

Boaters Alert!

Report Marine Invaders

1-877-STOP-ANS

Non-native, invasive plants and animals can seriously damage Florida's precious marine environments and the economy they support. People inadvertently introduce organisms via bilge water, on boat hulls, or by releasing live plants and animals from aquaria. Please help prevent potentially devastating introductions by cleaning boats and not releasing live organisms! You can also help by reporting sightings of introduced species, through the nonindigenous aquatic species toll free hotline (1-877-STOP-ANS). To learn more about marine invasions or report a sighting online, go to: <http://nas.er.usgs.gov/>.

The species below are already present in Florida waters:



Green Mussel

Perna viridis

Florida Locations:

Tampa Bay (1999) to Ten Thousand Islands (2002), Ponce de Leon Inlet (2002) to beyond Jacksonville Beach (2003), Pensacola Bay (2002)

Suspected Vector:

ballast water release

Description: Green mussels in the United States were first reported from Tampa Bay, where they clogged the intake pipes at several power plants during the summer of 1999. Since then, these mussels have spread south (probably larvae drifting on currents) and to the east coast of north Florida (possibly in ballast water or on ship hulls). Green mussels grow to 7 inches (18 cm), their shells are brilliant to dark green, and they survive best in saltwater (salinity of 27–33 ppt).

Description: Thousands of basketball-size Australian spotted jellyfish were seen in the Gulf of Mexico during the summer of 2000. In many areas, the jellyfish were packed so tightly that fishing gear was damaged and trawling was impossible. The bell of this jellyfish is white (semi-transparent to opaque) with bright white spots. Frilly tentacles extend below the bell. The Australian spotted jelly has a very mild sting.

Australian Spotted Jellyfish

Phyllorhiza punctata

Florida Locations:

Gulf of Mexico (2000), Indian River Lagoon (2001)

Suspected Vector:

ship ballast or hull fouling



Description: *Caulerpa brachypus* produces small, undivided, elongate to oval fronds (blades) that are up to 1.25 inches (3 cm) long and less than 0.5 inches (1.3 cm) wide. The fronds are attached to a green, creeping stem (rhizome or stolon). This plant grows on rocks or in sediments down to 100 feet (30 m). It can overgrow corals and seagrasses. *C. brachypus* resembles both a native *Caulerpa* and the rare Johnson's seagrass, so divers should not collect specimens.



Caulerpa

Caulerpa brachypus

Florida Locations:

Palm Beach County (2002) to Fort Pierce (2003)

Suspected Vector:

aquarium release or ballast water from ship

Description: The spectacular lionfish grows to 17 inches (43 cm). It has distinctive white and red stripes, fleshy tentacles around its face, fanlike pectoral fins, and 13 dorsal spines that contain extremely painful, but generally non-fatal, venom. This fish inhabits turbid lagoons and reefs down to 180 feet (55 m). It is generally found under ledges and feeds on small crustaceans and fishes. It spends most of its daylight hours immobile and may not swim away when disturbed. Instead, it may point its dorsal spines toward the intruder.

Indo-Pacific Lionfish (Red Lionfish)

Pterois volitans

Florida Locations:

Miami area (early 1990s), Jacksonville (2002)

Suspected Vector:

home aquarium releases



The species on this side are likely to invade soon:

Carnivorous Jellyfish (or Big Pink Jellyfish)

Drymonema dalmatinum

Vulnerable Locations:
Gulf coast. Huge numbers were recorded in the Gulf of Mexico in the fall of 2000.

Description: Pink, carnivorous jellyfish reach 3 feet (90 cm) in diameter, and their densely packed tentacles can stretch to 70 feet (21 m). Pink jellyfish often float upside down on the surface of the water. Their sting ranges from mild to severe. In the Gulf of Mexico, pink jellyfish primarily eat moon jellyfish, *Aurelia aurita*. This jellyfish may have been swept into the Gulf by currents coming north from Caribbean waters.

Feather Caulerpa

Caulerpa taxifolia
Mediterranean strain
(or aquarium strain)

Vulnerable Locations:
all marine waters where aquarium dumping occurs



Description: In 1984, *Caulerpa taxifolia* was accidentally introduced into the Mediterranean Sea. It now dominates these shorelines by overgrowing native plants and animals, which has caused local fishing and tourism to plummet. This plant was discovered in California in 2000 and in Australia in 2001, and both areas are spending millions of dollars on eradication. The native *C. taxifolia* found in the Florida Keys is not a problem like the Mediterranean (or aquarium) strain.

YOU Can Help Prevent the Spread of Invasive Species

While boating:

Limit boating through areas of vegetation.

After boating, before you leave the area:

Inspect your vessel, trailer, and equipment for aquatic hitchhikers. Remove any algae, plants and aquatic organisms. Clean away dirt or mud.

Drain all water from the boat, bilge, live wells, and other areas that might hold water.

Once home:

Rinse your boat, trailer and equipment with hot water (at least 104° F) or with a spray of high-pressure tap water. If possible, wash your boat thoroughly with a brush or sponge and an environmentally friendly cleaning product designed for boats.

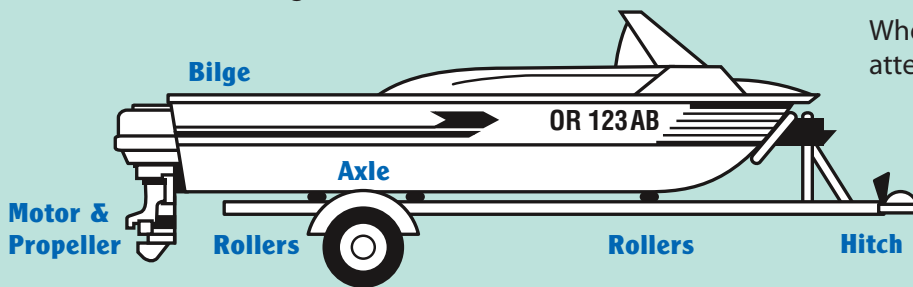
If hot water or pressure spray is not available, let your boat and trailer dry 5 days before putting it into another body of water.

Anglers:

Please dispose of unused bait in the trash if it might have come from a different body of water. Live bait from one body of water should not be released into another body of water.

When cleaning your boat and trailer, pay special attention to the parts labeled on the illustration at left.

For additional tips and information, please see:
www.protectyourwaters.com



Produced in 2005. Lionfish photo courtesy of Bishop Museum, Hawaii. *Caulerpa brachypus* photo courtesy of the South Florida Water Management District. Spotted jellyfish and carnivorous jellyfish images belong to Dauphin Island Sea Lab. *Caulerpa taxifolia* photo by Dr. Linda Walters.