



College of Letters & Science
UNIVERSITY OF WISCONSIN-MADISON



LIMNOLOGY NEWS

News for Alumni and Friends of the Center for Limnology

Fall 2023

Researching the Waters of Wisconsin and the World

Read more on pages 4-5



Jake Vander Zanden helps conduct fieldwork on a small alpine lake in les Écrins National Park, France.



Photo: Jeff Miller



As I sit at my desk making a final proofread of this newsletter, I'm struck with a deep pride to be a part of the Center for Limnology (CFL). This newsletter gave me a chance to ponder how our work and our impact truly spans from local to global. The global scope of our work is exemplified by Emily Stanley's recently co-authored *Nature* paper on global methane emissions from running waters. But beyond that, CFL researchers are engaged in diverse projects and collaborations spanning the

far reaches of our world – examples from Switzerland, Mongolia, Bonaire and Belize, and Antarctica (!) described on pages 4-5. At the same time, CFLers are deeply engaged in our communities in both Madison and Boulder Junction, WI - whether it be The Wilkinson Lab and their "Pond Pals" in Madison (page 3), or the wild rice project in Vilas County (page 8).

Moving beyond our current research projects, I'm also happy to share some exciting news - two CFL faculty, Hilary Dugan and Grace Wilkinson, both earned tenure this past year! We are all delighted to have the two of them as members of the CFL family. I honestly couldn't ask for more fantastic colleagues.

In other news - Madison is hosting the upcoming Association for the Science of Limnology and Oceanography (ASLO) meeting, to be held June 2-7, 2024 (aslo.org/madison-2024/). On behalf of myself and Grace Wilkinson (as meeting co-chairs), we would love to see you at the ASLO meeting at Madison's Monona Terrace next summer. It is sure to be a great chance to catch up with friends and colleagues from around the world.

It will also be a chance to help us celebrate the 100th anniversary of Trout Lake Station (TLS)! TLS alumni are invited to make the trek north for the weekend prior to the ASLO meeting (May 31 - June 2) to help celebrate the Station's 100th birthday. Stay tuned for more information about this event.

And finally, I extend my warmest thank you to the many generous alumni, friends, and donors who support the CFL on an annual basis. Your support allows us to continue to expand our impact - from the local to the global. I always love to hear from friends and alumni of the CFL, so please don't hesitate to drop me a note and an update.

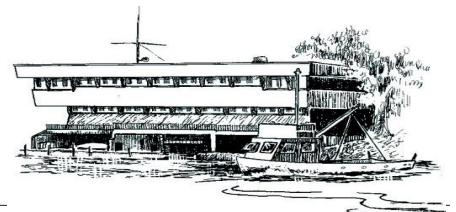
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Small But Mighty: “Pond Pals” Community Science Project Already Yielding Big Results

by Adam Hinterthuer



Amanda Pickart and her children monitor Lakeview Pond and record measurements like chlorophyll. *Photo credit: Codie Heidemann*

On a rainy June day in 2022, members of [Grace Wilkinson’s lab](#) at the CFL set up a couple of folding tables with microscopes and a display of assorted limnological information near a small pond in Elver Park on Madison’s west side.

It was their very first “[Pond Exploration Day](#)” and they were there for two reasons. First, to introduce passersby to their local body of water and, second, to recruit members of the public to help with an ambitious new study on urban ecosystems.

While no one volunteered on that first soggy day, the Wilkinson Lab’s “[Community Water Monitoring Network](#)” was up and running by the end of the summer, with more than a dozen community members signed on to help CFL researchers better understand some of the more than 300 stormwater ponds and other small water bodies throughout Madison.

Now, with two summers in the books, the program is running strong, consisting of seven teams of volunteers that visit their assigned pond each month. Each team is equipped with the

scientific tools they need to record data on things like temperature, water clarity and conductivity (a measure of salinity), as well as physically collect water samples that are then sent back to the lab for processing.

Amanda Pickart is one of these volunteers and, along with her children, collects data on a pond in Middleton’s Lakeview Park each month. Pickart says that the past year has been a “rewarding experience” and has grown her family’s connection to the small slice of urban nature they study as well as to the university and the community.

“It’s been really fun to return to the same nature spot over an extended period of time and get to know the space on a deeper level,” she says. “I love that my kids are able to see research being conducted by the university in a tangible way and inspire their own scientific discoveries.”

As of this fall, Amanda and the project’s fourteen other “Pond Pals” have recorded more than 3,000 observations and measurements and collected nearly 200 water samples at six ponds scattered around the Madison metropolitan area.

At some of the sites, says Wilkinson lab manager Helen Schlimm, these community members are “the only people we have collecting data,” which means that these volunteers are responsible for much of what we know about these ponds. “They’re contributing to science,” Schlimm says. “Their data is absolutely being used.”

This community-generated data is crucial to getting at the bigger picture of these tiny bodies of water, says Wilkinson, an associate professor at the CFL and the lead researcher on the project.

“The collective eyes and ears of our community monitoring partners combined with their local knowledge of the ponds has been critical for addressing our current research questions and generating new ones,” she says. “The sensors that we deploy in the ponds provide one way of ‘viewing’ the ecosystem and how it changes through time, but the combination of human observation and local knowledge, physical sample collection, and sensors provide the best context for understanding how these ponds are changing.”

Schlimm agrees, saying that the program is “thriving” and, noting that the lab has retained all of its original volunteers. “I think of it as our ‘small but mighty’ team,” Schlimm says. “We’re reaching fifteen people who really do science and make observations, [and] share the experience with each other and their kids.”

Schlimm says the project adds to the growing movement to engage more members of the public in this kind of citizen, or community, science. And, hopefully, it shows people that science is accessible and approachable and not just something for a professional in a white coat in a lab. “The common definition of a scientist needs to be debunked,” Schlimm says. “If you’re going out and observing anything and keeping track of how it changes and taking pictures, that can be science.”



Volunteers explore aquatic insects with Helen Schlimm at the forebay to Stricker’s Pond. *Photo credit: Cami Schroeder*





Aerial view of Sheenjek River in the Arctic National Wildlife Refuge
Photo Credit: A. Bonogofsky, USFWS

Charted Waters: Center for Limnology Research Spans the Globe

by Adam Hinterthuer



Emily Stanley

In August of this year, a study mapping global emissions of methane, a potent greenhouse gas, was [published in the prestigious journal, *Nature*](#). CFL professor [Emily Stanley](#) was a co-author of that study, which offered fresh insights into the global rates, patterns, and drivers of methane emissions from the world's running waters.

The study found that streams and rivers produce a lot of methane and play a major role in climate change dynamics. It also revealed some surprising results about how – and where – methane is produced. For example, contrary to scientific expectations, streams and rivers of the Arctic tundra produced comparable amounts of methane as warmer tropical waterways in the Amazon rainforest. The researchers also found that, in many parts of the

world, freshwater methane emissions are primarily controlled by human activity in and around both urban and rural waterways.

The study highlighted areas to focus our efforts as the world scrambles to reduce greenhouse gas emissions. For example, Stanley says, for streams and rivers, at least, “from a climate change perspective, we need to worry more about systems where humans are creating the circumstances that produce methane” rather than areas where it’s naturally occurring.

It was just another example of the CFL’s global reach. But Stanley isn’t the only researcher at Hasler Lab or Trout Lake Station contributing to the world’s understanding of our freshwater resources. CFL faculty and students are working in waters across the globe. Here’s a look at some of those projects.

SWITZERLAND: [Jake Vander Zanden](#) spent the past academic year on sabbatical at the University of Lausanne, Switzerland. Some of his work was carried out from atop the LeXPLORE research platform, a floating raft of sensors, scientific equipment and on-the-water lab space that is permanently anchored in Lake Geneva (Switzerland/France). Vander Zanden is using compound specific stable isotopes to understand the lower trophic levels of Lake Geneva's food web, and working with Marie-Elodie Perga and her [LAKES](#) group in their mission to document and understand how peri-alpine and alpine lakes are changing in our warming world.



Jake Vander Zanden conducts research on alpine lakes from the LeXPLORE research platform in Lake Geneva. *Photo Credit: Guillaume Cunillera*



Pictured (from left to right): Maggie Shaw, Ashley Trudeau, Ganzorig Batsaikhan, Dr. Mendsaikhan, and Joe Mrnak prepare for a day of research on Lake Hovsgol.

Photo: Anne Readel

MONGOLIA: Northern Mongolia is one of the fastest warming regions on earth. [Olaf Jensen's](#) lab studies the impacts of climate warming and other anthropogenic (human induced) change on lakes and rivers in this region, with a focus on how warming impacts the animals that call these waters home and the health of Mongolia's unique inland fisheries. On their most recent visit, Jensen, along with staff and students from the CFL and a few other UW affiliates, continued a long-term study of fish populations in the 18th largest lake in the world, Lake Hovsgol.

BONAIRE and BELIZE: While Trout Lake Station director [Gretchen Gerrish](#) spends most of her time on northern Wisconsin's beautiful lakes these days, she hasn't completely lost her connection to her earlier work in the warmer, saltier waters of the Caribbean. Gerrish, an evolutionary ecologist, conducts research on bioluminescence in tiny marine crustaceans called ostracods. Gerrish works on a group of ostracods commonly called "sea fireflies" and studies how they use the light they produce in both defense and courtship displays and how those behaviors change as species evolve. Last year, she helped discover five new species - two from the waters off of the Caribbean island of Bonaire and three in Florida as part of the UW-Madison's new [UW Marine Biology in the Florida Keys](#) course she taught with [Olaf Jensen](#) and [Robert Johnson](#).



Gretchen Gerrish exploring reefs of Bonaire.

Photo credit: Trevor Rivers



Charlie Dougherty gets an airlift to an Antarctic research site. *Photo: Peter Doran*

ANTARCTICA: [Hilary Dugan](#) is one of the lead researchers on the the [McMurdo Long Term Ecological Research](#) (MCM LTER) project in Antarctica. The MCM LTER brings in researchers from all over the world to study the unique ecosystems of Antarctica's McMurdo Dry Valleys. They have been collecting data since 1993 to test theories on ecosystem structure and function, focusing on meteorology, soils, streams, lakes, glaciers, and permafrost. This year Dugan and grad student Charlie Dougherty will be in Antarctica collecting data on the Dry Valley lakes.



Aerial photo of Lake Mendota taken by Brendan Heberlein during a LakeView test run in October, 2023.

Eye in the Sky: Cutting Edge Technology May Change What We Mean When We Say Lake View by Adam Hinterthuer

Early next year, as soon as Madison's lakes thaw from their winter freeze, CFL research professor [Paul Hanson](#) and graduate student [Sophia Skoglund](#) will start scanning the weather forecast for a calm, sunny day.

And, when conditions are just right, they, along with a handful of other UW-Madison research labs and one Wisconsin Department of Natural Resources (WDNR) airplane, will head out on - and above - Lake Mendota to launch an ambitious new project.



Bennett McAfee and Jimmy Sustachek sampling on Lake Mendota during the test flight of LakeView, October, 2023.
Photo by Sophia Skoglund

Dubbed "[LakeView](#)," the project will harness the power of hyperspectral imaging to help researchers get a clearer view of water quality dynamics in Lake Mendota, Lake Wingra and a couple of small stormwater ponds in the Madison area.

Hyperspectral imaging is essentially a way to use a high-tech camera mounted to a satellite or airplane to produce extremely detailed maps of a landscape. It has been used for years by scientists like geologists looking for oil deposits or agronomists wanting to precisely apply pesticides or fertilizers to fields.

But, says Hanson, the technology hasn't made the same waves in bodies of water - especially inland lakes. And that's something he and his team hope to change.

"Inland lakes have this fundamental problem in that they look like black, featureless bodies with current imaging, so they're typically not analyzed in the same way as terrestrial systems. All of the algorithms scientists have created to interpret these images are for terrestrial or marine systems, not lakes." That, Hanson says, is where LakeView comes in.

Their plan is to have the WDNR airplane - outfitted with hyperspectral imaging equipment - fly between 15 to 20 missions next year during conditions of clear skies and calm water. At the

same time the plane is up in the air looking down on the lake, research crews will be out in boats collecting real-time data on everything from water clarity to dissolved oxygen levels to the different species of algae present in the lake at that specific moment in time.

"When we look at the surface of a lake, we might note the clarity or color and then wonder why it looks that way," says Sophia Skoglund, a first-year graduate student working on the LakeView project with Hanson. Different things in the water reflect and absorb light at distinct wavelengths, Skoglund explains, and those differences create the colors we associate with things like the green of an algae bloom or brown, muddy tint of sediment erosion.

As the WDNR airplane is flying overhead, Skoglund will be out on the lake collecting data so that scientists can see how the images the LakeView camera takes correspond with real-time conditions in the water. By comparing the data they collect from the lake to the hyperspectral images, the team will be able to develop computer algorithms that can "read" the images and capture what is going on in the water. Eventually, says Skoglund, whole teams of researchers like hers won't need to be out on a lake to get real-time data. One satellite or airplane flyby will be enough to get a sense of current conditions.

The LakeView project is designed, in part, to "unlock the power of upcoming hyperspectral satellite missions," planned by NASA over the next one to five years, Skoglund says. Those flights will greatly increase the number of lakes captured in these giant global imaging datasets. If researchers can learn beforehand how to read what those images are telling them about the condition of lakes across the world, it will be a powerful tool.

"We have information on probably only one percent of U.S. lakes, so this is a huge opportunity to do a much broader scale assessment," Hanson says. "The problem is we don't know how to interpret the data yet." But, thanks to LakeView, he says, "that's where we're headed."

Tenure, Times Two! Hilary Dugan and Grace Wilkinson Hit "Career Milestone" in 2023 by Adam Hinterthuer

The Center for Limnology was thrilled earlier this year when two of our faculty reached an important milestone in their careers. Both [Hilary Dugan](#) and [Grace Wilkinson](#) received tenure within the UW-Madison's Department of Integrative Biology and we couldn't be happier to now have them fully established here at the CFL.



Grace Wilkinson

Grace, whose work on Madison's smaller water bodies is featured on page 3 of this newsletter, works to better understand water quality, nutrient cycling and food webs in freshwater systems across Wisconsin and strives to provide policy-relevant information to guide efforts to manage them. Grace joined the CFL from Iowa State University in 2021 and, as Dean Eric Wilcots remarked upon her promotion to tenure, "has positioned herself to take over the legacy of [research] put in place by some of her predecessors." It's quite the legacy, but we know Grace is up to the task!



Hilary Dugan

In addition to earning tenure, Hilary was this year's recipient of the Phillip R. Certain & Gary D. Sandefur Distinguished Faculty Award, which recognizes efforts in the classroom, laboratory and community. You can read more about Hilary's far-flung research interests in Antarctica on page 5 of this newsletter but, closer to home, she helps lead the CFL's winter limnology research programs and studies - among many other things - how the road salt we use on winter roads and parking lots is pushing our freshwater systems to salty extremes.

Congratulations to both Hilary and Grace. We feel lucky to have them here at the CFL and look forward to seeing where their research leads.

Monitoring Manomin: A Collaborative Study on Wild Rice Lake

by Madelyn Gamble, 2023 Trout Lake Station summer scicomm intern



Ally Kundinger, Sagen Quale, and Moira Keith sampling one of their wild rice plots.

Photo: Madelyn Gamble

Last Monday, I woke early to join our wild rice crew for a day of sampling. I knew the day would be a chance to learn more about this important native plant species and was excited to get out on the water.

After a quick boat ride out to the wild rice bed, visiting Georgia Institute of Technology graduate student Eric Greenlee and I hopped into a canoe. The wild rice summer field crew, consisting of UW-Madison undergraduate Ally Kundinger and recent UW graduates Sagen Quale and Moira Keith switched out the outboard motor on their jon boat for a pair of rowing oars. Since the wake from a motorized boat can uproot wild rice plants and kill them, we had to take things slow. As they rowed, thunder rumbled in the distance – nature’s clock was ticking on this sampling adventure.

Manomin (wild rice) has been harvested for many generations in northern Wisconsin by Native American communities. Manomin shares a long history with the Menominee people and is part of the Ojibwe migration story that led to their settling in the Great Lakes region. Harvested in the early autumn, wild rice is valued as a resilient resident of many waterways and holds many life teachings.

While Indigenous people in Wisconsin lost access to many lands during logging and colonization in the early and mid 1800’s, they never lost their connection to wild rice, advocating for waterways and retaining their rights to gather and manage rice beds in what came to be called the “Ceded Territories.” Today, the species remains vital to many Indigenous communities as Tribes across the state work to preserve and restore Manomin populations.

Trout Lake Station is excited to be partnered with several communities on its wild rice research, including the Lac du Flambeau Band of Lake Superior Chippewa. This partnership fosters efforts to restore declining wild rice populations while preserving the cultural connections to the species. It allows researchers to learn about the history of the plant, in hopes of implementing effective and ethical sampling methods.

This article is an abridged version of Madelyn Gamble’s original post of the CFL blog. Maddie worked as Trout Lake Station’s summer science communication intern this year, along with her fellow intern, Anna Mueller who was Hasler Lab in Madison, WI. To read more of both their work, visit the [CFL blog](#).

New Faces at the CFL

Jimmy Sustachek - Hasler Lab



I am excited and honored to be a part of such a wonderful academic community here at the CFL. I worked in the LTER Chemistry Lab as an undergraduate student from 2009–2011, and it is great to be back. My previous positions at UW were with the Agroecology Department and the State

Lab of Hygiene testing soil and rainwater samples. My interests outside of the lab include music, movies, cooking, fishing, and biking. I look forward to producing high-quality datasets for the LTER program as well as our graduate students’ diverse projects.

Jonathan Lytle - Trout Lake Station



My passion for the Northwoods came at an early age while working with my aunt and uncle, owners of Wildcat Lodge resort in Boulder Junction. I learned about maintaining boats/motors, assisting guests, and fell in love with fishing and hunting. Having been gone for the last 15 years, I am excited

to work here at TLS as Facilities Technician III. I keep our fleet of boats, motors, trailers, and field and research equipment ready for spring through fall research season, and assist with cabin and grounds maintenance.

Field Samples: Graduate Students and Postdoc



Cassie Ceballos (Ph.D., Stanley)

Cassie is originally from the western suburbs of Chicago, IL. She obtained BS and MS degrees in biology at Northeastern IL Univ. For her MS thesis research, she studied the algal communities that grew in a novel wastewater treatment system that was being tested to further reduce nutrients and pollutants in wastewater. This project ignited an interest to further understand how primary producer communities influence the movement of nutrients in natural systems such as freshwater lakes. In her first year at the CFL, Cassie began studying how aquatic plants have responded to rapidly rising water levels at Fish Lake in northwestern Dane County. When Cassie is not working, she enjoys spending time with her dogs Bacon and Linda and visiting family back home in Chicago.



Quinn Smith (Ph.D., Vander Zanden & Jensen)

Quinn grew up in the Twin Cities, MN and completed his BS and MS degrees at the Univ. of MN–Duluth. While at Duluth, he researched changing habitat conditions in Lake Superior and the effect of coarse woody habitat additions on fish behavior in northern WI at TLS. Now at the CFL Quinn continues to research fish in the Northwoods. His PhD research focuses on walleye populations across the Midwest, and what confluence of interactions leads to successful fisheries and how we can manage these fisheries in the future. When he's not in the field, wrangling R code, or teaching the next generation of fishy folk, you can find Quinn fly fishing the Driftless, climbing the local crags, snowboarding in search of the next great line, or SCUBA diving in his favorite lakes.



Bryan Maitland (Postdoc, Jensen)

Bryan was born and raised in New York City and completed his BS in Conservation Biology from SUNY: ESF. Summer undergrad research experience on the St. Lawrence River inspired his love of all things aquatic. He received an MSc in Conservation Biology from the Univ. of Alberta, before moving down the Rocky Mountains to the Univ. of WY for his PhD in Ecology. Bryan is a quantitative ecologist with broad research interests working on aquatic conservation and management. Recently, he has investigated the role of climate change on stream trout fisheries across Wisconsin, and the resilience and stability of the Lake Michigan food web. When he is not doing science, you can find him reading, fishing, or mountain biking.

Catching Up With Alumnus Aaron Koning

Earlier this year, Aaron Koning received the Hynes Award for New Investigators by the Society for Freshwater Science. We thought that was a good excuse to catch up!

Where are you now and what are you up to? I am currently at the Univ. of Nevada in Reno working as a Postdoctoral Research Fellow on the [Wonders of the Mekong Project](#) led by CFL alums, Zeb Hogan and Sudeep Chandra. Next June, I'll transition to a Teaching Assistant Professor position here in the Dept. of Biology.

What led you to study at the CFL? I had been working with a study abroad program in Thailand that worked with American college students and introduced them to concepts in sustainability while spending lots of time living with Thai and Indigenous communities. I realized ... I'd need a PhD to continue teaching at the college level. My decision to come to the CFL had to do with [its] reputation, as well as finding an advisor who was willing to take a risk on a student in Thailand with rather limited research experience!

Any fond memories you'd like to share? I have lots of fond memories of the CFL including going on the Sapelo Island field course, celebrations at the Terrace following successful proposal and thesis defenses (as well as paper rejections), and lively conversations with other students.

What's Next? I'll soon be starting a new project in my Thai study sites with a colleague from Oxford University. My partner, Stephanie (UW Ph.D. Population Health, M.S. Sociology 2018), recently started an Assistant Professorship in UNR's School of Public Health and our daughter, Ada (7), is gearing up for her second winter on skis!

Read full interview with Aaron at limnology.wisc.edu/news-events/newsletters/catching-up-with-alumni/



Exploring the Intersections of Art and Science: A 2024 Traveling Exhibition

by Amber Mrnak



Electrofishing, 2022, Catherine Nelson

Get ready to explore the inspiring work that occurs when art and science connect. In 2024, a traveling exhibition will highlight the works of many talented interns, artists, and scientists who have been working side by side to blend these two fields.

The upcoming exhibition will feature the works of six art-science interns and their mentors - six professional artists. Participants of the program have spent the last two summers in the field with scientists at the Wisconsin Department of Natural Resources, Lac du Flambeau Tribal Natural Resources, and UW-Madison Trout Lake Station where they were immersed in science and the creation of works of art based on their experiences. The exhibit will also feature contributions from artists associated with our ongoing artist in residencies that takes place during the chillier fall and winter seasons.



Sven the Painted Turtle, 2022, Cameo Boyle



Escanaba in Pastel, 2023, Sophia Sperduto

This exhibit will travel to several locations throughout Wisconsin during 2024 and hopes to inspire audiences with the unique insights that occur when art and science combine. Visitors will be able to tap their inner artist and explore their inner scientist while taking in the many works of art.

You can learn more about the program and everyone involved by visiting drawingwater.weebly.com

For now, enjoy a small sneak peek of the upcoming exhibition and stay tuned for more details!



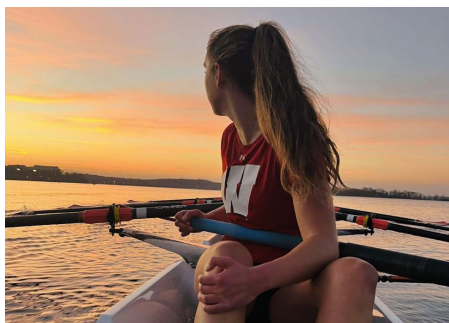
Green Frog, 2022, Libby Hetzel



Pelagic Food Web Gothic, 2023, Ananda Van Wie

CFL's Summer Science Communication Internships Give Undergrads the Chance to "See the Lake Differently."

by Anna Mueller, 2023 Hasler Lab summer scicomm intern



Anna Mueller pauses during UW Rowing team practice to enjoy the sunrise.

I have grown up in the Madison lakes – jumping into Mendota and Wingra every summer without a second thought, doing polar plunges late in the fall, fishing with my brother. And, this year, rowing competitively for the Badgers. I wanted to stay in Madison while pursuing my interests in English and Environmental Studies this summer, so I was thrilled to find a position that combined them perfectly at the CFL.

On my first day at "LimnoLaunch," an event lasting several days that prepares new students for summer field work, I learned how to use tools to get water and sediment samples. Later, I observed zooplankton, scuds, bloodworms, snails, spirogyra, mayfly larvae, and seemingly countless other organisms found in a cup of Mendota lake water harvested off of the dock.

Postdoctoral researchers showed me Aphanizomenon, a type of cyanobacteria (or blue-green algae) that had bloomed a few weeks prior and was still present in the water. Aphanizomenon can produce both liver and kidney toxins as well as neurotoxins, which affect the nervous system. I remembered rowing with my team through an algae bloom two weeks earlier and described to the postdocs what I had seen.

"Yup, that was Aphanizomenon," one of them told me, nodding his head. I looked back under the microscope at the algae, which resembled a microscopic bunch of grass, and considered how little I knew about the environment I was rowing – and breathing – in every day. I have accidentally drunk plenty of Mendota water while rowing, and living in Lakeshore dorms my first semester, I was immersed in the aquatic ecosystem every day. Here was a lab attempting to understand the lakes, ponds, wetlands, and rivers surrounding us, and within the first few hours, I already looked at the lake differently. In the same way that I have come to think of soil as an upside-down forest, with roots, animals, and organisms creating an even more complex ecosystem below ground, I now looked at the lake as a complex and busy frontier. I am excited to learn more. I am excited by how much more there is to learn.

When I row across the lake during early morning training with the UW rowing team, our boats send ripples through glassy water reflecting the bright colors of Memorial Union chairs. We watch the sun rise behind the Capitol. We hear flocks of American coots jump away from us as one. We get cold out there, rowing through wind and waves for hours, and the chill sets in deep, reminding us that we are alive. The lake is also alive. It is a part of this community, this town, this world.

This article is an abridged version of Anna Mueller's original post of the CFL blog. Anna worked as Hasler Lab's summer science communication intern this year, along with her fellow intern, Madelyn Gamble who was up at Trout Lake Station. To read more of both their work, visit the [CFL blog](#).

limnology.wisc.edu

See you in Madison!



Adapting to a
Changing World

1-7 June 2024
Madison, Wisconsin USA

2024 is a big year for the Center for Limnology. Not only are we hosting ASLO in Madison, we will also be celebrating the 100 year anniversary of Trout Lake Station!

Stay tuned for more details.

THANK YOU FOR SUPPORTING THE CFL

The generosity of our supporters allows the Center for Limnology to continue to train the next generation of limnologists, generate new knowledge about inland waters, and share this knowledge with diverse audiences. Please consider making a gift to the Center for Limnology.

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CFL PhD candidate **Danny Szydlowski** standing alongside his coffee table art piece at the Darwin Day art competition hosted by the Wisconsin Evolution. Danny's artwork depicts the bathymetry of the Yahara Chain of Lakes. Lakes are colored with dyed epoxy resin to match average relative color from satellite imagery.