

# New England Marine Invader ID Cards

## Marine Invader Monitoring and Information Collaborative (MIMIC)

The Marine Invader Monitoring and Information Collaborative (MIMIC)—organized by the Massachusetts Office of Coastal Zone Management (CZM)—brings together volunteers, scientists, and managers to search for marine invasive species along the New England coast. Since 2006, hundreds of trained volunteers have monitored more than 130 sites from Rhode Island to Maine. MIMIC's goals are to understand patterns of established invaders, detect new invaders, educate the public, and get outside to learn and have fun!

### How to use these cards

These ID cards provide information on the 18 established invaders monitored by MIMIC. Each card covers a species type, including tunicates, crustaceans, bryozoans, anemones, bivalves, and seaweeds. The 18 species were chosen because they are identifiable in the field, commonly occur in monitored habitats, and are of importance to managers. The front of each card includes identification information and some natural history background. The back of each card describes similar-looking native and invasive species. The ID cards were developed based on a review of the current literature, consultation with experts, and best professional judgment. Unless otherwise noted, illustrations are by Betsy Rickards, CZM.

**Invasive species** are introduced to a new location by human activity and can cause harm to the environment, economy, or public health. More than 60 marine invasive species have been documented in New England (mostly arriving through shipping and aquaculture activities), but the real number is likely higher. Since species can arrive at any time, it is important to have eyes on the ground to detect new invaders before they become established.



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### Need more information?

Contact CZM at [marine.invasives@mass.gov](mailto:marine.invasives@mass.gov) or see the CZM Marine Invasive Species Program page at [www.mass.gov/marine-invasive-species-program](http://www.mass.gov/marine-invasive-species-program).

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## MIMIC Protocol Quick Guide

Look for the 18 MIMIC species at docks, tide pools, and rocky shorelines from June-October and follow these steps:

### **Collect site data:**

- Note site name, type and location, date/time, weather, and time of low tide

### **Record surface temperature and salinity (optional depending on equipment):**

- Hold thermometer below water for one minute and record temperature in degrees Celsius (°C)
- Use refractometer to record salinity value in parts per thousand (ppt)

### **Monitor marine invasive species:**

- Inspect submerged structures and natural features for one hour for the 18 invasive species on the MIMIC datasheet and ID cards
- Sweep for shrimp using net (optional depending on equipment)
- Make sure to check many spots throughout the monitoring area rather than concentrating efforts in one spot
- Mark the presence/absence of species as well as their abundance as indicated in the key on the data sheet

### **Add additional comments:**

- Note any changes to the site, observations of native species, or other comments
- Potential Invaders - If you see a new or unusual species that you are not able to identify, make a note on the datasheet, take a few clear pictures, and e-mail to [marine.invasives@mass.gov](mailto:marine.invasives@mass.gov)

### **Add your species photos to the MIMIC project on iNaturalist:**

- View species observations at [www.inaturalist.org/projects/mimic](http://www.inaturalist.org/projects/mimic) or create a free account with the iNaturalist app to add your observations to the "MIMIC" project