

ALICE R. MILLIKIN, School of Natural Resources, West Virginia University, Morgantown, WV 26505; SARAH K. WOODLEY, Dept. of Biological Sciences, Duquesne University, Pittsburgh, PA 15282; DREW R. DAVIS, Dept. of Biology, University of South Dakota, Vermillion, SD 57069; and JAMES T. ANDERSON, School of Natural Resources, West Virginia University, Morgantown, WV 26505. Factors Influencing Salamander Hormones in Created Wetlands.

Small isolated wetlands are critical breeding habitat for many amphibians. Many of these wetlands are susceptible to destruction due to lack of regulation. Therefore, it is important to create new suitable habitat that can sustain healthy wildlife populations to mitigate loss. Concentrations of corticosterone, a hormone related to stress, development, and growth, can indicate a populations' health and habitat quality. The objective of our research was to determine if certain habitat characteristics in created wetlands influence corticosterone levels of Spotted Salamander (*Ambystoma maculatum*) larvae. From May-June in 2015 and 2016, we sampled Spotted Salamander larvae (n=10/wetland) in 26 wetlands created between 2011 and 2014 in the Monongahela National Forest, West Virginia. We collected environmental data including vegetation cover and water quality at each wetland. Analysis indicates that larval total length and wetland water temperature are positively correlated with corticosterone and the best predictors for corticosterone levels. Vegetation cover also showed a positive correlation with corticosterone levels. Our results can improve understanding of the relationship between physiological conditions and habitat quality and how it can be used to interpret wildlife population health and habitat degradation.