

Preliminary characterization of overwintering habitat for Eastern Ribbonsnake (*Elapagtekjij*) Atlantic Canada population

Lori Phinney¹, Megan Gallant², Jeffie McNeil¹, Matt Smith², Abby Lewis¹

¹*Mersey Tobeatic Research Institute, Kempt, NS*

²*Parks Canada, Maitland Bridge, NS*

The Eastern Ribbonsnake (*Thamnophis sauritus*) is a slender semi-aquatic snake that inhabits freshwater wetlands and lakeshores during the active season. This species is listed as Threatened in Nova Scotia under both the federal Species at Risk Act and the provincial Endangered Species Act due to their apparent small population size and limited distribution. Little is known on the species' habitat requirements or the scale of threats it faces in Nova Scotia. To fill knowledge gaps on their overwintering ecology, we used the recently developed method of transmitter attachment via duct tape to track daily movements in spring and fall to and from summer and winter habitats. We tracked a total of 27 individuals in Queens County, Nova Scotia between 2018-2022 for an average of 18.8 days (range of 3 to 35 days). Effort was concentrated at Grafton Lake (n=17), Kejimikujik National Park and National Historic Site as well as other nearby waterbodies within 10 km. Of a subset of 7 individuals tracked to presumed hibernacula, habitat attributes included: forests dominated by white pine or intolerant hardwoods, close proximity to water (40-250 m), south facing aspect, slight elevation and well drained soil. The ability to successfully radio track Ribbonsnakes provides the opportunity to identify winter habitat characteristics to develop effective management plans. In the future, efforts will expand to explore unprotected landscapes and fully inform winter habitat preferences in Atlantic Canada.

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