Blast off! The new major in Environmental Science and Policy (ES&P), inaugurated this semester, has taken off. To date, 30 students have declared as majors, and more are expected to show up on the registrar’s list soon. In terms of numbers, these figures vault the ES&P major ahead of 35 of the 56 majors offered at Smith College. Clearly, the ES&P Program has met a pent-up demand for an environmental major at Smith, because roughly half of those who have declared are juniors and seniors. These students were advised to take courses appropriate to the ES&P major in anticipation of its creation, and they have been able to arrange their remaining schedules to satisfy the requirements. Many are pleased to see that the design of the ES&P major is flexible enough to permit students to double major in a variety of disciplines. For example, students are combining the ES&P major with majors in Economics, Sociology, American Studies, Government, Biological Sciences, Geosciences, and Studio Art.

We expect the number of ES&P majors to grow. Current numbers do not reflect the interest of many sophomores, who will not declare until spring semester. Our introductory ENV 101 Perspectives course, co-taught by Professors Amy Rhodes (Geosciences) and Don Baumer (Government), was fully subscribed at 60 students. The three remaining Environmental Integration courses, which form the backbone of the major, are already enrolled at or past capacity for the spring. To help meet student demand for our courses we have a seasoned professor from Westfield State University assisting us with ENV 201: Collecting and Analyzing Information this spring, and the course will be offered again with its lab (ENV 202) in fall 2011. In addition, the ES&P Program is currently advertising for a two-year postdoctoral fellow to teach one or more of our required courses. A sustainable long-term solution, however, requires that the College invest in one or more full-time faculty to meet student needs, not only in the classroom, but also for advising and research opportunities. Similar programs at Smith including American Studies and Study of Women and Gender already have such interdisciplinary hires. So stay tuned.

For more information on the major, please see our website at www.science.smith.edu/departments/esp/requirements.htm.
Hi, I’m Jenna Zukswert. I am a sophomore and a recently declared Biological Sciences and Environmental Science and Policy (ES&P) double major! I love that ES&P is interdisciplinary, and decided to add it as a second major because it provides both a solid foundation in the field and also lets me focus on what I love to do—namely ecology, particularly forest and watershed ecology research. I began conducting research in high school, collecting water samples and identifying macroinvertebrates for the Vermont EPSCoR Streams Project. Last semester I volunteered in Professor Jesse Bellemare’s lab, where I used tree cores to study the population structures of a hemlock and a white pine population at the MacLeish Field Station. This summer I did exploratory research through a National Science Foundation Research Experience for Undergraduates (REU) program at the Hubbard Brook Experimental Forest in the White Mountain National Forest, New Hampshire. While there I studied the interactions between plant roots and soil physics. In addition to scientific research, this is my second and final year as an intern at the Botanic Garden as a STRIDE student where I work in Collections Management. I hope to conduct more research in my remaining years at Smith, but I am also expanding my horizons. I’ve recently started to work for the Office of Sustainability and am the Sustainability Representative for Chapin House.

Collecting horizon sample from soil pits at Hubbard Brook

There are a wide variety of career opportunities for those interested in environmental issues. Current estimates indicate that green careers comprise roughly 5-7% of jobs in the United States, and some have suggested career opportunities in fields that address environmental and sustainability issues could grow to represent 20% of the American workforce by 2030. The “greening” of our society is likely to present a broad range of professional opportunities in the coming decades as sectors throughout local, national and global economies continue to integrate sustainability and conservation policies and practices.

A sampling of Smith alumnae who graduated within the past decade have gone on to work for state environmental departments and regional conservation associations. Several are now employed at zoos, aquariums, and outdoor educational programs as zookeepers, naturalists, and educators. Many graduates continued their education, including a Fulbright Fellowship on water conservation in Portugal; others have gone on to graduate study and research; and some are teaching at colleges and universities, focusing on issues such as estuary research, marine biology, and geology. Smithies can also be found in a variety of environmental engineering and consulting roles at private firms such as CDM Inc, Stantec Consulting, Hart Crowser, Delta Consultants, and NERA Economic Consulting, as well as at organizations such as the MacArthur Foundation, Capacity Carrying Network, and New Yorkers for Parks (NY4P).

A number of great web and print resources are available for those exploring environmental career opportunities. For starters, the Career Development Office has posted a number of links to organizations and sites on the Environment page of its Career Field Research web resource. We also recommend the following texts (both available in the CDO’s resource library):


Summer Programs in Environmental Science and Policy
Interested in doing meaningful work during the summer? Consider these summer experiences.

Sea Turtle Nest Monitoring in the Rookery Bay National Estuarine Research Reserve of Florida
By Catherine Buchalski, Research Supported by the Agnes Shedd Andreae Fund

As a Marine Biology minor, I’ve had many exciting opportunities offered through the Environmental Science and Policy Program. I spent this last summer in Naples, Florida working for the Rookery Bay National Estuarine Research Reserve as an intern in their Sea Turtle Nest Monitoring Program. For ten weeks I learned about loggerhead sea turtle reproduction and worked to protect this threatened population. I witnessed some of the most intimate moments of life up close as I watched mothers lay their eggs and hatchlings emerge from their nests. My favorite part of my job was during hatching season, when we released hatchlings that could not get out of the nest on their own, and watched as they took their first few strokes in the Gulf of Mexico and disappeared into their new watery homes.

Sea turtles are some of the most vulnerable marine species in the Gulf of Mexico due to loss of critical habitat, pollution, ingestion of marine debris, and both intentional and fishery bycatch harvest - all convergent anthropogenic influences in the worldwide decline of sea turtle populations. The loggerhead sea turtle (Caretta caretta) is the most common species of sea turtle in the state of Florida and after decades of waning populations, is now listed as threatened throughout its range in the U.S. under the Endangered Species Act.

Conservation of this species is difficult as it is estimated that only 1 out of approximately 1,000 eggs will reach sexual maturity and add to the reproductive population. During the incubation period alone, eggs face numerous threats, including predation, inundation by high tides and coastal storms, and human interference. To promote conservation efforts of threatened sea turtles among its shores, the Rookery Bay National Estuarine Research Reserve collaborates with several local and state agencies to monitor the nesting activity of all sea turtles on the beaches within its 110,000 acres.

My internship at Rookery Bay NERR exposed me to science in action, community engagement, and the interactions between local, state and federal agencies to achieve a common conservation goal, while working with great individuals who served as fantastic mentors. I got to spend my summer outside walking along the beaches of Florida, watching dolphins, sharks, rays, manatees, birds, and of course, turtles. There’s no better way to spend a summer and I’m grateful to have had such an amazing experience in my time at Smith.

Coral Reef Ed-Ventures 2010
An Environmental Educational Project Conducted by Smith College Students for Youth in San Pedro, Belize

2010 Students: Katie Donovan, Marie Wallace, Lily Maynard, Emily Ulrich, Caitlin Kennedy and Kaylyn Oates
Advisors: H. Allen Curran, Paulette Peckol, Susan Etheredge, and Miguel Alamilla, Jr. (Manager, Hol Chan Marine Reserve)

The Meso-American Barrier Reef lies off the coasts of southern Mexico, Belize, and Honduras, extending for 625 miles from north to south, and is second in size only to Australia’s Great Barrier Reef. Ambergris Caye, an island off the northeast coast of Belize and in close proximity to the reef, is one of Belize’s premier vacation destinations. The island community’s dependence on the reef necessitates a local understanding of the reef’s central role in everyday life.

Smith College professors and students, in collaboration with Ambergris Caye’s Hol Chan Marine Reserve, initiated the Coral Reef Ed-Ventures Program in the year 2000. This summer educational program for local children was designed to increase awareness of the environmental and economic benefits of a healthy reef ecosystem. Each summer, a number of Smith students with backgrounds in environmental science and education get together to plan an appropriate curriculum; they then travel to Ambergris Caye to lead the summer ‘camp.’

During the program, children explore reef ecology through field trips to the beach and reef, hear from local guest speakers whose livelihoods depend on the reef, and engage in creative activities such as art projects and games. In addition to teaching the students about coral reef ecology, the team also provides the children with the skills to educate their

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Green Team is sometimes called the action arm of the Smith College Committee on Sustainability; we are a coalition of faculty, staff, and students dedicated to implementing sustainable policies and initiatives at Smith. If you want to be part of Smith’s green story, we welcome you to join us for lunch every other Thursday throughout the semester at 12 pm in Campus Center Room 102!

The Transparency/PR subcommittee is determining where more transparency on sustainability issues is needed within Smith College, and how to convey relevant information to all Alumni, Students, Faculty and Staff, and members of our larger community, including more Northampton public schools and other schools in the region. Attention is being placed on how to effectively communicate without using wasteful methods such as flyers.

The Campaigns to support/Events subcommittee is working on a big winter sustainability event to discuss issues relevant to this year’s international environmental conference. The event will invite leaders from many environmental groups with the goal of starting a conversation on these issues. The subcommittee is also looking at the different campaigns that Green Team should support through the rest of the academic year.

The Green Power Dedication subcommittee has already finished its primary action of powering Family Weekend entirely on green power. During that three day period, the entire Smith campus used about 180,000 kWh of exclusively wind-powered electrical energy, equivalent to what is needed to run 17 “average” US homes for a year.

The Dining subcommittee is working to improve the sustainability of Smith’s dining halls by promoting non-meat food options and supporting compost and waste programs. The subcommittee’s first steps involve dining preference surveys and dining hall audits that will allow for more systematic changes through the rest of the year.

The Waste and Consumption subcommittee is looking into the many different factors that play into the College’s use of resources. The subcommittee just finished a Mail Room Audit in which they counted and sorted all of the recycled fliers for the day in order to determine the effectiveness of this communication method, and help plan more sustainable ways of getting in touch with students.

The Transportation subcommittee is dedicated to finding more sustainable ways for students to travel. Their biggest action for the semester is facilitating bike use on campus. The Green Team website lists resources for students to get around by bike, bus, train, or car.

Visit our website: https://sites.google.com/site/smithgreenteam

Green Smith: Join the Coalition!

Environmental Student Groups on Campus

Global Action Against Poverty Everywhere (GAAPE) raises awareness throughout the campus and community on the topic of extreme global poverty by examining the issues in a holistic manner. We address health issues, access to clean water and sanitation, education, women’s empowerment, etc. We also raise funds for various nonprofit organizations working toward a more just developed world.

This year, we sponsored a Human Rights Coffeehouse, where students learned about the food access issues in Amherst and Haiti. We are also collaborating with the University of Massachusetts, Amherst Permaculture Committee, to transform a quarter acre grass landscape into a productive and low maintenance garden in an effort to raise awareness about environmental issues and provide community service opportunities to students in the Five-College community. In November, we made notepads from recycled paper, which we donated to the Literacy Project in downtown Northampton.

For more information on events and membership, please email gaape@smith.edu

Picture at Right: Sarah Gaffney ’14 and Gabriella Stien-della Croce ’11 sheet mulch with the UMASS Permaculture Group and GAAPE.
Students for Social Justice and Institutional Change (SSJIC) is a non-hierarchical umbrella social justice organization at Smith with groups focused on a variety of social justice issues. Focus groups for this academic year include: Queers and Allies, Economic Justice, Free Thinkers (Secular/Non-religious student alliance), the School of Americas Watch, White Students Confronting Racism, and Environmental Justice/Mountaintop Removal. People are always welcome to join existing working groups or propose new ones! Some upcoming events being planned include: a trip to the School of Americas vigil in Georgia; a mountaintop justice awareness month; a workshop with Davey Shlasko from Think Again training, and more! Contact Anne Watanabe twoparentheses@gmail.com

The Bicycle Kitchen is dedicated to providing the Smith Community with bicycle rentals and bike maintenance and use education. More broadly, we see the Bicycle Kitchen as a forum for providing environmentally friendly transportation and promoting all aspects of bike love. We do provide maintenance services to help Smith community members fix their bikes, but we aim to help students learn how to maintain their bikes themselves. We also offer semester bike rentals, workshops, and biking resources. Check out The Bicycle Kitchen Cookbook: A Guide to Cycling in Northampton and the Pioneer Valley. Please contact us for a copy.

We are located in the basement of Ainsworth Gym. Fall Bike Fix’n Hours are Mondays and Fridays, 4 to 6 p.m. Visit us at: http://sophia.smith.edu/bikekitchen/Home.html

The Smith College Community Garden serves as a tool for students to acquire practical knowledge in organic vegetable gardening. We believe that it is imperative for students to gain concrete knowledge in ways to solve everyday problems of environmental sustainability, especially those problems concerned with food production. Thus, the garden will teach, engage, and put into practice these notions of sustainability in ways that are both applicable to the individual and the greater Smith community. We aim to engage students in the basic knowledge of organic vegetable gardening by teaching techniques such as garden design, planting, harvesting, crop rotation, vegetables storage, raised bed and compost bin construction, natural pest control, compost application, soil replenishment and rainwater collection.

We are interested in teaching not only our own members, but also the larger student body, through gardening and food processing workshops, student conversations such as this fall’s Students in the Environment Lunchbag, and all-campus presentations like the panel at the recent Julia Child’s Day celebration in the Campus Center.

If you are interested in learning more, volunteering, or have any comments or feedback, please email us at smithgarden@gmail.com and check out our blog: http://smithgarden.blogspot.com
The promise of a liberal arts education is that students will have the freedom to explore a range of interests by taking classes in a wide range of topics, that they will gain the skills to synthesize knowledge from across disciplines, and that they can apply their knowledge to interesting extracurricular activities, internships and eventual careers. Emily Mailloux embodies this promise. Before the major in Environmental Science and Policy (ES&P) was created, Emily was one of a handful of trail-blazing students to create her own self-designed major that allowed her to pursue her interests in environmental sustainability not only in the classroom, but in the community and the world beyond.

When Emily selected her major she looked for an interdisciplinary program that dealt with issues related to the environment and sustainability. At that time the only option was a minor in ES&P. So Emily decided to create her own environmental major, and with help and advice from ES&P faculty, she self-designed a program of study similar to the one now offered by the Program. Emily wanted to have a scientific background and foundation, but decided to focus her major on policy and sociology, such as the human interactions with the environment and specific “anthropogenic influences on climate change.” The self-designed nature of her major pushed her to take on a number of independent projects, like her current special studies on land use history and changes in the Mill River. For the second part of this project, Emily will use GIS to look at her data and ask environmental policy questions about how the different uses of the river have evolved over time.

Other independent projects have allowed her to take ideas from the classroom and apply them to environmental issues in her own life. For example, Emily interviewed residents of her hometown of Greenfield, MA for her environmental sociology seminar last semester in order to study a “small city torn apart by a heated debate over the proposed construction of an industrial plant that will provide ‘clean energy.’” The case study she produced dissects the different ways “that each side of the debate understands the issues surrounding the plant” and discusses how these differences hold wide-reaching implications for all communities interested in implementing green technologies.

Emily’s ability to apply her understanding of sustainability issues to the real world issues does not stop with academic papers. While at Smith, Emily has taken advantage of a number of extracurricular experiences. This past summer, Emily interned as an Environmental Protection Assistant for the Office of Ecosystem Protection at the Environmental Protection Agency (EPA) in Boston. In addition to her primary assistant tasks, which included “collecting, cataloging, and evaluating communication materials concerning climate change adaptation,” she also worked in urban environmental planning to address the fundamental question of “how can we adapt and implement these practices in sustainable business?” The internship included many opportunities for networking, which allowed her to “meet others interested in the environment and learn how they got where they are.” Meeting and speaking with professionals in the field “helped me determine which direction I wanted to go into,” says Emily, who is now interested in environmental business consulting.

However, this summer experience also reinforced her other interests in environmental activism and public education. Emily had a more personally fulfilling experience the previous summer working for the Fund for the Public Interest as a field manager and a canvasser. Through this opportunity, she was able to join the grassroots movement of other “college students and young adults, all passionate about talking to the public about environmental justice.” Emily believes that education is key in dealing with issues of sustainability. “Some people are really not sure what is going on,” she explains, “or they only see a specific facet of the environmental effort and not the whole picture.” Emily believes current environmental education takes an overly simplistic approach and seems limited to lists of things you can do to reduce your own personal footprint (e.g. turn off lights, unplug electronics, etc). “People have heard these things over and over again”, Emily argues, but what seems to be missing is a way to help people understand how environmental concerns relate to every part of society as we know it.

In addition to canvassing, Emily spent two years working as a volunteer for the Massachusetts Public Interest Research Group (Mass-PIRG), where she coordinated “educational events on campus related to social and environmental justice.” She was elected chair of the campus chapter and was also a coordinator for the Global Warming Solutions campaign, which focused on the practical issues related to finding and implementing solutions to global climate change. The group coordinated educational events on campus and fund-raised for social and environmental causes. As one activity, Emily took a group of students to Powershift, a national youth conference focused on issues of sustainability, where students engaged in workshops with inspiring speakers and were given information and taught skills to help educate others.

“...the promise of a liberal arts education is that students will have the freedom to explore a range of interests by taking classes in a wide range of topics, that they will gain the skills to synthesize knowledge from across disciplines, and that they can apply their knowledge to interesting extracurricular activities, internships and eventual careers. Emily Mailloux embodies this promise. Before the major in Environmental Science and Policy (ES&P) was created, Emily was one of a handful of trail-blazing students to create her own self-designed major that allowed her to pursue her interests in environmental sustainability not only in the classroom, but in the community and the world beyond.

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(Continued on page 7)
This semester, Emily has an internship with GREEN Northampton where she is designing and executing a pilot project to improve the sustainability of businesses in the community. Emily’s plan includes specific stages that will enable GREEN Northampton to effectively communicate with businesses, give them the tools they need to become more sustainable and help them implement new strategies and technologies as they are developed. This isn’t the first time Emily has engaged in this kind of work. During her sophomore year Emily worked to improve the sustainability of Northampton businesses while working for the Department of Public Works. At that time she worked as a Waste Management Specialist. In that position Emily “designed and implemented action plans and policies to minimize paper consumption in the city” and to “reduce cafeteria waste within public schools.” All of these experiences in public planning and sustainability have allowed Emily to apply her class work in meaningful ways and have allowed her to engage with our local community.

At GREEN Northampton, Emily is also working on plans for a Earth Day festival. Drawing on her past experience helping MassPIRG plan similar festivals at Smith, Emily is working to make this year’s community festival bigger, and hopes to bring more people together in celebration of the environment by connecting the tri-town area of Northampton, Hadley and Amherst. Plans for the day include encouraging the movement of people between the townships while also promoting public transportation via bike and bus. This event, one of the last Emily will plan while a student at Smith College, will bring together her divergent interests in public planning and education and, she hopes, will have lasting impact on the sustainability of our communities.

This spring Emily will be enrolled in a seminar and working on her capstone project, which will bring her self-designed major together and showcase how her divergent interests in the environmental field intertwine. Emily is also taking a public policy class with an economics component as part of her Minor in Economics, a more recent interest that has developed in response to the experiences she had in her many internships. Because of her outside extracurricular experiences, particularly the recent internship with the EPA and the individual project working on climate change adaptation, Emily is now actively applying to Graduate schools to focus on Urban Environmental Policy and Planning in order to further her new career goal of becoming an environmental business consultant. Yet even while she moves more towards business, she wants to continue being involved in educating the public; she is confident that her enthusiasm for talking about environmental issues will insure that she will always be involved in environmental activism. Emily hopes to start graduate school next fall, taking her next step towards a career in helping ensure a more sustainable future for us all.

(Continued from page 6)
community about marine conservation. By the end of the camp, the children are able to demonstrate significant knowledge of the coral reef environment by identifying reef organisms, have an understanding of marine adaptations and symbiotic relationships, and are able to discuss threats facing the reef. For Summer 2010, over 100 students aged seven to eleven attended the two-week youth program.

The advanced camp this summer worked on a photo project with the focus “San Pedro is to me…” A photographer from the local newspaper, the San Pedro Sun, spoke at camp, and gave the budding photographers tips for how to take meaningful pictures. The campers then composed creative writing pieces to accompany their images. An exhibit of this project was held in San Pedro’s central park on a Friday evening and was well attended by the community, our advanced campers, and their proud parents. A glossy magazine of pictures and prose created by the eight students was printed, and copies were given to all the camp participants and local supporters.

In addition to running the Coral Reef Ed-Ventures camps, the Smith students also had an opportunity to conduct field research as part of an ongoing assessment project to monitor the health of the reef ecosystem. The team collected data to gauge the health of the coral on the local barrier and patch reefs, specifically evaluating grazing of the coral substrate by multiple species of reef fish.