

GUIDE TO MARINE INVADERS IN THE GULF OF MAINE

Didemnum vexillum (colonial tunicate, ascidian)



Salem Sound Coastwatch

PHYSICAL DESCRIPTION

- Dense colonies of microscopic zooids (individual animals)
- Color variable, including cream, white, tan, or yellow
- On hard substrates, may form long hanging, rope-like lobes, or beard-like colonies
- On sea floor, may form low, undulating mats with short lobes on surface



Dann Blackwood, USGS



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HABITAT PREFERENCE

- Found on hard substrates including docks, pilings, moorings, ship hulls, and rocks
- Primarily a subtidal species; may occur from lower intertidal zone to continental shelf

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INVASION STATUS & ECOLOGICAL CONCERNS

Observed covering a large area of the continental shelf off New England in the Gulf of Maine region in 2003, *Didemnum vexillum*, a Pacific tunicate, appears to be spreading in the Gulf of Maine. It was first collected in New England in 1993 at Fort Island Narrows, Damariscotta River, Maine as a colony living at 40 ft (12 m; at high tide) on shell-hash and gravel bottom. It has also been observed on dock pilings in Walpole, Maine and Woods Hole, Massachusetts since 1988. It has since been reported in California, and from Maine to Connecticut. As a fouling organism, it grows over a variety of surfaces, altering marine habitats and threatening to interfere with fishing, aquaculture, and other coastal and offshore activities. It aggressively grows over bivalves and may smother them or interfere with their growth. It has no known predators.

SIMILAR SPECIES

As a result of its lobed, irregular shape, *Didemnum vexillum* may be confused with other mature colonial tunicates, including *Botrylloides violaceus*. However, *Didemnum vexillum* does not have the red and orange coloring of *B. violaceus*. This species may also resemble a sponge, but colonies of *Didemnum vexillum* are firm and have a smoother texture than a sponge.

This identification card is one of a series produced by Salem Sound Coastwatch (www.salemsound.org) highlighting introduced species that pose a threat to the marine environments of Massachusetts and the Gulf of Maine. The original development of these cards was funded by the MA EOOEA Office of Coastal Zone Management with funding from the U.S. Fish and Wildlife Service. For additional species information or to report sightings, please visit www.mass.gov/czm/invasives/monitor/reporting.htm.



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