



A new species of *Notovoluta* Cotton, 1946 (Gastropoda, Volutidae) from Western Australia

Yao Zheng

Junior Research Fellow, Blue Sky Research Foundation, Trinity Beach, Cairns, Qld. 4789, Australia. Email: <mailto:yz19454@gmail.com>

Stephanie A. Clark

Invertebrate Identification, 481a Great Western Highway, Faulconbridge, New South Wales, 2776, Australia.

Stephen J. Maxwell

College Business Law and Governance, James Cook University, Cairns, Qld 4870, Australia. Corresponding author: stephen.maxwell@my.jcu.edu.au

ORCID <https://orcid.org/0000-0002-4328-6171>



[urn:lsid:zoobank.org:pub:55D42575-6EAA-4FEC-B01C-8BD5CC74C459](https://zoobank.org/pub:55D42575-6EAA-4FEC-B01C-8BD5CC74C459)

ABSTRACT

Notovoluta stricklandi sp. nov. is described based on shell morphology and is compared to other species of *Notovoluta* known from Western Australia. The recent discovery of *N. stricklandi* brings the total number of extant taxa within this Australian endemic genus to fourteen. Furthermore, the addition of this new species reinforces south-western Australia as a *Notovoluta* hotspot.

Key words –*Notovoluta*, *Notovoluta stricklandi*, Deep water, new species, taxonomy, Volutidae.

INTRODUCTION

The endemic Australian genus *Notovoluta* Cotton, 1946 currently is comprised of 13 recent and 11 fossil taxa (MolluscaBase, 1st December 2025), most recent taxa are known from very few specimens, and are highly sought after by researchers of Mollusca. Many, such as *Notovoluta kalotinae* Bail & Limpus, 2015, *Notovoluta norwestralis* Bail & Limpus, 2003, *Notovoluta portlandensis* Zheng & Maxwell, 2025 and *Notovoluta rossiteri* (Brazier, 1898) are currently only known from the holotype (Maxwell & Zheng 2025; Zheng & Maxwell



2025e). Similarly, other species are known only by a handful of specimens largely held in private collections, often with only the holotype being located in an institution, such as *Notovoluta baconi* B. R. Wilson, 1972, *Notovoluta capricornea* (B. R. Wilson, 1972), *Notovoluta gerondiosi* Bail & Limpus, 2005, *Notovoluta hoskensae* Poppe, 1992, *Notovoluta occidua* Cotton, 1946, and *Notovoluta pseudolirata* (Tate, 1888). Only three, *Notovoluta gardneri* Darragh, 1983, *Notovoluta kreuslerae* (Angas, 1865) and *Notovoluta verconis* (Tate, 1892) are considered relatively common.

The collection of material using remotely operated vehicles (ROVs) is providing opportunities to study the taxonomic composition of molluscan fauna from benthic substrates that hitherto have not been available for sampling. Importantly, those operating the ROVs have shared their finds willingly with active taxonomists, enabling the description of many new taxa. This paper adds to that growing number of taxa described based on the generosity and endeavours of those modern explorers of the deep, without whom much would remain hidden to science.

Abbreviations:

BSRF	BlueSky Research Foundation Collection, Cairns, Queensland.
DSC	Drew Strickland Collection, Geraldton, Western Australia.
RWC	Ray Walker Collection, Busselton, Western Australia.
YZC	Yao Zheng Collection, Perth, Western Australia.
L	Length of the shell.

METHODS

This study uses shell morphological information to describe new species, a method that has been used with several molluscan groups from Australia in recent years and Volutidae in particular (Maxwell & Berschauer 2023; Zheng & Maxwell 2025a, 2025b, 2025c, 2025d). The use of species rank was based on the theoretical understanding contained within Maxwell et al. (2020, 2021). Genetic material (the shell) was available for this study, but the cost of undertaking that task was outside the funding scope of the authors.

TAXONOMY

Superfamily Volutoidea Rafinesque, 1815

Family Volutidae Rafinesque, 1815

Genus *Notovoluta* Cotton, 1946

Type species *Voluta (Alcithoe) kreuslerae* Angas, 1865 [by original designation]

***Notovoluta stricklandi* sp. nov**

(Pl. 1, Pl. 2 Fig. B)

[urn:lsid:zoobank.org:pub:55D42575-6EAA-4FEC-B01C-8BD5CC74C459](https://zoobank.org/pub:55D42575-6EAA-4FEC-B01C-8BD5CC74C459)

Description. – Shell elongate conic, 63–55 mm high and 22–20 mm wide; protoconch smooth, apically flattened with three whorls, uniformly light apricot in colour; teleoconch with three whorls, with 20–22 rounded ribs; rounded ribs that gradually increase in size with maturity, the ribs commencing at the distinct suture, in alignment with the rib on the prior



whorl; a slight subsutural ramp prior to the formation of the shoulder; body whorl 39-37 mm in height, 22-19 mm wide; aperture 29-28 mm high and 8-7 mm wide; columella fold that commences with the second plait; aperture blunt anteriorly, with four well-formed plaits; outer lip straight posteriorly becoming recurved anteriorly where the aperture is widest and joins just below the shoulder forming an acute angle with the body whorl; labrum not thickened; shell colour uniformly light apricot with small reticulated darker apricot lines that create a triangular nebulae over the surface of the shell, a row of darker spots is found on the mid body whorl, and rarely with blotches.



Plate 1. *Notovoluta stricklandi* sp.nov., Western Australia, off Dongara, crabbed, by ROV, on sand at 180 m, L 55 mm, holotype (BSRF0036).



Holotype. – Western Australia, off Dongara, crabbed, L 55 mm, by ROV on sand at 180 m (BSRF0036).

Paratype. – Western Australia, off Dongara, crabbed, L 63 mm, taken in a cray pot 70-80 m, the aperture is damaged (DSC).

Type locality. – Western Australia, off Dongara, from 70 to 180 m (Pl. 3).

Distribution. – Known from the type locality only.

Etymology. – Named in honour of Drew Strickland, who has provided the authors with material, enabling a more nuanced understanding of Western Australian Mollusca, and for his long-term commitment and contribution to the research of molluscs.

Comparison. – *Notovoluta stricklandi* sp. nov. is currently known from two specimens. The holotype shows the broad body whorl, which is characteristic of the new taxon; the paratype lacks a complete lip and therefore does not reflect this feature.

Notovoluta stricklandi differs from others in the *Notovoluta* complex in having a broad body whorl. *Notovoluta baconi* differs from the new species in having more pronounced axial ribs, a different colour pattern and the width of the aperture is widest at the mid-point and not anteriorly in *N. stricklandi*. The anterior ventral fold is not thickened and ridge-forming in *N. baconi*, which is in contrast to the solid, wide ridge in *N. stricklandi*. *Notovoluta genderosi* has a narrower protoconch, and has a longer, elongated aperture that is tapered anteriorly and a columella tinged with yellow, the pattern in that species is much less finely reticulated than that found on *N. stricklandi*. *Notovoluta stricklandi* differs from *N. pseudolirata* in not having the strong, sharply raised axial shoulder. *Notovoluta capricornea* differs by lacking the axial ridges found on the body whorl of *N. stricklandi*.

ACKNOWLEDGEMENTS

We thank Drew Strickland of Geraldton and Ray Walker of Busselton for the use of specimens. We are indebted to Trevor and Marguerite Young of Myrtle Bank, South Australia, for kindly offering their remarks and proofing the paper, which improves the readability and clarity of the work.



Plate 2. *Notovoluta* species from central and southern Western Australia. Fig. A. *N. capricornea* (Wilson, 1972), dead collected coarse sand/sediment bottoms at 168 m, L 50.3 mm (YZC). Fig. B. *N. stricklandi* n. sp., Paratype, Dongara, Western Australia, taken in a cray pot 70-80 m, L 63 mm (DSC). Fig. C. *N. gerondiosi* Bail & Limpus, 2005, west of Dongara, collected by ROV on silty sand, L 51 mm (YZC). Fig. D. *N. baconi* Wilson, 1972, off South East Margaret River in about 90 metres, L 49 mm (RWC). Fig. E. *N. pseudolirata* (Tate, 1888), off Bremer Bay area, Albany, trawled by scallop boats at 50-75 m, L 72.7 mm (DSC). All figures at same scale.

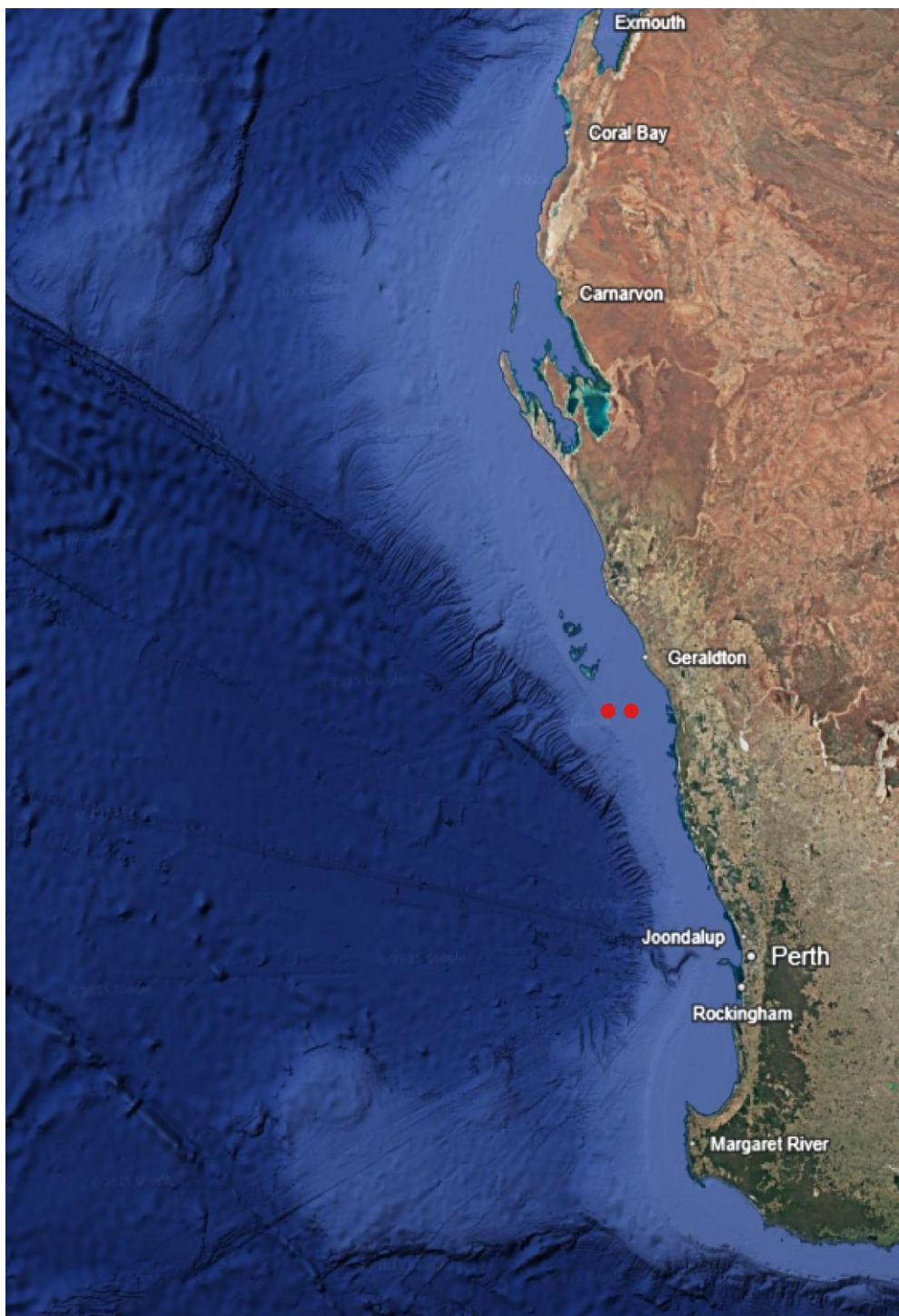


Plate 3. Known record locations of *Notovoluta stricklandi* sp. nov. from off Dongara, Western Australia (map source - Google Earth accessed 1.11.2015).



REFERENCES

- Angas, G. F. (1865).** Description of ten new species of shells, chiefly from the Australian seas. Proceedings of the Zoological Society of London, 1865: 55-58.
- Bail, P. & Limpus, A. (2003).** Two new species of Volutidae (Gastropoda) from Western Australia, *Notovoluta norwestralis* n. sp. and *Amoria (Amoria) simoneae* n. sp.. La Conchiglia, 34(305): 23-30.
- Bail, P. & Limpus, A. (2005).** A new species of Volutidae (Gastropoda) from Western Australia. Visaya, 1(3): 47-54.
- Bail, P. & Limpus, A. (2015).** A new species of the genus *Notovoluta* Cotton, 1946 (Gastropoda: Volutidae) from Northwestern Australia. Novapex, 16(3):95-98.
- Brazier, J. (1898).** New marine shells from the Solomon Islands and Australia. Proceedings of the Linnean Society of New South Wales, 22:779-782.
- Cotton, B. C. (1946).** Some rare southern Australian shells. The South Australian Naturalist, 24(1): 13-16.
- Darragh, T. A. (1983).** Volutidae (Mollusca: Gastropoda) from the Capricorn Channel, Central Queensland, Australia. Journal of the Malacological Society of Australia, 6(1-2): 83-87.
- Maxwell, S. J. (2022).** A revision of *Doxanderina* Dekkers and Maxwell, 2020 (Gastropoda: Neostromboidae: Strombidae): The extant *Doxander* Wenz, 1940 and a new species from Queensland. The Festivus, 54(2): 141-168.
- Maxwell, S. J. & Berschauer, D. P. (2023).** A Review of the *Relegamoria mollerii* complex (Gastropoda: Volutoidae: Volutidae) from the Solanderian Molluscan Province in Queensland, Australia. The Festivus, 55(4): 271-294.
- Maxwell, S. J., Congdon, B. C. & Rymer, T. L. (2020).** Essentialistic Pluralism: The theory of Spatio-temporal positioning of species using integrated taxonomy. Proceedings of the Royal Society of Queensland, 124: 83-97.
- Maxwell, S. J., Rymer, T. L., Rowell, M. K., Hernandez Duran, L. C., Berschauer, D. P., Underdown, M., Petuch, E. J. & Dekkers, A. M. (2021).** Defining and bringing relevance of meaning to species group-level taxa. Proceedings of the Biological Society of Washington, 134(1): 27-28.
- Maxwell, S. J. & Zheng, Y. (2025).** The reinstatement of *Voluta rossiteri* Brazier, 1898 (Mollusca: Volutidae) from Victoria, Australia and notes on its taxonomic placement and importance for conservation. The Festivus, 57(4): 230-233.
- Poppe, G. (1992).** New species and a new subspecies in Volutidae (Mollusca: Gastropoda). Malacologia Mostra Mondiale, 11: 3-21.
- Tate, R. (1888).** The gastropods of the older Tertiary of Australia (Part I). Transactions of the Royal Society of South Australia, 10: 91-176.
- Tate, R. (1892).** Descriptions of some new species of marine Mollusca from Australia. Transactions of the Royal Society of South Australia, 15(2): 125-132.
- Wilson, B. R. (1972).** New species and records of Volutidae (Gastropoda) from Western Australia. Journal of the Malacological Society of Australia, 2(3): 339-359.
- Zheng, Y. & Maxwell, S. J. (2025a).** A remarkable new *Cymbiola* (Volutidae) from the Arafura Sea, Northern Territory: How many specimens are enough? The Festivus, 57(2): 85-91.
- Zheng, Y. & Maxwell, S. J. (2025b).** A new species of *Amoria* J. E. Gray, 1855 from Ashmore Reefs. The Festivus, 57(2): 68-72.
- Zheng, Y. & Maxwell, S. J. (2025c).** A new *Notovoluta* Cotton, 1946 (Mollusca: Volutidae) from Victoria, Australia. The Festivus, 57(4): 230-233.
- Zheng, Y. & Maxwell, S. J. (2025d).** New *Melo* Broderip, 1826 (Gastropoda: Volutidae) species from the Northern Territory and tropical Queensland, Australia. Acta Malacologica Inquisitionis, 2(1), 20-46.

Responsible editor: Henk Dekker.