

Asian Green Mussel

Perna viridis

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Pathway • Hull fouling • Ballast water • Aquaculture

Impacts



Biodiversity

Once introduced they quickly expand and displace native mussel communities and oyster fisheries. Can carry diseases that native species may be vulnerable to.



Human Health

Can impact human health through shellfish poisoning if eaten.

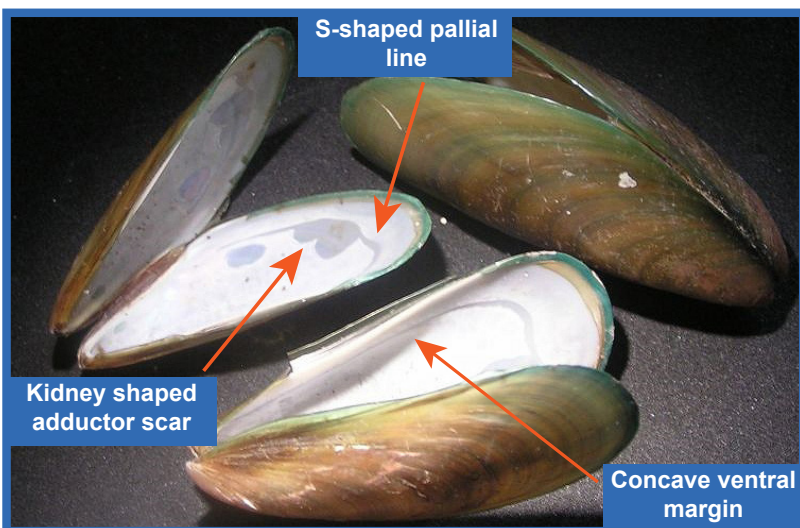
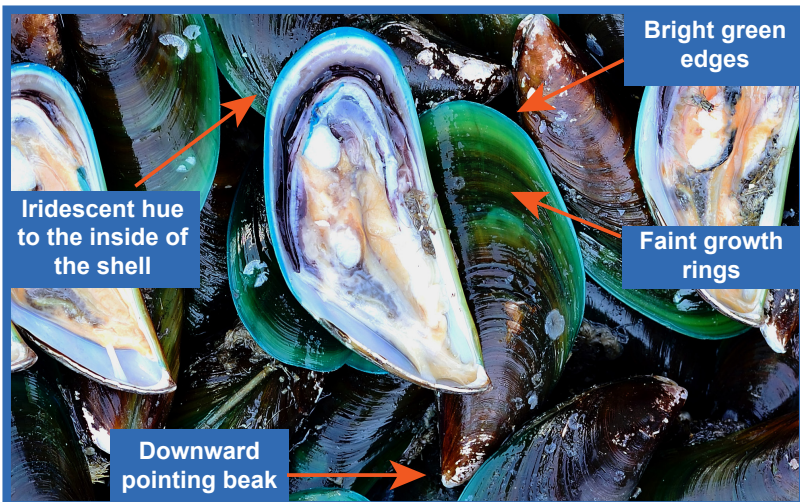


Economy

Known to clog water pipes of power stations, increasing the risk of damage and reducing efficiency. Also known to cover fishing equipment and boat hulls, increasing operations costs.

The high risks and impacts caused by this species has caused it to be classed as one of the ten most damaging species and one of the ten most likely invaders.

Key ID Features



Description

A smooth elongated shell with a distinctive downward pointing beak. The surface of the shell has faint, concentric growth lines that curve widthways and lines running lengthways along the shell can be observed if examined closely. Can be distinguished by its kidney-shaped adductor muscle, concave ventral margin and S-shaped pallial line.

Size

80 - 100 mm in length but can grow as large as 165 mm.

Colour

Juvenile mussels have dark brown-green shells at the front which change to a vibrant blue green at the wider part of the shell. As they grow to maturity, brown patches cover much of the green, leaving this brighter colouration only at the edges. When opened the inside of the shell has a blue-green iridescent hue.

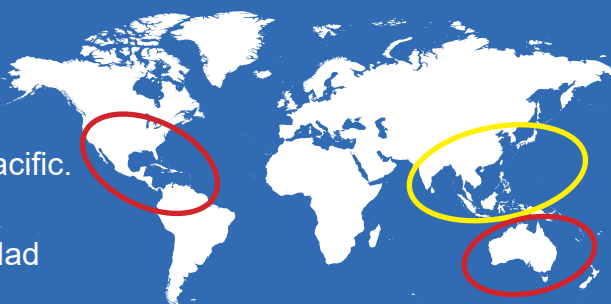
*Note: Images not to scale



Distribution

Native range: Asia and the Asia-Pacific region, particularly prevalent on the Indian coast and the Indo-Pacific.

Non-native range: North America, Jamaica, Trinidad and Tobago, Venezuela, Australia and Fiji.



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Habitat and Ecology

Habitat: Will attach to most hard substrates and objects, such as rocks, buoys, fishing equipment and hulls.

Environmental preferences: They can be found at depths 10-20 m, in sheltered estuaries at temperatures of 26-32 °C and salinities of 16-33 PSU. They are found in large clusters, at densities of 35,000 mussels per square metre.

Diet: Filter feeder which extracts phytoplankton and other organic matter from the water column.

Reproduction: Spawning usually occurs twice a year, (but can be year-round in Asia). After eight hours eggs develop into free swimming larvae and in two to three weeks they settle onto hard substrate. At 2-3 months they become sexually mature. Their lifespan is 2-3 years.

Confusion with similar species

Distinguishable from other species of mussel by the kidney-shaped adductor muscle, concave ventral margin and S-shaped pallial line.

Images

Front: Top © Pichaitun / Bottom: © Jan Delsing



Special Precautions

This mussel bioaccumulates toxins and heavy metals and has been known to cause shellfish poisoning in humans.

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

- <https://www.cabi.org/isc/datasheet/70090#A8527047-2D85-4D09-8A7D-806C1AF07DFB>
- <http://www.fao.org/fishery/species/2691/en>
- <http://www.iucngisd.org/gisd/species.php?sc=731>

