


## A new species of *Macrophaedusa* Möllendorff 1883 from Fujian, China (Gastropoda: Stylommatophora: Clausiliidae)

Zhe-Yu Chen

*Faculty of Science, The University of Melbourne, Parkville VIC 3010, Australia;*  
 <https://orcid.org/0000-0002-4150-8906>

**Abstract.** A new species of *Macrophaedusa* Möllendorff, 1883 is described from Fujian, China. It is distinguished from all congeners by a divided inferior lamella, the presence of a basal crest and the absence of the lower palatal plica.

**Key words.** Door snail, land snail, morphology, new species, taxonomy

### Introduction

*Macrophaedusa* Möllendorff, 1883 is a group of clausiliid snail endemic to China, distributed in the eastern provinces of Anhui, Jiangxi and Zhejiang (Nordsieck, 2012). Nordsieck (2001, 2012) recognised three species, namely *Macrophaedusa cecillii* (L. Pfeiffer, 1847), *Macrophaedusa frankei* (O. Boettger & Schmacker, 1894) and *Macrophaedusa veruta* (Heude, 1890).

In this paper, I describe and illustrate a new species of *Macrophaedusa* from Fujian, which has long been recognised but has remained undescribed.

### Materials and methods

The shells were photographed using a Canon® 5D Mark IV camera with a 100mm f/2.8 Macro lens. The final high depth-of-field images were produced by a WeMacro® Rail System and stacked from 20–30 single photos using Zerene Stacker® 1.04. The type materials of the new species were deposited in the Mollusc collection of the Museum of Hebei University, Baoding (HBUMM), Zhe-Yu Chen private collection, Wuhan (CZYC), De-Yao Zhou private collection, Shanghai (CZDY), Li-Wen Lin private collection, Fuzhou (LLW), Le-Jia Zhang private collection, Kunming (ZLJ) and Ming Zi private collection, Jinan (ZM).

### Systematics

Family **Clausiliidae** J. E. Gray, 1855

Subfamily **Phaedusinae** A. J. Wagner, 1922

Genus ***Macrophaedusa*** Möllendorff 1883

**Type species.** *Clausilia fortunei* L. Pfeiffer, 1852, by subsequent monotypy.

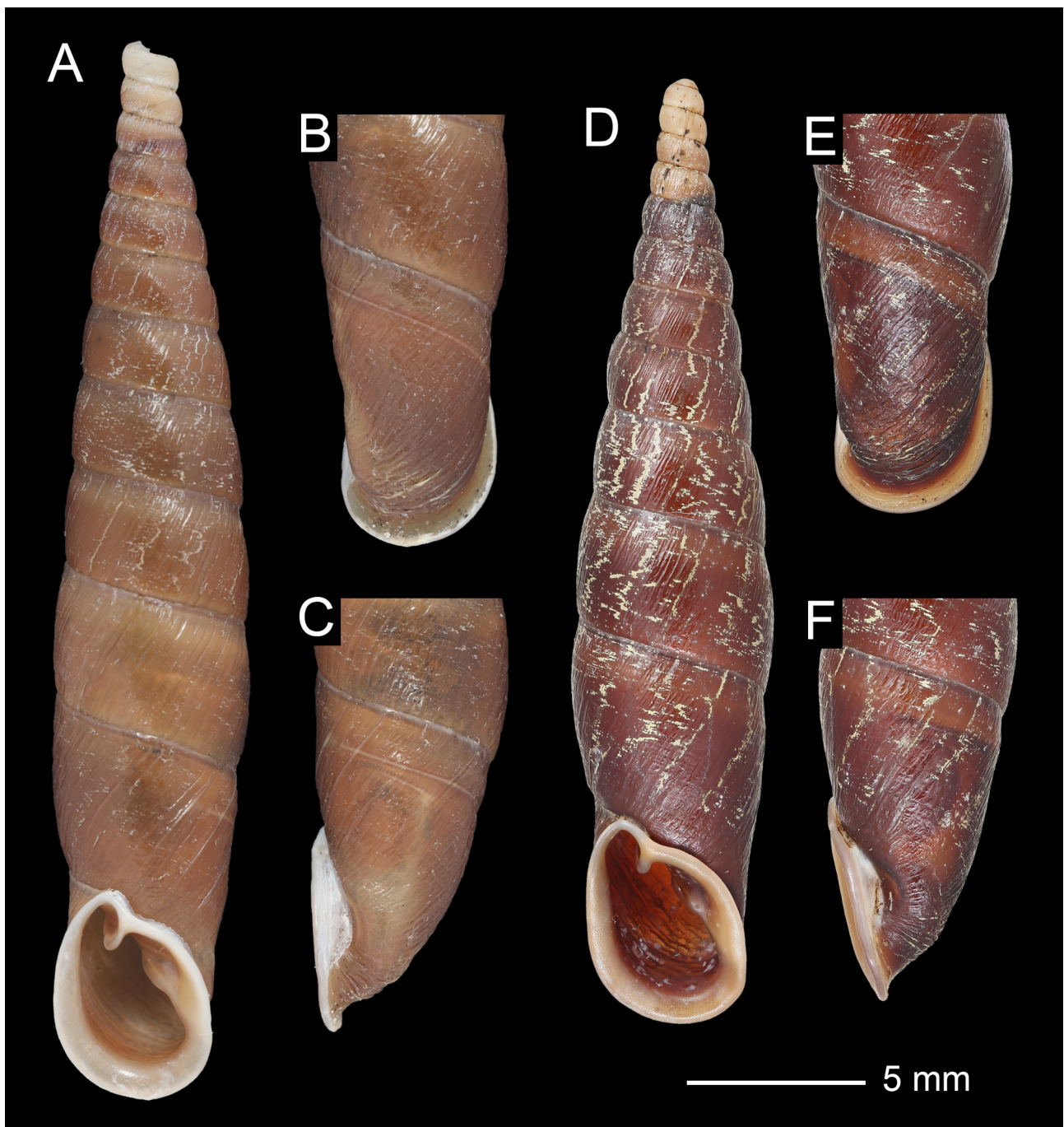
*Macrophaedusa lieque* sp. nov.

列缺长管螺

(Figures 1–2)

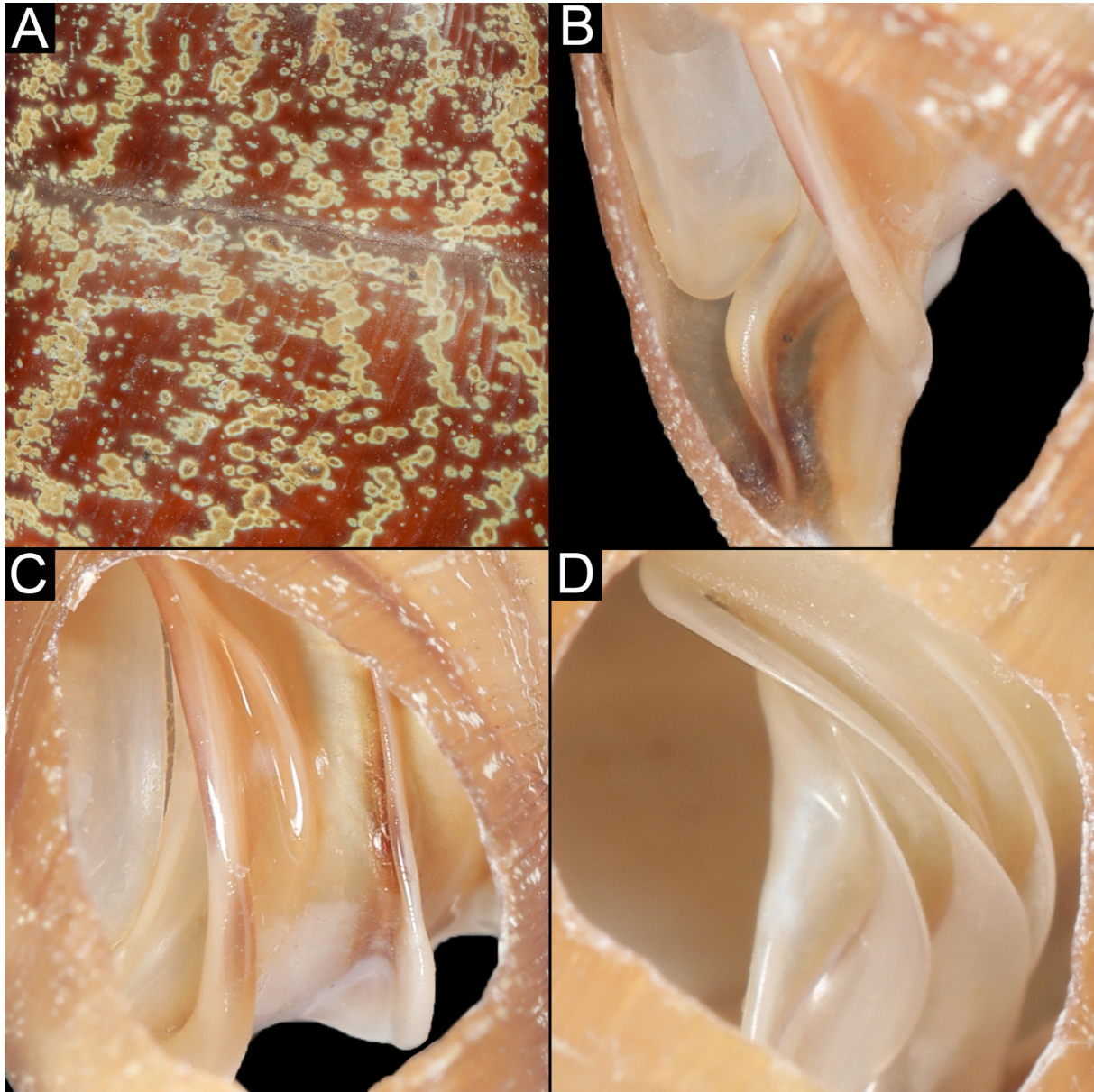
*Hemiphaedusa thaleroptyx* – Qian & Zhou, 2014: 94, two figs in text.

**Type materials.** *Holotype*. HBUMM, Yongquan Temple [涌泉寺], Mt. Gushan [鼓山], Fuzhou City [福州市], Fujian Province, 119°23'12"E, 26°3'35"N, alt. 500 m, leg. Yi-Feng Liu [刘屹峰], Dec. 2020. *Paratypes*. CZYC/7, ZLJ/1, same data as holotype; CZDY/1, Fenghuangshan scenic spot [凤凰山风景区], Putian City [莆田市], Fujian Province, 9 Aug. 2019, leg. Qing-Long Zhou; LLW/2,



**FIGURE 1.** *Macrophaedusa lieque* sp. nov., A–C. Holotype. HBUMM. D–F. Paratype, CZDY.





**FIGURE 2.** *Macrophaedusa lieque* sp. nov. **A.** Microstructure on the surface of the shell. **B.** Details of the external end of the subcolumellar lamella. **C.** Details of the external ends of the superior and inferior lamellae. **D.** Details of internal parts of lamellae. Figures not to scale.

Zhuangyuanling Trail [状元岭步道], Fuzhou Forest Park [福州森林公园], Fuzhou City [福州市], leg. Li-Wen Lin; ZM/2, Mt. Gushan [鼓山], Fuzhou City [福州市], Fujian Province, collected by local people, 2024.

**Differential diagnosis.** The new species can be distinctly distinguished from all the other members of the genus by the divided inferior lamella and the presence of the basal crest and absence of the lower palatal plica.

**Description.** Shell (Fig. 1) middle-sized, slender-fusiform, sinistral, usually decollate, consisting of ca. 11.5 to 12 whorls if not decollate. Apex narrow. Shell reddish-brown when alive, fad to brown after long term storage; in most specimens with dendritic or lightning-like patterns of unknown reason (Fig. 2A). Surface of shell covered with dense, low spinose, irregular but distinct growth lines. Basal crest present but weak. Aperture pear-shaped, attached to the upper whorl.

Peristome thick, light brown to pale white, expanded but not reflexed. Sinulus distinct but not closed. Superior lamella strong, continuous with the spiral lamella, gradually decreasing in height. Inferior lamella spirally ascending, well emerged, bending downward at the peristome; a short but distinct sub-inferior lamella arising dorsally on the inner side, visible through the aperture (Fig. 2C). Subcolumellar lamella (Fig. 2B) not reaching peristome, external end bending downward and distinctly reduced in height, visible through aperture at certain angles. All lamellae originate ventrally along one radial line (Fig. D). Principal plica starts laterally or nearly ventrolaterally and terminates at a distance behind the peristome. Lunellar lateral in position, slightly curved; upper palatal plica present, fused below with a broad and weak lunella; lower palatal plica absent. Clausilium plate slender, about one-fifth as wide as long, scarcely visible through the aperture. Oviparous.

**Measurements** (in mm, decollate). Shell height = 25.75–30.46 (29.61), Shell width = 5.33–5.83 (5.56), Aperture height = 5.59–6.34 (5.71), Aperture width = 4.14–4.61 (4.61) ( $n = 8$ , holotype measurements in brackets).

**Etymology.** This name is derived from the classical Chinese term “Lieque” (列缺), meaning “lightning”, in reference to the lightning-like patterns on the shell; the name is used as a noun in apposition.

**Distribution.** China: Fujian.

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## 福建省长管螺属一新种（腹足纲：柄眼目：烟管螺科）

陈哲宇

墨尔本大学理学院 帕克维尔 VIC 3010 澳大利亚

### 摘 要

本文报道了产自福建省的长管螺属 *Macrophaedusa* Möllendorff, 1883 一新种：列缺长管螺 *Macrophaedusa lieque* sp. nov.。该新种系长管螺属在福建省的首次报道。列缺长管螺可通过下板分歧、具基底龙骨且缺失下腭褶等特征与同属其他物种区分。

关键词：烟管螺，陆生贝类，形态学，新物种，分类学