

**IS THE INVASIVE ASIAN SHORE CRAB (*Hemigrapsus sanguineus*)
EXPANDING INTO UPPER BARNEGAT BAY?**

Kristen Ranges², Kylie Johnson¹, Jeffrey Webb¹, and Emily Cristiano¹

¹ Monmouth University Marine and Environmental Biology and Policy Program

² University of Delaware School of Marine Science and Policy

Faculty Mentor:

Dean John A. Tiedemann, Department of Biology

Funding Sources:

Urban Coast Institute Marine Science and Policy Initiative and Santander Bank

ABSTRACT

The Asian shore crab (*Hemigrapsus sanguineus*) is native to low energy rocky intertidal habitats along the east coast of Asia. They are thought to have been introduced to the mid-Atlantic and northeast coasts of the United States through ship ballast water. Their presence in North America was first discovered in 1988 at Townsends Inlet, New Jersey. Their populations have increased and spread rapidly since that time. Along the Atlantic coast, their range now extends from North Carolina to Maine. In the Barnegat Bay region, there have been reports of *H. sanguineus* along the Barnegat Inlet and Manasquan Inlet jetties since the early 1990s; however, no records of their presence in characteristics habitats within the bay existed prior to 2013.

In the summers of 2012 and 2013, macrozooplankton samples we collected in upper Barnegat Bay contained megalopae larvae of *H. sanguineus*. In July 2013, preliminary field surveys at sites characteristic of the crab's usual rocky intertidal habitat revealed the presence of adult crabs inhabiting an area of rip-rap in the upper bay at the Bay Head Shores Beach Club. Field surveys conducted this summer at these same sites included seining to identify possible prey species available to *H. sanguineus*, as well as quadrat sampling to locate and quantify the number of crabs in these areas of suitable habitat in the upper bay. This year, adult Asian shore crabs were again found at the Bay Head Shores site. In addition, adult crabs were found within the rap-rap at two other sites where they were previously absent – the Bay Point Harbor boat ramp and the Ocean County Park at the Mantoloking Bridge. These updated records provide evidence of an extension of the species local range within the upper bay.

