

GRADUATE EXIT SEMINAR

CHARLES PARISE

The Population Status and Diet of the North American River Otter in Ohio



The North American river otter (*Lontra canadensis*) is a vitally important species, both biologically as an apex predator in riparian ecosystems, and economically as a furbearer species. River otters were extirpated from much of the central United States by the 1970s as a result of excessive harvest, habitat loss, and other factors. Since then, several reintroductions of river otters have occurred throughout the United States including in Ohio between 1986-1993. Legal harvest of river otters in Ohio was implemented in 2005. The impact of the legal harvest of river otters on the population within Ohio is not well understood, and current methods of monitoring the population may not be paying adequate attention to differences among population demographics. Additionally, the diet of river otters in Ohio is not well understood and may present the future management challenge of conflict with anglers

and managers of fish hatcheries. We obtained demographic information and tissue for stable isotope analysis through necropsies of harvested and road-killed river otters throughout Ohio. We modeled the river otter population in eastern Ohio through Statistical Population Reconstruction (SPR) and summarized different population demographics across the whole state. Additionally, we modeled the contribution of different prey items to river otter diet, as well as how the contributions of those prey items differed among different population demographics, through a combination of Bayesian mixing models and generalized linear mixed effects models. We found that the river otter population in eastern Ohio may be reaching carrying capacity, but more work is needed to determine the impact of harvest on the population. Additionally, we found that river otter diet was composed largely of sunfish, minnows, and freshwater mussels and that diet varied meaningfully among regions in Ohio.

Advisor: Dr. Stanley D. Gehrt

THURSDAY, JULY 15, 2021
4:00 P.M.

Join the seminar via Zoom:

<https://osu.zoom.us/j/95578918303?pwd=bUZtSW1jcTZkMVZWMINVMHphZDhoQT09>

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