

DESTINEE A. DAVIS, TAYLOR R. WHITSON, JAMES R. KROCHMAL, KAINE M. DIEHL, AND ZACHARY J. LOUGHMAN, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV 26074. Advancements in the Understanding of Appalachian Primary Burrowing Crayfish Ecology and Habitat Usage with a Focus on *Cambarus monongalensis*.

Primary burrowing crayfish life history and ecology is largely due to their cryptic habitat preferences. *Cambarus monongalensis*, arguably the most charismatic of all crayfishes, lacks basic life history and habitat data because of the aforementioned obstacles. This study seeks to determine the life history and ecological preferences of populations of *C. monongalensis* in the northern panhandle of West Virginia and Southwestern Pennsylvania with notes on its natural history. Life history data will include form change and reproductive patterns including juvenile size of departure from the maternal burrow. Habitat data were collected using external burrow morphology and burrow locations within a standardized area collected seasonally to determine the preferences and cyclical patterns of crayfishes. With these data, the conservation of this species, and others that follow a similar life history strategy, is possible.