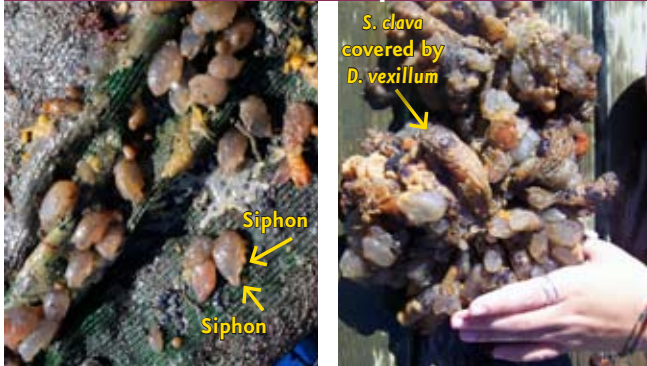


Solitary Tunicate Species

Ascidia aspersa



- oval to elongate shape
- bumpy surface
- color translucent white to gray
- up to 5 cm in length
- distinctive pink coloration at tips of siphons

Ciona intestinalis



- elongate to cylindrical shape
- smooth surface
- color translucent white to yellow
- up to 8 cm in length
- distinctive yellow ring around tips of siphons

Molgula manhattensis



- heart to spherical shape
- smooth surface
- color translucent white to gray
- up to 3 cm in diameter

Styela clava



- club shape
- rough, bumpy surface
- color beige to dark brown
- up to 15 cm long

Treatments to rid solitary tunicates (also called sea squirts or ascidians) from aquaculture gear and shellfish (bay scallops, oysters, quahogs, soft shell clams):

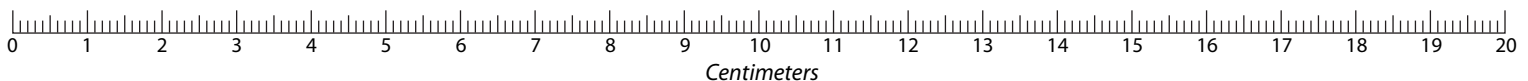
- remove by hand or scraping
- air dry (oysters, quahogs, soft shell clams only; not bay scallops)
- power spraying boatside
- spray or rinse with freshwater (oysters, quahogs, soft shell clams only)
- tumble, place in low salinity waters or keep in floating bags that are routinely flipped (oysters)
- grow shellfish in chemically treated boxes
- keep shellfish in cages on sandy bottom (quahogs and soft shell clams)



Several solitary tunicates on rope

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Photography by Dann Blackwood,
US Geological Survey, 2008



Colonial Tunicate Species

Botrylloides violaceus



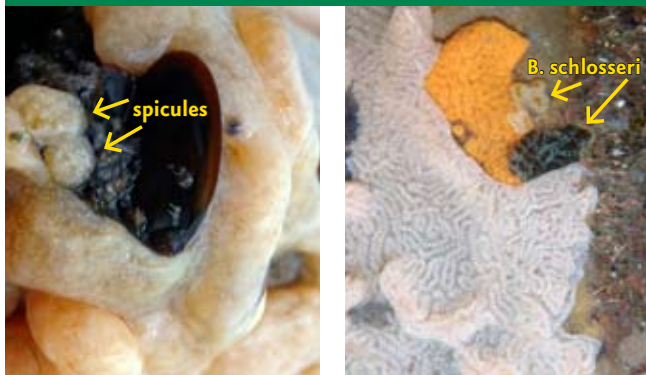
- color orange, red, maroon, beige, white
- zooids in a pattern of meandering parallel rows
- no calcareous spicules

Botryllus schlosseri



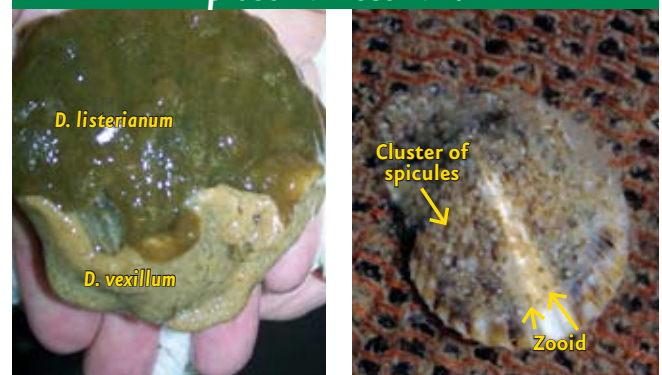
- color two-toned black, purple, beige, orange
- zooids in star or flower pattern
- no calcareous spicules

Didemnum vexillum



- color beige and pale yellow
- zooids in irregular shaped elongated loops
- white calcareous spicules throughout

Diplosoma listerianum



- color olive green to translucent
- darker colored zooids appear randomly spaced
- clustered white calcareous spicules

Treatments to rid colonial tunicates (also called sea squirts or ascidians) from aquaculture gear and shellfish (bay scallops, oysters, quahogs, soft shell clams):

- remove by hand or scraping; do not return to seawater because colonial fragments have the ability to reattach; discard on land
- air dry (oysters, quahogs, soft shell clams only; not bay scallops)
- spray or rinse with freshwater (oysters, quahogs, soft shell clams only)
- tumble, place in low salinity waters or keep in floating bags that are routinely flipped (oysters)
- grow shellfish in chemically treated boxes
- keep shellfish in cages on sandy bottom (quahogs and soft shell clams)



Tunicates covering bottom of an aquaculture float

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