



Ascidrella aspersa

European sea squirt, Dirty sea squirt

Threat Scores

1. Ecological Impact
 - Significant fouling organism
 - Like other invasive tunicates, *A. aspersa* is a tough competitor that outcompetes and replaces native solitary tunicates
 - Forms large populations and subsequent high amounts of biomass (Pederson et al. 2003), which redirects energy pathways to decomposers and not to higher trophic communities because it lacks many predators
 - It also directly competes with other native filter-feeding fauna of economic importance like scallops, mussels, and oysters
2. Invasive Potential
 - Low potential for spread in ocean currents
 - Fertilization is enhanced by low energy, sheltered environments
 - This species is able to withstand variable salinities, enabling it to spread to estuaries
 - A fouling organism on ship hulls, anchor chains, marina floats, shellfish beds, and other firm surfaces
3. Geographic Extent
 - Regionally pervasive
4. Management Difficulty
 - Changes to salinity and copper compound management options suggested to clean fouled surfaces
 - No known successful eradications in marine environments



Geography and Habitat

1. Native: Norway, Baltic Sea, Irish Sea, English Channel, Mediterranean Sea, northwest African coasts
2. Introduced: Atlantic Coast from Maine to Virginia
3. Habitats
 - Marine, fouling communities, estuaries/bays, coastland
 - 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

Invasion Pathways

1. Ballast water and sediments
2. Natural spread
3. Stocking in open water
4. Hull/Surface fouling

Non-Native Locations

1. 40- Gulf of Maine/Bay of Fundy
2. 41- Virginian

Sources

1. Molnar, Jennifer et al. 2008. Assessing the global threat of invasive species to marine biodiversity. *Frontiers in ecology and the environment*. Vol. 6, No. 9, pp. 485-492.

2. <http://conserveonline.org/workspaces/global.invasive.assessment>
3. <http://www.issg.org/database/species/ecology.asp?si=1126&fr=1&sts=&lang=EN>
4. http://www.ascidians.com/families/ascidiidae/Ascidiella_aspersa/OOS_aspe_clav_inte.jpg