



## 2021 Tennessee Herpetological Society Meeting

### Call for Abstracts – deadline November 1st

**Meeting date:** December 6-7<sup>th</sup>, 2021

**Location:** Tennessee Aquarium, Chattanooga, TN

**Abstract deadline:** November 1<sup>st</sup>, 2021

**Abstract submission instructions:**

250-word limit including short introduction to project, hypothesis, brief methods, results and conclusions. Please see the abstract below as a model. Be sure to include author affiliations.

***\*\*Indicate if you intend to present a talk or poster\*\****

**Please submit abstracts via email to: [Donald.Walker@mtsu.edu](mailto:Donald.Walker@mtsu.edu)**

**EXAMPLE:**

### **Larval development in treated wastewater confers an advantage in the terrestrial environment**

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Constructed wetlands are an important environmental technology because they can serve as a tertiary wastewater treatment among other functions, removing nutrients and pollutants that remain in the water after the primary and secondary treatments. It is hypothesized that tertiary treatment wetlands (TTWs) may function similar to natural wetlands in their ability to support plant and wildlife communities, but remaining pharmaceuticals have been demonstrated to cause developmental abnormalities in anurans using wastewater treatment wetlands. In a controlled experiment, we evaluated larval anuran development in water from secondary and tertiary treated wastewater versus rain-filled pond water. Tadpoles took 21% longer to metamorphose in pond water and grew to only 70% the size of tadpoles from secondary and tertiary treated wastewater. Survival was 2.2 times higher in wastewater relative to pond water. We also noted that size-corrected leg length was larger in tadpoles from wastewater but size-corrected head size was smaller than individuals from pond water. No malformations were noted in individuals from pond water but 5.5% of individuals from wastewater exhibited minor malformations. Overall, larval anurans developed faster to larger sizes in wastewater relative to pond water with tadpoles from TTWs more closely resembling those from secondarily treated wastewater relative to pond water. Increased growth in wastewater may confer higher long-term survival despite low rates of malformations suggesting that TTWs may serve as high quality habitat for anurans.