Northern Territory Government

Factsheet

Black-striped Mussel – *Mytilopsis sallei*

Description

Size: A small, finger-nail sized mussel, growing to an average size of 25mm.

Colour: It has a varied shell colouration, from black through to a light colour, with some small individuals having a light and dark zig-zag pattern.

Shell: The right valve overlaps the left valve, and is slightly larger. *Mytilopsis sallei* settles in clusters, and is rarely seen as a single individual.

Habitat

Depth: *Mytilopsis sallei* is found in intertidal and shallow waters. It has not been found any deeper than a few metres.

Substrate: It prefers to settle on vertical surfaces and objects, but is found on all types of substrata.

Tolerance: Found at a range of temperatures (10–35°C) and salinities (0–50 ppt). In its native habitat, *Mytilopsis sallei* is a colonial surface dweller of sheltered waters, for example, shallow coastal lagoons.

Impacts

This mussel has been responsible for massive fouling on wharves and marinas, seawater systems (pumping stations, vessel ballast and cooling systems) and marine farms (pearl oysters and aquaculture sites). In preferred habitats, it forms dense monospecific groups that exclude most other species, leading to a substantial reduction in biodiversity in infected areas.

The black-striped mussel is closely related, and ecologically similar to the zebra mussel (*Dreissina polymorpha*) found in North America. The zebra mussel is a freshwater species and was introduced into the North American Great Lakes system, it has since had massive economic and ecological impacts on the region. The economic impacts alone, which include counteractive engineering, cleaning out the fouling from pipes and water systems are estimated to be around US $600 million a year.

Reproduction

Mytilopsis sallei has high fecundity, rapid growth and fast maturity rate. During their lifespan, individuals change sex, with a proportion of mussels in any population present as hermaphrodites. Eggs and sperm are spawned into the water column, where external fertilisation takes place. Tens of thousands of eggs can be released. Spawning appears to be triggered by changes in salinity. A pelagic larva develops within a day of fertilisation and then settles. Juveniles grow rapidly, and are considered mature after one month. Maximum size is reached within six months, and mussels live for about 12–13 (max 20) months.

Distribution

Not yet established in Australian waters. *Mytilopsis sallei* naturally occurs in the tropical and subtropical eastern Pacific waters from the Gulf of Mexico to Columbia. Introduced into Florida, Indonesia, Singapore, India, Hong Kong and Japan. The mussel invaded Darwin Harbour marinas in 1999, but was successfully eradicated.

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Distribution Vectors

The most likely vector for the spread of *Mytilopsis sallei* is as fouling on the hulls and in the internal plumbing of commercial or recreational vessels. Marine scientists believe it has the capacity to colonise tropical and subtropical areas in northern Australia from Fremantle WA to Sydney NSW as well as the warmer parts of the South Australian Gulfs, if transported there. The waters of the Northern Territory are therefore at a high risk of invasion by *Mytilopsis sallei*.

Similar Native Species

Brachidontes spp.

Black-striped mussels

You can help!

Keep an eye out for new species in your area.

If you think you have spotted a marine pest, take a photo and a sample of the animal or plant and call Aquatic Biosecurity on **0413 381 094**, or email

aquaticbiosecurity@nt.gov.au.

For more information visit **www.fisheries.nt.gov.au**

References

NIMPIS (2002). *Mytilopsis sallei* species summary. National Introduced Marine Pest Information System (Eds: Hewitt C.L., Martin R.B., Sliwa C., McEnnulty, F.R., Murphy, N.E., Jones T. & Cooper, S.). Web publication <http://crimp.marine.csiro.au/nimpis>, Date of access: 9/8/2004

O'Neill, Jr. C. R. & Mac Neill D. B. The zebra mussel (*Dreissena polymorpha*): an unwelcome North American invader. Sea Grant November, 1-12. 91.

Stafford, H. & Willan, R.C. (2007) Is it a pest? Introduced and naturalised marine animal species of Torres Strait Northern Australia. Queensland Department of Primary Industries and Fisheries, Cairns.