MS Assistantship in Turtle Habitat Conservation at the University of Vermont

Project: The Mosher and Murdoch labs at The University of Vermont, Rubenstein School of Environment and Natural Resources, are seeking a master's-level graduate student to participate in research related to the conservation and nesting of Lake Champlain's shoreline turtle community in Vermont. The student will join a team of researchers from the University of Vermont and the Vermont Fish and Wildlife Department, as well as partners from Lake Champlain Sea Grant, Lake Champlain Land Trust, and Winooski Valley Park District. The position is available beginning in January 2022 and includes two years of funding (stipend, tuition waiver, and health insurance). We will also consider applicants who cannot start the position until May 2022.

Project description: Prioritizing land units for acquisition or management is a challenging but critical task that state, federal, and not-for-profit organizations face. These decisions are often made rapidly, either to halt species declines (for wildlife management projects), to capitalize on available parcels (for land acquisition projects), or harness funding. Developing tools that reflect management or acquisition priorities can support decision-makers in the prioritization process and should lead to decisions that are more likely to meet agency or organization goals.

Lake Champlain is one of the largest freshwater lakes in the US and lies between Vermont and upstate New York. The lake's shorelines provide valuable habitat for unique wildlife species, like turtles, but are also highly developed. Lack of high-quality shoreline nesting habitat is hypothesized to be one factor limiting LC turtle populations and is especially important for the state threatened spiny softshell (*Apalone spinifera*). As a result, Vermont Fish and Wildlife Department (VFWD) and Winooski Valley Park District (WVPD; partners in this research proposal) are considering whether restoration is possible in the LC Basin and how to prioritize sites based on their restoration potential. Similarly, LC Land Trust (LCLT; another partner) is a not-for-profit organization that acquires land parcels with high conservation value. Understanding how parcels rank in terms of their nesting habitat restoration potential can help these partners direct their valuable resources efficiently.

The objectives of this research project are to (1) identify characteristics that influence nesting beach suitability for three turtle species, including painted turtle (*Chrysemys picta*), map turtle (*Graptemys geographica*), and spiny softshell (*Apalone spinifera*), (2) synthesize information to develop and map nesting habitat suitability models for each species, and (3) develop an on-the-ground scorecard of restoration potential for spiny softshells and apply the scorecard to an important historic but currently unoccupied spiny softshell nesting site.

Qualifications: Bachelor's degree in ecology, biology, natural resources, environmental sciences or a closely related field. Applicants should have a strong work ethic, demonstrated writing capabilities, an interest in developing analytical skills, and a record of leadership. Excellent oral communication skills will be critical for this highly collaborative project involving other researchers, resource managers, and agency collaborators. In addition, the student must be comfortable working independently as well. Training will be provided, but experience working with ecological datasets (e.g., in R) is desirable.

Application: We strongly encourage applicants from underrepresented groups in science to apply for this position. GRE scores are not required. Interested applicants should submit 1) a cover letter expressing your interest, experience, and qualifications and 2) a CV with contact information for three references to Brittany Mosher (brittany.mosher@uvm.edu). **Applications will be reviewed as they are received, until November 19, 2021.** When you submit your materials, please use the subject line "Turtle Habitat Conservation MS Application".

Contact: Dr. Brittany Mosher (brittany.mosher@uvm.edu)