy Peace Fellow in Nepal, he initialized The Clean Hands Project (www.cleanhandsproject.com), a media campaign meant to empower and mobilize Nepali Dalits by teaching photography and videography. Teaching is one of his passions, and he claims to “thrive in creative and productive environments.” Jes’s photographs have been exhibited at numerous venues in the Washington, D.C., area, and he has won several awards and fellowships including being named a 2009 Washington, D.C., Artist Fellow and a 2010 Young Artist Grant recipient.

In addition to working with visual media, Jes is an avid musician, composer, and bicyclist. Jes Therkelsen is founder of Sensory Media Arts, a Washington D.C. - based media production company. He has also won the Roland Wood Fellowship three times, the Institute for Humane Studies Film and Fiction Scholarship twice, was a 2007 Flaherty Film Fellow and a 2006 National Gallery of Art Film Fellow. He has won a D.C. Peer Award and a CINE Golden Eagle.

The hiring of a scholar like Jes Therkelsen who is adept at communicating environmental science through visual media is timely as well as strategically important. Addition of a “cross-over” scholar to work with scientists and fine arts faculty and students adds a new collaboration to research and teaching within ENSP. Specifically, integrating filmmaking into ENSP expands the reach, relevance, and funding opportunities for William and Mary students and faculty and showcases the scientific/environmental work at W&M to a larger public audience. The title of the internal Mellon postdoc proposal—“From Test-tube to YouTube”—tells the story. Jes will oversee the conceptualization and production of environmental science educational films, but students will be responsible for researching, writing, and producing them as scholarly undergraduate research. Jes is a welcome addition to ENSP as our third Mellon scholar and we look forward to working with him!

by CHRIS MAGGIOLO '10



Jes Therkelsen in Biratnagar, Nepal



AGRICULTURAL LAND MANAGEMENT

Water Quality Impacts

Restoring and maintaining the health of the Chesapeake Bay is the focus of many William and Mary professors – especially those involved with the interdisciplinary Environmental Science and Policy program. It came as no surprise, then, that geology professors Jim Kaste and Greg Hancock decided to study the effectiveness of riparian buffers on preventing agricultural runoff from entering the Bay and its tributaries. Funded by Virginia Environmental Endowment, Kaste and Hancock now lead a team of undergraduates into the field, collecting samples and trying to determine whether the Virginia mandate of a buffer zone—one no smaller than 100 feet—is enough to make a difference in water quality.

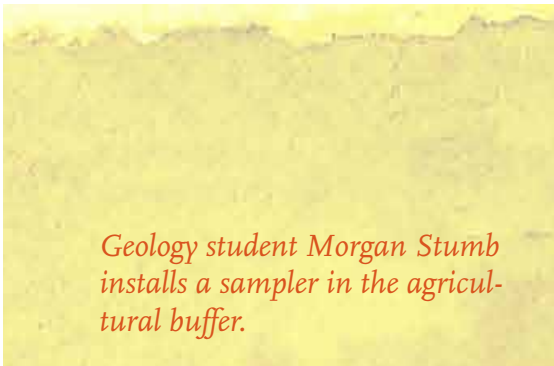
The team began by identifying the slopes of agricultural fields that border tributaries of the James and York Rivers—two watersheds characterized by short transport distances to the Chesapeake Bay. They then collected soil cores to a depth of 30 centimeters in both agricultural and riparian zones, analyzing them to determine whether levels of nitrogen and phosphorus are reduced as they pass into and through the buffer zone and into open waters. Additionally, Kaste and Hancock measured overland flow and sediment deposition using radioactive cesium that was deposited on the land during 1950s and 1960s, when atmospheric testing of nuclear weapons occurred. The cesium, spread evenly across the land's surface, acts as a marker through which post-1967 sediment movement might be tracked.

The group's initial research is occurring on four different farms on Virginia's Middle Peninsula. In addition, the team conducts work on two forested, control sites not affected by agricultural land use. Assisting Kaste and Hancock are Morgan Stumb '10 and Eric Newman '10, geology majors who are using the work as part of their senior honors projects. Stumb is focusing on the use of cesium as a tracer element in determining sediment movement from the farm fields through the forest. Newman is looking at the groundwater flow.

William and Mary's intimate, liberal arts environment fosters an interdisciplinary dialogue that is critical for projects such as this one. Hancock hopes that their work will help bring about changes in how people approach environmental problems – utilizing aspects of data-collection and observation to inform processes that have formerly relied heavily on speculation and planning on paper. Kaste and Hancock recognize the importance of a combination of social, scientific, and political approaches. The results and applications of their research will be presented in both professional and community settings. They also plan on writing white papers for non-scientific agencies and organizations and would like to publish their work in a peer-reviewed professional journal in order to reach a larger academic audience. A short video on the project may be found on the William and Mary website: www.wm.edu/news/stories/2009/riparianbuffers-013.php

"We may find some interesting things in a year or two," Kaste states in a December interview for a Faculty Feature, "and I have a feeling it's going to open up a few cans of worms here and there."

by CHRIS MAGGILO '10



GIS MEETS MERCURY

Tracking the Fates of a Toxic Chemical Release

During the spring 2010 semester, ENSP 204 and GEOL 204 students completed a class research project examining the environmental factors that contribute to mercury contamination in the South River watershed. The South River flows through Augusta and Rockingham counties as well as the city of Waynesboro near the Shenandoah National Park in Virginia. The mercury released during the 1930s and 1940s from a DuPont factory in Waynesboro remains a problem. Since the mercury was discharged into the water, contamination of the South River is obvious. Interestingly, investigators have determined that adjacent lands downstream of the factory are also contaminated with mercury.

The mechanisms that allow for the migration of mercury from the aquatic environment into the adjacent terrestrial environment and subsequent return of the mercury to the aquatic environment are not well understood. Despite it being 50 years since the last release of new mercury, high mercury levels are still found in the soil, sediment, fish, birds and insects in and around the South River. GIS students examined the environmental conditions of the South River floodplain in an attempt to explain the environmental factors contributing to the retention and recycling of mercury in this region.

Under the tutelage of Biology & ENSP faculty member Dr. Dan Cristol, W&M students visited the region in February to view the South River, the former DuPont factory, and myriad sample stations along the river. Over the past five years, Cristol and his students have uncovered evidence that aquatic mercury, once thought to be a problem only for fish and aquatic organisms, has migrated across the floodplain and is harming birds.

Working with data collected by consulting firm URS, the Department of Environmental Quality, and Masters students and undergraduates from William and Mary, students developed GIS projects in the new Center for Geospatial Analysis that addressed questions related to variation in mercury concentration across the South River floodplain. Students interpolated sample data to identify mercury hotspots and examined landuse, landcover, flooding, erosion rates, river channel characteristics and other environmental attributes in an attempt to find the conditions that contribute to the ongoing mercury contamination. Students also examined the environmental conditions that appear conducive to converting elemental mercury into the more hazardous methyl mercury, which readily moves up the food chain and poisons animals. Funding for the work was provided by the W&M Mercury Global Inquiry Group; selected projects appeared at the Reves Center's International Mercury Expo in April 2010.

by CHRIS MAGGIOLO '10

GIS Professor Stu Hamilton and students analyze pollutants in the South River watershed



Clare Stankwitz



Stephen Salpukas

Professor Hamilton works with students in the GIS Lab.



PROFILES *IN* ENSP

RESEARCHER PROFILE, *Timothy Russell*



Timothy runs an airboat across the Everglades

Sunrise is filtered by the broken clouds that dominate the South Florida horizon; the humidity hangs heavy in anticipation of afternoon thunderstorms. Keck Lab research assistant Timothy Russell climbs into the field truck that will shuttle him to the next study site. As part of an NSF-funded, long-term ecological research (LTER) project examining the Florida Coastal Everglades system, Timothy assists professor Randy Chambers with his studies of soils and organic matter throughout the marsh, mangrove, and seagrass ecosystems that dominate the south Florida landscape. Designed to measure the impacts of a multi-billion dollar Everglades restoration initiative, the soils work will determine in part how these ecosystems respond to the proposed return of water flow to the historic “River of Grass”.

Timothy’s typical day in the field is atypical, indeed. The 17 sampling locations he visits are spread over 75 miles, and none of them can be accessed directly by car. “I’ve travelled to sites using canoes, inflatable rafts, powerboats, airboats, and even helicopters,” he notes. Getting to every site requires planning and coordination with the LTER team based at Florida International University in Miami. Once at a site, Timothy assists the research of others in the field team, then goes about the business of collecting soils for transport to the Keck Lab for analysis.

The challenges of sampling are both physical and biological. Extreme temperature and humidity and the constant threat of severe thunderstorms make for a tough day anywhere, but in south Florida these elements combine with mosquitoes, alligators, equipment failure and vehicle malfunctions. Sampling at some sites must be completed in full clothing and netting that solves the bug problem, but makes the heat and humidity that much worse. And that’s only part of the story. “On one occasion the airboat engine overheated and wouldn’t restart. We knew we should pull the boat to the nearest tree island and call for assistance, but that would have moved us into an oncoming thunderstorm for which we’d be both the tallest object and only metal object around. Can you say ‘lightning rod?’”.

When Timothy’s not in Florida, he is involved in other research, whether assisting in the field collection of invasive wetland plant species, or sampling local streams and lakes as part of a watershed protection group he and Dr Chambers started seven years ago. He also helps students coordinate their environmental research projects and assists as a field men-

tor. Timothy also has set up monitors, and maintains the Keck Lab weather station and water sampling stations and their respective websites.

Timothy was hired in 2001 to lend his expertise in Geographic Information Systems (GIS). He taught undergraduate and graduate GIS classes to students and workshops and seminars for faculty for a number of years. “GIS is an amazing software program that touches every discipline. I have had students from Archeology, Geology, Biology, and Sociology all in the same class. It’s been a challenge and a privilege to have taught here.” Timothy also manages the day-to-day logistics of the Keck lab, but his biggest job is assisting ENSP students with their questions and needs. “Sometimes the questions are how to use specific software or how to use equipment...and sometimes, where the best place is to take their parents for dinner.”

For Timothy, what constitutes “research” encompasses a range of activities beyond those with which he ever thought he’d be involved. Whether troubleshooting software for ENSP faculty and students, providing data analyses for projects, trudging through Virginia’s salt marshes or returning from a sampling trip on Florida Bay, every day is a new challenge for the Keck Lab research assistant.



Sampling takes place in full mosquito gear in the mangroves

ALUMNI UPDATES

2007

ELIZABETH BURROUGHS started a career in fundraising first for democratic candidates in the Virginia governor's race and now for the Virginia interfaith center - a social justice advocacy organization based in Richmond that focuses on healthcare, housing and homelessness, environmental stewardship, criminal justice, and other issues that affect low and middle income Virginians.

Starting in May of 2007, **STEFANIE GERA** began a Master's degree in marine science at W&M's Virginia Institute of Marine Science. At VIMS, she examined egg capsule hatching success in *Rapana venosa* (an invasive gastropod) and *Urosalpinx cinerea* (a native gastropod) in relation to temperature and salinity. Stefanie completed her Master's degree in January 2010 and is currently looking for employment in marine, biological, and/or environmental science fields.

COURTNEY LEISNER graduated from W&M with a BS in Biology and Environmental Science. She completed her Masters in Botany in 2009 from Washington State University studying salinity tolerance in the single-cell C4 species *Bienertia sinuspersici*. Currently, Courtney is in her first year of a PhD program at the University of Illinois Urbana-Champaign. She works on the reproductive development in soybean and *Arabidopsis* under ozone exposure and also works at the SoyFACE research facility located outside of campus.

KATIE LUCIANO has pursued a Masters degree in Environmental Science (with a focus in Coastal Geology) from the College of Charleston, and graduates in May. Her project has given her the chance to collect data in an area that includes three barrier islands and their marsh, backbarrier, and adjacent marine offshore areas. While in Charleston, Katie has also had the chance to intern with South Carolina Sea Grant Consortium, helping them with research efforts and outreach. After graduating Katie hopes to take a little time off to travel before her next step (either a job or continuing with a Ph.D).

After graduating from the University of Oxford this past summer with a MPhil in Development Studies, **LAURA SAULS** moved back to Washington, DC and started working at the U.S. EPA's Office of International and Tribal Affairs (OITA) as a Presidential Management Fellow (PMF). As a member of the Climate and Energy Program, Laura focuses on climate change adaptation in developing countries, ways to address non-CO2 climate forcers internationally, and the UN negotiations process.

Top: Students work in the Keck Lab garden.

Below: Students mend traps.





2008

After W&M, **MARLEY BICE** worked as a marketing assistant at People for the Ethical Treatment of Animals. She then did a year-long AmeriCorps service project in coastal Oregon as a Watershed Outreach Organizer. She has recently returned to the East Coast and works two jobs in Philadelphia: one as an associate at a bakery and the other as a development and marketing manager for a Latino arts and culture non-profit organization. Next fall, Marley plans to attend graduate school for a masters in urban and environmental planning.

SAJITHYA PERERA is currently finishing up her second year at Eastern Virginia Medical School. After taking Step I of the board exams this summer, she will be starting on her clinical clerkships in July. After graduation, "Dr. Saji" hopes to pursue a career in primary care or geriatrics.

KRISTEN ERICKSON graduated with an Environmental Studies/Government degree and now works in Washington, D.C. for the Pew Environment Group as an administrative assistant with the Marine Science program. Her program funds a variety of domestic and international marine research and conservation fellowships. While the marine science program is non-advocacy, it also coordinates with Pew's various advocacy campaigns to ensure that they are based on reliable, peer-reviewed science. Kristen is happy to provide more information to interested ENSP students.

SUSAN O'SHAUGHNESSY graduated from W&M with majors in Music and Environmental Policy. She has been working for Travelers Insurance within the Special Liability Group where she manages litigation with an environmental aspect, such as mold, lead paint, hazardous waste, and asbestos. She is a member of the Young Guard and Alumni Assn in Baltimore, where she lives, and also volunteers with Big Brothers/Big Sisters.

Since graduation, **JENNA SWALIN** has been living in Seattle, Wash. and working with nonprofit organizations focused on international development. Her most recent position is with the Initiative for Global Development where she is a Communications Assistant. She also has had the opportunity to travel and spent time in Central America and Argentina.



Students canoe on Lake Matoaka in front of the Keck Lab.



Crocuses

2009

DAVID GORDON is completing his first year of a two-year master's program at Duke's Nicholas School of the Environment. There, he concentrates on economics and policy, considering different strategies for evaluating environmental services and environmental programs as well as the types of policies that make them work. Over the past few months, David has been working on a project in partnership with the United Nation's Global Compact to develop next-generation environmental stewardship strategies for organizations. However, over the summer he will be switching his focus and analyzing water quality trading policies in North Carolina.

GRAHAM LEDERER is a graduate student in the Department of Earth Science at UC Santa Barbara. After graduating last spring, he toured California with a group of W&M geologists led by Greg Hancock. Then, Graham travelled to the northwest Himalaya to conduct fieldwork and collect samples for his Master's research. "My experiences at W&M, especially within the ENSP program, have prepared me well for graduate school, and I am certainly enjoying it!"

LUCY MIDELFORT currently works as an environmental organizer for Green Corps, the Field School for Environmental Organizing. Green Corps' Field School for Environmental Organizing trains college graduates to run environmental campaigns, starting by building a core group of activists and finishing by convincing decision-makers to pass laws, change policies and create reforms to protect our environment.

FLORET PARKER is pursuing a Masters of Environmental Management at the University of New South Wales in Sydney, Australia. So far, so good! Since arriving, she's managed to go rock climbing around the southern bits of Sydney and out in the Blue Mountains, go to the beach a couple of times, and score a ride in a hot air balloon that safely crash-landed in a muddy, poo-filled cow paddock. Flo's also seen a lot of neat wildlife-- spiders and snakes and great birds: a honeyeater, an owl, the ubiquitous (and raucous) parrots, and even a lyrebird! Not a bad gig.

HANNAH WIEGARD works with Repower America in Richmond, VA as a field organizer. "We are reaching out to community members to show support for Congress to pass a climate bill that will create clean energy jobs, reduce oil dependence, and cut carbon pollution. I like being part of this movement, and I feel I am making a significant difference to bring people together around this issue."



Virginia Institute of Marine Science at Gloucester Point.