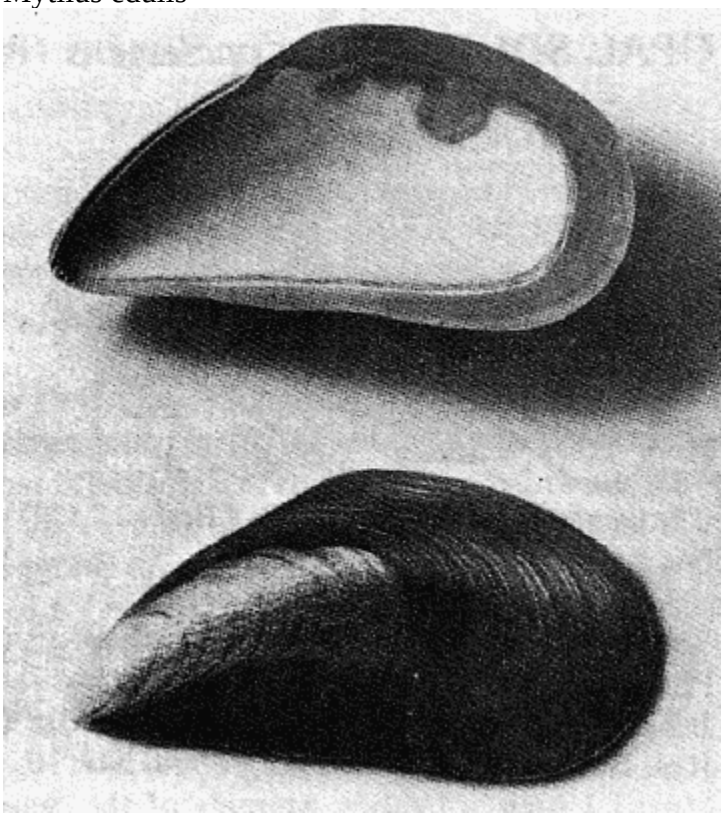
BLUE MUSSEL

Mytilus edulis



TAXONOMY

Phylum: Mollusca
Class: Bivalvia
Order: Mytiloida
Family: Mytilidae

ECOLOGICAL DATA

Distribution: common and widely distributed along the North Pacific coast.

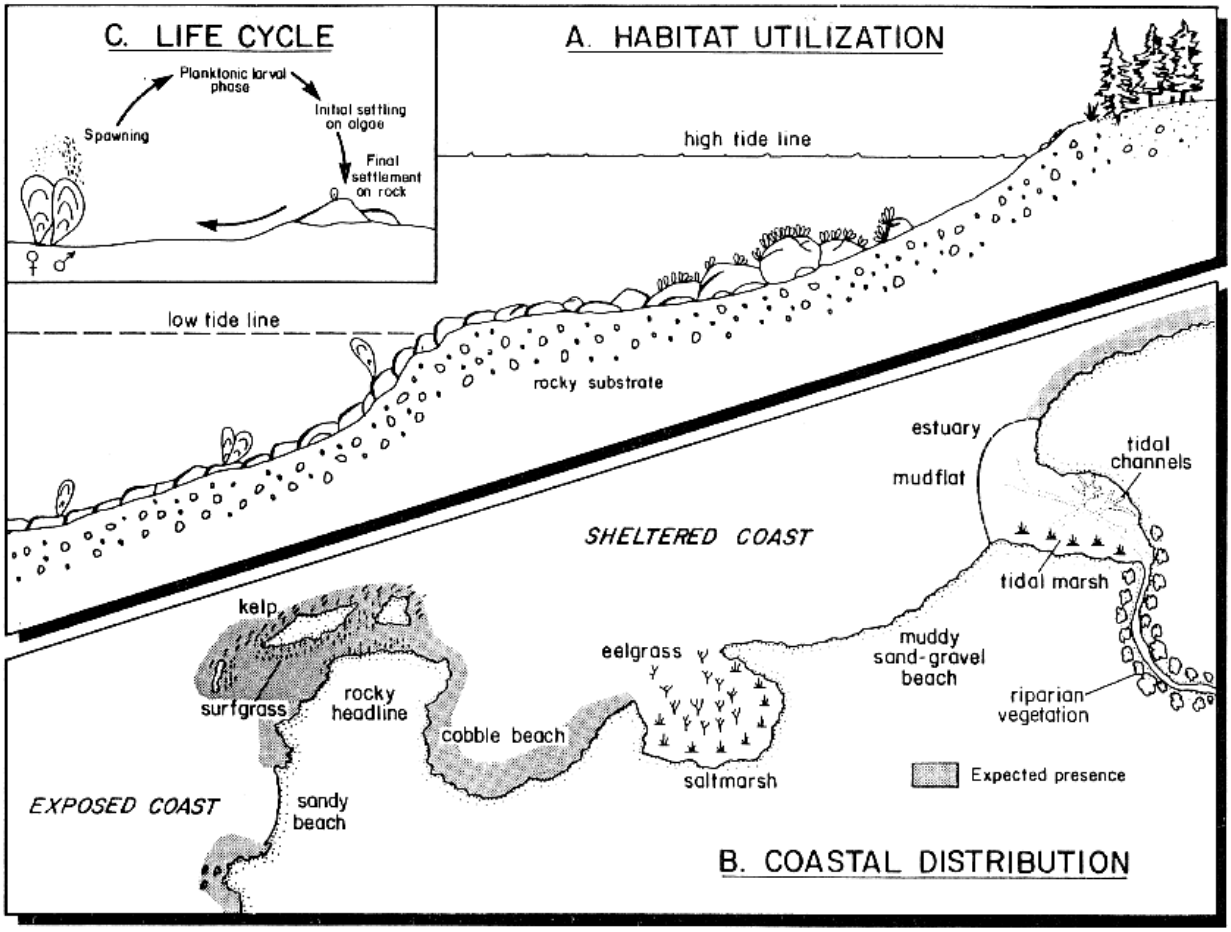
Habitat: rocky shorelines; attach to rocks, gravel, compact mud, man-made hard surfaces, and floating or suspended objects near the water surface; planktonic larvae dispersed by current; larvae first settle on filamentous algae or hydroids and then attach permanently to rock substrate.

Tidal elevation: intertidal to 45 m subtidal depth; dense colonization between 1.5 to 3.7 m tide levels.

Food: suspension feeder; small plankton, including phytoplankton, bacteria, zooplankton and detritus.

GROWTH RATE

Lower intertidal individuals have more rapid growth than higher intertidal ones; sexually mature in 1 yr; reaches 50 mm in 2 yr intertidally, or 1 yr using raft culture; many seem to die after one spawning.



Generalized life cycle of the blue mussel: Sexes usually separate but some hermaphrodites may occur in population. Spawning occurs from March to October. Mass fertilization occurs in water column and larvae develop within several hours. Larvae remain planktonic for about 3-5 weeks and are dispersed by currents. At approximately 0.35 mm larvae settle from plankton. Primary settlement involves initial attachment to filamentous algae or hydroids. Secondary settlement occurs on adult clumps or on clear areas where firm attachment is made using byssus. Post-larval mussels use byssal threads as a "parachute" for transport by currents before attaching permanently to rocky or other hard surface. Adult mussels may grow to 80 mm, but in the Northwest. they seem relatively short lived and most appear to die after one spawning when they are typically 30-60 mm in length and 3-4 years old.