September 1, 2021

HUBBARD BROOK MONTHLY August 2021 issue

Recent Publications

Wymore, AS, PJ Johnes, S Bernal, ENJ Brookshire, HM Fazekas, AM Helton, A Argerich, RT Barnes, AA Coble, WK Dodds, S Haq, SL Johnson, JB Jones, SS Kaushal, P Kortelainen, C López-Lloreda, B Rodríguez-Cardona, RGM Spencer, PL Sullivan, CA Yates, and WH McDowell. 2021. Gradients of anthropogenic nutrient enrichment alter N composition and DOM stoichiometry in freshwater ecosystems. *Global Biogeochemical Cycles*. https://doi.org/10.1029/2021GB006953

If your publication is missing from this list, please let us know: sciencelinks@hubbardbrookfoundation.org

Hubbard Brook in the News

Climate change is already disrupting US forests and coasts – here's what we're seeing at 5 long-term research sites
The Conversation

Three Storms, A Bucket, A Stress Test: 10 Years Later, What Tropical Storm Irene Says About Climate Change In N.H. Now
New Hampshire Public Radio

Outreach and Education Update

Sarah Garlick, John Besley, and Marty Downs participated as invited speakers in a plenary session of the Long-Term Agroecosystem Research 2021 Annual Science Meeting on Tuesday, August 31. The title of their session was: Building the LTAR Network: Perspectives on Communication and Engagement.

New or Proposed Research

The HB Research Approval Committee (RAC) will meet in October to consider proposals received by 15 September. Jeff Garnas and Matt Ayres invite your participation in proposing an experimental study of ecosystem effects of emerald ash borer by protecting strategically selected groves of ash trees via injection of emamectin benzoate.

See the following link for a planning forum for ash protection experiment at Hubbard Brook:
https://docs.google.com/document/d/19lAc59o1b1L-8lmMfl0OQlbhO8CAe4rKMuB9yhyb_EA/edit

You are invited to add text, suggestions, and comments. You are invited to participate as an investigator in the RAC proposal. You are also invited to participate in a proposal to NSF RAPID if we get approval from the RAC and support from our friends at the Ranger District, whose help we will need with NEPA applications and other things. You are also invited to communicate via email if that is easier (matthew.p.ayres@dartmouth.edu).

Save the Date

The next Quarterly Project Meeting is scheduled for **Monday, October 25, 2021**, from 10am to 2pm via Zoom. The topic of the meeting is "Evolutionary Biology Research at Hubbard Brook."

Shout-outs!

Nat Cleavitt gives a shout-out to **Geoff Wilson** for taking the initiative and thorough approach to gun training and storage for foliage shooting!

Lindsey Rustad gives a shout-out to **Ian Halm**, who has spent much of August in service to our country in fighting fires out West. Embedded in this service is also the service of those who fill in behind him when he is gone from Hubbard Brook: **Amey Bailey and Gabe Winant**! Thanks to all, as it takes a village!

Hubbard Brook Data Report

This month's "Featured Dataset" in the EDI newsletter is one of our own! The recently published *Calling activity of Birds in the White Mountain National Forest: Audio Recordings*. Read all about it here: https://environmentaldatainitiative.org/edis-featured-data-contributions/birds-audio-recordings-hbes/

You can find lots of helpful information about organizing your data, and preparing it for repository submission on the EDI website (https://environmentaldatainitiative.org). Be sure to check out the Five Phases of Data Publishing—throughout all of the data publishing phases, Hubbard Brook Information Management is here to help you!

For questions about Hubbard Brook data, please contact:

nina.lany@usda.gov – for questions about data collected by the US Forest Service
mary.martin@unh.edu – for questions and instructions on submitting your data to the repository.

This month, we highlight updates to the Hubbard Brook Watershed Ecosystem Record (HBWatER). HBWaTER datasets have now all been updated through 2020, and submitted to the Environmental Data Initiative (EDI) repository. These datasets include the weekly sample chemistry data, and monthly watershed-level stream and precipitation fluxes. The data can all be accessed on EDI from the links below. Note that EDI provides the capability to read these data programatically into your analysis workflow. When reading direct from EDI, you can set parameters to read a specific revision of the data, or to read the latest revision with the most up-to-date observations. This feature is available for all Hubbard Brook data in EDI, and enables full traceability to the authoritative version of our data. Contact Mary Martin if you you would like assistance in incorporating this capability into your data analysis workflow.

Weekly stream and precipitation chemistry:

Hubbard Brook Watershed Ecosystem Record (HBWatER). 2021. Continuous precipitation and stream chemistry data, Hubbard Brook Ecosystem Study, 1963 – present. ver 6. Environmental Data Initiative. https://doi.org/10.6073/pasta/ee9815b41b79c134fd714736ce98676a.

For every watershed, a monthly flux dataset has been prepared. The links below will take you directly to the data, and there you will find the downloadable datafile, and the full citation to be used when working with these data.

Watershed 1
- Stream Flux: https://doi.org/10.6073/pasta/a912e690ebe20d6a10352143c0c8a24d
- Precipitation Flux: https://doi.org/10.6073/pasta/a446363d4a91dc8d5b10fd21b1d07b0c

Watershed 2
- Stream Flux: https://doi.org/10.6073/pasta/1a22e1a37f6802c632426f137d7f9049
- Precipitation Flux: https://doi.org/10.6073/pasta/240d76c802b788fd3f80d5da37da65b2

Watershed 3
- Stream Flux: https://doi.org/10.6073/pasta/ea3bf94e20a93b0e43b1a28fd0e5a38a
- Precipitation Flux: https://doi.org/10.6073/pasta/dbef4674cc5ec52a2270be1e9d99101f

Watershed 4

- Stream Flux: https://doi.org/10.6073/pasta/59ec30d409d3ef05e5f76f48eb18d325
- Precipitation Flux: https://doi.org/10.6073/pasta/c891683512866d3d54802afd3fdeacdc

Watershed 5

- Stream Flux: https://doi.org/10.6073/pasta/a471b540dd141e361b137bad8fc92389
- Precipitation Flux: https://doi.org/10.6073/pasta/040f892b35639062af522b05d7f0222c

Watershed 6

- Stream Flux: https://doi.org/10.6073/pasta/3f608226a1ed499e8fa3cd188e70757c
- Precipitation Flux: https://doi.org/10.6073/pasta/39887003e9c00b21953f9f5f03b558e7

Watershed 7

- Stream Flux: https://doi.org/10.6073/pasta/bbb8d5a6503d15c1d75b7de9775cb7a2
- Precipitation Flux: https://doi.org/10.6073/pasta/66abe226113bf576117f20fce354ddd7

Watershed 8

- Stream Flux: https://doi.org/10.6073/pasta/f8441200f77e2172af16e73ecc7ff25a
- Precipitation Flux: https://doi.org/10.6073/pasta/5bbc612af48edc3037d03946417dea48

Watershed 9

- Stream Flux: https://doi.org/10.6073/pasta/e6a8c2280faac6abf53fd25513d57c8f
- Precipitation Flux: https://doi.org/10.6073/pasta/97a46e1be241c6d68a136564c1469925

Thanks for reading!