

KATIE SCOTT and ZACHARY DILLARD, Dept. of Organismal Biology, Ecology, and Zoo Science, West Liberty University, West Liberty, WV, 26074. Specific microhabitat utilization, resource partitioning, and movement biology of *Cambarus callainus* Thoma 2014 (Decapoda: Cambaridae) in Tug Fork, WV, USA.

Following the description of *Cambarus callainus* (Thoma et al., 2014), a range-wide survey was completed to determine the current distribution and conservation status of the species, resulting in federal protection enforced by the United States Fish and Wildlife Service in 2016 and listing as Threatened on the U.S. Endangered Species Act. While significant efforts evaluating the life history of *Cambarus callainus* have been completed (Vopal & Loughman, 2021), a more specific analysis of microhabitat utilization, habitat preference, resource partitioning, and movement patterns remains incomplete. High-resolution data involving the specific habitat requirements of crayfishes are lacking, which is recognized as a significant limiting factor in crayfish conservation and management (Jones & Bergey, 2007). We aim to resolve these unknowns by observing potential micro- and macrohabitat associations and individual movement patterns of adult *C. callainus* individuals, assessed via radiotelemetry across a temporal scale. We also hope to determine movement biology and any potential accidental or behavioral drift of crayfish young-of-the-year. Previous studies indicate that radiotelemetry methods are effective in determining the movement biology of Cambarid crayfishes (Bubb et al., 2004, 2006a, 2006b; Sadecky, 2020). Radio-monitoring of *C. callainus* will be beneficial for conservation management involving this species and will expand our ability to efficiently address issues affecting Threatened and Endangered crayfishes in the future.