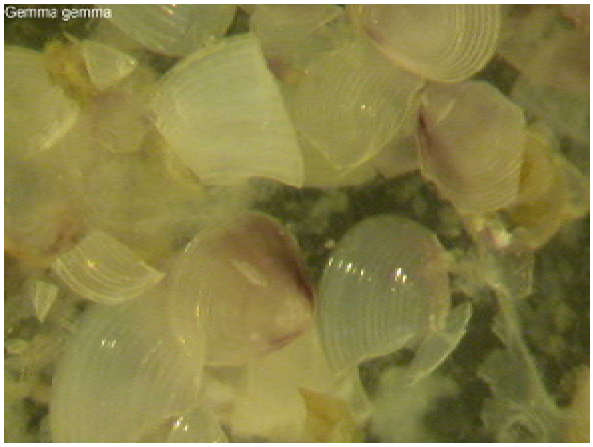
Gemma gemma

Amethyst gem clam



Threat scores

1. Ecological impact
    - Displaces and competes for resources with native species
    - Has shown under a variety of laboratory conditions to increase the larval settlement of another species of clam, Mercenaria mercenaria (Ahn, 1993)
    - Preferential settlement of M. mercenaria increased with increasing density of G. gemma in the sediment, suggesting that the gem clam alters the environment in some way that benefits larval settlement of other species (Ahn, 1993)
2. Invasive potential
    - Relies on passive transport mechanisms: tidal cycles, sediment bedload transport, storm deposition and other human assisted transport
    - Dispersion is highly dependent on sediment bedload transport, a passive transport mechanism which can result from many different causes
    - Another dispersal mechanism can result from high-density pressures leading to passive migration from tidal cycles that disperse juveniles to local low-density areas (Commito et al. 1995)
3. Geographic extent
    - Locally patchy
4. Management difficulty
    - Prevention, education, integrated management can stabilize invasive populations to prevent overwhelming native populations

Geography and Habitat

1. Native: Labrador, Canada south along the western coast of the Atlantic, Florida, Gulf of Mexico
2. Introduced: Washington, Oregon, California

- Habitats
    - Marine, estuaries/bays, intertidal zones, brackish water, coastland
    - Fine sand species common in bays and estuaries, can be found in the intertidal zone to depths of 6 meters
    - Found in marine, brackish, and freshwater environments
    - Part of benthic communities

Invasion Pathways

1. Stocking in open water - Atlantic oysters
2. Other animal trade - crop of ducks
3. Natural spread

Non-Native Locations

1. 56- Puget Trough/Georgia Basin
2. 57- OR, WA, Vancouver
3. 58- Northern California
4. 59- Southern California Bight

Sources

1. Molnar, Jennifer, et al. 2008. "Assessing the global threat of invasive species to marine biodiversity." *Frontiers in Ecology and the Environment*. 6 (9), pp. 485-492.
2. http://conserveonline.org/workspaces/global.invasive.assessment
3. http://nas.er.usgs.gov/XIMAGESERVERX/2009/20090316154709.jpg