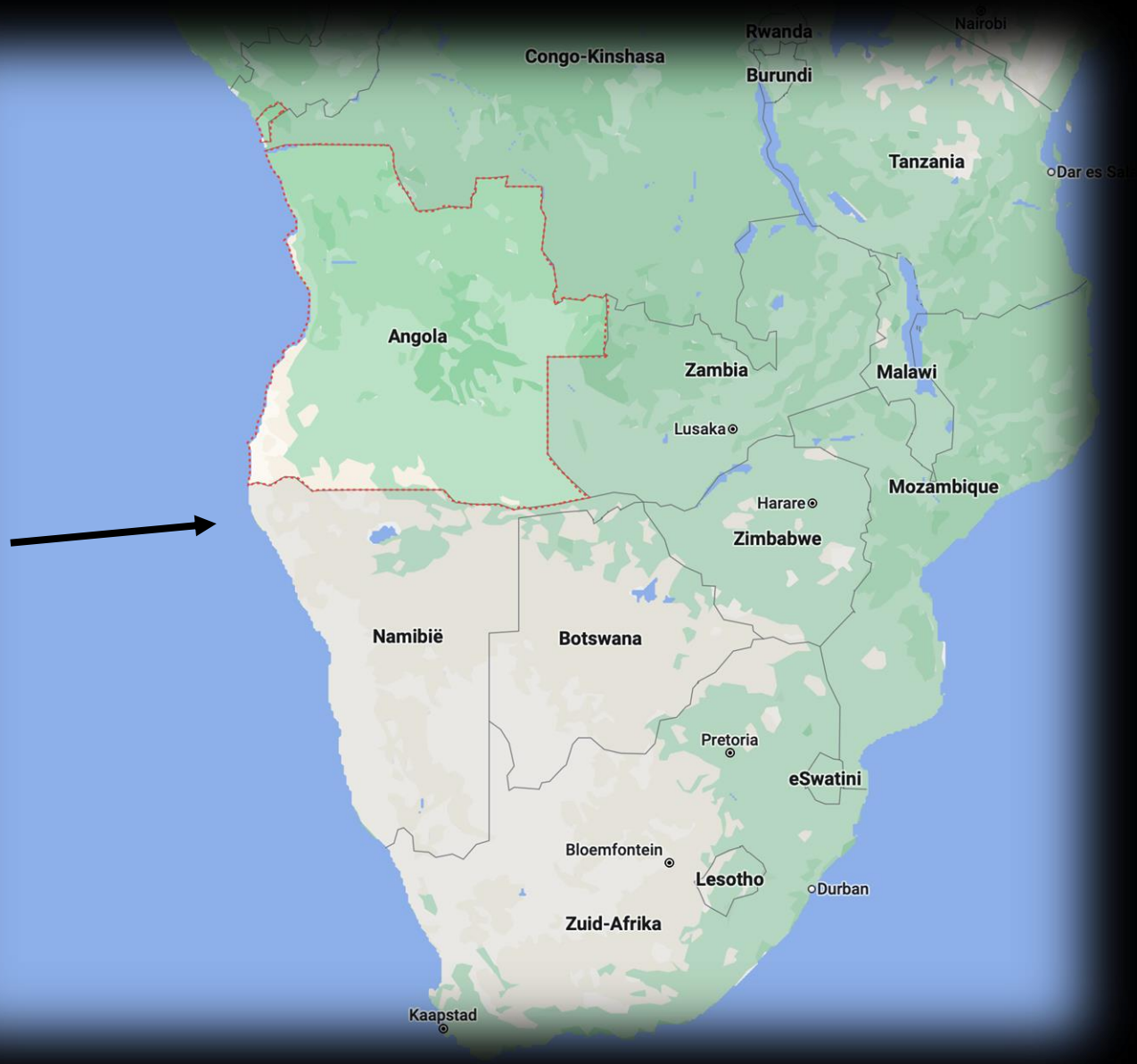
Clelandella namibiensis (Gastropoda: Trochoidea: Trochidae: Cantharidinae), a new species from SW Africa

speaker: F. Nolf

Hundreds of interesting shells were gathered by André Coenye, a Belgian navigating officer of PEMARCO (Pêche maritime du Congo), when he operated off the coasts of Congo-Kinshasa and Angola in the years 1960-1973.
Many of them concerned new species, described in the magazine '*Neptunea*'.

A great part of this material was also dredged between the mouth of the Cunene river (the border between Angola and Namibia) and Cape Fria (Namibia, SW Africa), and contained a sample of seven specimens revealed to be a new species of *Clelandella*

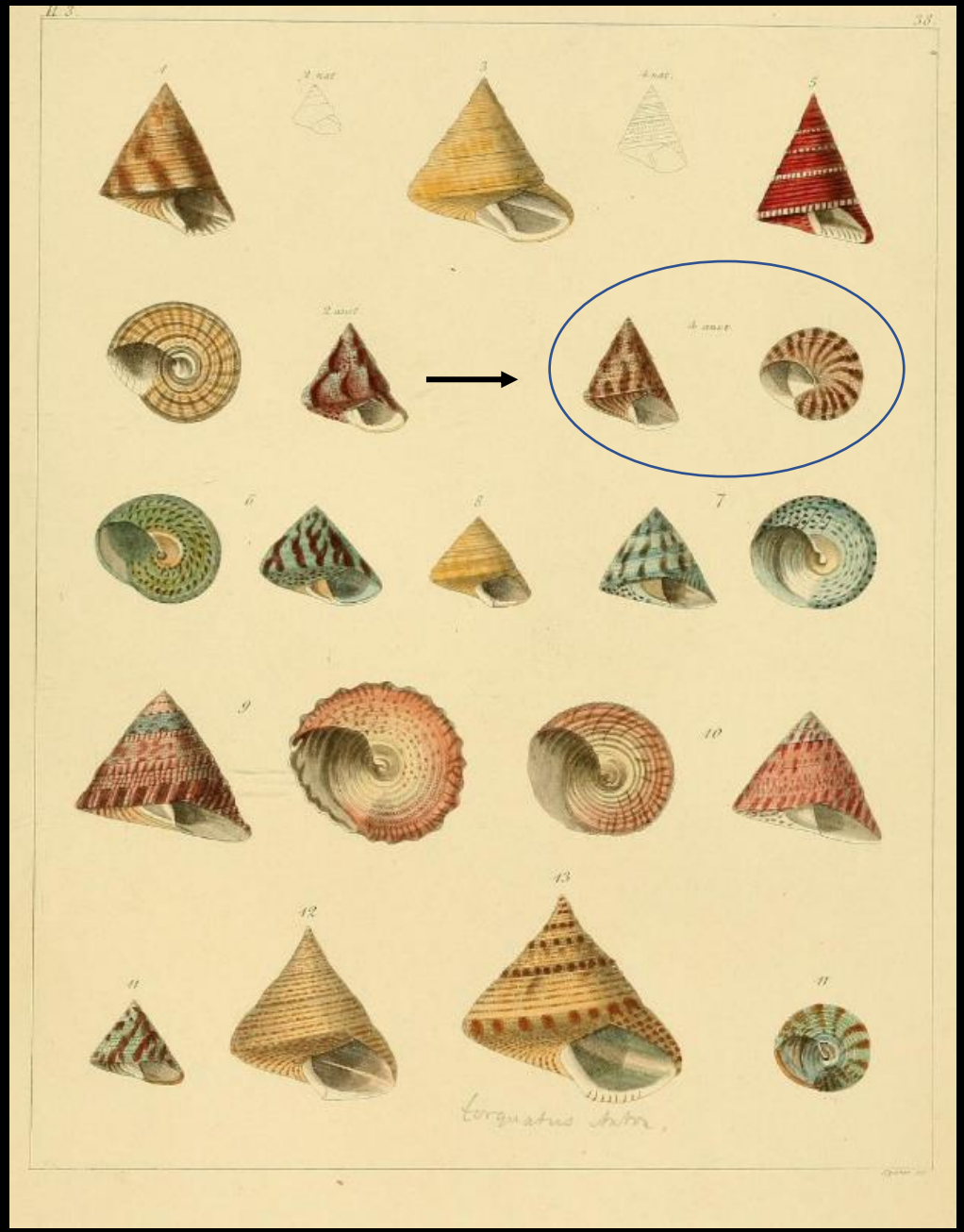


Introduction:

- First report of a "*Calliostoma*" from Angolan waters: *Calliostoma fragum* (Philippi, 1848) dredged by the S.M.S. Gazelle Expedition in 1874 at a depth of 79 fathoms just south of the mouth of the Congo River.

- One dead specimen was found, and the species was presumably determined by Théophil Studer, the only naturalist on board of the ship.

- We now consider "*Trochus fragum Philippi*" to be a *Calthalotia*, in the subfamily Cantharidinae of the family Trochidae. This species was described by Philippi (1848). In neither case the type locality was mentioned, but Philippi refers to a picture on Pl. 38, fig. 4 by Küster (1837) (Pl. VII).



- Martens (1904) reported the presence of *Trochus fragum* from the Congo River mouth at 06°22.1’ S/ 11°41’ E, south of the Congo River mouth, offshore Angola by the Gazelle Expedition in the species listing, without figures and comments (Anon, 1889).

- The occurrence of this ‘*Calliostoma fragum* Philippi’ in Angolan waters was subsequently ‘confirmed’ in several publications (a.o. Rolán, E. & Ryall, P., 1999) without extended critical study.

- Until today no specimens, corresponding to the figure by Küster, have been reported from West African waters.

- The shell represented on Pl. 38, fig. 4 rather resembles an Indo-Pacific species.

- Nowadays, *C. fragum* is assumed to occur from the Red Sea across the Indian Ocean to New South Wales (Australia).
- Does the figure really show an Angolan or an Indo-Pacific species?
- Moreover, is the dead collected specimen a *Calliostoma* or a *Clelandella* species?

Calthalotia fragum
Australia, Queensland
NMR 93713. Actual size 22 mm

- Regardless of these questions, the '*Calliostoma'* figure does not match any specimen known from N Angola neither the new species described as *Calliostoma schoenherri* Nolf & Hubrecht, 2022 and *C. coenyei* Nolf & Hubrecht, 2022.

Systematics:

Superfamily: TROCHOIDEA Rafinesque, 1915
Family: TROCHIDAE Rafinesque, 1815
Subfamily: CANTHARIDINAE Gray, 1857
Genus: *Clelandella* Winckworth, 1932

Type species: *Trochus clelandi* W. Wood, 1828 (= *Trochus miliaris* Brocchi, 1814)
Pliocene, northern Italy

The trochoid genus *Clelandella:* long been considered monotypic, with the sole species *C. miliaris* (Brocchi, 1814) known from N Norway to W Africa and into the Mediterranean Sea, where it has lived since the Pliocene period.

The systematic position of "*Trochus*" *miliaris:* always been a matter of discussion.
First of all: placed in the genus *Calliostoma* (a.o. Norman, 1893; Dautzenberg, 1927), later on in *Zizyphinus* (Calliostomatinae) (Brusina, 1866) and in the monodontine genus *Jujubinus* (Monterosato, 1884)

Winckworth (1932) proposed the subgenus *Clelandella* with *Trochus clelandi* Wood, 1828, a synonym of *T. miliaris*, as type species.

Nordsieck (1968) raised *Clelandella* to the status of a genus within the Calliostomatinae.

Cretella et al. (1990) submitted a lot of arguments to place *Clelandella* in the Monodontinae along with *Jujubinus*, based upon external head-foot and radular morphology.

We follow the new classification by Williams et al. (2010), as it was considered by Hickman & McLean (1990) and also by Bouchet & Rocroi (2005).

Clelandella namibiensis Nolf, 2022

The sample - containing 7 specimens - was dredged by the PEMARCO-fisheries at a depth of 275 m between the mouth of the Cunene river (18°27’ S/ 12°01’ E) and Cape Fria (17°15’ S/ 11°45’ E), Namibia, SW Africa in 1973.

Shell conical, as high as broad.

Protoconch less than one whorl, teleoconch with 7-8 whorls.

First teleoconch whorls flat, later whorls becoming slightly swollen and convex, especially in larger adult specimens

Sutures nearly visible by the presence of a secondary ridge.

Whorls with beaded spiral cords, as wide as interspaces, with 6 rows of pointed granulations in the last whorl.

Peripheral cord duplicate with adapical and abapical component slightly stronger developed than the others. Some specimens may possess alternating secondary spiral threads.

Base slightly convex and bearing 11-12 spiral cords.

Nearly closed umbilicus with a white nacreous callus.

Aperture iridescent nacreous.

Shell colour salmon pink covered with red-brown flames, spiral cords with darker and paler alternating dots.

Holotype (RBINS)
H. 10.95 mm D. 9.41 mm

Paratype 1
H. 12.11 mm D. 10.90 mm
Coll. F. Nolf.

Paratype 3
H. 10.14 mm D. 9.58 mm
Coll. F. Nolf.

Paratype 4
H. 10.82 mm D. 9.77 mm
Coll. F. Nolf.

Paratype 5
H. 10.82 mm D. 9.77 mm
Coll. F. Nolf.

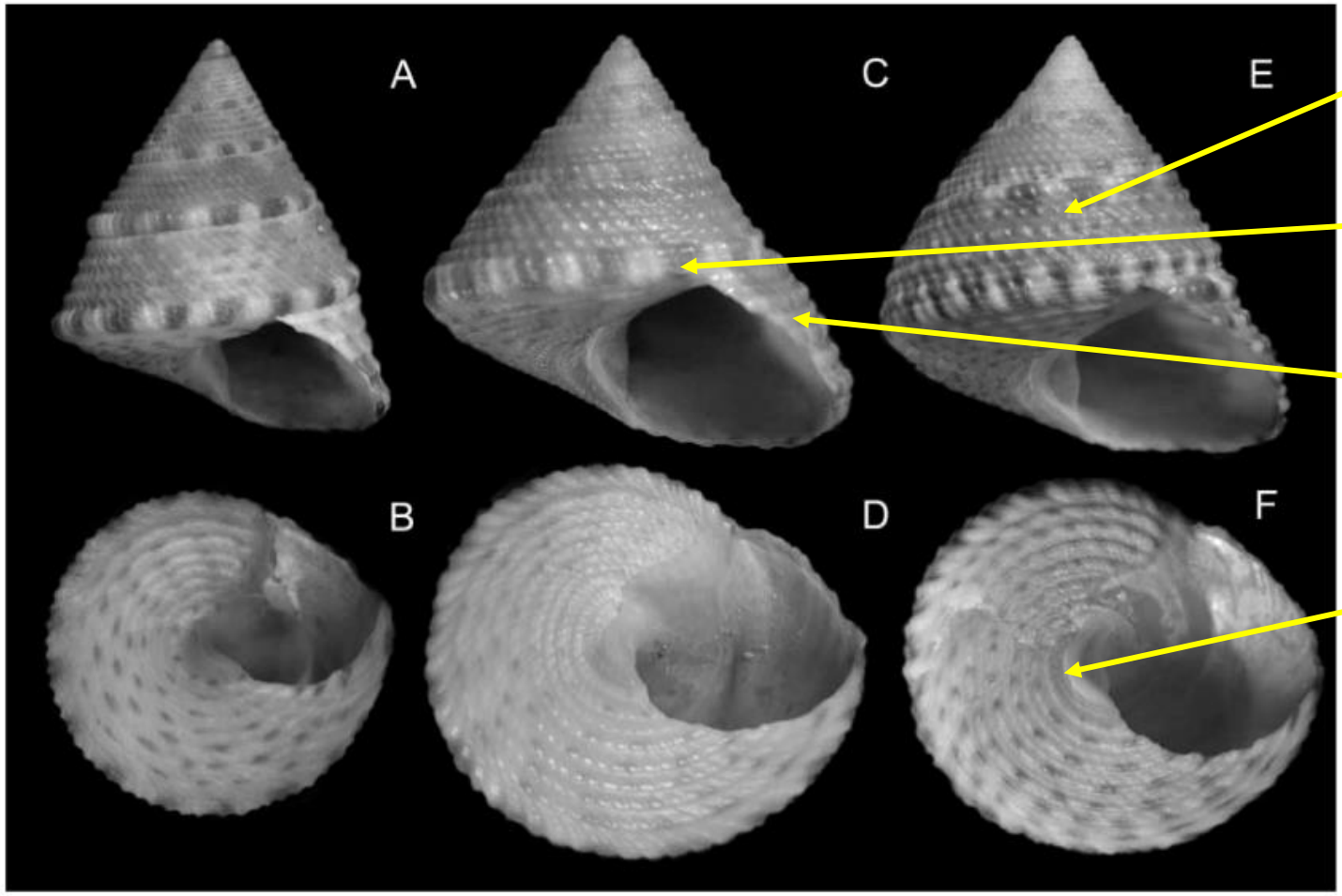


Figure 3. *Clelandella* spp. from West Africa. **A, B.** *Clelandella miliaris*, off Dakar, 135 m (spm., height 7.8 mm). **C, D.** *Clelandella* cf. *miliaris*, same locality (spm., height 7.8 mm). **E, F.** *Clelandella* cf. *miliaris*, off Dakar, 140–160 m (spm., height 10.2 mm).

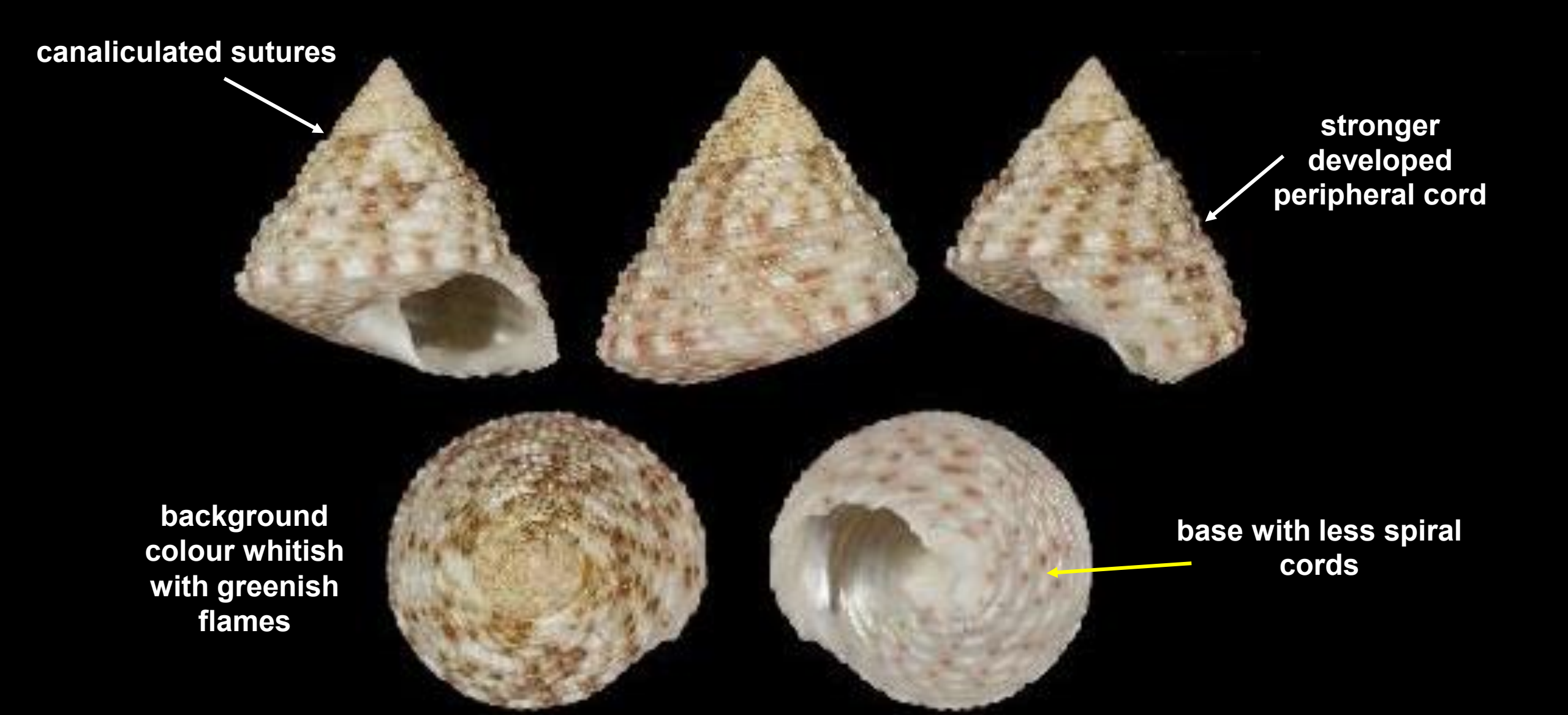
convex last whorl

distinct rim

larger beads on the spiral cords

closed umbilicus

***Clelandella* sp. from Senegal**



Clelandella dautzenbergi Gofas, 2005.
Josephine Seamount, off South Portugal. 36°40’ N/ 14°17’ W.
Dredged at a depth of 235-245 m. Holotype.

Clelandella miliaris **(Brocchi, 1814)**
Gullmarsfjorden, Sweden.
Trawled by fishermen at a depth of 85 m.
H. 10.53 mm D. 10.24 mm. Coll. F. Nolf.

Clelandella miliaris **(Brocchi, 1814)**
Off Lompoul-sur-Mer, Senegal.
Trawled by fishermen at a depth of 150 m.
1993.
H. 6.72 mm D. 6.60 mm.
Coll. Steve Hubrecht.

***Clelandella* cf. *miliaris* (Brocchi, 1814).**
Cap Barbas, Western Sahara, Morocco.
Trawled by fishermen at a depth of 50-60 m.
September 1991.
H. 12.97 mm D. 10.23 mm.
Coll. Steve Hubrecht.

Clelandella myriamae Gofas, 2005.
Gioia Tauro, Aeolian Islands,
Tyrrhenian Sea, Calabria, Italy.
H. 10.52 mm D. 9.51 mm.
Coll. Steve Hubrecht.

Clelandella artilesi **Vilvens, Swinnen & Guerra, 2011**
Off Western Sahara, Morocco.
Dredged at a depth of 50-60 m.
H. 5.58 mm D. 4.43 mm
Coll. F. Nolf.

Conclusion:

***Clelandella namibiensis* Nolf, 2022** is a new species, different from all other species in the E Atlantic.

It is the southernmost *Clelandella* species known until now.