Nelson Institute for Environmental Studies
UNIVERSITY OF WISCONSIN–MADISON

October 2023

THE COMMONS

For alumni and friends of the Nelson Institute for Environmental Studies at the University of Wisconsin–Madison

Stroll to the Sounds of History

Wisconsin's changing climate through Steve Vavrus's eyes. page 14

Meet new CEE director Benjamin Zuckerberg. page 22

PhD student Sam Helle treks with tigers in Nepal. page 28

EDITORIAL STAFF

Kevin Berger, Graphic Designer
Anica Graney, Assistant Editor
Eric Klister, Web Editor
Chelsea Rademacher, Editor
Laila Smith, Staff Writer
Diane Stojanovich, Managing Editor

CONTRIBUTORS

Abigail Becker
Dea Larsen Converse
Marek Makowski
Chris Vagasky

DEAN'S OFFICE

Paul Robbins, Dean, Nelson Institute for Environmental Studies
Colleen Godfriaux, Interim Director of Budget and Financial Management
Anna Gade, Associate Dean for Research and Education
Diane Stojanovich, Distinguished Associate Dean for Communications
Shelly Strom, Assistant to Paul Robbins
Ann Swenson, Associate Dean for Advancement
Steph Tai, Associate Dean for Education and Faculty Affairs
Jenna Weidner, Associate Dean for Administration

CONTACT US

We'd love to hear from you! Send us feedback or questions about this issue, or share story ideas for future issues.

Nelson Institute for Environmental Studies
550 Science Hall
Madison, WI 53706
communications@nelson.wisc.edu

Facebook Instagram

Twitter Linkedin

Stay connected by updating your contact information or by joining our LinkedIn group.

We're reducing our carbon footprint! We hope you enjoy our digitally published magazine, sent monthly to Nelson alumni, students, and friends.

Cover photo by Jeff Miller/UW-Madison

INSIDE

From the Dean

Greetings, Nelson alumni and friends,

What a time to be at the Nelson Institute! We recently wrapped up several weeks of tremendous events that put the history, legacy, and future of the institute on full display. I hope many of you were able to join — either here on campus or from afar — but for those who couldn't make it, this issue has some great recaps that will make you feel like you were right here with us.

We started our fall event lineup with a three-day Tales from Planet Earth event, which brought the remarkable documentary — Blackwaters: Brotherhood in the Wild — as well as members of its cast across campus and the community. This remarkable film, produced by the institute's long-time affiliate and partner James Edward Mills, provided a moving reflection of Black American experience in the outdoors, with breathtaking footage of fly fishing in Alaska; this was a startlingly effective and thought-provoking combination. The following week was a busy one, kicking off with the Loka Initiative's Creation at the Crossroads event, which I was fortunate enough to open with Loka director Dekila Chungyalpa. That initiative brings together campus scholarship and science with communities of faith around the world. It's one-of-a-kind. Then on Thursday, all corners of the Nelson Institute came together for our annual Rendezvous on the Terrace, which this year, was a two-day event celebrating the 10th anniversary of our environmental professional programs. We connected with old friends and new connections, learned from experts in our alumni network, and celebrated the Nelson Institute community. These programs have served dozens of students and countless partner organizations, from Wisconsin to Chile, and China to Kenya. This is among the best things we do here because it stresses training, skills, systems, and tools, while also being about grounded problems, and real landscapes, wildlife, and people. I'd also like to extend my thanks to everyone who pitched in for this year's day of giving, which also honored our environmental professional programs. Your gifts really do make a tangible impact here at the Nelson Institute. Seeing the strength of our community gives me great hope, not only for the institute but for our planet as a whole.

Speaking of hope, the pages of this magazine are once again filled with stories of inspiring faculty, impressive students, and innovative research, all of which propel the Nelson Institute forward on our mission to advance environmental research. We start with an op-ed published by our own Jonathan Patz, who spent some time in Montana this summer observing the groundbreaking youth climate lawsuit. Here in Wisconsin, tremendous efforts are underway to build the new Wisconsin Environmental Mesonet, an effort championed by Nelson's Steve Vavrus, Chris Kucharik, Michael Notaro, and so many others. Read more about this exciting research — and how you can get involved. Then head across the globe and see how one of our PhD students is working with communities in Nepal to support tiger conservation. Those stories, and so many more, lie in the pages ahead.

Read on!

Paul Robbins
Dean, Nelson Institute

Reflections on a Climate Victory

"We hope the results of this trial can accelerate the political momentum needed to bring about a net-zero carbon emissions and climate stabilized world," wrote the Nelson Institute's Jonathan Patz and his 2007 Nobel Peace Prize cowinner, Steve Running, in an op-ed published in the *Milwaukee Journal Sentinel*. The two spent time this summer in Montana — including Glacier National Park, pictured here — observing the constitutional climate lawsuit brought against the state by 16 youth activists.

Feature

An Environmental Campus Walkabout

Nelson students compiled an audio-based walking tour of campus's environmental history.

During the Spring 2023 semester, 13 Nelson Institute undergraduates took to the trails, streets, and sidewalks of the UW–Madison campus with a mission: to create an audio-based walking tour focused on the stories of environmental activism on campus. Creating the tour was their main assignment for Environmental Studies 600: Environmental Writing and Place, a new capstone class taught by Noreen McAuliffe, a lecturer in the Nelson Institute and the Department of English.

At the start of the semester, the class partnered with campus experts — that is, experts on the campus itself. They went on tours with Daniel Einstein, who specializes in campus history; Aaron Bird Bear, who cocreated the First Nations Cultural Landscape Tour; and Kacie Luccini Butcher of UW–Madison's Public History Project. For McAuliffe, the tours were "very formative in the way they were thinking about place on campus." From there, students selected a topic or area of interest, completed research, and put together a multimedia story using text, photography, and audio.

The tour was initially published through the Guidigo online platform with support from the UW–Madison Lakeshore Nature Preserve Student Engagement Grant. Although the grant ended in the summer, we're sharing the students' work here and online to keep the tour accessible. Lace up your walking shoes — or get your mouse ready! — as we head out to explore our campus's environmental history.

Overview

From the institution of Earth Day and natural wonders like Lake Mendota, to influential figures like Aldo Leopold and John Muir, come join us as we explore the deeper ideas of UW–Madison's environmental spaces, figures, and movements that connect us to this land and its multilayered history. In the Nelson Institute for Environmental Studies, you can explore stories like this every day!

Photo courtesy of Katie Manning

Stop 1: Lake Mendota | By Katie Manning '23
Majors: Environmental Studies and Finance, Investment, and Banking

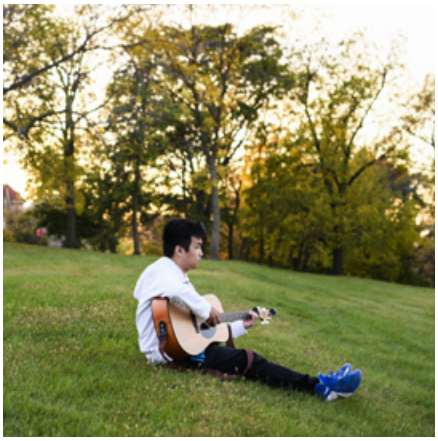
We are currently standing in *Teejop*, meaning "four lakes", the name given to this land by the Ho-Chunk who have had inherent sovereignty in this area since time immemorial. About 18,000 years ago, the glaciers retreated leaving behind one giant lake, Glacial Lake Yahara. Over the next couple thousand years water levels dropped, leaving behind the four lakes in the Madison area. We are standing at Lake Mendota, its current name given to it by Frank Hudson in 1849. The Ho-Chunk call this lake *Wonkshekhomikla*, meaning "Where the Man Lies," and many of their burial mounds are found along the shores of this beautiful lake.

The Memorial Union Terrace is one of the most popular student spots on campus, and looking around, it is easy to see why. The Terrace is located right on the shore of Lake Mendota, and on any sunny and warm day, students can be found at the orange, yellow, and green tables studying or chatting with friends. Looking at the lake, you can see the beautiful dark blue water with ripples and sunlight glimmering off of it. You can hear the sound of the waves crashing against the steps of the shore, the water being pulled back and forth by the gusty wind. [Listen]

Photo by Jeff Miller, University Communications (4)

Stop 2: Observatory Hill Overlook | By Allyson Mills '23
Majors: English and Music; Certificate: European Studies

Learn the rich cultural and ecological history of the views from Observatory Hill! Stand atop one of the most picturesque spots on the UW–Madison campus as you learn about the rich history of the places visible from this point. Learn about the Ho-Chunk Nation's stewardship of this land, Picnic Point peninsula, Washburn Observatory, and Lake Mendota, as well as some exciting recent discoveries made in and around the four lakes' waters. This stop is accessible via walking or the 80 bus line (no bus pass required). [Listen]



Stop 3: Observatory Hill | By Delia Langefeld '23
Majors: Environmental Studies and Italian

Observatory Hill is a 12,000-year-old formation once occupied by the Ho-Chunk Nation. On this hill, 100 years ago, the Ho-Chunk built five burial mounds in the shape of a bird, water spirit, panther, linear mound, and conical mound. Today, only the bird and water spirit remain. More recently, in 1866, the University of Wisconsin took control of this land and developed a farm and an orchard on the hill. In the early 1900s, farming activity shifted west towards Eagle Heights. With this, the hill was a popular toboggan area for university students. Since then, Observatory Hill's scenic overlook was built in 1984 so that passersby could enjoy the view. To reach Observatory Hill from the center of campus, take Bus 80 to Observatory Drive and N. Charter Street. [Listen]

Stop 4: Bascom Hill | By Lucia Macek '23
Majors: Environmental Studies and English

Bascom Hill, a daunting upward slope, is the heart of the UW Madison campus. First formed by glaciers, this hill has been through many ups and downs (no pun intended). It's home to the Ho-Chunk people, who were forced to cede their land to the U.S. government in the 1800s. Soon after this, it became the UW campus, beginning with the construction of North Hall. As more students began to trickle into the university, more buildings were constructed, shaping the Bascom Hill into what it is today. You can be picked up at Memorial Union by the 80 bus (it's free to the public) and it will take you up to the top of Bascom Hill. [Listen]

Stop 5: North Hall | By Corina Robinson '23
Majors: Environmental Studies and Psychology; Certificate: Afro-American Studies

North Hall is well known to be UW–Madison's first building. It is also known to have been the home of John Muir, one of the most famous preservationists. What is often forgotten is the racist and violent histories that each of these entities holds. This stop encourages listeners to take in both sides of the story, not favoring one over the other. North Hall is accessible via the route 80 Metro bus route heading towards Memorial Union. Take this bus to the Observatory and Bascom stop. [Listen]

Video still courtesy of UW Dance Department

Stop 6: Lathrop Hall | By Katie Soldatke '23
Majors: Environmental Studies and Dance

Since 1925, when Margaret H'Doubler founded the first dance degree in the nation, Lathrop Hall has become a safe space to explore movement and anatomy. Many student dancers at UW–Madison have had a long lasting impact on communities and environments, such as Anna Halprin. "Move your body, move the world." To get to Lathrop Hall by bus, take the 80 bus to University and N. Park. [Listen]

Photo courtesy of UW Housing

Stop 7: Leopold Residence Hall | By Kyle Hulbert '23
Majors: Environmental Studies and Geography

The Legacy of Aldo Leopold at UW–Madison. [Listen]

Photo courtesy of Alessia Fucentese

Stop 8: Lake Wingra and the Arboretum from Bear Mound
By Alessia Fucentese, Senior
Majors: Environmental Studies, Biology, and Botany; Certificate: Biocore Honors

Lake Wingra, the smallest lake on the UW–Madison campus, has the UW Arboretum on the south shore and Henry Vilas Park on the north shore. It is home to not only a beautiful ecosystem, but also many effigy mounds as well. In this stop, the history of the Ho-Chunk effigy mounds around the lake are explored in depth. Tune in for the story of effigy mound preservation in the past and present, including the founding of the arboretum as a whole. These stories are told from the vista of Bear Mound Park, located just north of Wingra's north shore. Though not directly on Lake Wingra, it offers a spectacular vista of the lake and remains a notable effigy mound in the vicinity of UW-Madison's campus. Let this tour be a powerful reminder to be respectful of these historical gems when walking in the arboretum and campus as a whole. [Listen]

Photo courtesy of Alexandra Bogner

Stop 9: Ho-Nee-Um Pond | By Alexandra Bogner '23
Majors: Environmental Studies and Agricultural and Applied Economics

Wind through Lake Wingra's Oak Savanna onto the 400-foot boardwalk along Ho-Nee-Um Pond. This map provides helpful context of how to reach the path and the geography of the surrounding area. Take a ride up on the 7 line on Monroe Street from campus to save on walk time! [Listen]

Photo by Jeff Miller, University Communications

Photo by Bryce Richter, University Communications

Photo by Jeff Miller / UW-Madison

Photo by Bryce Richter, University Communications

Stop 10: Science Hall | By Mandy Gorski '23
Majors: Environmental Studies and Life Sciences Communication

Science Hall, although synonymous with UW–Madison, is quite concentrated in classes and therefore results in less exposure to students on a more intimate level. Here, we will explore the infamously unique attributes of the building as well as look back at some of its past uses and how this has contributed to the constant adaptation of its interior. Finally, we will nod our heads to the Nelson legacy and briefly touch on some of the broader sustainability and environmental implications that will be covered further along this tour. Hopefully, we leave current and prospective environmental students more aware of the fascinating past of a potentially previously overlooked spot at the heart of campus. It can be found at the corner intersection of Langdon and N. Park Streets, across from College Library and diagonal to the Memorial Union. [Listen]

Stop 11: Library Mall (Earth Day 1970) | By Isabelle Labus, Junior
Major: Environmental Studies

The day before the first official Earth Day – April 21, 1970 – saw a group of students gathered here despite the city's recent ban on "all parades and rallies." What was the first Earth Day like here on campus? Why were the students gathered here to march in protest over it? This tour stop is located near Library Mall and East Campus Mall and is best reached by foot. There is nearby parking at Helen C. White Garage or the State Street campus garage on Lake Street. [Listen]

Stop 12: Red Gym | By Taylor Wild, Junior
Majors: Environmental Studies, Geography, and Atmospheric and Oceanic Science

The Red Gym, originally created to be a gymnasium and armory, is now the home of many student organizations, including ones that are sustainability and environmentally focused. Here, we will explore the past of the Red Gym including its history of various uses, the restoration project that transformed it into its current state, and the sustainability-related accomplishments of student organizations and the University as a whole. The Red Gym can be found right next to the Memorial Union and across the street from Library Mall. [Listen]

Stop 13: Eagle Heights Community Garden | By May Jagodzinski
Majors: Environmental Studies and Global Health

Tucked away near Lake Mendota Drive, the Eagle Heights Community Garden is the U.S.'s largest community garden. It facilitates cross-cultural exchange of language, culture, and ecological perspective between University of Wisconsin–Madison students and the residing community. Walk through the development of Eagle Heights, which is intrinsically tied to the story of Eagle Heights Garden and see its development up to current day as well its centrality to sustainability initiatives on campus. The gardens can be accessed either by the Lakeshore Path or by taking the 80 or 84 bus at no cost from Memorial Union. [Listen]

The Rise of Sustainability Communications

Across higher education, offices of sustainability show "optimism at the end of the world."

By Marek Makowski, Office of Sustainability

Attendees enjoy a session titled 'Why So Serious: Making Space for Silliness, Humor and Fun in Sustainability Communications' at the 2019 AASHE Conference. Photo courtesy of Lisa Nicolaison

Lisa Nicolaison's path to sustainability communications started at Elon, a small private university in North Carolina, where she studied psychology and worked with other students to inspire sustainability action on campus. After promoting sustainability projects in Ghana for the Peace Corps, she joined Princeton University's Office of Sustainability as a program coordinator and began to concentrate on messaging and engaging with the community.

In her new position, Nicolaison sought resources for how to effectively communicate in a field that was still new and undefined. Yet she could not find many. At one of the most prominent sustainability conferences in the world, hosted by the Association for the Advancement of Sustainability in Higher Education, she would sometimes find only one presentation about sustainability communications.

"Everyone would go to the one presentation," she said of communicators for other universities, "and we were like, this isn't enough, we need more." In response, Nicolaison organized a networking session in 2017 and was surprised to see that many people shared her desire for collaboration. "How do we communicate beyond this one event, this one conference?" she said.

The networking session inspired Nicolaison to create the Sustainability Communicators Network in 2019, a listserv that has grown to 280 members who discuss communications strategy and events, brainstorm together, and share resources. The network now hosts quarterly calls for members to discuss challenges, reflect on successes at their respective universities, and think through trends (most recently: TikTok and sustainability action plans). "The last couple of years, everyone seems to be going into the call with the same kinds of challenges," Nicolaison said.

In the past decade, as higher education institutions have rushed to respond to the realities of climate change, they have increasingly formed offices of sustainability and hired communicators to lead their messaging. Because of their position in the university, and because of the urgency of their subject matter, communicators have found themselves positioned in a dense, tangled web of audiences and tasks. How do you message about institutional responses to the climate crisis when your audiences will invariably critique them for being too bold or not bold enough? How do you speak with student groups that vary each year with graduations and enrollments? How do you engage with audiences about the mundane yet necessary

work of facilities upgrades, such as replacing light bulbs or sticking decals on glass to prevent bird collisions? How do you write about something that is not entirely here yet? And how do you message about destruction and the loss of the world we know?

Strategies for Communication: Conversations, Stories, Events

For Jill Sakai, the first communications director for UW–Madison's Office of Sustainability (O.S.), the primary challenge of her role was to define the new office.

"One of [my approaches] was letting the campus community know what was going on," she said. "This was a brand-new initiative [and] administrative unit for the campus [in 2012], so a lot of it was being able to create a community. I saw the communications as helping to build that community, and provide information about what campus was doing, and also to collect information about what people were interested in doing … to improve sustainability on campus."

Like many other universities, UW–Madison has treated sustainability not solely as natural resources conservation but as "the process of teaching, learning, researching, and operating in our community" toward equitable environmental, social, and economic benefits. Sustainability affects all disciplines, all aspects of campus and the world, so communicating about it brings the difficulty of needing to speak to many at once.

"Sustainability is inherently multidisciplinary, so you're always trying to bridge a lot of ideas and viewpoints," Sakai added, noting she views the discipline's breadth as an advantage. "You can ask ten people what sustainability is and get ten different answers that would all fall under this broad umbrella. Underneath that umbrella, there's a lot of different ways to approach sustainability issues and questions. It gives you a lot of flexibility."

Nathan Jandl, who took over for Sakai in 2017, said he continued her efforts "to get people to know the Office of Sustainability existed on campus" while taking care to avoid a single approach to the office's audiences.

"Sustainability is a broad topic, and we have a broad set of stakeholders: it is students of all stripes, it is staff in all corners of the university, it is faculty, it's deans, it's directors, it's higher administration, and then it's the community, peer institutions, folks around the state," he said.

> *"Obviously there's so much to be scared about and to be aware about, but that doesn't help people, that doesn't bring people in, that doesn't make a community."*
>
> — Lisa Nicolaison, Sustainable Princeton

Jandl's strategy involves a variety of events, media, and student programs. He has overseen the communications team of the O.S.'s student-intern program to produce the SustainUW Podcast, Instagram and TikTok Posts, news stories, and a Where Are They Now? series that highlights career paths of former interns. He publishes a monthly newsletter and facilitates dialogues among students and faculty in events such as the annual campus-wide Earth Week, the new Sustainability Symposium, and last year's divestment roundtable. In 2021 Jandl hired a graduate student assistant (the writer of this story) to produce in-depth features about sustainability topics, leaders, and events; launch the Sustainability Writing Awards; and collaborate with instructors across campus in training students to write about sustainability.

Across state lines, at the University of Illinois Urbana–Champaign, Tony Mancuso, the communications and public affairs director for the Institute for Sustainability, Energy, and Environment, draws from his experience as an editor for the *News-Gazette* in Champaign to lead a team of two other full-time communications specialists, a half-time videographer, two student writing interns, and two student social media interns.

"I kind of treat our staff like a newsroom," Mancuso said. "We think about ideas that we have — trends, stories, whether it's campus sustainability or research or education — but we also try to make sure that we're covering things in the news now, things that are

coming up, making sure we keep a calendar."

He adds, "My concept of it is to get the word out about the good things that are being done, get the word out about things that can be done, and also make sure that we give proper credit to everybody who is putting forth the effort."

Mancuso and his team publish three newsletters about campus sustainability efforts each month, as well as a monthly newsletter about campus sustainability research. Yet Mancuso emphasizes more organic student engagement efforts — such as a class that trains students to be sustainability ambassadors, or Illini Lights Out, an event that draws hundreds of student volunteers to flip off lights in buildings on Friday nights — as the most effective way of sustainability communications.

"We feel like our students are very engaged, and there is a percentage of our students that is hugely engaged in this. But to get it to the whole student population has to come from conversations," Mancuso said. "Our newsletter reaches 2,500 people per week. Well, that's a fraction of the university's population. To grow that culture of sustainability is going to take one person talking to ten people."

"We communicate, we send out newsletters," he continued. "We found that has been very effective, but again, it's reaching your captive audience, reaching the people you already know. So how do we do things that reach more people?"

Defining Audiences: Lessons from Michigan

The sustainability communications manager at the University of Michigan, Adam Fisher, works in a unique role within the Office of the Vice President for Communications. While other universities employ sustainability staffers on public affairs teams or use communicators in sustainability schools or offices to disseminate information about university-wide efforts, Fisher said he is "the only centrally situated sustainability-exclusive communicator that I know of."

In his position, Fisher coordinates with communicators for the university Office of Campus Sustainability, Graham Sustainability Institute, and School for Environment and Sustainability, in addition to sharing information with the Student Sustainability Coalition and the Planet Blue Ambassador program, both of which publish their own newsletters. While Fisher might write more generally for local media, the Office of Campus Sustainability might write more technically for internal audiences.

Fisher said he communicates "with the goal of bringing awareness to priority audiences and encouraging them to get involved and spur action." He described a need for consistency in terms, which he can facilitate through his centralized position.

UW–Madison Office of Sustainability interns show their love for an inflatable earth at Sustain-A-Bash, an annual student engagement event organized each fall by University Housing and the Office of Sustainability. Photo courtesy of Nathan Jandl

"Oftentimes students or even staff or faculty or community members can assume all university decisions — whether they're at the school or individual unit level or at the university level — are made in one room by a few people," Fisher said. "When there are people using different brand guidelines — let's say, one college is using different language for our carbon neutrality agreement than another—that's a challenge. Getting a community that's 100,000 people strong to speak with one voice on this topic is hard, and it's especially hard with an issue that is urgent, that will remain a priority, that there's a lot of public advocacy on — both by climate deniers and climate absolutists, for lack of a better term — and you have to speak with one voice that is amenable to the most number of audiences."

Consistency has also emerged as a broader challenge for sustainability, Fisher said, because, "there is no universal set of standards for what sustainability means, for what climate action means, for what carbon neutrality means."

One of Fisher's approaches to communicating with multiple audiences comes from his experience as an editorial associate for a creative consultancy founded by The Atlantic. When he drafts communications plans, he considers "priority audiences" "by typologies."

"I prefer to group audiences by their habits rather than by their roles," he said. "Instead of thinking about students, staff, faculty, I think about insiders, advocates, apathetics. I find that's useful in Ann Arbor, a place where the town and university are so deeply intertwined."

Fisher classifies insiders, for example, as those with high literacy in sustainability, variable advocacy, high interest, and high engagement. Advocates possess variable sustainability literacy, high interest, high engagement, and high advocacy, while apathetics bear a low interest in sustainability, along with low advocacy and low awareness. The target audiences change, Fisher said, and also include groups such as influencers, who promote the brand but might not read too deeply into the topics, or cynics and climate deniers, who are oppositional.

"When faced with a recent development," he said, "I ask myself, Which of these groups will this appeal to most?"

Fisher offered a few examples. A story about a building earning a LEED gold certification might not interest donors and influencers, so he could write it with technical details for knowledgeable readers within university leadership. However, he would write a major story about university investments or carbon neutrality to a broad audience, with "high-level" explanations and acknowledgements of donors and advocates.

"I've noticed that when we're in the action phase of an effort, rather than the committee or planning phase, it's that much more powerful to audiences," he added. "Process-oriented stories tend to have a mixed performance: people are generally glad that you could be analyzing or discussing an issue, but after a certain amount of time they see it as inertia. Communications, as a general rule, is only as good as the news behind it."

Writing and the Climate Catastrophe; or, Practices in Seeing

Back at UW–Madison, the Office of Sustainability's emphasis on communicating with broad, diverse audiences through clear writing dates to the tenure of Cathy Middlecamp, the former director of sustainability education and research who cofounded the office and was known to be scrupulous with words.

"Writing is all about the reader," said Middlecamp, who is critical of the long and jargoned sentences frequently used by scientists. "People who write often think it's all about them, but what you're writing for is people."

Despite a well-written sentence, university offices of sustainability will need to contend with the broader conceptual difficulties occasioned by the climate crisis.

"How do you animate the problems that we're facing right now — through writing, graphical forms, film — in such a way that you actually engage people and lock them in to care about those issues?" Jandl said. "Part of that has to do with the type of change we're seeing," which is slow, sometimes impersonal, and seemingly far away in time and place.

In response, all writers — not only in higher ed — will need to invent ways to connect the multitudinous causes and effects of climate change, breaking from a limited human point of view, as novelists such as Amitav Ghosh and Olga Tokarczuk have suggested. In the context of a news release, communicators have emphasized how they can describe technical developments more visually and relatably.

"It's really necessary, in my experience, to put numbers into human terms," Fisher said. "People don't know what a megawatt hour is: it's not tangible unless you're a subject matter expert. Putting that in annual households emissions or number of cars on the road can be really, really helpful. Otherwise people don't know the difference between one megawatt and one hundred megawatts and how impactful the efforts are."

Jandl added that the problem might become easier to solve as the effects of climate change worsen and become more immediately apparent. Nicolaison noticed an increase in student and faculty interest in sustainability as the crisis became more imminent during her time with Princeton and as sustainability offices started adopting more "justice-oriented" approaches. This is especially true with the lockdowns of the coronavirus pandemic, which caused masses of people to pause their work lives, live at a slower pace, wander outdoors, and reconsider their relationship with the world.

> *"How do you animate the problems that we're facing right now in such a way that you actually engage people?"*
>
> — Nathan Jandl, Office of Sustainability

"Paradoxically, the popularity of the idea of sustainability will provide its own challenges," Jandl speculated, remarking that the name of the discipline might change (it once was environmentalism; we might transition to having offices of resilience or, one fears, survival). "As it gets co-opted into a branding tool, as greenwashing gets more subtle, as companies transition into this space not necessarily because they want to be more sustainable but because they see it as an opportunity for more revenue and growth, helping people to distinguish what sustainability actually means is going to be an ongoing challenge."

Fisher also commented on the difficulty that corporations introduce to sustainability communicators with greenwashing, or marketing strategies that mislead consumers and conceal companies' lack of action and accountability.

"There's a lot of skepticism toward sustainability because, in my view, there are a lot of folks outside of our sector who work in corporate communications who will openly greenwash," he said. "I think university communicators are really careful not to, but if you're a casual observer and you see that there's this industrial company that has a vocal commitment to the environment and you're not seeing the same thing from your university, you're going to assume that your university has a worse environmental record. That's usually not the case."

Optimism at the End of the World

Faced with the financial, social, and ethical needs and demands of many, as well as the likely mass migration of

humans and extinction of animal and plant species, offices of sustainability have decided to be positive. The goal, communicators said, was to engage audiences and inform them, but not to a state of helpless despair.

"Even if most of the people on campus are on board with sustainability, you just know that there are people who are not," Mancuso said, noting his efforts to share quirky or moving stories such as his university's research to use pig feces to produce pavement or sell a net-zero home built by a campus initiative to a local veteran. "You don't want to preach. So finding out a way to point out the good is the first thing you can do, and to profile that. Encouragement by example. And then being able to talk to people and have them have that passion and carry it with them through their future conversations."

"There's been a big shift in communications around doom and gloom and not focusing on the negative impact," said Nicolaison, who left her university to work as a project manager for Sustainable Princeton, a nonprofit working to make Princeton "a model town that examines every action through the lens of sustainability," and to found Green LMN, a consulting company through which she works with clients to develop sustainability communications strategies. "Obviously there's so much to be scared about and to be aware about, but that doesn't help people, that doesn't bring people in, that doesn't make a community. People need to come together around positive impact and having goals for the future."

Yet, at least at the margins of thoughts and speech, one feels uncertainty. In contrast to more profit-driven communicators in other industries, corporate word-twisters who fabricate an institution's image and voice, sustainability communicators said they genuinely bear the task to halt the sixth extinction. They sort their recycling, bike, conserve water, harvest gardens in their backyards. They act in awareness of the news: despite far-away pledges, industrialized nations need to halve emissions within the next six years and completely halt them by 2050 to avert the onslaught of catastrophic heat waves, floods, food scarcity, and extinction. And they might fear, working in small teams at the corners of universities, that they might not be doing enough or that they cannot do enough.

Students participate in creating a clean energy and justice mural during Earth Week, a festival of sustainability-related events held each spring on the UW–Madison campus. Photo courtesy of Nathan Jandl

"I mean, how many breaking points do we have to reach for people to really feel like … I don't know, that's more doom-and-gloom messaging too, right?"

One aspect to messaging about actions and solutions, Nicolaison said, comes in transparently reporting university decisions that students and faculty members have long called for.

"That makes for great storytelling, but it also helps with that doom and gloom again," Nicolaison said. "Things are happening, it's taking some time, but bear with us and support us and here's what you can do. That kind of messaging is going to be really important and is what people are using more of, hopefully, in their communications."

"A lot of the time people don't feel like they're being heard doing this work, they don't feel like their communications have an impact," Nicolaison said. "I'm hoping to show people how to measure that, how to understand their impact more."

"When you're in higher ed you can work with a student one semester and never see them again and then they graduate. But what will they do after graduation? There are so many impacts that could have on one student, and that's another very powerful thing with working within higher ed. You never know what impact you might have on someone."

This story was originally published by the Office of Sustainability.

Twelve Years of Climate Change in Wisconsin

Steve Vavrus, director of the State Climatology Office, looks back on how Wisconsin's climate has changed since the 2011 WICCI assessment report.

By Dea Larsen Converse, Wisconsin Initiative on Climate Change Impacts

Photos by Kevin Sink (4)

Published in 2021, the Wisconsin Initiative on Climate Change Impacts (WICCI) assessment report reviewed climate impacts across the state, spanning industries from fisheries to forestry. For the next several months, we'll be highlighting interviews with some of the people who provided critical background and context to WICCI's 14 working groups. This month, hear from Steve Vavrus — WICCI codirector, State Climatology Office director, and Nelson Institute faculty affiliate — who reflects on Wisconsin's changing climate.

How is climate changing in Wisconsin?
It's getting warmer and wetter. Those are the operative words, and we are seeing a clear warming trend and wetter conditions over the last several decades in every season and every part of the state. That's exactly what we are expecting to see more of in the future. Readers may not believe the "wetter" part this summer! Helping Wisconsin's residents manage near-term weather and climate conditions is the mission of the newly funded Wisconsin State Climatology Office (SCO). As its director, my goal is to ensure that the office provides services to inform, interpret, and investigate. For example, the SCO has been playing an important role in the current drought by sharing information about its status, interpreting its development, and investigating how this year's event compares with historical droughts in Wisconsin.

What would you want decision-makers to know?
Climate change is here and now; it's having very practical impacts in terms of health, economy, wildlife, and many other ways. It also affects human comfort. People may notice, for example, that we are having more muggy nights and definitely more rainy days and flooding events. There are larger scale impacts too, with very important changes

for agriculture, tourism and so on that affect the bottom line in Wisconsin.

Is there any part of Wisconsin that is going to feel the impacts more than another part?
Everybody will be affected. It looks as if, in terms of extreme heat and rainfall, probably the southwest and Driftless Area are one of the most vulnerable. Right now, and historically, they tend to experience the most extreme weather events. They also tend to be the hottest part of the state because they are in the south and are away from the moderating effects of the Great Lakes.

Can you talk more about the extreme events?
Things like heat waves and extreme rainfall are expected to become more frequent because a warmer atmosphere can hold more moisture. Nationally, we have seen an increase in billion-dollar weather disasters around the country. This is something that NOAA has kept records of back to 1980, and you can see a very distinct increase, particularly in the last decade, of the number of extremely expensive weather disasters. It is not our imagination that extreme weather in general is getting more pronounced and the price tag for the extreme events is rising.

Do you have hope for the future?
One of the things that gives me hope is that there's greater awareness of climate change and its impacts, greater acceptance, greater realization that we really do need to do something. There are also technological improvements all the time.

Support WICCI
The Wisconsin Initiative on Climate Change Impacts (WICCI) is a statewide collaboration of scientists and stakeholders formed as a partnership between UW–Madison's Nelson Institute for Environmental Studies and the Wisconsin Department of Natural Resources. WICCI's goals are to evaluate climate change impacts on Wisconsin and foster solutions. Gifts to the WICCI Program Fund provide general, discretionary program support and enhance and expand WICCI's teaching, research, and public service roles. Gifts also support partnership-building activities, including faculty, staff, and student recruitment, retention, and morale.

This condensed interview is part of a series highlighting interviews done for the 2021 WICCI Assessment Report; read the full interview. Next month, hear from Chris Litzau, president of the Great Lakes Civilian Conservation Corps.

Weather Data, Wherever You Are

The new Wisconet provides up-to-date weather information to support Wisconsin farmers, researchers, and residents.

By Chris Vagasky, Wisconsin Environmental Mesonet

In late 2022, the Nelson Institute's Center for Climatic Research (CCR) — alongside UW–Madison's College of Agricultural and Life Sciences and the Division of Extension — announced a new partnership with the Wisconsin Rural Partnership Institute, made possible by funding from the U.S. Department of Agriculture. A large portion of CCR's funding was allocated to revitalize the State Climatology Office and support the creation of Wisconsin's first mesonet, or a network of weather and environmental monitoring stations, which are respectively led by Nelson Institute affiliates Steve Vavrus and Chris Kucharik. Read on for an update on the Wisconet — Wisconsin's Environmental Mesonet — which launched this spring.

Wisconsin's wild weather has been on full display in 2023 with severe thunderstorms and tornadoes, wildfire smoke, heavy precipitation and extreme drought. Weather can have an outsized impact on daily lives and the economy, but a team at the University of Wisconsin–Madison is making it easier than ever to access local weather data and make informed decisions.

Throughout the spring and summer, a team of University of Wisconsin–Madison researchers has been transitioning 14 weather stations across Wisconsin from Michigan State's Enviroweather program to a new Wisconsin-based program called Wisconet. In the coming months, Wisconet will be installing new stations in Dane, Sauk, Jackson and Clark Counties as part of the planned expansion to 90 weather stations, including at least one station in every county of the state.

"A common phrase is, 'If you don't like the weather, just wait five minutes.' Well, we'll know how the weather changes because Wisconet stations are providing live weather data every five minutes to support local meteorologists, researchers, farmers and growers, and the people of Wisconsin," says Chris Vagasky, research program manager for Wisconet. Each Wisconet station will report temperature and relative humidity, barometric pressure, wind speed and direction, liquid precipitation, solar radiation, leaf wetness, and soil moisture and temperature measurements. These data are critical to making appropriate decisions, whether it's to issue a life-saving warning, make better farming decisions or change outdoor plans. Data is available for viewing at the Wisconet website.

> *"Wisconet stations are providing live weather data every five minutes to support local meteorologists, researchers, farmers and growers, and the people of Wisconsin."*
>
> — Chris Vagasky

Wisconet is supported by a $2.3 million grant from the University of Wisconsin–Madison's Wisconsin Rural Partnership initiative, which is part of a broader $28 million USDA-funded Institute for Rural Partnerships. The institute aims to promote equitable, resilient, and prosperous food and agricultural systems and expanded opportunities for rural community development. Additionally, Wisconet also received $1 million in financial support from the Wisconsin Alumni Research Foundation, a non-profit technology transfer organization that serves UW–Madison.

"We are continually developing and updating our data and tools online," Vagasky says. "Plant growth and pest and disease models, heat models like the wet bulb globe temperature, and precipitation statistics are all things we have in mind to help Wisconsinites respond better to our ever-changing weather."

Wisconsin saw such changes this spring. After a record wet January — April, the state experienced the third-driest May/June in the last 129 years. This led to rapid development of drought across the state. Lack of precipitation during the growing season creates challenges for farmers and growers, but new soil moisture measurements from Wisconet will improve irrigation decisions and better inform drought monitoring.

"Wisconet will measure soil moisture at five depths from just two inches below the surface all the way to 40 inches below ground," explains Vagasky. "This added soil moisture data will let growers know how much water is available to their plants and help researchers understand how quickly the ground is responding to increases or decreases in precipitation, improving our awareness of short- and long-term droughts."

The Wisconet team continues to identify additional locations, develop novel tools and models for the website, and field new stations. They aim to install 75 new stations by 2026. Contact Chris Vagasky at vagasky@wisc.edu if you are interested in hosting a station on your property.

Left: Established in 1985, UW–Madison's Arlington Agricultural Research Station is one of the longest-running weather stations to make up the Wisconsin Environmental Mesonet, or Wisconet. Photo by Michael P. King/UW–Madison CALS

The South Florida Façade

Former CHE director Anna Andrzejewski is set to publish a book written with the help of two fellowships.

By Anica Graney

Left: Anna Andrzejewski. Photo by Elizabeth Andrzejewski; Above: Photo by iStock / Virsuziglis

"What is this place?" Anna Andrzejewski asked herself. Surrounded by palm trees, bright colors, sprawling suburbia, and the occasional alligator, she couldn't make sense of the strange cultural landscape of South Florida when she visited nearly 20 years ago. It was nothing like what she had experienced growing up in the Midwest, and as a complete outsider, it intrigued her to understand how modern Florida came to be — and why it looked so different from the rest of the United States.

Coming from her background in art history, architecture, and culture, Andrzejewski has spent the past five years writing a book that analyzes the uniqueness of the South Floridian leisure landscape, particularly its large, sprawling vacation and retirement communities. The upcoming book blends Florida's culture, history, and environment into an explanation of why Florida is the way it is, a fitting task for the former Center for Culture, History, and the Environment (CHE) director.

"My interest in South Florida's vacation and retirement communities developed quite by accident," she said, "and it's a story I love to tell."

While working on a historical project about a post-World War II builder in Madison, Andrzejewski learned of a family of builders with roots in South Florida's modern development. She hoped to draw comparisons between the families and reached out to one of the descendants of the Florida family, finding a phone number off Google and cold calling. The descendant, a son of the Florida development team, was more than willing to help Andrzejewski, inviting her to his home and showing her an extensive collection of records on his family.

"Directing a research center and writing a book within five years is pretty extraordinary. It usually takes longer than that, believe it or not. So, having the support of my Nelson Institute colleagues certainly helped nurture the book along."

— Anna Andrzejewski

A typical "retirement house" in Orange Lake Village, built and developed by James Rosati and Sons in the mid-1950s in Pinellas County, Florida. Photo by Anna Andrzejewski

"That's good advice for graduate students," Andrzejewski interjected. "Never be afraid to track down a lead."

The information she gathered from her visit, coupled with her curiosity about the reasoning behind the building of vacation and retirement communities, sparked an idea for a book and, in 2018, Andrzejewski got to work. The book began as an analysis of South Floridia's residential architecture, but as she continued to research, realized it was "more than just a story about buildings," and focused on the additional aspects that contributed to Florida's landscape of leisure, including builders, real estate developers, banks, mortgage institutions, and state and local governments.

Andrzejewski's time as CHE's director also contributed to the direction that her book ended up taking; she cites the center's support as a key factor in how she completed the book so quickly. "Directing a research center and writing a book within five years is pretty extraordinary. It usually takes longer than that, believe it or not," Andrzejewski said. "So, having the support of my Nelson Institute colleagues certainly helped nurture the book along." Moreover, she wrote a chapter about "suburban nature," that focused on the ways design of leisure communities shifted with growing consensus about environmentalism in the 1960s and 1970s.

Another area of support came from Andrzejewski's fellowships at the Institute for Research in the Humanities (IRH), which she completed during the fall 2022 semester, and the National Endowment for the Humanities (NEH), which she completed during the spring 2023 semester. The IRH fellowship is a UW–Madison residential fellowship offered to in-house professors that allowed Andrzejewski to take a break from teaching. "It allowed me to remain in Madison and participate in events at the Institute and at Nelson, but also gave me the opportunity to focus on writing my book," Andrzejewski said.

The NEH fellowship is a residential fellowship offered through the Hagley Center for History, Business, Technology, and Culture in Wilmington, Delaware (affiliated with the University of Delaware where Andrzejewski earned her PhD), in which Andrzejewski used the center's collection of travel ephemera to help write her book. "They have the

best collection of Florida travel ephemera, and I got to go there and spend hours in the archives combing through Florida advertising," Andrzejewski said. "They selected me, I think, because they knew that I could use that collection extensively."

The two fellowships ultimately allowed Andrzejewski the opportunity to finish the manuscript of her book, set to be published within the next year. She hopes that readers of her book will take the opportunity to think about South Florida's leisure landscape in a more serious light. "It's often billed as ticky-tacky, filled with monotonous landscapes of suburbia," Andrzejewski said. "Certainly, it's a playground of sorts, at least historically for middle class, white Americans, but it's also something that tells a deeper story about not just travel and leisure in America, but also the way that we sort and separate ourselves."

A 1953 advertisement for Florida Sun Deck Homes/Leisure City by Miami News

A 1965 advertisement for Marco Island that appeared in newspapers throughout the country.

From the Office of Sustainability

A monthly update from faculty, staff, and students in the Office of Sustainability - Education and Research. This month's column is from director Andrea Hicks.

Andrea Hicks

It is wonderful to be back on the UW–Madison campus with all of the sights and sounds of the semester, from brand new Badgers spending their first semester at the university to faculty like myself who have been here for more than a few years. I spent the spring semester on sabbatical as part of a Fulbright at the University of Limerick in Ireland. While I was there, I had the opportunity to conduct new research and to coteach a course on the circular economy. It was fascinating to gain a more global perspective on sustainability teaching and research within Ireland and the European Union. At the same time, my time overseas highlighted how differently some of the same challenges are being handled here at home compared to abroad. For example, the European Union adopted a circular economy action plan in 2015. This plan aims to transition the European economy from a linear to a circular economy.

A circular economy is defined by the Ellen MacArthur Foundation as "a system where materials never become waste and nature is regenerated." In other words, instead of disposing of products at the end of their useful life, they are continually cycled within the economy. This decreases the need for sourcing more virgin materials, while also decreasing the quantity of waste generated. At the White House Circular Economy Innovation Roundtable held earlier this year, one of the themes that emerged was that "circular economy innovations can contribute not only to decarbonization and net-zero goals, but also to economic growth and jobs, environmental justice, ending pollution, supply chain security, and other important priorities for America."

What does this mean for the Nelson Institute for Environmental Studies, the Office of Sustainability, and campus more broadly? Quite simply, new skill sets, education, and training are needed in order to take advantage of the opportunities afforded by the transition to a circular economy. This fall, UW–Madison is making significant investments in creating opportunities to endow interested students with those skills. For example, the graduate sustainability certificate is now available to all interested graduate students across campus. The goal of the certificate is to provide additional sustainability credentials, which are desired by employers, in addition to the skill set provided by the student's main degree program.

This is just one example of the activities occurring across campus to make UW–Madison a hub of sustainability expertise for employers across the state and nation. Another activity will be the second annual UW–Madison Sustainability Symposium, occurring October 25, 2023.

Director's Cut

Meet Ben Zuckerberg, the new director for the Center for Ecology and the Environment

It promises to be an exciting year ahead for the Center for Ecology and the Environment (CEE). As the new director, I am thrilled to continue the important work of the CEE both on and off our campus. We are profoundly grateful for the dedication and leadership of our outgoing director, Sean Schoville, who provided exceptional leadership and guidance over the past few years.

In the upcoming year, we will shine a spotlight on several endeavors. First, we remain committed to maintaining our long-standing symposium series in the fall and spring, featuring keynote speakers, student poster presentations, and faculty lectures. Personally, I have always cherished this event as an opportunity to reconnect with former colleagues and welcome new ecologists to our campus.

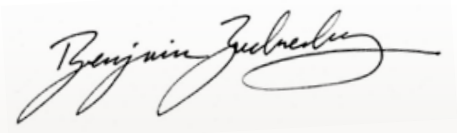
> *"It was a really important organization for a young professor like myself to ... understand how other faculty are working on different systems."*
>
> — Benjamin Zuckerberg

Additionally, we are looking forward to participating in undergraduate job fairs both on and off campus, as well as hosting events to recruit and welcome graduate students and faculty members. Among our notable initiatives, we are excited to introduce a Queer Ecology reading group and continue WILD-SEEDS, a program designed to foster the engagement and leadership of underrepresented students in the field of ecology.

Finally, we are delighted to announce the establishment of the new Aldo Leopold Graduate Research Award Fund. This annual competition will support graduate students at the university whose research focuses on the intersection of ecological and societal systems challenges.

As I step into my new role, I am already deeply impressed by the exceptional group of students, postdocs, and faculty members that comprise our executive committee. They are dedicated to nurturing our community of ecologists and are always eager to spearhead new initiatives. I extend a heartfelt acknowledgment to the following individuals for their support: Kyle Webert, James Crall, Zac Freedman, Sara Hotchkiss, Sean Schoville, Wendy Turner, Jesse Weber, Olivia Bernauer, Cooper Rosin, Aldo Arellano, Roberto Carrera-Martinez, Anupreksha Jain, and Carson Keller.

Together, we look forward to a year filled with growth, collaboration, and impactful contributions to the field of ecology and the environment.



Benjamin Zuckerberg

The Zuckerberg Lab uses drones to map microrefugia, or areas with microclimates that can support species populations whose usual habitats are experiencing climate events. Photos courtesy of Benjamin Zuckerberg (2)

Grassland birds – like the Dickcissel, a nest of which is pictured here – are rapidly declining across the country. The Zuckerberg Lab is working to identify refugia for these types of birds.

Meet Benjamin Zuckerberg

An Ecologist Grows in Brooklyn

Zuckerberg grew up in Brooklyn, New York's Park Slope neighborhood, which borders a large park but contains only one park of its own. Brownstone-lined streets mightn't be the traditional habitat for a budding avian ecologist, but Zuckerberg found inspiration: "David Attenborough," he says. "I give credit where credit is due!" Zuckerberg fell in love with nature shows, which led him out of the city to Connecticut College and a major in zoology. He then went to the University of Massachusetts–Amherst for a master's in wildlife and fisheries conservation followed by a PhD in ecology from the State University of New York's College of Environmental Science and Forestry and, ultimately, a postdoc position at the famed Cornell Lab of Ornithology.

Connect Four

Partnerships and collaboration have been a throughline in Zuckerberg's career. So, when a position at UW–Madison came up that was part professor, part Department of Natural Resources collaborator, he jumped at the chance. "I work with the DNR to think about research and management [and] help them understand the impacts of climate change on wildlife," Zuckerberg says. "That's been a fun exploration over the past several years." As soon as he got to campus, he joined the Center for Ecology and the Environment (then Wisconsin Ecology). "It was a really important organization for a young professor like myself to feel integrated, collaborative, and to understand how other faculty are working on different systems." Zuckerberg is also an affiliate of Nelson's Center for Climatic Research and a member of the Wisconsin Initiative on Climate Change Impacts (he cochairs the wildlife working group).

From Micro to Macro

Zuckerberg heads up a lab through his home in the Department of Forest and Wildlife Ecology that studies the impact of climate change on natural systems on what he describes as both micro and macro scales. "At the micro end of things, I've been really excited about using drones to better understand microclimates in an ecological context," he explains. "We focus on grassland birds, which are one of the fastest-declining groups of species in the country, to see whether or not we can identify where the refugia are for those species within these imperiled grassland systems." On the macro level, the lab uses big data and citizen-science initiatives to look at how climatic changes impact bird species across entire continents. "You can start appreciating the complexity not only of climate change, but of how species respond to climate change, from individual species to entire communities. That's exciting and impactful work to me."

Gone Fishin' with Jesse Weber

Each summer, Jesse Weber fishes for breakthroughs in the fields of evolution and parasitology.

By Laila Smith

Although much of the Weber Lab's work involves molecular and DNA analyses in Madison, every year the lab frequents numerous field sites around the northern hemisphere. Here, Jesse Weber is padding on an Alaskan lake to collect zooplankton. Photos courtesy of the Weber Lab (5)

Some Wisconsinites may embark on annual fishing trips, but Jesse Weber's fishing excursions look a little bit different. Over the past few years, Weber and a team of researchers have traveled up to Alaska's Kenai Peninsula to study the evolution of threespine stickleback living in nine different experimental lakes. Weber specifically examines how parasites interact with these fish and how the two co-evolve within the lakes. Weber was introduced to evolution through researching his own family tree while in elementary school. "The connection between us and all living things is set up so well by trees," Weber explains. "Later on, I started to wonder how these trees are formed and what they can teach us about evolutionary processes." His interest in ecology solidified after he participated in a study abroad program in Botswana's Okavango Delta, where he helped a PhD student with research and, in return, got to observe all sorts of wildlife like wildebeests, hippos, giraffes, and warthogs. "At that point in time, I knew I wanted a career that included field research," Weber shares.

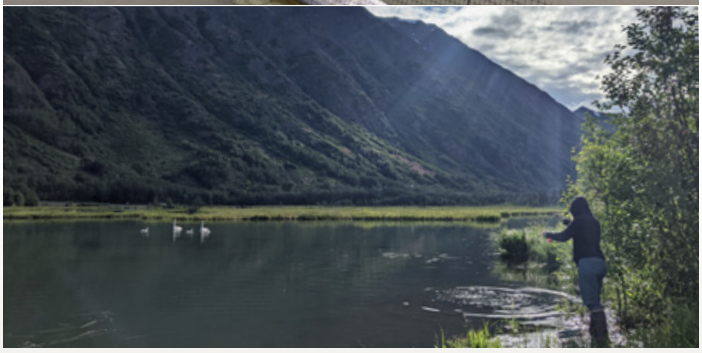
Weber studied biochemistry and molecular biology at the University of Colorado before earning his PhD in biology from Harvard University. After spending a few years doing postdoctoral research at different universities, Weber accepted his first faculty position at the University of Alaska–Anchorage. In the fall of 2020, Weber came to the University of Wisconsin–Madison's Department of Integrative Biology as an assistant Professor and was asked to join the Nelson Institute's Center for Ecology and the Environment by outgoing director Sean Schoville. He's currently in charge of the Weber Lab, where he "has his hands in many different pots" of research.

Can you explain the research being done in Alaska?
My team is working on what we coined as "the world's greatest eco-evo experiment" up in Alaska. By "eco-evo," we mean understanding how ecological interaction affects evolutionary responses, and vice versa. Back in 2019, I worked with collaborators from 10–15 universities around the world to stock nine Alaskan lakes with fish of our choosing. I study a fish called the threespine stickleback. It looks boring on the outside, but is a fascinating animal because we know so much about its ecology compared to most other vertebrates. This fish adapts to many features of its local environments, changing its diet, immune profile, how it grows, and even how it ages. So, we traveled across Alaska to find the most interesting and diverse populations, and then sampled from those populations and combined them into these blank slate lakes. We moved more than 10,000 fish from around the state to the Kenai Peninsula, and now we're just watching as they evolve — who they mate with, what parasites they get, what they eat, how their morphology changes. Now, we go up to these experimental lakes every summer and catch 100 fish from each one to dissect and further study.

Are there any misconceptions about your field or research?
People should know that parasites aren't always bad! Until recently, when modern medicine rid us of our parasites, we had evolved ways to cope with them. It was almost like a détente in military context, where these two systems came together and found a sort of equilibrium. If you remove the parasites, you have an immense immune response that isn't being regulated, and that's going to hurt you. The rise in autoimmune diseases and things like allergies are probably associated with a lack of parasites in systems. If we can find ways to understand how parasites are living in us, we might be able to create synthetic things that mimic those parasites. Through this, we might be able to cure an awful lot of disease — but it all comes from an understanding that parasites used to naturally exist in us and we've evolved to deal with them.

What's the importance of coevolution?
You can never just think about one system at a time. The interactions between species are so diverse in nature that we need to start thinking about how an evolutionary change in one will lead to an evolutionary change in the other. When it comes to climate change, many people focus on individual species, but we need to get a better feel for how interactions between species are changing as a result of the changing environment. I don't want to put a silver lining on how rapidly our world is changing, but it's giving us a chance to study coevolution like never before. We have to take advantage of this opportunity so we can learn how to maintain the environment and understand the intricacies of the wonderful ecosystems that we live in.

Is there anything you want our readers to know?
I want to plant a seed that there are tremendous opportunities for the public to get involved with the kinds of research that we do. Since moving here, I've been enamored with how much Wisconsinites love their lakes and love spending time in and around them. When people catch and filet fish, I want to know what they're finding! Did you find something interesting inside of a fish? If so, tell me about it! Better yet, send it to me! I want to talk to the public more about what they're finding and help them understand what they're seeing out there, especially in the context of these economically and ecologically important topics like lakes and fisheries.



Top left: Experimental enclosures are strategically placed around lakes to sample variation in habitat, including vegetation, prey, light, and temperature. Sometimes this involves serious canoeing expertise! Middle left: A major component of the Weber Lab's research is to understand how fish and infections vary in nature. Jesse Weber and PhD student Emily Kerns (both seen paddling in the canoe) set up large, netted enclosures – up to 14 feet wide and 6 feet deep – stocked with individually marked stickleback fish from a number of lakes. This work allows them to understand how fish compete with each other, what traits lead to high survival rates, and how rapidly fish can shift their physiology, immunology, and behavior when placed in a new lake environment. Bottom left: PhD student Emily Kerns is setting minnow traps in Tern Lake on the Kenai Peninsula of Alaska. In addition to the crystal clear waters, in the background are enormous mountains and trumpeter swans and cygnets. Below: Jesse dissecting fish and collecting parasites on the shores of Wik Lake in the Kenai Peninsula of Alaska.

UniverCity Alliance Launches New Scholars Program

Five Nelson students are working with local governments on community-identified priorities during the fall 2023 semester.

By Abigail Becker

From creating a publicly searchable database to helping a city become more walkable, UniverCity Alliance's inaugural class of scholars are supporting local governments across Wisconsin.

UniverCity Alliance (UCA) launched its scholars program in Fall 2023 with nine students ranging from undergraduate juniors to PhD students at the University of Wisconsin–Madison. This cohort-based program builds on UCA's hallmark program UniverCity Year (UCY), which provides students opportunities to work with local governments within a course.

"The UCA Scholars Program provides students with an additional opportunity to pursue community-based projects and support priorities identified by local leaders around Wisconsin," UCA managing director Gavin Luter said. "We are excited to offer enhanced learning experiences to more students in a way that continues meeting the needs of our community partners."

> *"I am excited to be able to collaborate with others in the community and to apply my skills for making a difference!"*
>
> – Pearly Wong, Nelson Institute graduate student

During the course of the fall 2023 semester, these nine students will work on an individual project for one of UCY's partner communities. Upon completion of the project, the students will receive $1,500 scholarships that were generously provided through the philanthropy of UW alumni John Holton, Pat Thiele, Colleen Goggins, John Nelson, Bill and Karen Monfre, John Bauman, Curt Fuszard, and others.

"UniverCity helps connect students to serve the needs of our state municipalities. The UW is a resource and economic engine critical to our state," said Karen and Bill Monfre, two supporters of the new program. "UniverCity is a bridge to the next generation of servant leaders."

The program sought students from diverse academic backgrounds to meet the varied needs of local governments. For example, Samuel Adeapin, a Nelson Institute graduate student in the environmental observation and informatics master of science program, is using his background in GIS to support the city of Madison in creating a publicly-searchable database for 911 calls of service.

UCA Scholars celebrate during an event on Sept. 8 in Memorial Union. Photo by Hedi Lamarr Rudd

"I am eager to join the UniverCity Alliance Scholars Program and gain skills and experiences that will help me achieve my career goals," Adeapin said. "I look forward to using my knowledge and creativity to work on a real-world project that will make a positive difference for a Wisconsin community and embody the Wisconsin Idea."

Another Nelson Institute graduate student, Pearly Wong, is partnering with the city of Milton on a project to involve more youth in the structure of local government.

"I am excited to be able to collaborate with others in the community and to apply my skills for making a difference!" Wong said.

Several of the scholars have unique ties to local government, contributing to their interest in this program. UW–Madison junior Sam Kaufmann, who is studying political science and geography, is a village trustee on the Waunakee Village Board.

UCY partnered with Waunakee from 2020–23 on 17 projects that addressed Waunakee's relationship with the Ho-Chunk Nation of Wisconsin, local ordinances, Waunakee's employment practices, housing, education, and mental health.

"From being a local elected official that has commissioned successful UniverCity projects for our community during my tenure, I know what a fantastic program it is using student knowledge to aid in solving key issues and problems," Kaufmann said. "I am excited to now sit on the other side of the table and use my own perspective in helping a different Wisconsin community."

Not only did Anna Kleiber, a UW–Madison junior, grow up in Wausau, she also worked for the city's Department of Public Works over the past two summers and learned about city infrastructure and services to maintain roads and sidewalks. Now, she will be working with the city on a pedestrian study as a part of her participation in the scholars program.

"I wanted to use the knowledge and hands-on experience I learned from my time working for [the Wausau Department of Public Works] to give back to my community and work on something I am passionate about," Kleiber said. "With my gained knowledge and familiarity with Wausau, I am thrilled to work on this project and care deeply about the work I will be doing."

Congratulations to the following Nelson students who are part of the inaugural cohort!

Melina Nguyen

Junior, Environmental Studies Certificate
"I'm hoping to gain first-hand experience in the field and better understand what I'd like to do in my future career."

Pearly Wong

PhD Candidate, Environment and Resources
"I am excited to be able to collaborate with others in the community and to apply my skills for making a difference!"

Samuel Adeapin

Master's Student, Environmental Observation and Informatics
"I look forward to using my knowledge and creativity to work on a real-world project that will make a positive difference for a Wisconsin community and embody the Wisconsin Idea."

Lily Yalowitz

Senior, Environmental Studies Certificate
"I am excited to be a part of the UCA Scholars Program to meet new people with similar interests as myself, learn planning techniques of Wisconsin municipalities, and to provide some of my personal input into my cohort and project assignment."

Shealynn Wegner

Senior, Environmental Studies Certificate
"From the climate crisis to accelerating socioeconomic disparities, it's critical that we rethink the way we are designating land use and designing urban spaces. The UCA Scholars Program gives me the opportunities to work with real people in local communities to do just that."

Trekking with Tigers

Growing up in the middle of Milwaukee, Sam Helle never expected to be surveying tigers in the foothills of the Himalayas.

By Laila Smith

A camera-trapped image of a tiger in a Community Forest captured during Team Tiger's recent survey. Photos courtesy of Sam Helle and Team Tiger (6)

"The natural world was for me because I was inescapably part of it."

— Sam Helle

When Sam Helle was growing up in the middle of Milwaukee, she didn't expect to someday be a conservation biologist surveying tiger populations in the foothills of the Himalayas. She had always been drawn to animals, but, living in the city, didn't have much exposure to wildlife. "When I originally started school, I was pre-vet, but after a year I didn't think it was the right path for me," says Helle. She ended up transferring to the University of Minnesota, where a transfer officer recommended she major in fisheries, wildlife and conservation biology.

An introductory ecology class is what solidified Helle's future in conservation. Being raised in Milwaukee by a single, working mother, she thought the outdoors was reserved for a certain type of person and didn't feel like she fit the demographic. "Being in that class and learning about how intricately and beautifully our ecosystems are woven together helped me see that I was part of a bigger environmental system," Helle recalls. "The natural world was for me because I was inescapably part of it." After that, she dove headfirst into conservation.

While working towards her bachelor's degree, Helle attended an undergraduate study program in Nepal with Professor Dave Smith and the National Trust for Nature Conservation. For five months, she and 11 other students lived near Chitwan National Park and practiced field techniques — such as tracking animals, identifying plants, and carrying out surveys — in the jungle. Coming from the city, this was a completely new world to Helle. She explains, "I was really interested in human-wildlife conflict mitigation because Nepal has a crazy

landscape of tigers, rhinos, elephants, bears, leopards, hyenas, and wolves, and also people!"

Intrigued by this, Helle focused her independent research around how people in Nepal had been impacted by living in close proximity to these animals. She and Smith set out to interview the local people on their experiences. Helle shares, "It was house one, day one, and I asked someone if they knew anyone who was attacked or killed by a tiger. They replied, 'Yes, my son,' and I just remember being in shock." At that point, Helle realized that even though she understood the biological components of conservation, she had no idea how to navigate its social aspects. "Hearing those words and understanding the reality of the situation, I realized I didn't know anything," she reflects. To Helle, this experience stressed the importance of learning Nepali to fluency and becoming trained in the social sciences to better understand the social-ecological systems of Nepal.

Helle measuring a fresh tiger paw print and identifying right from left foot.

Once Helle earned her bachelor's, she worked towards a master's degree in wildlife and ecology management under Smith while continuing to study in Nepal. After completing her master's, she was granted a Fulbright Fellowship, which she used to travel back to Nepal and continue her research. She had been working in Nepal for around six years, and her colleagues started to inquire about her future plans. "My colleagues at the National Trust for Nature Conservation told me they needed surveys of tigers outside of protected areas, so at that point I started looking into a PhD program," Helle says. What drew her to the Nelson Institute was its interdisciplinary emphasis, valuing social and biological sciences equally. Helle explains, "As a wildlife conservationist, I have to focus on both sides because I study and work in these systems where you can't ignore one or the other."

Tiger conservation in Nepal has been a huge success in the past few decades, with the population tripling since the 90s. Helle credits that to Nepal's Community Forestry program, where local people are managing forested spaces. "Over 35 percent of the population is involved in this," Helle claims, "and it has fundamentally increased tiger habitat." Because of the success of this program, tigers are no longer limited to living in protected areas — but not much is known about the tigers living in community-managed forests.

To investigate the tiger populations in these forests, Helle and a team of researchers — calling themselves "Team Tiger" — conducted a survey of the tiger population living in between two "tiger strongholds," Chitwan National Park and Bardiya National Park. Team Tiger traversed hundreds of miles though the foothills of Nepal while surveying tiger populations. Helle says she "can never talk enough about how difficult the ter-

Research and Survey "Team Tiger" from Nepal's National Trust for Nature Conservation Biodiversity Conservation Center. From Top Left: Tika Ram Yogi Tharu, Shiva Chaudhary, Sam Helle, Ramesh Darai, Kapil Pokharel, Binod Darai, Dipu Chaudhary, Trishna Rayamaji, Pratikshya Aryal, Surendra Chaudhary, Rakshana Shah, Aashish Gurung, Aitu Tamang

rain is," and has explained to many Wisconsinites that the foothills are not like the sledding hills they're used to, but actually "baby Himalayas."

Fortunately, Helle hasn't crossed paths with many tigers in the wild. In the 10 years she's been working in Nepal, she recalls only three or four times where she's encountered one. One morning, Helle was teaching a technician how to identify the difference between left and right paw prints when she started to hear alarm calls from nearby deer. "Immediately I knew there was a tiger around," Helle recounts. After she and her team had finished measuring the tracks, they walked back along the same path. "I look down and there's fresh tracks. Fresh!" she exclaims. "The tiger had completely avoided us. She knew we were there and went the complete opposite direction."

Because tigers have been hunted for hundreds of years, most are afraid of humans and try to avoid people, according to Helle. She explains, "They're very elusive and very shy. The hardest part of my work is trying to catch a tiger on camera or trying to track where they've been." Occasionally tigers do attack people, but it doesn't happen very frequently. Helle shares that one of her colleagues, Dr. Babu Ram Lamichhane, wrote a paper on tiger attacks and found that in nearly all of the cases, there was something physically wrong with the tiger that inhibited it from being able to catch normal prey. Other than those cases, tigers completely avoid humans.

Though tigers do try to avoid humans, it doesn't mean these cats live far away from mankind. Helle shares that a common misconception people have is that tigers and humans live in two separate, distinct areas. "In reality, most tigers are living in landscapes right alongside people," she clarifies, and claims that with the increasing world population, we're only going to see an uptick in the amount of people living in green spaces. However, she says that's not necessarily a bad thing. The Community Forestry program is meeting the needs of both the people and the wildlife, and Nepal is one of the few places in the world that's seeing more reforestation than deforestation. To Helle, supporting tiger conservation is supporting the local people living near the same forests.

Why should people support tiger conservation? Helle says that tigers (along with other apex predators) have evolved for millions of years to become ecosystem regulators, meaning that they keep herbivore populations — and, consequently, all other plant and animal populations — at bay. When herbivore populations are too high, vegetation is depleted, affecting rivers, streams, lakes, clean water, clean air, and carbon storage. Consequently, Helle claims that investing in tiger conservation supports not only tiger populations, but populations of the species they live alongside (including other endangered species), as well as the millions of people who benefit from the ecosystem services that tigers provide. She explains, "there was a World Wildlife report done that shows forested landscapes that specifically protect tigers store more carbon than other regional forests, and they overlap several watersheds that provide water to 830 million people in South Asia. So, saving tigers is also saving yourself!"

"Being yourself is enough, and I wish more people would bring their true authentic selves to this mission."

— Sam Helle

Throughout her journey in tiger conservation, Helle stresses the importance of science communication to help encourage others that they can, and should, be involved in conservation efforts. "I wish there was someone like me, a woman from the city working in large carnivore conservation, for little Sam to look up to," Helle shares. "There's this idea that someone has to look a certain way, come from a certain upbringing, or live a certain lifestyle to be involved in the nurturing of our planet, and that's simply not true. Being yourself is enough, and I wish more people would bring their true authentic selves to this mission."

Helle overlooking the jungle during wildlife occupancy surveys in the mid-hills of Nepal.

Helle and team surveying for tiger and other wildlife along a streambed in Dang, Nepal.

A Night of Celebration: Rendezvous on the Terrace

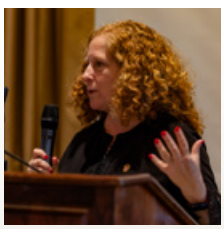
The 2023 Nelson Institute celebration marked an EPP milestone and recognized outstanding alumni.

By Laila Smith

L-r: Francisco Santiago-Ávila, Cait Williamson, Kyle Tanger, Dean Paul Robbins, Travis Blomberg, Emily Reynolds, director community engagement and alumni relations. Photos by Hedi Lamarr Rudd (5)

"We're the birthplace of environmental conservation, we're the place that showed the world how to bring swaths of land back to life and manage them properly... we're the birthplace of satellite technology, a pioneer in remote sensing and the use of data science to monitor the health of the environment... and, of course, we're the birthplace of the Wisconsin Idea."

– Chancellor Mnookin



The sun sets over Lake Mendota as a buzz of chatter can be heard from Nelson Institute faculty, alumni, and students attending the 2023 Rendezvous on the Terrace celebration. Unlike recent Rendezvous celebrations, this one marked a special milestone: the 10th anniversary of the Nelson Institute's environmental professional programs!

This year's event began on Thursday, September 28 with a Weston Roundtable lecture led by Lilian Pintea, Vice President of Conservation Science at the Jane Goodall Institute. Later that evening was the EnviroPros@10 Reunion, where alumni of the Nelson Institute's environmental professional programs were invited to catch up and reconnect with former classmates. The Rendezvous activities were continued on Friday, starting with three different EnviroPros@10 Panel Discussions: Natural Climate Solutions, Diverse People and Places, and Conservation Trends and Technology, which were all led by a variety of Nelson Institute alumni.

On Friday evening, faculty, alumni, and students of the Nelson Institute gathered at Memorial Union's Tripp Hall to honor the Nelson Institute's 2023 award recipients. Chancellor Jennifer Mnookin kicked off the event by praising the Nelson Institute's remarkable notoriety in the world of environment and sustainability. She went on to recognize the work and accomplishments of "new-to-UW" professor Tim Portlock (who has a dual appointment with the Nelson Institute and UW–Madison's Art Department), Civil and Environmental Engineering Professor

Nathan Schulfer (center) upon hearing he was selected to receive the inaugural Nelson Institute Outstanding Staff Accomplishment Award.

L-r: Dean Paul Robbins, Nathan Schulfer, director international and professional programs, Chancellor Jennifer Mnookin, Meghan Kautzer, lecturer and environmental conservation program coordinator, Sarah Graves, lecturer and environmental observation and informatics program coordinator.

Attendees enjoyed a catered buffet as well as opportunities to network with environmental professionals.

L-r: Dean Paul Robbins, Chancellor Jennifer Mnookin, Paul Block, professor civil and environmental engineering, and Reid Bryson Distinguished Professorship recipient.

— and newly named Reid A. Bryson Distinguished Professor — Paul Block, and Nelson Institute Associate Dean Steph Tai.

Dean Paul Robbins initiated the award ceremony with Nathan Schulfer, director international and professional programs, who recieved the Inaugural Nelson Institute Outstanding Staff Accomplishment award. When presenting the award, Robbins applauded Schulfer for being "unfailingly committed to students and alumni." The awards continued with the announcement of the 2023 Alumni Award winners, which include both the Rising Star Alumni Awards and the Distinguished Alumni Awards. The 2023 recipients of the Nelson Institute Rising Star Alumni Awards are Francisco Santiago-Ávila, Travis Blomberg, and Cait Williamson. The Nelson Institute Distinguished Alumni Awards were given to Martha Goodell, Nicole Leotaud, and Kyle Tanger. Santiago-Ávila, Blomberg, Williamson, and Tanger, were all in attendance, and each gave brief speeches upon being recognized.

The awards capped off with the Reid A. Bryson Distinguished Professorship of Climate, People and Environment, which was presented to Civil and Environmental Engineering Professor Paul Block. Block made a few remarks about the award after jokingly advising the audience to "get comfortable." The celebration wrapped up with photos, conversation, and congratulations among attendees, and a celebration of the Nelson Institute's phenomenal team of faculty, affiliates, students, and staff. Perhaps best summed up by Chancellor Mnookin in her opening remarks, "We're the birthplace of environmental conservation, we're the place that showed the world how to bring swaths of land back to life and manage them properly... we're the birthplace of satellite technology, a pioneer in remote sensing and the use of data science to monitor the health of the environment... and, of course, we're the birthplace of the Wisconsin Idea."

Looking Back: Nelson Institute Day of Giving

On September 29, alumni, students, and friends came together to support the Nelson Institute's environmental professional programs.

We did it — together!

Thank you to everyone who participated in the 2023 Nelson Institute day of giving on Friday, Sept. 29. The generous donations we received will directly support the Nelson Institute — specifically, our environmental professional programs which celebrated their 10th anniversary this year! We are so grateful for the incredible dedication and commitment of the global Nelson family. Thank you for investing in our future!

Thank you, Nelson community!

Support NELSON

Interested in supporting the Nelson Institute? There are many ways to contribute to the Nelson Institute — participating in our events, mentoring our students, providing connections to your personal networks, and making financial gifts. All of these are necessary and important to us, and we invite you to invest in our community in the way that makes the most sense to you.

Learn more about all of the great academic programs, research centers, and public programs we offer.

Gifts in any amount are needed and appreciated!

Welcoming Baratunde Thurston to the Jordahl Stage

Baratunde Thurston weaves together threads of race, technology, democracy, and climate at the annual Jordahl Public Lands lecture.

By Anica Graney

"When I say Jordahl, you say lecture!" Baratunde Thurston began, followed by the chants of the crowd.

Baratunde Thurston. Photo by Mathieu Young

The Jordahl Public Lands Lecture Series welcomed Baratunde Thurston, a writer, activist, and comedian, for a night of laughs and insights.

Audience members gathered at the Wisconsin Union Theater on Thursday, October 5 to hear from Thurston, who is the host and executive producer of the PBS television series, *America Outdoors with Baratunde Thurston*, as well as creator and host of the podcast, *How To Citizen with Baratunde*. Additionally, Thurston is the author of *New York Times* best-seller, How To Be Black, a comedic memoir about his childhood.

Born and raised in Washington, D.C., Thurston recounted his own history as he related his lived experience to current environmental issues. "When we're connected, we care. When we care, we preserve and extend and no longer see nature as this thing outside of us," Thurston said.

The Jordahl Public Lands Lecture Series is an annual event that honors the work of Wisconsin conservation pioneer Harold "Bud" Jordahl, who was the architect of much of the conservation policy framework that we take for granted today. The lecture series defines the latest thinking in public lands acquisition, stewardship, and science.

Right top: Baratunde Thurston jokes with the crowd as he recounts stories from his childhood and how they have shaped him into the person he is today. Right bottom: Baratunde Thurston and James Mills, honorary fellow, Nelson Institute for Environmental Studies sit down for a Q & A session after the lecture. Photos by Anica Graney (2)

Tales from the Gates of the Arctic Circle

Blackwaters: Brotherhood in the Wild is this semester's Tales from Planet Earth event

By Anica Graney and Laila Smith

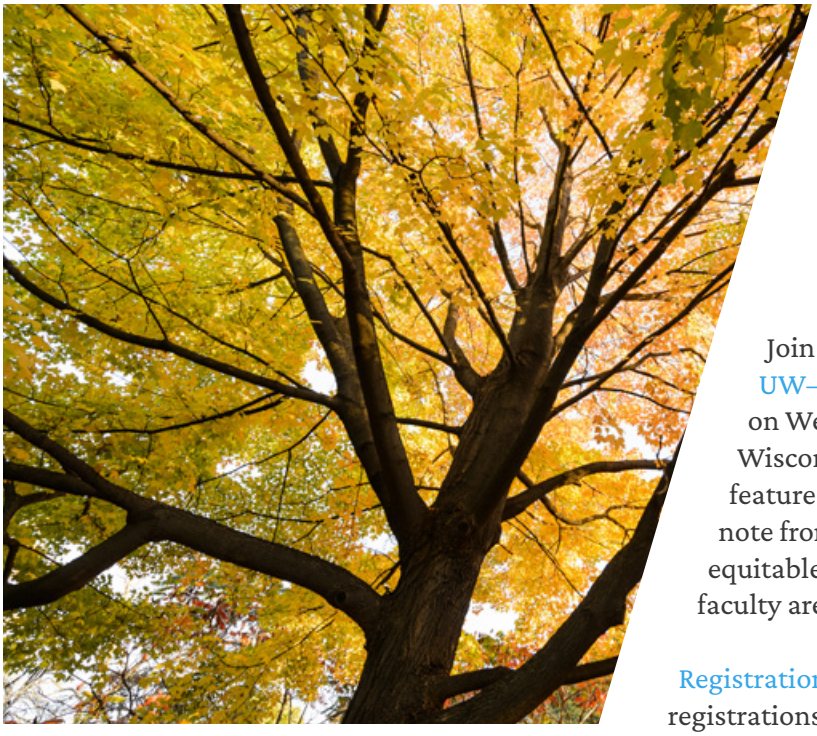
"Where do I, as a Black man, fit in nature?" "How do we hold space in nature for our next generation of young men?" These are some of the questions posed by the new documentary *Blackwaters: Brotherhood in the Wild*, which follows five men with five unique perspectives as they journey to the Gates of the Arctic Circle National Park.

The Nelson Institute's Tales from Planet Earth film series had the opportunity to host three viewings of *Blackwaters: Brotherhood in the Wild* for the University of Wisconsin–Madison campus and surrounding community on September 16, 17, and 18. Each screening was followed by a Q&A with the cast, with those that attended the Lussier Family Heritage Center screening were able to participate in fly fishing demonstrations, view a fishing gear display, and enjoy free pizza.

The film focuses on the unique healing nature can provide – each man recounting their personal struggles and finding peace in the outdoors. Through their journey and experience filming the movie, they hope to inspire young Black boys to find self-fulfillment in the great outdoors just as they have.

Originating over a decade ago, the Tales from Planet Earth film series links compelling narratives to the work of scholars and community organizations advocating for environmental and social justice. Learn more about the Tales from Planet Earth film series and this semester's film, Blackwaters: Brotherhood in the Wild.

Top: Following the screening, the Blackwaters cast (seated) with Operation Fresh Start participants and leaders. Photo by Diane Stojanovich; Top left: Attendees browse booths inside the Lussier Family Heritage Center before the film screening. Middle left: Learn to fly (fish)! Attendees were able to participate in fly fishing demonstrations before the film screening. Left: The Lussier Family Heritage Center provided a lovely outdoor space to connect with nature before the film screening. Photos by Anica Graney (3)



Sustainability Symposium Call to Register

Join the Office of Sustainability at the second annual UW–Madison Sustainability Symposium taking place on Wednesday, October 25 from 1–5:30 p.m. at the Wisconsin Institute for Discovery. The Symposium will feature lightning talks, posters, refreshments, and a keynote from Dr. Weslynne Ashton entitled "Crafting a just, equitable, and circular food system." All students, staff, and faculty are welcome to attend this no-cost event.

Registration is open through October 23, though in-person registrations at the event will also be allowed.

Save the Date for the CCR Symposium November 7

Alexandra Tempus

Oliver Buechse

Steve Vavrus

The Center for Climatic Research (CCR) invites you to the 2023 Climate Change Symposium: Will Wisconsin become a Climate Haven? on Tuesday, Nov. 7, from 4 to 5:30 p.m. at the Wisconsin Institute for Discovery's DeLuca Forum.

The Climate Change Symposium provides an opportunity for the UW–Madison community to learn about the effects of climate change on our natural resources and ecosystems, as well as economic and public policy implications. This year's theme — Will Wisconsin become a Climate Haven? — will present a balanced and in-depth discussion about the possibility of climate-induced human migration to Wisconsin.

Hear presentations from three expert panelists, followed by a group Q & A.
Panelists include:

Alexandra Tempus, climate-change journalist and UW alumna

Oliver Buechse, economic psychologist and futurist

Steve Vavrus, CCR scientist and co-director, Wisconsin Initiative on Climate Change Impacts (WICCI)

Register today

LEVELING UP

TIPS + ASSISTS FOR YOUR POST-COLLEGE GAME PLAN

nelson.wisc.edu/leveling-up

Join us

in celebrating the Nelson Institute year-round by purchasing branded merchandise, shirts, sweatshirts, jackets, bags, and more!