

# The Influence of Larval *Culex* sp. (Diptera: Culicidae) on Behavior and Growth Rate of Tadpole Shrimp *Triops longicaudatus* (LeConte) (Notostraca: Triopsidae)

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## PURPOSE OF STUDY

Tadpole shrimp prey on the inhabitants, such as mosquito larvae, in ephemeral pools. Consequently, they have a potential to be used as biological control agents to control the mosquito population. The researchers will investigate how the presence of mosquito larvae alters the morphology and behavior of tadpole shrimp to determine tadpole shrimp's efficiency as a biological control agent.

## STUDY UNDERWAY

- Tadpole shrimp will be grown under three conditions: in the presence of mosquito larvae, in water previously occupied by mosquito larvae, and water with no mosquito larvae.
- The researchers will monitor randomly selected tadpole shrimp for 15 minutes a day for 30 or more days, recording the frequency and duration of resting, digging, drifting, surfacing, tail contracting, looping, and number of molts.
- In a second experiment, the researchers will test how the chemical environment and water depth affect the growth and predatory behavior of the tadpole shrimp.

## BENEFITS

- The results of the study will enable researchers to determine how effective tadpole shrimp will be at depleting mosquito larvae in different conditions.



*Nicole Harings is pursuing an MS in biology with emphases in aquatic ecology and animal behavior. She plans to graduate in May of 2007 and defend her thesis in June. Nicole is originally from Stevens Point, Wisconsin.*

