Anthony John Stewart

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Education

University of Washington, Seattle, WA, Advisors – Dr. L. Monika Moskal and Dr. David Butman exp. 2025
Ph.D. in Environmental and Forest Sciences

University of New Hampshire, Durham, NH, Advisor – Dr. Heidi Asbjornsen 2017
M.S. in Natural Resources

Montana State University, Bozeman, MT 2014
Bachelor of Science in Environmental Science

Research Experience

Graduate Research Assistant, UNH, Seattle, WA 2020 – Present
Investigating remote sensing tools to evaluate and map terrestrial carbon storage driven by detection and characterization of inland wetlands.

Laboratory Manager, Cornell University, Ithaca, NY 2017 – 2020
Supported and managed research projects by operating analytical laboratory equipment and leading field research campaigns.

Graduate Research Assistant, UNH, Durham, NH 2015-2017
Evaluated effects of forest-to-agriculture land use change on landscape hydrology by conducting ecohydrological measurements and collaborating across disciplines with multiple researchers.

Student Laboratory Technician, MSU, Bozeman, MT 2013 – 2014
Assisted an investigation of NO_3 leaching from agricultural fertilizer into freshwater resources by processing soil and biomass samples and performing field sampling.

Manuscripts and Publications

Campbell, A.D., Fatoyinbo, T., Charles, S.P., Bourgeau-Chavez, L.L., Goes, J., Gomes, H., Halabisky, M., Holmquist, J., Lohrenz, S., Mitchell, C., Moskal, L.M., Poulter, B., Qiu, H., Resende De Sousa, C.H., Sayers, M., Simard, M., **Stewart, A.J**., Singh, D., Trettin, C., Wu, J., Zhang, X., Lagomasino, D., 2022. A review of carbon monitoring in wet carbon systems using remote sensing. Environ. Res. Lett. https://doi.org/10.1088/1748-9326/ac4d4d

Stewart A, Coble AP, Contosta AR, Orefice JN, Smith RG, Asbjornsen H. 2020. Forest conversion to silvopasture and open pasture: effects on soil hydraulic properties. *Agroforestry Systems*. DOI: 10.1007/s10457-019-00454-9

Coble, A.P., Contosta, A.R., Smith, R.G., Siegert, N.W., Vadeboncoeur, M., Jennings, K.A., **Stewart, A.J.**, Asbjornsen, H., 2020. Influence of forest-to-silvopasture conversion and drought on components of evapotranspiration. *Agriculture, Ecosystems & Environment* 295, 106916. https://doi.org/10.1016/j.agee.2020.106916.

Stewart A. 2019. Opinion: Governor is blocking Alaska's potential. Juneau Empire Newspaper.

Teaching Experience

Graduate Teaching Assistant, UNH, Durham, NH 2015-2017
Led four semesters of independent instruction for introductory biology focusing on evolution, biodiversity, and ecology through inquiry learning.

Naturalist, Seacoast Science Center, Rye, NH June 2016
Organized and educated K-12 student groups from various New Hampshire schools on intertidal marine ecology field trips.

Additional Professional Experience

Environmental Technician, Admiralty Environmental, Juneau AK Seasonally 2014 & 2015

Ensured State of Alaska and Federal regulated water quality by collecting and analyzing water quality samples from cruise ships, state ferries, and small tour vessels under regulatory scrutiny with compliance reporting in Juneau, AK.

College Intern, Alaska Department of Environmental Conservation, Juneau AK 2011 – 2013

Maintained and organized a file directory for environmental compliance and accounting documentation.

Datasets

Stewart, A.J., E.A. Kreitinger, P.M. Groffman, J.L. Morse, L.H. Pardo, L. Martell, and C.L. Goodale. 2020. Hubbard Brook Experimental Forest: Hourly soil oxygen, moisture and temperature across soil depths and an elevation gradient in the Bear Brook watershed; 2018-2019 ver 1. Environmental Data Initiative. https://doi.org/10.6073/pasta/7b3df681774e45523e37f47b9c744902

Presentations and Workshops

American Geophysical Union Fall Meeting Virtual 2021

Improving estimates of wetland carbon beneath a forest canopy through a spatially explicit remote sensing approach

North American Carbon Program Annual Meeting Virtual 2021

Wetland carbon stocks under forest canopy: a remote sensing approach

Hubbard Brook Ecosystem Study 57th Annual Cooperators Meeting, North Woodstock, NH 2020

Nitrogen cycle fluxes across hydropedological units: hots spots in watershed 3

Hubbard Brook Ecosystem Study 56th Annual Cooperators Meeting, North Woodstock, NH 2019

Taking a breath at depth: Soil oxygen in Hubbard Brook soils

Alaska Coastal Rainforest Center NSF RCN Workshop, Juneau, AK 2019

Transformation and Transport of Elements and Compounds from Terrestrial to Aquatic Systems Workshop

Hubbard Brook Ecosystem Study 55th Annual Cooperators Meeting, North Woodstock, NH 2018

Measuring Soil Oxygen at Variable Depths to Inform Denitrification Measurements

Northeastern Ecosystem Research Cooperative Conference, Saratoga, NY 2017

Land use change in the northeast United States: retaining forest structure and its soil hydraulic properties through silvopasture

American Water Resources Association Annual Conference, Orlando, FL 2016

Land use change in the northeast United States: retaining forest structure and its soil hydraulic properties through silvopasture

Awards

Instrumentation Discovery Travel Grant – CUAHSI 2021

Outstanding Student Presentation Award – 7th North American Carbon Program 2021

Mentorship

Whitney Denison, NSF Research Experience for Undergraduates 2019

Project: *Terrestrial Denitrification and Environmental Change*

Nathaniel Fisher, Biological Sciences Undergraduate Honors Program, Cornell University 2019

Project: *Controls on Denitrification at Three Depths in a Northeastern Hardwood Forest*

Nathan Chin, Environment and Sustainability Undergraduate Honors Program, Cornell University 2018

Project: *Effects of Nitrogen and Sulfur Deposition to Forest Ecosystems*