



***Carnarvoncochlea* Ponder, Zhang, Hallan & Shea, 2019**

Diagnostic features

Although this genus does not possess any unique anatomical characters, it differs from other Queensland species in the '*Jardinella* radiation' in that the rectum forms a prominent arch in the mantle roof. Otherwise, the anatomy is plesiomorphic for the group.

The genus is diagnosed as follows by Ponder et. al. (2021).

Shell small to tiny, conical to depressed trochiform, whorls convex, aperture subpyriform, peristome slightly thickened, inner lip loosely attached or separated from parietal wall; narrowly to moderately umbilicate. Sculpture of growth lines only. Protoconch of 1.2–1.4 whorls, minutely punctate. Operculum subpyriform, paucispiral with last whorl large, nucleus acentric; inner surface lacking white smear, with or without weak protuberances. Radula with central teeth with median cusp wider and longer than adjacent cusps; lateral margins usually narrow; innermost basal cusps short to moderate, broad; outer pair very small to absent; basal tongue narrow U-shape. Rectum with prominent arch. Male with pallial vas deferens simple or with undulations or coils. Prostate gland (known in only one species), broad, tapering rapidly anteriorly and posteriorly, slightly more than half in mantle roof. Penis with slightly tapering to slightly swollen distal end and short papilla; glands absent. Female with coiled oviduct with one arch-like vertical loop not overlapping bursa. Bursa copulatrix mostly posterior to albumen gland, absent in one species. Vestibule moderately to significantly expanded; genital opening terminal to subterminal, short to slit-like, with or without associated gutter.

Classification

Carnarvoncochlea Ponder, Zhang, Hallan & Shea, 2019

Class Gastropoda

Infraclass Caenogastropoda

Order Littorinida

Suborder Rissoidina

Superfamily Truncatelloidea

Family Tateidae

Genus *Carnarvoncochlea* Ponder, Zhang, Hallan & Shea, 2019.

Original reference: Ponder, W. F., Zhang, W. -H., Hallan, A., & Shea, M. E. (2019). New taxa of Tateidae (Caenogastropoda, Truncatelloidea) from springs associated with the Great Artesian Basin and Einasleigh Uplands, Queensland, with the description of two related taxa from eastern coastal drainages. *Zootaxa* 4583(1): 1-67.

Type species: *Jardinella carnarvonensis* Ponder & Clark, 1990.

Type locality: unnamed spring approximately 5 km northwest of Rangers headquarters, just north of 13th river crossing, Carnarvon Gorge National Park, Queensland.

State of taxonomy

Ponder et al. (2019) recorded variation and indicated that revision of these snails is necessary.

Biology and ecology

Known from springs, seepages and small streams feed by sandstone aquifers.

Distribution

Carnarvon Gorge and nearby areas, in the recharge area on the eastern edge of the Great Artesian Basin, Queensland.

Further reading

Fensham, R., Ponder, W. & Fairfax, R. (2010). *Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin. Report to Department of the Environment, Water, Heritage and the Arts, Canberra.* Queensland Department of Environment and Resource Management, Brisbane. <https://www.environment.gov.au/system/files/resources/0cefc83a-3854-4cff-9128-abc719d9f9b3/files/great-artesian-basin-ec.pdf>

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., Zhang, W. -H., Hallan, A., & Shea, M. E. (2019). New taxa of Tateidae (Caenogastropoda, Truncatelloidea) from springs associated with the Great Artesian Basin and Einasleigh Uplands, Queensland, with the description of two related taxa from eastern coastal drainages. *Zootaxa* 4583(1): 1-67.

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

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