

Midwest Partners in Amphibian and Reptile Conservation (MWPARC) Student Travel Grant Report

Awardee: Shania Burkhead

Professional association: Wichita State University

In one or two paragraphs, describe the work you participated in that was facilitated by this award.

My project investigated the interactions between salamanders and previous drying events (the process of a body of water completely drying down and refilling), and how those interactions affect the overall community assemblages within intermittent streams and wetlands. It was conducted at Wichita State University's Ninnescah Biological Reserve in Sedgwick County, Kansas. The experiment utilized 64 1000 L cattle tanks that have been set up as mesocosms for 3 years. Half of the tanks (n=32) were dried down and refilled to create a drying treatment (dry-rewet) while the other half (n=32) have been continuously filled since early 2020 to create a non-dry treatment (non-dry). Along with drying treatments, each tank had a treatment of larval salamander density that correlated to low, intermediate, and high densities found in local stream pools (10, 20, 40, and 80 individuals) to create a 2x4 factorial design.



Data was collected on the following eight response variables: larval salamander growth rates, time to metamorphosis, size at metamorphosis, survivorship, zooplankton abundance, gross primary productivity, and odonate (dragonfly larvae) abundance and size. Data was collected multiple times a week on differing days, from early April to late August.

How has this work aided you in achieving your career goals?

This project is part of my master's thesis. It has supplied me with valuable skills that will be essential to landing me a job upon graduation. I've gained skills in experimental design, sampling methods, data analysis, and scientific writing. As well as gaining skills, it has also given me the opportunity to lead a crew of biologist. This was a massive research project that required multiple people in order to accurately collect data. Leading a crew of 7 people gave me the chance to teach others how to collect data, while also teaching me how to successfully run a project and be a good leader in the field.

My goal is to work as a Wildlife Biologist for a government agency, whether it be federal or state, and this project supplied me with the needed skills to land this type of career. Typically, these positions consists of implementing experiments and leading crews. I'm very thankful to have had the chance to gain experience in both of these aspects with this project.