

Do Blue Crabs Respond to Visual Cues of Avian Predators?

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Introduction

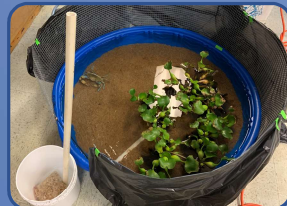
- Wading birds, such as herons, can prey on blue crabs, yet there are few studies investigating how crabs respond to avian predators (Smolka et al. 2011).
- Floating water hyacinth may provide overhead protection from avian predators
- Objective: Determine if blue crabs respond to the presence of large avian predators and increase use of habitat structure

Methods

Experimental Treatment Pools:



Experimental Bird Setup



Experimental Control Using PVC Pipe

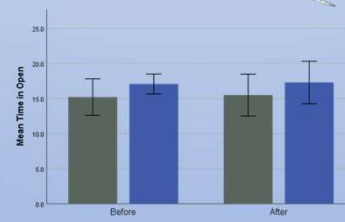
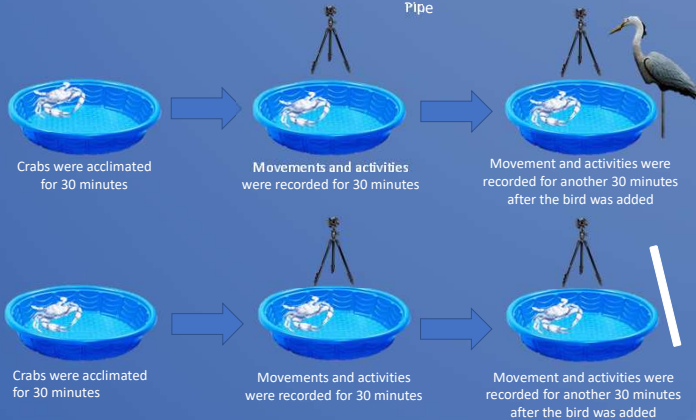


Figure 1. The amount of time (Mean \pm SE) crabs spent in open habitats before the treatments were added, and after the control (blue) and heron (grey) were added. Herons did not significantly impact the time spent in either habitat. (RM-ANOVA, Time*Treatment $P=0.980$)

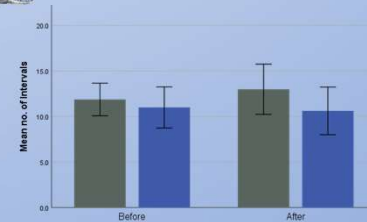


Figure 2. The number of times (Mean \pm SE) the crabs moved between habitats before, and after the control (blue) and heron (grey) were added. Herons did not significantly impact the number of times the crabs went between the habitats (RM-ANOVA, No. of intervals*Treatment $P=0.598$)

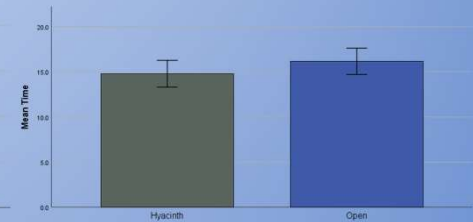


Figure 3. The amount of times (Mean \pm SE crabs spent in each habitat. The amount of time spent in the open habitat was not significantly different then the amount of time spent in the hyacinth habitat (RM-ANOVA, Time*Habitat $P=0.646$)

No, they do not.

Blue crabs showed no behavioral response to heron visual cues

Blue crabs do not choose habitats based on fear of predators

Blue crabs may need other cues such as movement to perceive avian threats