Australian FRESHWATER MOLLUSCS

Fonscochlea (*Wolfgangia*) *zeidleri* Ponder, Hershler & Jenkins, 1989

Fonscochlea (Wolfgangia) zeidleri (adult size 3.4-5.3 mm)

Distribution of *Fonscochlea (Wolfgangia) zeidleri*.

Blanche Cup, a spring in the middle Lake Eyre springs. Photo J. Ponder.

Kewson Hill springs, Lake Eyre Supergroup,. South Australia. Photo: W. Ponder.

Dr Wolfgang Zeidler, after whom the subgenus *Wolfgangia* is named.

Diagnostic features

Shell differs from *Fonscochlea* s.s. in being rather thicker, and the aperture has a thickened peristome. Operculum is thick with prominent pegs. Female genital system as for genus except oviduct between capsule gland and bursal duct always straight (looped in the typical subgenus) and sperm sacs lie dorsal to the muscular oviduct while in the typical subgenus they are ventral to the oviduct. The ducts of the sperm sacs are ventral to the sacs, not ventral as in the typical subgenus.

Classification

Fonscochlea (***Wolfgangia***) ***zeidleri*** Ponder, Hershler & Jenkins, 1989

Class Gastropoda

Infraclass Caenogastropoda

Order Littorinida

Suborder Rissoidina

Superfamily Truncatelloidea

Family Tateidae

Genus Fonscochlea Ponder, Hershler and Jenkins, 1989

Subgenus *Wolfgangia* Ponder, Hershler and Jenkins, 1989 (Type species: *Fonscochlea (Wolfgangia) zeidleri* Ponder, Hershler & Jenkins, 1989)

Original name: *Fonscochlea* (*Wolfgangia*) *zeidleri* Ponder, Hershler & Jenkins, 1989. *In* Ponder, W. F., Hershler, R. & Jenkins, B. (1989). An endemic radiation of hydrobiid snails from artesian springs in northern South Australia: their taxonomy, physiology, distribution and anatomy.*Malacologia* 31: 1-140.

Type locality: Coward Springs, Lake Eyre Division, South Australia.

Biology and ecology

This form, the most widely distributed of the mound spring snails of South Australia, is of special interest because of its amphibious habitat. It lives in most springs along the edges of the outflows where it is either exposed or partly or completely buried in the substrate. Lives together with *Trochidrobia*.

Fully aquatic (Form B) and amphibious (Form A) forms occur. The amphibious form lives along the edges of the outflows where it is either exposed, as on the hard substrata found on the calcareous mounds, or partly or completely buried in the sediment. The preference for burrowing in the substrate appears to differ between spring groups and might not be due entirely to substrate differences. For example the populations of this species at Hermit Hill are extremely cryptic, mainly because of this habit, whereas at Welcome Springs, with similar substrate available, they are much more conspicuous, large numbers being present on the surface.

Distribution

Northern South Australia, Mound Springs of the Lake Eyre Supergroup including Southern Springs, Middle Springs, South-Western Springs, Freeling Springs, Oodnadatta Complex, and Big Cadnaowie Spring.

Notes

Two formsof this species occur (forms A & B), and they are geographically isolated, have distinctive shell shapes and Form B and its fully aquatic habit, thus differing from the amphibious habit of the typical form A (Ponder et al. 1989).

This is one of several species of *Fonscochlea* found in northern South Australia. They are all very similar, being separated on small differences in size and shape of the shells and in a few anatomical details. They have pupiform shells with adults having a thin to slightly thickened aperture and the operculum usually bears one or more pegs. Species of *Fonscochlea* are among the most geographically isolated tateid snails in Australia.

Further reading

Ponder, W. F. (2004). Endemic aquatic macroinvertebrates of artesian springs of the Great Artesian Basin—progress and future directions. *Records of the South Australian Museum Monograph Series* 7: 101-110.

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.

Ponder, W. F., Eggler, P. E. & Colgan, D. J. (1995). Genetic differentiation of aquatic snails (Gastropoda: Hydrobiidae) from artesian springs in arid Australia. *Biological Journal of the Linnean Society* 56: 553-596.

Ponder, W. F., Hershler, R. & Jenkins, B. (1989). An endemic radiation of Hydrobiidae from artesian springs in northern South Australia: their taxonomy, physiology, distribution and anatomy. *Malacologia* 31: 1-140.

Rossini, R. A., Fensham, R. J., Stewart-Koster, B., Gotch, T. & Kennard, M. J. (2018). Biogeographical patterns of endemic diversity and its conservation in Australia's artesian desert springs. *Diversity and Distributions* 24: 1199-1216.

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