CFAES

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES

GRADUATE EXIT SEMINAR

PHILIP GOULD

Spatial variation in the abundance, trophic ecology, and role of semi-aquatic salamanders in headwater streams.

Headwater streams are common features of forested landscapes and provide critical resources to near-stream riparian forests and downstream aquatic habitat. In many small streams in the southern Appalachians, often narrow and heavily shaded, these systems are almost entirely dependent on external input of nutrients. Despite the perceived greater reliance on external resources, there has been little work to identify the role of wildlife in nutrient dynamics of smaller streams and adjacent riparian areas. My dissertation investigates spatial patterns of stream-associated salamander communities, and patterns in biomass, foraging, and excretion of the Black-bellied salamander (*Desmognathus quadramaculatus*), the largest, most-aquatic species of salamander occurring in fishless headwaters of the southern Appalachians. The primary objective of my research was to (1) identify drivers of stream-associated salamander community composition and (2) evaluate the extent to which *D. quadramaculatus* move nutrients between aquatic and terrestrial habitat through patterns in foraging and excretion. Using a variety of quantitative approaches, my research describes spatial patterns in stream-associated salamander communities and enhances our understanding of the nuanced role that salamanders have in headwater ecosystems.

Advisor: Dr. William Peterman

FRIDAY, NOVEMBER 19, 2021
12:30 P.M.

Location: Kottman Hall 333

Join the seminar via Zoom:
https://osu.zoom.us/j/91599506011?pwd=Y2lGQXZRSllLQzFJcWNqYUVhb3Q2UT09

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