

## SURVEY OF FRESHWATER TURTLES IN SALMON BROOK, NASHUA, NEW HAMPSHIRE, USA

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Danielle Clement '24, a senior Biology/Pre-Vet major at Rivier University, who presented at the Transformative Learning Conference (TLC) in April 2024.

*"My name is Danielle Clement, and I am a senior Biology/Pre-Vet major at Rivier University, graduating in December 2024. I have always had a strong passion for animals and knew from a very young age I wanted to work in that type of field. Starting at my most recent job as a veterinary technician solidified my dream of becoming a veterinarian. Following graduation, I plan to attend veterinary school and obtain my DVM.*

*Working closely with turtles for my research alongside Professor Demers has been an enriching journey that has deepened my appreciation for animals and their well-being. Observing hundreds of turtles throughout my research has given me a deeper understanding of their behavior and importance to so many ecosystems around us. This experience has further ignited a passion for animal care and conservation. This research has driven me to delve deeper into the field of herpetology, which I am excited to pursue further in the veterinary field."*

### Abstract

New Hampshire is home to eight native species of freshwater turtles, including one introduced species, *Trachemys scripta elegans* (Red Eared Slider). Literature on freshwater turtle populations and ranges throughout New England is not as complete as in other parts of the United States. Here, we provide population parameters for three native species of freshwater turtles: *Sternotherus odoratus* (Common Musk Turtle), *Chelydra serpentina* (Snapping Turtle), and *Chrysemys picta* (Eastern Painted Turtle) that we captured using baited hoop nets or by hand over three years from 2021 to 2023. We obtained biometric data, including carapace and plastron length and width, mass, and visual sex on 404 *C. picta*, 19 *S. odoratus*, 21 *C. serpentina*, two *T. scripta elegans*, and one state-endangered *E. blandingii*. Turtles that were recaptured during the survey were remeasured unless caught earlier in the same trapping season/session. A minimum of ten traps were set at three locations throughout a small river tributary, Salmon Brook, in southern Nashua, New Hampshire, USA, during May and July 2021, April 2022, May and September 2023. This survey established prevalent species found in the Salmon Brook tributary. Data collected during the three-year period will be used as baseline information for a longer-term population study assessing spatial and temporal variation in the observed species. ■

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\* **DANIELLE CLEMENT** '24, a senior Biology/Pre-vet major at Rivier University, was a presenter at the Transformative Learning Conference (TLC) in April 2024.

† **JEREMY FONTAINE**, an independent researcher from Boston, Massachusetts, obtained a Master of Arts in Biology from Miami University and is an Environmental Compliance Officer (ENV SP) for the MBTA. Jeremy has five years of environmental permitting experience and over ten years of experience in safe handling and restraint of animals. He has been conducting freshwater turtle population surveys for the last four years.

‡ **SHANNA DEMERS**, Assistant Professor of Biology, obtained a Master of Science in plant pathology from North Dakota State University and a Master of Science in environmental studies from Antioch University. She is pursuing her doctorate at Antioch University. Demers is broadly trained as an ecologist. Her current research is focused on population dynamics of freshwater turtles in urban ponds and the role cryptogams (mosses/lichens) play in vascular plant succession following disturbance. Her passion is to encourage curiosity and wonder about the natural world and how it works.