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Podium Presentation

Gender Determination Based off of Carapace Size in Notostracans (Triops)

Brad Raver

**Faculty Mentor: Thomas Hegna
Geology Department**

Unbeknownst to many, the field of paleontology often spends more time studying the smaller, more insignificant organisms, than the much famous dinosaurs. This research study is no exception. Often the most useful studies in paleontology are extremely specific, adding to the wealth of knowledge in order to make bigger realizations further down the road.

This study will investigate a branchiopod that is essentially a living fossil, remaining basically unchanged for hundreds of millions of years. They have existed throughout the geologic record remaining functionally the similar, occurring in the same assemblages every time. These species are known as Notostracans, and commonly referred to as tadpole shrimp. The species I chose to study is *Triops*, due to the availability of quality fossil specimens and the fact that they exist in modern day for comparison.

While this species has been studied by scientists rather extensively, few have attempted to make relationships between the size of the carapace and gender. This study, along with future research, will determine if this relationship exists, and how well the relationship exists. If proven successful, a wealth of information can be gathered from an already existing collection of these fossils. Gender determination will open the doors to lifestyle habits mating, and reproduction in the ancient. Since live specimens were reared in the lab, I can then apply this data back to the fossil record, putting one more cup of water into the pool that is knowledge.