

GREG A. MYERS#, ZACHARY W. DILLARD, KATIE SCOTT, NICOLE M. SADECKY, and LUKE K. SADECKY, and ZACHARY J. LOUGHMAN, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074. **A night of devastation: Natural and life history observations of an en-masse single night collection of *Fallicambarus devastator*.**

Due to their fossorial tendencies, primary burrowing crayfish are the most difficult behavioral group of crayfish to study in-situ. In this study we elucidated both natural and life history aspects and intraspecific behaviors from a collection of 111 individual *Fallicambarus devastator* collected in Angelina County, Texas, on the night of May 15th, 2015. We also intend to emphasize the importance of environmental cues on collection success. Significant amounts of precipitation occurred during the days prior to 15 May 2015, resulting in the majority of burrows to be flooded on the day of collection. All animals were collected either traversing the landscape or captured at the portal of their burrow. Behaviors observed included excavation, respiration, feeding, and interspecific interactions. The majority of animals observed were adults, with juveniles noticeably absent on the surface. Life history observations included evidence of synchronous alteration to reproductive form in males, as well as sexually-dependent chelae morphometric ratios. *Fallicambarus devastator* meristically displayed sexual dimorphism between form I male and female chelae, with form I chelae having longer propodus length and greater palm widths, compared to the squamous and shorter chelae of females. Understanding the significance of studying these animals in favorable conditions is of paramount importance to the quality of future primary burrowing crayfish research.