

STANLEY R. BIELINSKI JR. & ZACHARY LOUGHMAN, Department of Biological Sciences, West Liberty University, West Liberty, WV. The Effects of Seasonality and Environmental Covariates on Two *Heterodon* Species.

Seasonal and demographic activity patterns in snakes are heavily influenced by environmental variables. Members of the same genus, such as *Heterodon*, may differ in activity patterns within the same site. This study focuses on the seasonal patterns kept by a population of *H. platirhinos* and an endangered population of *H. nasicus* in southeastern Iowa. Specimens were collected using drift fences, cover boards, and random encounter surveys. Morphometric and demographic data were collected for each capture, and environmental covariates were collected from local private (air temp and surface temperatures) and public weather stations (precipitation, barometric pressure, humidity, and temperature). Statistical analysis reveals that both seasonality and environmental variables play a significant role in activity patterns and capture rates. Additional evidence suggests that the activity of both species can vary significantly based on the snake's age demographics and environmental variables. The results from this study show how seasonality and environmental variables affect both *Heterodon* species activity in a sand prairie in Iowa.