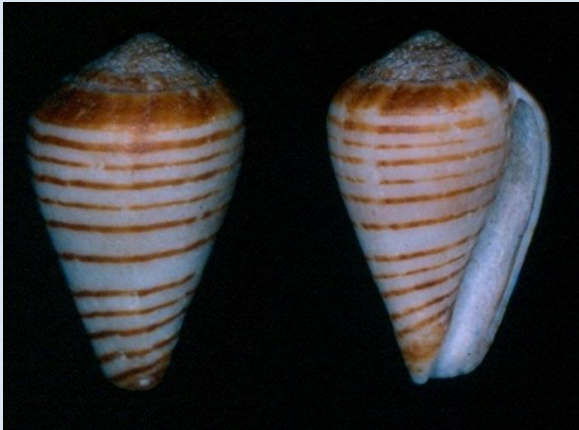


Conus chytreus Tryon, 1884



Holotype NMWC 16.6mm

Note: Somewhat unusually, Tryon described *C. chytreus* as a variety of *C. figulinus*.

Original description:-

- Var. CHYTREUS, Melvill. Pl. 27, fig. 1.

Shell small, slightly turbinated, brown, encircled with unevenly placed, thick, dark red-brown lines, aperture narrow, spire somewhat rounded. Length, 0.63 inch. Smaller and with, thicker and more irregular color lines than the type; aperture narrower.

Walls 1979 treats the shell as synonym of *C. variegatus*.

Fernandes and Röckel , 1983

This publication treats the shell as a species.



Size of pictured specimens: 25,3 mm, 17 mm 28 mm

18. *Conus chytreus* Melvill, 1883 (in Tryon. Manual, of Conch., 6 (II): 17. p1. 27. fig. 1) = *Conus lucirencis* Paes da Franca, 1957

Essential characteristics: Moderately heavy, small conical shell. The upper part of the body whorl including shoulder is convex, sides tapered near the base. Spire more or less elevated,

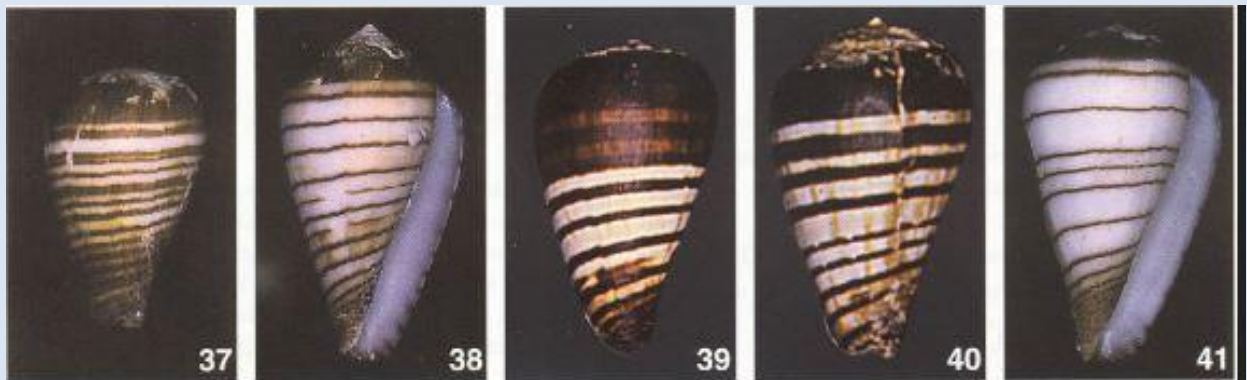
spire whorls convex superiorly, sides of spire straight or slightly convex. Surface smooth but no gloss. Ground colour white; base, shoulder and spire uniformly dark brown. 8 to 12 spaced spiral lines of dark around the body whorl. Inside white.

Animal: Color pinkish cream with black dots. Periostracum yellow and translucent.

Locality: From, Lucira Bay up north to Limagens Bay. Uncommon. Sympatric with *C. carnalis*, *C. fuscolineatus*, *C. guttatus*, *C. zebroides* and *C. ermineus*.

Similar Species: *C. africanus* and *C. fuscolineatus* alternate white and brown at spire, the spiral lines or dashes are narrow and not spaced. *C. bulbus* lacks the spiral lines and is alternating brown and white at spire too.

Rolán & Röckel, 2000



Specimens from Lucira and Limagens.

Synonym=*Conus lucirensis* Paes da Franca, 1957. Trab. Miss. Biol. Marie. 13: 79, pi. 1, figs. 5-6, pi. 2.

Type material: Holotype of *C. chytreus* in NMWZ (16.6 x 10 mm), depicted by Coomans et al. (1983, 414 a, b). Holotype of *C. lucirensis* in MZFC.

Other material studied from Campeona, Equimina, Limagens (SMNS), Bissonga, Baia do Cesar, Lucira, Doca, Salinas.

Type locality: Lucira Bay, Angola, designated by COOMANS ET AL., (1983: 118).

Shell description: Small to moderately small, moderately solid. Last whorl ovate to broadly ovate, slightly pyriform. Outline convex at ad apical half and slightly concave below. Shoulder rounded. Spire of low to moderate height, outline straight or sigmoid. Teleoconch sutural ramps convex, usually with numerous spiral striae. Last whorl smooth and dull, with about 10 spiral ribs at base.

Ground colour white, shoulder with a wide brown band down to sub shoulder area, last whorl with continuous brown spiral lines. Lines may be fine or broad, spaced or closely arranged. Base usually brown. Aperture white inside.

Periostracum thin, smooth, translucent.

Shell morphometry: L 19-32 mm; RD 0.62-0.71; RSH 0.08-0.16; PMD 0.69-0.72; RW 0.14 g/mm

Description of animal: Animal pinkish cream with black dots (RÖCKEL & FERNANDES, 1982b).

Radula: In radula sac 52-71 teeth. Tooth (Fig. 126) medium sized; PA equal or slightly longer than half tooth; two or three rows of D in S in adapical part and two or one below, here very

poorly evident. D only in the upper part of S and in two rows. F hardly observable, covering only 55-68% of PA.

Radula morphometry:

(n = 10); D 17-26;ABS 40-45°; LC/DR 39-60; DR/PA 1.8-2,0

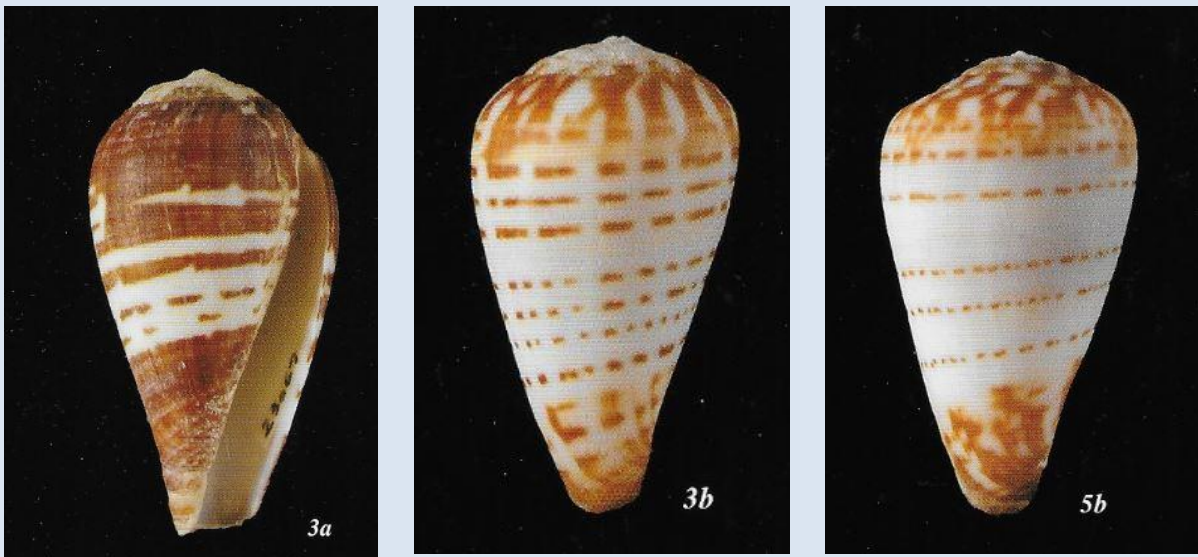
Distribution: From Lucira to Santa Maria. In this area, sympatric with *C. bulbus*, *C. neoguttatus*, *C. variegatus*, *C. zebroides*, *C. carnalis*, *C. nobrei*, *C. musivus*, *C. naranjus* and *C. albuquerquei*.

Habitat: Zone of calm shallow water, to 1 m depth, buried in fine sand with shell grits.

Discussion: Melvill(1883) described *C. chytreus* erroneously as variant of the Indopacific *C. figulinus* because of the presence of spiral lines on last whorl. Coomans et al. (1983) stated a similarity to *C. variegatus*, but the colour of the aperture is different and *C. variegatus* has a pattern with spiral rows of brown dots or dashes, alternating with white. The radular teeth have evident differences: DP/PA is usually smaller than 2 in *C. chytreus* and 2 or more in *C. variegatus*. Also the D in S are more prominent and numerous in the upper part of *C. chytreus* and the opposite in *C. variegatus*. Most similar in shell morphology is *C. fuscolineatus*.

Iconography of West African cones

This extends the interpretation of *C. chytreus* slightly to include specimens with dashes while maintaining the concept of a white shell with a white aperture and brown spiral lines.



Note that specimens 3b and 5b conflict with the original description which emphasises that the spire is a solid colour.

Many colour forms exist, even amongst the population in Lucira



Lucira 20mm C Afonso



Lucira 23mm www.conchology.be



Bentiaba 25mm GM



Bentiaba 27mm GM



Lucira 23mm GM



Lucira 23mm www.atollseashells.com

DNA analysis:

2 specimens are recorded in Genbank

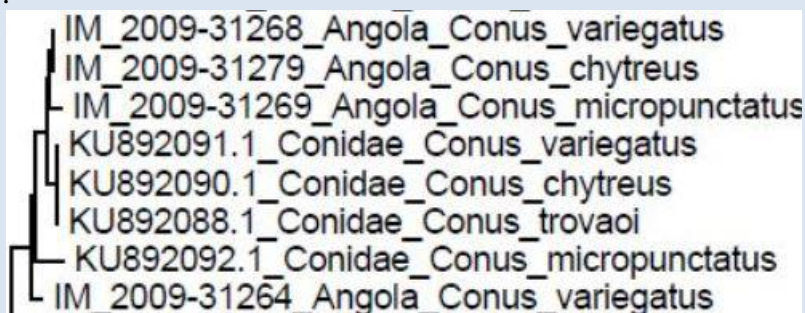


KU892090 Lucira



MNHN 2009_31279 Lucira

The two specimens are from same locality with similar patterns. MNHN 31279 with its purple aperture is a questionable assignment to *C. chytreus*. A similar specimen is assigned to *C. variegatus* in Monteiro et al, 2014



The COI gene tree shows little genetic difference between several species. Most Angolan specimens with blue in the ground colour of the whorl also have a purple aperture. It is quite possible that the two specimens are colour variations of the same species. The DNA indicates an equally close relationship to *C. chytreus*.
