

November 9th, 2020

TWO PhD GRADUATE STUDENT OPPORTUNITIES in Ecosystem Ecology – University of New Hampshire

The Wollheim lab in the Department of Natural Resources and Environment at the University of New Hampshire seeks two PhD level graduate students to conduct research on:

a) the coupled biogeochemical responses to land use and climate variability in urbanizing, temperate watersheds through interactions with streams, rivers, fluvial wetlands, beaver ponds, and/or reservoirs. Coupling of carbon, nitrogen and/or sediment cycles are of particular interest. The position would emphasize field measurements and experiments, as well as modeling to synthesize results and scale from individual ecosystems to entire river networks. This project is funded through the National Science Foundation's Long Term Ecological Research Program for the Plum Island Ecosystems project (<https://pie-iter.ecosystems.mbl.edu/welcome-plum-island-ecosystems-iter>). The Plum Island Estuary receives drainage waters from suburban Boston via the Ipswich and Parker River watersheds, which have been experiencing ongoing land use change due to both human and animal (beaver) activity. Collaborating institutions include the Marine Biological Laboratory, University of South Carolina, Villanova University, Woodwell Climate Research Center, Boston University, and Northeastern University.

b) the controls of carbon dioxide evasion through streams in headwater catchments across the United States. The UNH component of this project emphasizes the development of dynamic models of catchment and stream carbon cycling to understand how CO₂ evasion varies as a function of climate variability in 5 watersheds across the US. Relevant field measurements that can inform the modeling are being collected by collaborating institutions. The watersheds are part of the National Ecological Observatory Network (NEON). The position will require the demonstrated ability and strong interest in working with big data sets and ecosystem models. Familiarity with NEON infrastructure and data streams is preferred but not required. This project is funded through the National Science Foundation's Macrosystems Biology program and is a collaboration with Virginia Tech, University of Washington, University of Alaska Fairbanks, and NEON.

For more information regarding either of these positions, please contact Dr. Wilfred Wollheim (wil.wollheim@unh.edu).

Qualifications: The candidate must have an M.S. in ecosystem ecology, hydrology, biogeochemistry, data science, environmental modeling or closely related field. Strong quantitative skills are required. A B.S. with experience will also be considered.

Start Date: Position available starting Fall Semester 2021.

To Apply: Send a letter of application, a statement of research interests, curriculum vitae, and contact information for three references (electronic versions of all materials are required) to wil.wollheim@unh.edu, Subject: UNH_PHD. Please attach all application materials as word documents or PDFs with the candidates name included in the file name. Review of Applications will begin immediately and will continue through January 2021 until a suitable applicant is found for the position. Accepted students will be part of the Natural Resources and Earth System Science (NRESS) PhD program, an interdisciplinary program that cuts across environment related fields on campus (see: <https://gradschool.unh.edu/natural-resources-earth-systems-science-phd>).

About Our Lab: Our dynamic lab currently consists of three PhD students, one Master's student, several undergraduate researchers, and several research scientists (see <https://wsag.unh.edu/index.html>). We strive to make a welcoming and inclusive workspace, and encourage working collaboratively towards the mission of understanding how the natural world and its interactions with society works. We also have the goal of expanding the diversity of students and perspectives. Students that are underrepresented in the natural sciences and STEM fields are especially encouraged to apply for these graduate positions. We seek to establish a diverse lab that is welcoming of all backgrounds and viewpoints as an important step to better understanding how the environment functions to ensure a sustainable society.

UNH is located in the Seacoast region of New Hampshire approximately an hour and a half from Boston, MA and an hour from Portland, ME.