



UPSTREAM

News from Itasca Biological Station and Laboratories



Photo of Lake Itasca on April 21st, 2020 by Station Biologist Lesley Knoll. Lesley and her lab tech Lindsey Blake keep an eye on lakes throughout Itasca State Park to track ice-in and ice-out dates. They are continuing the database that has decades of ice cover data recorded by the Itasca Station. For ice cover data and other Station data resources, checkout z.umn.edu/itascadata for more information.

First Person: A Day in the Field

Molly Moran gives us a glimpse of what a typical day is like for her work as a field researcher.

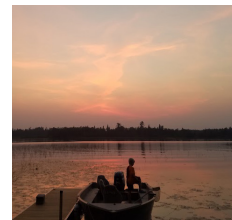
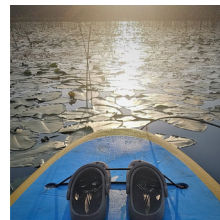


For the past couple of years, I've had the opportunity to conduct field work at the Itasca Biological Field Station. Situated near the intersection of four biomes, Itasca provides an array of research opportunities and attracts scientists of all backgrounds. During my stays, I do research, participate in public outreach programs, and spend every moment of free time on Lake Itasca.

A typical day starts bright and early with a trip to the dining hall. The amazing dining hall staff always cook up the best food, making it easy to get up early. After breakfast, I stop by the lab to gather necessary tools for the field. This generally includes flagging tape, calipers, a compass, and of course, my bug jacket. I load up the truck and head out to our designated experimental plots north of the station. Last Summer, I set up an experiment studying fungal "cannibalism". I emerged a fungal based biomaterial in pre-established microbiomes. Studying how fungi, dead and alive, interact with one another can tell us a lot about our ecosystems. Analyzing these relationships can help us more accurately estimate sequestered carbon levels as well as understand the role of fungi within carbon cycling. Being out in the field is also a great time to practice my native mushroom and plant identification skills!

After a long day, I head back to the station to relax for the evening. My favorite activity is spending time on the lake with a paddleboard. As the weather cools in the evening, a sunset bike ride to the beach after dinner is a perfect ending to busy day at the Itasca Station.

Molly Moran
Research Technician, Dept. of Plant & Microbial Biology



Greetings from Itasca!



DIRECTOR'S MESSAGE

More than ever, I hope this note from the North finds you well. Our annual Spring newsletter is meant to be short, sweet, and uplifting as we head into Summer. I am not about to change that – we need a refreshing boreal breeze right about now.

I will, however, give an update here on our Reduced Operations status, and what COVID-19 means for the Station. In terms of teaching, the Nature of Life orientation has been pushed to a Fall on-campus event in the Twin Cities, and we cancelled Field Biology courses for only the third time in the station's history (1918, 1944, and now 2020). Research has been reduced to essential, ongoing projects, only, and all engagement is virtual. We, the staff, are taking all precautions to keep the facilities safe, sound, and ready for action.

Dean Forbes and hard-working CBS staff have helped me make 'bridging' our seasonal staff a priority, an immense gesture of tactical support in rural Minnesota. Our sleeves are now rolled up for philanthropy, community-building, and pay-it-forward sustainability upgrades. Stay tuned! We are reinforcing our constitution, building pride, and sensing our common good – Minnesotan, to the core.

One more thing, 'Fertile Myrtle', the black bear, recently emerged with two cubs. Her family reminded my family that that nature offers comfort, even in surprise encounters, and that hibernation can end well. Minnesotans are turning to nature in large numbers during these COVID times. We need nature for our mental health, and our reconnecting is largely motivated by deep, innate desires, not by data. We need those connections. Our students and our future need those connections. Conservation depends on the empathy within those connections. It's never been more obvious to me. We need Itasca.

Jonathan Schilling
Professor, Dept. of Plant & Microbial Biology

Program Highlight

We have numerous programs that stay at the Station every year. Get to know one of these groups for a glimpse at the variety of programs that come to the Station!

Spring 2020 featured program:

LA5202: Landscape Analysis Workshop. This is a course for incoming students in the College of Design's Landscape Architecture graduate program.

What is the program's history at Itasca?

The group has been coming to the Station for over 20 years. Professor Emeritus David Pitt (Dept. of Landscape Architecture) used to lead the group in a week-long course, but it now runs for 3 and a half days at Itasca. The group is one of the only groups to leave the Twin Cities and arrive just in time for lunch as their kick-off to time at the Station.

Why come to Itasca?

The Workshop introduces students to the basic techniques of site analysis, spatial understanding, and graphic representation of landscapes. Itasca State Park and surrounding landscapes are good field sites to use as an introduction (see photos below of group at Frenchman's Bluff and Preacher's Grove). They even use John Tester's book Minnesota's Natural Heritage: An Ecological Perspective to help guide their course. Plus, it gives students a unique chance to meet other students and faculty in a northwoods atmosphere!



Photos of LA5202 students at Frenchman's Bluff (top) and Preacher's Grove (bottom) from Department of Landscape Architecture's Facebook page @UMN.LA

Spring Discoveries While Working From Home

We hear from Lindsey Blake, who reminds us to take a break sometimes to discover.

“Look Mama, I found a bird skull!” exclaimed my kindergartener. She and her second grade brother have been doing some major explorations outside now that they have been home from school full time and needing to use some of their pent up energy, since the majority of their distance learning consists of sitting in front of a screen. “Wow honey! What an interesting find!” I responded as I grabbed a snack from the kitchen during a break from teleworking.



The “Ifounda” list (and pile) is growing quickly with snow slowly melting away and revealing all sorts of treasures that were previously locked in the deep winter freeze - including but not limited to: bird nests, beaver bones, beaver chewed logs, a lost boot, rocks, bears, bear tracks leading to bear nests, uniquely shaped sticks for use as all sorts of tools, and piles of “antiques.”



As I was working from our tiny office, I overheard the duo continue to wonder aloud about the bird. Questions and hypotheses were fired off by both Alden and Bailey at an amazing rate. “It is a baby eagle! It has a meat-eating beak but is so small.” “How did it die? Maybe another eagle ate it!”

Eventually they found their bird book at the suggestion of dad. With the excitement only an eight year old and a six year old can bring, the two perused the book and compared and contrasted the structures of the birds aloud. I heard dad gently guiding them towards the American Kestrel as this was his initial guess and I was lured back downstairs to take another look myself. Eventually

we took out a ruler (I would have preferred a micrometer but we do not have one at home) and had Alden measure the length (63 mm) and width (34 mm) of the skull. Using an online bird bone identification guide (royalbcmuseum.bc.ca), we narrowed down our little raptor to either the Cooper’s Hawk (*Accipiter cooperii*) or Northern Harrier (*Circus cyaneus*). Living on the edge of a prairie in our wooded lot, both raptors made sense. We then emailed the University of Minnesota Raptor Center with a picture and dimensions of the skull to give us a final determination of the species. We heard back that it is most likely a Cooper’s Hawk due to the more “squished” skull.

This took about ten minutes of my time and the kids have already moved onto another adventure. I am back to work upstairs staring at a screen, but I know the discovery and study of this specimen will last much longer than those minutes. COVID-19 has taken more of our time than any of us would like. We feel lucky that our family unit has not yet been hit by COVID-19, and we are thinking about those who have been affected. We are missing the traditional education of our children, time spent with friends and extended family, and my time at the Itasca Station where normally in the spring I am helping prepare the station for incoming field biology students and scientists and ramp up for field research and outreach. These losses result in additional time at home, where deep discoveries in our immediate environment are possible and this I believe is quite the treasure for my children. What are your stay at home discoveries this spring?

Lindsey Blake
Research Technician, Itasca Biological Station & Labs

Socialize with us - from a distance!

Follow us on Facebook and Twitter @ItascaBio

We’ve started an Instagram page @ItascaBioStation ! Follow us there to keep up with cool sights from around the Station and for glances back in time for #throwbackThursday. Have a cool photo or story from your time with us? Send it to IBSL@umn.edu for a chance to be featured on our page!

Check-out our artist-in-residence exchange artists Karen Goulet @gouletke and Monique Verdin @moniqueverdin as they “takeover” the Weisman Art Museum’s Instagram account @weismanartmuseum.

