# New England's Marine Invasion

## What are marine invasive species?

Marine introduced species are live marine plants and animals that have made their way to non-native waters by way of ship hull fouling, ballast water release, live fish releases, and other pathways. Once introduced, they may develop abundant, widespread populations where they did not occur historically. When these introduced species cause harm, we call them invasive.

## Why should I help?

Marine invasive species can fundamentally change the ecology of marine habitats; they can cause economic damage to fishing, aquaculture, and shipping industries; and they can carry diseases and parasites, which may harm human health or native marine species.

Some common examples of invasive marine species are shipworms and non-native crabs. Shipworms (boring animals) damage piers in harbors, and introduced crabs feed on commercially valuable shellfish and other native species. There are extensive campaigns around the world to control invasive species and the damage that they cause. Controlling invasive species and preventing their introduction in the first place can save taxpayers and marine-based businesses hundreds of millions of dollars each year.

▲ Common periwinkle, *Littorina littorea;*
▼ European green crab, *Carcinus maenas*
Both species were established in New England by the 1800s.

The European green crab and common periwinkle (shown here) are two species of permanently established invaders that have changed New England's coastal ecology, displacing, preying-upon, and out-competing many native species.

## Watch List of Marine Invaders

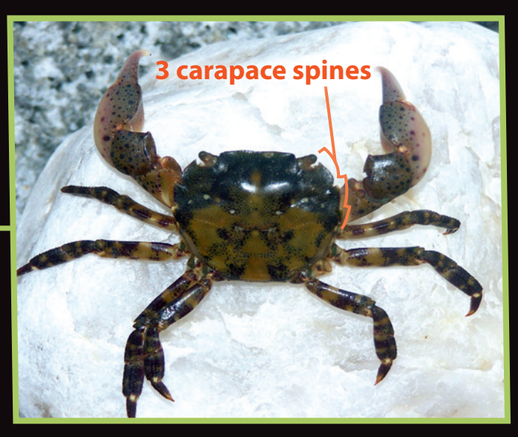
**We need your help tracking the spread of marine invaders. Have you seen any of the four species listed below?**

### Colonial Tunicate • *Didemnum vexillum*

**Cream-colored growths on docks, piers and other hard surfaces, usually below low tide to deeper waters. Ranges from northeastern Maine to Long Island Sound. Overgrows other species and may be impacting fisheries in Georges Bank.**

### Asian shore crab • *Hemigrapsus sanguineus*

**Ranges from North Carolina to Maine. Most often found under cobbles on rocky beaches. Is usually less than 1.5 inches across and has 3 carapace spines next to each eye. Feeds on small shellfish and snails.**




### Chinese mitten crab • *Eriocheir sinensis*

**Not yet detected in New England!**

**Along the U.S. Atlantic coast, the mitten crab has been sighted in the Chesapeake and Delaware Bays, in the Hudson River, and in Toms River, New Jersey. Can be as large as a dinner plate, with white-tipped, hairy claws, and a carapace width of up to 4 inches. Found in freshwater and estuarine environments where it preys on plants, worms, small crustaceans and shellfish. Burrows in muddy banks and levees, which can cause or accelerate shoreline erosion.**

### Rapa whelk • *Rapana venosa*

**Not yet detected in New England!**

**Currently found in the Chesapeake Bay. Usually resides under the mud except when it breeds. Consumes large numbers of shellfish and is a threat to commercially and ecologically valuable species. Shell can grow up to 7 inches in length.**

# You Can Help!

**If you see any of the 4 species listed above, please report them to one of the contacts listed below. Note the location and, if possible, send along a digital photograph.**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Photos—Star tunicate (*Botryllus schlosseri*) at top: Adriaan Gittenberger, *www.ascidians.com*; Periwinkles, green crab: Doug Snow; tunicate: Beth Bisson, inset: Massachusetts Office of Coastal Zone Management; Asian shore crab: David Delaney; Chinese mitten crab: Dr. Wolfgang Robitsch; Rapa whelk: US Geological Survey Archive, US Geological Survey, *www.Bugwood.org*

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