

# Blue Mussel

*Mytilus edulis*

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**Pathway** • Hull fouling • Ballast water • Aquaculture

## Impacts

**Biodiversity**  
Hybridises with native mussels.

**Human Health**  
None known.

**Economy**  
None known.

## Key ID Features



## Description

There are two hinged teardrop shaped shells of the same size and shape, except the beaks at the thinnest end, which are not symmetrical. The outside of the shell has concentric, curved, growth rings radiating from the beak. The inside of the shell has a curved adductor scar where the animal attaches to it. It also has a smaller, circular, scar at the narrow end of the shell. The body wall of the animal has a double margin, one of which is plain, smooth and yellow-brown in live animals, the other is fringed or toothed.

### Size

Commonly 5 - 10 cm, although adults can range from <0.3 cm to 20 cm.

### Colour

The outside of the shell is purple, blue or brown in colour, sometimes with prominent dark brown radial markings. The inside of the shell is pearly white with a wide border of blue or purple.

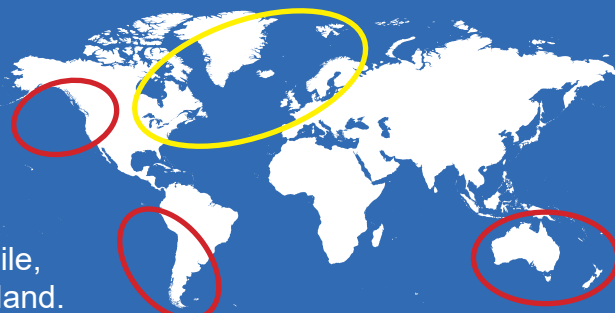
\*Note: Images not to scale



## Distribution

**Native range:** Native across the North Atlantic from the poles, south to North Carolina in the West and the French-Spanish border in the east.

**Non-native range:** British Columbia, Canada, Chile, Argentina, the Falkland Islands, Australia, and New Zealand.



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## Habitat and Ecology

**Habitat:** The substrate blue mussels prefer is a mixture of small boulders, cobble and pebble. They form dense reefs of up to six layers of mussels which provide habitats for other species. They also occur in crevices, rocks, piers and sandy or muddy bottoms in sheltered harbours and estuaries. Blue mussel beds occur from the upper shore down to about 10 m.

**Environmental preferences:** Able to survive desiccation, salinity (10 - 35 PSU), temperature (-1.8 - 35 °C) and oxygen fluctuations. Blue mussels can live for up to 24 years.

**Diet:** Filter feeders that take phytoplankton and other organic matter from the water column.

**Reproduction:** This varies depending on food availability and temperature. Typically spawning occurs twice a year, releasing up to 40 million larvae each time. The larval stage lasts for around six months and they can travel more than 10 km in that time. The larvae then settle on any suitable substrate and transform into an adult mussel which will become sexually mature in 1-2 years. Commonly farmed for human consumption through aquaculture.

## Confusion with similar species

It is visually indistinguishable from the Chilean mussel *Mytilus chilensis*, the only reliable means of identification being DNA analysis.



### Images

Front: All images © Eirian Kettle  
Reverse: © Pacaypalla



## Special Precautions

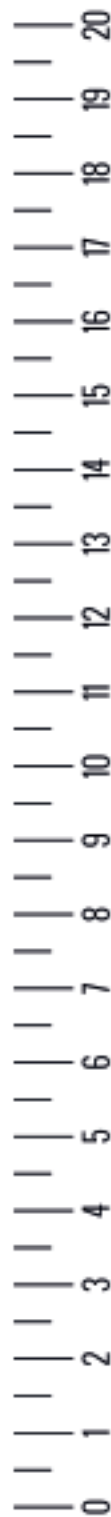
This mussel bioaccumulates toxins and heavy metals which have been known to cause shellfish poisoning in humans. These toxic accumulations cannot be destroyed by cooking.

If you think you have seen this species, please contact the person below who will confirm its identity.

Please also refer to the mitigation strategies guidance document, provided as part of the Marine Biosecurity Toolkit.

## Further Information

- [http://species-identification.org/species.php?species\\_group=mollusca&id=819](http://species-identification.org/species.php?species_group=mollusca&id=819)
- <https://www.marlin.ac.uk/species/detail/1421>
- [http://www.fao.org/fishery/culturedspecies/Mytilus\\_edulis/en](http://www.fao.org/fishery/culturedspecies/Mytilus_edulis/en)
- <https://www.cabi.org/isc/datasheet/73755>



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