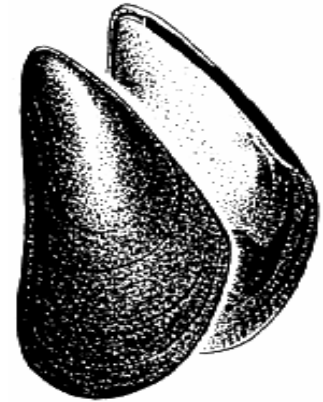


Blue Mussels (*Mytilus edulis*)

Blue Mussels are one of the unsung heroes of the benthic realm (the bottom of a body of water). They enhance hard bottom habitats through their role in connecting them with the water column and creating or supporting structural habitat complexity. By their sheer numbers, they filter enormous amounts of water and thereby contribute to improvements in water clarity and quality. When harvested from certified waters, they make for a tasty dinner.



Blue Mussels form small to large beds in higher salinity areas of the harbor. They prefer cool water, hard substrates such as gravel and shell beds, rocks, and submerged human-made structures with good water flow. They are not as tolerant of hypoxia (oxygen deficiency) as many other estuarine molluscan bivalve species.

Blue Mussels have significant water filtering capacity, which has positive implications for improving water clarity in the Harbor. In addition, mussel beds create microhabitats for small organisms and expand the hard surface area available for colonization by other species that live on the bottom of the Harbor Estuary. Clusters of adult Blue Mussels that break free from their original habitat by their own weight or water dynamics can form small satellite mussel colonies on the nearby open sandy bottom, influencing the benthic habitat and communities there. They are considered food for many species of crabs, lobsters, fish, and shore birds, including some wintering water fowl. Blue Mussels readily absorb many water borne toxic chemicals and substances (in fact it is used by EPQ as a water quality monitor), which can impair its health as well as make these toxicants available up the food chain. All New York shellfish beds in New York City are closed (uncertified) for shellfish harvesting. On most of the New Jersey side of the Harbor Estuary, shellfish harvesting is prohibited or restricted, except for a section of the Navesink River, which opens seasonally. The species is edible and harvested recreationally in some cleaner waters by divers, by hand, rakes and dredge. It is recommended to check with the New York and New Jersey Shellfish programs about where shellfish can be harvested.

Eggs of this species are pelagic (i.e., they float in the water column) and large numbers are produced by each adult mussel. The larvae set as spat on any hard surface and can use its foot to crawl about a substrate to find the best location to attach by strands called byssus threads. Once attached, it stays put. Food influences growth and temperatures above 25°C can impair growth or even prevent colonies to live much longer than a year or two without annual larval recruitment. This species is an active suspension feeder at all life stages.

Besides the predators mentioned above, the larvae are eaten by jellyfish and zooplankton, the spat are eaten by a number of benthic grazers, and adults are available to sea stars and larger gastropods (snails).

It competes for substrate space with barnacles and oysters and high densities of the mussel may be partially self-regulation because of food resource availability.



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