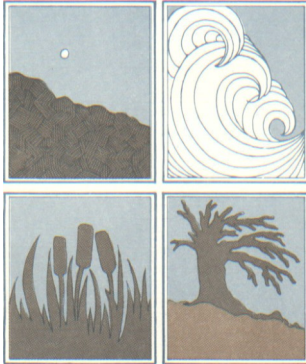


# The Rubenstein School of Environment and Natural Resources **News**



Vol. XXX, No. 2, November 2008, The University of Vermont, [www.uvm.edu/envnr](http://www.uvm.edu/envnr)

## THE ENVIRONMENTAL PROGRAM WELCOMES KAZA AS NEW DIRECTOR

Professor Stephanie Kaza has recently accepted the position of Director of the Environmental Program. Dr. Kaza is following in the footsteps of Ian Worley, who retired in August 2008 after 13 years of service. As Director, Dr. Kaza will have administrative oversight of the planning and delivery of major and minor degrees in Environmental Studies in the College of Arts and Sciences, the College of Agriculture and Life Sciences and The Rubenstein School of the Environment and Natural Resources. She will also be involved in management of the UVM Natural Areas and environmental studies educational activities beyond those supporting the degree curricula.



*Photo taken by Josh Brown*

develop into a set of real practices, such as a campus green rating system, carbon footprint analysis, and Eco-Reps programs.”

Along with promoting environmental action on campus, Dr. Kaza has been deeply involved with campus equality issues. She has served as a member and chair of the [President's Commission on the Status of Women at UVM](#), and helped prepare a recommendation for a campus-wide anti-bullying policy for staff, faculty, administration and students. She has also been a Faculty Union Executive Council member-at-large since 2005 to present, and was a member of the Delegates Assembly before that.

Since 1991, Dr. Kaza has traversed a full academic career development at UVM, from junior professorship to attaining full professorship in 2005. She was instrumental in the conception and creation of the Environmental Council, now the [Office of Sustainability](#), which was established with the help of Professor Larry Forcier and Ray Levine and is recognized nationally for its leadership. Dr. Kaza served as co-chair of the Council for eight years and continues in a leadership advisory role. “Enthusiasm for this has been enormous,” says Dr. Kaza. “It’s thrilling to watch the ideas

Dr. Kaza is strongly committed to pursuing scholarship in the environmental humanities, as both a cornerstone of environmental work and a compliment to the social and natural sciences. She is a leader in the field of Buddhist environmental thought. She has written numerous articles, produced two major anthologies in the field, and her third book *Mindfully Green: a Personal and Spiritual Guide to Whole Earth Thinking*, has just been released. “The book is meant to be a compliment to the large body of prescriptive work

*(cont'd on page 5)*

**The Rubenstein School News**, published monthly from October through May, is one of the school’s primary vehicles for keeping students, faculty, and staff informed. We publish news and highlight coming events, student activities, and natural resources employment opportunities. Copies are available in the Aiken Center lobby and the Student Resource Area (336 Aiken) in the Dean’s office. <http://www.uvm.edu/envnr>

**Editor:**  
Rachael Beddoe, '09G  
Aiken Center 218  
[Rachael.Beddoe@uvm.edu](mailto:Rachael.Beddoe@uvm.edu)

### ISSUE HIGHLIGHTS:

- Focus on Graduate Research—Carina van Riper & Kelly Goonan
- Focus on Undergraduate Internships—Satish Serchan and Ashley Murphy
- USDA Graduate Multicultural Fellows
- Meet the UVM Office of Sustainability
- and more...



### *Congratulations Graduate Research Symposium Presenters!*

After months of hard work, The Rubenstein School second-year graduate students displayed a dazzling array of research proposals, theories, findings and anecdotal stories at the 25th Annual Graduate Research Symposium in October. Research topics ran the gamut, including sustainable development, wildlife and biodiversity preservation, resource management, environmental ethics, Ecotourism, Carbon accounting, Ecological Economics, and environmental planning. See *page 10* for photos from the Symposium.



*View of Prescott Valley, AZ from Hang Glider Trail on Mingus Mountain. Photo from ENSC undergraduate Ashley Murphy, story page 10*

## THE RUBENSTEIN SCHOOL IN ACTION

### PUBLICATIONS

Cao, W., **W.B. Bowden**, T. Davie and A. Fenemor. 2008. Modeling impacts of land cover change on critical water resources in the Motueka River catchment, New Zealand. *Water Resources Management*. DOI 10.1007/s11269-008-9268-2.

**Bowden, W.B.**, M.N. Gooseff, A. Balsler, A. Green, B.J. Peterson, and J. Bradford. 2008. Sediment and nutrient delivery from thermokarst features in the foothills of the North Slope, Alaska: Potential impacts on headwater streams ecosystems. *Journal of Geophysical Research – Biogeosciences*, Vol. 113, G02026, doi:10.1029/2007JG000470.

**Bowden, W.B.**, M.J. Greenwald, M.N. Gooseff, J.P. Zarnetske, J.P. McNamara, J. Bradford, and T. Brosten. 2008. Carbon, nitrogen, and phosphorus interactions in the hyporheic zones of arctic streams that drain areas of continuous permafrost. In: D.L. Kane and K.M. Hinkel (eds.), pp. 165-171, *Proceedings, Ninth International Congress on Permafrost*. Fairbanks, 29 June-3 July, 2008.

Hand, C. H., **S. A. Ludsin**, B. J. Fryer, and **J. E. Marsden**. 2008. Development of statolith microchemistry as a technique for discriminating among sea lamprey (*Petromyzon marinus*) spawning tributaries in the Great Lakes. *Can J. Fish. Aquat. Sci.* 65:1-12

**Kaza, S.** 2008. *Mindfully Green: A Personal and Spiritual Guide to Whole Earth Thinking*. Shambhala Publications (Boston, MA). New book release—Green principles and values for taking up the "green practice path," with applications to energy, consumption, and peace awareness.

Madenjian, C. P., B. D. Chipman, and **J. E. Marsden**. 2008. Estimate of lethality of sea lamprey attacks in Lake Champlain: implications for fisheries management. *Can. J. Fish. Aquat. Sci.* 65:535-542

**McEvoy, T.J.** 2008. Simplicity is the Key to Success in Trees. *Farming -- The Journal of Northeastern Agriculture*. Vol. 11, No. 3. March issue. pp 48 □ 63.

**McEvoy, T.J.** 2008. Is a Partnership Right for Your Business? *Forest Products Equipment Journal*. Vol. 16. No. 8. pp 18 □ 21.

**McEvoy, T.J.** 2008. Soils in the Landscape. *Tree Services*. Vol. 4, No. 4 (April). pp 22 □ 25.

**Wallin, K. F.**; Skov, K. R.; Wagner, M. R; Kolb, T. E. 2008. Forest management treatments, tree resistance, and bark beetle resource utilization in ponderosa pine forests of northern Arizona. *Forest Ecology and Management* 255: 3263-3269.

**Wallin, K. F.**; Latty, T. M. 2008. Novel intermediate-term marking technique of terrestrial slugs. *Journal of Molluscan Studies* 74: 298-300.

### PRESENTATIONS

**Tatiana Abatemarco** and **Christina Erickson** presented a talk on "Student Influence on the Green Movement" at the National Association of College Axillary Services Conference, September, in Burlington, VT

Associate Professor **Saleem H. Ali** was invited by the World Economic Forum to a "brainstorming session of scientists" in Boston to set the agenda of the forum's next meeting in Davos, Switzerland. Dr. Ali was one of only two professors from state universities in the northeast to be selected for this session. Saleem also attended the World Conservation Congress in Barcelona, the largest gathering of international environmental organizations, hosted by the International Union for the Conservation of Nature in Barcelona, Spain, where he spoke on environmentally responsible ways of approaching the extractive industries.

## PRESENTATIONS (cont'd)

**Breck Bowden** presented results from recent research sponsored by the National Park Service's Arctic Network of parks on stream and lake ecosystems within the Gates of the Arctic National Preserve and the Noatak National Preserve. The presentation was made at the 2008 Arctic Parks Science Symposium in Fairbanks Alaska, 14-16 October 2008. This year the symposium was held in conjunction with the International Beringia Days conference, which brings together scientists from the US and from Russia who have a common interest in the ecology and culture of the areas that were once connected by the Bering Land Bridge. Information about this conference, including access to abstracts from the entire meeting can be found at <http://nps.arcus.org/>.

**Tom Hudspeth** made three presentations at the NAAEE (North American Association for Environmental Education) conference in Wichita, KS, 15-18 October: 1.) "UVM Sustainability Initiatives in Curriculum and Campus Operations", 2.) "UVM Sustainability Courses Emphasize Local Solutions to Global Climate Change Challenges", and 3.) "UVM Students Learn about and Become Engaged with Local Food-Production"

**Kaza, S.** Clark University "Difficult Dialogues" series sponsored by the Higgins School of the Humanities, Worcester, MA, "Unlearning Consumerism: Toward a Mindful Society," Oct 14, 2008.

**Kaza, S.** Merton Center for Contemplative Living conference in Louisville, Kentucky, keynote address -- "Following the Green Practice Path: Buddhist Principles of Contemplative Living," Oct 25, 2008.

**Kaza, S.** Association for the Advancement of Sustainability in Higher Education (AASHE) 2008 conference, Raleigh, NC, "Students Teaching Students (STS) Courses: Supporting Peer Education on Emerging Environmental Themes," Nov 11, 2008.

Kohler, G.R., **K.F. Wallin**, and D.W. Ross. 2008. Synchrony and host preference of *Leucopis* spp. (Diptera: Chamaemyiidae), predators of hemlock woolly adelgid in the Pacific Northwest. Southern Forest Insect Work Conference. Chattanooga, Tennessee. August 4-7, 2008.

**Marsden, J. E.** Investigations into age-0 mortality of lake trout in Lake Champlain. Lake Trout Age-1 Mortality Coordination workshop, E. Lansing, MI.

**Thom McEvoy** was invited to speak at the Climate Change, Connectivity and Conservation conference, hosted by the 'Two Countries One Forest' initiative in Montreal, 22 - 24 October. The subject of his talk was how to conserve biodiversity using the forest management protocols described in his book *Positive Impact Forestry* (2004 Island Press).



*Photo: Red Rocks, Burlington, VT. Courtesy of Pete Weafer, ENVS 12*

**Ott, D.,** Yanchuk, A.D., Huber, D., and **Wallin, K.F.** 2008. Estimating heritability of tree responses to each step of mountain pine beetle host selection behaviors. Entomological Society of America National Meeting, Reno, NV. November 15-19, 2008.

**Ott, D.,** Yanchuk, A.D., Huber, D., and **Wallin, K.F.** 2008. Estimating genetic variation of lodgepole pine defenses against mountain pine beetle colonization success. Southern Forest Insect Work Conference. Chattanooga, Tennessee. August 4-7, 2008.

**Ott, D.,** Yanchuk, A.D., Huber, D., and **Wallin, K.F.** 2008. Estimating heritability of tree responses to mountain pine beetle and one of its associated fungi. Mountain Pine Beetle: From lessons learned to community-based solutions. University of Northern British Columbia, Prince George, British Columbia June 10-11, 2008.

**Wallin, K.F.,** Kohler, G., and Ross, D. 2008. Host resistance and natural enemies perform in concert to control HWA in Pacific Northwest. Department of Plant and Soil Science Fall Seminar Series. University of Vermont. Burlington, VT. November 12, 2008

**Wallin, K.F.,** Latty, T.M., and Darrell W. Ross. 2008. Behavioral responses of *Laricobius nigrinus* Fender (Coleoptera: Derodontidae) to chemosensory cues associated with plant material. Southern Forest Insect Work Conference. Chattanooga, Tennessee. August 4-7, 2008.

**Wallin, K.F.** and **Kasmarek, A.** 2008. Insect host location behaviors by investigating the role and heritability of specific wavelength reflectance of host trees. Entomological Society of America National Meeting, Reno, NV. November 15-19, 2008.

## PRESENTATIONS (cont'd)

**Wallin, K.F.** and **Kasmerak, A.** 2008. Expanding our understanding of insect host location behaviors by investigating the role and heritability of specific wavelength reflectance of host trees.. National Science Foundation Research Day VT EPSCoR Annual State Meeting and Grant Writing Workshop. June 6-7, 2008. UVM Campus Burlington VT

**Wallin, K.F.,** Latty, T.M., and Darrell W. Ross. 2008. Orientation of the predator *Laricobius nigrinus* Fender (Coleptera: Derodontidae) to insect host and plant material in a multi-chambered olfactometer. Southern Forest Insect Work Conference. Chattanooga, Tennessee. August 4-7, 2008.

Yanchuk, A. Murphy, J.C., and **Wallin, K.F.** 2008. Evaluation of genetic variation in attack and resistance in lodgepole pine by mountain pine beetle. Mountain Pine Beetle: From lessons learned to community-based solutions. University of Northern British Columbia, Prince George, British Columbia June 10-11, 2008.

The **Spatial Analysis Laboratory** recently finished an assessment of the City of Cumberland's (MD) urban tree canopy. The Secretary of Maryland's Dept of Natural Resources presented our findings at a press conference in Cumberland on Oct 10th. Here is a link to the press release. <http://www.dnr.state.md.us/dnrnews/pressrelease2008/101408.html>

## AWARDS and GRANTS

**Breck Bowden** recently received a new award from National Science Foundation's Arctic System Science program that will focus on important impacts of climate change land and water surface processes in arctic landscapes. This project is a collaborative effort involving 20 investigators and graduate students from 10 different institutions across the US and Canada. The project focuses on how a widespread and long-term increase in the incidence of thermokarst failures impacts the structure and function of arctic landscapes. Thermokarst failures occur when permafrost – soil that may have been frozen since the last ice age – thaws and the soil begins to subside. In severe cases entire hillslopes will fail with thousands of tons of soil displaced in massive landslides. Specific components of this research focus on the composition of vegetation that re-colonizes thermokarst failures, the distribution and processing of soil nutrients within these features, emissions of greenhouse gases to the atmosphere, and exports of sediments and nutrients to stream and lake ecosystems. The projects are designed to address how changing land surface processes and formation of thermokarst failures feedback to the climate system through energy, albedo, water, and trace gas exchange. Additional information about this program of research can be found at <http://thermokarst.psu.edu>.

Rubenstein School graduate student, **Carena van Riper** was selected as a Lucille and Derby Dustin Future Scholar in June 2008. As a result, she was invited to attend the National Recreation and Park Association Congress and Exposition in Baltimore, MD, which hosted upward of 9,000 park and recreation academics and practitioners. The Future Scholar Program, sponsored by the Academy of Leisure Sciences, was designed for Master's students interested in pursuing a doctorate in leisure-related fields. During the meeting, Carena was introduced to some of the top researchers in the field of parks and recreation, she connected with potential Ph.D. advisors, and was given the opportunity to ask about existing doctoral programs. Professor **Robert Manning** nominated Carena for this award program.

**Lee Gross**, graduate student at the Gund Institute for Ecological Economics, received a grant for \$4000 from The Conservation and Research Foundation The grant will cover airfare and living expenses for research into: "Alternative Networks to Support Livelihoods and Agroecology in the Pico Duarte Coffee Region of the Dominican Republic" in December and next summer.

\$38,945. Chamaemyiid Predators as Potential Biocontrol Agents for the Hemlock Woolly Adelgid. USDA Forest Service. Ross, D. W and **Wallin, K.F.**

## ENVIRONMENTAL SCIENCE MAJOR AWARDED FOR SOCIAL JUSTICE ADVOCACY

ENSC freshman **Jessie-Ruth Corkins**, along with Phebe Meyers of Middlebury College, received two of six Brower Youth Awards for environmental leadership. These awards are given annually by the Earth Island Institute to six young people for their outstanding activism and achievements in the fields of environmental and social justice advocacy. Ms. Corkins was awarded \$3000 and a trip to the awards ceremony in San Francisco for her work in researching and preparing the Vermont Sustainable Heating Initiative. This initiative outlines strategies for more local production of heating fuels and was prepared in collaboration with students from 26 other high schools. Currently, the initiative is working with Vermont's Low Income Heating Energy Assistance Program to move fuel assistance money in the direction of pellet stoves and other renewables. Ms. Corkins and Ms. Meyers also served as panelists at the annual Bioneers conference in San Francisco. Their success has been written about in the Burlington Free Press. For the full text, visit: <http://www.burlingtonfreepress.com/apps/pbcs.dll/article?AID=200881023014>

**...ENVS New Director** *(cont'd from page 1)*

out there that tells you what to do, such as change your light bulbs,” says Dr. Kaza. “It is basically a deeper look into the principles and values underlying our personal environmental practices, what I’m calling a “green practice path.”

Dr. Kaza’s teaching reflects her commitment to the environmental humanities. In all her classes, she aims to help students articulate their own values, to examine and develop them in the context of their learning. She has developed courses addressing topics such as *Ecofeminism, American Nature Philosophers, Radical Environmentalism, and Religion and Ecology*. She also teaches ENVS 1, a huge task in itself.

“The students do great things,” she says. “They take on tasks from writing letters to Congress, from debates to ecological field studies. I have a lot of fun with the class but it’s a challenge!” She has also encouraged and supervised over a dozen STS

(students-teaching-students) courses on such topics as *Environmental Justice and Ecopsychology*. STS courses are student-designed and taught on emerging interests that often are not reflected in UVM offered courses. Kaza was the 2002 Kroeps-Maurisch Award winner for excellence in teaching at UVM.

When asked what approach she will take in her position as Director, Dr. Kaza spoke about the recent surge of interest in the environment and this year’s 24% increase in majors

*“The Environmental Program can be a place where things happen, where we encourage students to think on the edge. My goal is to prepare students to be better able to respond to emerging situations.”*

in Environmental Studies. “Interest in these issues is rising all over the country just as the university has hit a very tight financial time. One of the challenges is how to serve an increasing number of students without depending on a lot of additional resources. That calls for some creativity.” Dr. Kaza imagines expanding the range of faculty affiliated with the program, looking for more efficient advising methods, and exploring non-thesis capstone options. Her top goal is developing an interdisciplinary capacity in students to view situations from many perspectives. “I think respect and tolerance are important themes now. The current wave of environmentalism is not based on oppositional politics, but rather a collaborative vision that includes the well being of people as well as natural systems.”

Dr. Kaza envisions a thriving program that contributes vitality and innovation to UVM as “the environmental university.” “The Environmental Program can be a place where things happen, where we encourage students to think on the edge. My goal is to prepare students to be better able to respond to emerging situations. I look forward to working closely with my excellent colleagues to continue to be one of the strongest Environmental Programs in the country.”

You can learn more about Dr. Kaza at: <http://www.uvm.edu/~skaza/>

**All are welcome to come to a celebratory reception for the Environmental Program to meet Dr. Kaza as new director with her new book, *Mindfully Green: a Personal and Spiritual Guide to Whole Earth Thinking*, Tuesday November 18, 5-6:30, Fleming Marble Court**

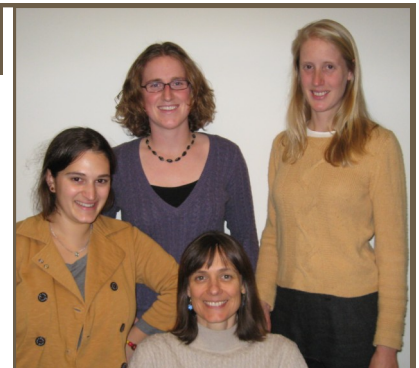
**MEET THE OFFICE OF SUSTAINABILITY FELLOWS!**

The University of Vermont is making a substantive effort to become the “green university.” In support of that endeavour, last Spring, President Fogel decided to promote Gioia Thompson, from the role of Sustainability Coordinator, to Director of the Office of Sustainability. One of the director’s first decisions was to create three graduate fellowships to support UVM’s sustainability goals. This year, all three fellows are RSENR grad students.

**Christina Erickson** is a Doctoral student, working with Tom Hudspeth and Stephanie Kaza. Her dissertation topic is a study of the efficacy of education and outreach approaches on behavior change. Christina supervises the Eco-Reps program and works on education and outreach initiatives for the Office of Sustainability. Currently, she is working with the Office of Student and Community Relations to educate off-campus students about energy efficiency measures they can take in their homes.

**Nell Campbell** is a Masters student, working with Jen Jenkins. Her thesis topic is the assessment of farm-scale crop-based biofuels in Vermont. Nell has recently completed an update of UVM’s Greenhouse Gas Inventory (congrats Nell!). Currently, she is working with Gioia Thompson on the Climate Action Plan, which will chart out UVM’s path to carbon neutrality.

**Tatiana Abatemarco** is a Doctoral student, working with Stephanie Kaza. Her dissertation is on the ethics of the local agriculture movement. Tatiana coordinates UVM’s new Clean Energy Fund, the Environmental Forum (previously known as the Environmental Council), and the Vermont Campus Sustainability Network. She also acts as the Office of Sustainability representative on the new President’s Commission on Sustainability.



*Clockwise from left to right: Tatiana Abatemarco, Nell Campbell, Christina Erickson, Gioia Thompson.*



## CONGRATULATIONS TO THE USDA NATIONAL GRADUATE MULTICULTURAL FELLOWSHIP RECIPIENTS



Two incoming graduate students, **Jennifer Leigh Wright** and **Nathaly Agosto-Filion**, have been awarded fellowships through the United States Department of Agriculture USDA National Graduate Multicultural Fellowship program in Conservation Fields. Jennifer and Nathaly are the final two of a total of four who were funded; **Mia Akaogi** and **Hanem Abouelezz** were awarded fellowships last year. Multicultural Fellows have access to an array of active conservation-oriented projects and service-learning courses and have the opportunity to participate in a mentorship program with conservation practitioners

and researchers. Fellows will participate in a paid internship experience with a conservation organization after graduation.

One incoming Ph.D. student, **Felix Wai**, was awarded a Graduate Multicultural Fellowship in Watershed Science and Ecosystem Science. This doctoral experience includes close mentoring from faculty, opportunities at University's Center for Teaching and Learning, and funding to participate in conferences. All fellowships provide full tuition scholarship, stipend, and a cost of education allowance put toward a paid internship placement at graduation.

### Hanem Abouelezz

Hanem came to the University of Vermont after three very wild summers; two in the Rockies, one in Alaska. It became increasingly clear to her that these beautiful places which evoke emotions that strip malls and diners never could, are under attack. After hearing constantly that "someone should do something to save the environment," she decided to be one of those "somebodies" and has since started her graduate work at the University of Vermont in Wildlife Biology. Hanem's co-advisors are Terri Donovan and Allan Strong. Currently her focus has revolved around course work in Geographic Information Systems, behavioral ecology and avian ecology. She is also working on the effects of land use change

in Vermont on the black bear population with Terri and fellow graduate student Jake McGrew. She will continue with this analysis to determine the effects on ovenbird, a small neotropical migrant that is heavily impacted by forest fragmentation. From there she may focus on some behavioral work, as her first love is indeed behavioral ecology (the focus of her previous work with USGS was wild mustang behavioral study). In the future, Hanem hopes to continue to have amazing experiences in the natural world, perhaps working as a biologist for nonprofit or government organizations both within the United States and abroad. She is most interested in studying elusive carnivore behavior and range use as well as ungulate sociobiology, with the hope of preserving keystone/umbrella species.

Growing up in rural Vermont and on her parents' organic farm instilled in Mia an appreciation of the environment at an early age. Mia's connection to the natural world was a product of childhood explorations of her family's property and working with her parents to grow crops for their livelihood. These experiences influenced her decision to attend Cornell University and pursue a degree in Natural Resources. She enjoyed the interdisciplinary approach to the program but found after four years of education that she wanted to see what opportunities were available for her outside of academia. She decided that AmeriCorps would provide a great opportunity to explore potential career options while gaining experience from real professionals in the field. She moved to Knoxville, Tennessee and became a part of the CAC AmeriCorps Water Quality Team. As an AmeriCorps member, Mia implemented the Adopt-A-

Watershed program into Knox County middle and high schools and worked alongside members of the local government, environmental agencies and the public on many watershed improvement projects. After two years Mia decided she wanted to go back to school and she looked for a graduate program that would give her not only scientific knowledge, but also tools to work with many different interest groups and incorporate environmental action into land use planning issues. She believes that many of our environmental problems come from our inability to balance increasing development pressures and the need to conserve the environment. Through her current enrollment in the Ecological Planning Program she hopes to gain the necessary skills that will help her be a valuable asset to any community.

### Mia Akaogi

### Nathaly Agosto Filión

Nathaly is a first year student of the Ecological Planning program. Having grown up as a New York "inner-city youth", she believes that the greatest environmental threat today is the ubiquitous sense of apathy and blissful ignorance among citizens of developed nations and its often disastrous effects on the lives of human communities and ecosystems throughout the globe. Her specific research interests lie in exploring issues of environmental justice and sus-

tainable development in the United States and abroad so as to effectively advocate for the communities in greatest need. Born in the Dominican Republic, Nathaly hopes to focus her master's project on social and environmental issues facing this island. For her, environmental justice and sustainable development go hand in hand.

Nathaly received dual undergraduate degrees at the University of Vermont in Integrated Natural Resources and Vocal Music Performance.

*(cont'd next page)*

## Nathaly Agosto Filión (cont'd)

She worked with Clare Ginger to self-design a major in Outdoor Education. At UVM she was a loyal supporter of several student organizations. Most notably, she served as president of Alianza Latina, the University's Latino students group, for two and a half years, and led the implementation of the student-run Latino Heritage Month events.

Since graduating college and returning home to New York City, Nathaly has worked for the City Parks Foundation Education Department, and the Christodora Ecology Group. Her favorite (and most trying) experiences involved teaching the Green Girls, in which she provided natural science and ecology lessons to middle school girls in East Harlem and the Bronx.

Jennifer was born in southern California and moved with her family to the suburb of Montréal when she was four. She grew up bi-lingual in French and English, though she didn't attend an English-speaking school until college. She completed her Diploma of Collegial Studies (DCS) in applied sciences at John Abbott College in 1995 and a four year bachelor of science in forest management at Université Laval, Québec city, in 1999.

Jennifer has worked for Oregon Department of Forestry (ODF), within the Private Forests (most recently with the Forest Legacy Program), State Forests and Fire program. She was the Education Chair for the local Society of American Foresters chapter for a few years. She is committed to educating her community about natural resource topics.

As a trained forester, Jennifer has developed great

interest in family forest lands through the

course of her career. She's come to understand the economic challenges landowners are faced with when attempting to retain family ownership of forested land. Because of the role family forests play in shaping America's ecological, economic and social setting, she believes it is imperative that we help landowners find ways to maintain their forests. She is interested in researching options for land management and marketing of non-timber values.

Jennifer attributes a strong work ethic to nine years of strict training as a gymnast. She also take great pleasure in teaching, and often wonders who has benefited the most, herself or the student?

## Jennifer Leigh Wright

## Felix Wai

Felix Wai recently returned from a 6-month stay in Hong Kong, the city from which his parents immigrated to America. Before this trip, he worked in post-Katrina New Orleans. He received a BA in Environmental Studies, a BA in Philosophy, and an MS in Environmental Science from Tulane University. He arrived in New Orleans a few months after Katrina and soon became Associate Director of the Tulane Community Service Office. From this office he ran a multitude of projects that addressed the community's vital issues brought about by the disaster, including supporting temporary shelters, aiding the reopening of public schools, cleaning flooded neighborhoods, and gutting flooded homes. He created a volunteer organization called the Mardi Gras Service Corps, hosting thousands of volunteers for programs that worked mainly with low-income, minority residents to rebuild homes and relocate back to New Orleans.

Felix has worked in the education field for some time, especially environmental education. Two highlights from his background are working for a wilderness therapy program for at-risk youth, and working as a 6th grade science teacher for New Orleans College Prep, a budding chartered college preparation school focusing on college acceptance for underprivileged children. As a doctoral student at UVM, he aims to study the forgotten, innate, dynamic connection to nature, and this connection's expression in the pioneering aspects of sustainable communities. In emerging attempts at sustainable community and ecological design, Felix sees a pioneering of a new worldview in a world still wrapped in old conventions. His work will focus on low-income, minority communities in urban areas, hopefully in New Orleans, as these communities are most likely to have a distant relationship with environmental issues while being disproportionately affected by environmental problems.

This past summer I spent several months working as an Urban Resources Initiative<sup>1</sup> (URI) intern at the Parks and People Foundation<sup>2</sup> based in Baltimore, Maryland. I was a research assistant for the assistant director, Dr. Mary Washington. I assisted her on two projects: (1) The Baltimore City Neighborhood Greening and Community Garden Census Database Project and (2) the Maryland Civic Justice Corps. Here, I'll describe my experiences in the Census Database Project.

My involvement with the Parks and People foundation began on June 1 with a brief safety awareness orientation at the University of Maryland - Baltimore County (UMBC). This en-

## FOCUS ON POST-UNDERGRADUATE INTERNSHIP SATISH SERCHAN, ENSC '08

gaging orientation lead by Paul Harris of Collective Cry was an ice-breaker among new interns for the Baltimore Ecosystem Studies (BES) and the Parks and People Foundation. In addition, the commissioner of the Baltimore City Police Department helped us to get a better orientation to Baltimore city and provided suggestions on standard operating procedures to be followed while conducting surveys. This was very helpful as I had never done anything like this before. *(cont'd on page 9)*

## FOCUS ON GRADUATE RESEARCH: BY CARINA VAN RIPER, NR '09 AND KELLY GOONAN, NR '09

Cadillac Mountain in Acadia National Park is an iconic peak in the northeast that offers a broad array of recreational opportunities for the public. At 1,532 feet, this peak offers spectacular views of the North Atlantic coast, trails that meander through forests of spruce and pitch pine, and a scenic road that winds its way up to a pink granite summit. On nice summer days, the summit of Cadillac Mountain draws 5,000 or more visitors.

The number of people who visit Cadillac Mountain is an example of the popularity of many parks and protected areas and mountain summits in particular. However, this popularity can influence both visitor experiences and environmental conditions. The finite and inherently fragile nature of mountain summits presents land management agencies with a difficult task: how to minimize environmental impact without negatively affecting the visitor experience. This issue gave rise to a program of research carried out by several members of the Park Studies Laboratory at the University of Vermont. The Northeastern States Research Cooperative is funding this research project.

Working with Professors Robert Manning and Chris Monz at Utah State University, two Rubenstein School graduate students, Carena van Riper and Kelly



*Carena van Riper, Pete Pettengill and Kelly Goonan in Acadia National Park*



*Carena administering survey on Cascade Mountain, NY*

Goonan, are researching the social and ecological components of recreation on mountain summits. This interdisciplinary research team is bridging the experiential and ecological camps of research in the field of parks and outdoor recreation to provide land managers with a more holistic understanding of how people perceive and are affected by recreational conditions on three mountain summits in the Northern Forest.

The research team spent much of the summer stationed on three summits in the Northern Forest region, which ranged from low to high use levels and development/management. The study sites were Cadillac Mountain in Maine, Camel's Hump in Vermont, and Cascade Mountain in New York. Two versions of a visitor survey were administered and biophysical inventories were conducted. One survey measured how acceptable people found recreational conditions, such as number of people on and off-trail, resource conditions on and off-trail, trail management, and techniques used to keep people on trails. The second survey looked at which recreational conditions were most important to people. The ecological inventories assessed current conditions of vegetation and soils on each summit, and will provide management agencies with baseline information to monitor these areas in the future.

This integrative program of research will ultimately develop a framework for managing a diverse range of mountain summits in the Northern Forest in a sustainable manner. The framework will allow managers to balance the need to protect these areas while continuing to offer quality experiences to visitors.

## KIM McRAE TO ATTEND UNIVERSITY PRESIDENTIAL INAUGURAL CONFERENCE

The Golden Key International Honour Society recently nominated RSENr PhD student, **Kim McRae**, to attend the University Presidential Inaugural Conference in Washington DC in January 2009. This invitation was extended to Kim as a result of her affiliation with the local UVM chapter due to her academic excellence.

The Golden Key International Honor Society is an international collegiate honor society that recognizes outstanding academic achievement and connects high-achieving individuals locally, regionally & globally with lifetime opportunities.

Membership is by invitation only and is extended to the top 15% of US graduate students in all fields of study, based on their academic achievements.

From January 17 – 21, 2009, Kim will be honored at the Inaugural Conference along with her fellow scholars as a highly accomplished college student and a distinguished future leader. As an Inaugural Scholar and special guest, she will witness the swearing in of the next President of the United States, Barack Obama, and will attend the inaugural parade. In addition, she will interact with White House officials, congressional staff members, political experts and special VIPs.



(cont'd from page 7)

The Baltimore City Neighborhood Greening and Community Garden Census Database Project was started when Dr. Mary Washington asked two simple questions: "How many green spaces have we created?" and "Where are they?" Lack of comprehensive listings of green spaces in Baltimore city caught her attention and sparked an idea of pioneering a green spaces census project in the whole of Baltimore city. I really liked the way she asks a question and then does something about it. This census would not only capture the number and whereabouts of green spaces, but also allow a comprehensive approach to green space management, including documenting who is stewarding the property, how it is administratively handled, what are its organizational ties, and what is the legal status of the green space.

According to Dr. Washington, Greening Census builds on an initial survey of community green spaces prepared by the Parks and People Foundation in 2002, which produced a geo-coded database and a series of reports relating to vacant lot restoration, community-managed open space, and greening strategies in Baltimore and other cities. After several meetings to define project goals and objectives, a simple question was developed to guide the research: "What are the number, types, ecological services, and geographic distribution of greening projects in Baltimore City?"

This question formed the backbone of my research, and I was joined by Celine Manekin, another URI-Intern from University of Maryland College Park to complete two major tasks (1) designing a Microsoft Access database that would hold the comprehensive information about the green spaces and the results of a survey questionnaire, and (2) planning and executing the survey and site assessment plan. We formulated standard operating procedures for our work, which included three steps: 1) phone surveys to find out the status of existing greening projects from the 2002 surveys, 2) site visits to document current conditions, and 3) data entry.

To carry out this work efficiently, I used existing GIS layers of pocket parks in Baltimore City and divided those GIS-layers into quadrants in order to simplify our site assessment field work. Thank goodness for NR 143! Slicing and dicing the GIS layers to create the survey areas could have been totally haphazard, but I used two important factors: (1) density of gardens within certain sections of the city and (2) accessibility of sections by vehicle to make these smaller sections more practical for field work. Celine and I then launched into our seemingly endless phone calls followed by the many site visits. We chatted with folks from many different communities who were actively maintaining greenspaces. We also took many photos to document the site conditions.

It was a great summer experience. I worked in an urban environment and learned a great deal about community organizing. I saw how interagency cooperation worked to build community social capital. I moved from problem formulation

## FOCUS ON POST-UNDERGRADUATE INTERNSHIP SATISH SERCHAN, ENSC'08

to product generation (reminding me of NR 206!). I diverged from my background in natural science-based internships. The project involved elements of participation at organization, community, and individual levels. I learned computational skills, completed administrative work, and did community outreach. On October 15<sup>th</sup> I presented a poster at the BES Annual meeting held at UMBC and participated in a community greening celebration where I presented results from the summer and highlighted importance of this project.

Thanks to Mary Washington, Miriam Avins, Marie



Dr. Mary Washington of Parks and People and Satish following a Baltimore Ecosystems Studies meeting.

Vea-Fagnant, and Maria Erb for helping me get the internship. Special thanks to the entire Parks and People Foundation staff for supporting my work and learning by sustaining a wonderful working environment throughout my term. Thanks to Morgan Grove, Austin Troy, and Jarlath O'Neil-Dunne for infinite insightful advice on GIS analyses. Thanks to Deane Wang and Susan Dinitz for wonderful pieces of advice regarding the generation of this article.

*Note: Dr Mary Washington foresees possible collaboration with BES students and students from other institutions which she hopes will expand the role of the Census Project. She expects that the project will step into the social science realm and begin addressing some research questions instead of just being a comprehensive data collection case study. With a social science approach, she hopes to tackle questions such as "What are the ecological benefits and services provided by these pocket green spaces?", "How are they distributed throughout the city in relation to demography and socio-economic status?", "How bio-diverse are these pocket green spaces relative to one another?" and so on. To learn more about the project contact: Dr Mary Washington [mary.washington@parksandpeople.org](mailto:mary.washington@parksandpeople.org) and Satish Serchan [Satish.Serchan@uvm.edu](mailto:Satish.Serchan@uvm.edu) or [Satish.Serchan@parksandpeople.org](mailto:Satish.Serchan@parksandpeople.org)*

<sup>1</sup>URI is a partnership of the Parks & People Foundation, Baltimore City Department of Recreation and Parks, Baltimore Ecosystem Study, USDA- Forest Service and several academic institutions.

<sup>2</sup>Parks and People Foundation is a non-profit community oriented organization that strives to improve the quality of life for all people in the Baltimore area through educational and recreational programs that motivate young people and through partnerships that create and sustain green spaces within Baltimore city.

<sup>3</sup>Baltimore Green Space, founded in 2007, works to protect community gardens, pocket parks, and other open spaces created and cared for by city residents.

<sup>4</sup>The Parks & People Foundation's Community Greening Stewardship Program supports the planning, surveying, organizing, funding and implementation of neighborhood and park-based greening projects in partnership with city residents' agencies, community associations, and other private and nonprofit groups.

**Matt Beam** describes his work with the Greening of Aiken to design an EcoMachine. His research will design living ecosystems to convert black water to pure water.



**Laura Nagel** discusses Carbon stocks and fluxes in residential lawns. Her study compared newly developed lawns to adjacent forests and/or agriculture.



**Amanda Garland** is working with the Natural Conservancy to create a Master Interpretive Plan for the Conservancy's Equinox Highlands Forest. The aim is for visitor interpretive experience to teach the importance of conservation.



**Paul Simonin** is researching habitat use and seasonal dynamics of the young-of-year of native Rainbow Smelt and non-native Alewife fish in Lake Champlain.

**Stephen Posner** examines comparisons between two measures of progress (GDP and the Genuine Progress Indicator [GPI]) in Baltimore, MD. His work is framed by an understanding of Ecological Economics



**Mia Akaogi** is working with the Green Mountain Conservation Group to create a groundwater monitory plan for the Ossipee River Watershed, NH. It is estimated that the watershed's aquifer supplies drinking water to the majority of residents, and that population in the area will grow 50% by 2050.



**Hanem Abouelezz** enjoys some well-earned comforts at the post-Symposium reception.



## HELP WANTED

The following is a sampling of positions listed at The Rubenstein School. Job postings are updated daily on the Job Board outside the Dean's office in the Aiken Center and weekly on the web at <http://www.uvm.edu/envnr/?Page=employment/employmt.html>. For further information contact: Marie Vea-Fagnant, Career Services Coordinator, 656-3003, email: [marie.vea-fagnant@uvm.edu](mailto:marie.vea-fagnant@uvm.edu)

### INTERNSHIPS

**Where:** The Cloud Forest School, Monteverde, Costa Rica,

**Description:** Locally known as the Centro de Educación Creativa, this school is a bilingual Pre-K through 11th grade school located. The school was founded in 1991 to increase educational opportunities for a growing population of school-age children in the area. This independent school offers creative, experiential education to 230 students with an emphasis on integrating environmental education into all aspects of the school. For more information about the school, go to: <http://www.cloudforestschool.org>

**Appalachian Trail Conservancy Internships.** Visit:

<http://www.appalachiantrail.org/site/c.jkLXJ8MQKtH/b.1485709/>

**Wolf education and Research Center** (<http://www.wolfcenter.org>).

Position: Three month internships. Primarily responsible for educational tours at the Visitor Center and observation decks. Also involved with early morning and evening tours to the outside classrooms. Responsibilities for pack care/security and maintaining camp. Housing provided along with food stipend. Visit:

[http://jobs.oriongrassroots.org/job/52162d9d238fa54b1f939f716c279302/?d=1&source=site\\_home](http://jobs.oriongrassroots.org/job/52162d9d238fa54b1f939f716c279302/?d=1&source=site_home)

### BACHELOR'S DEGREE REQUIRED

**Position:** Landscape Protection Coordinator

**Institution:** South Mt. Conservation Landscape Initiative of the Appalachian Trail Conservancy, Boiling Springs, PA

**Description:** Administers land use planning and protection initiatives within Pennsylvania. The Landscape Protection Coordinator's primary responsibility is to coordinate the South Mountain Conservation Landscape Initiative (CLI) with secondary duties to serve as ATC's point of

contact for implementation of the Pennsylvania Appalachian Trail Act.

**To apply:** visit [www.appalachiantrail.org/site/c.jkLXJ8MQKtH/b.4540757/](http://www.appalachiantrail.org/site/c.jkLXJ8MQKtH/b.4540757/)

**Position:** Assistant Farm Manager

**Institution:** Phillis Bridge Farm Project, New Paltz, NY ([www.philliesbridge.org](http://www.philliesbridge.org))

**Description:** Position begins early January 2009 for the upcoming 2009 season. The farm follows organic practices under the CSA model and is now entering its fifteenth season. The Assistant will work with the Farm Manager in many aspects of running a six acre garden and caring for a small flock of sheep and laying hens.

**To apply:** [http://jobs.oriongrassroots.org/job/40e08b6645634aaa7558b6a084d6cfb2/?d=1&source=site\\_home](http://jobs.oriongrassroots.org/job/40e08b6645634aaa7558b6a084d6cfb2/?d=1&source=site_home)

**Position:** Full-Time Program Coordinator

**Institution:** Salish Sea Expeditions, Bainbridge Island, WA (<http://www.salish.org>)

**Description:** Assist Education Director in development, management and supervision of all programs, with specific responsibility for "Sound and Source" watershed research program. Full-time, 40 hrs/wk, with additional hours as needed on weekends or during the program season. This is a ten-month position.

**To apply:**

[http://jobs.oriongrassroots.org/job/1fcfdb6b912b8dc8bd1399cbf17a525a/?d=1&source=site\\_home](http://jobs.oriongrassroots.org/job/1fcfdb6b912b8dc8bd1399cbf17a525a/?d=1&source=site_home)

### MASTER'S DEGREE REQUIRED.

**Position:** Sustainability Standard Development Specialist

**Institution:** Leonardo Academy, Madison, Wisconsin

**Description:** Develop sustainability achievement standards and document the sustainability profile of green products and services. Currently developing sustainability standards for: Sustainable Agriculture; Life-Cycle Impact Profile Declarations; Emissions Inventories, Reductions, Credits and Offsets; Sustainable Vehicles; and Sustainable Organizations.

**To apply:** <http://www.ecoemploy.com/jobs/sustainability.html>

**Position:** Research Associate

**Institution:** Sightline Institute, Seattle, WA (sustainability think tank)

**Description:** Tasks could include assisting in researching and writing Sightline's annual sustainability progress report; contributing to Sightline's blog; a variety of research projects aimed at a number of different audiences. Research topics may include: climate policy, transportation, toxics, green jobs, energy policy, sustainable lifestyles, or affordable housing.

**To apply:**

<http://www.ecoemploy.com/jobs/washington.html>

### PHD REQUIRED

**Position:** Assistant Professor

**Institution:** Department of Forestry and Natural Resources at Clemson University, Georgetown SC

**Description:** tenure-track Assistant Professor of Natural Resources Biometrics located at the Baruch Institute. Research may include, but is not limited to, experimental design, mensuration, disturbance ecology, land use, and spatially explicit modeling.

**To apply:**

[http://www.ecojobs.com/jobs\\_details.php?sec=5A&AID=21564](http://www.ecojobs.com/jobs_details.php?sec=5A&AID=21564)

**Position:** Faculty Positions in Biology

**Institution:** Dept of Biology, City College of New York, New York NY

**Description:** Three Assistant Professor positions in the areas of Molecular Ecology, Molecular Neurobiology, and Integrative & Systems Physiology. More senior applicants are also welcome to apply. We are also seeking candidates for an ASSOCIATE or FULL PROFESSOR position in the general area of Molecular, Cellular, or Developmental Biology.

**To apply:** [http://www.ecojobs.com/jobs\\_details.php?sec=5A&AID=21487](http://www.ecojobs.com/jobs_details.php?sec=5A&AID=21487)

## FOCUS ON UNDERGRADUATE INTERNSHIP ASHLEY MURPHY, ENSC '11

This summer I worked with the Coconino Rural Environment Corps (CREC) in Flagstaff, Arizona. CREC is an AmeriCorps sponsored organization that serves the conservation needs of communities throughout Coconino County and across Arizona. Partnering with land management agencies and organizations of Arizona, CREC improves trails, helps restore forests, monitors and eradicates invasive plant species and participates in various other projects requested by Arizona communities.

My work with CREC centered on maintaining old hiking, biking and horse trails and surrounding trees. Though this does not sound like an imminent or significant environmental concern, trails act as a public resource by providing meaningful and satisfying outdoor recreational opportunities. They lead users along well-developed paths and provide buffers, such as bridges, that protect environmentally sensitive areas, while allowing users to experience plant and animal wildlife and habitat. Specifically, this experience left me with a significant understanding of fire ecology and sustainability and provided me with a better understanding of the importance of human interaction with nature.

*View of Hang Glider Trail, Prescott Valley, AZ before maintenance*

I spent eight days at a time

camping in the wilderness of Arizona, hiking miles into a forest or to the top of a mountain. The trail work consisted mainly of lopping down overgrown branches or bushes. The goal was to provide a safe trail while maintaining the wilderness aesthetic and disrupting the surrounding area as little as possible.

Though most of our work consisted of simply trimming bushes, some of our projects required slightly more finesse. My first hike was to a trail maintenance project with the United States Forest Service in the Apache-Sitgraves Forest. About two miles in, the trail dropped down next to a stream, which it followed for about a mile. Our job was to relocate the trail away from the stream to prevent pollution of the water source. Erosion of the trail, user waste, and animal waste were contaminating the stream. This contamination not only disrupted the aquatic life, but also those animals (including humans) that drank from it. We set out a new trail on a lower graded slope that ran on the opposite side of the hill, hopefully preventing some of the contamination of the stream.

My internship with the Coconino Rural Environment Corps, though focused on hiking trails and not actual community sustainability practices, has certainly enlightened me and sparked my interest in ecological design. Previously unsure of where my future lay as an Environmental Science major, I now hope to choose a focus in ecological design. My internship left me not only with memories of the beautiful landscape of Arizona, but also with an initiative to change how communities interact with the environment.



*Mesa Trail sign, Apache-Sitgraves Forest, AZ*

*The UNIVERSITY of VERMONT*  
THE RUBENSTEIN SCHOOL OF ENVIRONMENT  
AND NATURAL RESOURCES  
George D. Aiken Center  
81 Carrigan Drive  
Burlington, VT 05405-0088