Hemistomia Crosse, 1872

Diagnostic features

Shell small to minute, elongately ovate to pupoid, with convex whorls, smooth or spirally sculptured, usually with a thin periostracum. Aperture oval to D-shaped, with peristome partially or completely separated from parietal wall. Columella concave, straight or with convex bulge. Protoconch sculptured with minute, irregular, shallow pits. Operculum oval, flat, somewhat thickened, nucleus eccentric, with 0-5 calcareous pegs on, in some species, oval calcareous smear, situated in or near middle of inner surface. Radula similar to that of *Potamopyrgus.* Penis simple, tapering with single penial duct opening terminally. Female genitalia similar to *Fluviopupa,* but with dense white part of capsule gland placed anterior to more translucent section. Seminal receptacle relatively larger than in *Fluviopupa* species. Head-foot pigmented to non-pigmented, eyes present in surface-living species, absent in subterranean species. Ctenidium present in most species, absent in 1 subterranean species. Intestine usually with loop on mantle roof.

Classification

Hemistomia Crosse, 1872

Class Gastropoda

Infraclass Caenogastropoda

Order Littorinida

Suborder Rissoidina

Superfamily Truncatelloidea

Family Tateidae

Genus Hemistomia Crosse, 1872

Type species: *Hemistomia caledonica* Crosse, 1872

Original reference: Crosse, H. (1872). Diagnoses molluscorum Novae Caledoniae incolarum. *Journal de Conchyliologie* 20, 69-75.

Type locality: New Caledonia.

State of taxonomy

An as yet unpublished molecular study suggests that the Lord Howe species assigned to *Hemistomia* are not closely related to the New Caledonian type species. However, this has yet to be dealt with taxonomically.

Biology and ecology

All species live in the permanent streams and seepages on the island at all altitudes, and many populations are confined to disconnected pools during times of low precipitation. They do not seem to favour any particular habitat, with the exception of *H. minutissima,* which is subterranean. Where two species live together they do not appear to segregate, but share the same microhabitat. It is assumed that, like most tateids, the Lord Howe Island species feed on bacteria, microscopic algae, diatoms and, possibly, decaying vegetation. In pools where snails were abundant, leaves were sometimes reduced to the veins, apparently as a result of feeding by the snails.

Two species on Lord Howe Island are subterranean.

Distribution

Lord Howe Island and New Caledonia.

Notes

Species of *Hemistomia* are separated from other tateid genera by their small, elongately ovate to pupoid shell, simple penis, opercular pegs and two to five basal cusps on the central teeth of the radula.

Unpublished molecular studies show that the Lord Howe Island species placed in *Hemistomia* are not closely related to the New Caledonian type species so that taxonomic adjustment will be needed.

Further reading

Beesley, P. L., Ross, G. J. B. & Wells, A., Eds. (1998). *Mollusca: The Southern Synthesis. Parts A & B*. Melbourne, CSIRO Publishing.

Etheridge, R. (1889). The general zoology of Lord Howe Island. (Mollusca by J. Brazier.) *Australian Museum Memoirs* No. 2.

Haase, M. & Bouchet, P. (1998). Radiation of crenobiontic gastropods on an ancient continental island: the *Hemistomia*-clade in New Caledonia (Gastropoda: Hydrobiidae). *Hydrobiologia* 367: 43-129.

Iredale, T. (1944). The land Mollusca of Lord Howe Island. *Australian Zoologist* 10: 299-334, pls 17-20.

Ponder, W. F. (1982). Hydrobiidae of Lord Howe Island (Mollusca: Gastropoda: Prosobranchia). *Australian Journal of Marine and Freshwater Research* 33: 89-159.

Ponder, W. (2019). Tateidae Thiele, 1925. Pp. 134-138 *in* C. Lydeard & Cummings, K. S. *Freshwater Mollusks of the World: a Distribution Atlas*. Baltimore, John Hopkins University Press.

Solem, A. (1961). New Caledonian land and fresh-water snails. An annotated check list. *Fieldiana Zoology* 43: 413-501.

Starmühlner, F. (1970). Die Molluskenn der Neukialedonischen Binnengewässer. *Cahiers O.R.S.T.O.M. Série Hydrobiologie* 4: 3–127.

Wilke, T., Haase, M., Hershler, R., Liu, H.-P., Misof, B. & Ponder, W. (2013). Pushing short DNA fragments to the limit: Phylogenetic relationships of 'hydrobioid' gastropods (Caenogastropoda: Rissooidea). *Molecular Phylogenetics and Evolution* 66: 715-736.

Zielske, S. & Haase, M. (2015). Molecular phylogeny and a modified approach of character-based barcoding refining the taxonomy of New Caledonian freshwater gastropods (Caenogastropoda, Truncatelloidea, Tateidae). *Molecular Phylogenetics and Evolution* 89: 171-181.

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