

***Conus trovai* Rolán & Röckel, 2000**



Conus trovai n. sp
(Figs.87-91)



"*Conus olivaceus*" Röckel & Fernandes, 1982. La Conchiglia, 14(164-165): 17, fig. 19.

Type material: Holotype (Figs. 87-88) in MNCN (15.05/39752) (38.5 x 20.8 mm).

Other material examined: Limagens , Baia do Cesar; Lucira.

Type locality: Limagens, Angola

Shell description: Moderately small to medium sized, moderately solid. Last whorl ventricosely conical to broadly and ventricosely conical. Outline convex at ad apical third, almost straight below. Left side concave near base. Aperture wider at base than near shoulder. Shoulder rounded. Spire of low to moderate height, outline straight to sigmoid. Teleoconch sutural ramps straight to convex, with fine spiral striae. Last whorl smooth, with some weak spiral ribs at base.

Ground colour light green to grey or pale yellow, with two light narrow spiral bands at centre and at shoulder. Specimens may have dark brown irregular flecks and streaks. Aperture dark violet with two light spiral bands at centre and shoulder and a white collabral band

Periostracum yellowish green, thin and transparent.

Shell morphometry:

L 25-44 mm

RD 0.67-0.71

RSH 0.09-0.16

PMD 0.73-0.81

RW 0.13-0.25 g/mm

Description of animal: Colour pinkish with dark spots and dots (ROCKEL & FERNANDES 1982c).

Radula: In radula sac 103-123 teeth. The tooth (Figs:142-143) is among the smallest ever found in the vermivorous type: Ratio LC/DR between 113-140; PA small. S fine without D in specimens with shell smaller than L 30 mm and with 10-16 small D in larger shells.

Radula morphometry:

(n = 5)

D 0-16

ABS 30-45°

LC/DR 113-141

DR/PA 2.4-3.1

Habitat: 1-3 m, buried in sand under large rocks or half buried near them in quiet zones without wave movement (ROCKEL & FERNANDES, 1982c).

Distribution: Found in Limagens, Baia do Cesar, and Lucira (Fig. 147).

Etymology: The new species is named after Herculano Trovão {Lisbon}, who started studies of Angolan Conidae, employing the radular teeth for specific separation.

Discussion: As *C. trovai* n. sp. looks like an olive (colour and shape), collectors were inclined to call this species *C. olivaceus*, a name for a species described by KIENER (1845). The latter species is known only by its figure, which shows a shell of similar size and colour-pattern, but with a subangulate to angulate shoulder -different from the rounded shoulder of *C. trovai*. Therefore the new species cannot be identified with *C. olivaceus*. *C. trovai* is similar to *C. neoguttatus* in size and differs slightly in its somewhat more conical shape (PMD 073-0.81 vs. 0.72-0.78). The colour pattern is obviously different: Greenish instead of white ground colour, absence of any spiral lines and small dots, and dark violet coloured aperture. The radular teeth of both species are similar. They share the unusual character, that sometimes large specimens may have an ontogenetic change having a vermivorous tooth without D in S., smaller base, etc.

The radular tooth of *C. trovai* may easily be distinguished from all of the other previously described Angolan cones.

Comment:

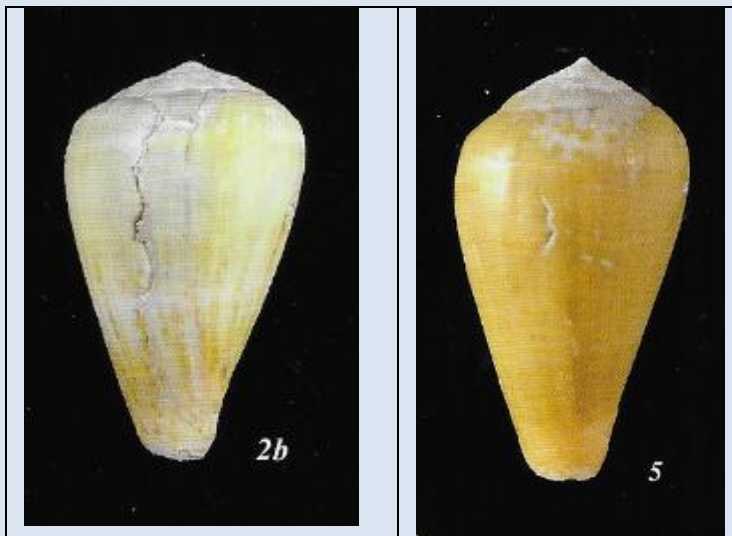
In the discussion above, there is reference to *C. olivaceus* Kiener, 1845. Fernandes and Röckel illustrated 3 specimens as *C. olivaceus* from Limagens. Of the three specimens in the picture, the left specimen bears some doubtful similarity to the figure from Kiener. The right specimen is typical *C. trovaoui*.

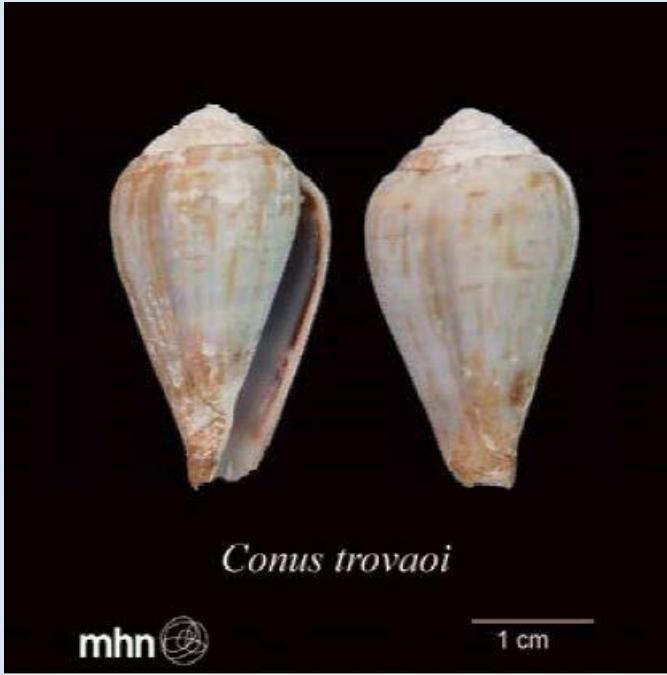


Original figure *C. olivaceus*.

Iconography of West African Conidae

Specimens similar to those in the original description are illustrated; two pictures show the effects of a thin yellow periostracum which is difficult to remove. (2b=holotype).





Paratype Rolán collection USC



Paratype Limagens 43mm



Röckel collection SMNS



Paratype Limagens 42mm



Röckel collection SMNS.



Paratype Limagens 42mm



Röckel collection SMNS

The 3 Röckel paratypes illustrate 3 common colour patterns; the plain form similar to the holotype with white bands at middle and shoulder, a pattern with thick random axial streaks and a pattern with thin wavy axial lines.



Limagens 28mm CS



Baba 20mm CS

Typical specimens are found in Limagens today, and one is illustrated in Monnier et al. , 2018. Potential juvenile specimens from Baia do Baba have the typical pattern but have a more angulate shoulder.

Baia do Baba as a locality would be a considerable range extension to the south.

Specimens from Equimina have the broad streaks in their pattern and an orange tone in the grey-green areas. An unusual narrower white specimen could be considered as having some relationship to *C. trovai*.



Equimina 37mm GM



Equimina 37mm GM



Limagens 27mm CS



Limagens 27mm CS

Below, the growth sequence of specimens from Limagens illustrates the change in pattern.



Collection CS: 16mm, 18mm, 20mm, 24mm

DNA Analysis



KU892088 Baia Lucira

The specimen labelled *C. trovai* in GenBank has a questionable id and is certainly not typical of *C. trovai*.

Similar blue shells are found at Limagens with the purple aperture that is found on most bluish Angolan cones. The shape and pattern on both the whorl and shoulder is similar to *C. micropunctatus* while the colour is blue compared to green found normally on *C. trovai*. The pattern does have a light band at middle and below shoulder, features found on *C trovai*.

The radula of is quite different in *C. trovai* and *C. lineopunctatus* is quite different from that of other Angolan species. If the radula has been assessed then a more informative label may be *C. aff. trovai*.

Page last updated 2 June 2019.