

ANABETH SHARPE, ZACHARY LOUGHMAN, & KINSEY GUTHRIE, Department of Biological Sciences, West Liberty University, West Liberty, WV, 26074. Ontogeny of secondary sexual characteristics using morphometrics and urinalysis in premature Cranwell's horned frogs (*Ceratophrys cranwelli*).

Cranwell's horned frogs (*Ceratophrys cranwelli*), also known as Pacman frogs, are commonly kept as pets in the United States due to their basic husbandry needs and charismatic appearance. Secondary sexual traits usually appear in frogs after sexual maturity, which occurs at about a year old in *C. cranwelli*. These traits include the presence or absence of nuptial pads, changes in the color and appearance of the throat, and the overall size of the frog. In *C. cranwelli*, females grow to be larger than males. This study aims to determine if there is any significant difference between developing males and females before sexual maturity. Every month, a variety of different physical traits are measured such as snout-urostyle length, head width, tympanum diameter, eye diameter, distance between the eyes, snout length, and thumb length. Urine is also collected to use in future urinalysis using enzyme immunoassays to measure concentrations of estrone, testosterone, and progesterone. Data is still being collected, and currently more data points are needed to prove significance. Any significant difference between the growth will allow breeders and conservationists to tell the sex of juveniles before they reach maturity. *C. cranwelli* data can also act as a proxy for threatened *Ceratophrys* species such as *C. stolzmanni* and *C. cornuta*, in which propagation methods are vital for population survival.