

# GUIDE TO MARINE INVADERS IN THE GULF OF MAINE

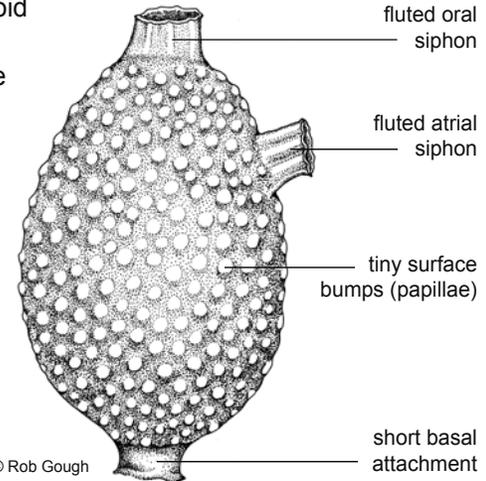
## *Ascidia aspersa* European sea squirt, tunicate



Robert Buchsbaum

### PHYSICAL DESCRIPTION

- Thin, grayish, semi-translucent, exterior with pinkish hue, often covered with debris
- Firm, rigid surface with tiny bumps (papillae)
- Two prominent siphons: a fluted oral siphon at top, and fluted atrial siphon located 1/3 of the way down the side of the body
- Variable shape; typically ovoid or egg-shaped
- Adheres to substrate on one end by basal attachment
- Grows up to 2 in (5 cm)



*Ascidia aspersa*

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### HABITAT PREFERENCE

- Found in shallow, subtidal waters attached to docks, pilings, ropes, and other submerged structures
- Prefers calm, protected waters with steady current
- Occurs in both marine and estuarine waters

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# *Ascidia aspersa*

European sea squirt, tunicate

### INVASION STATUS & ECOLOGICAL CONCERNS

*Ascidia aspersa*, a native of Europe, was most likely introduced to the United States shorelines from hull fouling and/or ballast water discharge. It was first discovered in New England waters in the 1980's, and it can now be found in the Gulf of Maine from Massachusetts to Connecticut. Like other invasive tunicates, *A. aspersa* is a tough competitor that outcompetes and replaces native solitary tunicates. This species is able to withstand variable salinities, enabling it to spread to estuaries. *A. aspersa* is a fouling organism on ship hulls, anchor chains, marina floats, shellfish beds, and other firm surfaces.

### SIMILAR SPECIES

***Styela clava*:** Elongate colonies of *Ascidia aspersa* may be mistaken for the solitary tunicate *Styela clava* (club tunicate), particularly when covered with encrusting debris. Perhaps the most helpful feature for distinguishing these species is the presence of two prominent, closely positioned siphons on the apex of *Styela clava*, vs. siphons separated by 1/3 of body length in *Ascidia aspersa*.

***Ciona intestinalis*:** *Ascidia aspersa* may be mistaken for *Ciona intestinalis*, another invasive, solitary tunicate. However, *C. intestinalis* always has yellow marks around the siphons and is typically more slender and not as firm as *A. aspersa*.

***Molgula spp.*:** Small specimens of *A. aspersa* may also be mistaken for *Molgula spp.* (sea grapes). However, *Molgula spp.* are spherically shaped with two siphons very close together at the top of their body.

*Styela clava* (club tunicate)  
encrusted with debris



Andrew Martinez

This identification card is one of a series produced by Salem Sound Coastwatch ([www.salemsound.org](http://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 EOEAA 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](http://www.mass.gov/czm/invasives/monitor/reporting.htm).

