



FALL 2009

NATURAL RESOURCES
AND ENVIRONMENT
M UNIVERSITY OF MICHIGAN

Stewards

A magazine for alumni and friends of the School of Natural Resources and Environment

SHAPING THE AGENDA

Dean Bierbaum, alumni
influencing environmental
policy in Washington

putting the
MUSSEL ON THE
GREAT LAKES

DRAWN
to excellence

LANDSCAPE ARCHITECTURE CELEBRATES 100 YEARS



UNIVERSITY OF MICHIGAN





new school year brings

RENEWAL AND PROMISE

In the academic world, the end of summer is a little like spring—the return of current students and arrival of a new cohort bring excitement and energy to the new school year, the Michigan autumn is always delightful, and football resumes. What makes this end of summer so special is that we also welcome the return of Dean Rosina M. Bierbaum, who has spent the past year as co-lead of a major project of the World Bank that addresses the intersection of climate change and development. Dean Bierbaum also has recently been appointed to President Obama's council of advisors on science and technology (see stories, page 17).

SNRE will benefit from an infusion of new faculty over the next years in response to our increased student enrollments as well as some reduction in available faculty due to retirements or the transfer of some senior faculty into administrative roles. As we await the new hires' arrival, we're already welcoming new faces. Landscape Architecture faculty member Stan Jones joins us from the University of Oregon early next year. Senior lecturers John DeCicco and Scott Noesen add strength and versatility to our Sustainable Systems track. Adding to our sense of excitement, we will search for five new faculty members this year: two in Conservation Ecology, two in Sustainable Systems and one in the Built Environment (see related story, page 6). These will be primarily junior appointments, increasing our feeling of rejuvenation.

Student interest in the environment, and in sustainability, has never been greater. This is good for the environment, for the nation's future and for the school. We just welcomed our largest incoming graduate class ever. Students are choosing SNRE because of our breadth of dual-degree programs, interdisciplinary approach to curriculum and overall reputation.

This fall we will celebrate the 100th anniversary of our Landscape Architecture program, which uniquely combines planning and design within a framework of environmental sustainability. SNRE is hosting this event, which includes a variety of social events, exhibits and professional panels, over the Oct. 9-10 weekend (see related stories, starting on page 12).

As we celebrate the continuing success of SNRE, we should acknowledge that we are living through a difficult time, nationally and in the state of Michigan. Realizing that many are experiencing hardship, we are mindful of today's circumstances, grateful for the support of citizens and friends, and resolved to do our part to work efficiently, provide our students with the best possible education and contribute to sustainable practices. Indeed, new developments in sustainability by our faculty and students can lead to new business opportunities, cost savings and a healthier environment. Despite difficult times, our mission and its relevance appear in sharper relief.

As you read this issue, classes will be brimming and humming, the enthusiasm will be palpable and faculty search committees will be beginning the exciting work of recruiting new colleagues. We welcome back Rosina, and look forward to a busy and productive 2009-2010 school year.



THANK YOU ... AND WELCOME BACK

On Sept. 1, Rosina M. Bierbaum resumed her duties as dean of the School of Natural Resources and Environment. During her year-long sabbatical, Professor David Allan, who has served on the faculty since 1990, served as acting dean. The SNRE community is grateful to Professor Allan for his service and dedication. Thank you, Dave.

Professor David Allan (dallan@umich.edu)
www-personal.umich.edu/~dallan



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The U-M Landscape Architecture program celebrates its 100th anniversary this year and marks a century of contributions by its alumni and faculty to scholarship and innovation. A weekend of events Oct. 9-10 commemorates the program's achievements.



ONLINE

VISIT SNRE.UMICH.EDU TO SUBSCRIBE TO RSS FEEDS, WHICH KEEP YOU UP TO DATE ON NEWS COMING FROM SNRE FACULTY AND STUDENTS, AS WELL AS OUR GROWING SOCIAL NETWORKING SITES.

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Research scientist David Jude has witnessed a remarkable ecological transformation in the Great Lakes, driven largely by the relentless advance of two closely related species of non-native mussels.

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From helping neighborhoods confront brownfields to working for businesses creating new markets, SNRE faculty and students are conducting research and shaping environmental policies to make lives and communities better.

a WORLD of CHANGE

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Dean Rosina M. Bierbaum has studied climate change science and policy for 20 years, but mostly from the perspective of a single country: the United States. This fall, her scientific analyses have a global audience.

SHAPING THE AGENDA

18 SNRE alumni Chris Miller (M.S. '88) and Mary Frances Repko (M.S. '91) are among the leading staff members in Washington on environmental and energy issues. Their status is due as much to their experiences and abilities as to the influence over legislation wielded by the powerful Congressional leaders they serve.



Stewards

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putting the MUSSEL ON THE GREAT LAKES

BY JIM ERICKSON

ABOARD THE R/V LAURENTIAN, LAKE MICHIGAN — The steel cable whines and the winch groans as it hoists a net crammed with about 300 pounds of fingernail-size quagga mussels over the stern and onto the deck.

Photo by Jim Erickson



DAVID JUDE

University of Michigan fishery biologist David Jude opens the net and starts sorting the catch, the result of a five-minute trawl along the bottom of Lake Michigan, about 3.5 miles west of Grand Haven in the lake's southern basin.

The final count: one fish (a slimy sculpin), a few zebra mussels and thousands and thousands of golden-brown quagga mussels.

"This is a good example of the kind of abundance of quagga mussels we're seeing on the bottom of Lake Michigan right now," said Jude, a School of Natural Resources and Environment research scientist who's been studying the Great Lakes for more than 30 years.

"A decade ago, there were no quagga mussels in Lake Michigan," he said. "Now you can find them across the entire lake, and this invasion has happened faster than anyone thought it would. We're really grappling with some of the changes that are going on in the Great Lakes as a result."

The lakes are in the midst of a remarkable ecological transformation, driven largely by the relentless advance of two closely related species of non-native mussels. Though the zebra mussel is better known, over the past decade it has largely been displaced in Lake Michigan by the quagga, which can thrive far from shore in deep, mud-bottomed waters. Similar changes are under way in Lake Huron and Lake Ontario.

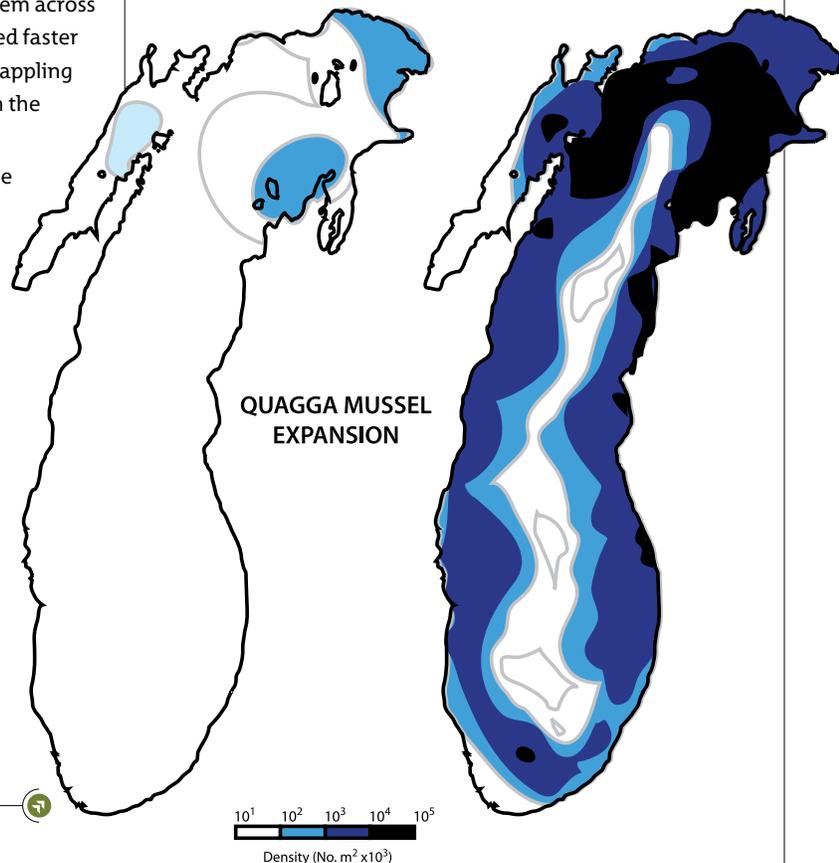
Each quagga and zebra mussel filters about a quart of water a day—and there are billions of the creatures in Lake Michigan alone. The result is startlingly clear water that delights recreational boaters but disturbs

scientists like Jude because the water's been stripped of life-supporting algae. Jude, colleague Mark Edlund (a U-M alumnus and a former field assistant of Jude's) and three student research assistants spent two days aboard the research vessel Laurentian in May, working on a project funded by the Great Lakes Fishery Trust.

READ MORE:
michigantoday.umich.edu

"These lakes—Michigan, Huron and Ontario—are going to become less productive, and that translates into fewer fish as well as different types of fish," Jude said. "So the sport fishermen are probably the people who will be most affected by this."

"We're seeing changes at every level of the ecosystem, starting at the bottom and going all the way to the top," Jude said. "And it's just really a dramatic thing to be working on the lakes during this era and to be a witness to what's happening."



THE EXPANSION OF QUAGGA MUSSEL IN LAKE MICHIGAN FROM 2000 (LEFT) TO 2005 HAS BEEN DRAMATIC. QUAGGA MUSSELS HAVE BEEN FOUND AT DEPTHS OF 450 FEET.

Source: Michigan Sea Grant

helping the Golden State SHINE again

BY KEVIN MERRILL

MASTER'S PROJECT TAKES ON RENEWABLE ENERGY IN CALIFORNIA DESERTS

Ten SNRE students are sharing The Wilderness Society's largest annual scholarship award for their research into public lands, renewable energy and California deserts.

The Gloria Barron Wilderness Society Scholarship is given annually—usually to an individual student—to support research and preparation of an academic paper on some aspect of wilderness. Recently, judges bestowed the 2009 Society Scholarship upon the 10-student SNRE team because of the topicality and interdisciplinary breadth of their project.

"The judges were definitely drawn to the timeliness of the project," said Spencer Phillips, vice president of Ecology & Economics Research at The Wilderness Society, in Washington, D.C. "Renewable energy development that will affect public lands is an important issue, and federal land managers—along with many others—need to get up to speed quickly. The analysis and tools the SNRE group proposes to develop will be invaluable."

The students' research started earlier this year as part of a year-long master's project. The 400,000-member organization had earlier volunteered to become a client to an SNRE student team. Next, the students worked with the group's leaders to define the scope of the project, leading to the master's proposal.

"When combined with expanded conservation and efficiency, renewable energy is key to the West's energy and economic future and to the nation's response to the challenges of climate change," the students wrote in their overview. "Significant opportunities exist to promote distributed generation of solar and wind energy, but large-scale central generation will likely be an important component of a national transition to clean energy. Solar and wind energy generation are the leading technologies that offer the potential to be deployed at the utility scale."

Their research activity, which includes conducting interviews, creating databases, reviewing policies and synthesizing reports, will continue this year, culminating in a presentation of their findings in the spring of 2010. The master's project's title is "Renewable Energy in the California Desert: Mechanisms for Evaluating Solar Development on Public Lands."

Eventually, the students will develop then apply a list of environmental screens to renewable energy projects in various California deserts. The screens include criteria such as distance to transmission, distance to load, impacts on wildlife habitat and impacts on wildlife species.

The students then plan to compile, analyze and translate the environmental screens for use in evaluating the impact of renewable energy projects on important environmental factors.

Phillips said he was particularly impressed by the interdisciplinary approach of the project and the students' intention to use geographic information systems tools to tie the various types of information together. The interdisciplinary nature of the research is rooted in the students' academic interests: Many are pursuing dual degrees at the University of Michigan. The students are Jesse Fernandes, Natalie Flynn, Samantha Gibbes, Matt Griggs, Takahiro Isshiki, Sean Killian, Laura Palombi, Nerissa Rujanavech, Sarah Tomsy and Merry Tondro. Their adviser is SNRE Professor Steven Yaffee.

"We are thrilled and honored to be selected for this prestigious award," said Tomsy, who also completed an internship this summer at The Wilderness Society. "The scholarship will greatly bolster our capacity to pursue our research on this important topic." ♻️



U-M RECOGNIZES SNRE FOR CONSERVING WHILE COMPUTING

When it comes to being good environmental stewards, everyone at SNRE is "walking the walk." The conservation efforts of the school's IT department were recognized this summer by the Climate Savers Computing Initiative (CSCI). Through this program, U-M departments and units are eligible for Green IT Achievement recognition based upon scores against a checklist that gauges green computing practices. By rewarding units, the Green IT Achievement program wants to promote long-term changes in behavior and keep the CSCI program going beyond its current two-year campaign.



IN ADDITION TO FIELD NOTES AND REFLECTIONS, STUDENTS POST PHOTOS. BRIDGET HOHNER POSTED IMAGES OF A MALE DAMSELFLY (*CALOPTERYX MACULATA*) AND A GIANT FLOATER (*PYGANODON GRANDIS*) SHE OBSERVED ALONG THE PAW PAW RIVER IN NORTHERN MICHIGAN.

having a FIELD DAY

SNRE students have always spent summers working on grant-funded research or serving in career-related internships. This year, a group shared almost daily insights and updates on those experiences through a blog.

“Postcards from the field” launched this year with 12 master’s and doctoral students. The site’s goal was to create a real-time dialogue between students as they progress through their projects. For Catherine Game, a second-year master’s student, participating gave her an opportunity for mid-internship reflection that she may not have otherwise had.

“Writing in a blog is different than writing in a journal. You write knowing that someone else will read your work. With this in mind, I found myself trying to be even clearer in relaying my experiences than if I was writing in a private journal,” Game said. “Writing from this outsider’s perspective helped me think

about my internship in a big-picture sense.”

Game spent the summer in Chicago interning at Global Alliance of Artists, an organization representing an international coalition of artists dedicated to social and environmental issues. The Postcards project met its first-year goal, said Sara Ana Adlerstein

Gonzalez, an SNRE associate research scientist who originated the project and helped organize the site. Now, the goal is to make the site, which also allows students to post photos, a year-round venue.

For Game and others, the experience also has another—unintended—consequence: greater exposure as they enter their respective fields. “Ideally, I will be enjoying a career where I am able to continue exploring the intersection of art and environmental education,” Game said. “This will hopefully involve some combination of paintbrushes, spending time outdoors ... and office dogs.”

READ THE BLOG:
snre.umich.edu/postcards

FACULTY NEW HIRES TO ADD INTERDISCIPLINARY DEPTH

The School of Natural Resources and Environment begins searches this fall to add five faculty, including two positions awarded competitively through an ongoing initiative of University of Michigan President Mary Sue Coleman.

When hired, the new faculty will deepen SNRE’s interdisciplinary research and teaching, and strengthen its ability to secure research funding and attract top students. Two searches will be for faculty specializing in the area of Conservation Ecology; the three others will be in Energy Storage, Sustainable Systems and the Sustainable Built Environment.

Two of the five positions are new and awarded as part of the

junior faculty initiative announced by President Coleman in November 2007. Through the initiative, the university plans to invest \$30 million to recruit 100 new faculty members whose research and teaching interests are interdisciplinary.

President Coleman said the initiative will enhance U-M’s ability to engage in emerging research opportunities.

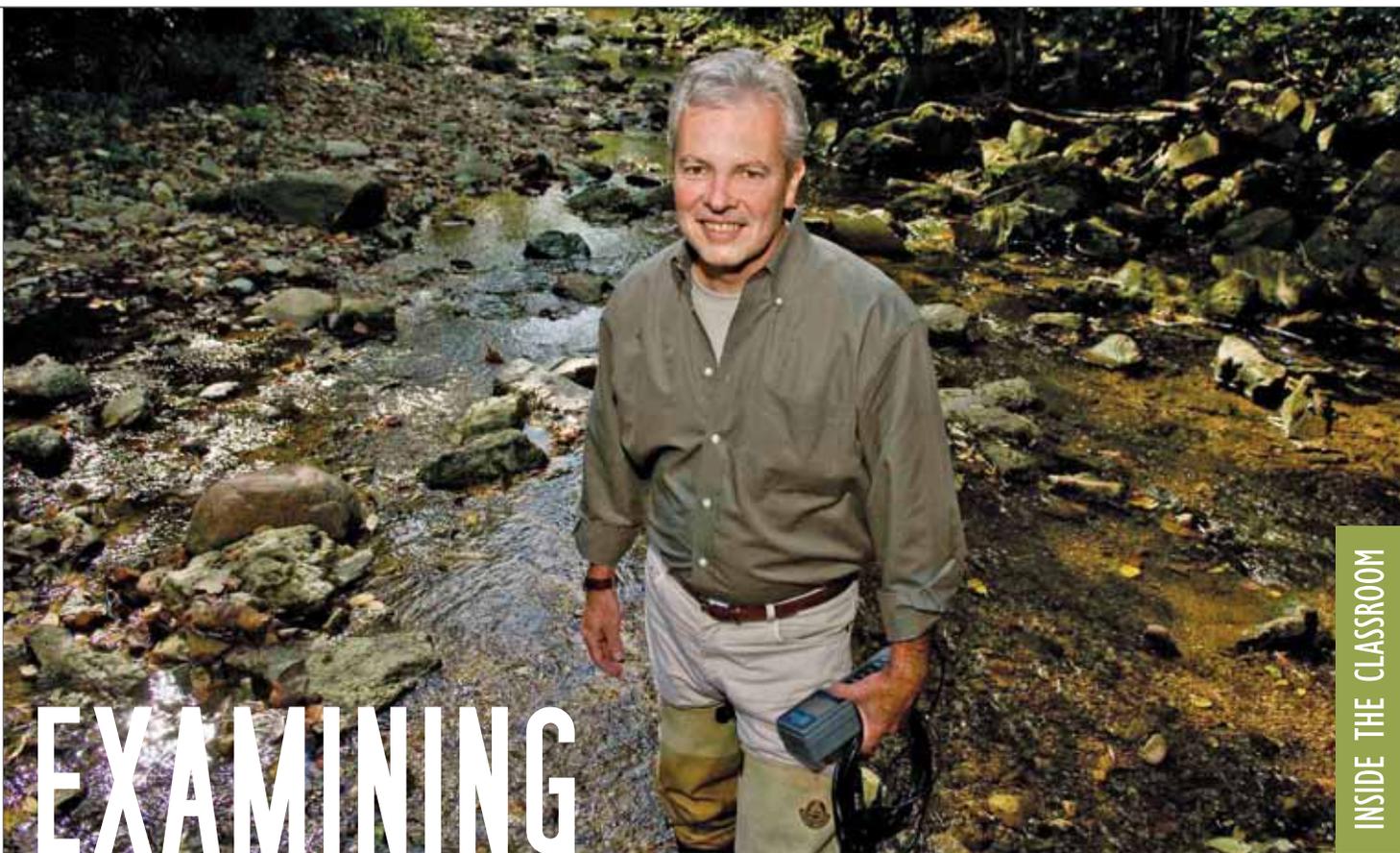
Under the initiative, faculty at U-M colleges and schools work in teams to submit “cluster” hire proposals. The university then selects from among dozens of these proposals. In April 2008, six clusters were approved, representing 25 new positions. In April 2009, an additional

six were approved, representing 24 positions. The remaining 51 positions will be approved by 2012 at the rate of about 18-20 a year.

SNRE received one new position in 2008 and two in 2009. This fall, SNRE will seek to fill two of those three positions: the one from 2008 (Energy Storage) and one from 2009 (Sustainable Built Environment).

The search to fill SNRE’s second 2009 cluster position—in the area defined as “Environment, Information, and Sustainable Development: The Asia-Africa Nexus”—will likely begin in 2010.

MORE ON THE POSITIONS:
snre.umich.edu/employment



EXAMINING AQUATIC STRESS

Allen Burton is the director of the Cooperative Institute for Limnology and Ecosystems Research and a professor in the Aquatic Sciences: Research and Management field of study at the School of Natural Resources and Environment. His research focuses on identifying significant effects and stressors in aquatic systems where sediment and stormwater contamination is a concern. Professor Burton joined SNRE in August 2008. He serves on the U.S. Environmental Protection Agency Science Advisory Board and National Research Council committees and is past president of the Society of Environmental Toxicology & Chemistry. This fall, he teaches a new seminar, "Stressor Dynamics and Interactions in Aquatic Ecosystems," that investigates the impact of natural and man-made stressors on aquatic life in North American and European waters.

Stewards: Why is the information covered in this seminar so important now?

Burton: Our waterways and their ecosystems are impacted by both natural and man-made stressors. Our focus has been on chemical stressors, such as urban and agricultural runoff, discharges from wastewater treatment plants and industrial operations, and

BY LAURA WILLIAMS

historical contamination from landfills and industry, that are associated with human activities. There are also "natural" or non-chemical stressors, such as climate change, habitat and flow alteration, suspended solids and invasive species that impact aquatic life.

These stressors vary in their magnitude, frequency and duration (their "dynamics"), and it is important to understand these patterns in order to understand how the stressors affect aquatic life.

Stewards: What is the seminar's goal?

Burton: The goal is to heighten awareness of the complexities of stressor dynamics so students are able to analyze the causes of impairment and work to correct or improve the situation.

Stewards: What are examples of those complexities?

Burton: To improve a waterway, we must first know what is actually causing impairments to beneficial uses. For example, why dredge contaminated sediments from a river or harbor if the upstream source of contamination has not been removed? Or why restore habitat if upstream contamination has not been removed?

To determine which of the problems are most important—contaminated sediments, upstream water discharges, habitat—one needs to understand the relationship between the "problem" and the responses of the fish, invertebrates, etc. Are stormwaters causing most of the problem? If so, are there places for the fish to hide during storms? If not, can we create areas? Can we reduce the contaminant loads in the storm waters? Are the fish moving in and out of contaminated areas? Are the fish being contaminated from the insects they are eating in the contaminated sediments?

All of these questions are examples of the many issues that must be considered.

Stewards: How does the seminar relate to your other courses and to the SNRE curriculum?

Burton: I touch on these issues in my course "Environmental Risk Assessment." For SNRE students focused on water-related problems—whether as a research scientist or a policy manager—it is important to understand these issues in order to correct and manage them. ✓

Photo courtesy of Yichun Xie



HUMANS, CLIMATE CHANGE AND THE MONGOLIAN PLATEAU

BY KEVIN MERRILL

SNRE researchers, in partnership with collaborators at Eastern Michigan University and the Chinese and Mongolian Academies of Sciences, have received a \$900,000 grant from NASA to study human adaptation to climate change on the Mongolian Plateau.

The plateau is in Central Asia and covers substantial portions of the Inner Mongolia Autonomous Region of China (IMAR) and the independent state of Mongolia. The study will enhance the understanding of the dynamics of the grassland system in this region and contribute to a more general understanding of human responses to the dynamics of grassland productivity, said Dan Brown, the project's principal investigator. Brown is also a professor of Environmental Informatics and Terrestrial Ecosystems at SNRE.

The project is part of an ongoing

set of research activities within SNRE on human-environment interactions in China and other parts of Asia, including India and Siberian Russia. Projects have examined the effects of the break-up of the Soviet Union on the forest dynamics in Siberia; how land-use changes in the Central Yangtze Basin contribute to changes in vulnerability to flooding; and the roles that community forest resource management play in determining the contributions forests in India make to human livelihoods and ecosystem services.

Co-investigators are SNRE Professor Arun Agrawal and Associate Research Scientist Kathleen Bergen. In its work, the team will evaluate interactions between grassland ecosystems and herder communities at multiple scales, and the role of climate variability in determining

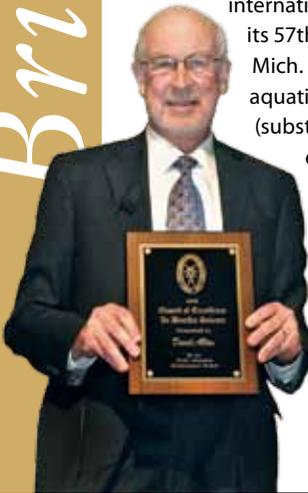
changes in grassland productivity and human adaptations. The Mongolian Plateau contains rolling grasslands (steppes) that cover about two-thirds of central Mongolia. The treeless, semi-arid Mongolian steppes provide grazing land for many types of animals, including oxen, sheep and camels.

Researchers will use a combination of field sampling and remote-sensing imagery to observe grassland productivity and its relationship to climate variability and change. They will survey herder households and conduct an analysis of regional demographic data to examine household-to-regional scale social dynamics and policy implications. And they will produce a framework of adaptation strategies that will guide an integrated analysis of the relationships and trends found among all the data. 📍

Briefs

BENTHOLOGICAL SOCIETY RECOGNIZES PROFESSOR ALLAN

David Allan, professor and acting dean of the School of Natural Resources and Environment, received the Award of Excellence from the North American Benthological Society for outstanding contributions to all fields of benthic science. The 1,500-member international organization bestowed the award during its 57th annual meeting this year in Grand Rapids, Mich. Benthic science refers collectively to all aquatic organisms that live on, in or near the bottom (substratum) of water bodies, and to the bottom environment itself. This includes organisms inhabiting running and standing waters, and also applies to organisms from saltwater and freshwater habitats. Professor Allan's teaching interests are in freshwater ecology, including conservation, management and restoration. He also helps lead interdisciplinary, team-taught courses and the "Global Environmental Change" minor at the University of Michigan.



➔ Great Lakes journal honors Johengen

The Journal of Great Lakes Research gave its 2009 award for best peer-reviewed paper to Thomas Johengen, an associate research scientist at SNRE and associate director of the Cooperative Institute for Limnology and Ecosystems Research. Johengen received the Chandler-Misener Award for "Stimulation of Lake Michigan plankton metabolism by sediment resuspension and river runoff."

➔ Parson named first Sax Collegiate Professor

Edward A. (Ted) Parson, a professor with dual appointments to SNRE and the Law School, was named U-M's first Joseph L. Sax Collegiate Professor of Law. The professorship runs through January 2014, and recognizes Sax, a world-renowned environmental law expert who taught at U-M from 1966-86. Parson joined the SNRE and Law School faculties in 2003.

rising from the

ASHES



UHLHORN, FELLOW STUDENTS CREATE COMPANY BUILT ON RICE HUSK ASH

BY KEVIN MERRILL

Elizabeth Uhlhorn still has eight months before she graduates but already the SNRE master's student is a corporate vice president and winner of multiple business plan competitions. And she can thank, in part, the burned husks of rice.

Uhlhorn and four recent U-M graduates have had a remarkable year. A class project that centered on a plan to convert agricultural waste into a highly efficient insulator has been extremely well received. The group's Husk Insulation business plan won three competitions in one month alone—and nearly \$300,000 in award money in less than a year.

Now, Husk executives, including Uhlhorn, are working to develop a prototype as the next step in luring more investors and bringing to market the insulating product, which they expect to be used primarily to help refrigerators stay cold. But finding time to finish two degrees (one from SNRE and the other from the Ross School of Business) and serve as Husk's corporate vice president for finance and sustainability leaves even a strong time manager like Uhlhorn feeling stretched.

"I love being busy," said Uhlhorn, a Peace Corps veteran who has traveled to 20 nations. "And I'm passionate about making a difference and helping the environment."

The rise of Husk is a case study in collaboration. Uhlhorn and other students in a business class had to find a product around which to write a business plan. Someone in her group suggested contacting Richard Laine, a materials scientist at the U-M College of Engineering.

A compression and packaging process he developed using the ash of burned rice husks was patented by

the University of Michigan, but no business plan for its development had ever been written. The students took on the project and have been developing the idea non-stop ever since.

"The more we got into the business-planning, the more we realized we were really on to something," said Uhlhorn, 29, who spent the summer in a strategic development role at Dow Chemical Co.'s headquarters in Midland, Mich. Since the group won a class competition among fellow students, it has put together a string of victories, including:

- + Beat 100 entries to win \$15,000 and the Pryor-Hale Award for Best Business, awarded as part of the Michigan Business Challenge sponsored by U-M's Samuel Zell & Robert H. Lurie Institute for Entrepreneurial Studies.
- + Won the sustainability track and \$20,000 at the McGinnis Venture Competition at Carnegie Mellon University.
- + Finished second and received \$21,000 in the Clean Energy Prize competition sponsored by DTE Energy, U-M, the Masco Corporation Foundation and The Kresge Foundation.
- + Won \$200,000 and the MIT Clean Energy Prize, a national student competition sponsored by the Massachusetts Institute of Technology, the U.S. Department of Energy and utility NSTAR.

So, what will Uhlhorn do for an encore after an impressive 2008-09 school year? In addition to maintaining her role as a Husk corporate officer, she is working on her SNRE master's project, which focuses on the processes private equity firms use to judge a company's green "footprint" as a way of measuring the firms' worthiness as an investment.

Part of her job as a Husk vice president is to ensure the company examines its own ecological footprint and the eco-friendliness of its entire production process. "I feel it's real important that we live by the sustainability models we're espousing," Uhlhorn said. ♻️



ELIZABETH UHLHORN



MEMBERS OF HUSK INSULATION WON THE MIT CLEAN ENERGY PRIZE THIS SPRING. 'CHECKING' IN WITH THE CAMERA WERE (FROM LEFT): SHALLY MADAN, SIDDHARTHA SINHA, MIT PRESIDENT SUSAN HOCKFIELD, NSTAR CEO TOM MAY, U.S. ENERGY SECRETARY STEVEN CHU, ELIZABETH UHLHORN, IAN DAILEY AND ERICA GRAHAM.

Photo courtesy of NSTAR

RECLAIMING THE FIELD *in brownfield*

BY LAURA WILLIAMS



Photo by Todd Marsee, Michigan Sea Grant

Most people look at Flint, the once-mighty linchpin of Michigan's auto industry, and see an industrial wasteland and a symbol of Midwestern urban decline. But Joan Iverson Nassauer sees potential.

"It's possible that in the near future, people walking or driving around Flint will see many more signs of neighborhoods that are well cared for," said Professor Nassauer, who teaches in the Landscape Architecture program at SNRE. "And there could be more opportunities for people in Flint to safely and conveniently get closer to nature."

Shaping that future this fall will be School of Natural Resources and Environment students working with U-M colleagues from urban planning, social work, architecture, public health, law and business. In her "Ecological Design Approaches to Brownfield Redevelopment" course, Professor Nassauer and her students will work with officials at the Genesee County Land Bank Authority (Flint is located in Genesee County) to develop new approaches to redeveloping vacant residential properties and commercial sites that may be contaminated.

Drawing on knowledge from their diverse disciplinary backgrounds, students will examine case-study neighborhoods in Flint to consider how vacant property can be managed with attention to enhancing community quality of life and planning for long-term ecosystem services.

The students' work could have a national impact. Michigan has led policy innovation in the use of land banks, which allow local governments to quickly gain ownership and management of tax-foreclosed property. This idea is gaining appeal nationally as unemployment and the mortgage crisis lead more homes toward tax foreclosure. The state's innovations include a 2004 amendment to the brownfield law that allows land bank property to be part of a larger brownfield plan.

The Genesee County Land Bank Authority, with more than 4,000 properties, is the leading innovator in applying the 2004 law. "Because we have this cutting-edge interpretation of brownfields in state law and because vacant property is an issue of rapidly growing international importance, it's time to bring the course home to Michigan," Professor Nassauer said.

Work by land banks spans from redeveloping abandoned property and demolishing abandoned buildings to turning

some vacant lots into neighborhood open spaces. Redevelopment, demolition and open-space uses all have ecological design implications, Professor Nassauer said. "Land banks are not about 'returning a property to nature,'" she said. "It's not about letting nature happen; it's about intentionally designing new ways for cities and towns to be a part of nature."

Interdisciplinary teams of graduate students will explore these implications in their case-study recommendations. "To have a group of top-notch graduate students—this diversity of good minds—coming into the class and offering ideas about how Michigan's approach to vacant properties can be even better—that's the ultimate community service," Professor Nassauer said.

This year's course is once again supported by the Graham Environmental Sustainability Institute. That support allows students to work with internationally recognized practitioners and visit precedent case-study sites, such as New York City in 2007 and Cleveland this fall.

"SNRE has a lot of courses that are interdisciplinary, but Joan's class has the most people from across the university," said Rebekah VanWieren (M.L.A. '09), who recently completed the course. "I worked with people from urban planning, law and social work. It was especially useful to have such an interdisciplinary class later in my degree program."

In previous years, the course focused on projects in Stamford, Conn., Chicago and Milwaukee. Students on the Stamford site later won top honors in a university competition for "Best In-Class Student Paper or Project on Environmental Issues and Climate Change" for their study of how coastal brownfield remediation can be more resistant to extreme storm events.

"The bones of established cities like Flint and Detroit can inspire the next generation of development," Professor Nassauer said. "Our American idea of linear progress—rather than thinking in terms of cycles of change—can limit the imagination. People who remember Flint in its heyday don't have as much difficulty imagining a vital future."

"We can see the value in Flint," she added. 🌱



JOAN IVERSON
NASSAUER

GIVING A HAND TO MICHIGAN'S ECONOMY

BY LAURA WILLIAMS

Students help green-technology firms

Talk about a *power* lunch: A chance meeting between SNRE student Paul Gruber and a local entrepreneur gave birth this spring to a venture development firm whose clients now include a start-up lithium-ion battery company.

The venture firm, Turtlerock Greentech LLC, became a second home this summer to Gruber and three other SNRE students. All are dually enrolled with the Ross School of Business. Their summer internships through the Erb Institute for Global Sustainable Enterprise, which manages the three-year, dual-degree program between the schools, gave them invaluable experience with a start-up—and the chance to grow and diversify the state's economy.

"It's an incredibly exciting time," said Gruber, who wants to work with Turtlerock after graduating in the spring of 2010. "It's my dream job."

About 20 Erb students found summer internships this year with Michigan companies and organizations, doing everything from working on the renewal of

Detroit and developing solar technology to making recommendations for pharmaceutical manufacturing.

"Michigan is a crucible for testing many of the values, strategies and approaches we teach about sustainable enterprise," said Rick Bunch, managing director of the Erb Institute.

For example, while Gruber and others were aiding Turtlerock, SNRE student Alex Linkow worked for the Fair Food Network, a non-profit organization dedicated to bringing healthy, sustainably grown food to communities that do not have access to fresh local produce. While the group plans to expand its work nationally, its efforts to date focus on Detroit.

As part of his internship, Linkow conducted research for a book by Fair Food Network president Oran Hesterman about the domestic food system. "Food systems tie in to environmental and business issues, and the modern U.S. food system has a lot

of negative environmental impacts," Linkow said. "There is the opportunity to design a system that is sustainable. From a business perspective, there are a lot of entrepreneurial opportunities in the food sector, and that business can create positive change."

At Turtlerock, students Bryan Hogle, Imogen Taylor and Nic Wetzler collaborated with Gruber and senior Turtlerock leadership on a variety of items, from reviewing business plans and funding opportunities to writing grants. Gruber met David Han, now managing principal at Turtlerock and a University of Michigan graduate, this spring when seated at the same table during an energy conference hosted on campus.

"We want to contribute right here, right now," Han said of the firm's ambitions. "In Michigan, it's all doom and gloom, but we see lot of opportunity."

While the venture firm specializes in green technologies and sustainable enterprises, its most valuable asset may be its commitment to progress and change. Pursuing "green entrepreneurship" means having an understanding that being successful and making money is not enough, Han said.

"Michigan is a crucible for testing many of the values, strategies and approaches we teach about sustainable enterprise," said Rick Bunch, managing director of the Erb Institute.

That can-do attitude drove the six members of Turtlerock, including managing partner Scott Phillips, to collaborate with a lithium-ion battery company in writing a multi-million-dollar grant proposal for the U.S. Department of Energy in hopes of winning stimulus dollars to bring the batteries to market.

Many of the Michigan-based students worked with start-up companies, non-governmental organizations or government agencies addressing sustainable business issues. Because those internships do not usually pay wages equal to private-sector internships, the Erb Institute often makes up the difference. "A lot of students who do non-profit or government internships find that the experience shapes their career plans because the work can be so rewarding and have immediate impact," Bunch said.

Nearly 75 students participated in the Erb internship program this summer, working for major corporations such as Ford, DTE, Amazon, Microsoft, Dow and GE; smaller companies such as Honest Tea; and non-profits and NGOs like the Environmental Defense Fund's Climate Corps, Ceres, the Golden Gate National Park Conservancy and the National Resources Defense Council. ♻️



HOW I SPENT MY SUMMER VACATION: TURLTEROCK MANAGING PARTNER SCOTT PHILLIPS (FAR LEFT) AND TURLTEROCK MANAGING PRINCIPAL DAVID HAN (SECOND FROM RIGHT) RECEIVED CONTRIBUTIONS THIS SUMMER FROM ERB STUDENTS IMOGEN TAYLOR, NIC WETZLER, BRYAN HOGLE AND PAUL GRUBER.

DRAWN *to*

LANDSCAPE ARCHITECTURE CELEBRATES 100 YEARS OF INNOVATION

BY LAURA WILLIAMS

On a sunlit floor in the Samuel T. Dana Building, about 45 students progress yearly through a series of three studio rooms, each room representing another year in the pursuit of a master's degree in landscape architecture. In a tradition spanning decades, students work and study into the night and take turns occasionally crashing on a communal couch—all in service of their chosen profession, which has undergone dramatic change while achieving greater prominence in an increasingly environmentally conscious world.

This fall, the Landscape Architecture program celebrates both the collective accomplishments of its alumni and 100th anniversary as an academic unit at the University of Michigan. The School of Natural Resources and Environment, the first home to Landscape Architecture and its permanent host since 1965, hosts the Oct. 9-10 weekend festivities. A variety of social events, exhibits and professional panels mark the occasion. (See schedule, page 15)

In the last century, the study of landscape architecture at U-M evolved from a single course taught by the legendary designer O.C. Simonds to a five-year undergraduate and graduate program in the College of Literature, Science, and the Arts; then to a department in the College of Architecture and Art; and later to a graduate-only program operated as a distinct field of study within SNRE. These migrations, including the development of a doctoral program and the awarding of the nation's first Ph.D. for the field, reflect the shifting academic underpinnings of the program, from those that prepared students primarily to design private properties and parks to one that more broadly educates and challenges them to integrate environmentally sound science into innovative design.



CARRYING ON A TRADITION:

LANDSCAPE ARCHITECTURE STUDENTS DURING THE 2009 STUDIO OPEN HOUSE ON THE THIRD FLOOR OF THE DANA BUILDING.

excellence

"The school is known widely for its interdisciplinary approach to environmental education, but having a leading Landscape Architecture program as part of our academic offerings is unique," said Rosina M. Bierbaum, dean of SNRE and professor of Natural Resources and Environmental Policy. "As we celebrate the program's first 100 years, we need to acknowledge the vital role it plays today in strengthening SNRE's reputation for interdisciplinary environmental research and education."

Chris Ellis, an associate professor of Landscape Architecture and coordinator of the program since 2007, said that while SNRE's program maintains a strong design component, it was one of the early few to emphasize environmental aspects of design—an approach now widely practiced in the field.

One of the pillars of the program, Chuck Cares, who taught at the university for more than 20 years, witnessed that evolution first hand. "When I came here in 1958, we emphasized design," said Cares, who has been serving the past year as a member of the LA Centennial Planning Committee. "Now it's more about conservation. There's still a design emphasis, but it's changed quite a bit."

A majority of landscape architecture programs are in architecture schools, and generally emphasize either a fine-arts approach to design, a "nuts and bolts" construction approach or the importance of the environmental stewardship, Professor Ellis said. In contrast, SNRE's program clearly excels in ecological design, attracting both artists who wish to develop an

understanding of ecological systems and scientists who want to learn design.

"For nearly a hundred years, we have continued to produce graduates who use their technical skills and artistic and ecological sensitivities to both lead and challenge the profession of landscape architecture as we strive for a more sustainable future," wrote Bob Grese, SNRE Landscape Architecture professor, director of the Nichols Arboretum and a landscape architecture historian.

While the U-M program once included undergraduate, master's and doctoral students, today's program is graduate only. The master's program offers both two- and three-year tracks. U-M was a pioneer in the 1960s when department chair Walter L. Chambers recruited Ken Polakowski to design the then-innovative three-year program, which attracts students from a variety of undergraduate backgrounds and previous careers.

About 15 students graduate yearly from today's master's program. Last fall, the industry's main accreditation agency, the Landscape Architecture Accreditation Board, evaluated the program and awarded it accreditation until 2014. U-M's program has been accredited since 1929. Generally, in order to be eligible to take the licensure exam, landscape architects need to have a bachelor of landscape architecture or master of landscape architecture degree from an accredited program and meet the state requirement for years working with a licensed landscape architect.

Since the earliest years of the 20th century, about 850 students have graduated from the program; about 750 alumni live around the world today. 🌱

MILESTONES IN THE 100-YEAR HISTORY OF THE LANDSCAPE ARCHITECTURE PROGRAM

- 1908** – First instruction in landscape design, by Ossian Cole (O.C.) Simonds of Chicago (right)
- 1909** – Landscape Design program organized in U-M's College of Literature, Science, and the Arts.
- 1916** – The Botanical Garden (not yet called Nichols Arboretum) is transferred from university management to control by the Department of Landscape Architecture
- 1929** – Landscape Architecture program receives first accreditation
- 1939** – U-M awards the nation's first Ph.D. in Landscape Architecture. Department transfers to the architecture and art school
- 1963** – Operations move to Cheever House
- 1965** – Program leaves architecture and art and returns to School of Natural Resources
- 1968** – First three-year master's program introduced
- 1973** – Program moves into 109 E. Madison
- 1978** – Program moves into Dana Building, its current home
- 1992** – School of Natural Resources adds "and Environment" to its name
- 2008** – *U.S. News and World Report* names landscape architecture one of the "30 Best Careers"
- 2009** – Program celebrates 100 years of innovation and leadership



THE NEXT 100 YEARS



ALLISON KRUEGER

M.L.A. CANDIDATE, CLASS OF 2010

Current work: Working with the City of Detroit's Department of Transportation on designing transit-oriented development for the neighborhood stops on the proposed Woodward Light Rail Line (master's project), as well as working with residential clients on planting design and garden maintenance.

I don't believe the most important development necessarily coincides with a single event; rather, I would argue that our profession is being greatly affected by the new way of 'systems' thinking. The U.S. Green Building Council's LEED Certification emphasizes the systems approach in thinking of buildings, neighborhoods and even cities as interconnected rather than singular entities.

By combining the systems approach with the overwhelming popularity of "green" infrastructure in design and problem solving, the landscape architecture profession finds itself in a position of greater importance and application over a wide range of problems.

We have never been singularly focused. As a profession, and specifically as graduates of the University of Michigan, we create solutions based on balances between ecological principles and human cultural needs. In the next 100 years, our work will affect the everyday experience of people as they enjoy the benefits of cleaner water and air, walkable neighborhoods, healthier ecosystems with greater biodiversity, fresher and more localized food production, cleaner sources of energy, and greater networks of public green and open space.



KOFI BOONE, ASLA

M.L.A. 1995

ASSISTANT PROFESSOR, DEPARTMENT OF LANDSCAPE ARCHITECTURE, NORTH CAROLINA STATE UNIVERSITY COLLEGE OF DESIGN

Current work: W.E.B. DuBois Campus Vision Plan, Wake Forest, N.C.; comprehensive campus regeneration plan for an historic Rosenwald school site. The plan incorporates community design, historic preservation, brownfield remediation, intergenerational interaction, interagency cooperation and green-collar job training.

Global climate change will have the most far-reaching impact on the practice of landscape architecture. In the developed world, the landscape will be increasingly recognized as a valuable environment to demonstrate balance between high-quality lifestyles and ecologically regenerative practices. In the developing world, the disproportionate impacts of climate change on the poor and communities of color will buttress ecological thinking with more sweeping approaches to providing basic human rights to all global citizens.

A Frederick Law Olmstead will emerge from the developing world, and reclaim the profession's trajectory from merely decorating spaces for leisure, comfort and affluence.



ANGELA LEE

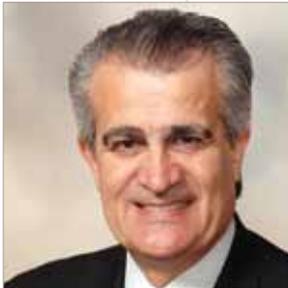
M.L.A. CANDIDATE, CLASS OF 2010

Current work: Designing a sustainable transit-oriented development plan for the future light-rail line along Woodward Avenue in Detroit that uses both creative applications of environmental sustainability and communicates character and sense of place for the city of Detroit (master's project).

Landscape design for improving water quality and conservation will be a top priority. If I had to narrow this down to a single development, I am excited to see the ways in which the raingarden will be creatively designed and implemented as a means to retain and store rainwater in a wide range of contexts, from replacing expanses of lawn in suburbia to greening urban hardscapes.

Raingardens provide visual cues of environmental service and benefit in the types of landscapes where people live, work and play. This visibility will strengthen how people relate with nature by communicating the importance of natural systems to our quality of life—and maybe even encourage interest in careers in landscape architecture for the future.

TO HELP SEE INTO THE FUTURE, WE ASKED ALUMNI AND CURRENT STUDENTS
“WHAT SINGLE DEVELOPMENT IN LANDSCAPE ARCHITECTURE WILL MOST CHANGE
THE COURSE OF THE PROFESSION IN THE NEXT 100 YEARS, AND WHY?”



SADIK C. ARTUNC, FASLA
M.L.A. 1979

PROFESSOR AND HEAD, DEPARTMENT OF LANDSCAPE ARCHITECTURE, COLLEGE OF AGRICULTURE AND LIFE SCIENCES, MISSISSIPPI STATE UNIVERSITY

Current work: My current and former students are my most significant projects. They have been contributing to the profession throughout the world.

As the concerns for sustainability finally capture the attention of the public at large as well as decision-makers at all levels, landscape architects have the knowledge, skills and ability to take a leadership role in the interdisciplinary process of addressing three main components of sustainability: the planet (creating a viable natural environment through healthy ecology); equity (creating a viable social environment through nurturing communities); and prosperity (creating a viable economic environment through satisfactory economy). By addressing these issues with artful planning, design and management alternatives, landscape architects can ensure that sustainable development is perceived not as a compromise but as an enhancement of quality of life.

The success of our profession will be dependent upon our will and ability to market ourselves as a knowledge-based profession, as opposed to a service-based profession, as we assume the leadership role both in the U.S. and around the globe. We need to focus especially on parts of the world that have no landscape architects or landscape architectural programs, such as the continent of Africa and all other underdeveloped areas, where ecological, social and economical challenges may threaten the overall sustainability of the planet.



LISA E. DELPLACE, ASLA
M.L.A. 1988

CEO, OEHME, VAN SWEDEN & ASSOCIATES

Current work: New designs for Chicago Botanic Garden, Glencoe, Ill.; urban planning study for the redesign of Eastern Market Metro Station, Washington, D.C.; U.S. embassy designs in several countries.

With ever-increasing demands to develop urban open spaces, landscape architects must not only seek to preserve existing open space but advocate for new well-designed, sustainable green spaces for people. To do so will require active participation on community, state and federal planning boards. Short-term economic valuation of developable lands often overshadows the long-term financial contributions green space brings to cities.

One must ask what would New York be without Central Park, Boston without the Emerald Necklace or St. Louis without Forest Park? Chicago and other forward-thinking cities have proven the long-term financial benefits to 'greening' urban areas: increased tourism, higher square-foot rental rates near major parks and increased demand for development near major park lands. What will be our contribution to this legacy?

100

LANDSCAPE
ARCHITECTURE

UNIVERSITY OF MICHIGAN SCHOOL OF
NATURAL RESOURCES AND ENVIRONMENT

University of Michigan Landscape Architecture Program Centennial Celebration Schedule of Events

Friday, October 9, 2009

3-4:30 p.m. Registration

3:30-4:30 p.m. Dana Building
Tours

4:30-6 p.m. Harlow O.
Whittemore Panel Discussion:
“Reflecting on the Past,
Designing for the Future”

6-7:30 p.m. FLOfest Reception

Saturday, October 10, 2009

10:30-11 a.m. Registration

11-12:30 p.m. Lunch program

12:30-2:30 p.m. Landscape
Architecture Tours: Central
Campus and Nichols
Arboretum

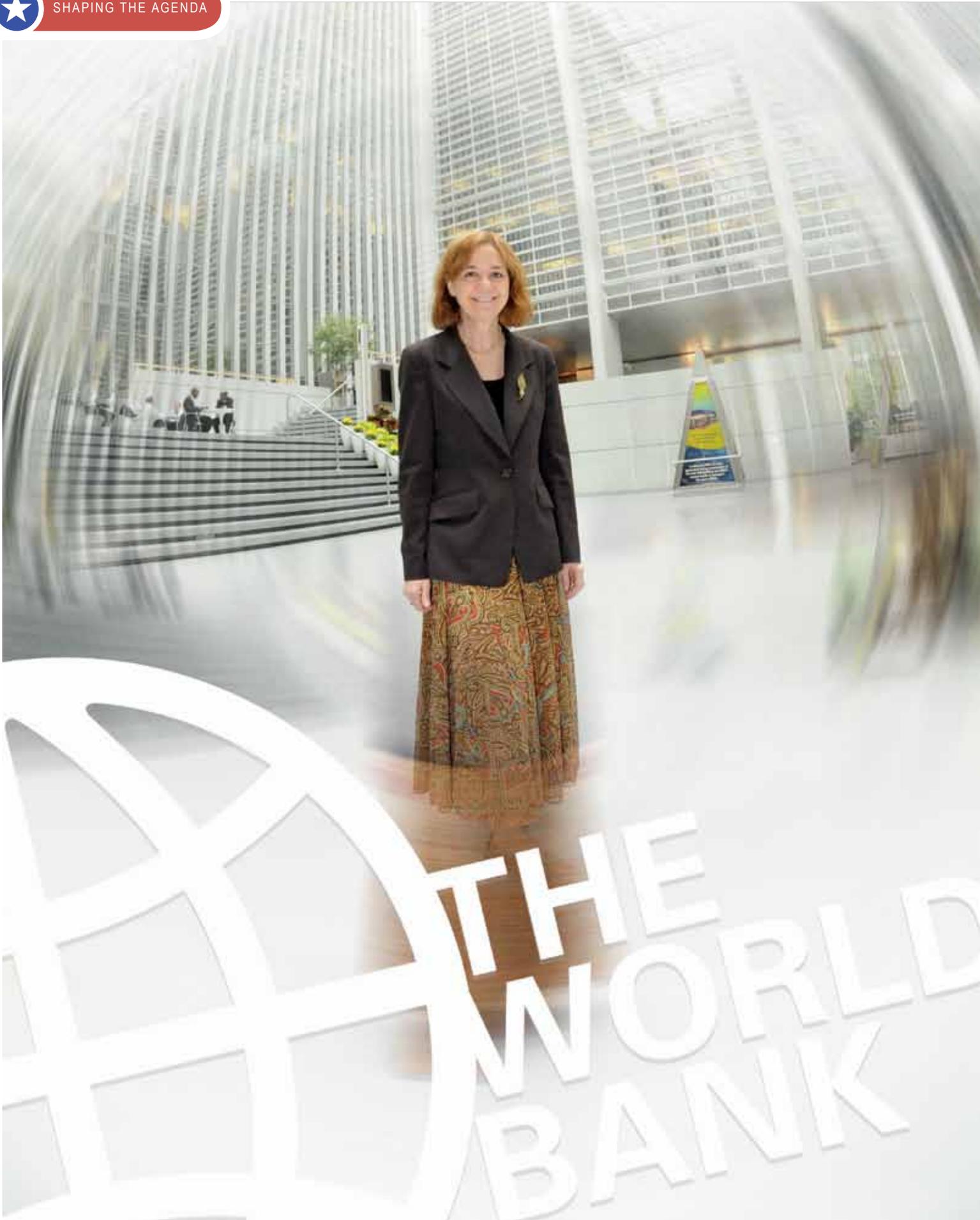
3-4:30 p.m. Panel Discussion:
“Diversity and Sustainability
in the Landscape Architecture
Field”

4:30-6 p.m. Centennial Alumni
Retrospective and Historical
Display

6:30-8 p.m. Centennial Gala,
Michigan Union Ballroom



REGISTER FOR THE EVENT AT:
snre.umich.edu/la/100years



a WORLD of CHANGE

BY KEVIN MERRILL

WASHINGTON, D.C. — Rosina M. Bierbaum has studied climate change science and policy both as a scientist and policy adviser for more than 20 years, but mostly as they relate to a single country: the United States. This fall, her scientific analyses extend to the nearly 200 nations of Earth.

Dean Bierbaum's expertise on climate change takes center stage as the World Bank releases its 2010 World Development Report (WDR), which focuses on the topic. She spent more than a year overseeing the research and writing the WDR with co-director Marianne Fay, a global economist employed by the World Bank. The report, scheduled for a Sept. 15 release, will play a large role in shaping the international debate regarding connections among climate change, economic growth and poverty reduction.

The WDR, published annually since 1978, is a guide to the economic, social and environmental state of the world. Each year, the report provides an in-depth analysis of a specific aspect of development.

To produce this year's report, Dean Bierbaum, Fay and others on their team received input from academic advisers and applied researchers on five continents. The team carried out consultations, in person and remotely, in dozens of nations.

"This report will be unlike any other," Dean Bierbaum said. "It not only synthesizes the latest policy questions and scientific data, but attempts to present a road map to respond to this global problem." (More information about the report can be found at www.worldbank.org/wdr2010.)



DEAN BIERBAUM (OPPOSITE PAGE) INSIDE THE ATRIUM AT THE WORLD BANK HEADQUARTERS IN WASHINGTON AND (ABOVE) WITH CO-DIRECTOR MARIANNE FAY WORKING ON THE 2010 WORLD DEVELOPMENT REPORT. DEAN BIERBAUM AND FAY SOLICITED PAPERS AND SYNTHESIZED DATA TO COMPILE THE REPORT, WHICH WAS RELEASED THIS FALL.

Dean Bierbaum is a recognized authority on global climate change. She spent 20 years in public service at the federal level, first at the Congressional Office of Technology Assessment and then as director of the Environment Division of the White House Office of Science and Technology Policy. In that capacity, she was the Clinton administration's senior scientific adviser on environmental research and development, with responsibilities for global change, air

and water quality, biodiversity, ecosystem management and energy research and development.

To focus on the World Bank project, she took a year-long leave from teaching, research and administrative duties at SNRE. She returned to those duties Sept. 1. During her absence, she relocated to Washington and worked out of World Bank's headquarters.

The report explores three key questions: What does climate change mean for development? What does development mean for climate change? And what does it all mean for policy?

To answer those questions, the WDR examined the "climate-smart" development policies needed to not only tackle the challenges of adaptation and mitigation but to exploit the new competitive landscape created by climate change. As with past WDRs, its focus was international and its objective was to promote adequate, achievable and equitable solutions to climate change that meet the needs and concerns of developing countries.

The report's release coincides with another climate change-related initiative of the World Bank: the launch of a climate change data portal that provides readily accessible climate and climate-related data to policy makers and development practitioners. A working prototype of the site can be found at beta.worldbank.org/climatechange/.

The World Bank also launched a blog (blogs.worldbank.org/climatechange) to which Dean Bierbaum contributed, to coincide with the WDR. 

OBAMA TAPS BIERBAUM TO SERVE ON SCIENCE ADVISORY COUNCIL

Even after the World Development Report is published, Dean Bierbaum will remain influential in Washington as a member of the President's Council of Advisors on Science and Technology (PCAST). President Barack Obama appointed the 21-member council this spring to advise him on policy formation in areas where the understanding of science, technology and innovation are key. "This council represents leaders from many scientific disciplines who will bring a diversity of experience and views," President Obama said. "I will charge PCAST with advising me about national strategies to nurture and sustain a culture of scientific innovation." Prior to joining SNRE in 2001, Dean Bierbaum served as the Senate-confirmed director for environment in the Office of Science and Technology Policy during the Clinton administration and acting director of the agency into the first months of the Bush administration.





Mary Frances REPKO

BY KEVIN MERRILL
WASHINGTON, D.C.

Serving congressional leaders in pursuit of stronger environmental laws



MARY FRANCES
REPKO

Even for someone accustomed to a career of long days and nights, the past year has been virtually non-stop for Mary Frances Repko. And she couldn't be happier.

Repko's role as a high-profile energy and environmental adviser on Capitol Hill was reshaped by the Jan. 20 inauguration of President Obama. With a far more ambitious green agenda than his predecessor, President Obama has put environmental legislation on the front burner. And for congressional staffers like Repko (M.S. '91), that change in priorities has been rewarding, invigorating and, yes, occasionally exhausting.

"I haven't had a real day off since the inauguration," said Repko during a brief interview in June inside the Capitol. As the senior policy adviser on energy and environmental issues for Maryland Congressman Steny Hoyer, Repko not only serves the Democratic House Majority Leader, but one of the most powerful individuals in Washington. Seated in an ornate high-back chair in a private meeting room in her boss' office suite, Repko said the long hours are welcome—and go with the territory.

"The reason you get up every day is to change environmental law for the better," Repko said.

Her status as a key congressional adviser was solidified in May, when the Washington-based newspaper *Roll Call* identified her as one of 10 energy staffers on Capitol Hill who "will play a crucial role in the country's future energy legislation." (Fellow SNRE alumnus Chris Miller also was on the list; see related story, page 20.)

As House Majority Leader, Rep. Hoyer can greatly influence legislation. His position is second only to House Speaker Nancy Pelosi (D-Calif.) in its authority within the House of Representatives. Repko and aides like her play a vital role for their Capitol Hill bosses by collecting and synthesizing data, staying current on the latest policy and science developments and, when necessary, serving as a buffer between groups with agendas to push.

Rep. Hoyer praised the performance of Repko, who joined his staff in July 2007. "She is absolutely the most knowledgeable staff member on energy and the environment on the hill," Rep. Hoyer said. "She is just exceptional. The University of Michigan should be very proud."

Rep. Hoyer isn't the first big-name congressional leader Repko has served. She has worked in top legislative roles directly for two U.S. senators (Maria Cantwell of Washington and Russell Feingold of Wisconsin) and on the U.S. Senate Committee on Environment and Public Works as the primary energy staff person for committee Democrats, working for former Sen. Jim Jeffords of Vermont and current Chair Barbara Boxer of California. (In that role, she received a security clearance three levels above top secret from the White House because of the committee's work on nuclear issues.)

Her legislative adviser career began soon after graduating in 1991 from the School of Natural Resources and Environment, where she received a degree in Resource Policy and Management. She worked for two years in Washington at the World Wildlife Fund as a research fellow but then returned to Ann Arbor for a year-long stint with the Great Lakes Commission as a program specialist and project manager.

She enrolled at SNRE after earning a bachelor of arts' degree from Johns Hopkins University. Growing up in East Lansing, Mich., Repko was drawn to Johns Hopkins for its nationally known international relations program—and for the chance to continue her passion for debate. A star on her high school team, she easily made it on to the much-heralded Johns Hopkins team, which she helped lead to the 1989 national semifinals. She continued her interests in debate even at SNRE, where she took time on weekends to travel statewide to judge high school competitions.

Her Johns Hopkins degree gave her a solid foundation in policy development and the

legislative process. Next, she wanted to connect that interest with her other passions: science and the environment. "I was attracted to SNRE in large part because of its reputation for teaching the natural and social sciences together," she said.

Her assimilation into a more scientific world was made easier by the fact that her dad, Wayne W. Repko, was and is a professor of physics and astronomy at Michigan State University. Science seems to run in the family. Repko's sister, Elizabeth, is a 2001 graduate of SNRE.

The family's SNRE connections took on a new dimension when, as a first-year master's student, Repko volunteered to help perform survey work for SNRE Professors Paul Mohai and Bunyan Bryant in the same southwest Detroit neighborhood where her father was raised. The research was a continuation of the professors' groundbreaking work on race and the incidence of environmental hazards.

Even her master's project had roots in the state of Michigan. She and a team of fellow students looked at the rise of

the zebra mussels, the invasive species that was then only coming onto the environmental radar in the United States, in the Great Lakes.

As senior policy adviser, one of Repko's primary roles is to meet with lobbyists and members of advocacy groups seeking an audience with Rep. Hoyer.

Often, she attends meeting with these same individuals and her boss while also drafting the meeting notes that help him prepare. She listens to the groups as they articulate their needs and will occasionally challenge them with arguments presented by the other side. She passes these observations and her additional insights from these meetings onto Rep. Hoyer. She briefs him frequently on the status of energy and environmental legislation and the debates under way inside and outside the Beltway on a variety of topics, from cap-and-trade and greenhouse gases to environmental pollutants and green jobs.

This constant interaction with advocacy groups and lobbyists has helped her develop a unique insight into

"The reason you get up every day is to change environmental law for the better," Repko said.

how legislation is shaped and adopted. From that experience has evolved a perspective on how groups can ensure the success of their legislative goals.

"If I could teach a course at SNRE, it would be about the real nuts-and-bolts of affecting the legislative process. Those who are successful at advancing their cause and affecting policy do more than just show passion," Repko said. "They come prepared with talking points, a proposed bill and even a speech to introduce the bill—all of which makes it easier to move their idea forward. Those are real, tangible contributions to the process of law-making that are, on some levels, as important as the underlying scientific data." 

MARY FRANCES REPKO MEETS WITH HOUSE MAJORITY LEADER STENY HOYER IN HIS CAPITOL OFFICE. 





Chris

MILLER

BY KEVIN MERRILL
WASHINGTON, D.C.

Building coalitions, consensus in service to Nevadans and the nation



CHRIS MILLER

For someone whose engineering-degree goals were derailed by organic chemistry, Chris Miller finds himself comfortably at the top of his class.

As a senior policy adviser to the Majority Leader of the U.S. Senate, Miller (M.S. '88) provides environmental analysis and political insights to one of the most powerful offices in Washington. Sen. Harry Reid (D-Nev.) relies on Miller, a 20-year veteran of the Capitol, to know politics and science, and to be his eyes and ears on environmental and energy issues in his home state of Nevada and within the Beltway.

Miller spends more time today than ever analyzing politics and policies as environmental legislation moves through Congress at an unprecedented rate. His constantly vibrating Blackberry is a welcome nuisance and Miller's commitment to conservation remains steadfast.

"This is why I got into this business 22 years ago," Miller said during an interview in Sen. Reid's Capitol offices. "The environment has never been a 'sleeper' issue. In fact, it underpins everything we do. If we don't have clear air, clean water, a stable climate, then we don't have much.

"The consensus that has finally emerged is we have to embed conservation principles in everything we do," Miller added. "This recognition and attention was going to come. The question is: Are we going to act in time?"

Miller's status as a leading congressional staffer was validated in May, when the well-regarded newspaper *Roll Call* featured him in its "10 Staffers To Know" article regarding energy and environment legislation. The story identified congressional employees with the knowledge, experience and proximity to power to shape the nation's environmental and energy policy. (Also on the list was fellow SNRE graduate Mary Frances Repko; see related story, page 18.)

"We're both very well steeped in all the energy and environmental issues that

Congress has faced for a long time," Miller said of his fellow alumnus. "We're very conscientious and try hard to serve our bosses and our respective chambers."

Born in Detroit and raised in its suburbs, Miller enrolled at the University of Michigan to become an engineer. After the organic chemistry experience, he changed majors from materials and metallurgical engineering to political science. That experience and his ongoing interest in the environment led him to SNRE's master's program, where its strengths in environmental policy curriculum and eclectic mix of students appealed to him. "It was a very diverse group of people," said Miller, 47. "It was good to meet the botanists, foresters and landscape architects. It helped me get a broader sense of the larger picture."

After earning his undergraduate degree from U-M in 1984, Miller worked in Washington through the university's Public Service Internship Program. After returning to Ann Arbor and graduating from SNRE in 1988, he worked at the Ann Arbor-based Great Lakes Commission as a research assistant. He later served as a legislative assistant to Michigan Sen. Carl Levin for 10 years before joining the U.S. Senate Committee on Environment and Public Works in February 1999. While on the committee, he first worked directly with Sen. Reid, whose office he joined in September 2005. Eight months later, Sen. Reid became the Senate Minority Leader. After the mid-term elections of 2006, Democrats gained control of the Senate and elevated Sen. Reid to Majority Leader.

Among Miller's duties for Sen. Reid are preparing legislation, analyzing policy and law, and writing statements, speeches and briefing materials. Most importantly, Miller helps Sen. Reid build coalitions and coordinate activities with Senate offices and House leadership as well as outside policy and political groups. To



stay current, Miller continues to read as many daily news sources as he can and supplements those with material from federal resources including the Congressional Research Service and the Energy Information Administration.

Advisers like Miller face a separate set of challenges from their House counterparts when working with the Senate's notoriously independent-minded members. "The Majority Leader has one of the most difficult jobs in government. It's like herding cats in order to move them in the right direction.

The legislative process is somewhat easier since a pro-environment administration was elected in November. "We have friends downtown now," Miller said in reference to the White House. But there isn't 100 percent consensus on every issue.

"At times, coordinating that relationship is challenging—a pleasurable challenge," he added quickly. "It's a little bit more complicated than before."

The tenure for staff in the Senate is traditionally short, given the long hours, the election cycles (sometimes a boss



CHRIS MILLER MEETS WITH SEN. HARRY REID INSIDE THE MAJORITY LEADER'S CAPITOL OFFICE.

Each senator believes that they are in charge of the entire operation," Miller said with a smile. "So convincing them and their staffs that a certain direction is the right to way to go is a constant challenge."

Miller also must keep tabs on energy and environmental issues in Nevada. And finding a balance between promoting regional and national interests is no easy task.

"There's sometime a tension, because what's good for Nevada isn't always good for the nation, and vice versa," Miller said. "Environmental issues can be so regional in nature. Scientists tell us certain things, but building the political coalitions to get there is difficult. You've got coal here, solar there, hydro here. Balancing the regional differences to try and get the caucus moving in one positive direction is challenging to say the least."

loses an election), and the rise and fall of parties in control of a chamber. Miller views his longevity as a testament to his desire to see enacted lasting and positive environmental change.

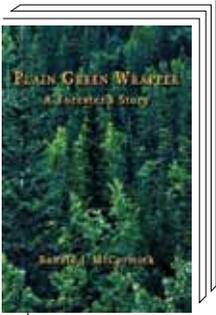
"As much as we would all like to have instantaneous and perfect change, it takes a lot of work and a long time to really make change. If you're only willing to be here for a few years, it's hard to make much of an impact," he said. "The senators that have been around for a long time, they are the ones who will go down in history as having left a legacy that improves the country and the world. Every staff person comes here with the idea they are going to make the country a better place. But first, there's a fair amount of ego subjugation. The member comes first. As long as that member has the right principles, and I've worked for great senators, the hours and patience justify the results."

Class Notes

Please keep *Stewards* in mind when sharing news about new jobs or personal achievements. We also welcome photos (preferably color). Send your information to Erin Longchari, assistant director of development and alumni relations, either via e-mail (erinla@umich.edu) or through regular mail at SNRE, Office of Development and Alumni Relations, University of Michigan, 440 Church St., Ann Arbor, MI, 48109-1041.

Ronald J. McCormick (B.S. '58)

recently recorded his memories in a book titled, *Plain Green Wrapper – A Forester's Story*. McCormick relates stories about his experiences while studying at the University of Michigan, but mainly focuses on his 33-year career with the U.S. Forest Service, during which he worked in seven national forests. From 1983 until the mid-1990s, he was forest supervisor of Siskiyou National Forest in Oregon. His tenure there coincided with the



height of the spotted owl and old-growth controversies as well as the 97,000-acre Silver Fire, at the time the largest in the forest's history. Today, McCormick is retired and living in Grants Pass, Ore. McCormick said profits from book sales will be donated to an ongoing volunteer effort to construct a National Museum of Forest Service History in Missoula, Mont. The book is available from www.lulu.com.

Barron Eldridge (M.L.A. '72)

is providing consulting services from his home office in Sacramento, Calif., after a long full-time career in landscape architecture that took him from Australia and the Fiji Islands



THE GRAND HYATT REGENCY IN KAUAI, HAWAII, IS ONE OF ELDRIDGE'S MANY PROJECTS.

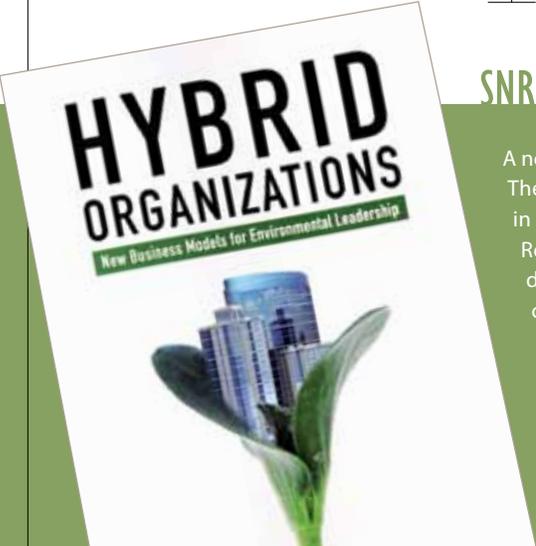
to Southern California and the islands of Hawaii. The focus of his work continues to be projects throughout California and Hawaii. While working in the Pacific, he produced a strategy plan for the city of Melbourne, and site planning services and conceptual studies for the Naisoso Island Resort in Fiji. He also developed the master plan and authored the brochure for the National Memorial Cemetery of the Pacific, sometimes known as "Punchbowl," in Honolulu. He has planned, designed and developed a 100-acre recreation area for Hewlett-Packard Co. as well as wineries, schools, parks and estates throughout northern California. Eldridge was the on-site designer and contract administrator for



extensive water-feature developments at the Grand Hyatt on Kauai, the Hyatt Regency and Four Seasons on Maui, and the Lodge at Koele and Manele Bay Hotels on Lanai.

Michael Simsik (M.F. '92) is the country director for the Peace Corps in Mali. Simsik draws on nearly 20 years of experience in international development and program management to direct the multi-sector development program in West Africa, which has up to 180 Peace Corps volunteers and a local staff of 40. He previously served as the associate director for Peace Corps, with responsibility for environmental programming, in Madagascar. Prior to working with the Peace Corps, Simsik was at the Cornell University Cooperative Extension office and still serves on the board of editors of *The Journal of Extension*. He can be reached at msimsik@gmail.com.

Nicholas P. Shear (B.S. '93) is director of the Inter-American Center for the Arts, Sustainability & Action in Cotacachi, Ecuador. The non-governmental organization supports communities and organizations throughout the Americas in their small-scale and artistic endeavors to create sustainable, creative and more autonomous ways of living. Shear manages rural integrated development projects in Guatemala and Ecuador for the Inter-American Center. He also is Ecuador country director for Global



SNRE ALUMNI EXPLORE HYBRID ORGANIZATIONS IN NEW BOOK

A new breed of company is emerging, one that wants to both make money and change society. These "hybrid organizations" and their investments in sustainable business practices are explored in a new book by five SNRE master's graduates: Brewster Boyd ('09), Nina Henning ('09), Emily Reyna ('09), Daniel E. Wang ('08) and Matthew D. Welch ('09). The team members, who all earned dual degrees from SNRE and the Ross School of Business, began surveying more than 100 companies nearly two years ago as part of a group master's project. Now, they have compiled the survey responses, case studies and resulting analyses from that effort into *Hybrid Organizations: New Business Models for Environmental Leadership*. The book explores trends and lessons learned from hybrid organizations that are pursuing environmental sustainability missions. Hybrid organizations—defined as entities that are both market oriented and mission centered—can contribute positively to some of humanity's most pressing challenges by executing on business models that have values-based missions baked in, the authors conclude.



Works, based in Boulder, Colo. Since 2002, he has been an adjunct faculty member in the University of Vermont's Department of Geography. His NGO and related work can be found at www.casainteram.org.

Joe Malcoun (B.S. '00, M.S. '03) recently joined DTE Energy Resources in Ann Arbor, where he works on renewable power and carbon-offset projects. He recently earned an M.B.A. from the Ross School of Business.

Anne Gore (M.S. '02) is a science education manager in the Alaska regional office of The Wilderness Society. She has spent more than 15 years working for non-profit conservation organizations in communications and marketing capacities. While at SNRE, she taught an undergraduate course titled "Writing for Science." She loves the challenge of finding new ways to communicate science and make it accessible, relevant and interesting to diverse lay audiences.

Jetta Wong (B.S. '03) is an agriculture and energy policy analyst with the Environmental and Energy Study Institute (EESI) in Washington, D.C. She writes for the organization's Bioenergy, Climate Protection and Oil Reduction newsletters; monitors the reauthorization of the Farm Bill and implementation of its existing energy provisions; and is the primary EESI researcher on three projects studying effective marketing incentives for biopower, biofuels and biobased products.

Kerry Duggan (M.S. '06) joined the Michigan League of Conservation Voters (LCV) as deputy director and director of development. She previously served in Washington, D.C., as the campaigns project manager for the national LCV.

Justin Felt (M.S. '08), a dual-degree graduate of SNRE and the Ross School of Business, is a senior analyst at Point Carbon, a provider of independent news, analysis and consulting services for European and global power, gas and carbon markets. He leads Carbon Project Manager North America, which Point Carbon says is the largest North American carbon offset database available. Felt was recently interviewed about his new role by editors of *Carbon Neutral Digest*.

OAP SEEKS ALUMNI ASSISTANCE

The School of Natural Resources and Environment welcomed nearly 180 new graduate students this fall. The new class brings SNRE's enrollment to almost 500. The school continues to attract a growing number of applicants who are selective about earning a graduate degree founded upon rich interdisciplinary research and teaching.

These students also know the invaluable role that networking with SNRE alumni serves in establishing and advancing their careers. To aid our students further, the Office of Academic Programs (OAP) needs the help of alumni—regardless of location, field of study pursued or degree earned—in two primary areas:

CAREER SERVICES AND MENTORING

OAP manages the eRecruiter Web site, which allows students and alumni to post resumes and connect with potential employers online. Alumni are needed to:

- + **Sign up for eRecruiter as an employer.** Doing so allows you to easily recruit students for part-time, full-time and internship positions. Setting up an employer account is easy. (Alumni are also welcome to register at eRecruiter as a job applicant themselves.)
- + **Sign up as a Professional Network member.** Students want a diverse and engaged source of alumni to contact and network with professionally. By joining as a member, alumni make themselves available to answer career-related questions from students.

More on eRecruiter: snre.umich.edu/career_services/resources

Relatedly, OAP also wants to know when SNRE alumni are visiting Ann Arbor. Students want to meet alumni in person to discuss careers and environmental issues. If you are going to be near campus and are interested in being a speaker at an informal career talk, please contact OAP.

MASTER'S PROJECTS

Every year, 10-15 interdisciplinary projects that focus on a real-world environmental challenges are selected by teams of four-to-seven master's students. The teams work to solve a science and policy challenge on behalf of a client organization.

The students are advised by an SNRE faculty member, begin their work in March and finish the following year in April. They present their work at the Master's Project Symposium in December or April (and often present to their client organization, too).

The project is an excellent opportunity for companies and organizations to harness the talents of SNRE students. The school is currently gathering master's project ideas for consideration by a new cohort of students. If you or your company have a project idea, please submit a proposal by Oct. 31.

More on master's projects: snre.umich.edu/current_students/masters_projects

The Office of Academic Programs is responsible for admissions, academic advising, financial aid, student services and career services. If you have questions about how to help OAP serve current students, please contact the office at 734.764.6453 or visit snre.umich.edu/oap.



NEW SNRE STUDENTS—THE ENVIRONMENTAL LEADERS OF TOMORROW—GATHER FOR A GROUP PHOTO DURING THE 2008 NEW STUDENT ORIENTATION AT THE UNIVERSITY OF MICHIGAN BIOLOGICAL STATION IN NORTHERN MICHIGAN.

THANK YOU SNRE SUPPORTERS

In the past year, more than 830 alumni and other friends made investments in the future of the School of Natural Resources and Environment. As another exciting academic year begins and the largest-ever incoming class arrives on campus, we want to acknowledge the individuals and organizations whose support makes our progress possible.

Through recent and past contributions, SNRE has been able to create scholarships, fund research projects and launch pioneering initiatives that are key to addressing the important environmental issues of our time. In addition, the ongoing support helped facilitate the school's ability to attract more students, deepen community outreach and enhance its overall influence as a leading environmental educator.

For example, recent gifts helped 55 SNRE students attend professional conferences and sustained more than 60 fellowship awards last year. Financial support also strengthened the school's ability to fund current faculty. This support is even more important as SNRE launches five faculty searches this year. These new faculty will greatly enhance SNRE's reputation while complementing the academic interests of our growing student body.

Our valuable partnership with supporters makes it possible to set ambitions high as we strive to be the benchmark by which other environmental schools are measured; the place where innovative research is generated; and the resource where leading organizations turn for the next generation of environmental leadership.

Thank you, friends and supporters. 🌱

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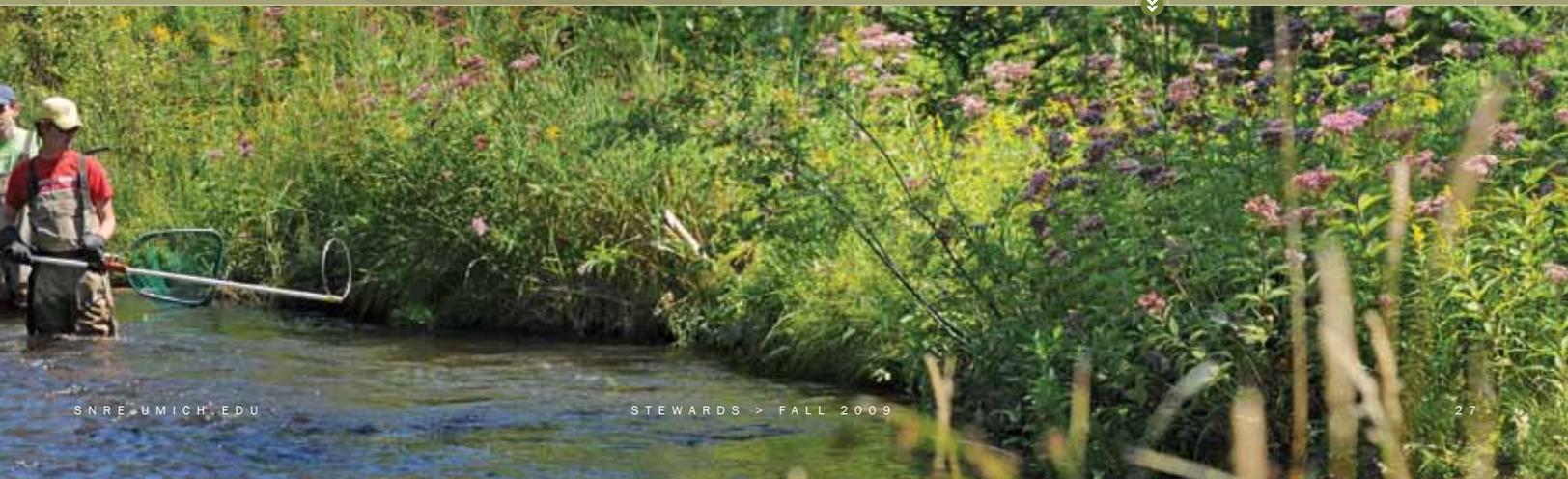


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+ MORE INFORMATION:
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The 2010 Annual Fund Campaign of the School of Natural Resources and Environment is under way, and once again, we call on your continued generosity.

During one of the worst economic crises of our time, SNRE is fortunate that the University of Michigan's longstanding fiscal responsibility has enabled it to weather the economic downturn better than most institutions. However, sound financial management alone is not enough to keep us among the "Leaders and Best."

As state of Michigan budget allocations to higher education continue to decline, support of U-M alumni and friends is more crucial than ever. With your help, we can ensure that academic excellence

flourishes at SNRE—and that the school continues to be accessible to the next generation of environmental leaders. This year's annual fund seeks enhanced resources for these needs:

- + Fellowships and scholarships: providing the foundation by which SNRE recruits and retains top students from across the country and around the world.
- + Career development opportunities: helping students attend professional conferences and workshops, network with innovative environmental leadership and access critical internship experience.
- + Thesis and master's project support: allocating resources to students to conduct critical research and carry out real-world projects providing solutions to complex environmental problems.

We encourage you to continue your generosity and make a gift today at snre.umich.edu/giving. If you have questions about matching gifts, planned giving or other giving-related issues, contact the SNRE Office of Development and Alumni Relations at 734.615.0270. 

preserving SAGINAW FOREST *as a natural treasure*

BY PAUL GARGARO | LEADERS & BEST

More than 100 years ago, lumberman and Michigan Regent Arthur Hill and his wife, Louise, made a gift of dirt, trees and water to the University of Michigan in the form of a rural, 80-acre tract five miles west of the Ann Arbor campus. Named Saginaw Forest after the Hills' hometown, it has long served as a living classroom and research resource for SNRE.

The M. Jerome Rieger Saginaw Forest Enrichment Fund, created through a \$250,000 gift from Richard O. Rieger (A.B. '79) of Bedford, N.Y., to honor his father (A.B. '40, M.B.A. '41), will bolster the impact of the Hills' early philanthropy by helping implement a new SNRE stewardship plan for Saginaw Forest.

Supported by Ann Arbor's Debby McMullen, the plan examines the forest's continued use for graduate education and

research as well as new possibilities for K-12 environmental education programs and nature-based recreation for the public. Saginaw Forest features 55 acres of woodlands planted between 1904 and 1937, Third Sister Lake and surrounding wetlands.

Rieger said his gift reflects his father's passion for the woods. An ardent student of trees, the elder Rieger possessed an uncanny ability to identify an enormous range of species, even in Latin.

"He'd walk down the street and tell you the names of every tree," his son said. "Even though he was told (forestry) was not a good professional pursuit, he pursued it in his leisure. It was a lifelong love.

"He had so many interests, and the University of Michigan really nurtured them. His Michigan experience really opened his eyes," Rieger said. ↴

+ MORE ON SAGINAW FOREST:
snre.umich.edu/facilities/properties



ABOVE: RICHARD RIEGER WITH HIS LATE FATHER, M. JEROME RIEGER. BELOW: THIRD SISTER LAKE AT SAGINAW FOREST.



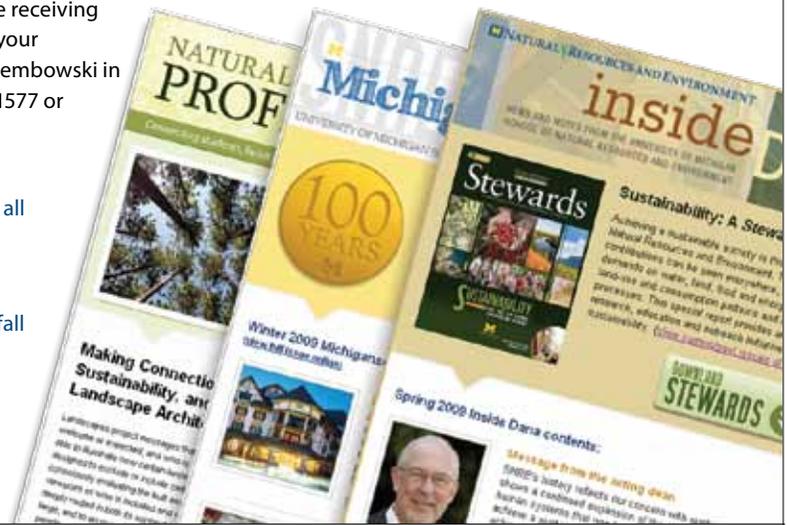
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SNRE is always seeking ways to improve the quality and effectiveness of its online communications with alumni and friends. To ensure you are receiving the school's electronic newsletters via e-mail, make sure we have your preferred e-mail address. Send changes and updates to Sarah Jarzembowski in the SNRE Office of Development and Alumni Relations at 734.763.1577 or sejar@umich.edu.

- Inside Dana: Produced quarterly. Contains news pertinent to all alumni. Next issue: mid-September
- Natural Resources Professional: Produced for alumni of the school's traditional forestry-based programs. Scheduled for fall 2009 launch (more at snre.umich.edu/nrp)
- Michiganscapes: Produced bi-annually for Landscape Architecture alumni. Next issue: early October

For more information about these and other alumni communications, visit snre.umich.edu/alumni_friends/communications.



Events

→ **September 15**

SNRE is one of the sponsors for a lecture by Google's "Green Energy" czar Bill Weihl. Weihl is the first speaker in the 2009-10 Dean's Speaker Series. He offers insights on the use of smart information technology to reduce global greenhouse gas emissions and making affordable renewable energy a solution to global warming. 4 p.m., Room 1040 Dana Building.

→ **September 25**

SNRE hosts a Class of 1959 and Emeritus Reunion luncheon at noon in the Dana Building. The luncheon includes a special welcome and tour of the building. Participants will also go on a Saginaw Forest property tour after lunch. For more information about this event and the entire Homecoming schedule, visit snre.umich.edu/homecoming.

→ **September 25**

SNRE hosts its annual campfire from 5-10 p.m. The event features games, music, food, drink and more! Activities include wader races, log sawing, pumpkin seed spitting, face painting, bobbing for apples and pumpkin carving contests.

→ **October 9-10**

Landscape Architecture Centennial Celebration. Two days of events celebrating the 100th anniversary of the Landscape Architecture program for alumni and friends. (See related stories starting on page 12 for more information.)

→ **October 13**

SNRE Alumni and Friends Reception at the Land Trust Alliance 2009 Rally. 6-8 p.m. at Cheatham Hall in the World Forestry Center in Portland, Ore. The Land Trust Alliance is a national non-profit organization that unites and champions organizations in local communities working to save natural areas.

visit snre.umich.edu/events