



Mytilus galloprovincialis

Bay mussel, blue mussel, Mediterranean mussel

Threat scores

1. Ecological impact
 - In South Africa, the Mediterranean mussel is replacing the indigenous black mussel and the brown mussel (Molnar 2008).
2. Invasive potential
 - “Potential for transport on ships hulls or in ballast water or live wells. *M. Sometime*s transferred through mariculture as a food source and because it is confused with other *Mytilus* species” (Molnar 2008).
 - “A realistic estimate of the rate of spread of mussel beds (as opposed to individual mussels or solitary clumps) is 5 km year⁻¹” (Molnar 2008).
 - Mussel larvae are dispersed like passive particles matching the speed and direction of surface currents generated by the wind.
3. Geographic extent
 - Locally pervasive
4. Management difficulty
 - No success in eradicating any invasive populations. Ballast water management could stop the spread of its larvae.



Geography and Habitat

1. Origin: Mediterranean
2. First introduction: 1880
3. First recorded in Pacific Ocean off Northern California. Since established from Puget Sound, Washington to southern California.
4. North America: Washington, Oregon, California, Hawai'i
5. Marine, estuaries/bays

Invasion Pathways

1. Live Seafood Trade
 - Accidental probable
 - Cause- aquaculture contaminant
 - “*M. galloprovincialis* is sometimes transferred through mariculture as a food source and because it is confused with other *Mytilus* species” (Molnar 2008).
2. Ballast Water and Sediments
 - Accidental probable
 - “Late twentieth century distribution of *M. galloprovincialis* was probably enhanced by ballast water transport as well as ship fouling” (Molnar 2008).
3. Hull/Surface Fouling
 - Accidental probable
 - “Late twentieth century distribution of *M. galloprovincialis* was probably enhanced by ballast water transport as well as ship fouling” (Molnar 2008).

4. Natural Spread
 - Known
 - Cause- range expansion/migration
 - “A realistic estimate of the rate of spread of mussel beds (as opposed to individual mussels or solitary clumps) is 5 km year⁻¹” (Molnar 2008).
5. Natural Spread
 - Known
 - Cause- Larvae spread in water currents
 - “Mussel larvae are dispersed like passive particles matching the speed and direction of surface currents generated by the wind” (Molnar 2008).

Non native locations

1. 56- Puget Trough/Georgia Basin
2. 57- OR, WA, Vancouver Coast and Shelf
3. 58- Northern California
4. 152- Hawaiian Islands

Sources

1. <http://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=107>
2. <http://www.issg.org/database/species/ecology.asp?si=102&fr=1&sts=sss&lang=EN>
3. 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.
4. <http://conserveonline.org/workspaces/global.invasive.assessment>
5. http://lh6.ggpht.com/_hTt7ulSkLpI/R5yvV5Te85I/AAAAAAAAQHk/UE_mkJrZawA/s800/mytilus_galloprovincialis_4.jpg