

Asian green mussel brochure, trifold

HOW TO RECOGNIZE THE ASIAN GREEN MUSSEL

1. The posterior region (the region farthest from the beak) has a bright green color that continues along the top and bottom edges of the shell.



2. The shell has faint concentric growth rings extending from the dorsal to ventral margins of the shell, but lacks the longitudinal radial ribs like those that run from the beak to the shell margins in native mussels (see Similar Native Species, inside).



3. Mussels are often found in clusters, and they may be covered with other fouling organisms, such as bryozoans, tunicates, sponges, and other bivalves, which may nearly obscure the introduced mussel.



WHAT YOU CAN DO

If you see the Asian green mussel, please contact David Knott at the

Southeastern Regional Taxonomic Center
Marine Resources Research Institute
South Carolina Department of Natural Resources
Charleston, SC

KnottD@dnr.sc.gov or 843-953-9096

Please include as much of the following information as possible:

- Date of observation
- Locality (GPS; nearby geographic features)
- Description of attachment site (e.g. buoy)
- Abundance (e.g. single individual, cluster, densely overgrown)
- Approximate depth
- Size range of individuals (e.g. 1-4 inches in length)
- your name and contact information
- a digital photo, if possible



THANK YOU FOR YOUR HELP!



DNR

www.dnr.sc.gov/marine/sertc

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THE ASIAN GREEN MUSSEL UNWELCOME ADDITION TO FOULING COMMUNITIES OF SOUTH CAROLINA



The Asian green mussel (*Perna viridis*) is a rapidly growing fouling species that has been found attached to floating docks, boat hulls, water intakes and other man-made structures in the southeastern U.S. Native to the Indo-Pacific, this mussel has been observed recently in the Gulf of Mexico, Florida, Georgia and in South Carolina as far north as Charleston Harbor.

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THE ASIAN GREEN MUSSEL

(*Perna viridis*)

The Asian green mussel is an introduced* and potentially invasive* species that fouls man-made structures in the southeastern United States. This bivalve was most likely transported from its native region, the Indo-Pacific, to the Caribbean and to the U.S. via ballast water and/or attachment to ocean-going ship hulls.

THE ASIAN GREEN MUSSEL IS FREQUENTLY FOUND ATTACHED TO

- fixed submerged structures, such as seawalls, bridge pilings, water intake pipes
- floating structures, such as docks, buoys, boat hulls and motors
- buoy lines and crab pots in high salinity waters

Photo courtesy of USGS



SIMILAR NATIVE* SPECIES

Three native species that somewhat resemble the Asian green mussel are found in South Carolina. However, each of these species has **radial ribs** (raised ridges on the shell that originate near the beak) that can be easily seen and felt, except in very small juveniles. These ridges are not found on the Asian green mussel.

- *Native: a species that occurs naturally in a region
- *Introduced: a species that is not native to a particular ecosystem but that is brought there by human activity
- *Invasive: a non-native species that causes economic or environmental harm, or harm to human, animal or plant health



Brachidontes exustus



Geukensia demissa



Ischadium recurvum

PROBLEMS CAUSED BY THE ASIAN GREEN MUSSEL

- **Mechanical (fouling):** the Asian green mussel can form a high-density layer on vulnerable structures, reducing their effectiveness.



Photo by John Koeck, courtesy of Mote Marine Laboratory

left: fouled hull of a beached pontoon boat; above: outboard motor fouled below the water line

- **Biological:** green mussels may change ecosystems significantly by competing with native species, like the Eastern oyster, for space and food, resulting in reduced growth or mortality.

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outreach example, Susan DeVictor