

A new species in the genus *Cima* (Prosobranchia: Cimidae) from Senegal

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Abstract: A new species in the genus *Cima* is described from Senegal. The characteristics of the new species are compared with those of the known species from the eastern Atlantic Ocean.

Introduction: The genus *Cima* Chaster, 1896 consists of species of a very small size and very fragile nature which are difficult to be collected alive. The first European species was described by Jeffreys (1856) as *Jeffreysia cylindrica*; Warén (1993) showed a drawing with a living animal of a *Cima* and described two new deep water species for northern Europe. Most of the works on the European fauna mention *Cima minima* (Jeffreys, 1858) and *C. cylindrica* (Jeffreys, 1856): for example Rolán, 1983 and Graham, 1988, for the Atlantic; Poppe & Goto, 1991, Coppini, Margelli & Bogi, 1994, Gofas, Moreno & Salas, 2011 for the Mediterranean; Hernández, Rolán & Swinnen, 2011, for the Canary Islands. Another, different species later also found in the Mediterranean were described from Senegal (Rolán, 2003).

In recent samplings from Senegal and Mauritania some shells belonging to a different *Cima* species were found. It is described in the present work and compared with its closest congeners.

ABBREVIATIONS

s shell

j juvenile

Systematics:**Family:** Cimidae Warén, 1993**Genus:** *Cima* Chaster, 1896Type species: *Jeffreysia cylindrica* Jeffreys, 1856***Cima mingoranceae* sp. nov.**
(figs 1-5)

Type material: **Holotype:** Museo Nacional de Ciencias Naturales of Madrid (MNCN, 15/05/60088, Fig. 1). **Paratypes:** Museum National d'Histoire Naturelle (MNHN IM-2012-2698, 2 s, Fig. 2); Museo de Historia Natural de la Universidad de Santiago de Compostela (MHNS, 100607, 1 s, 2 j); Royal Belgian Institute for Natural Sciences, Brussels, Belgium (RBINS, MT.2996, 1 s, 1 j); Museum Municipal of Funchal (MMF, 42798, 1 s) all of them from the type locality; from Mauritania, 80-90 m the following paratypes are included in the type series: collection F. Swinnen (4 s); collection Francisco Déniz, Gran Canaria (1 s); collection José Martín (4 s, 1 j).

Type locality: Off Saint Louis, north of Dakar, near the Mauritanian border, Senegal. 100-120 m deep.

Description: Shell very small, conical, fragile, with a smooth surface, suture distinct, consisting of about 4 convex whorls. Protoconch probably with one whorl, but there is not any difference in the transition with the teleoconch; diameter of the nucleus of the protoconch about 100 μ m. The beginning of the protoconch is heterostrophic, the nucleus is in a lower level of the apex. The whorls are convex and the sculpture only consists of growth lines which are opistocyrt in the subsutural area, but change to prosocyrt below this area. No other sculpture. The last whorl is almost 60% of the shell height. The deep umbilicus is a little reduced because of a recurvation of the internal lip. The aperture is ovoid, peristome narrow, only in contact with the previous whorl for a short distance.

Dimensions: The holotype is 1.41 mm x 0.61 mm.

Distribution: Only known from the type locality and from Mauritania (80-90 m deep).

Remarks: The most similar species is *Cima minima*, which may be distinguished by the following characteristics: *C. minima* is usually slightly smaller, the protoconch is

less heterostrophic, the nucleus of the protoconch is a little smaller (about 90 μm), the shell has usually got three whorls, its shape is more cylindrical, frequently has some axial sculpture on the first whorls and the umbilicus may be closed or reduced to a fissure.

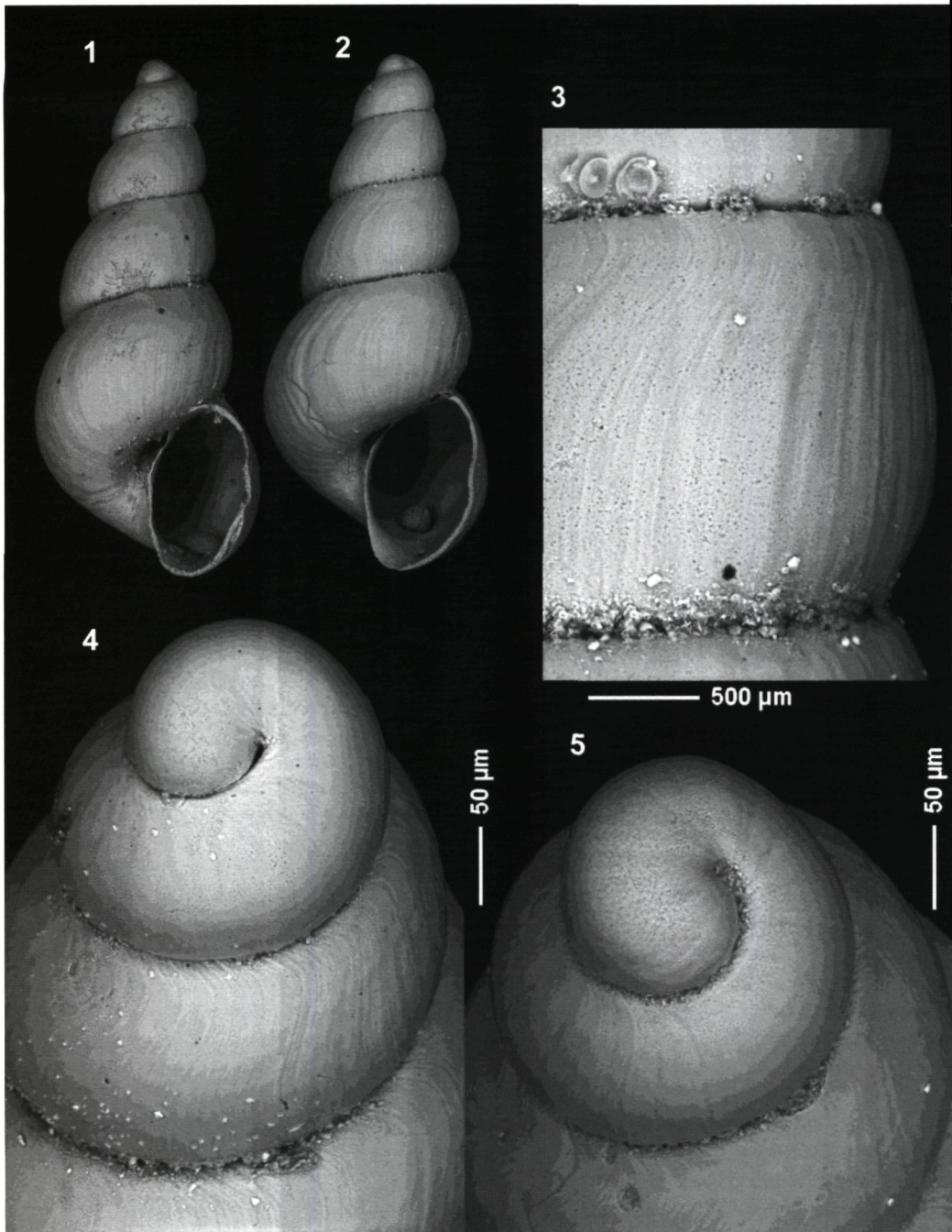
Cima cylindrica has more than 4 whorls, the increase of the whorls in diameter is smaller, its size can reach 1.8-2.0 mm, it frequently shows a spiral sculpture and lacks an umbilicus.

Etymology: The species is named after Esperanza Mingorance, the wife of José Martín from Gabias, Granada, Spain, who obtained the material for study.

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1-5: *Cima mingoranceae* sp. nov. **Fig. 1:** Holotype, MNCN, 1.41 mm; **Fig. 2:** Paratype, MNHN, 1.4 mm; **Fig. 3:** detail of the sculpture; **Fig. 4:** protoconch of paratype (Fig. 2); **Fig. 5:** protoconch of a juvenile paratype, MHNS