

An Endemic *Morum* Röding, 1798 (Harpidae: Moruminae) from Central Western Australia

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ABSTRACT A new species of *Morum* Röding, 1798 from the deep water of the central Western Australian Coast is described. Collected in 100-250 m of water off Coral Bay by a remotely operated vehicle (ROV), *Morum stricklandii* nov. sp. is known from only five specimens collected over a period of 10 years searching its known habitat. It differs from the only other endemic *Morum* from Queensland, *M. morrisoni* D. Monsecour, Lorenz & K. Monsecour, 2020, in being smaller, bulbiform, and more spinose, and in lacking a columella plate covering the anterior of the shell, and from the southeastern Australian *Morum bruuni* (Powell, 1958) in sculptural form and lacking a coloured columella. Similar in size and with a white aperture to *M. cancellatum* (G.B. Sowerby I, 1824), *Morum ninomiyai* Emerson, 1986, and *Morum watanabei* Kosuge, 1981, these species are not only restricted to different molluscan provinces but have consistent morphological differences that enable them to be discerned from the new species. We expect greater understanding of the habitat and distribution of existing molluscan biodiversity will be gained with further ROV exploration in deep water off the central Western Australian Coast.

KEYWORDS Biogeography, Coral Bay, deep water, exploration, *Morum stricklandii*

INTRODUCTION

Morum, currently consisting of 43 recognised species distributed throughout the tropical and subtropical oceans, is a popular genus among collectors of gastropods. Many are deep water and elusive, for example *Morum mariaodeteae* Petuch & Berschauer, 2020 from Brazil, and more recently named *Morum ngoengai* Thach, 2025 from Vietnam, and *Morum magnificum* Lorenz, D. Monsecour & K. Monsecour, 2025 from Indonesia. This study introduces a new *Morum* from the edge of the continental shelf of central Western Australia.

The new *Morum* is the only taxon discovered of this genus from Western Australia and

presumably is restricted to the outer continental shelf edge (100-250 metres) in the southern Exmouthian Subprovince of the Damperian Province (Petuch and Berschauer 2020). The endemic *M. morrisoni* D. Monsecour, Lorenz & K. Monsecour, 2020 from the Solanderian Province of Queensland (Petuch and Berschauer 2020) and *Morum bruuni* (Powell, 1958) from south-eastern Australia and a wider distribution that includes the Kermadec Islands, are the only other species of *Morum* from Australia. Records of *M. uchiyamai* account to David Monsecour from northern Australia cannot be verified this time by the authors (personal communications).

ABBREVIATIONS

BSRF	BlueSky Research Foundation Collection, Cairns, Queensland
CCC	Chris Clarke Collection, Bussleton
DSC	Drew Strickland Collection, Geraldton, Western Australia
FEM	Femorale Collection Data Records
YZC	Yao Zheng Collection, Perth, Western Australia
H	Axial height

METHODS

Material for this study was provided by Drew Strickland and Ray Walker, who collected the material at depths of 100 and 250 metres with the use of a remotely operated vehicle (ROV), and Chris Clarke who owned two examples. The new species is described based on morphology and distinguished by biogeography from other known species from Australia, a method used in similar studies of Australian gastropods (Zheng and Maxwell 2024, 2025a, 2025b, 2025c). The use of species rank was based on the theoretical understanding contained within Maxwell *et al.* (2020, 2021). Genetic material was available for this study, but the cost of undertaking that task was outside the funding scope of the authors.

Comparisons are made with the Australian *M. morrisoni* D. Monsecour, Lorenz & K. Monsecour, 2020, and other taxa from the Northern Pacific and Central Indo-Pacific that have a similar form. The Mollusca provinces used in this study are defined by Petuch and Berschauer 2021.

SYSTEMATIC PART

Family	Harpidae Bronn, 1849
Subfamily	Moruminae Hughes & W.K. Emerson, 1987
Genus	<i>Morum</i> Röding, 1798

Morum stricklandi Zheng, Dekkers, and
Maxwell, nov. sp.
(Plates 1-6)

Description. Shell bulbiform with short spire 30-40 mm in length; protoconch translucent, mammillate and glossy, with three whorls; early teleoconch with axially raised ribs and two spiral ribs that intersect to form blunt nodules; later teleoconch whorls have axial and spiral ribs, which intersect forming foliated spines; foliated spines are linked along axial rib; interspaces between the ribs are lined with low, thin axial laminae; body whorl with axial foliations that form 14 spines as they intersect ribs; ramp to shoulder bears smallest spine; shoulder spine longest, and spines gradually decline in size toward anterior; spines concave and externally foliated; aperture joins below spire; columella forms a granulated shield that does not cover anterior of shell but extends over a quarter of upper body whorl increasing as the shell narrows in width at the mid body; outer lip flattened, with distinctive teeth with raised ridges between them; labrum foliated and with a smooth zone before it, aperture and columella white; body whorl off white with the axial rib foliations darker.

Type Material. Holotype: H. 39.9 mm, West of Dirk Hartog Island, 140 m by ROV, (BRSF0039); Paratype 1 (YZC) - The Funrell Patch, West of Bernier Island, 110 m by ROV, H. 36.1 mm; Paratype 2 (CCC) - Bernier Island, Coral Bay, 228 m by ROV, H. 37.4 mm, 2024; Paratype 3 (CCC) - False Entrance, Shark Bay, 202 m by ROV, H. 31.8 mm; and

Paratype 4 (DSC) - W/NW Bernier Island, 120 m by ROV, H. 39.8 mm.

Type Locality. West of Dirk Hartog Island, Western Australia, at a depth of 140 m. On a sparse reef, in association with sand, sponges and rubble at a depth between 100 and 250 m (Drew Strickland personal communications).

Etymology. Named after Drew Strickland who collected and brought the type material to the attention of the first author and kindly donated the type material.

DISCUSSION AND COMPARATIVE REMARKS

The shell of *Morum stricklandi* differs from *M. morrisoni* in being half the size and more bulbiform, in having greater foliation on the spiral/axial ridge intersections, and not having the columella plate that is more granular which does not extend over the entire anterior of the shell (Plate 2). While similar in size to the Japonic and Indo-Malaysian *M. cancellatum* (G.B. Sowerby I, 1824), *M. stricklandi* can be distinguished from it has a more biconic shell lacking, the foliation along the axial ribs and especially the spire that is indicative of *M. stricklandi*; in dorsal view, there is an axial perpendicular ramp before the labrum in *M. cancellatum* that is absent in *M. stricklandi* (Plate 3). *Morum watanabei* Kosuge, 1981 from the Japonic Province and the Philippinian Subprovince of the Indo-Malaysian Province, differs from *M. stricklandi* in being more bulbous with a shorter spire; it is finer in sculpture lacking the larger spines on the body whorl; the largest spines recurved apically at the shoulder; and having a larger axial perpendicular ramp before the labrum (Plate 4). *Morum ninomiyai* Emerson, 1986, from the Andamanian Subprovince of the Lemurian Province, shows similarities with the *M. stricklandi* but the columella plate of that species is lirate, not nodulate as with *M.*

stricklandi; and *M. ninomiyai* has a more pronounced axial perpendicular ramp before the labrum (Plate 5). *Morum grande* (Adams, 1855) centred on the Philippinian Subprovince of the Indo-Malaysian Province and ranging to the Melanesian Subprovince, is a larger species than *M. stricklandi*; has a plate that extends over half the body whorl and covers the anterior of the shell; and the sculpture is finer and there are more spiral ribs on the body whorl than on *M. stricklandi* (Plate 6).

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Plate 1. *Morum stricklandi* n. sp. and similar species of *Morum*: **A**= *M. morrisoni* D. Monsecour, Lorenz & K. Monsecour, 2020, Moreton Bay, Queensland, Australia, H 68.8 mm (FEM258805). **B**= *M. stricklandi* n. sp., west of Dirk Hartog Island, 140 m by ROV, H 39.9 mm, 2008, holotype (BRSF0039). **C**= *M. grande* (Adams, 1855), off Senkaku Island, Japan, H 64.8 mm (FEM 54632). **D**= *M. cancellatum* (G.B. Sowerby I, 1824), off Senkaku Islands, southwest of Okinawa, Japan, H. 38.0 mm (FEM 55350). **E**= *M. watanabei* Kosuge, 1981, off Minabe, Wakayama, Japan, H 31.4 mm (FEM 54631). **F**= *M. ninomiyai* Emerson, 1986, off Phuket Island, Andaman Sea, Thailand, H 37.2 mm (FEM 331247).



Plate 2. Comparative plate of *Morum stricklandi* n. sp. and *Morum morrisoni* D. Monsecour, Lorenz & K. Monsecour, 2020: **A**= *M. stricklandi*, The Funrell Patch, West of Bernier Island, 110 m by ROV, H. 36.1 mm, Paratype 1 (DSC); **B**= *M. morrisoni*, off Half Moon Reef, Swain Reefs, Queensland, Australia, H. 64.0 mm (FEM258805); **C**=*M. morrisoni*, off Swain's Reef, Queensland, Australia, H. 65.6 mm (FEM319295); **D**= *M. morrisoni*, Bundaberg, Queensland, Australia, H. 65.5 mm (FEM310754); and **E**= *M. morrisoni*, off Lynx & Leopard reef, NNE of Bowen, Queensland, Australia, H. 48.5 mm (FEM 320545).

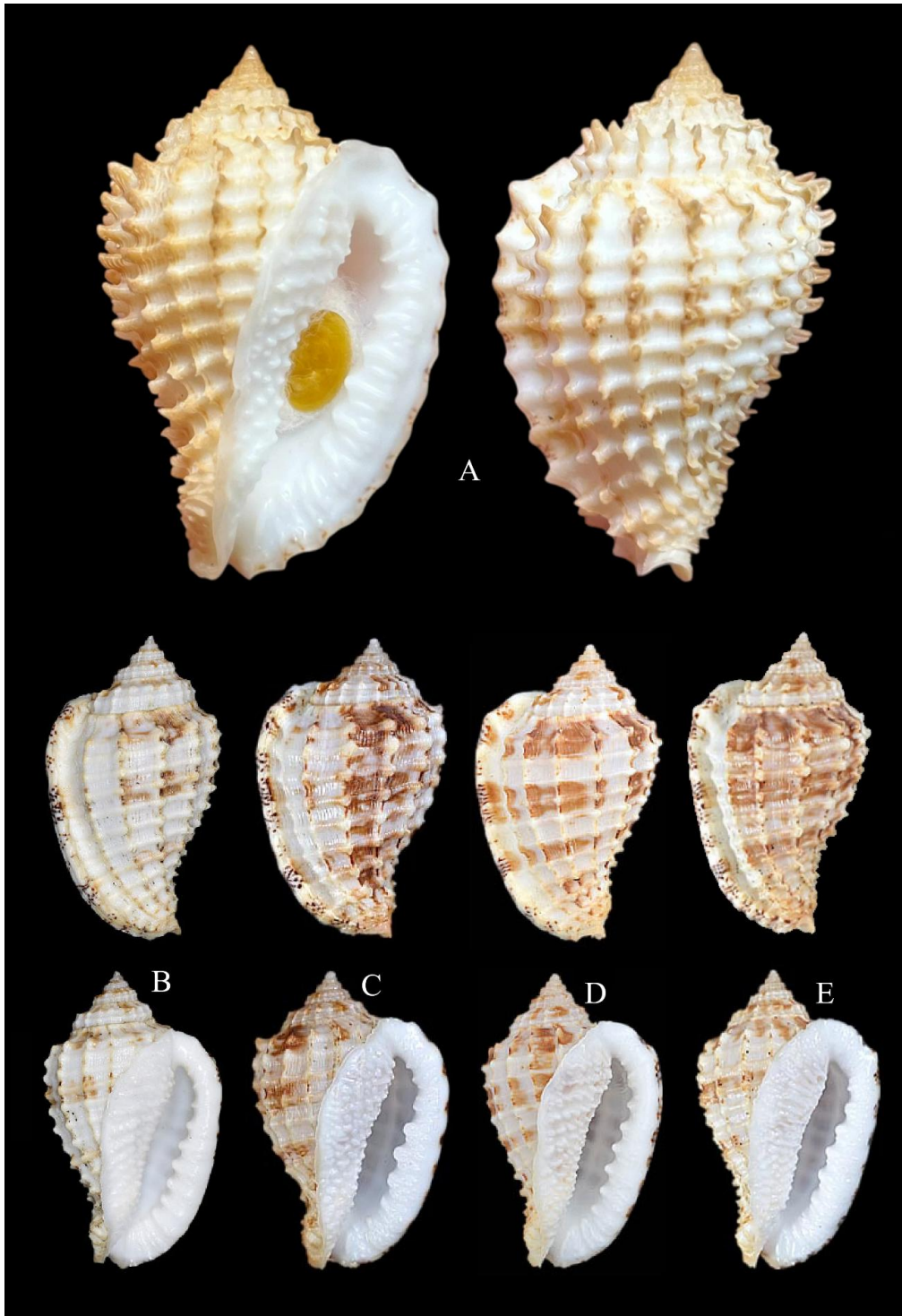


Plate 3. Comparative plate of *Morum stricklandi* n. sp. and *Morum cancellatum* (Sowerby I, 1824): **A**= *M. stricklandi*, West of Dirk Hartog Island, 140 m by ROV, H. 39.9 mm, 2008, Holotype (BRSF0039); **B**= *M. cancellatum*, off WenZhou, East China Sea, China, H. 42.1 mm (FEM 290920); **C**= *M. cancellatum*, off Senkaku Islands, SW Okinawa, Japan, H. 34.2 mm (FEM 83618); **D**= *M. cancellatum*, off Keelung, Taiwan, China Sea, H. 35.1 mm (FEM 131913); and **E**= *M. cancellatum*, Bashi Channel, off SW Taiwan, H. 43.7 mm (FEM 95388).



Plate 4. Comparative plate of *Morum stricklandi* n. sp. and *Morum watanabei* Kosuge, 1981: **A**= *M. stricklandi*, off Coral Bay, 228 m by ROV, H. 37.4 mm, 2024, Paratype 2 (CCC); **B**= *M. watanabei*, Samal Island, Davao, Mindanao, Philippines, H. 36.1 mm (FEM 330091); **C**= *M. watanabei*, off Minabe, Wakayama, Japan, H. 33.5 mm (FEM 139105); **D**= *M. watanabei*, off Keelung, Taiwan, China Sea, H. 29.0 mm (FEM 124192); and **E**= *M. watanabei*, Aliguay Is., Dipolog, Mindanao, Philippines, H. 37.8 mm (FEM 95391).

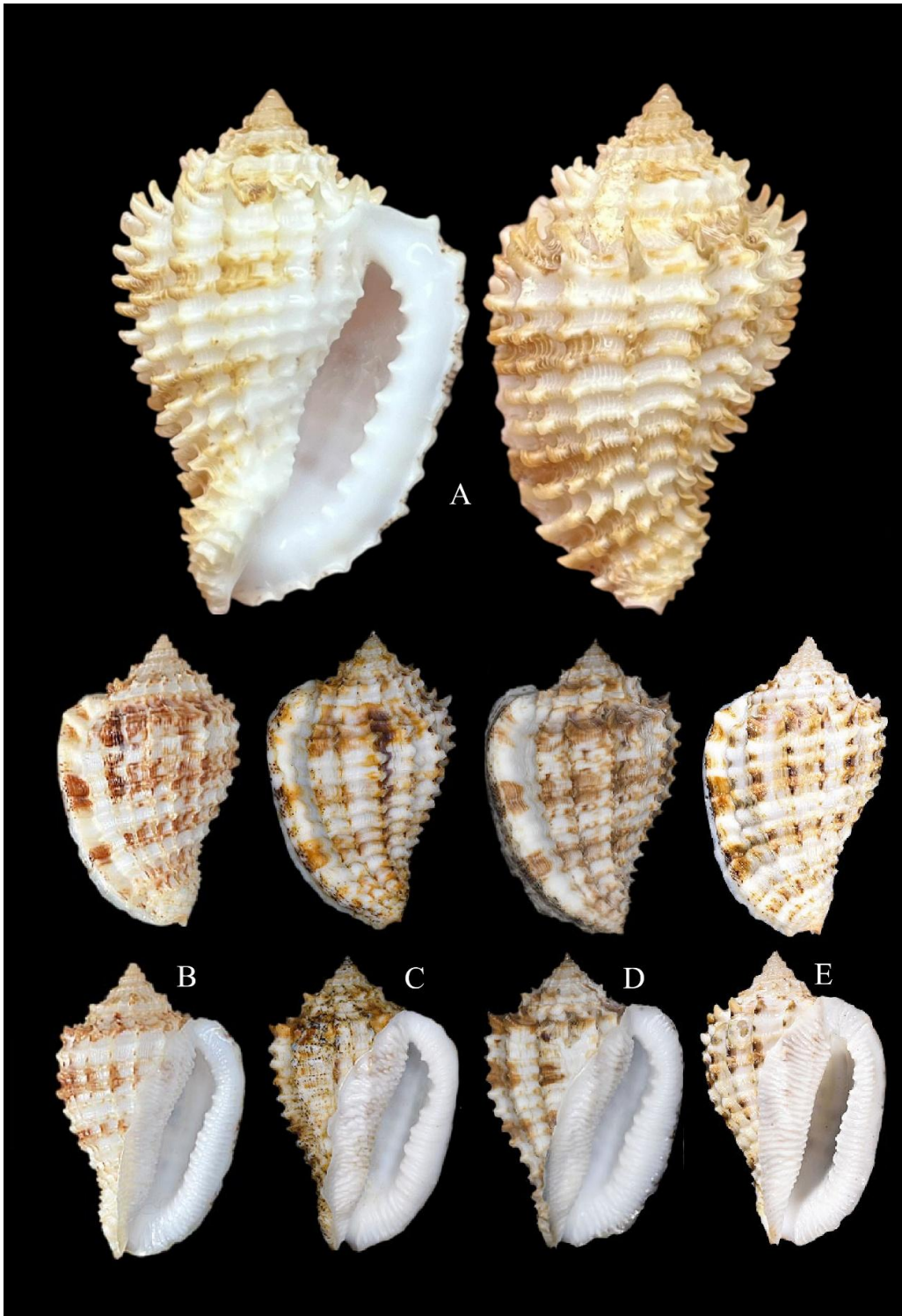


Plate 5. Comparative plate of *Morum stricklandi* n. sp. and *Morum ninomiyai* Emerson, 1986: **A**= *M. stricklandi*, False Entrance, Shark Bay, 202 m by ROV, H. 31.8 mm, Paratype 3 (CCC); **B**= *M. ninomiyai*, off Phuket Island, Andaman Sea, Thailand, H. 42.6 mm (FEM 112016); **C**= *M. ninomiyai*, off Phuket Island, Andaman Sea, Thailand, H. 44.8 mm (FEM 331249); **D**= *M. ninomiyai*, off Phuket Island, Andaman Sea, Thailand, H. 42.3 mm (FEM 323008); and **E**= *M. ninomiyai*, off Phuket Island, Andaman Sea, Thailand, H. 44.0 mm (FEM 261711).



Plate 6. Comparative plate of *Morum stricklandi* n. sp. and *Morum grande* (Adams, 1855): **A**= *M. stricklandi*, W/NW Bernier Island, 120 m by ROV, H. 39.8 mm, Paratype 4 (DSC); **B**= *M. grande*, off Keelung, NE Taiwan, H. 68.4 mm (FEM 123679); **C**= *M. grande*, Aliguay Is., Mindanao, Philippines, H. 57.3 mm (FEM 4350); **D**= *M. grande*, off Senkaku Island, Japan, H. 71.8 mm (FEM 45339); and **E**= *M. grande*, Honiara Island, Solomon Islands, H. 55.4 mm (FEM 64909).