Models and Metrics for Tracking Transformation

John Petersen ’88, Director, Environmental Studies Program

389.46, 392.49, 393.18: the parts per million of atmospheric CO₂ measured in April of 2009, 2010 and 2011, marking the continued upward trend over the last century. The decimal places on these numbers are illustrative of the increasing precision and advanced methods with which we now track the depletion and deterioration of the natural systems on which our social and economic systems depend. Sobering as they are, we need solid numbers on changes in the biophysical system; we can’t appropriately calibrate the scope and scale of an effective response without honestly facing reality.

And yet, if we hope to inspire and mobilize the actions of students, citizens, and politicians, our ability to trace deterioration needs to be matched by an even more robust suite of tools for identifying, tracking, and building on environmental successes. What models and metrics are most useful for measuring positive environmental change? How do we identify the leverage points, decision-making processes, and actions that are most effective at bringing about necessary transformations in biophysical, social, and economic systems?

15, 37, 41, 45: the numbers of environmental studies majors graduating from Oberlin in 1995, ’00, ’05, and ’11. By various measures, the good news is that Oberlin students, alumni, faculty, and collaborators continue to grow in number and to exercise great creativity, vision, and leadership in building models of successful transformation. In this and previous ES newsletters, we report on an impressive range of environmental initiatives our students and graduates are engaged in around the world. Even a sampling of their successes continued on page 12

Building Resilience: An Update on the Oberlin Project

David W. Orr, Paul Sears Professor of Environmental Studies and Special Assistant to the President on Sustainability

With no prospect for federal climate legislation anytime soon, what’s to be done? The short answer is to keep pushing on every front to change federal and state policies, transform the economy, improve public understanding of science, engage religious and civic organizations, reform private institutions, educate for ecological literacy, and improve our own behavior. Even without a coordinated, systematic national response, maybe enough small victories in time will suffice. Maybe.

I finished writing Down to the Wire and contributed an article to our last newsletter with descriptions of the Oberlin Project, a joint effort by Oberlin College and the city of Oberlin to create “full-spectrum sustainability,” in which the parts are integrated to reinforce the resilience and durability of the whole community. Typically, we’ve gone about implementing sustainability via a series of unconnected, one-off projects. As a result, work in sustainable agriculture, renewable energy, and other fields has been piecemeal and disconnected. The full-spectrum approach taken by the Oberlin Project aims to create a more integrated, comprehensive approach to sustainability.

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The signing ceremony for a federal stimulus grant awarded in part to support the Oberlin Project. Ohio Congresswoman Marcy Kaptur and Oberlin College President Marvin Krislov look on as David Orr discusses opportunities.
GRADUATING SENIORS REFLECT ON THEIR WORK AT OBERLIN

**Tim Ballard**
Working on the board of the Green EDGE Fund validated my belief in collaboration and the existence of win-win solutions. Bringing together student, staff, faculty, and business partnerships to implement real-world sustainability solutions was one of the most gratifying aspects of my college years. More importantly, the EDGE board has had the opportunity to share this experience with our fellow students by funding their proposals for environmental change. These include converting college tractors to run on vegetable oil for the grounds department, supporting a student gardening initiative, and implementing campus lighting and water efficiency retrofits. There is nothing more satisfying than the chance to be a part of real changes to the Oberlin campus.

**Allegra Fonda-Bonardi**
Dance—in my case Tango, Hip-Hop, Salsa, and Contact Improvisation—is a form of expression that emphasizes bodily presence in the world. By honing this bodily presence, I connect dance to environmental issues, especially environmental health, in which bodies—and indeed whole ecosystems—resist and remake themselves out of systems that have been polluted or disrupted in some way. Dance (as well as other art forms) can also be a site of social resistance. Studying the arts and peace and conflict studies at Oberlin has helped me see how the arts can help build community resilience in the face of injustice, environmental degradation, and global climate change. Lastly, understanding conflict—through the Peace and Conflict Studies Program and as a mediator in the Oberlin College Dialogue Center—helped me contextualize environmental conflicts on a local and globalized scale. Next year, I will have a chance to further integrate these interests as a Compton Mentor Fellow, in which I will be establishing a community-based theater program within an environmental NGO in Gansu, China.

**Kevin Smith**
Pursuing degrees in both engineering and environmental studies through Oberlin has helped me grasp the ethical and practical implications of design. In traditional engineering programs, the role and valuation of social sciences is often marginalized. My engagement with the ES program has been paramount in developing a vivid understanding of human ecology. This frame of reference is invaluable when designing truly viable solutions for those issues of immediate and direct consequence to the quality and sustainability of human life. My desire to work on many different issues, including the Campus Resource Monitoring System, was driven by a belief in the efficacy and stabilizing effect of real-time feedback on the management of assets. Applying the same technology to vital resources such as groundwater can empower individuals by informing the decisions that directly impact their livelihoods. Involvement in managing and improving this cutting-edge system has been the cornerstone of my Oberlin experience.

**Savannah Sullivan**
I am currently the sustainability intern for the city of Oberlin, and for the past year I’ve assisted city officials in developing their climate action plan. I’ve been able to witness how different interests are involved in shaping policy-based environmental action. Additionally, I’ve observed firsthand how the Oberlin Municipal Light and Power System has revamped its energy portfolio in the face of climate change to be 85 percent renewable by 2015. Working with the city has been an incredible experience because I’ve learned how communities can be climate actors in the absence of federal or regional climate regulations, and have participated in formulating nearly 50 municipal actions that directly lead to significant community emission reductions.

**Maggie Zimmer**
I joined the Environmental Studies Program Committee in 2009 as a student representative. During my second semester, I had the opportunity to participate in the process of hiring a new faculty position. I quickly realized that most conversations regarding the hire consistently focused on the interests of the students. It gives me great pride to say that although professors are often the ones at the front of the classroom imparting their wisdom on eager ears, the students truly shape the Environmental Studies Program. I sincerely believe that the ES program and Oberlin College as a whole are unique in the degree to which students play strong, leading roles in determining class offerings, research and educational goals. •
QUANTIFYING THE VALUE OF URBAN AGRICULTURE IN REDEVELOPING CLEVELAND

Rumi Shammin, Assistant Professor, Environmental Studies

When the 2010 census numbers for population were released in March 2011 showing that Cleveland had lost more than half its population over the past 80 years, it was time for Cleveland to accept the fact that a new model of sustainability would have to be the development mantra if the city were to redevelop as a thriving, desirable, and prosperous place to live and work.

The model of sustainable growth (an oxymoron) has failed cities like Cleveland and Detroit. According to the new census, Cleveland’s population declined from a little over 900,000 in 1930 to just below 400,000 in 2010. Cleveland’s population has declined by 17 percent since the year 2000—but during the same period, the eight-county Cleveland-Akron metro area population declined by just 2.2 percent. This indicates the outmigration of people from the region at large and specifically from Cleveland and surrounding places within the region. The result is a struggling city plagued by closed industries, job losses, foreclosed homes, and abandoned properties, among other things.

However, there is another side of the story—the tale of a quiet revolution that is emerging out of the convergence of many disparate efforts at various scales to reinvigorate, reenergize, redesign, rebuild, and redevelop Cleveland. This is perhaps best summarized by the Reimagining Cleveland (reimaginingcleveland.org) portal developed by the Green City Blue Lakes institute at the Cleveland Museum of Natural History. Despite population reductions in recent years, about 30 percent of the Great Lakes population still resides in dense urban areas. Many of these cities are now beginning to make long-term plans for redevelopment, including plans for the disposition of vacant lands. As part of this initiative, I am collaborating with the Cleveland Botanical Garden to conduct a pilot study to assess the opportunities and challenges of redeveloping vacant land as green infrastructure in Great Lakes cities funded by the Great Lakes Protection Fund. Together with ES professor Janet Fiskio, I am working with student research assistants (Madeline Marvar and Jennifer Helfand in the past and currently Laura Rose Brylowski) to specifically study the value of urban agriculture as a way to reclaim vacant properties so as to bring about economic, social, and ecological benefits.

Our research is situated in the context of a significant local-foods movement that recently earned Cleveland second place in the ranking of local-food cities in the U.S. by the environmental website Sustain Lane. The movement is made up of numerous community gardens, farmers markets, community supported agriculture (CSA), urban farms, celebrity chefs, and local food procurement programs, reports Oberlin alumnus Brad Masi.

Brad and others conducted a study that analyzes the possibility of the 16 counties of Northeast Ohio (NEO) moving 25 percent of the way toward fully meeting local demand for food with local production. A couple of key questions moving forward are how these initiatives will be supported by local and regional economic development policies, and whether these initiatives are long-term sustainable land-use solutions, or just transitional land use that temporarily provides the impetus for urban renewal that will later be replaced by the development needs of other economic sectors. To answer these questions, it is important to develop a comprehensive understanding of the aggregate value of the full range of benefits of urban agriculture in monetary terms. Many of the external and indirect benefits of urban agriculture are not included in traditional cost-benefit analysis—mainly because some of these benefits are either not measured or appear to be too abstract to be quantified. Some examples include ecological benefits such as improved storm water management, sink for air pollution and greenhouse gas emissions, habitat for urban wildlife, and improvements in local environmental quality; social benefits such as places for community interaction and engagement, equitable access to healthy food, and reduced stress as a result of improved local aesthetics; and economic benefits such as job creation, increase in real estate values, and resilience against increase in food prices as a result of increase in oil prices. Recent developments in environmental and ecological economics and other social science disciplines inform us that there now exist several well-accepted research methods that can be used to estimate the value of these benefits.

In our research, we intend to identify the full range of economic, social, and ecological benefits associated with the different urban agriculture initiatives in the Cleveland area and explore ways of measuring the aggregate economic value of these benefits. This will not only enable us to fully appreciate the overall importance of urban agriculture in redeveloping cities like Cleveland, but also to recognize the true potential of these emerging green landscapes amid concrete jungles as long-term, sustainable urban land-use solutions in our policy and development plans.
In previous issues of this newsletter, we have described collaborations between Oberlin faculty, the city of Oberlin, Sustainable Community Associates, and Lucid Design Group to develop technology that monitors and displays the invisible flows of energy and water through the city and college. Our broad goals are to engage, educate, motivate, and empower environmental stewardship among students and citizens. The technology developed so far monitors and displays electricity use—and soon water use—in all Oberlin dormitories and in 33 residences and 11 commercial spaces developed by Sustainable Community Associates. Also monitored is total electricity and water use by the city of Oberlin and, soon, water flow and quality in Plum Creek. The faculty and staff research team working on the project includes Steve Mayer and Cindy Frantz (Psychology), Rumi Shammin and John Petersen (ES), and Henry Bent (Sustainability Technology Research Fellow). Current student collaborators include Chris Canning ’12, Rebekah Blank ’12, Jasmina Makota ’11, Glen MacKay ’11, Noel Meyers ’14, and Kevin Smith ’11. Research efforts this past year have focused on developing and evaluating the impact of several key components of the display and on “Campus Conservation Nationals,” a pilot national water and electricity use reduction competition for college dormitories. A few highlights are described below:

Empathetic Gauges:

One of the premises of our research is that to be effective, feedback must be pervasive and must touch emotional chords in the viewer. To accomplish this, we have been working to develop animated characters, like the squirrel and fish shown above, that exhibit behavior in response to current levels of resource use. In several experiments, Oberlin students have rated the animated characters as being significantly more interesting, relevant, and motivational than non-character displays (e.g. the power line above). We have also found that characters exhibiting sad, worried, and disappointed expressions generate greater empathy and responsiveness than characters exhibiting annoyance and anger. As this article goes to press, we are completing a more comprehensive study in Burton and Kahn halls to determine whether students in hallways who view the squirrel gauge are motivated to consume less electricity than those viewing a power line gauge.

Bioregional Dashboard:

The diagram above (developed by Oberlin’s Great Lakes Protection Fund Research Team and drawn by Lucid Design Group’s Gavin Platt ’07) is the current concept for the Bioregional Dashboard that will be featured on Dashboard websites and on digital signage in the Slow Train Cafe and in the Oberlin Public Library. When fully functional, real-time flows of water and electricity through Oberlin will animate through this conceptual model of the city. The same animated “empathetic gauge” squirrel and fish characters used in the display in dorms and apartments will provide a narrated explanation of current resource flows through the community, together with suggestions on how to conserve resources.

Environmental Orbs:

The Energy Orbs now installed in many of Oberlin’s dorms glow different colors depending on how much electricity is being used relative to how much electricity is normally used at that particular time of day. In a study conducted in 2010, we found that hallways in Burton, in which energy orbs were installed, used significantly less electricity than hallways in Burton without orbs. In surveys, occupants reported viewing the orbs regularly and that the devices motivated conservation and increased understanding, interest, and awareness of electricity use. Oberlin engineering major Kevin Smith spent much of the summer of 2010 redesigning the electronics and programming of the orb so that it will soon be able to display information on water consumption as well.
Speakers and Workshops:

The Environmental Studies Program sponsored talks and workshops by a broad range of seminal thinkers on environmental issues this year. A sampling follows:

- Eitan Amiel, Blaustein Institutes for Desert Research, *Wind-borne Pollen Effect on Arthropod Populations in Agricultural Fields in the Northern Negev, Israel*
- Hector Aristizábal, founder and creative director of ImaginAction, *Theater of the Oppressed Workshops and Performance*
- Noel Canales, president, National Farmers and Ranchers Union of Nicaragua, *Farmers’ Unions and Women’s Organizing in Nicaragua*
- Karen Coulters, Earth First, *30 Years of Earth First!: No Compromise in Defense of Mother Earth*
- Walt Galloway ’69, Environmental Protection Agency, *Life, Science and People: From Oberlin to the EPA*
- Tammy Horn, senior researcher/apiculturist at the Eastern Kentucky Environmental Research Institute, *Creating a Honey Corridor on Surface Mine Sites in Appalachia*
- Lucy Long, professor, Bowling Green State University, *Food, Cultural Sustainability and Green Bean Casserole*
- Michael Lythcott ’70, visiting faculty member at Georgetown University, *Environmental Justice Workshop*
- Fred Magdoff ’63, Emeritus Professor of Plant and Soil Science at the University of Vermont, *The World Food Crisis: Political and Economic Obstacles to Sustainable Agriculture and Food System*
- Bill McKibben, author, environmental activist, co-founder of 350.org, *Global and Local: On the Front Lines of the Climate Fight*
- Gary Paul Nabhan, author, folklorist, conservationist, food and farming advocate, *Heirloom Fruit Search, Community Conservation, & Local Market Recovery* (workshop); *Climate Change, Food Security, and Food Diversity* (public talk)
- Adil Najam, professor, Boston University and Tufts University, *Pakistan’s Great Flood: Lessons and Consequences*
- Mark Nowak, professor of English, Washington College, *Documentary Poetics and a Conversation and Reading from “Coal Mountain Elementary”*
- John Petersen ’88, director of Oberlin’s Environmental Studies Program, *From Orbs to Dashboards to the Oberlin Energy Squirrel: Combining Real-Time Feedback with Competition to Engage, Educate, Motivate and Empower the Oberlin Community to Conserve Water and Electricity*
- Philip Rutter ’70, CEO/chief scientist, Badgersett Research Corporation, *Hope: Theory/Practice/Future of Agriculture With Woody Plants (Help Wanted)*
- Julie Sze, associate professor of American studies, University of California-Davis, *Gendering Environmental Justice*
- Winter-Term Seminar for Oberlin faculty in gender, sexuality, and feminist studies; comparative American studies; and environmental studies on *Environmental Justice, Intersectionality, and Curricular Revision*
Life in the New Environmentally Themed Kahn Hall

Margaret Herarty ’14

Living in the newest dorm on campus, Kahn Hall, was a unique experience for me as a freshman. In applying for Kahn last summer, I pledged to live as sustainably as possible alongside other like-minded first-year students. As an aspiring environmentalist, that was great for me. I imagined that living in the Sustainability Dorm my first year on campus would quickly plug me into Oberlin’s environmental community. In reality, living in Kahn had its ups and downs.

I expected Kahn Hall to be more of an environmental resource than it turned out to be. I anticipated that the resident assistants would be carefully chosen environmental studies majors or environmental activists that I could turn to for advice on environmental activism. This didn’t prove to be the case. In addition, I was disappointed in some of the sustainable features of Kahn. For example, the dual-flush automatic toilets flushed unnecessarily at any sign of motion; passing beneath the automatic light sensors kept hallway lights on for 20 minutes after leaving the hallway; and each hallway was equipped with a flat-screen TV, a microwave, and three small fridges. The building’s energy-harnessing, rooftop solar panels have yet to be funded and installed. Luckily, some of these design issues have been addressed, but altogether, I was frustrated at times with the ways in which Kahn’s environmental technologies fell short of my expectations.

On the other hand, there were great parts of Kahn that I really enjoyed. Kahn is a first-year dorm, and it was built to be so. The architects purposefully created a space that fosters small, close-knit communities; hallways are set up to lead residents to lounges, where people congregate. Separate energy orbs display resource use in each hallway (compared to other dorms in which one orb displays whole-building use), and each wing has a centralized composting bin, part of an initiative by the campus Compost Working Group to integrate compost systems in campus dorms. This infrastructure was created to help foster development of a community in which residents could hold each other accountable for living sustainably. I became extremely close with the hall-mates in my wing, and I did feel comfortable holding them accountable for making our hall a more sustainable place to live.

Living in Kahn provided me with many great opportunities, and though it may not be the perfect model of sustainability (yet), hopefully it can tackle these first few glitches and improve in the years to come.

News from the New Agrarian Center

2010 was a great year for City Fresh, a program of the New Agrarian Center (GotTheNac.org). Over 18,000 shares of fresh, naturally grown local food were distributed in Cuyahoga, Summit, and Lorain counties, including to a number of “food deserts”—inner-city areas with poor access to fresh produce. Over $140,000 was paid to local farmers who own small family farms within 75 miles of the Fresh Stops, which are all managed by volunteers. The program has a full-time operations manager who is working to grow Fresh Stop locations and the number of shareholders.

The George Jones Memorial Farm continued to grow farmers as well as produce for the CSA, Oberlin College, OSCA, City Fresh and the community. In the fall of 2011, Lorain Community College will begin a Certificate of Sustainable Agriculture Program with a number of classes being held at the farm and taught by farm manager Evelyn Bryant. George Jones Farm Summer Discovery Camp for those who have completed grades 2 through 5 will be held the weeks of July 18, 25, and August 1. Two Americorps/VISTA Oberlin College volunteers will work to create an exciting week of fun and food for the campers. We are working to provide camperships and accepting donations for those who can’t otherwise afford to attend.

Founding director Brad Masi has moved on to become an independent local food system consultant and has collaborated on major regional work, including the production of the film Polycultures 2. Sandy Kish Jordan has joined the New Agrarian Center as executive director. Sandy has nonprofit experience as a board member for Providence House for 19 years. She has extensive marketing, promotion, and special events experience, having worked in broadcasting for 15 years. Prior to her current position, she was an entrepreneur, working on special projects with the Cleveland Home and Garden Show, WVIZ-TV, WDOK-FM, and Cuyahoga Community College.

Finally, The NAC proudly became a partner of Community Shares in 2010. Community Shares supports local nonprofits working for long-term, sustainable solutions to build a stronger Cleveland. Learn more about Community Shares and supporting social justice through workplace giving at www.communityshares.org.

Visitors are always welcome at the farm. Come to reminisce, volunteer, and consider a tax-deductible donation. The farm is here because of the generous past support of people like you!
Local foods have received a lot of attention in recent years as the environmental, health, and resilience problems of industrialized food production become increasingly apparent. Funded by the Bonner Foundation, the PolicyOptions Pilot Project brings together community members—Oberlin students, staff, and faculty, students from other institutions such as Lorain County Community College (LCCC) and Kent State University—to facilitate projects that improve access to local food for all residents of Lorain County.

The project began in summer 2009 when Michelle Jahnke ’12 began researching food policy issues and posting information on the PolicyOptions Wiki, an online workspace provided by the Bonner Foundation with the goal of teaching students to put together effective policy briefs to bring in front of local, state, or federal legislators. In November 2009, I replaced Michelle and began working with professors and community partners to design a forum to bring together stakeholders from all aspects of the food system. In April 2010, this effort culminated in the Lorain County Food Summit, hosted by LCCC. Thirty-five stakeholders from around the county weighed in on how they wanted their food system to look in 2020, and the Lorain County Food Policy Coalition (LCFPC) was born.

The goal of the LCFPC is to support food systems that increase access to local, fresh, wholesome, and affordable food for all Lorain County residents. The LCFPC will catalyze the multitude of efforts currently under way to improve food access and build local food systems across diverse constituencies in Lorain County.

In addition to the work of the food policy coalition, the PolicyOptions Pilot Project aims to work with students, faculty, and staff at Oberlin College to promote sustainable food system and policy work. Using the Bonner Center for Service and Learning (BCSL) as a home base and the Lorain County Food Policy Coalition as a community partner, the project has involved students in food system mapping and municipal level policy research in Lorain County. The project provides many opportunities for students and faculty, including winter-term projects, Bonner Scholar hours, private readings sponsored by BCSL director Beth Blissman, and community-based learning projects in environmental studies classes.

Students come to Oberlin from all parts of the globe and disperse widely after graduating. In recent years Oberlin has attracted a significant Bulgarian contingent. They experience a college in which sustainability values are ingrained in buildings, faculty, staff, and curriculum in equal measure. We followed up with four recent Bulgarian-born alums to see how their current work on the environment has been affected by their experiences at Oberlin.

Vladislav Shunturov ’05

I crossed paths with the Environmental Studies Program during a summer fellowship at Oberlin that allowed me to work on data visualization of the performance of the Lewis Center. This practical application of my computer programming skills was so attractive that within a semester I became an ES major. During my senior year, our research group, led by Professor John Petersen, received a grant from the EPA that allowed us to run the first real-time electricity reduction competition between residence halls on campus. We demonstrated that intuitive real-time feedback on resource use can change the behavior of building occupants and motivate them to reduce consumption by as much as 50 percent. In 2004 we incorporated Lucid Design Group with two other Oberlin ES graduates in an effort to create technology that would allow other schools and companies to take advantage of real-time feedback. Today we are celebrating Lucid’s seventh birthday in Oakland, California, with 16 employees. Our product, Building Dashboard, is now installed in over 1,000 buildings at more than 150 college and university campuses, K-12 schools, and private companies. We are proud that six of our 16 employees are Oberlin alumni (though I am the only Bulgarian at the moment).

Apostol Dyankov ’06

Upon returning to Bulgaria after graduating, I realized how much demand there was for the “soft skills” and
STUDENT AWARDS

It is especially gratifying to have students involved in environmental work recognized for their excellent academic and extracurricular work and the quality of their expression in bringing about positive change. The awards listed below are a sample of the ways in which our students are recognized for what they have already done and for what they will do next.

Udall Scholarships
Abby Halperin and David Fisher, environmental studies majors, were both awarded Morris and Steward Udall foundation scholarships. The Udall Foundation is a highly selective national program that awards scholarships to college juniors recognized for their leadership potential across a wide spectrum of environmental fields, including policy, engineering, science, education, urban planning and renewal, business, health, justice, and economics.

Compton Mentor Fellowship
Environmental studies major Allegra Fonda-Bonard received this prestigious fellowship to establish a community-based theater program within an environmental NGO in Gansu, China. The Compton Foundation provides 10 graduating seniors at participating colleges and universities with a $35,000 grant to design a project of social merit that focuses on the environment, peace and conflict resolution, reproductive health, or equal opportunity.

Watson Fellowship
Alison Swaim, a comparative American studies major with a minor in environmental studies, received a $25,000 Watson Fellowship to conduct independent study. She has been pursuing her passion for radio as a medium for storytelling and social change. Allison spent a winter term working at Radio Victoria, a community radio station in El Salvador. With a stipend from Oberlin’s Creativity and Leadership Fund, she worked as an intern for Oberlin Street Law, an organization that teaches practical law to high school students, and spent time at the Lake Erie field Station in Sandusky, Ohio. With a $35,000 grant to design a project of social merit that focuses on the environment, peace and conflict resolution, reproductive health, or equal opportunity.

Schaening Memorial Fund Awards
The Ann Marie Schaening (’89) Memorial Fund, established by the family and friends of Ann Marie Schaening, provides support for students pursuing winter-term projects related to the environment. Congratulations to the seven 2011 recipients for their creative projects: Samantha Bass ’11, Internship with Corporate Campaigns, Inc., and the Killer Coke Campaign; Marlee Blasenheim ’13, Sustainable Agriculture and Its Political Implications in Costa Rica; Clarissa Fortier ’13, Food, Sustainability & Farming Across Borders; Casey Lee ’12, Conducted Biological Research with the U.S. Geological Survey at the Lake Erie field Station in Sandusky, Ohio; Catherine O’Hare ’11, Honeybee Research in Israel; Darrin Schultz ’13, Waste Management and Food Production Using Mushroom Mycelia for the Oberlin Student Cooperative Association (OSCA); and Margaret (Maggie) Zimmer ’11, Hydropedology (Interactions Between Soil and Water) Research at Hubbard Brook Experimental Forest in Central New Hampshire.

Doris Baron Student Research Fellowships
The Doris Baron Student Research Fund was established in 2009 by Doris’ son, Frank Baron ’70, as a way to support student-initiated research projects—particularly those related to international development and the relationships between agricultural communities and the environment. This year the Baron Fund supported the work of seven students:

- Vincent Alessi and Chase Stone’s project, Localizing the Source of Industrial Components for a Sustainable Speaker Housing, involved designing and testing a viable alternative to the “Classic Three” reference-grade monitor speakers to produce a new housing that lowers the negative environmental impact of speaker construction.

- Samantha Bass lived in Nicaragua with a coffee cooperative in the Miraflo Nature Reserve. Her project, Popular Uprising and Counter/Revolution: Agricultural and Community Development in Rural Nicaragua, involved interviewing community members and employees of the Union of Agricultural Cooperatives about the history of Miraflo during the Somoza dictatorship, Sandinista revolution, and later neoliberal reforms.

- David Fisher’s project took him on an environmental pilgrimage to Israel to explore his Jewish roots and draw connections between the Holocaust, climate change, and the American Jewish connection with Israel for a better tomorrow in Israel.

- Andrew Flachs’ project, The Economic Accessibility of Organic and Local Produce in Berkeley, California, focused on the cost of organic and local produce versus the cost of conventional produce at a variety of Berkeley area food outlets.

- Joshua Morse’s project, Evaluating the Condition of Lake Trout Spawning Habitat in Lake Erie, examined the impact of biological invasions on a native top predator of the Laurentian Great Lakes and the implications of this work for environmental management and policy.

- Erika Zarowin started the Urban Defense Project, a community-based neighborhood greening initiative on the near west side of Cleveland that included work on urban gardening, community energy efficiency, and policy writing.

continued on next page
Gorn Prize Recipients for 2011

Each year the ES program awards the Joyce Gorn Memorial Prize to one or more graduating seniors for outstanding work on an extracurricular or off-campus environmental project. This year we are pleased to bestow the award on five very worthy recipients:

- **Timothy Ballard** organized and led a variety of local initiatives, including the Green EDGE (Ecological Design and General Efficiency) Fund, the Firelands Apartment Complex Water Efficiency Retrofit, the Woodland Street Weatherization Program, a solar feasibility study for the Oberlin Industrial Park, and a National Teach-In on Global Warming (at Oberlin).
- **Allegra Fonda-Bonardi** worked on environmental justice issues and projects. She co-founded the Green Prison Project, was a volunteer translator of environmental news articles from Chinese into English for a local Chinese environmental NGO, and accompanied Chinese environmental journalists to China’s industrial interior to cover environmental justice issues associated with the droughts of 2009-10.
- **Kevin Smith** has been active in a range of environmental issues but certainly one of his greatest legacies to Oberlin has been his work on the Campus Resource Monitoring System that provides real-time feedback to students on energy use in the dormitories. Kevin successfully completed a total re-engineering of the Environmental Orbs that glow different colors based on electricity and water use.
- **Savannah Sullivan** worked as the sustainability intern for the city of Oberlin, assisting city officials in developing a climate action plan for the city and establishing related policy.
- **Margaret Zimmer** has served as a student representative on the Environmental Studies Program Committee since 2009 and has been instrumental in collecting student input during recent changes in the major and in the hiring of tenure-track faculty.

**Emergence is a wonderful and mysterious property** of complex adaptive systems. It is what makes the whole greater than the sum of the parts. Because it cannot be predicted, it makes what is to come unknowable with any clarity.

David Orr came to Oberlin with a particular worldview articulated in his 1990 *Oberlin Review* article, “What good is a great college if you don’t have a decent planet to put it on?” Orr brought with him an emerging vision that catalyzed the nascent campus green movement into a national force for change. At Oberlin, the vision took form in the Lewis Center that was dedicated in 2000 and in the campus sustainability initiatives over the past two decades. In 2002, EnviroAlums came into being to advocate Oberlin’s environmental vision.

This past October, we celebrated the 10th anniversary of the Lewis Center. We looked back at its influence and meaning and forward to new vistas of possibilities embodied in The Oberlin Project, formally announced at the celebration. EnviroAlums was the fertile soil in which the idea of “Friends of the Oberlin Project” germinated, and it too became public in October.

The Oberlin Project is, as you will read in this newsletter, a mega emerging vision that will transform Oberlin, city and college, for the better. EnviroAlums has and will continue to play an important role by funding student environmental initiatives and education, sponsoring alumni for the environmental careers speaker program, serving on Alumni Council, representing EnviroAlums and environmental issues on the Alumni Council Executive Board, and just being in the conversations for creating a more just, equitable, and habitable world. If you haven’t joined EnviroAlums, consider doing so (http://new.oberlin.edu/office/alumni-affiliate-groups/enviro-alums/).

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**Faculty Books**

Hot off the press in 2011 are books by ES affiliated faculty David Orr, Carl McDaniel, and T.S. McMillin.
Don’t Miss Out!

In an effort to curb print, postage, and environmental costs college-wide, Oberlin is moving several of its print publications online. Please make sure we have your email address, so that you don’t miss out on newsletters, invitations to alumni regional events, and more. You can update your email address (and other information) via OBIEWeb at www.oberlin.edu/alumni. Go to the MyOBIEweb box and click on “register to access the community” (it’s free).

Please direct questions to alumni@oberlin.edu or call the Alumni Association at (440) 775-8692.

A. J. LEWIS CENTER 10TH ANNIVERSARY CELEBRATES FUTURE POSSIBILITIES

The 10-year anniversary celebration last October of the completion of the Adam Joseph Lewis Center (AJLC) provided an excellent opportunity to explore how actions within Oberlin serve as leverage points and models for larger transformations. The diverse cast of characters that descended for the celebration helped us focus on opportunities built on a foundation of past successes: Rick Fedrizzi and Scott Horst ’81 from the U.S. Green Building Council; Colonel Mark Mykleby from the office of the U.S. Joint Chiefs of Staff; Architects Bill McDonough, Bob Berkabile, and Kevin Burke; Deputy City Manager of Vancouver Sadhu Johnston ’98; Michael Murray ’04 of Lucid Design Group; Hooper Brooks of the Prince’s Foundation for the Built Environment; and the growing cast of environmental dignitaries directly affiliated with projects at the college and city of Oberlin.

The best models are those that inspire new thought and action beyond their initial scope. Those gathered at the anniversary event made clear that ideas germinated at the AJLC continue to bear fruit far and wide. In speaking about the influence the Lewis Center has had beyond Oberlin, AJLC architect Bill McDonough addressed David Orr directly. “A building, like a tree, sends its seeds out,” he said. “We did it, David; the building’s self-replicating.”

Vasil Zlatev ’10

“Act locally, think globally.” This is one of the many lessons I learned at Oberlin, especially being involved in the ES program. I work at Energy Agency of Plovdiv (EAP), an NGO in my hometown of Plovdiv, Bulgaria. The NGO focuses on projects with the goal of moving the city along the path of sustainable development, and, at the same time contributing to global efforts in that direction. The head start I gained at Oberlin proved invaluable; in fact my Oberlin degree earned me an interview at EAP. Some of the projects I am working on now are very similar to projects I engaged in at Oberlin. These Oberlin experiences allowed me to contribute significantly to EAP right from the beginning.

Dimitar Vlahov ’07

Beyond putting soda cans in the correct recycling bin, I spent my Oberlin days unconcerned about environmental causes. However, Oberlin instilled in me a strong desire to initiate transformative change in my surroundings. And perhaps I was afflicted with the sustainability bug at a subliminal level. The desire to encourage positive change has lead me to pursue an MS degree in management science and engineering at Stanford. Last fall classmates and I challenged a Silicon Valley-based multi-billion-dollar high-tech giant to take a close look at the carbon footprint of one of its products. Our final report triggered a corporate discussion that we hope will lead to new sustainability initiatives. This spring I am leading a research project studying business models for reclaiming used shoes and clothes. Our goal is to make recycling of these items as mainstream as conventional recycling. We just launched a first-of-its-kind shoe collection drive in the form of a campus-wide competition offering a variety of incentives to participants.

Vasil Zlatev ’10

Panel discussions featured Oberlin graduates inspired by their involvement with the Lewis Center. From left to right: Sadhu Johnston ’98, deputy city manager for the city of Vancouver, British Columbia; Naomi Sabel ’02, founding partner of Sustainable Community Associates; and Michael Murray ’04, founding partner and CEO of Lucid Design Group.
Systems Ecology students visit Old Woman Creek Estuary.

Living Machine float dignitaries Amanda Goldstein ’11 and Koby Shevin ’14 gear up for the Big Parade.

Systems Ecology students enjoy the ecological assessment of Miller’s Ice Cream.

Ohio Congresswoman Marcy Kaptur gets a tour of the Lewis Center’s Building Dashboard data display system. Photo by Sustainability Fellow Colin Koffel ’10

Julia Bowling is ready for whatever comes at her on the Living Machine float.

Glen MacKay and John Petersen salvage plants from old AILC wetland.

The Oberlin Dance Company performs an installation of Bodies in Motion and in Stillness in the landscape of the Lewis Center. Director Nusha Martynuk, photos of dancers by Rachel Saudek and Daniel James respectively.
initiated in our local community is impressive: Sustainable Community Associates, Full Circle Fuels, the Green EDGE fund, Black River Café, Eden Vision, PolicyOptions, and the New Agrarian Center. Projects such as these provide hope and inspiration and are obviously important steps in sustainable community building. But questions increasingly asked in Oberlin and beyond are how might we develop an infrastructure and model of transformation? How might we weave together individual efforts like those listed above in ways that create a community in which the whole is greater than the sum of parts? And how can we learn from this process in ways that inform and are informed by parallel efforts in other communities? As the Oberlin Project ramps up, much thought is being given to the new metrics that might be used to assess community-wide transformations.

David Orr’s adjacent cover article provides an update on the status of the Oberlin Project. In the broadest sense, the goals he describes involve effecting parallel transformations in physical, economic, and social systems in the Oberlin community that can serve as a working and transferable model of “full spectrum” sustainability for other communities. The success of the project as a model is, in part, contingent on implementing a dynamic research program that documents, supports, and communicates transformations in each of these three dimensions of sustainability and articulates linkages between networks of communities engaged in parallel transformations. During the spring of 2011, faculty members Rumi Shammin, Cindy Frantz, and I have been working with David on fleshing out a research agenda. A key initial goal will be to identify, adapt, and develop core sustainability metrics that can track, assess, predict and inform community transformation. Gathering the baseline data on social, economic, and physical conditions that can serve as input for such metrics is a first step that will enable quantification of change in response to the constellation of programs that comprise the Oberlin Project. Moving forward, our plan is to institute a process by which data for sustainability metrics are collected and analyzed and the metrics further developed throughout the evolution of the project.

Although documenting the process is important, a key objective is to create measures that rapidly evaluate the efficacy of initiatives in ways that allow us to refine strategies and goals to match reality. Likewise, in keeping with the goal of creating a model, the metrics must be transferable to other communities. The characteristics identified below illustrate the kinds of data needed to track each dimension of sustainability.

Social Transformation:
- Individuals’ attitudes, knowledge, emotional connection with nature, and resource use behavior;
- Community identity and strength of community bonds, particularly around environmental issues;
- Structure and function of social networks and information flow within the Oberlin community and between Oberlin and other communities.

Physical Transformation:
- Material and energetic flows and cycling through the community as a whole and through key sectors of the community, the biocapacity, and production of ecosystem goods and services;
- The spatial configuration of the physical environment including the amount of land used for food, biomass, solar, wind, infill in downtown, sprawl, preservation, and carbon sequestration.
- Development and restoration of farms, forests, and wetlands.

Economic Transformation:
- Economic development with an emphasis on internal cycling and local self-reliance as well as on attraction of external dollars into the community;
- Number and size of local businesses, mean income, income distribution, employment, opportunity;
- Economic dependence on fossil fuels and renewables.

The good news is that a significant body of knowledge and research methodology exists for quantifying change in these systems. Bringing this knowledge together to create an integrated and dynamic picture of whole-community transformation is a critical task that will draw heavily on the skills and knowledge of Oberlin students, faculty, staff, citizens, city leaders, and members of the environmental community far and wide. It is a challenge we look forward to working on together.
energy, green buildings, and economic development was not designed to take advantage of the synergies among them.

The goals of the Oberlin Project are to (1) rebuild a 13-acre block downtown to U.S. Green Building Platinum standards as a driver for economic revitalization; (2) transition to carbon neutrality by a combination of radically improved efficiency and deployment of renewable energy; (3) develop a 20,000-acre greenbelt for agriculture and forestry; and (4) do all of the above as a part of an educational venture that joins the public schools, the college, a community college, and a vocational educational school that equips young people for decent and creative lives in a post-cheap-fossil fuel economy. The project, now 18 months old, is organized around community teams working on energy, public policy, finance, community engagement, economic development, and education.

Like light refracted through a crystal, the project appears different from different vantage points. For Oberlin students it means a cool 24/7 downtown. For college faculty it means better facilities. To the local merchants it means more business and higher profits. To public officials it is a model of climate neutral economic revitalization in a region devastated by deindustrialization. To architects and urban planners, it is a model of ecological design at the scale of a small city. To educators it is a model of applied pedagogy and hands-on learning for students. In a political context, it is a constructive and authentic version of democratic grassroots action that can redirect the anger and angst common to our time into the work of building resilient communities powered by sunlight. It is, finally, a model of development that will be necessary everywhere for reasons of security. In the recent catastrophe in Japan, Tokyo Electric, GE equipment, and one black swan event combined to do what only a marauding army could otherwise have done. But for the victims, the results were about the same.

Security—by which I mean safety and dependable access to food, water, energy, shelter, health care, and livelihood—was once assumed to be synonymous with our capacity to project military power beyond our shores and borders. As such, security had little or nothing to do with how we designed, managed, and maintained our country’s food, water, and energy infrastructure, or with the protection of our air, waters, soils, landscapes, biological diversity, and public health. But ensuring security in the 21st century will be far more complicated and difficult. We must now reckon with:

• terrorist threats to critical infrastructure, notably the electric grid;
• food shortages, water scarcity, and expensive oil by 2030 or sooner and described by the chief science advisor to the British government, John Beddington, as a “perfect global storm;”
• the implications of rapid climate destabilization, including mass migrations estimated to reach 250 million by mid-century. The massive heat wave of 2010 in central Russia, record heat in Asia, unprecedented flooding in Pakistan, and the largest cyclone in Australian history (February 2011) are consistent with projections by most climate scientists and likely portents of what’s ahead for all of us; and
• increasingly frequent low or unknown probability/high global consequence events such as the financial crisis of 2008, the Fukushima disaster, similar “normal accidents,” infrastructure failures, and acts of God.

The upshot, in Joshua Cooper Ramo’s words, is that “we must squarely face the awful fact that our security will become more perilous.”

We must also face the fact that no government on its own can protect its people from the growing impacts of climate destabilization and the turmoil likely to accompany the transition to a post-fossil fuel world. Citizens, neighborhoods, communities, towns, cities, regions, and corporations will have to do far more to ensure reliable access to food, energy, clean water, shelter, and economic development in the decades ahead. We are reaching the political, organizational, and ecological limits of large-scale enterprises, whether governmental or corporate, to be the sole-source security providers for a largely passive and dependent public. Communities will have to carry much more of the burden.

Sustainability, in short, must be the domestic and strategic imperative for the 21st century. Its chief characteristic is resilience, which means the capacity of the system to “absorb disturbance; to undergo change and still retain essentially the same function, structure, and feedbacks.” Or as a Marine Corps friend of mine puts it, “resilience is the capacity to take a gut punch and come back swinging.” However defined, resilient systems are characterized by redundancy so that failure of any one component does not cause the entire system to crash. They consist of diverse components that are easily repairable, widely distributed, cheap, locally supplied, durable, and loosely coupled. In Joshua Ramo’s words: “studies of food webs or trade networks, electrical systems, and stock markets find that as they become more densely linked they also become less resilient; networks, after all, propagate and even amplify disturbances.” The less resilient we are, the more military power is needed to protect our far-flung interests and client states, hence greater the likelihood of wars fought for oil, water, food, and materials. But resilient societies need not send their young to fight and die in far-away battlefields, nor do they need to heat themselves into oblivion.

A revolution in the design of resilient systems has been quietly building momentum for nearly half a century. It includes dramatic changes in:

• architecture, e.g. highly efficient communities powered entirely by renewable energy;
• waste management, in which all wastes are purified by natural processes;
• agriculture that mimics natural systems;
• renewable energy technologies;
• advances in energy efficiency;
• cradle-to-cradle and biomimetic production systems that create no waste;
• urban planning and smart growth strategies that build ecologically coherent cities; and
• tools for systems analysis that improve foresight, organizational learning, and policy integration.

These and other advances in science, distributed technologies, and policy are the tools for a society and world that is more secure by design, hence more resilient in the face of disruptions whether by malice, rapid climate change, accidents, human error, or acts of God. They are the heart of policies that are less provocative to other nations and less likely to engender global conflicts while:
• reducing balance of payments deficits for imported oil;
• eliminating our dependence on politically unstable regions;
• cutting military costs associated with oil dependence;
• eliminating our carbon emissions;
• equipping the next generation for lives and livelihoods in economies and societies calibrated to work with natural systems;
• increasing our prosperity by creating employment and business in sustainable enterprises; and
• improving the capacity of communities and regions to withstand effects of climate destabilization and new threats to critical infrastructure as well as global economic turmoil.

Said differently, national security is too important to be left solely to the generals, defense contractors, and politicians in Washington. Neighborhoods, communities, towns, cities, and regions must improve their resilience and security by their own initiative, intelligence, and foresight. The Oberlin Project is one example, but there are many others at different scales and in different regions. It is time to join these into a larger network of sustainability sites, cities, and projects and thereby accelerate change, amplify purposes, increase local capacity, and build resilience from the bottom up. It's not hard to imagine a global network of transition towns and resilient cities and regions—a solar-powered global renaissance of local capability, culture, independence, and security in the full sense of the word. Maybe in time we could create a world in which no child needs to fear violence, hunger, thirst, poverty, ignorance, homelessness, or heat and storms of ever increasing magnitude.

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**HONORS RESEARCH PROJECTS**

Five students successfully completed honors theses in 2010-11 under the auspices of environmental studies. Their work spans the breadth of topics and approaches that characterize ES.

- **Gabriela Baker**’s thesis, *Community Perceptions of the Barriers and Benefits to Local Food Access in Northeast Ohio*, was supervised by Tom Newlin and Cindy Frantz. In her thesis, Gabriela seeks to uncover how low-income communities perceive the barriers and benefits of purchasing local produce and, using the framework of Community-Based Social Marketing, recommends ways to increase access to a local foods economy. Her goal was to foster understanding of what prevents different individuals from buying fresh, local produce, and how marketing and outreach strategies can be altered to better engage different communities.

- **Amy Chung**’s thesis, *Natural Aliens: Science Fiction, Nature, and the Creation of the Other* was supervised by Janet Fiskio and examines the intersection of science fiction with environmental literature. Amy explores the way themes of colonialism, globalization, and the frontier play out in works of science fiction, and looks at how newer speculative works subvert these themes to create narratives of displacement and alienation experienced by marginalized groups. Ultimately, she explores how speculative fiction can provide new narratives and alternate structures for thinking about how nature, society, and human beings will interact in the future.

- **Viviana Gentry**’s thesis, *La Tierra es de Quien la Trabaja: U.S. Agricultural Policy, NAFTA, & Immigration*, was supervised by Janet Fiskio. In her work, Viviana seeks to link the ways in which farm policy, driven by the American Farm Bureau, the USDA, and agribusiness, has influenced immigration policy in the U.S. She argues that within a larger context of neoliberal economic policy, NAFTA has not only changed agriculture in Mexico, but also caused a substantial increase in Mexican migration to the U.S.

- **Amanda Goldstein**’s *Community Engagement in Sustainable Design: A Case Study of the Oberlin Project*, supervised by Rumi Shammin, casts the Oberlin Project in the context of the theory and practice of collaborative planning. More specifically, this study considers the planning literature on collaboration and community engagement, case studies relevant to the Oberlin Project, and the results of in-depth interviews conducted with 20 Oberlin community members. She asks the question, “how might project leaders engage the wider Oberlin community in the future of the Oberlin Project?”

- **Margaret Zimmer**’s thesis is titled *An Evaluation of Surface Water Sources Using Spatial and Temporal Variations in Stream Chemistry in a Headwater Catchment*. Maggie compares soil type characteristics to spatial and temporal water chemistry in a small headwater catchment at the Hubbard Brook Experimental Forest in New Hampshire. Her goal is to determine the location and extent of surface water sources in the catchment. John Petersen supervised her project.
Camille Washington-Ottombre

I survived my first year at Oberlin College! My first semester was, frankly, overwhelming, passing quickly as I tried to keep up with the daily tasks of teaching. Winter break was a time of deep introspection, during which I completely rethought my role as a teacher, thanks to the help of student evaluations, my colleagues, Steve Volk, my mentor Renee Romano, and my daily savior Bev Burgess. It was an ongoing process, and I’ve come to greatly enjoy the quality of the exchanges I have with Oberlin students in and outside of class. Every day I’m more amazed by the ability of Oberlin students to critically analyze highly complex issues, connect various areas of knowledge, and apply theoretical perspective to real-world types of issues. Interacting with students has helped me to discover and appreciate the nature of my job as a teacher and the soul of Oberlin College. I now see my job as creating a favorable learning environment for students so they can realize their goals of making this world a better place. This may seem like a naive statement, but I think that members of the Oberlin community—students and faculty alike—understand how important, challenging, and rewarding it is.

Before Oberlin, I saw myself as a researcher. In my graduate work, I enjoyed the mix of theoretical questioning, literature review, fieldwork, data analysis, and research writing. I wasn’t sure I’d have time for that at Oberlin, which saddened me a little. But once again, my expectations proved wrong. Working with highly talented and interesting research assistants gave me the energy to go the extra mile and complete research projects. Two students, Marion Rockwood and Rachel McMonagle, will travel with me to Zambia this summer to conduct a research project on adaptation to climate change and variability. I also worked with Deirdre Molitor and Kelsey Atkinson on the idea of forming a winter-term project in Kenya to support women’s groups in the rural arid areas around Mt. Kenya. I look forward to participating in future projects with other students!

The community within and surrounding Oberlin has helped me grow as an individual. The very unique Oberlin brew of rural landscapes, cold and harsh midwestern winters, racial and social diversity, and a somewhat utopian atmosphere appeals to my family and me. I anticipate this year as being the first of many on the road to being a better teacher, researcher, and individual.

Janet Fiskio

As I reach the end of my second year at Oberlin, I find myself even busier and happier, if both are possible.

In November 2010 I presented a paper, “Re-Placing Agrarianism,” at the International Association of Environmental Philosophy in Montreal. This paper was part of a panel responding to Paul Thompson’s recent book, The Agrarian Vision. I argued that the New Agrarianism needs to rethink its focus on place to make room for the epistemology and ethics of those on the margins of the food system. Paul was gracious about my critiques! I presented another paper on an agricultural theme at the Food Justice Conference at the University of Oregon in February 2011: “The New Agrarianism: Rethinking Place, Migration, and Citizenship.”

I continue to be involved in the emerging Association for Environmental Sciences and Studies (AESS) as a member of the program committee and now as a member of the editorial board for the new Journal of Environmental Sciences and Studies (JESS). I’ll be at the next AESS meeting in June 2011 with professors John Petersen, Rumi Shammin, and Julia Christensen. John, Rumi, and I will present on teaching climate change across the disciplines, and I’ll draw particularly on the “expressive projects” my students completed in my Climate Change: Ethics, Equity, Narratives class. Also in June, I will present a paper at the Association for Literature and the Environment; but what I’m most excited about is that two ENVS majors, Michelle Jahnke and Lissette Lorenz, will be presenting their Mellon-Mays research in an undergraduate panel with students from Centre, Gettysburg, and Drew colleges.

My new class this year was ENVS 302: American Agricultures. This course takes an interdisciplinary approach to the question of agriculture and its place in American literature, culture, and thought. Questions we considered include: What is the relationship between agriculture, citizenship, and democracy? Does agricultural labor cultivate good moral character? What challenges are posed by transnationalism to the New Agrarianism’s belief in the importance of a “sense of place” and privileging of the local? How can local foods movements incorporate wider concerns for economic and social justice? This class has given me the opportunity to incorporate community-based learning and field trips, as well as a campus visit from food and farming advocate Gary Paul Nabhan and an excursion to Coal River, West Virginia, to plant heirloom fruit trees with Emily Arons ’10.

I’m grateful for all the support I’ve received this year, including a Community-Based Learning Practitioner Award from the Bonner Center for Service and Learning and two Curricular Diversity Grants from the dean of arts and sciences: one for Renewing Lorain County’s Food Traditions (in collaboration with Amy Margaris, anthropology) and the other for Environmental Justice and Intersectionality (in collaboration with the Comparative American Studies Program and the Gender, Sexuality, and Feminist Studies Program).

Ted Toadvine

I have had the good fortune of spending this academic year at Oberlin College while on sabbatical from my regular appointment as associate professor of philosophy and environmental studies at the University of Oregon. I’ve continued on next page
focused on new research, and my retreat at Oberlin has given me time to devote to two book projects—The Compass of Reflection: Phenomenology and the Resistance of Nature and Rhythmic Life: Animality and Ontology. Since my arrival in Oberlin last fall, I have had the opportunity to present various portions of this research as invited lectures at Vanderbilt University, Michigan State University, Ryerson University, and University College Dublin, as well as at conferences of the Center for Advanced Research in Phenomenology, Inc., and the International Association for Environmental Philosophy. When I return to the University of Oregon in July, I will take on new responsibilities as head of the department of philosophy there, so the opportunity to spend my research time at Oberlin has been invaluable.

Oberlin College has been a splendid environment for my work, thanks especially to its wonderfully supportive and collegial atmosphere. I have found the campus and community very welcoming and have benefited enormously from the college's many resources, especially the regular visits by exceptional guest lecturers and the world-class musical performances. Many new friends among the students and faculty have pushed my thinking in new directions. Among the more memorable moments was my participation in a field trip to a West Virginia coal-mining community with Professor Fiskio's Climate Change class in the fall semester, as well as the visit by food activist Gary Paul Nabhan in the spring.

I am especially grateful to the Environmental Studies Program for officially hosting me as a research associate during the fall term and a visiting associate professor this spring, and for providing me with the opportunity to teach a spring course in an area of particular interest to me. At the University of Oregon, my teaching is generally divided between very large undergraduate lectures and small graduate seminars, so I have few opportunities to teach small courses with dedicated undergraduates, which is one of the most rewarding classroom experiences. My class this spring, Ecophenomenology: The Experience of Nature, attracted a diverse group of motivated students, including majors from visual arts, politics, biology, and French, as well as environmental studies. We worked our way through some of the most challenging philosophical thinkers of the last century—Husserl, Heidegger, Merleau-Ponty, Derrida—and studied the application of their thinking within key issues in environmental theory: the relationship between the living experience of nature and its scientific description; the aesthetic experience of the natural and built environment; the “world” of the non-human animal and claims of human exceptionalism; and the alienating effects of modern technology. My students made this class a joy to teach, thanks to their engaged and insightful reactions to our readings and discussions, and their willingness to challenge their own ideas as well as my own. I’m certain I have learned more from them than the other way around, and I will miss the opportunities to continue our discussion.

Let me close with a word of thanks to everyone who has made my visit such a pleasure and a success. I look forward to our paths crossing again.

John Petersen ’88
I returned to Oberlin as a faculty member just as final touches were being made on the program’s new home. So the 10-year anniversary of the completion of the Adam Joseph Lewis Center provided a time for me to reflect back as well. The reality is that although I’ve been chair of the ES program for five years now, in many ways I still feel like a new arrival. For example, I still get very nervous on the first day of class. I still worry during the final weeks of the semester that my students won’t be able to pull together the ambitious class projects they have undertaken (even with 10 years of evidence that almost all will!). I still often find myself identifying more strongly with student activists than with many faculty colleagues. And I’m still impressed and often surprised by the skills and creativity demonstrated by the wonderful group of students who become prized and indispensable research collaborators and then graduate. I’m pleased and relieved that the five years that the Environmental Studies Program Committee put into revamping the curriculum is finally being realized; all new ES majors are now declaring “Curricular Pathways” (see last newsletter). Early student and faculty experiences suggest that the added structure and requirements are compelling precisely the kind of self-directed curricular focus that we intended.

Although my signature upper-level courses remain Systems Ecology and Systems Modeling, my research efforts now focus principally on how real-time monitoring and visual feedback on resource consumption can be used to engage, educate, motivate, and empower environmental conservation and stewardship in the built environment (see bioregional dashboard article on pg. 4). As an homage to the 10th year anniversary of the AJLC, I examined 10 years of data gathered from the building’s monitoring system and published the results in an article in the winter 2011 issue of High Performance Buildings. It is gratifying that the building has achieved most of its key design performance goals: on average it has produced slightly more electricity with its two photovoltaic arrays than it has consumed, it has recycled the vast majority of water used on site through the Living Machine, and has a maturing landscape that now cools the soil. One of the most fulfilling aspects of my recent work has been the emergence of an interdisciplinary team of local faculty and student research assistants described in the article on page 4. This continued on next page
last year I presented research findings from this collaborative research at the annual Behavior Energy and Climate Change conference in Sacramento and MIT’s Annual Energy Conference: Confronting Limits with Fact-Based Analysis in Boston. Although I’m trained as a natural scientist, collaborations with faculty and students in other disciplines have me increasingly convinced that understanding psychological motivations for engagement and pro-environmental actions are central to bringing about more sustainable relationships between humans and the natural world. Can we develop technological approaches that do a better job of connecting people with the natural flows of energy and cycles of matter on which they depend? Can we motivate them to act on this connection? We are excited by what we are finding on this front (page 4)!

Md Rumi Shammin

One of the exciting developments in my scholarship is a new research project on climate policy in Bangladesh. I taught at North South University in Bangladesh between 1996 and 2001 and was very engaged with the environmental research community in the country. Since then, most of my research has focused on sustainability analysis, ecosystem service valuation, and energy and climate issues here in the U.S. I have always been deeply concerned about the impact of climate change in Bangladesh, where we already are observing significant changes in biogeochemical cycles affecting millions of people. Even under moderate scenarios, more than 20 million people could be directly impacted in the coming decades. While Bangladesh has been actively exploring and implementing programs to adapt to the changing climate, little research has been done on the potential tradeoffs for Bangladesh to undertake climate mitigation initiatives.

Over the past year, I have been developing a research project to study the opportunities and challenges of climate mitigation policies in Bangladesh. During a trip there this spring, I developed local collaborations and engaged in conversations on this topic with the climate change negotiating team of the government of Bangladesh and researchers in universities and non-government organizations. During my research leave next year, I hope to devote considerable time and energy on this project and spend several months doing field research in Bangladesh. While we are in the middle of an unfortunate debate on the validity of anthropogenic climate change and associated policy stalemate here in the U.S., climate change is already happening in tropical and sub-tropical countries like Bangladesh, with real impacts on real people. It is thus very exciting, rewarding, and humbling for me to reconnect with my ethnic roots and join the struggle toward solutions that will help the people of Bangladesh and at the same time advance our knowledge and understanding of the potential role of less-developed countries in global climate policy.

Jordan Suter

I have been on research leave from the college this year and have done my best to make productive use of the time. As the summer of 2010 began, many in the department wished me good luck on a productive year. Unfortunately, I followed their advice to “break a leg” too closely, as I managed to do exactly that while playing soccer soon after classes ended. My recovery was relatively quick, however, and I spent the fall semester as a visiting professor in the Department of Resource Economics at the University of Massachusetts. The semester at UMass allowed me to connect with an impressive network of environmental economists in the five-college area of Western Mass. In January 2011, I returned to Oberlin and continued to pursue a number of ongoing research projects.

Much of my attention the past year has been focused on groundwater resources and the role that policy can play in improving the efficiency and sustainability of groundwater use. I obtained funding from the National Science Foundation, along with researchers in hydrology and economics at the University of Delaware, to investigate the relationship between human decision-making and groundwater dynamics. To this end, we designed software that models a spatially explicit groundwater commons and allows human participants to make a series of pumping decisions given realistic economic incentives. During the spring semester, I carried out a number of economics experiments using this software, while varying the underlying hydrologic parameters. In the future, we will implement these same experimental trials, with the addition of policies aimed at resource conservation.

In addition to groundwater dynamics, my research over the past year has evaluated a number of pollution control policies utilizing controlled laboratory economics experiments. In a paper published in the American Journal of Agricultural Economics in the fall of 2010, I evaluated a policy that utilizes a background tax that allows policy makers to achieve desired pollution control objectives over time. In another recent paper, I utilized economics experiments to explore cap and trade type policies specifically targeting water quality objectives.

Outside of the economics laboratory, I continued work on several research projects. Assistant Professor Md Rumi Shammin and I are working on a paper looking at residential energy efficiency, which utilizes data generated from college-owned housing. In addition, along with Associate Professor John Petersen, we published a teaching-based case study that allows students to explore tradeoffs in policies aimed at reducing greenhouse gas emissions. Finally, with researchers in computer science at Cornell University, I have continued work on a project that seeks the optimal design of wildlife corridors, focusing on the U.S. Northern Rockies.
Michael Maniates

The Environmental Studies Program is excited to welcome Michael Maniates as a visiting professor of environmental studies for 2011 through 2013. Michael comes to Oberlin on a two-year leave from Allegheny College, where he has taught since 1993 and currently serves as professor of environmental science and political science. Michael earned his bachelor’s, master’s, and doctoral degrees at the University of California, Berkeley, the latter two in the Energy and Resources Group. Early in his career he established a research focus at the intersection of energy, environment, development, and public policy. His recent work, however, has expanded to include the politics of overconsumption and social change. In 2008 Miller-McCune magazine named him “the nation’s leading authority on the politics of consumption.” Michael’s latest book, The Environmental Politics of Sacrifice (2010), explores the politically disabling ways in which contemporary environmentalism conceptualizes sacrifice and alternative ways to frame issues that empower deeper levels of commitment and civic engagement on environmental issues.

Michael is a longstanding friend of Oberlin’s Environmental Studies Program. In 2001 he participated in an NSF-funded workshop hosted by Oberlin that examined the future of environmental studies education. His 2000 BioScience paper, “Environmental Studies: The Sky Is Not Falling,” was assigned reading for the workshop. In 2005 he served as one of three external reviewers of Oberlin’s Environmental Studies Program and provided Oberlin with critical feedback that has contributed to significant curricular revisions. This coming fall Michael will teach Environmental Policy and Environment and Society. We look forward to working with Michael to determine the upper-level course that might best match his interests and program needs. Michael will be moving to Oberlin this summer with his partner, Rebecca Pappert, and we welcome both to our program and community!

“I’m thrilled to be joining Oberlin’s ES program,” Michael writes. “I’ve long admired the work of Oberlin’s faculty and students. To now be invited to learn from and contribute to this community is an honor and privilege.”

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ENVIRONMENTAL STUDIES WELCOMES AFFILIATED FACULTY AND STAFF

Separate articles in this newsletter highlight visiting and permanent faculty members with direct appointments in Oberlin’s ES program—Camille Washington-Ottobre and Ted Toadvine, as well as our incoming visiting professor Michael Maniates. We are also very pleased to welcome several members of the larger environmental community at Oberlin College.

Amanda Henck Schmidt joined Oberlin in January as assistant professor of geology. Amanda is a surficial geologist with strong interests and experiences in considering human effects on geological processes. She completed her undergraduate studies in environmental engineering at Princeton University in 2002 and a PhD in geosciences at the University of Washington in 2010, after which she spent 10 months in Jiuzhaigou National Park, Sichuan, China, on a Fulbright Fellowship. Her research is related to how human activities affect sediment transport in mountainous landscapes, with a particular emphasis on western China. Amanda is teaching several new classes of special interest to environmental studies majors, including Earth Surface Processes, Applied Geographic Information Systems, and Soils and Society.

“I am excited to be at Oberlin and to be working with such engaged and enthusiastic students. I hope that my research and teaching can form an even stronger bridge between the geology department and Environmental Studies Program, as we have so many complementary interests and opportunities.”

Swapna Pathak joined Oberlin in the fall of 2010 as a visiting instructor in the Department of Politics, where she taught a well-received course in international environmental politics that was cross-listed in environmental studies. She has a BA in journalism, a master’s degree in international relations from Jawaharlal Nehru University (JNU), Delhi, and is currently a PhD candidate in political science at the University of South Carolina. Swapna’s dissertation, the “Environmental Consequences of Violent Conflicts,” bridges interests of many students and faculty members at Oberlin by asking the questions: how does violent conflict affect the environment? And how does post-conflict environmental management vary by a country’s level of democratization, economic development, environmental vulnerabilities, and refugee population?

We are very pleased that Swapna has accepted a two-year Mellon Post-Doctoral Fellowship position as a visiting assistant professor in Oberlin’s politics department. During her tenure, she will continue to teach International Environmental Politics and also introduce a new seminar-level course on Natural Resources and Conflict. “I’m very excited about continuing at Oberlin and teaching some very topical courses pertaining to the environment and international politics. In this past year, it has been an absolute pleasure to interact with students who are not only passionate, but also very sensitive and thoughtful about their learning. During my next two years, apart from teaching, I hope to collaborate with my students on research

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projects that cross disciplinary boundaries of environmental studies, geography, and international politics.”

Julia Christensen is a familiar face at Oberlin because of her position as Luce Visiting Professor of the Emerging Arts; she has taught in the studio arts and TIMARA (Technology in Music and Related Arts) departments since 2007. This spring, she was offered and accepted a tenure-track position at Oberlin as assistant professor of integrated media in the studio arts department. Julia’s work bridges art and research, and her investigations often manifest in multi-media artwork (video, photography, net art, installation, performance) as well as writing (articles, papers, and books). Her art project about the reuse of abandoned “big box” buildings in the United States was shown at the Walker Art Center and Carnegie Museum before it became her first book, Big Box Reuse (MIT Press 2008); her current project, “Surplus Rising,” has had national solo exhibitions and will soon be published in the 3rd Coast Atlas, a compendium of architecture, landscape, and mapping projects being made in and about the Great Lakes Basin.

Julia joined the Environmental Studies Program Committee in Spring 2010, and we are very pleased to welcome her into a more permanent position at Oberlin. “I have always felt at home at Oberlin, where disciplines inform each other and students are open to exploring the pathways between departments. I am excited to continue to develop the bridges between the arts and sciences at Oberlin through my involvement with the Environmental Studies Program.”

Oberlin’s Office of Environmental Sustainability, which oversees implementation of the college’s comprehensive environmental policy, underwent expansion and reorganization this last year. In June 2011, Colin Koffel ’10 was hired as a full time environmental sustainability fellow. In January 2011, after an extensive national search, Robert Lamppa was hired into the new position of director of sustainability and energy management. Rob is trained as a civil engineer and comes to Oberlin with significant experience in campus energy management and sustainability, most recently working as director of facilities at the University of Maine, Farmington. Before that, Rob spent 10 years at Carleton College, where, among other things, he managed installation and ongoing operation of Carleton’s 1.65 MW wind turbine, which offsets over 30 percent of that college’s electricity consumption. Top items on Rob’s plate at Oberlin include determining what combinations of increased efficiency and new power sources will allow our institution to meet its commitment to running a climate neutral campus by 2025.

While a student at Oberlin, Colin Koffel majored in politics and was active as a student senator at a time when a number of important environmental initiatives were passed. “I found Oberlin’s openness to extending education beyond the classroom enthralling, and it enabled me to work closely with my fellow students, faculty, and administrators to deepen the college’s commitment to sustainability. I’m thrilled to stay in Oberlin and continue that work.”

Environmental Studies Program

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Thomas Newlin, Russian

David Orr, Environmental Studies
Md Rumi Shammin, Environmental Studies

Jordan Suter, Economics
Camille Washington-Ottombre, Environmental Studies
Samuel White, History
Harlan Wilson, Politics
CONGRATULATIONS NEW GRADUATES!

Graduating ES majors and minors*
John Andreoni
Christina Appleby*
Gabriela Baker
Timothy Ballard
Rachel Beck*
Matthew Berliner
Martin Brophy*
Joseph Chou
Abbey Chung
Caroline Curatolo
Albert Davila
Catherine Durkin*
Tessa Emmer
Andrew Fenster
Allegra Fonda-Bonardi
Vivian Gentry
Amanda Goldstein
Hannah Gordon
Ei-Phyo Han
Ava Henderson
Nicole Heyman*
Benjamin Jakubowski*
Amelia Jensen
Erika Karsch*
Jonathan Kaufman
Sara Kuperstein*
Zachary Lipshultz
Glen MacKay
Susan Maday Travis
Madeline Marvar
Meghan Meloy
Gabriel Pollack
Sarah Pyle
Karen Quinteros
Peter Sabo
Allison Schneiderman
Lauren Schwartzman
Robinson Schelhas*
Emily Siegrest-Jones
Kiran Singh
Leo Sprinzen
Elias Steltenpohl
Gabriel Stewart
Tyler Stoll
Savannah Sullivan
Samantha Taylor
Hillary Tipton
Laura Tully-Gustafson
Ian Walker
Bayoan Ware
Sophia Weinmann
Lida Wise*
Erika Zarowin
Margaret Zimmer