

# The identity of *Meioceras elongatum* de Folin, 1881 (Gastropoda, Caenogastropoda, Caecidae)

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*Meioceras elongatum* de Folin, 1881, has been described from “mers de Chine” (China Seas) and was never recorded thereafter. The three syntypes are not conspecific and have probably a different origin. To stabilize the nomenclature, the specimen best fitting the original description and illustration is here selected as lectotype. As a consequence, *Meioceras elongatum* has to be considered a junior synonym of *M. nitidum* (Stimpson, 1851).

Keywords: Indo-West Pacific, Caecidae, *Meioceras*, lectotype.

## INTRODUCTION

The genus *Meioceras* Carpenter, 1859, was established to allocate some caecid species from the West Indies, characterized by an early teleoconch forming an open spiral like a cow's horn, whereas in the genus *Caecum* Fleming, 1813, the teleoconch develops in almost a single plane (Carpenter, 1859: 438). The adult shell of *Meioceras* is characterized by a smooth, often swollen tube with a convex dorsal side and a slightly concave to slightly convex ventral side. The aperture is contracted and inclined toward the ventral side. The posterior end is closed by a low septum with a pointed, almost dorsal mucro. Typical adult shell length is 2.5 mm.

The first *Meioceras* species were described from tropical Western Atlantic coasts, namely *M. nitidum* (Stimpson, 1851), *M. cornucopiae* Carpenter, 1859, and *M. cornubovis* Carpenter, 1859. Twenty years after Carpenter's monograph, the Marquis de Folin described several species from the same region (de Folin, 1869), most of which are now considered synonyms of the highly variable *Meioceras nitidum* (see Moore, 1972). Some years later the same author described the first *Meioceras* species occurring outside the

Atlantic Ocean, i.e. *M. elongatum* de Folin, 1881 (type locality “mers de Chine”). This species has not been recorded any more since its description. In this contribution, the identity of *Meioceras elongatum* is dealt with on the basis of both the type material and the original description.

## MATERIALS AND METHODS

References. — For the dates of publication of the Proceedings of the Zoological Society of London (1838 to 1859) and Les Fonds de la Mer, I follow Sclater (1893) and Rehder (1946), respectively.

Terminology. — Cutting plane: plane delineated by the edge of the shell at the apex in correspondence of the truncation occurring in the subfamily Caecinae (Nofroni et al., 1997). Dorsal side: convex side of the tube in the subfamily Caecinae. Septum: closure of the posterior end of the shell after the previous stage is discarded. Ventral side: concave side of the tube; left and right sides are referred to with respect to the ventral side with the apex upwards.

Abbreviations. — MNHN = Muséum national d'Histoire naturelle, Paris, France.

## SYSTEMATIC PART

**Superfamily Truncatelloidea Gray, 1840**

**Family Caecidae Gray, 1850**

**Subfamily Caecinae Gray, 1850**

**Genus *Meioceras* Carpenter, 1859**

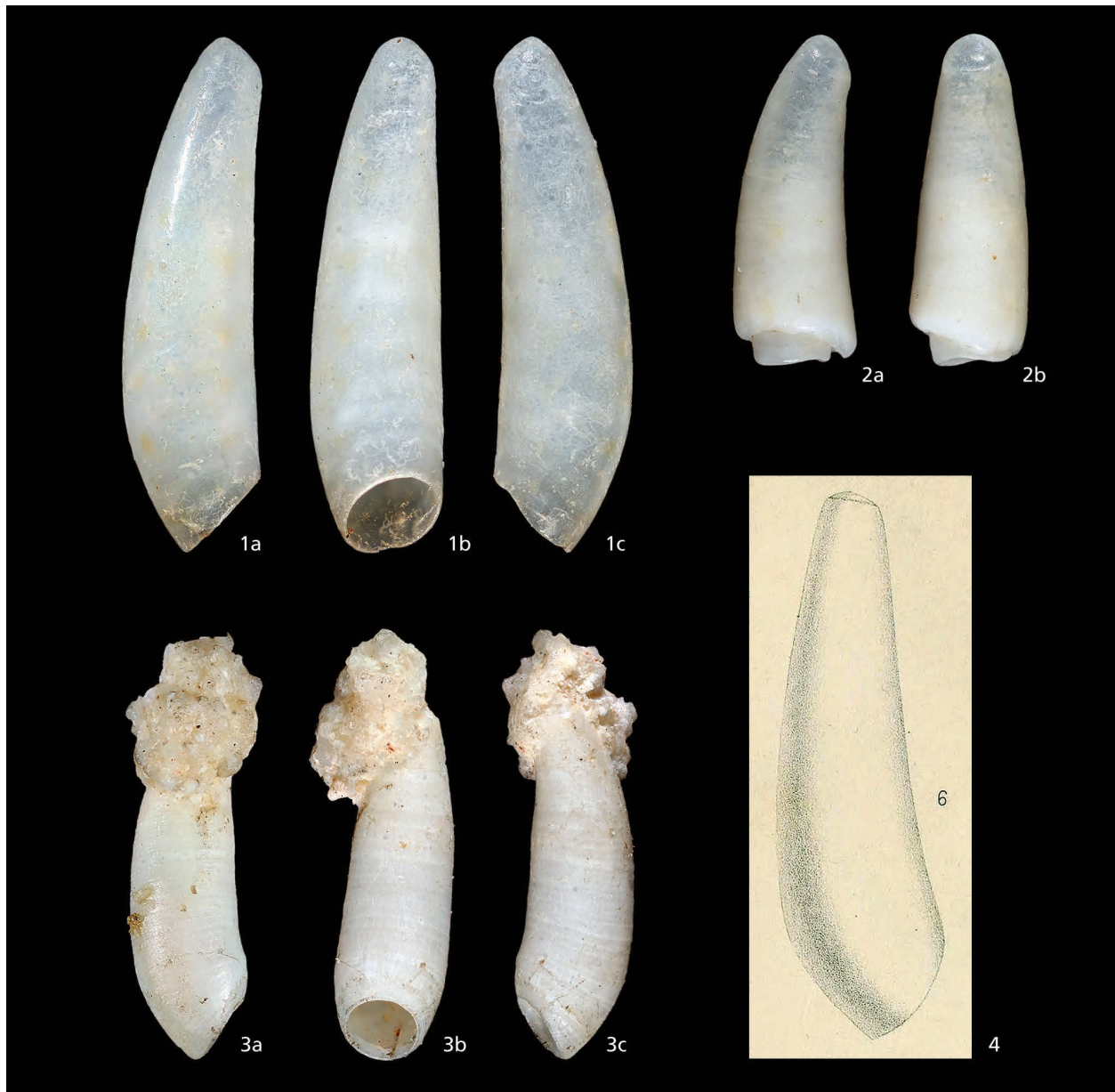
Type species: *Meioceras cornucopiae* Carpenter, 1859; by subsequent designation of Cossmann, 1912: 154.

***Meioceras elongatum* de Folin, 1881**

(Figs 1-4)

*Meioceras elongatum* de Folin, 1881: 17, pl. 1 fig. 9. Type locality: “mers de Chine”.

Type material. — Lectotype (here selected): MNHN-IM-2000-



**Figs 1-4.** Type series of *Meioceras elongatum* de Folin, 1881. 1. Lectotype here selected (MNHN-IM-2000-32923), length 2.78 mm. 2. Paralectotype 1 (MNHN-IM-2000-34000), length 2.05 mm. 3. Paralectotype 2 (MNHN-IM-2000-33999), length 2.2 mm. 4. Original drawing of *Meioceras elongatum*, adapted from de Folin (1881: pl. 1 fig. 9). Images courtesy Manuel Caballer, project E-RECOLNAT: ANR-11-INBS-0004, MNHN.

32923 (Fig. 1), paralectotype 1 MNHN-IM-2000-34000 (Fig. 2) and paralectotype 2 MNHN-IM-2000-33999 (Fig. 3).

Original description. — “Testa quoad genus valida, conica, vix arcuata, albida, subopaca, nitida; latere ventrale ferè recto, dorsale paululò arcuato; aperturam versùs testa leviter contracta; apertura satis declivis, haud marginata; septum parvum, submamillatum. Long.: 2<sup>mm</sup>5; lat.: 0<sup>mm</sup>7.” Translated from Latin: Shell large for the genus, conical, somewhat arched, whitish, slightly opaque, smooth; ventral side almost straight, dorsal side slightly arched; shell

slightly contracted toward the aperture; aperture rather inclined, not rimmed; septum small, slightly mamillated. Length: 2.5 mm; width 0.7 mm.

Remarks. — *Meioceras elongatum* is known only from the type material. Hughes (1985) mentioned this species and reproduced the original drawing of *M. elongatum* but reported no new records. Our Figs 1-3 show the type series of *Meioceras elongatum* in MNHN, consisting of three specimens, one of which broken. This is in agreement with de Folin’s words: “Nous avons été étrangement surpris de ren-

contrer dans le même lot trois sujets de *Meioceras*, dont l'un est brisé, mais dont les deux autres doivent certainement fournir le type d'une nouvelle espèce". The lot referred to by de Folin is the one from China Seas from which he also described *Caecum rostratum* de Folin, 1881.

Moore (1976) hypothesized that *M. elongatum* could be based on worn specimens of a species of *Parastrophia* de Folin, 1869, with broken apex. However, although in poor condition, the figured specimens (Figs 1, 2) show a true septum with well-defined cutting plane as usual in *Caecum* and *Meioceras*, whereas specimens of *Parastrophia* with a broken apex show an irregular truncation without a true septum (Vannozzi, 2017: fig. 4 O-P).

Two specimens (Figs 1-2) are worn and probably conspecific, and show traces of colour pattern. In the third specimen (Fig. 3) the apex is hidden by an encrustation and the septum is not visible. Nevertheless, that shell is in good condition and can be identified as *Meioceras kajiyamai* Habe, 1963. Comparing the type series of *Meioceras elongatum* with the original figure, here reproduced in Fig. 4, the specimen best fitting the original description and drawing is the syntype shown in Fig. 1, which is here selected as lectotype. Both the lectotype and paralectotype 1 (Fig. 2) show a very strongly inclined cutting plane. The lectotype shows also clear traces of a colour pattern, comprising brownish round spots aligned in longitudinal rows and larger white blotches visible in the ventral side, not mentioned in the original description. The aperture is oblique and contracted. The dorsal side is convex while the ventral side is almost flat or slightly concave adapically. All these characters conform well to *Meioceras nitidum*, a common species occurring in the tropical West Atlantic coasts (Lightfoot, 1992; Gomes, 1999; Tunnell, 2010).

*M. nitidum* shows a high degree of variability, as shown by Gomes (1999). No species similar to *M. nitidum* has been reported from the entire Indo-West Pacific. The only species occurring in that area that can be compared with *Meioceras elongatum* is *M. kajiyamai*, a rather common species described from Japan and occurring throughout the tropical to subtropical Indo-West Pacific (Pizzini et al., 2013). However, *M. kajiyamai* is uniformly whitish and shows a clear sculpture of fine rings throughout the tube. The profile of the tube is also different, i.e. bitimid in ventral view in *M. kajiyamai* while in *M. nitidum* the tube is evenly subcylindric (Bandel, 1996; Hasegawa, 2000; Vannozzi, 2017). Other differences are the presence of a swelling before the aperture in the ventral side and a clearly reflected lip, which are both absent in *M. nitidum*.

On the basis of the above considerations, it is concluded that the type material of *Meioceras elongatum* seems to be composed of specimens of different provenances that became accidentally mixed. A similar confusion has been observed by Moore for a sample of *M. carpenteri* de Folin, 1869, originally described from the Antilles but in addi-

tion in the collection of de Folin from "Mer de Chine" (as reported by Kisch, 1959: 39), which according to Moore (1976: 19) also belongs to *M. nitidum*. Therefore, *Meioceras elongatum* de Folin, 1881, should be considered a junior synonym of *M. nitidum* (Stimpson, 1851).

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