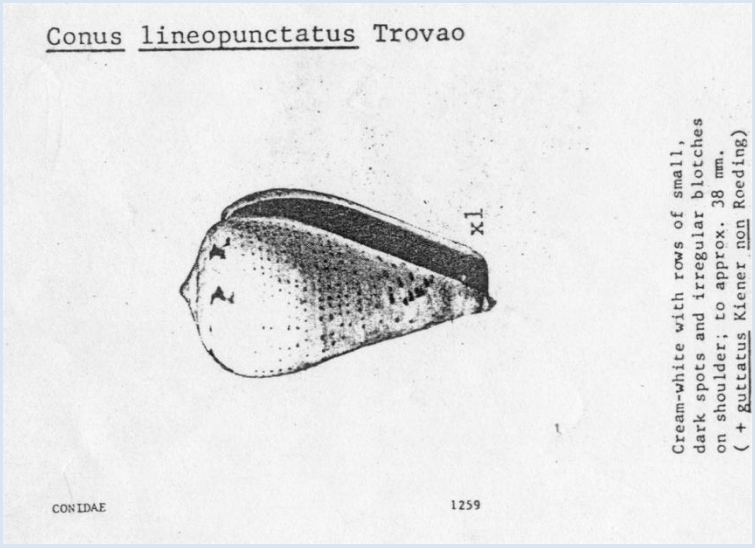
Conus lineopunctatus Kaicher, 1977



Until recently, the Kaicher cards were not accepted by the ICZN as a valid publication/ descriptions. *C. lineopunctatus* is the first valid replacement name for *Conus guttatus* Kiener, 1845. The "guttatus" name was a homonym, already used by Röding in 1798 for a different cone.

As a result of the confusion regarding the validity of Kaicher names, Da Motta published a replacement name *Conus neoguttatus* in 1991 which has been used in many publications. However the later ICZN decision to accept as valid, the Kaicher cards requires the name *C. lineopunctatus* to be used.

The *C. lineopunctatus* holotype is in USNM

Kaicher description: "Cream white with rows of small dark spots and irregular blotches on the shoulder. To approx. 38mm"

Kiener's original description of *C. guttatus* matches the Kaicher shell.

Coquille turbinée, raccourcie, élargie et renflée vers sa partie superieure. La spire est surbaissee et obtuse; on y cornpte six tours; 1'angle spiral. du dernier est très-arrondi et obtus; il est lisse sur toute son étendue, excepté vers sa base qui présente quelques petits

sillons obliques. La coquille est d'un gris fauve, marquée de petits points bruns ou taches irréguliéres eparses et peu nombreuses; ses points presentent quelquefois l'aspect de series d'ailleurs fort irrégulieres.

Shell turbinate, shortened, enlarged and swollen towards its upper part. The spire is low and obtuse; six whorls are counted; the spiral angle of last whorl is very rounded and obtuse; it is smooth over all its extent, except towards its base which presents some small oblique furrows. The shell is a tawny grey, marked with small brown dots or a few scattered irregular spots; its markings sometimes present the appearance of a very irregular series.

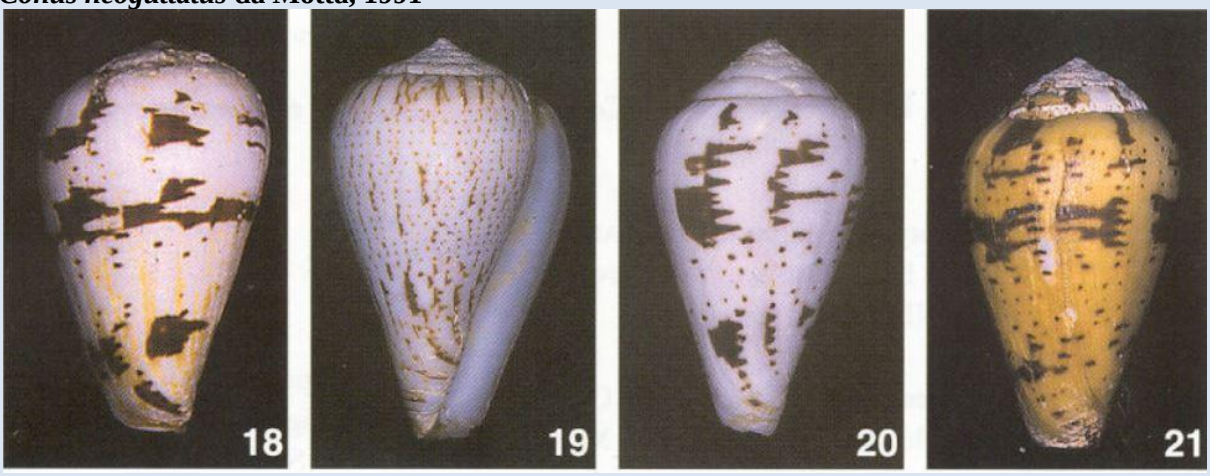
Kiener figure.

Fernandes & Röckel 1982

Heavy pyriform shell. Sides of body whorl attenuated near base, upper widely convex. Shoulder rounded, spire low, Surface smooth and dull, at base 6-8 spiral ribs. Color white with spaced spiral rows of small brown dots; sometimes shiny. Inside matte white.
Animal: Colour reddish with black dots. Periostracum with two layers: upper side dull and grey-brown, lower side glossy and yellow-brown.
Habitat: Buried in sand, at 2 - 3 m. under rocks.
Locality: Found only in Limagens Bay, South Angola. Very rare. Sympatric with *C. zebroides. C. lucirensis, C. carnalis, C. tabidus, C. ermineus, C. fuscolineatus' C. naranjus* and C. *obtusus.*
Similar species: C. africanus and *C. variegatus* are dark inside, *C. bulbus* is very distinct in shape and pattern.
Size of pictured specimen: 33 mm.

Rolán & Röckel, 2000

***Conus neoguttatus* da Motta, 1991**



Figures 18-21. *C. neoguttatus.* 18: Meva, 39.5 mm (CER); 19: Limagens, 33.9mm (SMNS); 20-21: Santa Maria, 32.9 and 24.9 mm (SMNS).

Conus guttatus Kiener, 1845. Coq. Vivant., 2: pl. 105, fig. 4. 1949: 259.
Conus neoguttatus da Motta, 1991. La Conchiglia, 22 (258): 73, *nomen novum* for *C. guttatus* Kiener, 1845, non *Cucullus guttatus*, Roding, 1798.

Type material: Representation of the holotype in KIENER (1845: pl. 105, fig. 4) (35 x 21 mm).

Other material studied: Limagens, Meva, Canoco, Santa Maria;

Type locality: Not mentioned; we herewith designate Santa Maria, Angola, as the type locality

Shell description: Moderately small to medium-sized, moderately solid. Last whorl ventricosely conical; outline convex at adapical half and straight or slightly concave below. Shoulder rounded. Spire of moderate height, outline slightly sigmoid. Larval shell of about 1.5-2 whorls, maximum diameter 0.5 mm. Teleoconch sutural ramps convex, smooth or with fine striae. Last whorl smooth and dull, with some spaced spiral ribs at base.

Ground colour white. Last whorl with irregular brown flecks, bars or streaks, sometimes with incomplete dotted spiral lines and axial hair-lines. Aperture white.

Shell morphometry

L 23-38 mm
RD 0.65-0.76
RSH 0.11-0.18
PMD 0.72-0.78
RW 0.15-0.24 g/mm

Description of animal: Reddish with black dots (ROCKEL & FERNANDES, 1981).

Radula: In radula sac 80-90 teeth. Tooth (Fig. 137) very primitive, with a large base, covered oil external surface with dense tubercles. Tooth extremely small, possibly the smallest ever found in typical vermivorous species. Waist not evident, PA small, very simple. Saw bare of denticles, but, exceptionally, bigger specimens can have a small number of them. Apparently no blade.

Radula morphometry:
(n = 4)

D no one
ABS 20-25
LC/DR 90-155
DR/PA 2.7-3.0

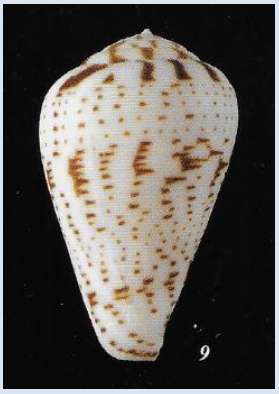
Distribution: Only found in Santa Maria, Meva, Canoco and Limagens. sympatrically living with *C. bulbus, C. variegatus, C. zebroides, C. carnalis, C. chytreus, C. nobrei, C. musivus,* and *C. naranjus*

Habitat: Buried in sand at 2-3 m, under rocks.

Discussion: RODING (1798) introduced a new generic name, Cucullus, in place of Conus. WINCKWORTH (1945) noted that Cucullus Roding, 1798 is a junior synonym of Conus Linne, 1758. KOHN (1992) confirmed this and indicated Conus by Cucullus. So the name *Conus guttatus* Kiener, 1845 was invalid and was correctly replaced by da Motta with *Conus neoguttatus. C. neoguttatus* differs clearly in colour pattern from all other endemic Conus species of Angola. In shape and size it is similar *C. trovaoi* n. sp.

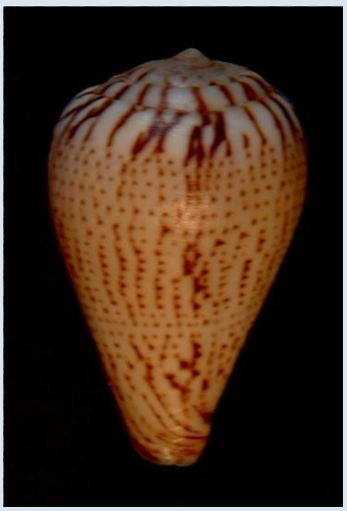
NOTE: *C micropunctatus* is described in the same publication and compared to C. lineopunctatus(neoguttatus).
“The relative diameter of similar patterned specimens of *C. neoguttatus* (compared to *micropunctatus*) is usually larger (>0.70), the number of dotted spiral lines is fewer (<30) and the distance of dots is larger. *C. fuscolineatus* differs by its brown, sometimes interrupted spiral lines instead of punctated lines and its greenish white ground colour. The radular tooth of *C. neoguttatus* is very different: without D in S and without F.”

Iconography of West African Conidae
The description and comparison follow Rolán & Röckel but the interpretation of the description provides some additional patterns for the shell.



The banded form and the form with axial wavy flammules have elements of the colour patterns of *C. micropunctatus*.

Currently specimens with the differing patterns can be found at Limagens and Elefantes living sympatrically with *C. micropunctatus* and are sometimes difficult to separate and to identify.

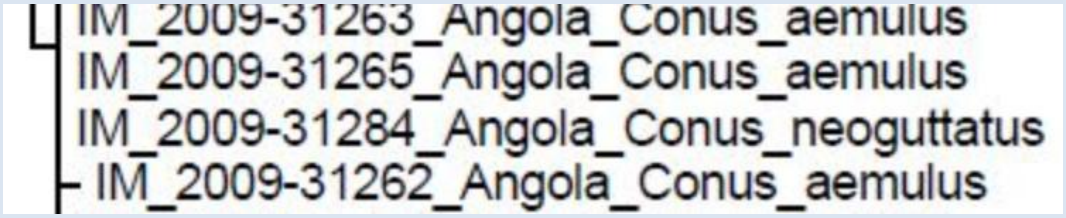



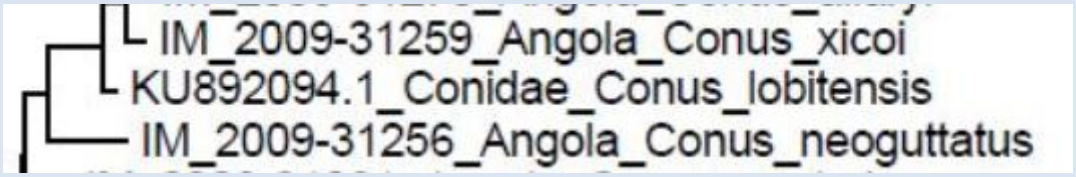


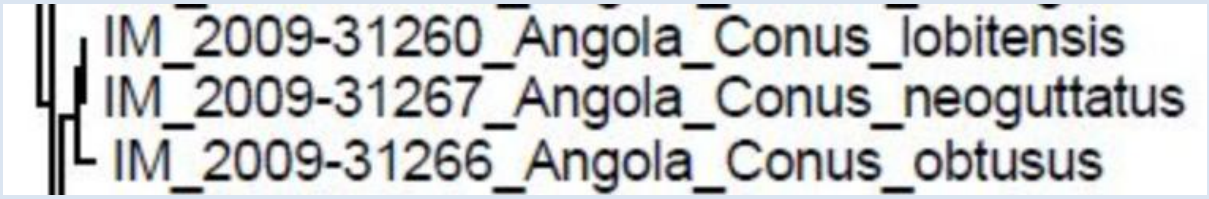
Limagens 30mm CS Limagens 28mm GM Elefantes 19mm GM

DNA Analysis:

Specimens labelled *C. lineopunctatus/C.neoguttatus* are to be found in three sections of the COI tree.







MNHN 31256 MNHN 31284 MNHN 31267

Specimen MNHN 31256 is labelled as Libellé du pays ANGOLA Localité/Lieu-dit Mava. Mava is a small stream in Luanda province. Meva near Limagens is a possible label error. However the purple aperture is not found in *C. lineopunctatus*.

Specimen MNHN 31284 is labelled as Libellé du pays ANGOLA Localité/Lieu-dit Capato Baia da Lucida. There is no such locality. This could be a label reading error for Lucira or for

Baia da Luanda. Possibly a specimen of *C. aemulus* which is found with such a spotted pattern or a specimen of a bluish morph of *C. lineopunctatus*.

Specimen MNHN 31267 from Santa Maria is very similar to specimen 31266 from the same locality and labelled as *C. obtusus* which would be a more likely identity.

One has to conclude that none of the DNA data for *C. lineopunctatus* is valid.

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