EMMY DELEKTA, Dept of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074, ZACHARY LOUGHMAN, Dept of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074, BRONWYN WILLIAMS, North Carolina Museum of Natural Sciences, Research Laboratory, Raleigh, NC, 27669. Determination of a new species of crayfish (Decapoda: Cambaridae) from the lower Tennessee River Drainage, USA.

The crayfish genus *Faxonius*, formerly composed of surface-dwelling *Orconectes*, has over 95 species and subspecies. From these, no other species group has been the topic of more debate than the *F. juvenilis* complex (FJSC). As far back as 1885, Walter Faxon questioned the validity of species in FJSC due to similar character-states, leading to the composition of the group being up for debate for over 130 years. The FJSC is currently defined in Taylor, 2000 as all members of the former subgenus *Procericambarus* (genus *Cambarus*) east of the Mississippi River possessing a strong central project of the form I male gonopod, and a central projection that accounts for at least 35% of the total gonopod length. The most recent work on this taxonomic group was published in 2016 naming a new species, *F. yanahlindus*, from the lower Tennessee River drainage. However, there is another crayfish found in Weatherford Creek that we believe to be a new *Faxonius* species. We hypothesize *F. sp.* to be most closely related to *F. yanahlindus* due to the presence of the distomedial carpal spine, a character unique in the FJSC. *F. sp.* found in Weatherford Creek differs from *F. yanahlindus* in coloration and morphology. Preliminary analyses show that *F. sp.* is genetically distinct from *F. yanahlindus*. Our findings will be used to describe *F. sp.* from the lower Tennessee River drainage as a new species.