

GUIDE TO MARINE INVADERS IN THE GULF OF MAINE

Styela clava club tunicate (sea squirt, ascidian)

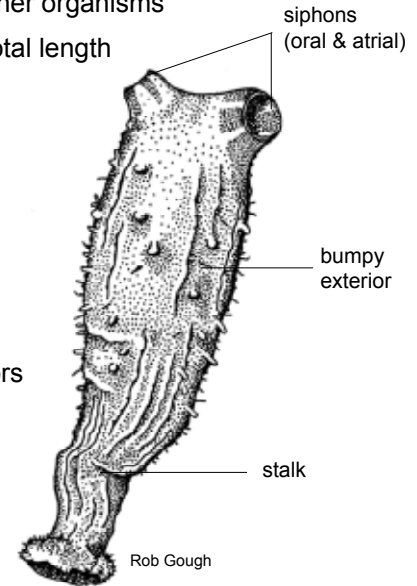
PHYSICAL DESCRIPTION

- Club-shaped with two siphons; anchored to substrate by a stalk
- Tough, leathery, bumpy exterior; often covered with other organisms
- Up to 8 in (20 cm) with stalk approximately 1/3 of its total length



HABITAT PREFERENCE

- Found in shallow subtidal waters on hard surfaces
- Abundant within sheltered areas like docks and harbors



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INVASION STATUS & ECOLOGICAL CONCERNS

Abundant in sheltered, subtidal waters attached to hard surfaces, *Styela clava* was introduced from Japan into Newport Harbor, California in the 1920s, where it went unidentified until 1933. By 1949, it was one of the two dominant tunicates in the bay, replacing native solitary tunicates. It first appeared in Long Island Sound, Connecticut in 1973 and rapidly spread north to Prince Edward Island and south to New Jersey. This species is a tough competitor for settlement space and food and is a fouling organism on ship hulls, mussels, and oyster beds. The transport of oysters and the movement of ships has probably advanced its rapid dispersal.

SIMILAR SPECIES

Molgula manhattensis Sea grape

- Translucent gray or greenish-blue
- Often occurring in dense clusters
- Encrusted with debris
- More rounded shape than *Styela clava*

Boltenia ovifera Stalked sea squirt, sea onion

- White, tan, orange or red bulb-like body
- Translucent stalk two to four times longer than body
- Entire animal reaching 12 in (30 cm) or more in length
- Siphons on one side; incurrent aimed upwards, excurrent aimed downward

Stalked sea squirts, *Boltenia ovifera*, (right) have a stouter, more bulb-like shape than club tunicates, *Styela clava*.



Andrew Martinez

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 EOEEA 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.

