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Description of two new *Piperamarginella* species (Gastropoda: Marginellidae: *Marginella*): *cremeonuca* & *subpallida* from the Eastern Cape, South Africa

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ABSTRACT Two new species in the subgenus *Piperamarginella,* genus *Marginella* off the Eastern Cape, South Africa, are described. The study originated after several new species were described from the *Piperamarginella* in recent years. The two new species are named *Marginella (Piperamarginella) cremeonuca* and *M. (P.) subpallida.*

KEYWORDS Marginellidae, *Marginella*, *Piperamarginella, M. (P.) cremeonuca*, *M. (P.) subpallida*, Eastern Cape, South Africa

INTRODUCTION

Recent study on the *Piperamarginella* revealed several new species over the last couple of years, especially during 2024. During the last year's study, a couple of new species were identified. Firstly, from the *Marginella (Piperamarginella) velliesi* S.G.Veldsman & R. Aiken, 2015 material, a grey-greenish looking shell was split out and through further investigation it became clear that it was a new species, described here as *M. (P.) subpallida*. Secondly, working through the *M. (P.) philipi* S.G.Veldsman, 2013 material, another new species was identified, described here as *M. (P.) cremeonuca*. All these shells occur from relatively shallow (*i.e,.* 20 m) to being dredged at 100 m depth.

METHODOLOGY

Marginella species within the same subgenus share several taxonomic characters, such as the type and size of labial denticles, posterior notch presence 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, plicae markings, and body-whorl coloration.

Figure 1. Locality map indicating the main localities along the Eastern Cape, South Africa, where the two new species occur.

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Material from the Institute for Marine and Environmental Science's (IMES) Collection were studied along with material from the Linda Swart Collection.

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 Volutoidea Rafinesque, 1815
Family Marginellidae Fleming, 1828
Genus *Marginella* Lamarck, 1799
Subgenus *Piperamarginella* S.G.Veldsman, 2017

Marginella (Piperamarginella) subpallida
S.G.Veldsman n. sp.
(Plate 1, Figures 1-2)

Description. The shell is moderately large in size (15-17 mm), slender-oval fusiform shaped. Spire moderately high to high in relation to shell length and aperture, slightly stepped, spiral whorls rounded. Shoulder slender, rounded. Body whorl moderately wide at posterior end slightly rounding to last third anterior side, straightening to anterior side, curving at anterior end. Labrum moderately thick, lip slightly rounded. No posterior notch or labial denticles. Four columellar plications placed at equal intervals, third and fourth (lower plica) towards anterior side at an angle, fourth ending directly at siphonal canal. Plicae off-white color, dark grey coloration on last plicae, callus covering all the plicae, no callus inside of columella on posterior side. Aperture narrow and straight, columella slightly bending inwards. Aperture off-white to light grey. Background color of dorsum of the body whorl off-white to light grey colored. Pattern consistent with thin broken lines, grey with a greenish tint, a thin lighter colored band just below shoulder and one just below center. Lip off-white colored with dark grey markings visible on lip, no markings visible on apertural side of lip. Spire consisting of the same thin broken lines as the body whorl. Protoconch broad, off white to light cream.

Distribution. Type locality of *M. (P.) subpallida* n. sp. is dredged at 100 m off East London, Eastern Cape, South Africa. Specimens studied were dived at 20 m to being dredged at 100 m, off East London to Jeffreys Bay, Eastern Cape, South Africa.

Type Material. The type material of the holotype and paratypes of *M. (P.) subpallida* are as follows:

Holotype: 16.34 x 8.41 mm, dredged 100 m, East London, Eastern Cape, Coll. Natal Museum South Africa (NMSA), ID No: P2803/T4646. From the IMES Coll. Donated by S.G. Veldsman.

Paratype 1: 15.69 x 8.03 mm, dived 25 m, Gqeberha (ex. Port Elizabeth), Eastern Cape, IMES Coll.

Paratype 2: 16.73 x 8.62 mm, dived 25 m, Gqeberha (ex. Port Elizabeth), Eastern Cape, IMES Coll.

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Paratype 3: 15.68 x 8.11 mm, dredged 100 m, East London, Eastern Cape, IMES Coll.
Paratype 4: 16.49 x 8.33 mm, dived 20 m, Gqeberha (ex. Port Elizabeth), Eastern Cape, IMES Coll.
Paratype 5: 15.24 x 7.93 mm, dived 25 m, Gqeberha (ex. Port Elizabeth), Eastern Cape, IMES Coll.
Paratype 6: 15.51 x 8.26 mm, dredged 100 m, East London, Eastern Cape, IMES Coll.

Etymology. The name "subpallida" refer to the shell having a greenish tint.

Marginella (Piperamarginella) cremeonuca
S.G.Veldsman n. sp.
(Plate 1, Figures 5-6)

Description. The shell is moderately large in size (13-16 mm), biconical-oval shaped. Spire moderately high in relation to shell length and aperture, slightly stepped, spiral whorls rounded. Shoulder moderately broad, sharp-edged rounded. Body whorl widest at posterior end slightly rounding to center, straight to anterior side. Labrum thick, lip slightly rounded. No posterior notch or labial denticles. Four columellar plications placed at equal intervals, third and fourth (lower plica) towards anterior side at an angle, fourth ending directly at siphonal canal, plicae yellowish-cream color, callus covering all the plicae, no callus inside of columella on posterior side. Aperture narrow and straight, columella slightly bending inwards, aperture creamy. Background color of dorsum of the body whorl yellowish-creamy colored, the pattern as follows: thin light-colored band just below shoulder, followed by a broad band consisting of thin, faint grey lines around the body whorl, followed by a thin light-colored band just below center anterior side, followed by a broad band consisting of dark grey broken lines around the body whorl, ending with a light color and little pattern at anterior end. Lip yellowish-creamy colored with dark brown markings visible on lip, no markings on apertural side of lip. Spire has similar light coloration as the posterior broad band. Protoconch broad, light grey.

Distribution. Type locality of *M. (P.) cremeonuca* n. sp. is dived at 25 m, in Jeffreys Bay, Eastern Cape, South Africa. Specimens were collected dived and dredged, at depths ranging from 25-100 m, occurring from East London to Jeffreys Bay, Eastern Cape, South Africa.

Type Material. The type material of the holotype and paratypes of *M. (P.) cremeonuca* are as follows:

Holotype: 14.57 x 8.34 mm, dived 25 m Jeffreys Bay, Eastern Cape, Coll. Natal Museum South Africa (NMSA), ID No: P2802/T4645. From the IMES Coll. Donated by S.G. Veldsman.
Paratype 1: 15.20 x 8.70 mm, dredged 65-70 m, Jeffreys Bay, Eastern Cape, IMES Coll.
Paratype 2: 15.97 x 9.53 mm, dredged 100 m, East London, Eastern Cape, IMES Coll.
Paratype 3: 14.01 x 8.20 mm, dredged 70 m, Jeffreys Bay, Eastern Cape, IMES Coll.
Paratype 4: 14.00 x 7.80 mm, dredged 65 m, Jeffreys Bay, Eastern Cape, IMES Coll.
Paratype 5: 15.15 x 8.26 mm, dredged 100 m, East London, Eastern Cape, IMES Coll.
Paratype 6: 13.34 x 7.55 mm, dredged 65-70 m, Jeffreys Bay, Eastern Cape, IMES Coll.

Paratype 7: 13.36 x 7.36 mm, dredged 65-70 m, Jeffreys Bay, Eastern Cape, IMES Coll.

Etymology. The name "cremeonuca" refer to the shell looking like a creamy nut.

DISCUSSION

Marginella (Piperamarginella) subpallida compares to *M. (P.) velliesi* in general shape being slender fusiform, with *M. (P.) subpallida* being slightly more oval with a rounder lip than *M. (P.) velliesi.* The coloration of the two species differs significantly with *M. (P.) velliesi* having pattern consistent with thin broken lines around the body whorl: a thin light creamy colored band below the shoulder, followed by a broad darker colored band, followed by a thin light-colored band below the center, followed by a broad band around the anterior third, ending with dark markings at anterior end; larger pattern on body whorl represents wavy to textile-like flames. *Marginella (Piperamarginella) subpallida* has a more consistent pattern of thin broken lines, grey with a greenish tint, a thin lighter colored band just below shoulder and one just below center. *Marginella (Piperamarginella) velliesi* has dark brown markings visible on the lip dorsal side, with dark brown spots visible on apertural side of lip, whereas *M. (P.) subpallida* has grey markings visible on dorsal side of lip, and no markings on aperture side.

Marginella (Piperamarginella) cremeonuca compares to *M. (P.) philipi* in general shape being biconical-oval. The main difference is in the coloration of the species, *M. (P.) philipi* has an off-white to light grey background color of the body whorl, *M. (P.) cremeonuca* has a yellowish-creamy color. The pattern of *M. (P.) philipi* consists of a very fine grey speckled pattern within thin broken lines around the body whorl, there is a lighter colored band around the shoulder and a dark band below center around the anterior third of the body whorl (only visible on dorsal side, faded on aperture side). The pattern of *M. (P.) cremeonuca* consists of a thin light-colored band just below shoulder, followed by a broad band consisting of thin, faint grey lines around the body whorl, followed by a thin light-colored band just below center anterior side, followed by a broad band consisting of dark grey broken lines around the body whorl, ending with a light color and little pattern at anterior end.

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Plate 1. Figures 1-2. *M. (P.) subpallida* **1=** Holotype: 16.34 x 8.41 mm, East London, dredged 100 m, Coll. NMSA (P2803/T4646). **2=** Paratype 2: 16.73 x 8.62 mm, Gqeberha (ex. Port Elizabeth), dived 25 m, Coll. IMES. **3=** *M. (P.) velliesi* Paratype 1: 14.76 x 6.90 mm, East London, dredged 100 m, Coll. IMES. **4=** *M. (P.) philipi* Paratype 1: 14.73 x 8.29 mm, Jeffreys Bay, dredged 70 m, Coll. IMES. **Figures 5-6.** *M. (P.) cremeonuca* **5=** Paratype: 14.57 x 8.34 mm, Jeffreys Bay, dived 25 m, Coll. NMSA (P2802/T4645). **6=** Hol**o**type 1: 15.20 x 8.70 mm, Jeffreys Bay, dredged 65-70 m, Coll. IMES.

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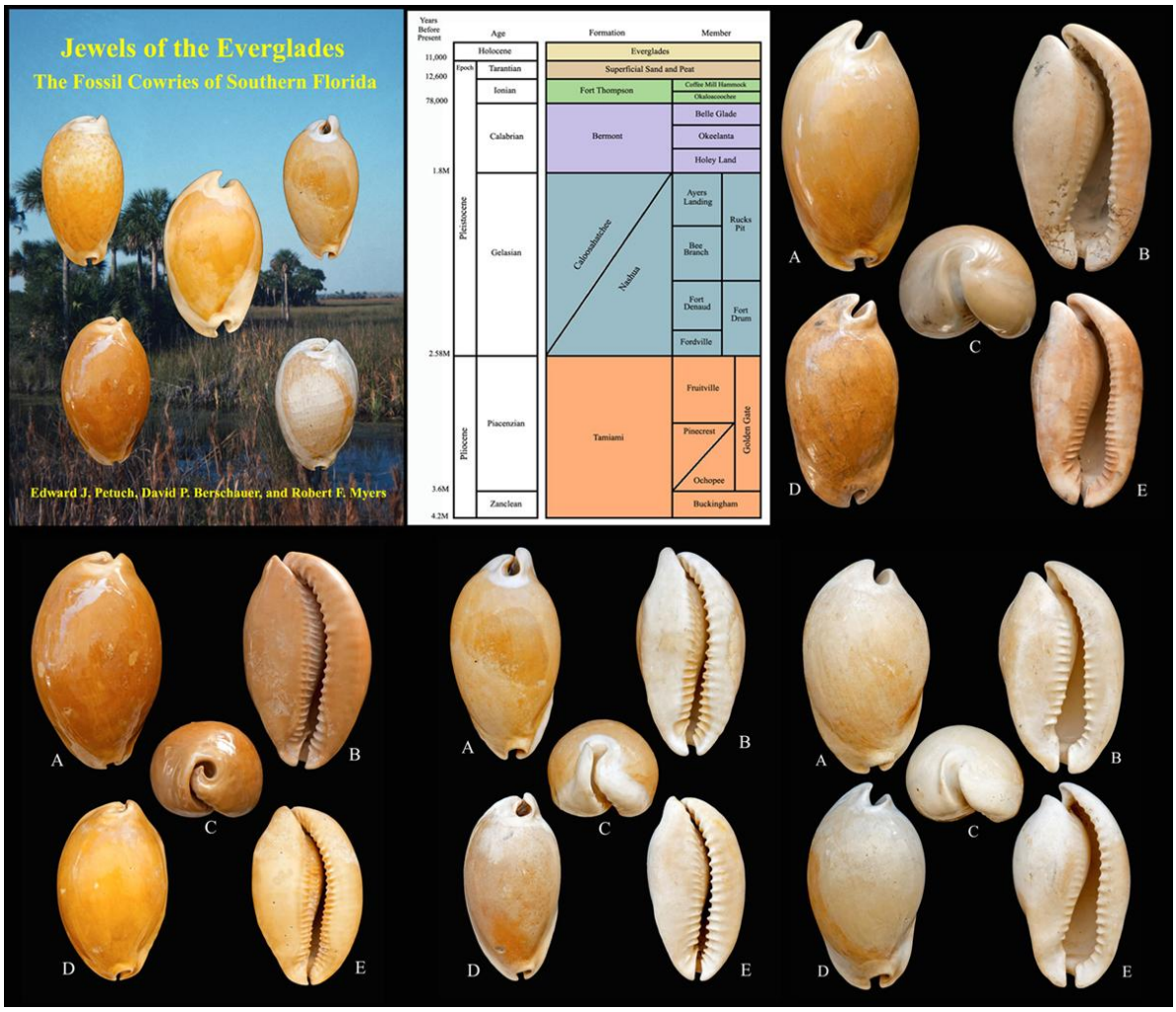

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