



## *Xenostrobus securis* (Lamarck, 1819)



*Xenostrobus securis* (adult size 20-30 mm)

### Diagnostic features

Shell blue black to brown, elongate, interior of valves nacreous,



Distribution of *Xenostrobus securis*.

umbones almost terminal, sculpture of growth lines. Periostracum smooth. Long internal ligament and well-developed byssus; hinge teeth lacking. Juveniles with characteristic zig-zag markings.

Dioecious, gills filibranch. Posterior adductor muscle much larger than anterior. Foot small and elongate.

### Classification

*Xenostrobus securis* (Lamarck, 1819)

*Common name:* Axe head mussel, pygmy mussel

*Class:* Bivalvia

*Infraclass:* Pteriomorpha

*Cohort:* Mytilomorpha

*Order:* Mytilida

*Superfamily:* Mytiloidea

*Family:* Mytilidae

Genus *Xenostrobus* Wilson, 1967 (Type species: *Volsella inconstans* Dunker, 1856).

*Original name:* *Modiola securis* Lamarck, 1819. In Lamarck, J. P. B. A. d M. C. d (1819). Histoire naturelle des animaux sans vertèbres, présentant les caractères généraux et particuliers de ces animaux, leur distribution, leurs classes, leurs familles, leurs genres, et la citation des principales espèces qui s'y rapportent; précédée d'une introduction offrant la détermination des caractères essentiels de l'animal, sa distinction du végétal et des autres corps naturels, enfin, l'exposition des principes fondamentaux de la zoologie. Vol. 6 part 1. Deterville, Verdier, Paris. pp. 1-343.

*Type locality:* "Nouvelle Hollande" and Timor.

*Synonyms:* *Limnoperna fortunei kikuchii* Habe, 1981; *Modiola fluviatilis* Hutton, 1878; *Modiola nitens* Gould & Carpenter, 1857; *Modiola vexillum* Reeve, 1857; *Perna confusa* Angas, 1871.

## Biology and ecology

Inhabits brackish water, lives on hard substrata in lower reaches of tidal creeks and rivers and upper reaches of bays, inlets and harbours often forming extensive colonies. Has a salinity tolerance range from about 1-30 parts per thousand of chlorine and is able to survive in freshwater for months, although adults remain inactive with their valves closed below about 2 parts per thousand (Wilson 1968).

## Distribution

Southern half of Australia; New Zealand; Introduced to the Italian part of the Adriatic Sea and the Mediterranean Sea in general; Spanish part of the North Atlantic Ocean and China (including Hong Kong) and Japan.

## Notes

Recent genetic studies by Colgan & DaCosta (2013) have shown that there are different genetic forms of *X. securis* in Australia, one of which is invasive, the other not. They also found that *Xenostrobus* and the very similar *Limnoperna* are not congeneric, although that had been suggested by some authors.

## Further reading

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