

Description of two new *Marginella* species (Gastropoda:Marginellidae), from the KwaZulu-Natal and Eastern Cape, South Africa

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ABSTRACT Two new species in the genus *Marginella* from KwaZulu-Natal and the Eastern Cape, South Africa, are described. The first, *Marginella (Nataliamarginella) praeacuta* n. sp. is described from Hole in the Wall and Coffee Bay, northern Eastern Cape, South Africa, and compared to *M. (N.) mtataensis* from the same area, and *M. (N.) wallaceorum* from southern KwaZulu-Natal. The second, *Marginella (Albamarginella) humeronotata* n. sp. is described off southern KwaZulu-Natal, South Africa, and compared to *M. (A.) bicatenata* from the same area, and *M. (A.) tomlini* from the Agulhas Bank.

KEYWORDS *Marginella*, *Albamarginella*, *Nataliamarginella*, *M. (N.) praeacuta*, *M. (N.) humeronotata*, Marginellidae, KwaZulu-Natal, Eastern Cape, South Africa

INTRODUCTION

Several new species are discovered yearly by dredging in new areas along the South African coast, along with comparing data from the old research programmes conducted by the Natal Museum, Pietermaritzburg, during the 1980s. Two new species were discovered amongst the vast number of specimens studied. The first is a small shell classified in the *Nataliamarginella* S.G. Veldsman, 2017 subgenus that compares to *Marginella (Nataliamarginella) mtataensis* S.G. Veldsman, 2021 from the same locality range, northern Eastern Cape (Figure 1). *Marginella (N.) mtataensis* from the Eastern Cape was described by Veldsman (2021) as a small species that is ovate-biconical in shape and compared to *Marginella (Nataliamarginella) wallaceorum* Lussi, 2013 from KwaZulu-Natal.

The second, is a small shell in the subgenus *Albamarginella* S.G. Veldsman, 2017 that in many instances was identified as *Marginella*

(*Albamarginella*) *bicatenata* Sowerby III, 1914, from southern KwaZulu-Natal (Figure 1), but was found to be morphologically different. Wakefield (2012) indicated the type locality of *M. (A.) bicatenata*, allocated by Sowerby (1914), was Gorée, Senegal, and decided it is an error. The authors agree with Wakefield (2012) that the type locality of *M. (A.) bicatenata* is southern KwaZulu-Natal, South Africa and not Senegal, and the holotype concurs with specimens dredged south of Durban to Amanzimtoti, southern KwaZulu-Natal (Figure 1). For a while in the past authors synonymized *M. (A.) tomlini* Shackleford, 1916, with *M. (A.) bicatenata*, but Shackleford (1916) described a much larger shell from the Agulhas Bank, that is clearly different from *M. (A.) bicatenata*.

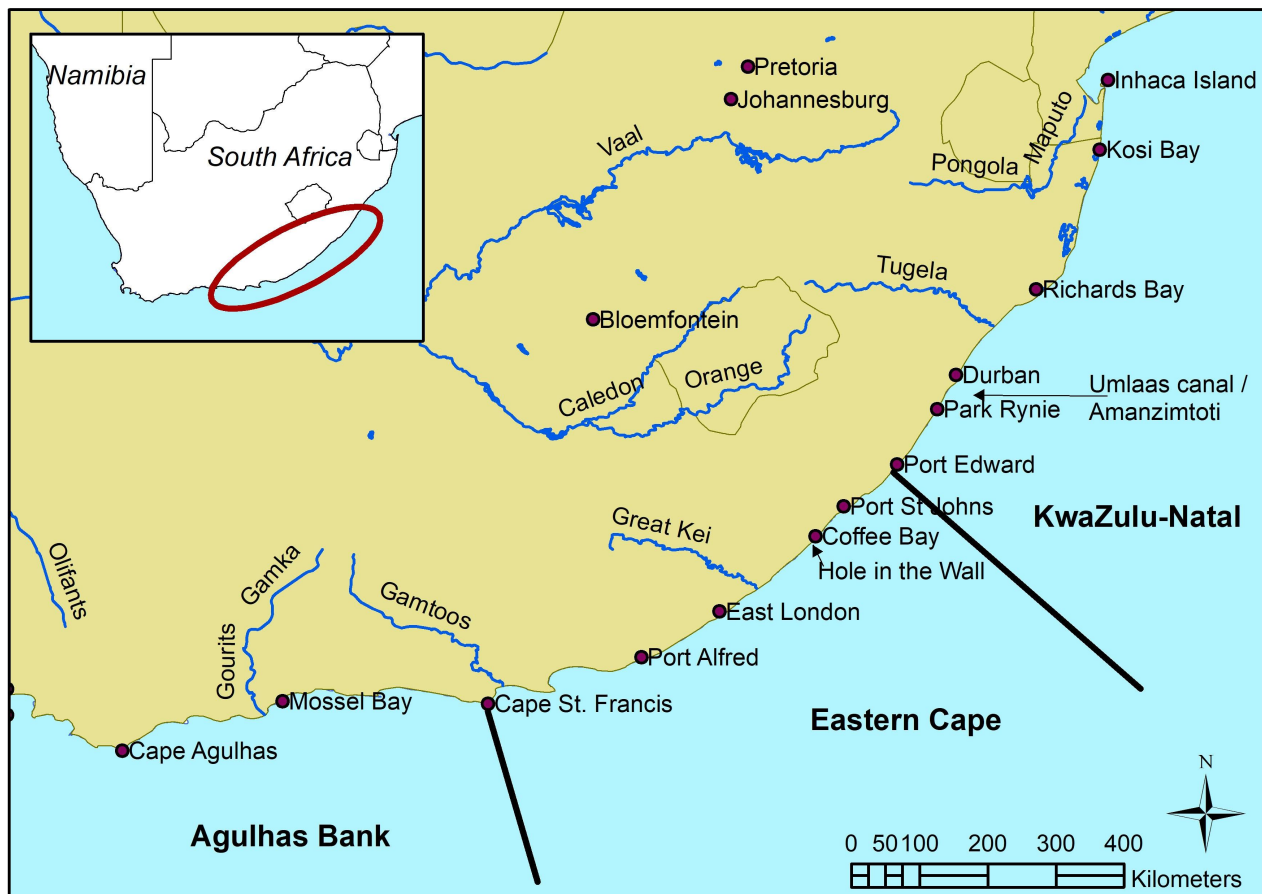


Figure 1. Locality map indicating the regions where the two new species occur.

METHODS

Marginella species within the same subgenus share several taxonomic characters, such as the type of labial denticles, posterior notch and callus on columella. Other shell morphological features are used here to differentiate species from each other, but not limited to, such as the shoulder shape and width, general shape of the shell, spire height and characteristics, aperture shape and width, shape of the labrum, markings, coloration and striae on body whorl.

Shells were measured with a pair of digital calipers (RS Pro Electronic Digital Caliper 150mm/6", South Africa). To ensure precision, each measurement was taken in triplicate. All the type material of the new species and other

material studied were photographed by S.G. Veldsman.

SYSTEMATICS

Phylum Mollusca Linnaeus, 1758
 Class Gastropoda Cuvier, 1795
 Subclass Caenogastropoda Cox, 1960
 Order Neogastropoda Wenz, 1938
 Superfamily Volutioidea Rafinesque, 1815
 Family Marginellidae Fleming, 1828
 Genus *Marginella* Lamarck, 1799
 Subgenus *Albamarginella* S.G. Veldsman, 2017
 Subgenus *Nataliamarginella* S.G. Veldsman, 2017

Marginella (Nataliamarginella) praeacuta

S.G.Veldsman & R.Aiken, n. sp.

(Figure 6.1, 6.2, 6.3 & 6.5)

Description. The shell is small (10-13 mm), fusiform-biconical shaped, has a low, sharp angled shoulder. Moderately thick labrum, smooth and off-white background color with dark brown markings on top, with no posterior notch or labial denticles. Spire moderately high and moderately broad, spire whorls convex and slightly stepped. Wide protoconch, light grey color. Columella straight with four thick continuous plications, which take up half the length of the aperture, off-white color. Callus developed on the columella. Aperture moderately wide and straight, off-white color. Background of the body whorl off-white to creamy colored, with brown speckled pattern presented in thin bands around the body whorl. The thin speckled lines become lighter colored towards the last third of the body whorl at anterior side, presented as a wide band, followed by thin band of dark brown lines visible around the body whorl. The last portion towards the base of the shell have similar speckled bands than that of the first two thirds of the shell. The shoulder has a thin darker speckled band presented as larger blocks. The spire has slightly darker brown speckled bands.

Distribution. Type locality of *M. (N.) praeacuta* n. sp. is dredged 110 m off Hole in the Wall, approx. 7 km south-west of Coffee Bay, Eastern Cape, South Africa. Specimens were dredged 100-110 m off Hole in the Wall and Coffee Bay, Eastern Cape.

Type material. The type material of the holotype and paratypes of *M. (N.) praeacuta* are as follows:

Holotype: 12.01 x 6.41 mm (Figure 6.1); off Hole in the Wall, dredged 110m; Coll. Natal Museum

South Africa (NMSA), ID No: P2001/T4559 (Donated by R. Aiken).

- Paratype 1: 11.94 x 6.52 mm (Figure 6.2); off Hole in the Wall, dredged 110m; Aiken Coll.
- Paratype 2: 12.23 x 6.66 mm; off Coffee Bay, dredged 100m; Veldsman Coll.
- Paratype 3: 12.40 x 6.95 mm (Figure 6.3); off Hole in the Wall, dredged 110 m; Aiken Coll.
- Paratype 4: 12.08 x 6.75 mm (Figure 6.5); off Hole in the Wall, dredged 110 m; Veldsman Coll.
- Paratype 5: 11.61 x 6.67 mm; off Coffee Bay, dredged 100 m; Aiken Coll.
- Paratype 6: 11.42 x 6.37 mm; off Hole in the Wall, dredged 110 m; Aiken Coll.

Etymology. The name '*praeacuta*' refers to the shell sharpening at one end (anterior side).

Discussion. *Marginella (N.) praeacuta* n. sp. is closely related and very similar in size to *M. (N.) mtataensis* S.G.Veldsman, 2021 (Figure 2) and *M. (N.) wallaceorum* Lussi, 2013 (Figure 3). *Marginella (N.) mtataensis* is much more ovate in shape than *M. (N.) praeacuta* that is more fusiform ending sharper edged at the anterior side, whereas *M. (N.) wallaceorum* is even more ovate. *Marginella (N.) praeacuta* has a higher and sharper spire than *M. (N.) mtataensis* and *M. (N.) wallaceorum* that have shorter wider spires. *Marginella (N.) praeacuta* has a wider and straighter aperture than the other two species, and its lip is on average thinner.



Figure 2. Holotype of *Marginella (Nataliamarginella) mtataensis* (10.68 x 5.85 mm), dredged 135-165m off Ubombo, approx. 19 km north-east of Coffee Bay, northern Eastern Cape. NMSA C3280/T4454, photo taken by S.G. Veldsman.



Figure 3. Holotype of *Marginella (Nataliamarginella) wallaceorum* (11.53 x 6.19 mm), dredged 125m off Port Edward, southern KwaZulu-Natal. NMSA W9482/T3159, photo taken by S.G. Veldsman.

Marginella (Albamarginella) humeronotata
S.G.Veldsman & R.Aiken, n. sp.
(Figure 7.1, 7.2 & 7.3)

Description. The shell is small (11-13 mm), light-weight and biconical-oval in shape. Spire low in relation to shell length and aperture, moderately stepped and slightly convex with the spirals being rounded. Shoulder is wide and rounded. Body whorl wide at posterior side, rounded, narrowing at a slight angle towards anterior side. Labrum is moderately thick, lip straight. No labial denticles present, posterior labial notch is slightly developed. Four columellar plications placed at equal intervals, the third and fourth (lower plicae) towards the anterior side at an angle with the fourth ending directly at the siphonal canal. Plicae off-white color, callus covering all the plicae and inside of columella. Moderately wide aperture and straight, columella straight. Aperture off-white colored. Background color of dorsum of the body whorl and spire off-white. Dark brown to black spots, widely spaced in one line around shoulder. The spire and protoconch off-white in color.

Distribution. Type locality of *M. (A.) humeronotata* n. sp. is dredged 160-170 m off Amanzimtoti, KwaZulu-Natal, South Africa. All specimens studied occur in deep water ranging from 100-170 m southern KwaZulu-Natal.

Type material. The type material of the holotype and paratypes of *M. (A.) humeronotata* are as follows:

Holotype: 12.03 x 7.03 mm (Figure 7.1); off Amanzimtoti (30°06.40'S & 31°00.80'E), southern KwaZulu-Natal, dredged 160-170 m, 1985; Coll. Natal Museum South Africa (NMSA), ID No: D1496/T4556.

- Paratype 1: 12.92 x 7.45 mm (Figure 7.2); off Park Rynie, southern KwaZulu-Natal, dredged 100 m; Aiken Coll.
- Paratype 2: 11.09 x 6.64 mm (Figure 7.3); Umlaas Canal (30°01.10'S & 31°03.20'E), southern KwaZulu-Natal, dredged 150 m, 1985; Coll. NMSA: D800/T4557.
- Paratype 3: 13.85 x 8.26 mm; off Amanzimtoti (30°06.40'S & 31°00.80'E), southern KwaZulu-Natal, dredged 160-170m, 1985; Coll. Natal Museum South Africa (NMSA), ID No: P2000/T4558.

Etymology. The name '*humeronotata*' refers to the markings on the shoulder.



Figure 4. Holotype of *Marginella bicatenata* (13.00 x 7.00 mm) southern KwaZulu-Natal. National Museum Wales (NMW) Tom. Coll. 1955.158.01434, photo with courtesy of Amgueddfa Cymru — NMW, Department of Natural Sciences.

Discussion. *Marginella (A.) humeronotata* n. sp. compare with *M. (A.) bicatenata* Sowerby III, 1914 (Figure 4) and *M. (A.) tomlini* Shackleford, 1916 (Figure 5). *Marginella (A.) tomlini* is larger in size and differs in general shape than the other two species. Furthermore, *M. (A.) tomlini* is biogeographically separated from the other two KwaZulu-Natal species that it occurs only on the Agulhas Bank (Figure 1) more than 700km apart. *Marginella (A.) humeronotata* n. sp. is more oval shaped with a wider body whorl on the posterior side and center, only angling slightly towards the anterior side, whereas *M.*

(A.) bicatenata is only wide at the posterior end, narrowing at the center, angling sharply towards the anterior end. *Marginella (A.) bicatenata* has a thinner more rounded lip than *M. (A.) humeronotata* n. sp. that has a thicker and straighter lip. *Marginella (A.) humeronotata* n. sp. has only one line of spots around the shoulder, whereas *M. (A.) bicat*



Figure 5. Holotype of *Marginella tomlini* (18.00 x 9.00 mm) trawled 105 fathoms off Cape St. Blaize, Agulhas Bank. Iziko Museum of South Africa (SAM) A37047, photo with courtesy of Albe Bosman, Collections Manager, Ichthyology, Natural History, Iziko Museum of South Africa.

ACKNOWLEDGEMENTS

The authors thank Sulize Veldsman for proof reading and support during development of this paper, and Vellies (J.H.) Veldsman for his input and proofreading. Mary (Nelisiwe) Manukuza from the Natal Museum, South Africa (NMSA) is thanked for providing the holotype numbers.

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Cite as:

Veldsman, S.G., and R. Aiken. 2022. Description of two new *Marginella* species (Gastropoda: Marginellidae), from the KwaZulu-Natal and Eastern Cape, South Africa. *The Festivus* 54(3):214-220.

<http://doi:10.54173/F543214>



Figure 6. 1= *M. (N.) praeacuta* (12.01 x 6.41 mm) – Holotype; off Hole in the Wall, dredged 110 m; Coll. NMSA (P2001/T4559). 2= *M. (N.) praeacuta* (11.94 x 6.52 mm) – Paratype 1; off Hole in the Wall, dredged 110 m; Aiken Coll. 3= *M. (N.) praeacuta* (12.40 x 6.95 mm) – Paratype 3; off Hole in the Wall, dredged 110 m; Aiken Coll. 4= *M. (N.) mtataensis* (11.37 x 6.31 mm) – off Coffee Bay, dredged 100 m; Aiken Coll. 5= *M. (N.) praeacuta* (12.08 x 6.75 mm) – Paratype 4; off Hole in the Wall, dredged 110 m; Aiken Coll. 6= *M. (N.) mtataensis* (10.88 x 6.05 mm) – off Hole in the Wall, dredged 110 m; Aiken Coll. 7= *M. (N.) mtataensis* (10.95 x 5.97 mm) – off Hole in the Wall, dredged 110 m; Aiken Coll. 8= *M. (N.) wallaceorum* (10.23 x 5.67 mm); off Park Rynie, KZN, dredged 100 m; Veldsman Collection. 9= *M. (N.) wallaceorum* (10.81 x 5.91 mm); off Pumula, KZN, dredged 100 m; Veldsman Collection. 10= *M. (N.) wallaceorum* (10.61 x 5.93 mm); Park Rynie, KZN, dredged 100 m; Veldsman Collection.

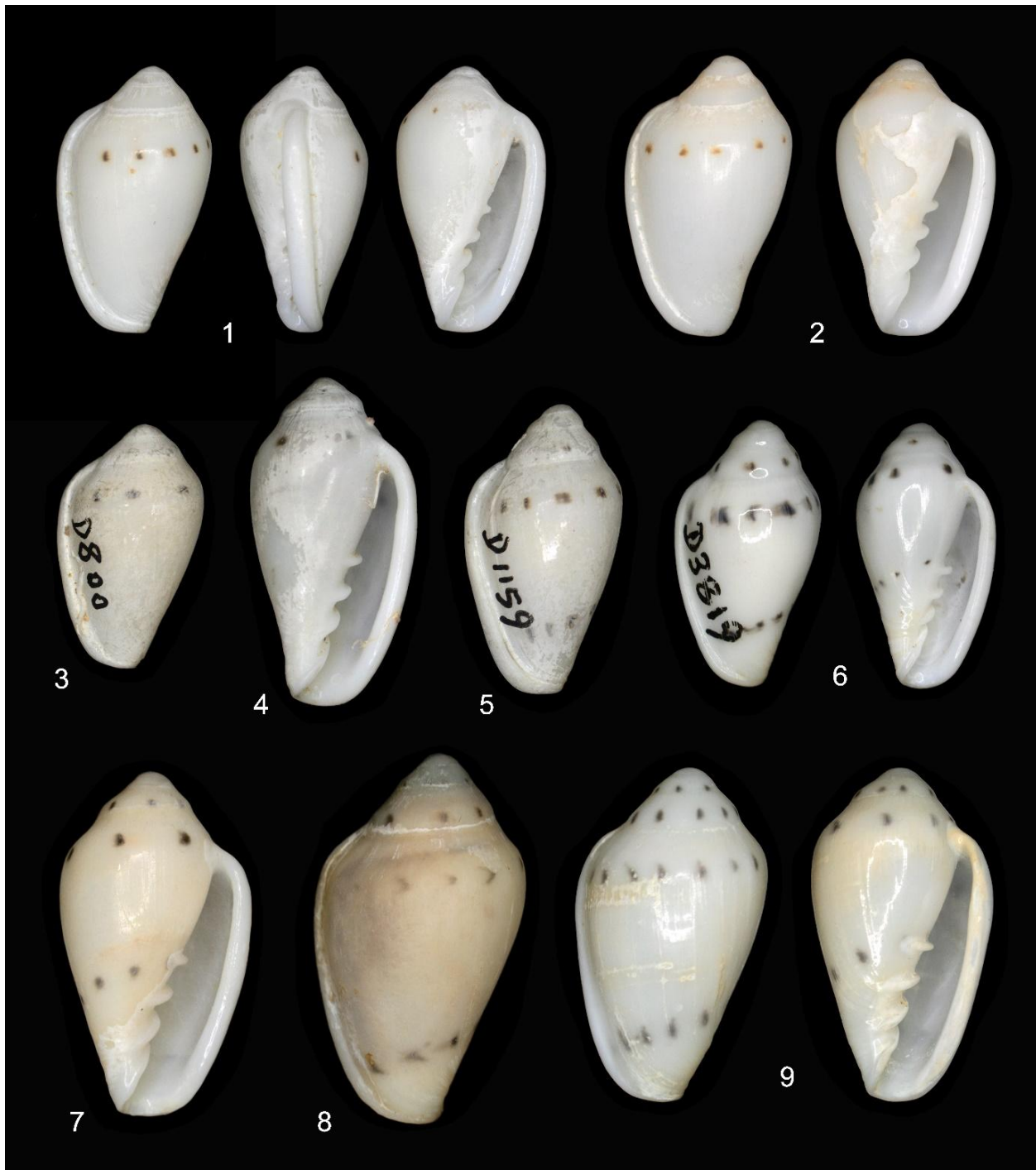


Figure 7. 1= *M. (A.) humeronotata* (12.03 x 7.03 mm) – Holotype; off Amanzimtoti, dredged 160-170 m; Coll. NMSA (D1496/T4556). 2= *M. (A.) humeronotata* (12.92 x 7.45 mm) – Paratype 1; off Park Rynie, dredged 100 m; Aiken Coll. 3= *M. (A.) humeronotata* (11.09 x 8.26 mm) – Paratype 2; Umlaas Canal, dredged 150 m; Coll. NMSA (D800/T4557). 4= *M. (A.) bicatenata* (14.56 x 6.64 mm); Umlaas Canal, dredged 100 m; Coll. NMSA (D1094). 5= *M. (A.) bicatenata* (13.02 x 7.30 mm); Umlaas Canal, dredged 150 m; Coll. NMSA (D1159). 6= *M. (A.) bicatenata* (11.97 x 6.75 mm); off Durban, dredged 110-120 m; Coll. NMSA (D3819). 7= *M. (A.) tomlini* (15.59 x 8.66 mm); off Mossel Bay, trawled 100-150 m; Aiken Coll. 8= *M. (A.) tomlini* (17.50 x 9.65 mm); off Mossel Bay, trawled 100-150 m; Aiken Coll. 9. *M. (A.) tomlini* (15.16 x 8.82 mm); off Cape Agulhas, trawled; Coll. NMSA (D506).