



***Pyrgophorus platyrachis* Thompson, 1968**



Pyrgophorus platyrachis (adult size about 2.5-5.0 mm)

Diagnostic features

Shell elongate-conical with 5-6 whorls usually with raised spiral threads around periphery, frequently the uppermost thread has conical or triangular spines. Spire straight-sided. Suture deeply impressed. Color brown or olive. Peristome complete around aperture. Sexually dimorphic in size; length of female shell 3-5 mm. males about half as large as females. Male *Pyrgophorus* have a distinctive penis fringed with numerous papillae: 3-7 papillae along right margin and a projection with 1-4 papillae near end on left side (Hershler & Thompson 1992).

Classification

***Pyrgophorus platyrachis* Thompson, 1968**

Common name: Serrate crownsnail

Class: Gastropoda

Infraclass: Caenogastropoda

Order: Littorinida

Suborder: Rissoidina

Superfamily Truncatelloidea

Family Cochliopidae

Genus *Pyrgophorus* Ancey, 1888 (Type species: *Paludina parvula* Guilding, 1828; St Vincent, Lesser Antilles, Caribbean)

Original name: *Pyrgophorus platyrachis* Thompson, 1968. In Thompson, F. G. (1968). The Aquatic Snails of the Family Hydrobiidae of Peninsular Florida. University of Florida Press: Gainesville, Florida. 1-268 pp.

Type locality: Florida, USA.

Biology and ecology

Pyrgophorus platyrachis is most commonly found in fresh water, including man-made structures such as canals, also lakes, streams, rivers, swamps etc. and has been collected in brackish marshes. It most commonly occurs in streams and canals with a slight current and a soft, silty bottom but some populations may be found in mangrove swamps. Individuals are generally found on plants but may also be found on any submerged object on the bottom (Thompson, 1968).

Pyrgophorus feeds on algae and biofilm. *Pyrgophorus* species are ovoviparous brooders, females holding eggs until hatching in a brood pouch in the pallial oviduct. The embryos are clearly visible through clean shells.

Distribution

Native to Florida, USA; recently introduced to Singapore.

Notes

This species resembles *Potamopyrgus antipodarum* but differs in that the spines and sculptural ornamentation of the shell is composed of calcium carbonate (shell) and not proteinaceous material (periostracum) as in *Potamopyrgus*. Also *Pyrgophorus* has low (often indistinct) multiple spiral cords around the shell. *Potamopyrgus* only develops a single spiral thread or row of spines on the whorl shoulder of some individuals under certain environmental conditions. Anatomically *Pyrgophorus* differs in having a number of short finger-like glandular papillae on the penis of males; *Potamopyrgus* has a simple penis.

Although *Pyrgophorus* is not yet recorded from Australia, given that it is established in freshwater in Singapore, and because of its close resemblance to *Potamopyrgus*, we include it here as a species to watch for.

Further reading

Clark, S. A. (2019). Cochliopidae Tryon, 1866. Pp. 104-108 in C. Lydeard & Cummings, K. S. *Freshwater Mollusks of the World: a Distribution Atlas*. Baltimore, John Hopkins University Press.

Hershler, R. & F. G. Thompson (1992). A review of the aquatic gastropod subfamily Cochliopinae (Prosobranchia: Hydrobiidae). *Malacological Review* Supplement 5: 1 - 140.

Liu, Hsiu-Ping, R. Hershler & F. G. Thompson (2001). Phylogenetic relationships of the Cochliopinae (Rissooidea: Hydrobiidae): an enigmatic group of aquatic gastropods. *Molecular Phylogenetics and Evolution* 21: 17-25.

Nava, M., Severeyn, H. & Machado, N. (2011). Distribución y taxonomía de *Pyrgophorus platyrachis* (Caenogastropoda: Hydrobiidae), en el Sistema de Maracaibo, Venezuela [Distribution and taxonomy of *Pyrgophorus platyrachis* (Caenogastropoda: Hydrobiidae) in the Sistema de Maracaibo, Venezuela]. *Revista de Biología Tropical* 59: 1165-1172.

Ng, T.H.; Liew, J.H., Song, J.Z.E. and Yeo, D.C.J. (2016) First record of the cryptic invader *Pyrgophorus platyrachis* Thompson, 1968 (Gastropoda: Truncatelloidea: Cochliopidae) outside the Americas. *BiolInvasions Records* 5: 75–80.

Ng, T.H., Tan, S.K., Wong, W.H., Meier, R., Chan, S-Y., Tan, H.H. and Yeo, D.C.J. 2016. Molluscs for sale: Assessment of freshwater gastropods and bivalves in the ornamental pet trade. *PLoS One*. DOI:10.1371/journal.pone.0161130.

Rosenberg, G., Moretzsohn, F. & García, E. F. (2009). Gastropoda (Mollusca) of the Gulf of Mexico. Pp. in D. L. Felder & Camp, D. K. *Gulf of Mexico origin, waters, and biota: Volume 1, Biodiversity*. Corpus Christi, Texas, Texas A&M University Press.

Thompson, F. G. (1968). *The aquatic snails of the family Hydrobiidae of peninsular Florida*. Gainesville, Florida, University of Florida Press.

Thompson, F. G. (1999). An identification manual for the freshwater snails of Florida. *Walkerana* 10(23): 1-96.

To cite this resource: **Ponder, W. F., Hallan, A., Shea, M. E., Clark, S. A., Richards, K., Klunzinger, M. W., and Kessner, V. 2023. Australian Freshwater Molluscs. Revision 2.**

https://keys.lucidcentral.org/keys/v3/freshwater_molluscs/

To contact the authors for comment or suggestions, please email: fwmollusc@gmail.com

Copyright © 2023. All rights reserved. The Australian Museum.

