

HUBBARD BROOK MONTHLY February 2021 issue

Recent Publications

Bayer, MO, LK Swartz, and WH Lowe. 2021. Predictors of Biofilm Biomass in Oligotrophic Headwater Streams. *Northeastern Naturalist*.

<https://doi.org/10.1656/045.028.0103>

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

sciencelinks@hubbardbrookfoundation.org

Hubbard Brook in the News

Pandemic Sparks Innovation at New Hampshire's Influential Hubbard Brook Experimental Forest

[New Hampshire Public Radio](#)

The Science and Power Behind Ice Storms

[New Haven Register](#)

Episode 238: The Lasting Impacts Of The Station Nightclub Fire; What We Can Learn From New England's Forests

[NEXT](#)

Hubbard Brook Data Report

Since the submission of the 2016 LTER renewal proposal, Hubbard Brook investigators have submitted 84 completely new datasets to the EDI repository! With our total submissions at 225, this represents a huge uptick in our data submission rate – great job everyone!

An EDI/LTER working group has just released a best practices document covering the curation of datasets that fall outside of our typical tabular format. Examples are: spatial data, models, code, documents, audio, drone, and extremely large datasets. If you have a data that you've hesitated to publish because they are a bit out of the mainstream, these guidelines will help. The read is a bit in the weeds, but your HBR Information Manager will take care of the details necessary to prepare these data for submission to the repository. Contact mary.martin@unh.edu to get started in developing repository-ready datasets of any type.

To read in the browser:

<https://ediorg.github.io/data-package-best-practices/datapackage-design/>

To download the pdf:

Gries, C., S. Beaulieu, R.F. Brown, S. Elmendorf, H. Garritt, G. Gastil-Buhl, H. Hsieh, L. Kui, M. Martin, G. Maurer, A.T. Nguyen, J.H. Porter, A. Sapp, M. Servilla, and T.L. Whiteaker. 2021. Data Package Design for Special Cases ver 1. Environmental Data Initiative. <https://doi.org/10.6073/pasta/9d4c803578c3fbc45fc23f13124d052>

New and updated datasets:

For a number of years, species lists have been available on the hubbardbrook.org website. These have been updated periodically from the original lists published in "Organisms of the Hubbard Brook Valley" by Dick Holmes and Gene Likens in 1999. The most recent updates occurred in January 2021, and are available at:

<https://hubbardbrook.org/hubbard-brook-species-lists>. They have also been submitted to the EDI repository for long-term preservation.

Holmes, R., H. ter Hofstede, L. Christenson, and G. Likens. 2021. Mammal species recorded within the Hubbard Brook Experimental Forest and vicinity (1963-2020);

updated January 2021). ver 2. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/c84aa617a5372b4a9e96e39381282092>

Lany, N., E. Stange, R. Holmes, and G. Likens. 2021. Lepidoptera species recorded within the Hubbard Brook Experimental Forest and vicinity ver 1. Environmental Data Initiative. <https://doi.org/10.6073/pasta/c3548c8dc618c670bf248cabb94c00a>

Likens, G., W. Lowe, D. Buso, and R. Holmes. 2021. Amphibian species recorded within the Hubbard Brook Experimental Forest and vicinity (1963-2020; updated January 2021). ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/0ddea32e0354352e4b590131ca1ce8cd>

Likens, G., D. Buso, and G. Winant. 2021. Fish species recorded within the Hubbard Brook Experimental Forest and vicinity (1963-2020; updated January 2021). ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/782759b2916c317430dbfd9b764a9c9a>

Buso, D., G. Likens, and R. Holmes. 2021. Reptile species recorded within the Hubbard Brook Experimental Forest and vicinity (1963-2020; updated January 2021). ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/32df8f7c7fb9084521e18b1b0974304d>

Holmes, R., S. Sillett, and M. Hallworth. 2021. Bird species recorded within the Hubbard Brook Experimental Forest and vicinity (1963-2020; updated January 2021). ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/da6cbb1ed8142d52a9d72762983742d8>

The following 3 EDI data packages contain the full hyperspectral data cubes from the SpecTIR flights over Hubbard Brook on August 2012, February 2013 and March 2013. The data are georegistered and atmospherically corrected to surface reflectance. Data are packaged with files for each flightline (in a zip bundle), and an overview image for quick reference. The August 2012 imagery is at the core of the HB foliar N map (data citation in the last HB Monthly), and the winter images have been used in snow studies.

Ollinger, S. and L. Lepine. 2021. Hubbard Brook Experimental Forest: Hyperspectral Reflectance Imagery, August 2012 ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/ba356a0c3892a7bb9e624f25939ec3b5>

Ollinger, S. and L. Lepine. 2021. Hubbard Brook Experimental Forest: Hyperspectral Reflectance Imagery, February 2013 ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/5e32955846038c818e639088dc48cfc3>

Ollinger, S. and L. Lepine. 2021. Hubbard Brook Experimental Forest: Hyperspectral Reflectance Imagery, March 2013 ver 1. Environmental Data Initiative.
<https://doi.org/10.6073/pasta/fa9295b94c01ed53828ad87a11091ebb>

Outreach and Education Update

On February 3, John Campbell and Sarah Nelson presented on "Recreating in a Changing Climate," for the Sense of Place community forum series, co-organized by HBRF.

On February 4, Lindsey Rustad told the story "A near miss...a story about science and safety in the Forest Service" for a virtual classroom event hosted by the organization Exploring By the Seat of Your Pants. A recording is available at the following link:
<https://youtu.be/uwVfMVoTeak>

On February 9, Lindsey Rustad, Anthea Lavallee, Jenny Bower, and Nikki Lindt presented on "Soundscapes Beneath the Forest Floor: Soil, Water, and Rock Interactions" for the Squam Lakes Natural Science Center's Virtual Pub Night. A recording is available at the following link:
<https://youtu.be/C-ie3BzNZLI>

On February 13, Lindsey Rustad shared "Reflections on Navigating a Career in

Environmental Science" at the Women Blaze Trails festival. A recording is available at the following link:

<https://youtu.be/ALBtKyHgK44>

On February 17-18, Sarah Garlick participated in the Future of Synthesis in Ecology Workshop led by the National Center for Ecological Analysis and Synthesis (NCEAS).

On February 27, Sarah Nelson presented a poster from the Confronting Our Changing Winters Science Links project at the Acadia National Park Science Symposium organized by the Schoodic Institute.

<https://schoodicinstitute.org/science-symposium/>

In February, HBRF released transcripts and audio of a three-part interview with Gene Likens, recorded in 2020. The interviews are available at the following links:

<http://multimedia.hubbardbrook.org/interview-with-gene-e-likens-part-one>

<http://multimedia.hubbardbrook.org/an-interview-with-gene-e-likens-part-two>

<http://multimedia.hubbardbrook.org/an-interview-with-gene-e-likens-part-three>

Alix Contosta is presenting winter climate change synthesis research in a Protect Our Winters New England Local Alliance meeting on March 3.

Sarah Garlick, Natalie Cleavitt, and Anthea Lavallee are leading a Hubbard Brook Roundtable about the regeneration of northern hardwoods in the Northern Forest on March 25, 2021. This roundtable dialogue is supported by Cornell University's Engaged Opportunity program and the University of Maine's Leveraging Intelligent Informatics and Smart Data for Improved Understanding of Northern Forest Ecosystem Resiliency (INSPIRES) program.

Last August artist [Rebecca Schultz](#) spent a week at Hubbard Brook, where she accompanied Scott Bailey and Jenny Bower as they sampled soils and cored bedrock. Rebecca has been making paintings of rocks for several years. She explains "the revelation for me during this residency was learning how rocks are a dynamic and integral part of forest ecosystems. I made a series of paintings based on my experience at Hubbard Brook that visually reflect the connections Bailey and Bower are making with their research, including images of thin sections of weathering bedrock, the topography of the Forest, and bedrock crystal structures." This work is on display at the Abington Art Center, Abington, PA, through March 13th. The exhibit includes an augmented reality experience using the Artivive app created by University of the Art game design student Eden Blas. A local exhibition is planned for this summer (exact dates TBD) at the Patricia Ladd Carega gallery, Sandwich, NH. For more information about Rebecca's work, including an image of one of her Hubbard Brook paintings, see her blog post:

<https://www.rebeccaschultzprojects.com/artist-blog>

Hubbard Brook DEI Committee Updates

HBRF's Dan Clark and Anthea Lavallee will be hosting Zoom orientations for all who stay at Hubbard Brook facilities this summer. One important goal of these orientations is to review information included in the Resident Packets on workplace safety, inclusion, harassment, and anti-racism.

Dr. John Besley, Social Scientist and Professor of Public Relations at Michigan State University, will lead a 30-minute workshop on improving meeting dynamics for the HB community on **March 17, 2:30 - 3:00pm**. John has been working with HB for years as a Co-PI on HBRF's Public Engagement with Science program. The workshop will be during the second half of our regularly-scheduled monthly SCC meeting, and all are encouraged to join. **Be on the lookout for a Zoom link.**

All members of the LTER community who self-identify as a member of a group that is underrepresented in the network, their site, or their professional spaces are invited to join a monthly conversation group via Zoom. The next session will take place on **March 9** and will focus on tropical forest research. Register at the following link:

https://ucsb.zoom.us/meeting/register/tZMldeGsqTgoGNd4K6Q23y_xN-nwM0m_8RIT

If you missed the LTER Network Orientation last month but want to know more about the

Network's structure, resources, and how to get involved in the LTER community, you can access the slides and videos of the presentation here:

<https://lternet.edu/stories/lter-network-orientation/>

The LTER DEI Committee's highlighted diversity, equity, inclusion, accessibility resource of the month: This piece from NPR Shortwave features an audio interview with three science educators who discuss how they are building an anti-racist perspective into their curriculum and seeking to make the science classroom more inclusive. The page also has links to additional useful resources to help other scientists address systemic racism and promote inclusivity in their fields:

<https://www.npr.org/2021/02/12/967378819/anti-racist-science-education>

Save the Date

On **Monday, March 1 at 4pm**, the Dartmouth Political Union and the League of Conservation Voters are hosting a webinar on "Clean Energy and Climate Action: A National and New Hampshire Update." Register at the following link:

https://dartmouth.zoom.us/webinar/register/WN_5oBer2-KSJWxsFNgs72yKg

HBRF is a co-organizer with the White Mountain National Forest and other local partners of the Sense of Place community forum series. The next forum will be held **Wednesday, March 3 at 6:30pm** on Zoom to discuss "Supporting Diversity and Inclusion in the Outdoors." Register at the following link:

<https://www.eventbrite.com/e/sense-of-place-webinar-supporting-diversity-and-inclusion-in-the-outdoors-tickets-140882877479>

On **Monday, March 8 from 9am - 1pm ET**, HBRF is hosting a virtual Climate and Clean Energy Youth Forum in partnership with the League of Conservation Voters, the Revers Center for Energy at the Tuck School of Business at Dartmouth, ReVision Energy, Stonyfield Organic, and Sustainable Futures Consulting. Join for discussions and breakout sessions featuring: environmental and clean energy students, regional and national climate leaders, New Hampshire's Congressional delegation, scientists, business leaders, and environmental and climate justice champions. Register at the following link:

<https://www.mobilize.us/lcvnh/event/375742/>

And check the following website for updated information:

<https://www.nhyouthclimatetownhall.com/>

The Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) is hosting a webinar series on experimental catchment research at sites across the globe. The series will be held **Wednesday at 1pm EST from February 10 – March 31** and will feature short- and longer-format talks and discussions on research catchments, and their value to science and society. Mark Green, Peter Groffman, Bill McDowell, and Jeff Pu all have presentation slots. Please attend and share your ideas on cross-site syntheses!

https://zoom.us/webinar/register/6116111629183/WN_Swlag2TITeK3L7vqxsSj7g

Announcements

The Lowe Lab at the University of Montana (<http://hs.umt.edu/dbs/labs/lowe/>) is seeking 1-2 field technicians to assist with data collection in a long-term study of stream salamander population biology, movement, and ecology at the Hubbard Brook Experimental Forest in New Hampshire. The technician's primary duties will involve conducting mark-recapture and telemetry surveys of stream salamanders in headwater streams of central New Hampshire. The paid positions will last approximately 2.5 months, starting in June and ending in August, though some fieldwork in September is also possible. Housing is provided at Hubbard Brook in New Hampshire. Qualified candidates from all minority backgrounds and identities are strongly encouraged to apply. For a complete job description and application information, please contact Maddy Cochrane:

madaline.cochrane@umontana.edu. **The last date to apply is March 8, 2021.**

The Northeast Climate Adaptation Science Center (NE CASC) recently announced a call for Statements of Interest regarding Fiscal Year 2022 Research Awards. Available funding for the Northeastern region is up to \$1.25 million, and NE CASC intends to fund up to 6-10 projects through the FY22 RFP. The deadline for submission of Statements of Interest is

Friday, March 19th, 2021. More information here:

<https://necsc.umass.edu/news/call-statements-interest-ne-casc-fiscal-year-2022-research-awards>

The Northeastern States Research Cooperative (NSRC) recently announced the Indigenous Forest Knowledge Fund. The Spring 2021 Request for Proposals is now open and proposals are due by **4:30pm on April 2, 2021**. Find more information at the following link:

<https://nsrcforest.org/indigenous-forest-knowledge-fund>

Thanks for reading!