Littorina littorea

Common periwinkle

Threat scores

1. Ecological impact
    - Large negative impacts on invaded ecosystems; completes with native gastropods & other littorines
    - Can breed all year, primarily and algae grazer, but will feed on small invertebrates such as barnacle larvae
    - Has drastically altered New England intertidal community structure by allowing slow growing Chondrus crispus to over-take faster growing green algal species
    - In open coast and estuary habitats can be found at densities of 200-500 individuals per sq. meter" (Molnar 2008)
2. Invasive potential
    - Egg capsules are shed directly into the sea
    - Larval settling time or pelagic phase can be up to six weeks
    - Potential for localized spread in ocean currents
    - Can serve as a highly suitable bio-indicator species for contamination of marine environments
    - Potential for spread or new introductions through ballast or continued live food trade
3. Geographic extent
    - Native of Eurasia, now established in North America
    - Locally pervasive
4. Management difficulty
    - For similar species, biocides, manual removal, and bio-control agents have been considered, however, little has been done in the way of eradication

Geography and Habitat

1. Origin: Coast of northern Spain to Scandinavia and Russia
2. Introduced: Atlantic Coast from Maine to Virginia, Pacific Coast
4. Habitats
    - Marine, coastland, estuaries/bays, brackish water
    - Found from coastal intertidal, rocky waters to estuarine brackish water and mud flats

Invasion Pathways

1. Ballast Water and Sediments
2. Stocking in Open Water

Non native locations

1. 40- Gulf of Maine/Bay of Fundy
2. 41- Virginian
3. 56- Puget Trough/Georgia Basin
4. 57- OR, WA, Vancouver
5. 58- Northern California

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://www.gastropods.com/Shell_Images/G-L/Littorina_littorea_2.jpg