

The effects of decreasing salinity on the predatory behavior of the Atlantic rock crab, *Cancer irroratus*, and the European green crab, *Carcinus maenas*

Increased precipitation and rain events are effects of climate change whose impacts on coastal ecosystems are often overlooked. They can cause a decrease in salinity in the coastal environment of the Northeast and can affect the behaviors of resident organisms. The invasive European green crab, *Carcinus maenas*, and the native Atlantic rock crab, *Cancer irroratus*, were exposed to 50%, 75%, and 100% seawater treatments and were offered prey in order to observe their behavior associated with finding and consuming prey. Walking behavior in green crabs was significantly higher in the 100% seawater treatment than the 50% seawater treatment, and rock crabs spent more of their overall time buried than green crabs. The trends in behaviors show us that green crabs favor escape or avoidance behaviors such as walking when under hyposaline stress. In contrast, rock crabs favor inactivity or burying behaviors that are tolerance behaviors. The behavioral impacts that could be caused by a potential increase in severity and frequency if rain events allow for a mechanism in which green crabs could potentially outcompete rock crabs in the future.

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