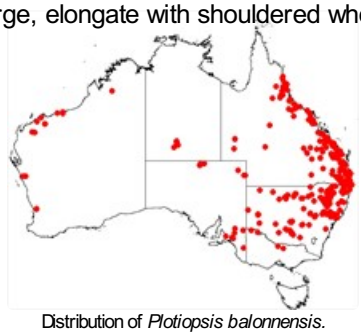
Plotiopsis balonnensis (Conrad, 1850)

Diagnostic features

Plotiopsis: Shell moderate to large, elongate with shouldered whorls

Plotiopsis balonnensis (adult size may reach 30 mm)

Plotiopsis balonnensis - living animal. Photo: H. Jones.



Distribution of *Plotiopsis balonnensis*.

Running Waters, Finke River, Northern Territory. Habitat of *P. balonnensis*. Photo: V. Kessner.

and strong axial and spiral sculpture, the widely-spaced prominent axial ribs often produced into nodes on the whorl shoulder. Colour usually a light yellowish-brown with dark brown flames and speckles. The apical whorls are often corroded. The aperture is oval but with a slightly flaring lip anteriorly; the umbilicus is closed, the columella callus is not greatly thickened or reflected. The operculum is an elongated oval and paucispiral.

As in other thiarids, the head-foot is short and squarish with a broad bilobed snout. On the edge of the mantle there are numerous finger-like papillae, and long, thin tentacles with eyes at their base. The radula is taenioglossate and typical of thiarids. The ctenidium is long with long filaments. Salivary glands are anterior to the nerve ring. The stomach contains a short style sac, a crystalline style and a gastric shield. The female pallial gonoduct is closed along its entire length. A brood pouch is located in the neck region of the headfoot in females.

Classification

Plotiopsis balonnensis (Conrad, 1850)

Common name: Balonne marsh snail

Class Gastropoda

Infraclass Caenogastropoda

Megaorder Cerithiimorpha

Order Cerithiida

Superfamily Cerithioidea

Family Thiaridae

Genus Plotiopsis Brot, 1874 (Type species: *Melania balonnensis* Conrad, 1850)

Original name: *Melania balonnensis* Conrad, 1850. *In* Conrad, T. A. (1850). Descriptions of new species of freshwater shells. *Proceedings of the Academy of Natural Sciences of Philadelphia* 5:10-11.

Type locality: Balonne River, Australia (=Balonne River west of Brisbane, Queensland)

Synonyms: *Melania lirata* Menke, 1843 (junior primary homonym of *Melania lirata* Benson, 1843) *Melania tetrica* Conrad, 1850 (non *M. tetrica* Gould, 1847); *Melania oncoides* Tenison Woods, 1878; *Melania tatei* Brazier, 1881 (new name for *M. tetrica* Conrad); *Melania subsimilis* Smith, 1882; *Plotiopsis centralia* Cotton, 1943; *Plotiopsis flata* Iredale,1944; *Plotiopsis subornata* Iredale,1943; *Plotiopsis thrascia* Iredale, 1944; *Plotiopsis sociana* Iredale, 1944

Biology and ecology

Feeds on detritus, lives in stagnant as well as running waters in rivers, creeks, reservoirs and permanent waterholes in ephemeral rivers. Snails are euviviparous and parthenogenic and only completely developed crawling juveniles (3-7 in most populations and up to 58 in the Finke River populations of Central Australia) with shells comprising several whorls hatch from the brood pouch located in the head.

Distribution

Throughout mainland Australia with the exception of the Monsoonal Kimberley, Top End and Gulf of Carpentaria. In NSW in coastal rivers north of the Shoalhaven River. Endemic to Australia.

Notes

The extensive range includes a number of disjunct populations. The species concept employed here requires further testing.

Further reading

Glaubrecht, M., Brinkmann, N. & Pöppe, J. (2009). Diversity and disparity 'down under': systematics, biogeography and reproductive modes of the 'marsupial' freshwater Thiaridae (Caenogastropoda, Cerithioidea) in Australia. *Zoosystematics and Evolution* 85: 199-275.

Glaubrecht, M. & Neiber, M. T. (2019). Thiaridae Gill, 1871 (1823). Pp. 86-89 *in* C. Lydeard & Cummings, K. S. *Freshwater Mollusks of the World: a Distribution Atlas*. Baltimore, John Hopkins University Press.

Maaß, N. & Glaubrecht, M. (2012). Comparing the reproductive biology of three “marsupial”, eu-viviparous gastropods (Cerithioidea, Thiaridae) from drainages of Australia’s monsoonal north. *Zoosystematics and Evolution* 88: 293–315.

Ponder, W. F., Clark, S. A. & Dallwitz, M. J. (2000). *Freshwater and estuarine molluscs: an interactive, illustrated key for New South Wales*. Melbourne, CSIRO Publishing.

Smith, B. J. (1992). Non-marine Mollusca. Pp. i-xii, 1-408 *in* W. W. K. Houston. *Zoological Catalogue of Australia*, 8. Canberra, Australian Government Publishing Service.

Smith, B. J. & Kershaw, R. C. (1979). *Field guide to the non-marine molluscs of south eastern Australia.* Australian National University Press, Canberra, Australia.

Stoddart, J.A. (1983). The accumulation of genetic variation in a parthenogenetic snail. *Evolution*, 37: 546-554.

Stoddart, J. A. (1985). Analysis of species lineages of some Australian thiarids (Thiaridae, Prosobranchia, Gastropoda) using the evolutionary species concept. *Journal of the Malacological Society of Australia* 7: 7-16.

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