Population Ecology of Blue Crabs in the Gulf of Mexico

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Description

The blue crab, *Callinectes sapidus*, is a wide-ranging species that is very important to the ecology and economy of the Gulf of Mexico. Despite their importance, we are not able to predict changes in blue crab populations from year to year. This is partly because we lack good estimates of crab survival and growth, and also because blue crabs disperse as tiny larva in the Gulf of Mexico currents.

Our lab is developing a region-wide population model for blue crabs in the northern Gulf of Mexico using a combination of fieldwork, computer simulations and population modeling. Fieldwork will help us to estimate basic population rates such as survival and larval settlement, while computer simulations will help us track larvae in ocean currents. Both fieldwork-based and simulation-based information will then be combined into a population model, which will ultimately help us to better manage blue crab populations in the region.

Objectives

During the 10-week period, the participant will assist postdoc Erin Grey in conducting field experiments. The participant will also be encouraged to develop their own research questions concerning blue crab or population ecology. They will gain experience with:
- Formulating and testing scientific hypotheses
- Conducting fieldwork in estuarine habitats
- Identifying marine invertebrates
- Statistical analysis of data
- Written and oral scientific presentation skills

Prerequisites
- Completion of sophomore year
- GPA of 3.00 or higher preferred
- Strong interest in ecology, environmental science or fisheries science
- Ability and willingness to work outside in salt marshes
- Proficiency with Excel preferred