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Introducing a new genus of Marginellidae from Africa: *Africosta* new genus (Gastropoda: Marginellidae) along with the description of two new species

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ABSTRACT A small group Marginellidae species were moved between genera several times by different authors, described as *Marginella,* sometimes called *Glabella,* classified under *Dentimargo,* and also reclassified as being *Eratoidea* species. This group of very small Marginellidae has their own unique shell characteristics within the family, and are described here within a new genus: *Africosta.* Four known species are discussed along with the description of two new species from KwaZulu-Natal, South Africa within the new genus.

KEYWORDS Marginellidae*, Africosta, Eratoidea, Dentimargo, Marginella, Glabella,* KwaZulu-Natal, South Africa, Africa

INTRODUCTION

The family Marginellidae is a very diverse group of marine gastropods and its taxonomy has been a subject of considerable debate by several authors for almost a century (Thiele 1929; Coan 1965; Vaught 1989; Coovert & Coovert 1995; Millard 1997). Thiele (1929) recognized only three genera, namely *Persicula*, *Marginella*, and *Marginellona*. Coan (1965) used Thiele's classification, but re-organized the species within the genera. Vaught (1989) grouped all the species in the subfamily Marginellinae under the genus *Marginella*, but suggested several subgenera. However, most of the subgenera proposed by Vaught (1989) were elevated in later works to genus level, and some were synonymized (Coovert & Coovert 1995; Millard 1997; Bouchet & Rocroi 2005). Coovert & Coovert (1995) undertook a comprehensive revision on the marginelliform gastropods, including the families Marginellidae and Cytiscidae, and were subsequently supported by Millard (1997) and Bouchet & Rocroi (2005) who used their classification system. Souza & Simone (2019b) conducted a study on phylogenetic relationships of some of the genera in the Marginellidae based on comparative morphology, strengthening the current classification of the family.

Coovert & Coovert (1995) undertook a phylogenetic reclassification on the family Marginellidae and divided it into two subfamilies, the Marginelloninae and the Marginellinae. The subfamily Marginelloninae comprises two genera, *Afrivoluta* and *Marginellona*. The subfamily Marginellinae is further divided into three tribes, the Austroginellini, the Prunini, and the Marginellini, and an extinct genus *Myobarum* (Coovert & Coovert 1995). These classifications involved the use of broad shell morphological and anatomical differences (Coovert & Coovert 1995). Souza & Simone (2019a) provided a checklist of the generic and supra-generic classification of Marginellidae following the classification of Coovert & Coovert (1995), Bouchet *et al.* (2017) and Souza & Simone (2019b). Veldsman (2017, 2019) also followed the classification of Coovert & Coovert (1995), focusing mainly on the genus *Marginella*.

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Boyer (2019) proposed a new classification for the Marginelloninae by describing a new family Marginellonidae. A more recent trend is to classify the Marginellidae into three subfamilies rather than tribes, namely Marginellinae, Austroginellinae and Pruninae (Fedosov *et al.* 2019, MolluscaBase 2021a).

The focus of the current study includes only some of the extant genera within the subfamily Marginellinae (ex. Tribe Marginellini). Several morphological and anatomical differences between the known genera are discussed by Coovert & Coovert (1995) and Souza & Simone (2019b). The main shell morphological differences between the living genera are that while *Dentimargo* and *Eratoidea* lack a siphonal notch, this is present in *Marginella* and *Glabella*. *Eratoidea* has sub-equal labial denticulation and some of the species have axial costae, whereas *Dentimargo* is characterised by the bifurcated ends of the columellar plications joining a collabral callus ridge, and have a prominent posterior labial notch (Coovert and Coovert 1995). Species from the genus *Glabella* have prominent axial costae, whereas *Marginella* species have a smooth shell (Coovert & Coovert 1995). Three of the four extant known Marginellinae occur in African waters, and only Eratoidea represents a Caribbean genus (Coovert & Coovert 1995).

A small group of Marginellidae species are found along the eastern coast of Africa, the first of which was thought to be described by Thiele (1925). Lussi & Smith (2000) mentions a species by the name *Marginella costulata* Thiele (no date) hosted in the Natural History Museum in Berlin (two types ZMB: 102153) with Zanzibar as the Type locality, changing it from the genus *Marginella* to *Dentimargo*. The second mention of this species is in McCleery (2011) as *Eratoidea costulata* (Thiele, 1925) – changed from the genus *Dentimargo,* with Natal as the Type locality. After research into the published work of Thiele, it was established no reference to the description of this species could be found. This was confirmed by Bouchet (personal communication, 2021) and the following note was added to the entry in WoRMS (MolluscaBase eds. 2021b) “McCleery (2011:102) treated "*Eratoidea costulata*" as a valid species and attributed the name to Thiele, 1925. However, Thiele did not establish a species with that name, neither in *Marginella*, nor in *Dentimargo*, nor in any other marginellid genus. Because ICZN Art. 16.1 requires that "every new name published after 1999 [...] must be explicitly indicated as intentionally new", the name *Eratoidea costulata* cannot be attributed to McCleery, 2011, and remains unavailable.” The Berlin Museum was contacted with regards to investigate this elusive species. The Berlin Museum hosts a species by the name “*Marginella costulata*” labeled by Thiele, from Zanzibar, marked with a star (Figure 1). According to Zorn (personal communication, 2021) the star means that Thiele marked it as a Type specimen.

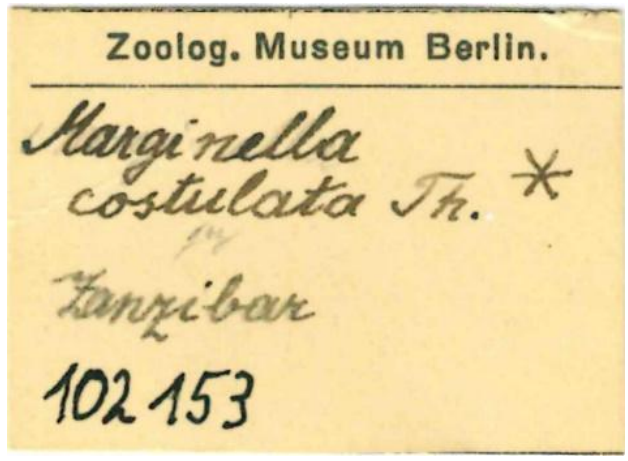

Figure 1. The original label of the shell in the Berlin Museum supposedly described as *Marginella costulata* by Thiele. Courtesy of the Berlin Museum, received from Christine Zorn, photographed by Eran Wolf.

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A photograph was received from the Berlin Museum (Figure 2) of the species supposedly named by Thiele. This shell resembles the species "*costata*" described by Bozzetti in 1997 from Zanzibar. Still no written/published reference could be found to where this species is supposed to be described, and until the specific reference is found, it can't be accepted as a valid species.

Figure 2. The shell in the Berlin Museum supposedly described as *Marginella costulata* by Thiele. Courtesy of the Berlin Museum, received from Christine Zorn, photographed by Eran Wolf.

Species within this group of shells were previously named under the genus *Dentimargo* by Lussi & Smith (2000). Specimens studied at the Natal Museum had several genus names allocated on their labels, such as: *Marginella sp., Marginella (Glabella) sp.,* and *Marginella (Plicaginella) sp. Plicaginella* is now synonymized with *Austroginella,* a genus of species in the subfamily Austroginellinae. McCleery (2011) reclassified the species under the genus *Eratoidea* as the '*Eratoidea costulata* species group'. McCleery's reasoning being the species have costate shell surfaces and four strong plications, which in some species are bifurcated. McCleery (2011) further note an important point that these species differ significantly from the Caribbean *Eratoidea* in several respects, the most noticeable being the lip, which is wide, straight and without labial denticles, and wide conspicuous ventral callus in some species. The author agrees with McCleery (2011) that these species are different and do not fit into any other species group or genus because of its distinct features. Since these species also do not really compare to *Eratoidea, a* new genus name to include them are proposed here: *Africosta* new genus and the main shell morphological differences between the genera discussed here are tabled below.

METHODS

Main shell morphological features were used during this study to differentiate the species from the newly proposed genus with other genera in the Subfamily Marginellinae. There are no published records or data of the animal material, as reiterated by McCleery (2011), thus no comparison regarding the anatomy is made.

Holotype material of most of the species are hosted in the National Museum of History (MNHN), Paris, France, and images were obtained from the MNHN website. Shells hosted in the Natal Museum, Pietermaritzburg, South Africa were studied and photographed using an Olympus SZ61 microscope (SC100 Olympus camera, Münster, Germany) and digitally measured (Stream Imaging Software, Olympus) by the author (2015).

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Several shell morphological features are used here to differentiate species from each other, but not limited to, the shoulder shape and width, general shape of the shell, spire height and characteristics, aperture shape and width, shape of the labrum, costae shape and separation on body whorl. Further to the shell morphological features, location is very important as noted.

SYSTEMATICS

Phylum Mollusca Linnaeus,1758
Class Gastropoda Cuvier, 1795
Subclass Caenogastropoda Cox 1960
Order Neogastropoda Wenz, 1938
Superfamily Volutoidea Rafinesque, 1815
Family Marginellidae Fleming, 1828
Subfamily Marginellinae Fleming, 1828

Africosta S.G.Veldsman, new genus

Type species: *Africosta delphinica* (Bavay, 1920), designated here.

Congeners:
Africosta aliwalobliqua n. sp.
Africosta costata (Bozzetti, 1997)
Africosta gigacostata (Bozzetti, 2016)
Africosta nataliaglobosa n. sp.
Africosta sinuosa (Bozzetti, 1997)

Shell characters. Shells are very small (2-4 mm), biconical shaped, has a low angled rounded shoulder. The surface of the body whorl is costate (Figure 3). Has a thick labrum, smooth with and axial ridges or ridges present on the edge of the lip and on the varix. No labial denticles present, but a large flat labial notch is present on the posterior side of the lip. Prominent posterior canal visible. Callus is highly developed on the columella. Spire moderately high to high, spire whorls convex and stepped with suture present. Wide protoconch, off-white to light grey color. Columella rather straight with four thick continuous plications, which take up more than half the length of the aperture, off-white color. Aperture narrow and relatively straight, mainly off-white color. Siphonal canal is slightly flaring, with no siphonal notch present. The number of whorls varies between the species from around 3.5 to 6. The background color of most of the species are off-white.

McCleery (2011) makes special mention of the strong surface texture around the aperture, and the callus that extends in an arc from the first plication to the labial insertion point, strongest anteriorly, weakening posteriorly.

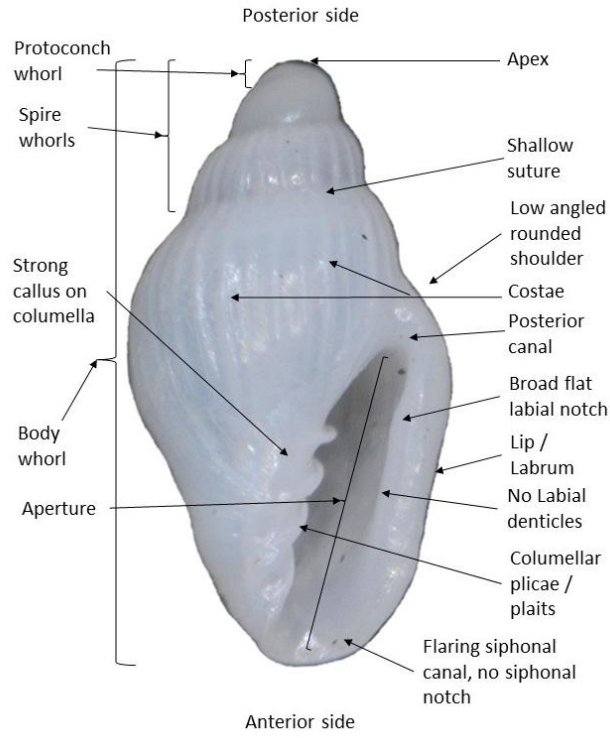

Figure 3. Illustration of the main shell morphological features used in the description of the genus *Africosta* new genus.

Distribution. The species within this genus occur from South Africa, Madagascar, Zanzibar and Oman (Figure 4).

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Figure 4. Locality map indicating the region where the five new species occur, Eastern Cape, South Africa.

Genus discussion.

The genera under the subfamily Marginellinae used in this comparison are *Marginella, Glabella, Dentimargo, Eratoidea,* and the newly described genus *Africosta*. Apart from the author's own observations, the following references are extensively used for the comparison, Coovert & Coovert (1995), Lussi & Smith (2000), McCleery (2011), and Souza & Simone (2019b). The main shell morphological features used to differentiate between the genera are (Table 1): costae present on body whorl, presence of a siphonal notch, labial denticulation, posterior canal, callus on columella and labial notch. For detailed discussions on the known genera, refer to the references above.

As mentioned before, the genus *Eratoidea* only occurs in the West Atlantic around the Caribbean, including the south-eastern USA, south of Georgia and the Bahamas in the north, and Trinidad & Tobago in the south east, ranging further towards to Brazil (McCleery 2011). *Dentimargo* species are found throughout most of the ocean, *e.g.* Australia, Indo-Pacific, Eastern Pacific, West Atlantic, West Africa and South Africa. *Marginella* and *Glabella* are found only around the African coast (West Africa, South Africa, East Africa and Madagascar). Previously several species from the West Atlantic were classified under the genus *Marginella,* but were re-assigned to the genus *Eratoidea* by Veldsman (2017, 2019). *Africosta* species are only known from the eastern Indo-Pacific that includes countries such as South Africa, Madagascar, Zanzibar, and Oman.

McCleery (2011) classified *Dentimargo boyeri* Bozzetti, 1994 under the genus *Eratoidea costulata* species group. However, *D. boyeri* has different shell morphological features and does not compare to *Eratoidea* species (apart form that it occurs off the Somalian coast and not in the Caribbean). Some *Dentimargo* species have costae present on the body whorl, or knobs on the shoulder and spire such as *D. boyeri* and *D. scapulatus* Boyer, 2017. These species display mostly *Dentimargo* shell morphological characteristics, thus cannot be placed within the new genus only because it has costae present. It is evident that the genus *Dentimargo* must be studied further to group species or reclassify them into subgenera since there is so much variation visible in particular features.

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Genus	Costae	Callus on columella	Posterior canal	Siphonal notch	Labial denticles	Labial notch
Marginella	Smooth, no costae visible	Callus on columella varies between subgenera	No posterior canal visible	Siphonal notch present	Labial denticles present in some species, and lack in others	Labial notch present in some species and lack in others
Glabella	Have prominent axial costae present	Callus development varies between species	Posterior canal mostly visible	Siphonal notch present	Prominent labial denticles present	Labial notch present in some species and lack in others
Dentimargo	Smooth, costae visible only in a few species	Callus slightly developed, but varies between species	No posterior canal visible	Lack a siphonal notch	Labial denticles present in some species, and lack in others	Single sharp labial denticle present (larger than the rest of the labial denticles), but not always that prominently visible
Eratoidea	Some species have costae and others are smooth	Callus slightly developed, but varies between species	Posterior canal slightly developed in some species and not visible in others	Lack a siphonal notch	Prominent labial denticles present	Labial notch generally absent, with poster labial denticles sometimes larger than the rest
Africosta	Axial costae present	Callus highly developed over the largest part of the columella	Posterior canal visible	Slightly flaring siphonal canal, with no siphonal notch present	No labial denticles present	Large flat labial notch present

Table 1. Presentation of the main shell morphological differences between the five genera discussed.

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SPECIES ACCOUNTS

Africosta costata (Bozzetti, 1997)

Africosta costata is a relatively small species (2-3 mm), broadly biconic in shape (Figure 5). The body whorl is strongly costate, with costae low and rounded from the shoulder and ending at the anterior side, slightly wavy on posterior side, widely spaced. Aperture straight and narrow. Background color is off-white, with no markings. Detailed shell descriptions can be obtained from Bozzetti (1997) and McCleery (2011). The type locality is Kiwengwa, Zanzibar.

Figure 5. *Africosta costata* (Bozzetti, 1997), Holotype, 2.35 x 1.10 mm. Courtesy of the Muséum national d'Histoire naturelle, Paris (France), Collection: Molluscs (IM), Specimen MNHN-IM-2000-583.

Africosta delphinica (Bavay, 1920)

Africosta costata is a relatively small species (2-3 mm), broadly oval-biconic in shape (Figure 6). The body whorl has strong costae over the posterior side, widely spaced, smoothing out towards the anterior side. Aperture straight and narrow. Background color is off-white, with no markings (almost translucent). The type locality is "Madagascar in arenis" (Bavay 1920). This species was named for Fort Dauphin (now Taolagnaro) in southern Madagascar, so it can be assumed that the species occur there. Further there is a record of specimens trawled off Lavanono, southern Madagascar.

Figure 6. *Africosta delphinica* (Bavay, 1920), Holotype, 2.35 x 1.10 mm. Courtesy of the Muséum national d'Histoire naturelle, Paris (France), Collection: Molluscs (IM), Specimen MNHN-IM-2000-583.

Africosta gigacostata (Bozzetti, 2016)

Africosta gigacostata is a relatively small species (3-4 mm), broadly biconic in shape (Figure 7). Has a very distinct curved, sharp pointed shoulder. The body whorl has strong axial costae, costae narrow, low and rounded. Aperture straight and narrow. Background color is pearly-white, with no markings. The type locality is Mirbat, Oman Meridionale (Bozzetti 2016).

Figure 7. *Africosta gigacostata* (Bozzetti, 2016), Holotype, 3.9 x 2.2 mm. Courtesy of the Muséum national d'Histoire naturelle, Paris (France), Collection: Molluscs (IM), Specimen MNHN-IM-2000-28455.

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Africosta sinuosa (Bozzetti, 1997)

Africosta sinuosa is a relatively small species (2-3 mm), broadly biconic, sinuous shaped (Figure 8). The body whorl is strongly costate, with costae low and rounded, spaced. Aperture straight and narrow. Costae smoothing slightly out towards the last quarter on the anterior end. Background color is off-white, slightly translucent, with no markings. Detailed shell descriptions can be obtained from Bozzetti (1997) and McCleery (2011). The type locality is Kiwengwa, Zanzibar.

Figure 8. *Africosta sinuosa* (Bozzetti, 1997), Holotype, 2.35 x 1.15 mm. Courtesy of the Muséum national d'Histoire naturelle, Paris (France), Collection: Molluscs (IM), Specimen MNHN-IM-2000-1268.

Africosta nataliaglobosa S.G.Veldsman, new species

Description. The shell is small (2-3 mm), ovate-biconical shaped, has a low angled rounded shoulder (Figure 9). Thick broad labrum, smooth. Spire low and broad, spire whorls convex and slightly stepped. Wide protoconch, off-white color. No labial denticles present, but a large flat labial notch is present on the posterior side of the lip. Posterior canal present. Columella rather straight with four thick continuous plications, which take up more than half the length of the aperture, off-white color. Callus highly developed on the columella. Aperture narrow and straight, off-white color. Siphonal canal is slightly flaring, with no siphonal notch present. The body whorl is strongly costate, with costae moderately wide and rounded, narrowly spaced. Costae smoothing slightly out towards the last quarter on the anterior end. Background color of dorsum of the body whorl off-white.

Distribution. The type locality of *A. nataliaglobosa*, new species, is 2-Mile Reef, Sodwana Bay, Northern KwaZulu-Natal, South Africa, sorted from stone washings collected by divers at 10-15 m. Most specimens studied were collected by diver at shallow depths (8-22 m), and others were dredged at 50 m. The species distribution is from Sodwana Bay to Kosi Bay, Northern KwaZulu-Natal.

Type material.

Holotype: 2.55 x 1.39 mm (Figure 9.1); 2-Mile Reef, Sodwana Bay, sorted from stone washings, collected by diver at 10-15m, 1987; Coll. Natal Museum South Africa (NMSA), ID No: E737/T4500.

Other material examined:

NMSA - P1673/T4501 (one specimen); 2-Mile Reef, Sodwana Bay, sorted from stone washings, collected by diver at 10-15 m, 1987.

NMSA - S4248/T4502 (one specimen) 2.61 x 1.44 mm; Kosi Bay, main reef, 1-4 km south of estuary mouth, collected by diver at approx. 18 m by underwater pump, 1990.

NMSA - E5489/T4504 (one specimen) 2.5 x 1.51 mm; off Boteler Point (approx. 12 km south of Kosi Bay), dredged 50 m in dead coral rubble, 1987.

NMSA - S2034/T4505 (two specimens) 2.54-2.72 mm; Kosi Bay, main reef,

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1-4 km south of estuary mouth, collected by diver at approx. 18 m by underwater pump, 1990.

NMSA - S3038/T4506 (4 specimens) 2.41-2.62 mm; between Bhanga Neck and Kosi Bay, reef off marker 13 north, collected by diver at 13 m, in hand dredged sand, 1990.

NMSA - S4347/T4503 (four specimens) 2.29-2.47 mm; 2-Mile Reef, Sodwana Bay, collected by diver at 10-15 m, hand dredged sand, 1990.

NMSA - S2470/T4508 (12 specimens) 2.49-2.95 mm; between Bhanga Neck and Kosi Bay, reef off marker 13 north, near pinnacles, collected by diver at 10-12 m, in hand dredged sand, 1990.

NMSA - S2702/T4507 (31 specimens) 2.24-2.83 mm; between Bhanga Neck and Kosi Bay, reef off marker 13 north, collected by diver at 5-9 m on algal portion, by underwater pump, 1990.

NMSA - S2861/T4509 (15 specimens) 2.70-2.71 mm (Figure 3.2); between Bhanga Neck and Kosi Bay, reef off marker 13 north, collected by diver at 8 m, by underwater pump, 1990.

NMSA: D9924/T4510 (six specimens) 2.40-2.56 mm; Kosi Bay, main reef, 1-2 km south of estuary mouth, collected by diver at 9-17 m, sorted from stone washings, 1987.

Etymology. *Africosta nataliaglobosa* is a combination name, “natalia” for KwaZulu-Natal and “globosa” for its rounded globe shape.

Africosta aliwalobliqua S.G.Veldsman, new species

Description. The shell is small (2.5-3.2 mm), biconic, slightly sinuous, oblique shaped, has a very low angled rounded shoulder (Figure 10). Thick broad labrum, smooth. Spire moderately high and broad, spire whorls convex and slightly stepped. Wide protoconch, off-white color. No labial denticles present, but a large flat labial notch is present on the posterior side of the lip. Posterior canal present. Columella rather straight with four thick continuous plications, which take up more than half the length of the aperture, off-white color. Callus highly developed on the columella. Aperture narrow and straight, off-white color. Siphonal canal is slightly flaring, with no siphonal notch present. The body whorl is strongly costate, with costae wide and rounded, widely spaced. Costae smoothing slightly out towards the last quarter on the anterior end. Background color of dorsum of the body whorl off-white.

Distribution. Type locality of *A. aliwalobliqua*, new species, is Landers Reef, Aliwal Shoal, KwaZulu-Natal, South Africa, collected by diver at 20-30 m, sorted from shell grit. All the specimens studied were collected in this manner (from 9-30 m), on the Aliwal Shoal (off Umkomaas, Park Rynie and Scottburgh), southern KwaZulu-Natal, and Durban, central KwaZulu-Natal.

Type material.

Holotype: 3.08 x 1.67 mm (Figure 10.1); Landers Reef, Aliwal Shoal, KwaZulu-Natal, South Africa, sorted from shell grit, collected by diver at 20-30 m, 1988; Coll. Natal Museum South Africa (NMSA), ID No: E2303/T4511.

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Other material examined:

Veldsman Collection (five specimens) 2.97-3.21 mm; Addington Beach, Durban Bay, collected by dredging, 1992.

NMSA - S7187/T4513 (one specimen) 3.12 x 1.59 mm; Aliwal Shoal, off Scottburgh, collected by diver at 25-27 m, in hand dredged sand and reef debris, 1992.

NMSA - E1683/T4512 (two specimens) 2.60-2.65 mm; Aliwal Shoal, off Umkomaas, collected by diver at 27 m, in silt from between rocks, 1988.

NMSA: S5955/T4514 (14 specimens) 2.73-3.14 mm; Aliwal Shoal, collected by diver at 16 m, in hand dredged sand, 1990.

NMSA: S8622/T4515 (38 specimens) 2.5-2.99 mm; Aliwal Shoal, off Scottburgh, collected by diver at 14 m, by underwater pump, 1991.

NMSA: E6122/T4516 (one specimen) 2.56 x 1.33 mm (Juvenile); Aliwal Shoal, collected by diver at 9-15 m, 1988; Coll.

Etymology. *Africosta aliwalobliqua* is a combination name, "aliwal" for Aliwal Shoal and "obliqua" for its almost oblique shape.

DISCUSSION

The two newly described species are compared to the two closest relatives from further north (Zanzibar/Kenya). *Africosta sinuosa* (Bozzettii, 1997) stands out with its sinuous general shell shape, very different from the other species. *Africosta costata* (Bozzetti, 1997) has a slender shell shape in comparison to the two new species. The body whorl of *A. costata* is much more rounded without any prominent indents such as the prominent indents of *A. sinuosa* (causing the sinuous shape); the slight indents of *A. aliwalobliqua* (creating the oblique shell shape), and the sharp lower indent of *A. nataliaglobosa* (giving the very rounded globose shell shape). Further, the costae of *A. costata* seem to extend lower down towards the anterior side than with the two new species where the costae smooth out on the lower third of the body whorl on the anterior side. *Africosta delphinica* (a very oval shaped shell) from Madagascar, has an even smoother body whorl, with costae mainly present on the upper half (posterior side) of the body whorl. The costae of *A. aliwalobliqua* is slightly broader and more widely spaced than the thinner costae of *A. nataliaglobosa* that is narrowly spaced. The lip of *A. nataliaglobosa* is much more rounded than *A. aliwalobliqua* that is slightly bent, but not as straight as the lip of *A. costata*. *Africostae gigacostata* is different from all the other species, having a very distinct sharp shoulder with the most prominent posterior canal, its costae cover most of the body whorl from the posterior side to the anterior end, and has a very straight lip.

McCleery (2011) illustrated two specimens from KwaZulu-Natal thought at that stage to be "*costulata* Thiele", the only specimens he studied. Clear differences can be observed between the two specimens illustrated. Figures 439, 444, 446, 447, 448, and 452 (McCleery 2011) illustrate a specimen that compares to new species *A. aliwalobliqua*, and Figures 440, 445, 449, 450, 451, and 452 (McCleery 2011) illustrate a specimen comparing to the other new species *A. nataliaglobosa.* McCleery (2011) only discuss some differences between the KwaZulu-Natal specimens and the species (*A. costata*) from Zanzibar, but without any differences between the two specimens illustrated.

The species within this genus is widely geographically separated from each other:

- *Africosta gigacostata* (Bozzetti, 2016) – southern Oman
- *Africosta costata* (Bozzetti, 1997) - Kiwengwa, Zanzibar and Kenya
- *Africosta sinuosa* (Bozzetti, 1997) - Kiwengwa, Zanzibar
- *Africosta delphinica* (Bavay, 1920) - southern Madagascar
- *Africosta nataliaglobosa* n. sp. – northern KwaZulu-Natal, South Africa
- *Africosta aliwalobliqua* n. sp. - southern KwaZulu-Natal, South Africa

From the material studied by the author, it currently seems that *A. nataliaglobosa* occur mainly in northern KwaZulu-Natal, whereas *A. aliwalobliqua* occur further south, from Durban to Park Rynie, southern KwaZulu-Natal. McCleery's (2011) two specimens apparently came from Park Rynie, which indicates that *A. nataliaglobosa* occur further south towards Park Rynie, this however has to be confirmed by further collection data.

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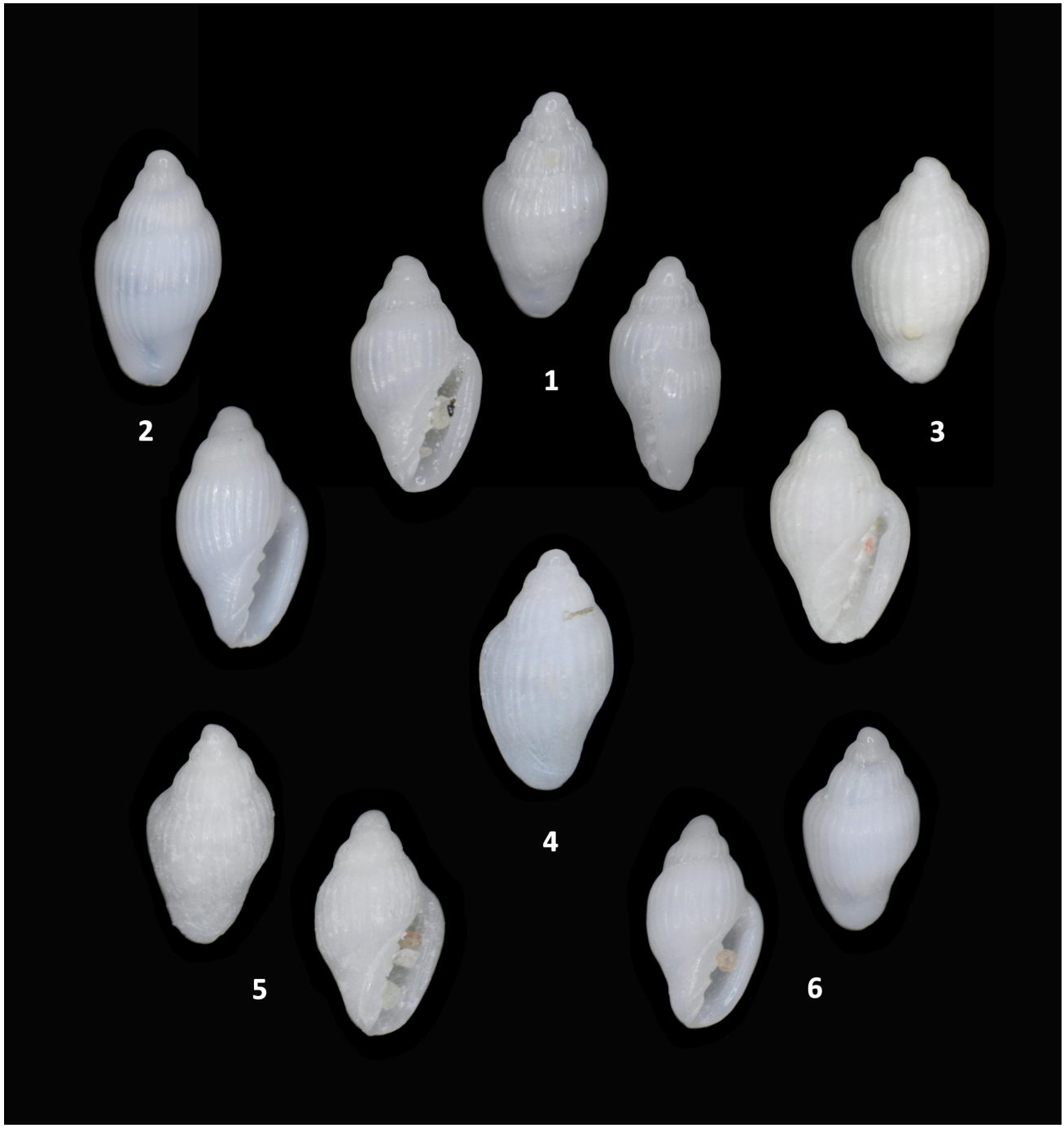

Figure 9. ***Africosta nataliaglobosa***
1= Holotype: 2.55 x 1.39 mm; 2-Mile Reef, Sodwana Bay, sorted from stone washings, collected by diver at 10-15 m, 1987; NMSA - E737/T4500; **2=** 2.61 x 1.44 mm; Kosi Bay, main reef, 1-4 km south of estuary mouth, collected by diver at approx. 18 m by underwater pump, 1990; NMSA - S4248/T4502; **3=** 2.50 x 1.51 mm; off Boteler Point (approx. 12 km south of Kosi Bay), dredged 50 m in dead coral rubble, 1987; NMSA - E5489/T4504; **4=** 2.59 x 1.44 mm; between Bhanga Neck and Kosi Bay, reef off marker 13 north, near pinnacles, collected by diver at 10-12 m, in hand dredged sand, 1990; NMSA - S2470/T4508; **5=** 2.43 x 1.41 mm; 2-Mile Reef, Sodwana Bay, collected by diver at 10-15 m, hand dredged sand, 1990; NMSA - S4347/T4503; **6=** 2.29 x 1.27 mm; 2-Mile Reef, Sodwana Bay, collected by diver at 10-15 m, hand dredged sand, 1990; NMSA - S4347/T4503.

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Figure 10. ***Africosta aliwalobliqua***
1= Holotype: 3.08 x 1.67 mm; Landers Reef, Aliwal Shoal, KwaZulu-Natal, South Africa, sorted from shell grit, collected by diver at 20-30 m, 1988; NMSA - E2303/T4511; **2=** 3.12 x 1.59 mm; Aliwal Shoal, off Scottburgh, collected by diver at 25-27 m, in hand dredged sand and reef debris, 1992; NMSA - S7187/T4513; **3=** 2.65 x 1.41 mm; Aliwal Shoal, off Umkomaas, collected by diver at 27 m, in silt from between rocks, 1988; NMSA - E1683/T4512; **4=** 2.70 x 1.48 mm; Aliwal Shoal, off Scottburgh, collected by diver at 14 m, by underwater pump, 1991; NMSA: S8622/T4515; **5=** 2.87 x 1.48 mm; Aliwal Shoal, off Scottburgh, collected by diver at 14 m, by underwater pump, 1991; NMSA: S8622/T4515; **6=** 2.99 x 1.51 mm; Aliwal Shoal, off Scottburgh, collected by diver at 14 m, by underwater pump, 1991; NMSA: S8622/T4515.