January 16th, 2024

HUBBARD BROOK MONTHLY December 2023 issue

Recent Publications

Cochrane, MM, BR Addis, LK Swartz, and WH Lowe. 2024. Individual Growth Rates and Size at Metamorphosis Increase with Watershed Areain a Stream Salamander. *Ecology*. https://doi.org/10.1002/ecy.4217

Zukswert, JM, MA Vadeboncoeur, and RD Yanai. 2023. Responses of stomatal density and carbon isotope composition to N, P, and Ca fertilization in sugar maple (Acer saccharum Marsh.) and yellow birch (Betula alleghaniensis Britton). *Tree Physiology.* https://doi.org/10.1093/treephys/tpad142

Education and Outreach

Here are some stats about the 2023 tour season from Brendan Leonardi:

- 30 tours were hosted at Hubbard Brook this year for 21 unique schools, serving almost 700 individuals.
- 5 Zoom-A-Scientist sessions were held for 4 schools, serving over 200 students
- 5 additional outreach programs were organized for over 150 individuals
- A total of 1,175 individuals were served through guided forest tours, zoom sessions, school visits and outreach programs in 2023!

The 7th session of the Young Voices of Science program just concluded! To date, YVoS has served 149 students from 78 unique academic institutions, including participants from the U.S, Canada, Scotland, Portugal, China and New Zealand.

Hubbard Brook in the News

Measuring record-high rain in N.H. from unusual December flood
The Boston Globe Morning Report

NH Project Learning Tree Teacher Tours
Northern Woodlands

Announcements

Hubbard Brook's 2024 January Quarterly Project Meeting took place at the Environmental Barns at Vassar College on January 3-4 in Poughkeepsie, NY. Day 1 of the meeting focused on reviewing the LTER Proposal Process, and the topic for Day 2 was Beech Leaf Disease. Thanks to Peter Groffman, Pam Templer, Nat Cleavitt, and John Campbell for organizing, and as always thanks to Hazel Westney for logistical support! You can find video recordings from the meeting here.

Mirror Lake experienced Ice-In and Ice-Out twice in December 2023 before refreezing in early January, an event which has never before occurred over the 60 year record. In 2018, the lake froze twice and thawed once, prompting this paper by Likens et. al. Tammy Wooster reported Mirror Lake's first Ice-In of the season on December 5th, an Ice-Out on December 18th, the second Ice-In on December 22nd, the second Ice-Out on December 29th, and finally a refreezing event on January 2nd, 2024. Stay tuned for the next chapter in the Chronicles of Mirror Lake.

2024 Youth Forum on Climate Action and Clean Energy
January 18, 2024 in Concord, NH

Days before the NH presidential primary, students and public figures will explore policies and solutions for building a robust and resilient climate economy.

The Hubbard Brook Research Foundation, the League of Conservation Voters, and the

Irving Institute for Energy & Society at Dartmouth College will host a youth forum at the intersection of public policy, climate action, and the clean energy economy. Through this public in-person event, NH students will engage with policy and corporate leaders, U.S. presidential candidates, celebrated authors and actors, philanthropists, and entrepreneurs to explore opportunities for building an economically strong and environmentally secure future.

Contact Anthea Lavallee for more information, and stay tuned for opportunities to participate or to attend.

News from the LTER Network Office:
Join the NEW LTER Community Forum! Filtering through information about the 28 LTER sites can be overwhelming when you're looking for people, research methods, and experiences relevant to your project or idea. This new forum can help you navigate the wealth of knowledge and connections available to you in the LTER Network. Register to connect with your peers from other sites!

LTER Community Calls are another new initiative from the LTER Network starting in January 2024. These open discussions will focus on community-proposed topics. Learn more or propose a topic here.

The **Spring** Quarterly Project Meeting will be held virtually on Wednesday, April 10, 2024, from 10am to 3pm, with a possible earlier end time. The topic will be Carbon (with more details to come) and the the organizers will be Lynn Christenson, Christy Goodale, and Pam Templer.

Dayna's DEI Digest

The Hubbard Brook Guidelines & Expectation Checklist: A tool for improving communication

Dayna De La Cruz (She/They)
Community Relations Specialist

You heard about the The Hubbard Brook Hiring Checklist in last month's piece, but we have more! Introducing the Hubbard Brook Guidelines & Expectation Checklist.

While the Hiring Checklist is focused on promoting communication during the hiring process, the Hubbard Brook Guidelines & Expectation Checklist is meant to continue this communication into the field season. On site, each field crew tends to have its own "culture." And we would like to encourage crews to discuss values and standards at the beginning of the season in order to set guidelines for behavior and interactions and to clarify expectations across the community.

This tool will be provided to field crews and individuals to facilitate communication about expectations and help prevent or mitigate friction within field crews and among residents. This includes topics relating to responsibility clarity, power dynamics, living details or anything else related to communal living and work/life balance. There are two sections to this tool: The Housing Dynamics and the Work Dynamics.
Some of the checklist questions include:

- Housing
    - What are the expectations of the living space? What boundaries will we implement? What are some house rules we would like to enforce?
    - How are chores divided? What's the plan with cooking/meals? When are quiet hours? Should there be a limit on discussions of work in the living space (i.e., limited to certain times or upon asking first, etc.)

- Work/Crew
    - What are some general goals of the season (academic, work, personal)?
    - How often will we check in about our project? How often will we check in about our field experience on site? About our group dynamics? Where will these check-ins happen?
    - What to do if we have a grievance? What if I would like to stay anonymous?

We will encourage PIs/crew leaders to send these completed checklists to the Community Relations Specialist (that's me!) prior to or upon arrival to the site so that they can be discussed during the first house meeting. This tool is still in its development stage and we hope it evolves into a helpful hand that increases communication across our community. Feel free to provide any feedback to ddelacruz@hubbardbrookfoundation.org.

Shout-Outs

From Anthea to Raisa: Thank you for doing such effective and quick leg-work between Hubbard Brook scientists and reporters at the *Boston Globe*, days after record-breaking streamflow and region-wide flooding. Your hard work paid off and effectively highlighted Hubbard Brook as a go-to source for scientific perspectives on weather events that impact daily life!

Hubbard Brook Data Report

A few new and updated datasets are listed below. As you work on data analysis and manuscripts, please be sure that you have made a plan with the Hubbard Brook Information Manager (IM; (mary.martin@unh.edu) to submit your data to the Environmental Data Initiative Repository (EDI). Journals are now have increased expectations for data associated with manuscripts. Don't let this take you by surprise! The data publication process is now easier than ever, and by working with the Hubbard Brook IM your published dataset will align well with other Hubbard Brook data and data within the wider Long-Term Ecological Research (LTER) network. Also note that publications based on Hubbard Brook data should include the site acknowledgment, and that can be found at https://hubbardbrook.org/information-management. You will also find information on that page about our data use policy, instructions on data citation, and more.

USDA Forest Service, Northern Research Station. 2023. Hubbard Brook Experimental Forest: Routine Seasonal Phenology Measurements, 1989 - present ver 14. Environmental Data Initiative.
https://doi.org/10.6073/pasta/dd7429ad7d78ef68714f09fd775a817b
(Accessed 2024-01-10).

USDA Forest Service, Northern Research Station. 2023. Hubbard Brook Experimental Forest: 15-minute Precipitation Measurements, 2011 - present ver 7. Environmental Data Initiative.
https://doi.org/10.6073/pasta/114a90da00f909622d96175ecfc15378
(Accessed 2024-01-10).

USDA Forest Service, Northern Research Station. 2023. Hubbard Brook Experimental Forest: Daily Precipitation Rain Gage Measurements, 1956 - present ver 20. Environmental Data Initiative.
https://doi.org/10.6073/pasta/d1465d1fcf7956578b0fb213d025c440
(Accessed 2024-01-10).

Zammarelli, M.B. and R.T. Holmes. 2023. Hubbard Brook Experimental Forest: 10-ha bird plot territory maps, 1969 - 2021 ver 1. Environmental Data Initiative.
https://doi.org/10.6073/pasta/df93595ba8df60570d472f6e6f58839e
(Accessed 2024-01-10).

Faey, T.J. and N.L. Cleavitt. 2024. Hubbard Brook Nitrogen Oligotrophication (HBNO): Leaf mass per area ver 1. Environmental Data Initiative.
https://doi.org/10.6073/pasta/a62a4261c79ab2de38bc564828582de9
(Accessed 2024-01-10).

Thanks for reading!