

GRADUATE EXIT SEMINAR



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Population Demographics and Stable Isotope Evaluation of the North American River Otter (Lontra canadensis) in Ohio

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In Ohio, the North American river otter (*Lontra canadensis*) was extirpated by the 1950s, reintroduced in 1986, and otter trapping was reinstated in 2005. Preliminary work indicated that the river otter population in Ohio was large and increasing prior to the reinstatement of river otter trapping in 2005, thereby indicating that river otter trapping from 2005-2008 was sustainable. These preliminary estimates, however, lack specificity in terms of variation among sex and age classes. While the river otter harvest seems sustainable, considerable changes could be occurring in the demographics of the river otter population in Ohio. If there are temporal or spatial variations in the river otter population demographics, then population models based on previous demographic data might not represent the current population or the impact of the current harvest. This strengthens the need to do a reexamination of river otter abundance and the impact of harvest on populations. This research will help fill in knowledge gaps and update river otter demographic data, ensuring a healthy and sustainable population.

In addition to river otter population demographics, river otter diet became a large focus of this research. River otters are apex riverine predator that are adapted to hunting in the water. This lifestyle results in a diet focused on aquatic and semi-aquatic species. Using stable isotope analysis, we sought to determine river otter diet composition and trophic level. Understanding diet and trophic level provides insight into how river otters might influence community dynamics and potentially reveal important prey species for river otters in various riverine systems. Ultimately, if differences exist among riverine systems, that might warrant the exploration of different management practices.

