

\*Please see a corrected version of the April Hubbard Brook Monthly below with an additional item in the Announcements section.

May 5, 2022

## HUBBARD BROOK MONTHLY April 2022 issue - Corrected

### Recent Publications

Hong, DS, KE Gonzales, TJ Fahey, RD Yanai. 2022. Foliar nutrient concentrations of six northern hardwood species responded to nitrogen and phosphorus fertilization but did not predict tree growth. PeerJ.

<https://doi.org/10.7717/peerj.13193>

Likens, GE. 2022. Aldo Leopold's "Odyssey" and the development of the ecosystem concept and approach. Socio Ecol Pract Res 4, 17–18.

<https://doi.org/10.1007/s42532-022-00107-9>

Mason, RE, JM Craine, NK Lany, M Jonard, SV Ollinger, PM Groffman, RW Fulweiler, J Angerer, QD Read, PB Reich, PH Templer, AJ Elmore. 2022. Evidence, causes, and consequences of declining nitrogen availability in terrestrial ecosystems. Science.

<https://doi.org/10.1126/science.abh3767>

Pardo, LH, MB Green, SW Bailey, KJ McGuire, and WH McDowell. 2022. Identifying controls on nitrate sources and flowpaths in a forested catchment using a hydrogeological framework. Journal of Geophysical Research. Biogeosciences.

<https://doi.org/10.1029/2020JG006140>

Symes, LB, [KD Kittelberger](#), SM Stone, RT Holmes, [JS Jones](#), IP Castaneda Ruvalcaba, MS Webster, MP Ayres. 2022. Analytical approaches for evaluating passive acoustic monitoring data: A case study of avian vocalization. Ecology and Evolution. <https://doi.org/10.1002/ece3.8797>

If your publication is missing from this list, please let us know:

[scielinks@hubbardbrookfoundation.org](mailto:scielinks@hubbardbrookfoundation.org)

### Hubbard Brook in the News

How the environmental movement won with acid rain

[WSGW](#)

### Outreach and Education Update

As part of a synthesis project about community resilience, Sarah Garlick and Raisa Kochmaruk convened a series of three facilitated dialogues this past month with Hubbard Brook scientists, economists, business leaders, natural resource managers, and decision-makers from state and federal agencies and regional NGOs. Look for their upcoming report this summer.

Lindsey Rustad collaborated with educator Woodsy Owl and Maria Janowiak from the US Forest Service on an Earth Day video about climate change and trees. Watch the video [here](#).

On April 2, Teacher Mariella Mannino presented a workshop titled "WaterViz: Using Data-Derived Art & Music to Teach Water Cycle Science" at the National Science Teaching Association Conference, Houston, Texas.

### Shout-Outs

Sara Kaiser gives a shout-out to Cornell undergraduates in the Hubbard Brook Field Ornithology Program, John Deitsch and Lindsey Forg, for submitting their honors theses

to the College of Agriculture and Life Sciences:

- Artificial Light at Night increases top-down pressure on caterpillars: experimental evidence from a light-naïve forest
- DNA metabarcoding reveals within-season variation in the diet of the insectivorous black-throated blue warbler (*Setophaga caerulescens*)

## Announcements

The AMC is seeking a Research Fellow 'to advance our understanding of climate change and the responses of montane ecosystems by integrating our own mountain science-based research into a global context.' Working with the Staff Scientist, Director of Research and other AMC staff, the Fellow will investigate a range of questions concerning mountain climate change utilizing AMC's and other mountain climate datasets to identify current conditions and spatial and temporal trends.

Click [this link](#) for more information and to apply.

The Fragile Rainbow art exhibition will have its opening reception on Saturday May 7, from 3-5pm ET at the Williamsburg Art and Historical Center. Hubbard Brook artist Rita Leduc and collaborator Rich Blundell have contributed to this exhibition through their Ecology Extended project. Read more about the exhibition [here](#).

On May 22, Rita and Rich will present Ecology Extended: A Conversation at the same location.

The Research Approval Committee (RAC) met in April and approved all four proposals for new projects, including:

- Phenotyping functional hydraulic traits across NH (Vadeboncoeur)
- Canopy phenology and litter decomposition monitoring at the APE plots (Vadeboncoeur)
- Salvage dendrochronology of white ash across the Hubbard Brook valley (Vadeboncoeur)
- Evaluation of Soil Erosion in Small Scale Watersheds using  $^{239} + ^{240}\text{Pu}$ ,  $^7\text{Be}$ , and  $^{210}\text{Pb}$  as Soil Erosion Tracers (de Castro Portes)

Scott Bailey has stepped down from the RAC. Linda Pardo has joined as the new Chair. All inquiries about new proposals should be addressed to Linda.

## Hubbard Brook Data Report

A revised page on our website now provides one-stop access to information about the availability and use of Hubbard Brook data, instructions on acknowledging the Hubbard Brook Ecosystem Study and Forest Service in publications, and adding your publications to the Hubbard Brook bibliography: <https://hubbardbrook.org/information-management>

You've seen a preview here, and now you can check out the first official release of the *lterdatasampler* R package, described in this [blog](#). It's easy to install and has great examples of data exploration and analysis – including our very own sugar maple seedlings! <https://lter.github.io/lterdatasampler/>

For questions about Hubbard Brook data, please contact:

[nina.lany@usda.gov](mailto:nina.lany@usda.gov) – for questions about data collected by the US Forest Service

[mary.martin@unh.edu](mailto:mary.martin@unh.edu) – for questions, instructions, and assistance in submitting your data to the repository.

## New datasets:

Diggs, F.M. and J.N. Nash. 2022. Multiple Element Limitation in Northeast Hardwood Ecosystems (MELNHE): Root cores and mycorrhizal colonization ver 1. Environmental Data Initiative. <https://doi.org/10.6073/pasta/ae6b0ef1390b1294cf7adc7d41de8cdc> (Accessed 2022-04-28).

Walsh, G.E. 2022. Multiple Element Limitation in Northeast Hardwood Ecosystems (MELNHE): Salt Exchangeable Cation Extractions from Hubbard Brook and Bartlett sites

ver 1. Environmental Data Initiative.

<https://doi.org/10.6073/pasta/02e2764efb408a8b66b7f486eac14dc0>

(Accessed 2022-04-27).

Bourgault, R.R. 2022. Hubbard Brook Experimental Forest: Watershed 3 Manganese Transects ver 1. Environmental Data Initiative.

<https://doi.org/10.6073/pasta/40e07ab244d6942bff7c39334ff70f29>

(Accessed 2022-04-27).

#### **Updated datasets:**

Hubbard Brook Watershed Ecosystem Record (HBWatER). 2022. Continuous precipitation and stream chemistry data, Hubbard Brook Ecosystem Study, 1963 – present. ver 7. Environmental Data Initiative.

<https://doi.org/10.6073/pasta/b8ae3f31fcd2de3f53b2b394f122aa69>

(Accessed 2022-04-21).

Fisk, M. 2022. Soil properties in the MELNHE study at Hubbard Brook Experimental Forest, Bartlett Experimental Forest and Jeffers Brook, central NH USA, 2009 - present ver 3. Environmental Data Initiative.

<https://doi.org/10.6073/pasta/275ad28a2f31356cf9c2648531a16a2b>

(Accessed 2022-04-27).

Johnson, C. and W. Clymans. 2022. Mass and Nutrient Loss in Decomposing Hardwood Boles on Watershed 1 at the Hubbard Brook Experimental Forest, 1990 - present ver 3. Environmental Data Initiative.

<https://doi.org/10.6073/pasta/eea0fc6d80b5c9e246371af376eb4f55>

(Accessed 2022-04-27).

Thanks for reading!