

# Environmental Studies

SPRING 2016

## Chair's Report: Many Shades of Green

BY MD RUMI SHAMMIN, ASSOCIATE PROFESSOR AND CHAIR, ENVIRONMENTAL STUDIES PROGRAM

The year 1970 marks several important landmarks in the history of the environmental movement in the United States: Earth Day was first celebrated, the U.S. Environmental Protection Agency was established, the National Environmental Policy Act passed, and the Clean Air Act passed. The year 1970 also marked the opening of the first U.S. environmental studies department—at the University of California, Santa Barbara. Since then, the scope of environmentalism in the U.S. and that of environmental studies and related academic programs have evolved significantly. What started as a response to increased awareness of conservation and preservation of nature, air and water pollution, limits to growth, and loss of biodiversity has now expanded to question, critique, and reimagine human relationships with the natural world and with each other in a much more comprehensive way. Some of the bigger challenges that dominated the environmental movement in the later parts of the 20th century—climate change, energy and resource use, species extinction, deforestation, desertification, water resource management, etc.—are still relevant and important in environmental discourses today. However, new questions and perspectives have joined the list as previously unheard voices are spoken, unintended consequences are revealed, and fundamental assumptions of modern capitalism are questioned. Environmentalism today encompasses critical social issues that directly or indirectly relate to environmental issues at local, regional, national, and international scales.

The Environmental Studies Program at Oberlin College has also evolved in recent years to offer new and expanded opportunities for students. Our program emphasizes critical thinking, community engagement, and skill-building across natural sciences, social sciences, and humanities disciplines. Faculty in environmental studies are engaged in research and teaching that span climate change, energy systems, systems ecology, natural resources and conflict, indigenous environmental issues, political ecology, environmental economics, environmental psychology, environmental justice, sustainable agriculture, food justice, critical race



Rumi Shammin's advisor group at the ENVS advisor wars.

theory, expressive culture, and global environmental issues and politics. We collaborate with indigenous, African diaspora, and South Asian communities as well as with local, county, and “Rust Belt” communities in our bioregion.

We are pleased to welcome two new faculty members to our program this year. Assistant Professor Chie Sakakibara’s teaching and research interests lie in the field of the human dimensions of global environmental change among indigenous peoples, specifically on their cultural resilience and socio-environmental justice. Associate Professor Karl Offen teaches courses in political ecology and investigates environmental change in Latin America. Together they have added new areas of coursework and research to our portfolio. The diversity of interests within our program is also reflected in our other faculty members. Professor John Petersen has expertise in systems ecology, feedback, and control mechanisms operating in complex social and environmental systems, and his research focuses on community-based learning and change. Associate Professor Janet Fiskio is an environmental humanist with courses and research focusing on collaborative, community-based topics including climate change, direct action, environmental justice, and food justice with a particular emphasis on the Rust Belt. She is also a faculty member in the Comparative American Studies Program. Assistant Professor Swapna Pathak’s work focuses on international environmental politics and on the relationship between

# Exploring Cultural Resilience on the Top of the World: Oberlin Students Visit Arctic Alaska for Ethnographic Fieldwork on Climate Change

BY OLIVIA ROAK '17, KILEY PETERSEN '17, AND PAULUS VAN HORNE '17

Research on the human dimensions of global climate change should consider the ways marginalized populations confront uncertainty through cultural practices. This is a vital point for indigenous peoples around the world, but particularly for those in the Arctic region where the effects of climate change are most dramatic. Community response and resilience to climate change is multifaceted, and because of such complexity, it should be interpreted through myriad lenses.

**Olivia Roak '17, Kiley Petersen '17, and Paulus van Horne '17** will travel with Assistant Professor Chie Sakakibara to Barrow, Alaska, November 20-26, 2016, to establish a long-term collaborative relationship between the indigenous Iñupiat community on the Arctic Slope and Oberlin's Environmental Studies Program. This project is generously funded by Arthur Blank Fellowships, Doris Baron Environmental Studies Student Grants, Jerome Davis Social Sciences Research Awards, and Faculty Grant-In-Aid Program at Oberlin College.

Olivia Roak will explore the intersection of climate change and community resilience through the indigenous experience of music in northern Alaska. She will examine contemporary Iñupiat music practices within the context of the enduring social, political, cultural, and ecological

legacies of settler colonialism. Furthermore, she will trace both continuity and transformation in musical forms and practices among Iñupiat, looking specifically at the ways in which they have adopted elements of Western music into their cultural fabric and integrated them with traditional instruments and performance styles. Drawing from frameworks such as ethnomusicology, political ecology, political economy, and cultural anthropology and humanistic geography, she will seek to illuminate the importance of music as a powerful tool to cope with social and climatic changes by enhancing the contemporary Iñupiat identity.

Kiley Petersen's project is titled "Indigenous Resilience, Adaptation and Community Solidarity in the Face of Climate Change." As a student of environmental studies, specifically the intersection of environmental policy and community/indigenous resilience, Kiley hopes to explore how nested levels of governance and climate change policy can impact indigenous groups and directly affected regions. Through recorded interviews and participant observation, her project aims to further understand how indigenous groups adapt to climate change through internal resilience and community solidarity and how external factors—the Alaskan and federal governments and international







Page 2, lower left: Olivia Roak '17, Paulus van Horne '17, and Kiley Petersen '17 with their classmates in Chie Sakakibara's course Indigenous Peoples and Climate Change. This photo was taken following a Skype lecture and discussion with Rosemary Ahtuanguaruak of Nuiqsut, Alaska, an Iñupiaq environmental activist and a founder of REDOIL (Resisting Environmental Destruction on Indigenous Lands). *Left:* Assistant Professor Chie Sakakibara with community members of Barrow, Alaska, in celebration of a successful bowhead whale harvest. *Below left:* Iñupiaq drummers perform at a midsummer feast called Nalukataq. *Below:* The village of Barrow from the air. The community is the northernmost settlement of North America and faces the Arctic Ocean.



environmental monitoring groups like the International Whaling Commission—affect the community.

Paulus van Horne looks forward to working with the community through trust- and relationship-building to better understand a living history and cultural vibrancy of the people. Building upon the existing oral history and narrative sources on Alaska Native subsistence communities, his research will demonstrate how Iñupiat control their own narrative to the outside world through the participation in local and tribal radio stations and programs. As a premise, a radio program is broadcast to the community; while it may never be heard in exactly the same way again, the radio broadcast becomes woven into the oral tradition of the community. In this way, the

lifeways of the people of the North Slope of Alaska and their social resilience could be sustained and enhanced by this new form of storytelling when their ancestral land is severely influenced by the problems posed by climate change.

Upon their return to Oberlin, Olivia, Kiley, and Paulus will work closely with Chie to consolidate field notes and interview transcripts for inclusion in an *Oberlin Review* article and a peer-reviewed journal manuscript to be written in collaboration with the community members of Barrow. It is our sincere hope that this collaborative community-partnered project will synthesize our research and community voices to draw a holistic picture of Iñupiaq cultural resilience in the face of climate change.

## Chair's Report

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conflict and the natural environment. Professor Emeritus David Orr, acclaimed author and internationally recognized proponent of environmental education and ecological design, is renowned for his work in the fields of sustainability in higher education, the built environment, and climate change. We also have an environmental economist, Assistant Professor Ben Fitch-Fleischmann, with a joint appointment in economics and environmental studies. My own expertise is in energy, urban sustainability, and domestic and international climate change policy and programs. In addition to core faculty, our Program Committee membership reflects the interdisciplinarity that we believed characterizes all the environmental challenges and opportunities we face—with participating faculty from disciplines as diverse as biology, chemistry, economics, English, electronic music, geology, politics, psychology, religion, and sociology. These departments and others offer courses that support the environmental studies major. The program also maintains an active speaker series that brings in international, national, regional, and local thinkers and researchers on the environment to campus on a regular basis.

The fundamental goal of the Environmental Studies Program at Oberlin is to create opportunities for students to develop an understanding of the causes and consequences of our environmental predicaments and the creative problem-solving skills necessary to design and develop a more sustainable relationship between humans and the rest of the natural world. We seek to do this in an inclusive learning environment that instills interactional diversity and creates spaces where many perspectives, priorities, and values can combine, collide, and interact in a respectful and productive way. In our classrooms, students and faculty learn from each other and often engage in the community to broaden the scope of our understanding of how problems, solutions, and related discourses manifest in the real world. We celebrate an environmentalism that is painted in not just one, but many shades of green.

## A Note from Student Reps to the Environmental Studies Program Committee

BY NATALIA GARCIA-SANABRIA AND HYACINTH PARKER

Hello! We are Natalia Garcia-Sanabria and Hyacinth Parker, environmental studies student representatives for 2016. Natalia is from the (boogie-down) Bronx and is focusing on sustainable enterprise and entrepreneurship.

She enjoys home-cooked meals and binge watching *Bob's Burgers*. Hyacinth is from San Francisco and is focusing on urban studies and sustainability. She loves sewing and is learning to play the trumpet (currently learning "Moon River"). One of our main goals is to make environmental studies—as a major/program and as a discipline—more diverse. We are especially dedicated to including and incorporating students from underrepresented backgrounds—students of color, trans\*, lower-income, first-generation, etc. We want to emphasize how intersectional and fulfilling the environmental studies major, field, and classes can be.

In terms of programming, we hosted an event for prospective majors. To address concerns of accessibility, we first held an informal discussion with students to address their desires and hesitations about the major. Next we organized an "advisor wars" event to pit environmental studies majors against one another in friendly competition. Activities included a water balloon toss, three-legged race, egg run, tug-of-war, and potato sack race. We hope these types of events will foster community and give students a chance to get know one another outside of the classroom. Finally, we are planning to implement a mentorship program. Newly declared majors will be paired with upperclassmen who share a similar pathway/focus. The program is intended to offer support and to help students navigate the major.

Outside of programming, we want our building, the AJLC, to feel more inviting, so we have started redecorating! These are minor changes that will hopefully lead to a productive work environment or just a good place to hang out in between classes.

We love working with the Environmental Studies Program community and hope to make the major more inclusive.



Natalia Garcia-Sanabria '17 and Hyacinth Parker '17



# Environmental Dashboard Expands On and Off Campus and Beyond Oberlin

BY AUGUSTUS ARTHUR AND DARREL TREMAINE

As readers of this newsletter know, Environmental Dashboard is a technology and approach that makes flows of water and energy through buildings and whole communities visible and engaging while linking them to pro-environmental thoughts and choices. This year has been very productive for the Environmental Dashboard team. Two new team members were added in 2015: Augustus Arthur as the new dashboard project manager (building on Danny Rosenberg's work), and Darrel Tremaine as the new sustainable technology coordinator (building on Samuel Hartman's work).

In April 2015 a proposal to expand the resource monitoring system for the Dashboard project was cofunded by the Green Edge Fund and Oberlin's finance office. This injection of capital allowed the team to both tie into existing building automation systems and to purchase and install new data loggers and meters in Wilder Hall, the King Building, Peters Hall, Finney Auditorium, and Mudd Library. While the Dashboard project has long been known for measuring water and electricity use in buildings across campus, this phase of expansion allowed us to make our first venture after the AJLC into thermal metering—the measurement of steam and chilled water flows—through many campus buildings. This new metering capability is exciting because it is a significant step toward Oberlin's goal of becoming a carbon neutral campus by the year 2025—and until we meter all flows that produce greenhouse gasses, we can't manage them.

Phase III of the Dashboard expansion (beginning in June) will result in water, steam, chilled water, electricity, and natural gas metering in eight of the most resource-intensive buildings on campus. Once Phase III is complete, we will have a total of 78 monitored buildings that continuously measure resource flows through 664

different metering devices!

In late October 2015, representatives of the Environmental Dashboard team—John Petersen, Augustus Arthur, and students Rebecca Orleans and Ifunanya Ezimora—presented at the annual conference of the Association for the Advancement of Sustainability in Higher Education (AASHE) in Minneapolis. We outlined the benefits of bringing Environmental Dashboard to other campuses and organizations. Numerous other presentations were made this last year including to organizations such as CEOs for CITIES.

Since the inception of the Environmental Dashboard project, the team has worked to develop curricular materials that leverage the value of real-time data for education at K-12 and college levels. In the summer of 2015, Rebecca Orleans, a summer fellow for the Dashboard project, worked with local teachers and engaged in research to begin design work on a website to house curricular content developed by professors and K-12 teachers. In the fall of 2015, students of the Ecological Communications class at Oberlin College worked with the Environmental Dashboard team to implement this design (visit the “teacher resources” section of [www.environmentaldashboard.org](http://www.environmentaldashboard.org)). Increased adoption and further creation of curricula that harness the power of the Environmental Dashboard is paramount to encouraging adoption by educators not only in Oberlin but nationwide.

Can buildings, campuses, and whole communities serve not just as places in which learning occurs but as fundamental components of curricula emphasizing authentic and active learning, civic engagement, and systems thinking? As the paragraphs above suggest, meaningful progress has been made this year in answering this question affirmatively.

## Notable AJLC News

*Building Design + Construction*, a commercial construction trade publication, included the AJ Lewis Center on its February 2016 list of 52 game-changing buildings built in the last 170 years. The AJLC was specifically cited for having the first commercially installed Living Machine. Included on the list were the Eiffel Tower, the Chrysler Building, the Guggenheim museums in Bilbao and New York, the St. Louis Gateway Arch, and the Beijing National Stadium (also known as the Bird's Nest). We are proud to have been included on such a distinguished list of architectural icons.



# Reflections of Graduating Seniors



## **ALDRUMESIA BAKER**

Making the move from Dallas, Texas, to Oberlin, Ohio, was inherently a rare move to make. But being a black womyn earning a BS in geology and minors in both Africana and environmental studies

(with a concentration in environmental justice) is also a move that many of my peers cannot fully relate to. My studies at Oberlin, plus a community service scholarship through the Bonner Scholars Program, have granted me the opportunity to see environmentalism and social justice through truly interdisciplinary lenses.

Early on at Oberlin, I entered the world of research by earning an Oberlin College Research Fellow position alongside Professor Dennis Hubbard. I spent my first summer of this fellowship examining ocean acidification and coral reef degradation. After hours in the lab looking through a microscope, I decided the solitary lab life was not for me, and I changed directions. For the past two years, I have been working with Professor Janet Fiskio on environmental justice issues, creating a successful collaboration between my academic research on environmental racism and coalition-building with an Alabama town that has been plagued by big oil and big industry known as the Africatown Partnership. This work has helped solidify the Cooperative Partnership Agreement between Oberlin College and Baheth Research Laboratories and the prioritization of the institution to get big industry out of the backyards and playgrounds of the members of Africatown.

From collaborating with communities of color in Milwaukee on matters of food accessibility to partnering with Africatown on matters pertaining to environmental racism, the trajectory of my environmentally related endeavors outside the classroom has prepared me for a lifetime of prioritizing the needs of communities. I am now dedicated to decentralizing the professional knowledge that tends to remain in places where propensity for change is seldom realized. I now consider myself a lifelong student activist who aspires to perfect the art of being a liaison between various forms of community and professional knowledge.



## **AVA NICOLAI**

My experience in environmental studies has been defined by the ways in which the program works to reach outward: Locating truths of human interaction with the natural world across a wide array of art, literature, and other cultural ephemera, and constructing a complex web of understanding that allows for cross-disciplinary application of ideas fostered within environmental studies. I am lucky to have had professors that actively push students outside the classroom both conceptually and literally—from investigating the history of the United State's agricultural industry to community engagement projects that send students to Oberlin's schools and nonprofits. In the fall of my junior year, I took the Environmental Dashboard's practicum course in ecological communication. That class served as a jumping-off point for my most personally significant work at Oberlin. I was awarded the Bonner Center's Community Engaged Research Fellowship and completed original research in collaboration with Dashboard and the Oberlin Heritage Center during the summer of 2015. The project developed curricular materials for educating youth in oral history and interview techniques in a manner that engaged their learning about community, environment, and history. The fellowship convinced me that the humanities can be a space for learning and gathering in order to celebrate and build positive relationships with the natural world. I continued to work for Dashboard and realized how empowering it is to have your ideas respected and valued by an organization as an undergraduate student. As an environmental studies and studio art double major, I hope to continue investigating how the arts can be a space of story sharing and scholarship that facilitate community and environmental engagement.





## REBECCA ORLEANS

In order to talk about my experience in the Environmental Studies Program, I have to talk about my professors and the relationships I built with them. The time and effort ENVS faculty put into their students is exemplary. (I say this honestly—this is not an attempt to get a good recommendation letter from anyone!) Professors in ENVS took me seriously as a student, a collaborator, and as a human with real ideas. This atmosphere allowed me to push my thinking and to speak up. In courses with Janet Fiskio, I created a book of found poetry that supports women moving freely throughout the environment; I also explored the relationship between perceptions of dirtiness and the exclusion of migrant labor from New Agrarian discourse. Under the guidance of my advisor, John Petersen, I worked for the Environmental Dashboard. This work gave me leadership practice, research experience, and relationships with Oberlin public school teachers as we partnered to create a curriculum for the Dashboard website. The work was also crucial for me in figuring out my passion for education and my desire to begin a career in education after graduation. In addition, because of John, I took Systems Ecology, one of the hardest, yet most rewarding courses I had at Oberlin. Many of my friends from high school—especially females—seem to be leaving their colleges less confident than they did when they entered. This was not my experience at Oberlin, especially not in the ENVS program. My professors took me seriously, and so I took myself seriously. These professors and the department at large have made me feel prepared and confident for life beyond Oberlin.

## THE ENVIRONMENTAL STUDIES PROGRAM

### Speakers and Events

A screening of *This Changes Everything: Capitalism vs. The Climate* was followed by a teach-in and discussion on COP21 and Global Climate Justice.

**Michael Lythcott** shared his experience with students working as an environmental justice consultant, brainstormed opportunities and challenges, and discussed career paths for students interested in environmental justice work.

**Cheri Honkala**, director and cofounder of the Poor People's Economic Human Rights Campaign, presented "Economic Human Rights: An Evening with Cheri Honkala."

**Laura Lengnick**, affiliated researcher with the Appalachian Sustainable Agriculture Project's Local Food Research Center, presented "Climate Change, Resilience, and the Future of Food."

Organized by the International Studies Concentration, and with funding from the Isenberg Family Charitable Foundation, Oberlin hosted the first **Global Issues Symposium 2016: Climate Change Consequences: Disruption, Migration, and the Development of Resilient Communities**, with a keynote speech given by Igro Krupnik from the Smithsonian Institution titled "Living on the Changing Planet: Why Indigenous Voices Matter for Debates on Climate Change."

**Ben Schiff** (politics) moderated the panel "Climate Policy at the Global Level: Needs and Solutions" with **Arjun Makhijani** from the Institute for Energy and Environmental Research, **Swapna Patak** (ENVS), and **Ben Fitch-Fleischmann** (economics).

**Chie Sakakibara** (ENVS) moderated the panel "Resilience at the Local Level: Environmental Attitude and Knowledge in Indigenous Communities" with **Caroline Cannon**, Inupiat Tribal Elder, **Frank Kelderman** (comparative American studies), **Amy Margaris** (anthropology), and **Matt Bahar** (history).

**John Petersen** (ENVS) and **David W. Orr** (ENVS, Oberlin presidential advisor) moderated the panel "Connecting the Global and Local: Assessing the Future of Climate Resilient Action" with **Caroline Cannon**, Inupiat Tribal Elder, **Igor Krupnik**, and **Arjun Makhijani** from the Institute for Energy and Environmental Research.

Oberlin students **Ify Ezimora '19**, **Kaylee Elliot '19**, and **Chris Kennedy '18** presented "Stories of Environmental Justice and Resilience," on their winter-term experiences, sponsored by the **Ann Marie Schaening '87** Memorial Fund.

Alumnus **Eric Davidson '78** presented "Manure Happens: The Consequences of Feeding 7 Billion Carnivorous Humans."

OES, EnviroAlums, ENVS, and the Career Center sponsored the first ever Sustainability Careers Conference with speakers including **Peter Nicholson**, **Michael Lythcott**, **Abbe Turner**, **Bryant Williams**, **Andrew de Coriolis**, **Jim Rokakis**, and **Lenore Beyer-Clowe**.

**Ricardo Dominguez**, cofounder of the Electronic Disturbance Theater, a group that developed virtual sit-in technologies in solidarity with the Zapatistas communities in Chiapas, Mexico,

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# Faculty and Staff News and Notes



**AUGUSTUS ARTHUR**  
Ojekoo! ('Hello!' in 'Ga', a Ghanaian native language). Since joining the team in August last year, I have been on an incredible journey of acquainting myself with the Environmental Dashboard, meeting new people, and settling down in the Oberlin community. I am motivated and have pride in the mis-

sion of the project, which is to make invisible flows of water and energy through communities visible and engaging and to link these to the thoughts of citizens.

My roles here involve a lot of community outreach. Most recent was the Ecolympics competition, a two-week water and electricity conservation competition at both Oberlin College and in the public schools. I was privileged to have the support of David Hall, superintendent of Oberlin's schools, in a torch relay kickoff event. It was the first of its kind in the three-year history of Ecolympics in the public schools and drew administrators, all four principals, and very excited kids. This year saw a total of 11,000 kilowatt-hours of electricity and 2,000 gallons of water conserved. It was satisfying to reintroduce water in this year's competition after students at Eastwood elementary helped administrators discover a water leak during the 2015 competition.

It has been a very fulfilling nine months, and I thank all who took a moment to explain a thing or two to me in the early days. I thank the faculty and students who worked with me on the Dashboard project and other tasks. I most of all thank John Petersen for guiding me on my new path and teaching me the Dashboard way. I feel privileged to be entrusted with the task of managing this project. Oyi wala don! ('Thank you!' in 'Ga').



**JANET FISKIO**  
Every year at Oberlin there are new things to be grateful for. I am thrilled to welcome new colleagues Chie Sakakibara and Karl Offen. Our students continue to be a source of delight in learning and inspiration to walk the talk. In October, I returned to Africatown, Alabama, with seven stu-

dents (Dru Baker, Anne Chege, Nora Cooper, Ify Ezimora, Tony Moaton, Moses Richardson, and Paulus van Horne) to continue our collaboration with the Mobile Environmental Justice Action Coalition (MEJAC). MEJAC is a community organization fighting for the wellbeing of the community of Africatown and against toxic industries such as tar sands holding tanks and pipelines. I first met elders from MEJAC while volunteering at the Tar Sands Healing Walk in Fort McMurray, Alberta. Africatown is the place where the last ship of enslaved people landed in 1860. After the Civil War, these survivors of the middle passage founded the community of Africatown. In addition to the fall break collaboration, students Ify Ezimora and Kaylee Elliot worked with MEJAC for winter term 2016.

This collaboration with MEJAC connects with my teaching and research on climate justice. Next year, when I'm on research leave, I hope to complete my book manuscript, *Counter Friction: Poetics and Performance of Climate Justice*. In this monograph I bring together literature, performance, and protest to articulate the utopian (and dystopian) visions that emerge in the context of climate change. I continue to be engaged in research and teaching on food justice as well. This fall I published the chapter "'Where Food Grows on Water': Food Sovereignty and Indigenous North American Literatures" in *The Routledge Companion to Native American Literature*. Student Moses Richardson is the research assistant in my ongoing collaboration with Vel's Purple Oasis, a community garden and teaching kitchen in Cleveland. Oberlin students and colleagues, and collaborators from Cleveland to Africatown, offer me the most vibrant community I can imagine for doing the work of teaching, learning, researching, and writing about environmental justice in the rust belt and beyond.



**BEN HOBBS**  
In the spring of 2008, while teaching environmental science at University School in Hunting Valley, I brought a class of students to tour the still groundbreaking Adam Joseph Lewis Center. I shared in their enthusiasm for the space and its message of how to build a building that mimicked nature, instead of mocking it. I had no idea that eight short



years later I would be hired to run that same building. After a 10-year teaching career and two years in the solar PV industry, I was thrilled to have the opportunity to join the Environmental Studies Program as the facility manager and community outreach coordinator. Building on the successes of my predecessors, I am tasked with maintaining, managing, and improving the performance of this space. Additionally, I have the great pleasure of working with and managing the 13 students who are entrusted with the daily task of running the Living Machine and Environmental Studies Information Center. It's springtime in Oberlin, which means we are in the midst of preparing the garden and orchard, tours are frequent and exciting, and the interview process for the hiring of summer staff is well underway.



### **KARL OFFEN**

I very much enjoyed my first year at Oberlin. In the fall I taught Political Ecology, a course that explores how different conceptions of the environment and moral economies intersect with political and economic power across scales to effect resource access, social conflict, and environmental change.

Next year I will offer a new course titled Society and Environment in Latin America and the Caribbean, a variation of a class I taught for almost two decades before coming to Oberlin. During the year I was a contributing guest editor to a special issue of the *Journal of Latin American Geography* titled *Mapping Latin American Geographies*. My current research project surveys the cultural geographies of Africans and their descendants in colonial Latin America. We often forget that three quarters of all migrants to the Western Hemisphere between the years 1500 and 1820 were Africans, and we continue to ignore the environmental knowledge, experiences, and skills these peoples brought with them and passed along to their descendants. In every form of resource production or extraction in the Neotropics in particular, Africans and Afrodescendants contributed to the creation of New World environmental knowledge, agroecologies, and cultural landscapes. I foresee several projects emerging from this work, including a new first-year seminar and, hopefully, more student-funded research.



### **DAVID ORR**

David Orr's eighth book, *Dangerous Years: Climate change in the Long Emergency and the Way Forward*, will be published by Yale University Press this fall. He was recently awarded a Lifetime Achievement Award from Green Energy Ohio—only the third they've given. He still serves the college as counselor to the president on environ-

mental issues and has been instrumental in funding and development of the Peter B. Lewis Gateway Center (hotel and conference center). The building is expected to be certified as a Leadership in Energy and Environmental Design (LEED) Platinum building and will utilize geothermal and solar energy systems. He is organizing the first major event at the Gateway Center, a conference titled The Next Economy, which will focus on the economic shifts as a result of the migration away from fossil fuels. The conference will be held October 6-8, 2016, one month before the presidential election in a battleground state.



### **SWAPNA PATHAK**

2015-16 has been an exciting year on both professional and personal fronts. My research focuses on international environmental politics, and 2015 was going to be a significant year because of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC). Researchers and activists working on

issues of international politics around climate change and climate justice had been studying the run-up to this event since 2009, when the UNFCCC talks in Copenhagen did not come to any significant fruition. In October 2015, I attended the pre-Paris Agreement negotiations in Bonn, Germany, where I met diplomats and negotiators from several countries and interviewed them about their national positions regarding any possible agreement. I also talked

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to a few NGO coalitions like the Climate Action Network, International Indigenous Peoples' Forum on Climate Change, and Greenpeace International, about their political strategies during and after the negotiations. While the Paris Agreement has yielded mixed results, I look forward to being engaged with this process in the near future.

In December, I was involved in organizing an awareness and teach-in event related to climate change that was jointly organized by the Students for Energy Justice and the Environmental Studies Program. Events such as these (including the Global Symposium on Displacement due to Climate Change in April) on campus provide a valuable opportunity for me to connect with the students and people in the Oberlin community through my research.

This year I also had the privilege of being the primary advisor for senior Zoe Bluffstone's honors thesis. I learned so much about the politics and corporate power behind material/bottle recycling legislations in the U.S. I would like to congratulate and thank Zoe for her hard work. On the personal front, last July my husband and I bought our first home in Oberlin and are experiencing the joys (and many expenses) of home ownership. However, we are excited to deepen our ties with this wonderful community and grow many tomatoes this summer.



### JOHN PETERSEN '88

This is my first year teaching at Oberlin since 2006 in which I have not been program chair of ENVS. It has been exciting and gratifying to witness my good friend and colleague Rumi Shammin build on our past work and launch new

initiatives that are already strengthening and enhancing the vibrancy of Oberlin's program. Great job Rumi! While it is nice to be out of the hot seat, I feel no less busy as a "regular" faculty member. I am particularly pleased to have led efforts to hire three fantastic new staff members in ENVS this last year: Environmental Dashboard Project Manager Augustus Arthur, Sustainable Technology Coordinator Darrel Tramaine, and AJLC Building Manager and Community Outreach Coordinator Ben Hobbs. Fortunately the prior occupants of these positions—Danny Rosenberg, Samuel Hartman, and Catherine Hoyle—left positive legacies to build on. But we are all excited by the skills, interests, and energy that our new hires bring!

My research remains focused on how introducing resource-use feedback in the built environment can be used to engage, educate, motivate and empower conservation. Engaging students as research collaborators continues to be one of my greatest pleasures. This last year I published four peer reviewed papers, all of which included former students as coauthors (Jake Grossman, Tess Yanisch, Evan Tinknell, Noel Meyers, and George Allen) and two of which have former students as the lead authors (Erika Brandt and Danny Rosenberg). I co-presented with current Oberlin students at three national conferences (Becca Orleans, Ifunanya Ezimora, Melissa Cabat, Rose Benjamin, Emily Heck, Evan Holiday, and Shane Clark). I also served as supervisor for three honors projects this spring (Elaine Hinrich, Hugh Milner, and Alexandra Kahn). It has been a pleasure welcoming Chie Sakakibara and Karl Offen into the Environmental Studies Program. Chie and I had fun co-teaching Environment and Society in spring of 2016.

I will be on sabbatical next year and am very much looking forward to catching up on research, writing, learning new things, and recharging my teaching.

### CHIE SAKAKIBARA

My first year at Oberlin was filled with endless joy, surprise, and excitement. I would like to express my deep gratitude to the students, colleagues, and staff in the Environmental Studies Program. This year I enjoyed sharing my passion and expertise in indigenous studies and cultural geography with my students in Indigenous Peoples and Resources and Indigenous Peoples and Climate Change. I was also privileged to co-teach Nature, Culture, and Interpretation with Janet Fiskio and Environment and Society with John Petersen. Both Janet and John generously shared their time and wisdom with me.



In September 2015, I presented a paper on the legacy of Portuguese whalers in Arctic Alaska and indigenous cultural resilience at the Conference on Hunting and Gathering Societies at the University of Vienna. In April 2016, I was honored to serve as one of the organizers and cultural participants for the inaugural Global Issues Symposium on climate change and resilience by welcoming Igor Krupnik



(Arctic Studies Center, Smithsonian Institution), Caroline Cannon (Iñupiaq environmental activist, Goldman Prize recipient of 2012), and Arjun Makhijani (Institute for Energy and Environmental Research). Additionally, I have recently returned from Columbia University after serving as a panelist for the symposium *Ice Cubed: An Inquiry into the Aesthetics, History and Science of Ice*.

On the research front, I contributed a book chapter respectively to *Giving Back: Research and Reciprocity in Indigenous Contexts* (Oregon State University Press, forthcoming 2016) and *Critical North: Space, Nature, Theory* (University of Alaska Press, forthcoming 2016). An article on my fieldwork in Alaska will appear respectively in the *Journal of Senri Ethnological Studies* and the *Geographical Review* in January 2017.

Looking ahead, I am thrilled to report that I will travel with three student research assistants to Barrow, Alaska, in fall 2016 (see the essay by Kiley Petersen '17, Olivia Roak '17, and Paulus van Horne '17). In spring 2017, I will offer a course titled Indigenous Environmentalism in conjunction with the exhibition that I will curate at the Allen Memorial Art Museum, *Exploring Reciprocity: The Power of Animals in Non-Western Art* (January 31-June 4, 2017). This exhibition will be supported by an Andrew W. Mellon Foundation AMAM Curriculum Development Grant, and I will invite a student assistant to collaborate with me on the project. Last but not least, I enjoy every moment of my life here in Oberlin, and I am looking forward to more adventures in the years to come.

## MD RUMI SHAMMIN

This past year has marked several new beginnings for me. I have been working on a project to expand the Environmental Dashboard technology developed at Oberlin to four other campuses: Albion College, Antioch College, DePauw University, and Hope College. The project is funded by the Great Lakes Colleges Association through a grant from the Andrew W. Mellon Foundation and is currently in its second year of implementation. In summer 2015, I organized a workshop in Oberlin where faculty and staff from the participating campuses came together to share lessons learned, exchange ideas, and brainstorm a range of curricular, campus sustainability, and community outreach opportunities. Throughout the past year, I also continued my work with several other ongoing initiatives under the Environmental Dashboard project. In fall 2015, I returned from my sabbatical leave and started my term as chair of the Environmental Studies Program. This was a significant transition for me. As chair, I identified a few priorities that I



Rumi with Majora Carter, the keynote speaker at the 2015 CANUSSEE Conference in Vancouver.

would pursue beyond my regular duties: exploring ways to better support diversity in ENVS and fostering an inclusive space that is both interdisciplinary and inter-sectional; evaluating and updating physical facilities in the Lewis Center to cater to the evolving needs of ENVS faculty and students; coordinating career resources for ENVS majors; and thinking about external

engagement and recognition of Oberlin's ENVS program. I have made some progress on these this year and plan to continue working on these throughout my tenure as chair. In October 2015, I cochaired the Joint Biennial Meeting of the U.S. and Canadian Societies for Ecological Economics in Vancouver, Canada. This year we tried, with reasonable success, to broaden the scope of the ecological economics community and foster a more diverse set of discourses. Finally, I visited Bangladesh in January 2016 to develop the next phase of my research on climate change in developing countries. I am currently collaborating with colleagues in Washington, D.C., and Vancouver on a project to study financing and programming opportunities in Bangladesh and other developing countries under the new climate funds committed as part of the Paris Agreement.

## DARREL TREMAINE

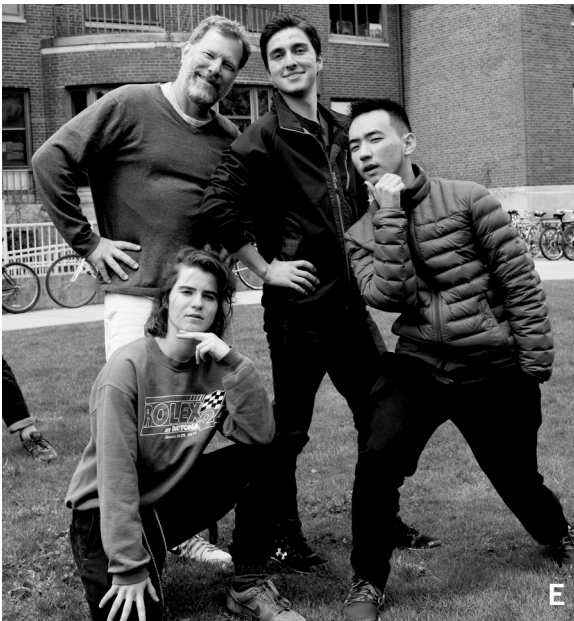
Darrel Tremaine joined the Office of Environmental Sustainability in January 2016. His role is to maintain and expand the complex network of sensors installed in residential, academic, administrative, and commercial buildings at the college and in the city of Oberlin. This monitoring network provides residents, faculty, and staff with real-time tracking of electricity, water, natural gas, and steam heat consumption for dozens of individual buildings. The network also monitors citywide wastewater output, freshwater usage, and electricity consumption. Darrel shares his passion for sustainability and mitigation of climate change by communicating with community stakeholders to understand how small changes in natural resource consumption can lead us toward our ultimate goal of the college becoming a carbon-neutral community by 2025.

Darrel earned his BS in mechanical engineering at

*continued on page 18*



# A Glimpse into the Environmental Studies Program





# EnviroAlums Update

BY CRIA KAY

Fifty million years ago, Wyoming looked something like a tropical forest. It was full of Orohippuses (tiny horse-like creatures), Uintatheres (large mammals that looked similar to rhinos, although not related), and Notharctuses (lemur-like primates). Before college, I never dreamed I would be interested in this scene. However, my love for geology blossomed throughout my time at Oberlin. I began to realize that geology does not just incorporate inanimate rocks, but also the creatures that lived on this planet and exist now only as bits of fossilized minerals.

Summer 2015 expanded my understanding of life on earth, as I dedicated eight hours a day, five days a week to studying just that. I received a grant through the Oberlin Enviroalums that allowed me to work at the Field Museum of Natural History in Chicago.

Preparing for the job was intimidating, to say the least. The museum's size was striking, but even that didn't compare to the sheer number of specimens the institution holds. I was amazed by the diversity and quality of the museum's specimens. Not only does it house millions of artifacts for the public to observe, but it also contains research and collections facilities for researchers to utilize. I worked behind the scenes assisting postdoc Susumu Tomiya in his endeavors to care for and maintain the fossil mammal collection.

Each day, I got on the bus and headed to work. I worked predominantly in the oversize storage, where the largest dinosaur bones were held. Here, I helped organize specimens from the Washakie Basin in Wyoming. I had always been fascinated by bones and teeth; I thought of them as human-made rocks. Working at the museum was ideal in this sense because every day I was up close and personal with teeth and bones. Organizing a fossil collection involves studying these specimens for hours



on end. I was fascinated by the diversity in the way that teeth could look. Brontothere teeth have an electric blue, black, and white tie-died pattern, while

crocodile teeth are little mounds of concentric circles. I spent my days repairing fossils, re-repairing the fossils as they broke in my hand (50 million years takes a heavy toll on bones), and creating protective casings. The activity that impacted me most was “picking”—the tedious task of sorting through a huge can of microscopic sediment under a microscope to pick out fragments of fossils: teeth, fish ear bones, claws, and bone fragments. This task taught me my most important lesson of the summer—that scientific understanding of environments and the ecological systems that exist within them are not dependent on large specimens or obvious answers. Oftentimes, the smallest fragments provide clues about Earth's past that can only be uncovered when the details are examined.

This internship gave me a deeper understanding of how remnants of fossilized mammals are clues about how Earth's environment and climate evolved. In this way, the current global climate is situated within the larger context of the planet's history. Humans are a minute part of Earth's history, and learning about the mammals that existed 50 million years ago helped put this into perspective. Paleontology gives me a greater understanding of the magnitude of human's influence on Earth given our incredibly short time existing on the planet.



**A.** ENVS students participating in tug-of-war at Advisor Wars 2016. **B.** Living Machine team members gather to celebrate the bountiful harvest of maple sap that would eventually become several gallons of delicious maple syrup. **C.** Summer Blank Fellowship students getting in a day of work at the George Jones Farm. **D.** ENVS students enjoying a meal at the fall picnic. **E.** Professor Karl Offen's advisor group at the ENVS Advisor Wars 2016. **F.** Environmental Dashboard team member Augustus Arthur leads a group of Oberlin City School children in a torch relay to kick off the 2016 Ecolympics. **G.** Students performing soil sampling in Africatown, Alabama, during a project with Janet Fiskio.

# Grants, Awards, and Scholarships

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## SCHAENING MEMORIAL FUND AWARDS

**The Ann Marie Schaening ('87)** Memorial fund, established by the family and friends of Ann Marie Schaening, provides support for students pursuing winter-term projects related to the environment. Six students were granted awards in 2016:

**Abigail Cali '17** participated in an intensive top bar beekeeping internship in Strawberry Fields, Jamaica. The importance of natural/treatment free beekeeping became increasingly apparent as she learned about the ecosystem surrounding a bee colony. This internship gave her the tools needed to dive into beekeeping and the confidence to expand her current project (two hives) to a learning apiary with five-plus hives.

**Ifunanya (Ify) Ezimora '19** collaborated with MEJAC (Mobile Environmental Justice Action Coalition), gathering statistical/scientific evidence of the negative effects of pollution on the health of community members, and Baheth Research and Development Laboratories to conduct community health surveys.

**Zia Kandler '16** trained with a grassroots human rights organization called NISGUA that works within Guatemala on social justice and human rights issues. This training coincides with her ENVS honors research on land distribution, the extractive industry's role in Guatemala, and women's roles in resistance movements in Guatemala.

**Christopher Kennedy '17** traveled with the student group Oberlin in Solidarity with El Salvador and practiced climate listening in El Salvador and worked with antimining organizers.

**Rachel Leader '17** interned at a public school in Tucson, Arizona, working on curriculum for third and fourth graders about the monarch butterfly's lifecycle, migration patterns, and forces in the world that work to endanger their populations. It gave her valuable experience and connections for continuing work with experiential environmental education.

**Julie Stark '16** studied Wolves and Northwoods Carnivores: A Look at Predatory Ecology offered by the Audubon Center of the North Woods in Minnesota. The course included lectures, training sessions, and field experience opportunities relating to the research and study of predatory ecology.

## DORIS BARON FUND

The Doris Baron Environmental Studies Student Research Fund was established to support independent research projects proposed by students and designed to increase knowledge of and appreciation for environmental studies. Projects typically involve close collaboration with existing organizations from local to international scales. A community-based focus—especially work that connects local agricultural initiatives with projects in developing countries—are favored. This year the fund will support three research projects:

**Olivia Roak '17** will explore the intersection of climate change and community resilience based on her observations and experience of traditional and contemporary music scenes in Barrow, Alaska.

**Kiley Petersen '17** will work to further understand how indigenous groups adapt to climate change through internal resilience and community solidarity and how external factors such as the Alaskan and federal governments and international environmental monitoring groups affect the Iñupiaq people.

**Paulus van Horne '17** will conduct research on how local community/tribal radio serves as a center for organizing and preserving communal and indigenous knowledge and how this effort results in the confirmation of cultural identity of Iñupiat at the time of unprecedented social and environmental changes.

## ARTHUR BLANK FELLOWSHIPS

Established by the Arthur M. Blank Foundation, this grant enables Oberlin students to undertake research and educational opportunities in collaboration with ESP faculty.

Professors John Petersen (ENVS and biology), MD Rumi Shammin (ENVS), and Cindy Frantz (psychology) collectively supervised five students: **Rebecca Orleans '16**, **Yue Yu '17**, **Caroline Burnham '16**, **Sage Jenson '17**, and **Sarah Kahl '16**

Lewis Center Facilities Manager and Community Outreach Coordinator Catherine Hoyle supervised three students focused on summer management and improvement of the Lewis Center: **Joyce Freitag '16**, **Deirdre Haren '16**, and **Eli Rogatz '16**.

Associate Professor Md Rumi Shammin (ENVS) supervised students **Miriam Stern '16** and **Stephen Barry '16**.

Associate Professor Janet Fiskio (ENVS) supervised student **Anne Chege '16**.



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**THE LEAH DEBORAH FREED '77 MEMORIAL AWARD** honors the life of Leah Deborah Freed (1954-1986), a pioneer student in the women's studies program at Oberlin College. Environmental studies major **Zia Kandler '16** was a recipient this year. During winter term she traveled to Oakland, California, to attend a training/workshop on Guatemalan history/current rights issues and state of human rights.

#### **JEROME DAVIS RESEARCH AWARD**

This fund is designed to defray costs of research projects in the social sciences and well-defined topics focusing on or having implications for the community. **Kiley Petersen '17, Olivia Roak '17, and Paulus van Horne '17** each received the award for collaboration with Professor Chie Sakakibara on Alaska fieldwork and research publications.

#### **OBERLIN COLLEGE OFFICE OF FOUNDATION STUDENT RESEARCH FELLOWSHIPS**

**Olivia Roak '17** will work with Chie Sakakibara on the community-partnered project in Barrow, Alaska, and produce reports and papers reflecting her experience and research findings in collaboration with Chie, Kiley Petersen, Paulus van Horne and the Barrow community.

**Samuel Tunick '19** will work with Chie Sakakibara on the art exhibition *Exploring Reciprocity: The Power of Animals in NonWestern Art* to be held at Oberlin's Allen Memorial Art Museum from January 31 to June 4, 2017. This exhibition will develop in conjunction with Chie's courses Nature, Culture, and Interpretation (ENVS201) and Indigenous Environmentalism (ENVS327).

#### **MARY WITT SCHOLARSHIP**

**Dyaami D'Orazio '16** received the Mary Witt Scholarship in January 2015 to travel to Cuba for the course *Imagining Havana* led by Oberlin Professor of Hispanic Studies Ana Cara. The goal was to gain a deeper understanding of the Cuban Revolution and alternative narratives in history through art, dance, music and film

#### **JOYCE GORN MEMORIAL PRIZE RECIPIENTS:**

##### **Dru Baker '16**

At Oberlin, Dru is earning a BS in geology while minoring in Africana and environmental studies with a pathway in environmental justice. This, combined with a community-service scholarship through the Bonner Scholars program, allowed Dru to experience social justice through an interdis-

ciplinary lense. Dru worked with Professor Janet Fiskio on the Africatown project and in conducting research on urban gardening in Milwaukee. She participated in the spring and fall 2015 immersions in Africatown and conducted independent research on testing for toxins in air and soil. On the spring trip in particular, she was essential to the success of the project, for she demonstrated and taught other students proper soil sampling methodologies. A leader in environmental justice work, Dru has been an active member of ENVS. She presented at the Geological Society of America's 125th annual conference (as an On To The Future Scholarship recipient), produced a scientific publication on climate change, served as a National Institute of Drug Abuse paid intern at the Steinhardt school of Human Development at NYU, served as a summer researcher at UNC's coastal studies program, received the Award for Excellence in Undergraduate Community Engaged Research, and was a founding participant of the Bonners in Amsterdam winter-term trip.

##### **Emily Belle '16**

Emily, a double major in environmental studies and comparative American studies, has been deeply engaged with off-campus communities around themes of sustainability and environmental education. As a first-year student, she taught gardening lessons as part of the Eastwood outdoor classroom program in Oberlin's public schools. In her second year, she served as the community voices coordinator for the Environmental Dashboard project and learned about various local food access projects taking place through work at Oberlin Community Services. Her longest-standing extracurricular involvement has been with the Oberlin Boys and Girls Club, where she sought to incorporate environmental justice perspectives into her everyday work as a literacy tutor. Extending this commitment, in summer of 2014 she worked through the Bonner Center for Service and Learning as a Community Engaged Research Fellow. In this capacity, Emily collaborated with Boys and Girls Clubs of Lorain County staff, as well as her research adviser, Janet Fiskio, to observe, evaluate, and present recommendations for after-school and summer meal services provided through the organization. She developed a project proposal for resource allocation to site-based gardening education programs, with the dual purposes of increasing kids' access to fresh, local, organic produce to complement government-subsidized commodity food items and providing a pedagogical space for outdoor play, scientific inquiry, and environmental awareness.

*continued on page 16*

### **Anne Chege '16**

Anne has demonstrated exceptional leadership in the areas of public health, environmental justice, and working with Marcelo Vinces in the Center for Learning, Education and Research in the Sciences (CLEAR) to encourage and model participation in the natural sciences by women and students of color. Anne participated in both Africatown immersions (spring and fall 2015) and served as Professor Janet Fiskio's research assistant at Vel's Purple Oasis in summer 2015. The Oasis is a learning garden and teaching kitchen in University Circle, Cleveland. Anne worked especially on implementing sustainable renovations to the Don Scott House (where the kitchen is located), funded by a grant from the Green Edge Fund. Anne is a founding member of the Black Scientist Guild and received a travel award to present her neuroscience research at the 2014 Annual Biomedical Research Conference for Minority Students.

### **Jane Clark '16**

Jane has demonstrated exceptional organizational initiative across the East Asian and environmental studies programs. As the Ecolympics intern, she worked with the Oberlin EnviroAlums and the Career Center to organize the first ever Sustainability Careers Conference at Oberlin: a day-long marathon of workshops, seminars, and panels that connected students with alumni and other local professionals working in sustainability. In 2014, Jane was invited to work as a student assistant with Professor Ann Sherif of East Asian studies to work on implementing an exploratory grant under the Luce Initiative on Asian Studies and the Environment (LIASE). Jane helped organize public presentations, faculty development seminars, curriculum development grants, and research trips. She served as an intern with Foresight Design Initiative and as a resident assistant/teaching assistant (RATA) for the Foresight Sustainability and Leadership Initiative. Jane also played an instrumental role in assisting faculty and students from Tokyo City University during their visit with ENVS and EAS in March 2016.

### **Dyaami D'Orazio '16**

Dyaami has dedicated her time to environmental and social justice endeavors while at Oberlin. She has supported the ES program in its efforts to diversify majors, curriculum, faculty, and staff. As a Bonner Scholar, Dyaami served as a community service resource center intern, organizing athletes and others to work with Legion Field Community Garden in Oberlin. She served as cochair of La Alianza Latinx as well as part of the Latinx Heritage Month Committee, which promotes community around identity and social action. Outside of Oberlin, she worked with the Tropical Audubon Society,

translating a migration brochure into Spanish to increase accessibility and inclusivity around important conservation information. For two summers, Dyaami participated in the Doris Duke Conservation Scholars program, which focuses on social justice-oriented approaches to conservation projects, recognizes and seeks the involvement of marginalized identities in environmental issues, and works toward a more inclusive conservation movement. This year, as the 2016 class president, she organized Citizenship Classes at El Centro in Lorain County, which assists undocumented migrants in preparing for the U.S. citizenship exam. This summer, Dyaami will work as the education and interpretation intern at the Everglades National Park, teaching youth about the intersection between the Cuban Nike Missile Crisis and the national park.

### **Jake Holtzman '16**

Jake has been involved with the student group Oberlin Food Justice (formerly Slow Food Oberlin) since his first year and served as cochair for two years. He helped organize many campus events, including garden workshops, guest speaker talks, and film screenings, related to furthering the collective education around food justice issues and solutions. In spring 2014, Jake taught an ExCo called Food Systems and Social Justice, focusing on food justice issues both local and global, and he actively practiced facilitation skills around these issues. At the same time, he worked with Janet Fiskio as a research assistant, researching environmental justice issues facing Hmong and black American communities in Milwaukee. Jake was a Bonner Leader through the AmeriCorps program for two years, in which he worked with community sites such as Zion CDC and the Oberlin Project. He helped organize community-building events, researched the implementation of a local food hub, and conducted interviews with local community members for the Environmental Dashboard project. While in the Bonner AmeriCorps program, Jake was engaged in community sites in his Bay Area, California, hometown, volunteering at a homeless shelter and working at People's Grocery, an Oakland-based food justice nonprofit. There, he did community garden maintenance, office work, community engagement work, and administrative tasks to assist with the organization's many food justice programs.

### **Zia Kandler '16**

Zia studied away in Guatemala, Nicaragua, and Honduras through Augsburg College's Center for Global Education and Experience. She and another student followed up by developing a project in Guatemala in collaboration with educators at the Proyecto Lingüístico Quetzalteco (PLQ), a Spanish school in Quetzaltenango. Zia and collaborators



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spent the summer interviewing women in three different communities across Guatemala who were midwives, protesting the operations of a Canadian gold mining company, and in a new settlement of ex-combatants formed after the 1996 Peace Accords brought an end to a 36-year civil war. Upon her return to Oberlin, Zia worked to secure funding to return to Guatemala to continue her work with the women in resistance at the Canadian gold mine operation. In addition, she sought to raise money to offer a summer 2016 workshop in conjunction with PLQ that would use art and acting to educate children about extractive industries in their country. This year she delivered talks about the life stories of the women interviewed, most recently at the annual meeting of Oberlin's Santa Elena Project of Accompaniment, where her presentation was well received. She co-created a web page with audio of the women's voices (<http://enelnombredelatier-ravidacomunidad.com/>). This fall, Zia will work as a volunteer with the San Francisco-based NISGUA (Network in Solidarity with the People of Guatemala), where she will be part of its Guatemalan Accompaniment Project (GAP).

### **Cria Kay '16**

Most of Cria's environmental work has taken the form of environmental justice activism, specifically in New Orleans. This started with her work as a food justice intern at the Common Ground Health Clinic, an organization that provides free health services to people in need within the greater New Orleans area. There, she organized and implemented a weekly farmers market, developed a volunteer program, and created and distributed a resource guide listing free services in the city. Cria then began working with Make Music NOLA, a nonprofit that uses music education as a method for social change. There, she wrote and edited grants to fund teaching artist stipends and program supplies. Cria also worked at the Field Museum of Natural History to conduct research surrounding paleoclimatology, interned for the city of Delaware to draft the Source Water Protection Plan for the city to submit to the Ohio EPA, volunteered at the Cloud Forest School teaching environmental programming, and worked as a research assistant for Karla Hubbard in Oberlin's geology department. Locally, Cria volunteered at Community Meals two times a week.

### **Ava Nicolai '16**

Ava was awarded the first Community Engaged Research Fellowship by the Bonner Center last summer. She collaborated with the Oberlin Heritage Center to develop a unit for a history camp in which students conducted interviews with senior members of the Oberlin community to learn about historical views of the community and natural environment.

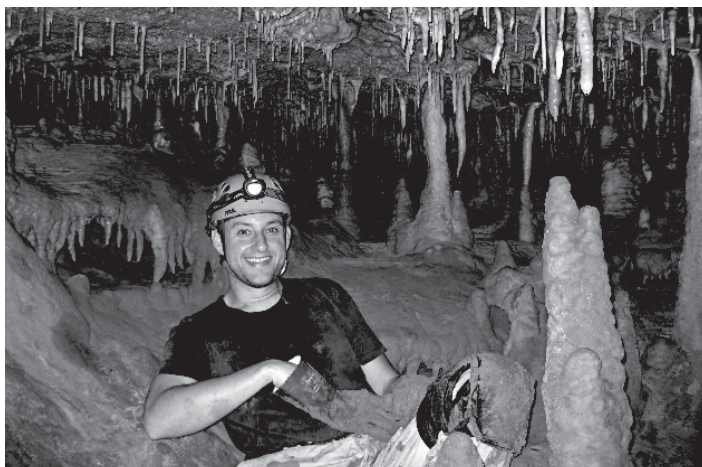
The content was featured on the Environmental Dashboard. Ava did extensive additional work with both the Heritage Center and Dashboard to use art as a mechanism for promoting environmental sustainability. She has worked as a docent and research assistant at the Oberlin Heritage Center and as a land preservation assistant at the Western Reserve Land Conservancy's Oberlin office.

### **Rebecca Orleans '16**

Rebecca completed two poetry residencies in sixth-grade language arts classes at Langston Middle School through the Writers in the Schools (WITS) program. She worked with Environmental Dashboard projects through the Practicum in Ecological Communications and the Arthur Blank Research Fellowship. With Dashboard, she interviewed community members for Community Voices, worked with Oberlin public school teachers to develop a Dashboard curriculum, and worked with a team of college students to develop content for the Dashboard website. She also tutored for the Ninde Scholars Program, a college access program that serves low-income students and students of color from the middle and high schools. During the summer of 2015 she integrated her work with Dashboard with the Ninde Scholars Program by developing and teaching a Dashboard unit at the Aspiring Ninde Scholars Summer Program. She served as a community based projects TA for the Environment and Society course in spring 2016, where she collaborated with community partners to design and oversee 11 projects for 44 students. Lastly, Rebecca was member of the outreach workgroup of WOBC radio, working on ways to enhance connections between WOBC and the Oberlin community.

### **Moses Richardson '16**

Moses participated in the Africatown immersion project in October 2015, where he proved to be incredibly responsible and reliable. The underserved residents of the Africatown, Alabama, have been forced to deal with unsafe living conditions due to high industrial activity being allowed in their residential community. Students helped residents voice their concerns by going door to door to collect surveys from town members on behalf of the Mobile Environmental Justice Action Coalition. Moses then served as Janet Fiskio's research assistant at Vel's Purple Oasis garden in Cleveland. He independently researched and implemented planting in high hoop house, led field trips for Case Western Reserve University students, and focused on planning for spring and summer planting, community outreach, and grant writing. He will continue as Janet's assistant at the Oasis this summer.



Darrel Tremaine

the University of Cincinnati in 2002. He worked as a manufacturing engineer in the automotive industry for six years, where he was responsible for designing, installing, and maintaining machining centers and robotic material handling cells. He earned his MS (2010) and PhD (2015) in chemical oceanography and paleoclimate at Florida State University. His research was centered on understanding how changing weather patterns are stored within stalagmites in limestone caves. He there developed a 4,000 yrBP to present record of north Florida rainfall and is currently developing several stalagmite paleoclimate records detailing the last 86,000 years from the central South Pacific island of Niue.

Prior to Oberlin, Darrel was a postdoctoral researcher at Rutgers University, ran his own education and outreach corporation, and taught at Lorain County Community College as an adjunct professor of ecology. In his spare time, Darrel teaches earth science to 3rd-6th grade students at the Sandusky Regional Center for Advanced Academic Studies, and owns and operates a small organic farm with his wife, Danielle, in Castalia, Ohio.

## CONGRATS NEW GRADS!

### Graduating ES majors and minors\*

Madeleine Aquilina*	Sarah Kahl
Olivia Ashmoore	Alexandra Kahn
Kaia Austin*	David Kahn*
Aldrumesia Baker*	Zia Kandler
Idalia Bamert*	Cria Kay
Miriam Bar-Zemer	Celia Keim
Stephen Barry	Emily Kuhn
Emily Belle	Callan Louis*
Lila Bhide	Hugh Milner
Zoe Bluffstone	Kyle Mytelka
Colin Brown	Hallie Neuhaus
Rewa Bush*	Peter Nguyen
Robin Chakrabarti	Ava Nicolai
Alexander Chalmers	Rebecca Orleans
Tristan Cimini*	Hannah Rosenberg
Jane Clark	Nolan Scharper*
Dyaami D'Orazio	Colin Seikel
Arthur Davis*	Perri Sheinbaum
Darrell Davis	Laura Shriver
Dominic Fiallo*	Shavonne Stanek
Jacob Gilbert	Julie Stark
Miguel Goldsmith	Eli Steiker-Ginzberg*
Mark Grubbs	Sarah Stratton
Edith Hanly	Caroline Summa
Deirdre Haren	Kyla VanBuren
Brian Hemmert	Amelia Wallace*
Max Herzog	Daniel Wetherell
Elaine Hinrichs	Melissa Whitehouse
Jake Holtzman	Zhou Zhou
Margo Josephson	

### ES PROGRAM EVENTS, continued

presented "Lines in the Sand: Geo-Aesthetics [ ] Geo-Disturbances."

**Anthony Cortese**, a principal of the Intentional Endowments Network and founder of Second Nature, presented a lecture titled "Future of Higher Education in a Hotter Time."

**Irma Ily Vázquez**, attorney with the Fray Bartolomé de las Casas Human Rights Center (FrayBa), presented "Walking with the Subjects of History: Indigenous Communities' Fight for Autonomy and Human Rights in Chiapas, Mexico and Beyond."

**Gökçe Günel**, a lecturer in anthropology at Columbia University, presented "Spaceship in the Desert: Energy, Climate, and Green Business in the Arabian Gulf States."

Author, activist, and founder of Sightline Institute **Alan Durning '86** held an informal lunch discussion with students regarding "Climate Policy and Politics, Democratic Reform and Life After Oberlin."



# A YEAR IN THE LIFE OF THE AJLC

BY DEIRDRE HAREN '16 AND ARDEN HAMMER '18

The AJLC was full of excitement this year! From tapping trees to turning toilets pink, students have been hard at work. At the end of last summer, students began the job of moving and repairing broken compost bins. These were donated to the Legion Field Community Garden, and space was cleared for new larger-scale, concrete compost bins now in place at the AJLC. Last fall saw a record harvest for the experimental hazelnut patch on the west side of the building. ENV5 majors were recruited to help with the harvest one Saturday morning, and everyone had a great time gathering nuts. Within the living machine, a cool and fairly large-scale research project was conducted as part of the Systems Ecology class. This group of students tested the denitrification potential of the anaerobic marsh within the Living Machine (LM). To track movement across the system, they used a harmless pink dye that gave the toilets a pleasant pink tinge for a while. Then winter came: the AJLC chickens were sent off to their happy new home at the George Jones Farm, and the LM was primed and cut back in preparation for a new paint job. The new paint, now applied, is much more water resistant and should keep the LM walls looking nice and mold-free.

At the beginning of the spring semester we said a sad goodbye to building manager Catherine Hoyle, who worked very hard the past year to make the AJLC an even happier and welcoming building. We now welcome new building manager Ben Hobbs, who has joined the team enthusiastic to keep the AJLC an exciting and vibrant place. With warm temperatures at the beginning of spring semester, the annual Tappin' in Tappan sugaring project took off immediately. Overall, the AJLC

team tapped seven sugar maples across Tappan Square and made almost three gallons of syrup! The AJLC then opened its doors to the community for another successful spring open house; all were invited for tours, music, sap tasting, and many other fun activities.



O-STEEL performs at the AJLC Open House during the 2016 Ecolympics.



It's a yucky job, but someone has to monitor the Living Machine, Oberlin's system that processes wastewater into reusable grey water via the natural cleansing methods that occur in a wetland—plants, bacteria, protozoa, and other aquatic microorganisms that are used to clean and condition the water for reuse. Also known as the Living Machine, it gives budding environmentalists the chance to explore issues of wastewater, wetland ecology, microbiology and plant dynamics.

## ENVIRONMENTAL STUDIES PROGRAM

### **Adam Joseph Lewis Center for Environmental Studies**

122 Elm Street  
Oberlin, OH 44074  
440.775.8747  
www.oberlin.edu/envs  
www.oberlin.edu/ajlc  
bev.burgess@oberlin.edu (e-mail)

### **FACULTY & STAFF:**

#### **Md Rumi Shammin**

*Chair and Associate Professor of  
Environmental Studies*

#### **Augustus Arthur**

*Sustainable Technology Research Fellow*

#### **Bev Burgess**

*Departmental Secretary III*

#### **Janet Fiskio**

*Associate Professor of Environmental  
Studies*

#### **Benjamin Fitch-Fleischmann**

*Assistant Professor of Economics and  
Environmental Studies*

#### **Benjamin Hobbs**

*AJLC Facilities Manager and Community  
Outreach Coordinator and Instructor*

#### **Carl McDaniel**

*Visiting Professor of Environmental  
Studies*

#### **Brad Charles Melzer**

*Visiting Instructor of Environmental  
Studies*

#### **Karl Offen**

*Associate Professor of Environmental  
Studies*

#### **David Orr**

*Special Assistant to the President*

#### **Swapna Pathak**

*Assistant Professor of Environmental  
Studies*

#### **John Petersen**

*Paul Sears Professor of Environmental  
Studies and Biology*

#### **Chie Sakakibara**

*Assistant Professor of Environmental  
Studies*

#### **Darrel Tremaine**

*Assistant Project Manager for  
Environmental Dashboard*

## ENVIRONMENTAL STUDIES PROGRAM COMMITTEE:

**Md Rumi Shammin**, *Environmental  
Studies*

**Cheryl Cottine**, *Religion*

**Matthew Elrod**, *Chemistry*

**Janet Fiskio**, *Environmental Studies*

**Benjamin Fitch-Fleischmann**, *Economics  
and Environmental Studies*

**Cindy Frantz**, *Psychology*

**Ben Hobbs**, *Environmental Studies*

**Dennis Hubbard**, *Geology*

**Roger Laushman**, *Biology*

**T. Scott McMillin**, *English*

**Thomas Newlin**, *Russian*

**Karl Offen**, *Environmental Studies*

**Christie Parris**, *Sociology*

**Swapna Pathak**, *Environmental Studies*

**John Petersen**, *Environmental Studies*

**Chie Sakakibara**, *Environmental Studies*

**Ben Schiff**, *Politics*

**Peter Swendsen**, *TIMARA*

**Natalia Garcia-Sanabria '17**, *Student Rep*

**Hyacinth Parker '17**, *Student Rep*