

Williams College
Center for Environmental Studies



N O T E S



Spring/Summer 2001

A Publication of the Center for Environmental Studies, Kellogg House, Williams College, P.O. Box 632,
Williamstown, MA 01267 <http://www.williams.edu/CES>

Letter from the Director

In July Kai Lee began a one-year term as interim director of CES, while Hank Art is on sabbatical leave. Kai was director 1991-98 and is Rosenburg professor of environmental studies.

Welcome (back) all. The 2001-02 year is full of opportunity, and we look forward to seeing old friends and new faces at September's opening events. I'd like to welcome new faculty to CES; there is a listing nearby in this issue. Please join us in making our new colleagues and teachers welcome to the unusual precincts of CES and Kellogg House. They bring new perspectives and stimulation. I'd like to take special note of Ronald Nigh, who will join us in January and spring semester as the Class of 1946 Visiting Professor in International Environmental Studies. Professor Nigh is an applied anthropologist working in the Chiapas region of Mexico, and he will be teaching an exciting course on the struggle for environmentally sound development and social justice, in Chiapas and on the world stage. Dr. Sarah Gardner, an urban planning scholar with extensive experience with environmental justice issues, and Elisabeth Goodman, an environmental attorney, will teach ENVI 302 (Environmental Planning and Analysis) next spring as well. We also welcome back from extended leaves Professor Antonia Foias, an archeologist studying the Mayan culture of Central America, and Professor Kenda Mutongi in the History faculty with expertise in African history. Professor Bill Jaeger of Economics, who created courses in sustainable economic development at CES and the Center for Development Economics, left Williams during the summer; we wish him and his family well in their new home in the Pacific Northwest.

This will be a full year for students at CES. Log Lunch, with a staff led by David Cooperman '02 and Nina Trautmann '03, is doing business at its familiar Friday noon address. The composting program, under the capable leadership of Briana



Kai Lee, Interim Director of CES

Halpin '04, is working on a smooth transition from a student-run pilot program to a continuing responsibility of the College staff. That transition, and the proposed expansion of Stetson Hall—which is bound to affect CES—will be watched by the Campus Environmental Advisory Committee, whose student chair this year is David Cooperman. The Forest Garden is in fine shape thanks to the effective stewardship of the Hopkins Forest caretakers over the summer, and Irena Hollowell '02, who will be assembling Saturday work crews. Greensense (formerly the Purple Druids), with leadership from Carlos Silva '04 and others, will be focusing on energy and conservation in the autumn semester and involving all of us. And the Students for Social Justice, led by Heather Brutz '02, will also set an agenda in the autumn; the group's landmark 2000 Fund in the College endowment, focused on community development and socially responsible investment, will be up and running in a few weeks. This wide span of activities, all initiated and led by students, demonstrate again how environmental studies at Williams goes well beyond the curriculum and beyond a conventional view of what "the environment" is. It is our hallmark as an academic program; students are its propelling force.

We have a staff at full strength this year, the result of a sustained and successful effort led by Hank Art over the past three years. Sandy Zepka will be settling into her newly renovated office and serving, as always, as central coordinator and problem-solver for the Center. Rachel Louis (and her pooch) will continue to coordinate student projects and counsel on internships and job placements. Drew Jones, from his Kellogg House office, the Rosenberg Center, and elsewhere in the Hopkins Forest, continues to invest the concept of "Here" with a wide range of academic and community-oriented experiences. Norm Parker, who spends afternoons at CES in his dual responsibilities with the College library and the Matt Cole Library, will supervise our library operations and press ahead on the "electronic forest" that is the ambitious Hopkins Forest database.

Hank Art is still in evidence, even though he is on sabbatical leave and has so far kept a diplomatic silence about how I am steering the ship. Let the man work: he's doing a lot to grow the electronic forest this year. But he smiles and responds to questions, I know.

Finally, a word about rules of the house. Like all human communities, CES is a commons, in which trust for others in the community is essential to sustaining the quality of life. As in every commons, that trust must be continually rebuilt by the actions of community members, or else trust erodes. Public spaces in Kellogg House are open 24 hours a day during the academic year. If you see people in the house, at any time, whom you don't recognize as regulars, please welcome them and ask if you can help them to find what they're looking for. That will strengthen the civility upon which environmental responsibility is founded and signal that ours is a community. And if you use the kitchen or other facilities, please clean up and make sure that others do too—monitored commons with effective rules can work for long periods of time, and CES has flourished with these practices.

The Purple Valley will take on its autumn raiment before the semester is far advanced. Stop by while the leaves are still green and say hi, won't you?

Kai Lee (klee@williams.edu or x2358)

Goings On at CES

The past spring was another busy time here at CES.

In February, CES and the Hopkins Forest hosted an environmental education workshop by Project Wild. Williams students, AmeriCorps members, and CES staff spent a day learning educational techniques and environmental activities for a variety of age groups.

Rutherford Platt, Professor of Geosciences at the University of Massachusetts, presented a lecture in March entitled "The Exploding Megalopolis: Greenspace Strategies in the 21st Century". Prof. Platt's visit was sponsored by the Class of 1960 Scholars Program.

Two important events took place during April. On April 10th, Robert Bullard, Executive Director of the Environmental Justice Resource Center at Clark Atlanta University presented a talk on "Environmental Justice For All" (see article on page 5). Two weeks later, on the 26th, the CES Class of 1960 Scholars Program hosted John

Wargo of the Yale School of Forestry and Environmental Studies. Prof. Wargo's talk on "Environmental Quality and Children's Health in the 21st Century" drew a diverse group of students, faculty, and community members.

The final CES event of the semester was a slide show sponsored by the Predator Conservation Alliance of Bozeman, MT. The presentation on "Wild Traditions: A Look at Forest Predators of the Northeast" combined beautiful photography of several endangered species with a message about conservation.

The 2001-2002 academic year is off to a terrific start, enhanced by the arrival of several new faculty members, as well as some faculty returning from time away from Williams. New additions to the faculty include Manuel Morales in the Biology Department. This year Manuel will be teaching Biology of Conservation and Extinction (BIOL 207), Current Topics in Ecology

(BIOL 402T), and Introduction to Environmental Science (ENVI 102). Joining him in ENVI 102 is Heather Stoll, a new addition to the Geosciences Department. Heather, a 1993 graduate of Williams, is also teaching Climate Changes (GEOS 215) and Environmental Geology (GEOS 103).

Other new faculty with an interest in the environment include Karen Merrill in the History Department, Jennifer French in Romance Languages, and Darel Paul in Political Science.

Returning to the CES faculty after two years away are Antonia Foias in Anthropology and Kenda Mutongi in History.

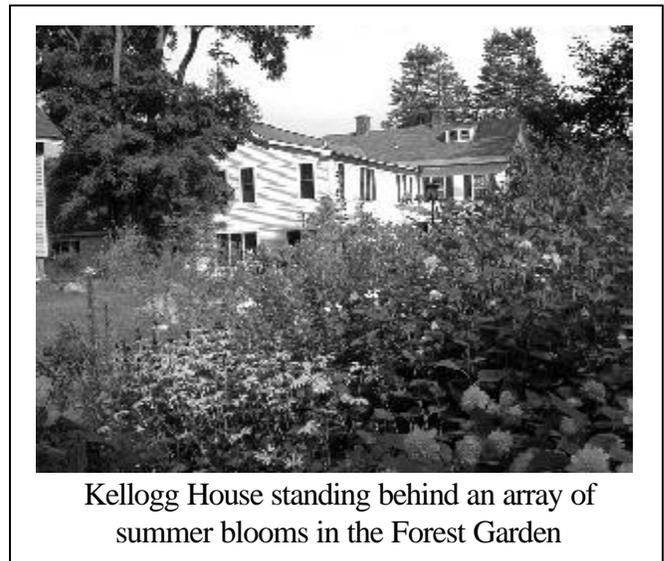
We are looking forward to yet another season of Log Lunches, Class of 1960 Scholars lectures, and other exciting events at CES and across the Williams campus.

How Does Our Garden Grow?

As every spring, the new blooms in the Forest Garden erase the memory of last year's weeds. When winter gives way to lungwort and bluebells and red leaf lettuce, I'm almost willing to pretend I didn't find myself face to face with a six-foot jewelweed last summer. But not quite.

This spring, the Forest Gardeners put most of our energy into helping this garden keep its spring beauty through the summer. Bushes were moved to let the Buildings & Grounds mowers into Seeley lawn, where they will trim under our now tall apple trees. Asparagus, planted in the veggie bed that stood empty last year, shot up daily. Hopefully, horseradish on the other side of the veggie bed will stifle any wandering jewelweed that ventures in. Leaf mulch and woodchips have taken their place in restraining the fertility of our manure-rich soil. Hopefully, these changes will make the garden more sustainable and give both our carefully nurtured plants and the HMF Caretakers, who do the summertime nurturing, a little more time to rest in the sun.

I hope these changes will take a little more of the worry out of the garden, and leave the joys more evident. The garden, after all, is here to help us learn how to create sustainable local environments and to help us see how beautiful, how rich in species, how lush in greenery and even how delicious a campus can be. Sometime soon, I hope you will wander down one of the woodchip covered paths, sit under the shade of the new grape arbor, admire the wild strawberries under your feet, and feel, in whatever season it may be, the joy that I see in the garden every spring. Please, while you're there, pull up a few weeds. I'm sure they will still be with us, still reminding us to enjoy getting our fingers in the dirt.



Kellogg House standing behind an array of summer blooms in the Forest Garden

Anne Dwyer '01

Report from Mystic

Above a core of bedrock, some 35 miles south of Cape Cod, sits a mass of sand where, on a warm July day, more than 50,000 people might be found enjoying the surf and sun. In a few hundred years, as little as 50 people may be able to fit on the weathered remains of what we now call Nantucket Island. With rising sea levels, punctuated by the occasional severe winter storm, Nantucket is disappearing – a condition observed firsthand by students in the Williams–Mystic Maritime Studies Program.

Williams-Mystic is Williams' coastal campus located at the Mystic Seaport Museum in Connecticut. Each semester, twenty-three students with a shared interest in the world's oceans participate in this one-of-a-kind museum-based undergraduate program. Students live together (cooperatively, in five restored nineteenth-century homes), take classes together (in the disciplines of Maritime History, Literature, Policy, and Science), and travel together with professors to the Gulf of Maine and California in the fall, and to the Caribbean and the Pacific Northwest in the spring.

In addition to the offshore voyage (to the Gulf of Maine/ Caribbean), and the Pacific coast seminar (to California/ the Pacific Northwest), Williams-Mystic students also participate in a field seminar on Nantucket Island. Bordered only by the sea, Nantucket serves as a microcosm, exhibiting the advantages and challenges of coastal living in the unique manner of an island community.

As part of this field seminar, Williams-Mystic students have been measuring the erosion of Nantucket Island, every semester since the fall of 1995. On the south shore of the Island, at Tom Never's Head, stands a building now used as the Veteran of Foreign Wars' (VFW) hall. Between it and the ocean is an area of flat land which abruptly ends in a precipitous cliff, a 50 foot drop to the ocean and beach.

In the fall of 1995, Williams-Mystic students stood in a long line with arms outstretched – touching fingertip to fingertip – from the corner of the VFW building to the edge of the cliff. Twenty-five students and professors were able to fit on the line that October. The actual distance was 136 feet of land.

Only five years later, by the fall of 2000, 45 feet had disappeared. The Student Erosion Index (SEI) had shrunk to 16, the equivalent of 91 feet of land between the hall and the cliff. CES and Williams-Mystic student Julianna Connolly (Williams College '01) was there to witness the process of the ongoing study.

CES student Nina Trautman (Williams College, 2003) was a part of the spring '01 class that participated in the annual visit to Tom Never's Head, the most recent measurements to date. One month prior to the spring 2001 Nantucket field seminar, a severe winter storm had pounded the Island's south shore, exacerbating the daily erosive effects of winds and waves. More than half the class looked on as a mere 10 students, stretched fingertip-to-fingertip, filled the space from the VFW building to the new location of the cliff; the measured distance was 54



The "Student Erosion Index" as measured by students in the Williams Mystic Program

feet. Thirty-seven feet of the cliff had been lost in one season, the majority of that probably to one winter storm. Having experienced Nantucket's shore as it stands today, the spring 2001 students stared in amazement at a photograph from 1995, which showed more than twice the number of students stretched from the building to the cliff.

In six short years, Williams-Mystic students recorded a loss of 82 feet of the Nantucket coast to erosion. Solid land 50 feet deep had given way to the effects of the weather and tide. In the space where vans carrying students had once parked now stood open air with the expanse of ocean below.

At present, the bank at Tom Never's Head is distinctly undercut (leaving a thin layer of earth hanging precariously over the beach), and the angle of repose is steep – suggesting that erosion will continue significantly in the winter months of the coming years. Wes Tiffany, Director of the UMass Field Station and the host of the Nantucket field seminar, predicts that Nantucket Island has perhaps 400-500 years left as a habitable island.

Even with such drastic changes to the shore, the threat of erosion has not halted Nantucket's coastal development. Since 1999, two multi-million dollar homes have been built on the properties adjacent to the VFW site. Given the episodic nature of erosion events, it is difficult to predict how soon the sea will claim the remaining land between these structures and the cliff. However, Williams Assistant Professor and Associate Director James McKenna suspects that the homes could stand at the cliff's edge sometime within the next five years. This is where science gives way to policy—who will pay for the damage to these homes when they inevitably succumb to the effects of erosion? The federally subsidized National Flood Insurance Program provides financial coverage for these kinds of homes, but should the government enact laws prohibiting new structures from being built so close to an eroding cliff?

These are a few of the issues facing island communities that Williams-Mystic covers during the Nantucket Field Seminar. Considering the fact that by the year 2025, 50% of the world's population is expected to reside along coastlines, coastal issues such as these increasingly affect us all, demanding objective scientific analysis, awareness, and thoughtful stewardship.

Contributors to this article are too numerous to name.
Thanks to the Williams-Mystic Staff.

Environmental Justice for All

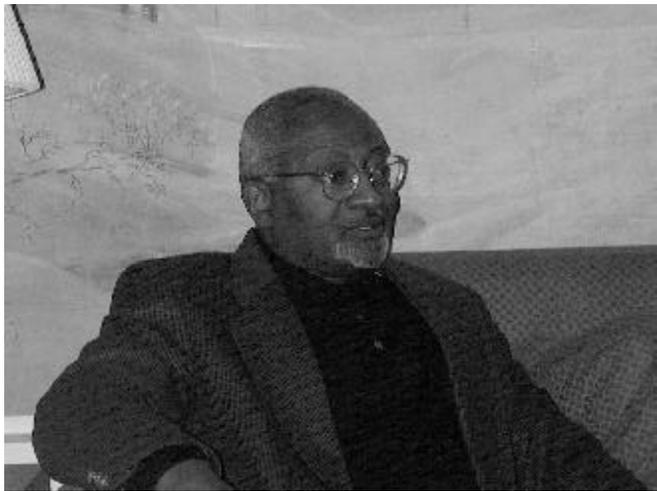
On Tuesday, April 10 in Brooks-Rogers, Robert Bullard, a professor of sociology and director of the Environmental Justice Resource Center at Clark Atlanta University in Atlanta, GA, spoke about the direction environmental justice (EJ) is taking. Lecturing not only as one of the nation's preeminent scholars of EJ but also as someone who has been there on the front lines to witness environmental racism at its worst, Bullard kept the audience captivated for well over an hour.

When Bullard began his career as a sociologist in the 1970s, the EJ movement was just beginning. More than 30 years later, it is gaining nationwide recognition and momentum as academics, activists and environmental professionals begin to realize that, as Bullard puts it, "all communities are not created equal."

EJ, according to Bullard, is "about doing the right thing for the right reason." It is a movement that examines

the sociological effects of environmental protection and hazards and especially what these effects mean for minority communities. It attempts to dispel the myth that African Americans and economically disadvantaged individuals are not interested in working on environmental issues. Finally, the EJ movement, a hybrid between environmental protection and social justice, works to "change the way environmentalism is practiced."

Bullard's provocative lecture, "Environmental Justice For All," targeted environmental racism—whether from industry or not, whether intended or not—as the primary culprit in the EJ battle. "Race matters. Class matters," said Bullard; "even a child knows that environmental racism is illegal." In supporting his claims, Bullard referenced numerous statistical studies by the government as well as outside interest groups citing race as the single most important variable in searching for



Robert Bullard, Director of the Environmental Justice Resource Center

sites of environmental hazards and the single most important predictor in determining such sites. “Somehow,” remarked Bullard, “the risky stuff [environmental hazards] follows the people of color.” Such a comment emphasizes the claim that the predominant method of fighting environmental hazards has evolved from “not-in-my-backyard” (NIMBY) to “put-in-blacks’-backyard (PIBBY).” It is precisely this change that Bullard and the EJ movement are seeking to prevent.

Though Bullard’s findings, as well as those of his fellow activists, have largely been accepted by the mainstream, the federal government has been slow to act. Recent steps toward including EJ in the nation’s environmental protection framework include the creation of an Office of Environmental Justice (OEJ)

within the Environmental Protection Agency (EPA) in 1992, the establishment of the National Environmental Justice Advisory Committee (NEJAC) in 1993 and President Clinton’s signing of Executive Order 12898 in 1994. Each of these government actions has moved the nation closer toward accepting EJ, but the ultimate goals, in the eyes of Bullard, are still but a distant possibility. Part of the problem, as Bullard sees it, is our own conception of the environment. “The environment is out there in the hinterlands,” he said, “but it is also in here. It’s where we live, work, play and eat. It’s in our communities.” Taking this a step further, Bullard stated, “Community is more than location. Community is social, cultural.” Despite our desire for our communities to be safe and clean, we often act against such aspirations. After all, as Bullard reminded his audience, “some of it is us — we drive, we pollute.” If we are ever to be successful in fighting to keep environmental hazards out of our communities, Bullard reasoned, we must begin deep within these very communities. “Environmental justice is not about creating little black Sierra Clubs. It’s about building organizations that are integral to our communities.”

The other main obstacle to eliminating environmental racism is our enforcement, or lack thereof: “The laws that we have—the regulations we have—are only as good as they are enforced. Laws are not enough. We need enforcement too.” With the relatively late entry of the federal government into the EJ arena and the continued absence of many leading environmental organizations in EJ coalitions, even those laws that address EJ issues have been haphazard at best when it comes to enforcement. It is a startling revelation when it becomes clear that “environmental racism is a violation of human rights.” If Bullard’s contention is true, then the failure to enforce EJ regulations or guidelines reflects poorly on the United States in not only environmental circles but humanitarian ones as well.

Defining EJ may very well be a difficult task, but it is one that Bullard has embarked upon with vigor. As the author of *Dumping in Dixie*, *Unequal Protection*, and *Sprawl City* as well as numerous other books, compilations, and articles on a wide-range of EJ issues, Bullard has earned himself recognition as a pioneer in the field. He did make it clear, however, that most of his views regarding EJ and environmental racism are just opinions, and that everyone is entitled to his or her own opinion. Much like the first principle of EJ, when it comes to thinking about the environment in general, “people must make decisions for themselves.”

By Justin Crowe, Opinions Editor
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Robert Bullard’s lecture was sponsored by the Center for Environmental Studies with assistance from the Departments of Philosophy, Political Science, Anthropology and Sociology, the Multicultural Center, the African-American Studies Program, the American Studies Program, The Dean’s Office, the College Lecture Committee, the Chaplains Office, and the College Council.

Summer Grantee Reports

Allie Robbins '01

While many of my fellow students here at Williams for the summer spent hours in the library researching current economic issues or doing science research, I looked back in time to investigate the work of the Civilian Conservation Corps in the Hopkins Memorial Forest in 1936-39. The project was funded by funds from the George Dorion '51 Family Fund, administered by CES, and gave me the opportunity to search for information about the CCC work in HMF. Prior to this summer, CES held some information on the CCC sidecamp in the forest but lacked the names of camp members and extensive information about their work and experiences in the Forest. The CCC's actual activities in the Forest included building stream weirs, roads, and helping in the experimental projects. The CCCers worked in the Forest in 1936, and again in 1938-41.

The research experience this past summer led me down some interesting roads. I traveled to the Northeast States Civilian Conservation Corps Museum, in Stafford Spring, CT, where I talked with members of the Southern Massachusetts/Northern Connecticut CCC Alumni association, all of whom told me incredible stories about their time spent in the region's forests as 18-21 year-olds. Their enthusiasm in talking to me and their excitement to see a young person interested in the CCC really gave me a feeling for the importance of the CCC experience in the lives of so many young men in the 1930s, and provided additional motivation in my search to find surviving members of the HMF sidecamp. A good portion of my research time was also spent in Sawyer Library, looking through microfiche of the North Adams Transcript from 1936-39. While I was successful in finding some articles on the CCC in HMF, I also learned far more about local history than I could ever learn from a course or books. This information, combined with a visit to the North Adams Historical society, gave me a vision of this area during a very different era.

Overall, I had little luck finding information on the CCC in Hopkins Memorial Forest. As it was a sidecamp, the records of its members and activities are

not accessible (unlike those for main camps). All attempts to find enrollees whose names I had located also failed. However, despite the lack of information available on the CCC, I was still able to compile the information available, and also had the valuable opportunity to explore the history and resources of the North Adams/Williamstown area.

Christine Pace '01

Thanks to a grant from the John H. Ohly '33 Memorial Fund and CES, I was able to work at the Population Council's New York City headquarters during the summer of 2000. The Council is an international non-profit, non-governmental organization that conducts research on reproductive health issues in developing countries around the world. Their work embraces the biomedical, social science and public health domains, and involves extensive cooperation between their U.S. headquarters and their numerous other offices around the world. I was involved in the Council's efforts to improve our understanding of adolescent girls' lives in developing countries. The Council aims to educate policy makers and program directors so that they may best serve this often-vulnerable population. The goal is not only to improve girls' reproductive health and awareness, but also to improve their education and livelihood opportunities.

My role in this project was to compile a series of tables on adolescent girls' living situations, educational levels, sexual behavior, reproductive histories and reproductive health in 45 developing countries in Africa, Asia, Latin America and the Caribbean. The data I used was derived from the Demographic and Health Surveys (DHS); it was disaggregated and re-worked to fit the Council's interests, which are less purely reproductive than the DHS's agenda. This was a unique learning opportunity, for each and every table taught me something about a world very different from the one I grew up in, and an adolescence very different from my own. I was also able to learn about the workings of an international organization, and the linkages the Council has formed to the U.N. and its affiliated agencies.

I witnessed these linkages first hand when I

traveled to Dakar, Senegal, in October, to attend a UNICEF-run conference on adolescent policy in West Africa. There, I had the opportunity to help present our data tables (in French!) to an audience of policy makers and program directors whose professional lives were, in fact, devoted to the girls I had studied over the summer. It was, needless to say, an incredible and inspiring experience to meet so many West Africans involved in this field, and to learn about topics ranging from gender prejudice in the classroom, to early marriage, to children's rights—and how definitions of children's rights often exclude adolescents, particularly those who are married. I am very grateful to CES for funding my summer work and for helping fund my trip to Senegal—they were unparalleled experiences that have shaped many of my goals for the future.

Brian Werner '01

Thanks to the grant from the Thomas C. Black '80 Memorial Fund administered by the Center for Environmental Studies at Williams, I spent the summer of 2000 in Williamstown playing with rotting food. Well, more accurately, I was investigating options for a campus-wide, sustainable program for composting food waste.

While a student-run composting operation has existed at Williams for six years now, persistent problems have plagued the program. Ranging from uncertainty about a recipient for the food waste to difficulty securing student labor to the current problem of having no hauler to transport the food waste, the future of the program has always been questionable.

Thus, this summer I sought to present a plan to the school which would offer several options for long-term sustainability. In order to identify feasible alternatives for Williams, I first looked at other schools who have implemented successful composting programs. Besides telephone interviews with several composting coordinators, I spent time at both Middlebury and UMass-Amherst—two schools with solid, though very different, programs. While Middlebury employs a traditional windrow system for turning organic wastes into compost, UMass utilizes technology known as in-vessel composting.

Both of these programs are examples of potential programs that may be implemented at Williams. Through working with Buildings and Grounds we will be able to determine which type of system will fit best here logistically and financially. However, before any sort of progress can be made into researching future program options, a commitment from the school to support the program must occur. This is the one component that is been missing from the Williams program that all other schools I consulted had in place. While students here may desire a change, they often don't have the time or resources to see a project of this magnitude through.

I hope that, as this project continues this fall, I will be able to convince the school to ensure that our organic wastes are dealt with in an environmentally responsible manner.

David Cooperman '02

80 minutes south on Route 7 from Williamstown lies Tatkon House, home of the Berkshire-Taconic Program of The Nature Conservancy. I've spent many hours in this conservation non-profit office making maps, discussing flaws in our survey protocol, and preparing null hypotheses for statistical analysis. I glance at the cornfield out one window and the invasive plant "exhibit" out the other. These plants, and their assault on the mountain landscape, brought me to Sheffield, Mass. this summer.

The goal was to survey the 36,000 acre forest core for 7 species of non-native, invasive plants. Japanese barberry, bush honeysuckle, Asiatic bittersweet, garlic mustard, common buckthorne, multiflora rose, and winged euonymous are basically large-scale weeds with the ability to take over the forest floor and to damage ecosystem function. Kristina Weyer '03, my partner, and I drove and hiked every last road and trail we could find in the forest core, which spans the ridge lines of the southern Berkshires and Taconics in Mass., New York, and Conn. Fortunately, both for the ecosystem and for us, our random sampling methods only turned up about 50 plots (out of a total of over 250) that contained at least one of the target species. Only so many days of fighting through spines, branches, and vines are tolerable.

The job and the office also introduced me to two other important aspects of conservation work, GIS and landowner relations. Learning how to use computer mapping software in conjunction with a global positioning

systems unit to map our survey plots was fun and exciting. It allowed us to label plots according to biogeochemical information, habitat type, and tax map identification numbers. This final criterion allowed us to contact landowners and ask for their permission to “check a small part of your land for big weeds.” The range of responses was broad, intriguing, and usually affirmative.

The most stimulating part of the project, other than those multiflora thorns, is the analysis of the correlation of different geophysical features with the presence of the invasive species. The primary hypothesis centers around the role of roads and trails as dispersal vectors for these plants. We can then divide these groups according to elevation, trail system, habitat type, and ecological land units to look for more trends in invasive dispersal. An approximation of the rate or extent of dispersal from the road for each species is also feasible. Our conclusions, to be presented in a published paper later this fall, could help set priorities for invasive plant control not only for the Berkshires, but for the entire eastern US.

Hilary Williams '01

In August 2000, I was able to intern with the Maine Island Trail Association (MITA) courtesy of a grant from W. Conant Brewer '18 Fund. MITA is a nonprofit organization that stewards a large set of public and private wild islands along the coast of Maine. The organization has two offices, and I worked at the one in Portland so that I could live at home in nearby Yarmouth.

The office was a small, second-story space right down on the wharf. On my first day, I was surprised to find that it was staffed by only six women. Because of this small staff size, I had the good fortune to get to know each of these women and to collaborate with them on various projects. This gave me a taste of the various tasks that contribute to the successful functioning of an environmental nonprofit. Some of these tasks, such as filing reports on major donors and putting together membership mailing packets, were not terribly exciting but did provide me with insight about the nature of such groups. Other tasks proved to be much more interesting.

Over the course of these four weeks, I came to focus on educational outreach. MITA has well-established venues for educating adults about island stewardship but little material to address children. I had just returned from a month-long outdoor trip-leading job

and had been thinking a lot about how to instill conservation ethics in children. Spurred by an invitation to do a presentation on island ecology and stewardship for middle school girls at a science camp in Maine, I began to develop a children's curriculum. I made a visual display, a series of curriculum questions, and a proposal for integrating such curriculums into local school systems. In focusing more thoroughly on one project such as this, I really gained an appreciation for program development processes and an awareness of my capabilities. I feel grateful to have worked with women who gave me the opportunity to create my own projects and to structure my own time in the office.

Having worked at MITA and seen the commitment of these women and their volunteers to the wild islands of Maine, I will definitely consider working at environmental non-profits in the future. The feeling of sincerity and passion in this office really appealed to me, and the local scale struck me as a venue in which noticeable positive changes for the environment and for our relationship with the environment can be made.

Kristin Bohnhorst '03

A set of animal tracks winds through the deep snows of wintry Hopkins Forest. By spring, there are hoofprints in the brook mud, and here and there a twig snaps as a leaf is ripped from the branch. Although many hikers never see a white-tailed deer, in the forest they are surrounded by evidence of these animals.

The white-tailed deer, *Odocoileus virginianus*, is a common herbivore in the eastern United States. Deer, like other large ungulates, browse heavily and play a key role in the ecosystems they inhabit. It is therefore important for management decisions to take deer into account.

Last summer, Kyle Goodrich and I received a CES grant from the Donald B. Miller Fund to study the deer population of Hopkins Forest. The Hopkins Memorial Forest is used by a substantial population of white-tailed deer. Management goals for the forest include both the preservation of plant communities for study and the maintenance of natural dynamics in an ecosystem that contains deer. Williams manages its deer herd by issuing hunting permits in the fall and conducting periodic research projects, such as ours.

Our project sought to assess the density and impact of the deer relative to a carrying capacity. It

involved two studies: a study of deer densities, based on pellet counts, and a survey of deer browse on forest plants.

We counted deer pellet piles (droppings) on two separate sampling rounds, using a system of sample plots located on the USFS permanent plot grid. From this we calculated deer density estimates for different regions of the forest. Regional estimates varied from five to 15 deer per square kilometer. The highest calculated density was in Vermont, a finding in keeping with past studies. Deer densities in all regions exceeded one or more of three biodiversity carrying capacities generated by other studies in the Northeast.

Deer browse was recorded on plants in two smaller plots adjacent to each pellet plot. We tallied every leaf and missing leaf in these plots by species. Data from the browse survey illustrate the species composition and diversity of different areas of the forest, as well as deer browse rates. Overall, 3.7% of leaves sampled in our plots were browsed. Wildflowers and ephemerals were browsed at a higher rate than most other species and were undersampled due to the limited timeframe and small sampling plots in our survey. Garlic mustard and other invasive species were not preferred by deer. Browse on trees showed the potential to impact forest succession in some areas. The tree species of greatest concern were quaking aspen, witch hazel, and eastern hemlock.

Future research on deer and biodiversity in the Hopkins Forest might include additional pellet counts and studies of edge communities, spring ephemerals, and

overbrowsed tree species. An enclosure study in a plant diversity 'hot spot', such as a forest opening or edge, could yield more precise information on the impact of deer on these communities.

We enjoyed learning about our antlered neighbors and hope that you will keep an eye out for them on your next visit to the Hopkins Forest.

Katie Guernsey '01

Funded by a grant from the George H. Dorion '51 Family Fund, I spent the past summer studying the environmental effects of horse farming. I based my project in Saratoga, NY, and made several journeys to other areas in the country with large horse populations. I spent the majority of my time visiting farms and speaking with farm managers, owners, and horse trainers about manure management (disposal/recycling) and insect control. I recorded my findings at each farm and then investigated articles, papers, and other existing scientific research to identify the effects of these methods of manure management and insect control on the environment. The primary environmental risks that I encountered were the use of chemicals for insect control, and non-point source pollution from manure. Based on my research, I was able to inform farm owners of methods that were detrimental to the environment, as well as to make suggestions for alternative techniques.

My work this summer was both challenging and rewarding. I am grateful to have had the opportunity to design a project that had personal significance and that I may otherwise not have been able to pursue.

The Class of 2001

Ten students with a concentration in Environmental Studies graduated in June. Congratulations go out to the Class of 2001: **Alan Brelsford**(biology), **Julianna Connolly** (chemistry), **Emily Earle** (history), **Kathrine Figge** (psychology), **Tanu Kumar** (sociology), **Jessica Leibler** (political science), **Caren Mintz** (biology), **Rebecca Sanborn** (biology), **Brian Werner** (American studies), and **Hilary Williams** (art). **Elizabeth Wood** (history) graduated in December, 2000.

As part of the Class Day exercises, CES gave out several awards.

The Rosenberg Prize in Environmental Studies, given each year to a senior for outstanding scholarship and potential for solving local, national, or international environmental problems, was awarded to **Hilary Williams**. The Rosenberg Prize consists of a cash award.

The Tom Hardie Memorial Award is given to a student who has produced an outstanding work in Environmental Studies. The Award consists of a 3-color woodcut print by Mark Livingston '72, and publication



CES graduating seniors gather for a final group photo shoot prior to graduation

of the work. This year's award was given to **Jessica Erickson '01**, for her paper "Information Flows and the Impact of PCB Contamination on Property Values"

The Scheffey Award, given in the name of Lewis and Andrew J.W. Scheffey, is given to a student in recognition of outstanding environmental leadership. The 2001 Scheffey award, also a cash prize, was given to **Rebecca Sanborn**.

An informal award was given this year to **Brian Werner**, recognizing him for his leadership of the composting program. Brian was awarded a t-shirt with the slogan "Let it Rot" at the CES reception for graduating seniors and their families.

The Environmental Studies program is going strong, with another twelve concentrators in the class of 2002.

Alumni Corner

Alumni Notes

Ned Sullivan '76 is the President of Scenic Hudson, Inc., a Land Trust and environmental advocate in the Hudson Valley. "We have jobs for environmentalists" says Ned. Go to <www.scenichudson.org> for more information.

Jeanne T. Gerulskis '79 has been executive director of the Christa McAuliffe Planetarium in Concord, NH since January 1998. She returned to New England after 16 years in Alaska, and lives with her son in Bow, NH. The Christa McAuliffe Planetarium is currently working with NASA and the University of New Hampshire's Institute for the Study of Earth, Oceans and Space on a multi-media planetarium show on the sun. A founding member of the New England Science Center Collaborative, the Planetarium is working with scientists and science organizations throughout New England to bring awareness of climate change issues to the people of New England; its next multi-media show will focus on the climates of Earth, Mars, Mercury and Venus, and causes of climate change. Jeanne is a member of the Collaborative's steering committee, and on the board of the NH Space Grant Consortium. Jeanne can be reached at jgerulskis@starhop.com

Rick Boyce '81 is an Assistant Professor in Plant Ecology at the University of Denver.

Tim Williams '81 is working as Senior Evaluation Advisor for John Snow, Inc, a consulting firm dedicated to improving public health. "I work in the area of family planning and reproductive health in developing countries, hopefully contributing positively to the environment in this indirect way."

Jon Scott '82 is the Development Director for Clean Water Action and Clean Water Fund

Syma Ebbin '83 writes "I'm currently the executive officer of the international project office of a core project on the Institutional Dimensions of Global Environmental Change. The office is located at Dartmouth College in Hanover NH. I just moved up from Connecticut in January with my husband and 2 boys. Since I moved, I've been able to reconnect with several Williams CESers: **Jon Scott, Doug and Susie Cogan**. It's been a lot of fun to get to see them again frequently." You can write to Syma at Symaebb@aol.com.

Andrew Cutko '86 Is working as an ecologist with the Maine Natural Areas Program, within the state's Department of Conservation. "I spend much work time feeding black flies and tromping through northern Maine in search of unique habitats — the last intact remnants of old growth forests, domed bogs, and cedar swamps. As a licensed forester, I work with industry foresters and land managers to recognize and manage (or set aside) these habitats. I'm also in charge of monitoring the state's new 70,000 acres of ecological reserves. When I'm in sugar maple stands, I often fondly remember my days of tapping trees and boiling maple syrup for my work study job in Hopkins Forest!"

On the personal side, Andrew writes "I live near the shores of Merrymeeting Bay in Bowdoinham, and I'm vice-chair of the local land trust. I'm happily married to Kate, a sweetheart I met at Williams-Mystic in '84, and I'm the father of a two-and-a-half year old budding botanist named Haven ("Haven, can you say *Schoenoplectus tabernaemontanii*?")." Andrew can be reached at Andrew.R.Cutko@state.me.us

Kristian Omland '91 writes "Here's my news: I am going to complete my PhD in Ecology at UConn this September, and I am going to spend the next year as a visiting professor in the Biology Department at Union College. I'm looking forward to teaching, and being closer to the mountains!"

Bernie Kluger '94 Writes that "**Laurel Blatchford '94** and I are now living in Cobble Hill, Brooklyn. She's creating a workforce development program at the New York Downtown Alliance. I am up at the other end of Manhattan, at a new education technology program at Columbia University. We work with faculty at the University, to help them improve their teaching through the use of new media. One of our "clients" is the new Earth Systems Masters Program, which is based at Biosphere2. Wacky stuff. My email address is now bskluger@earthlink.net".

David Evan Markus '94 writes that "Since graduating in 1994, I've wound my way through New York's environmental and government-reform communities (which are closely related in ways that continue to surprise me), and ultimately landed at Harvard, where I'm Fellow for State and Local Government. This spring I'll graduate with my law degree from Harvard Law School and my Master of Public Policy from Harvard's Kennedy School of Government. Starting in August 2001, I'll be clerking for the New York State Court of Appeals in Albany, and



Debra Clark, Jan Goldman-Carter, Candy Cox-Dunn, and Mark Carter, all class of 1976, at the June 2001 Alumni Picnic

look forward to kayaking the Hudson and hiking the Berkshires as often as my docket allows. After that, I'll be looking for work, probably in public service in New York. I can be reached by email at david_markus@post.harvard.edu."

Josh Solomon '97 is living in Cambridge, MA. For the last year and a half, Josh writes, "I've been working for a nonprofit called The Food Project that combines youth development, sustainable agriculture, environmental protection, and hunger relief. We work with 100 youth from inner-city Boston and the suburbs to raise 150,000 pounds of organic produce for distribution to area shelters, sale at low-cost farmers markets in the inner city, and a Community Supported Agriculture farm in the suburbs. It's an exciting project that really makes an impact on high schoolers' lives, making a tangible difference in how they view their relationship to food and their communities, while also growing their skills in public speaking and their confidence in themselves as activists and engaged citizens in their towns and neighborhoods.

"I've been working in the office mostly, doing grant-writing and other development work, while also managing and expanding the computer systems for both of The Food Project's offices. I'm always excited to talk to any current students or alumni about The Food Project, grant-writing, life in Boston, etc. so please do look me up. (617) 876-0439, jsolomon@wso.williams.edu".

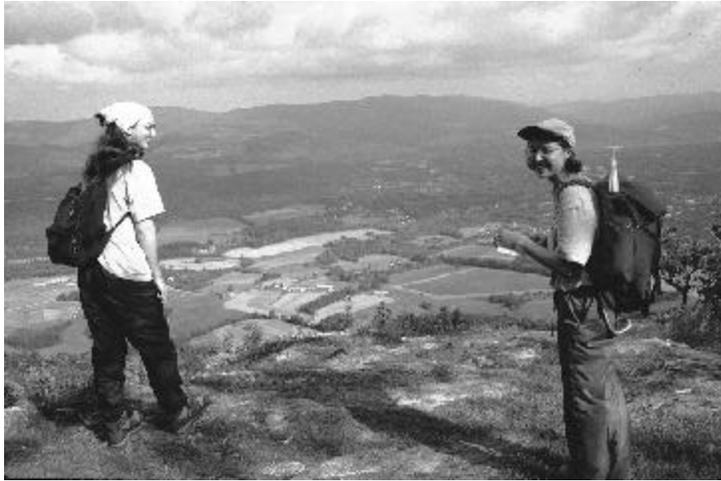
Michel Woodard '97 has graduated with a Master's in Environmental Management from the Yale School of Forestry and Environmental Studies. Michel writes that "Although I have my diploma in hand, I am still working to finish my Masters project, a hedonic study of river values in Maine. When that is done, I will head to Cambridge, MA to start my new consulting job with Industrial Economics, Inc. My first project (I am told) will be to work on a cost-benefit analysis of the Clean Air Act for the EPA." Michel can be reached at michel.woodard@yale.edu

Deb Zucker '97 has moved to the Seattle area to start the Naturopathic Medicine program at Bastyr University. "Naturopathic medicine is a type of primary health care which emphasizes preventing illness, promoting the body's inherent abilities to heal itself, treating the whole person, educating the patient, and increasing personal responsibility for one's health. It is supposed to be an incredible program. Check out the website if you're interested at www.bastyr.edu. I have bought a house (YIKES!) for the five years I'm in school, and my new address is: 8175 NE 150th St., Kenmore, WA 98028. Phone: (425) 483-6435. Email: dzucker@wso.williams.edu. Be in touch, and come visit!"

Emily King '99 writes "I am living at the Grand Canyon in Arizona working on the revegetation crew for the park service. My official title is a biological science technician. I work mainly on the south rim of the canyon though I spend about 1/3 of my time working in the canyon on a Himalaya Blackberry removal/control project. I have been working here since September 2000 and, as of right now, I have no plans to leave. Write to Emily at eking@wso.williams.edu.

Katherine Birnie '00 is working for the Peninsula Open Space Trust, a land trust in the San Francisco Bay Area, and having a great time exploring the west coast. You can reach Kath at kbirnie@wso.williams.edu.

Mary Brevdo '00 is working at a Boston business-based immigration law firm, going to African dance at the dance complex, cooking in her new kitchen and hanging out on my her back porch. Mary writes that she "went to **Chris Kurth's** pig roast and summer solstice party . . . , **Josh Solomon** was also there, and it was a good time in the old Chris Kurth tradition." Mary also visited **Angela Lankford** in Colorado, where they backpacked in her home, the Sangre de Cristo Mountains, just before Angela went off to China for a few years with the Peace Corps. You can contact Mary at mbrevdo@wso.williams.edu



Emily Simpson '00 and Aya Reiss '00

Kathleen Reardon '00 is currently living on Islesboro, an island in Penobscot Bay, Maine. She writes “ I have a fellowship with the Island Institute (Rockland, Me) to work for and live in the Islesboro community. The island has a year round population somewhere near 600, though in the summer I hear it can get up to 3,000. My fellowship allows a huge amount of freedom for determining what project I work on. I’ve been here since November - and I spent a lot of the winter just talking to people to figure out where I could help.” Kathleen has been involved with some of the town’s committees such as the comprehensive plan, the groundwater protection

committee, and the shellfish committee as well as working a bit at the k-12 school (100 students). During 2001-2002 she may be teaching her own class – honors science with a focus on projects using GIS. “GIS has been a huge part of the fellowship. I’ve mostly just been making maps, but I have plans to create some useful databases now that the school and town have Arcview.” Kathleen can be reached at kreardon@wso.williams.edu

Aya Reiss '00 writes “I have just arrived and am settling into my work here at the Mountain School up in Vershire, VT. I’ll be the environmental science teaching intern, spending my days teaching classes and working on the farm. It’s beautiful up here and we have been harvesting and eating many vegetables in the past weeks. You can reach Aya at areiss@wso.williams.edu..

Please send updates for the Alumni Notes section of the next issue of *Field Notes*.

Alumni Listservers

CES manages two listservers for the benefit of our alumni. CESJOBS-L is for posting information on environmental jobs and careers. CESALUMS-L is for discussion of issues that are of interest to the subscribers. Both lists are open to all interested individuals, and all subscribers may post to the lists.

To subscribe, send a message to: listproc@williams.edu leaving the subject line blank. In the body of your e-mail write: subscribe <listname> <your name> (substituting the name of the list and your name for the <> and what's between them).

To unsubscribe from a list send the message: unsubscribe <listname>

How You Can Help CES

There are several ways that we look to our alumni for help. Throughout the year we are looking for internship and employment opportunities for current students. If you know of appropriate summer or permanent positions please send them to us. In February, 2002, CES will once again co-sponsor a Non-Profit Career Fair here on campus. If you work for a non-profit that may be interested in recruiting Williams students for entry-level positions or internships, please let us know.

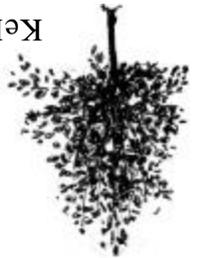
Another way you can help is to write an article for a future issue of *FieldNotes*. Have you been conducting interesting research? Has your job or personal life led you to exciting regions of the world? Is there an environmental issue that you feel passionate about and want to share your opinions? If so, please write a short article that will be read by well over one thousand CES students, alumni, and friends.

Articles, alumni notes, job listings, and any other correspondence can be sent to Rachel Louis at Rachel.Louis@Williams.edu or by snail mail to Kellogg House. The CES staff can also be reached by phone at 413-597-2346.



Kellogg House, Williams College, P.O. Box 632, Williamstown, MA 01267 <http://www.williams.edu/>

The Center for Environmental Studies



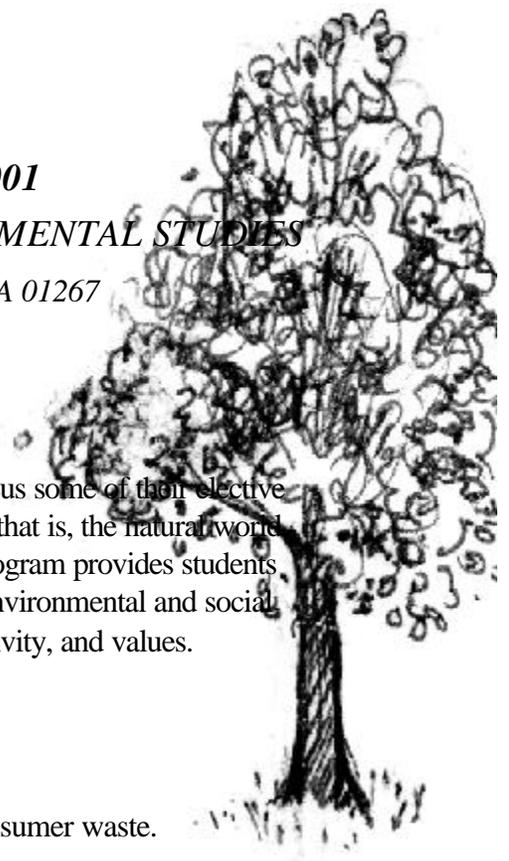
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FIELD NOTES, Spring/Summer 2001

A PUBLICATION OF THE CENTER FOR ENVIRONMENTAL STUDIES

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The Williams program in environmental studies allows students to focus some of their elective courses in an integrated, interdisciplinary study of the environment—that is, the natural world both in itself and as it has been modified by human activity. The program provides students with the tools and ideas needed to engage constructively with the environmental and social issues brought about by changes in population, economic activity, and values.



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