

## Seven new species of *SynprospHYMA* Wagner, 1920 from Southwest China, with notes on two little-known species (Stylommatophora: Clausiliidae)

Yi-Feng Liu<sup>1,\*</sup> & Li-Min Qiao<sup>2</sup>

<sup>1</sup> Xinguan Road, Gejiu 661000, Yunnan, China; <https://orcid.org/0000-0001-5792-8481>

<sup>2</sup> Shenzhen Research Institute of China Agricultural University, Shenzhen 518000, Guangdong China; <https://orcid.org/0009-0008-0951-7002>

**Abstract.** In this study, seven new species of the genus *SynprospHYMA* are described from Southwest China, namely *S. abiens* sp. nov., *S. jinhuo* sp. nov., *S. muzzybbep* sp. nov., *S. subserrata* sp. nov., *S. wumeng* sp. nov. from Yunnan, *S. longmen* sp. nov., from Sichuan, and *S. yuanqini* sp. nov. from Guizhou. All species have significant morphological differences that clearly distinguish them from congeners. Additionally, *S. imperatrix* (Boettger & Schmacker, 1894) and *S. Suilla* (Bavay & Dautzenberg, 1909) are redescribed based on newly collected materials.

**Key words.** Land snail, morphology, new species, Phaedusinae, taxonomy

### Introduction

*SynprospHYMA* A. J. Wagner, 1920 was established with 15 nominal species (Wagner, 1920). However, nine of these were later transferred to other genera (Nordsieck, 2001, 2012b). Nordsieck (2001, 2002) treated *SynprospHYMA* as a subgenus of *Hemiphaedusa* O. Boettger, 1877, recognising 30 species and arranging them into four species groups. Later, Nordsieck (2012b) reinstated *SynprospHYMA* as an independent genus, and divided it into two subgenera: *SynprospHYMA* (*SynprospHYMA*) and *S. (Excussispira)* Lindholm, 1925. *SynprospHYMA (Excussispira)* was subsequently recognised as an independent genus in Nordsieck (2021). Species of *SynprospHYMA* can be distinguished from other genera by their pale shells, strong basal crest, superior lamella continuous with the spiral lamella, and non-decollated shells (Nordsieck, 2012d). Uit de Weerd *et al.* (2023) recognised *SynprospHYMA* as representing an independent subfamily, but it was subsequently reassigned to Phaedusinae A. J. Wagner, 1922 by Magonyi *et al.* (2024).

The region encompassing southern China and northern Vietnam harbours a particularly high diversity of *SynprospHYMA* species. To date, 38 species have been recorded, yet many regions with potentially high species richness remain insufficiently explored (Do *et al.*, 2019; Grego & Szekeres, 2011, 2017, 2020; Hunyadi & Szekeres, 2016; Nordsieck, 2012a, 2012b, 2016). This study describes seven new species of *SynprospHYMA* from China and provides additional data on two little-known *SynprospHYMA* species, namely *S. imperatrix* (Boettger & Schmacker, 1894) and *S. Suilla* (Bavay & Dautzenberg, 1909).

\*Corresponding author: [11029883048@gmail.com](mailto:11029883048@gmail.com)

<http://zoobank.org/urn:lsid:zoobank.org:pub:FCBBC01B-86E4-44FF-94BC-34F3CDDDBCE05>

## Materials and methods

The living snails were submerged and euthanised in water before the animal was separated. These animal parts were removed and stored in 70% alcohol. The shells were cleaned with a water jet and kept under dry conditions. The images were taken with a Leica® DFC550 camera, which is a part of the Leica® M205A stereomicroscope. All photographs were composed using Adobe Photoshop® 24.3.0. The specimens used in this study were deposited in the Mollusc collection of the Museum of Hebei University, Baoding, China (HBUMM) and Yi-Feng Liu's private collection, Gejiu, China (LYFC).

## Systematics

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

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

Genus ***SynprospHYMA*** A. J. Wagner, 1920

**Type species.** *Clausilia suilla* Bavay & Dautzenberg, 1909, by subsequent designation.

### ***SynprospHYMA abiens* sp. nov.**

裂褶瘤管螺

(Figure 1A)

**Type materials.** *Holotype.* HBUMM10097 (mature shell), Mount Daxueshan [大雪山], Yongde County [永德县], Lincang City [临沧市], Yunnan Province [云南省], China, leg. Hua-Chang Li, February 2023. *Paratypes.* HBUMM10098/2 (two mature shells), LYFC/2 (two mature shells), same date as holotype.

**Diagnosis.** A *SynprospHYMA* species characterised by a medium-sized and spindle-shaped shell, a lunella separate from the lower palatal plica, and a 2-shaped lunella.

**Description.** Shell medium-sized, sinistral, light yellowish, spindle-shaped, consisting of 8.5–9.5 whorls. Apical part slender. Protoconch smooth, with 1.5–2.25 whorls. Teleoconch with dense, irregular growth lines, much stronger from neck to behind aperture. Suture depressed. Basal keel present, weak. Aperture elliptical. Peristome white, expanded but not reflexed, detached from body whorl. Superior lamella strong, smoothly continuous with spiral lamella, forming a single line. Inferior lamella ascending straight and reaching aperture. Subcolumellar lamella not reaching aperture but visible through it. Principal plica starting dorsolaterally and ending just behind peristome. Dorsolateral lunella shaped like a reversed “S”. Lower palatal plica separated from lunella. Clausilium plate partly visible through aperture.

**Measurements.** Shell height 23.3–27.3 mm, shell width 6.9–7.2 mm; aperture height 6.7–7.1 mm; aperture width 5.4–5.8 mm ( $n=5$ ).

**Etymology.** *Abiens*, meaning ‘departing’ in Latin, refers to the lunella being separated from the lower palatal plica.

**Ecology.** This species lives in the leaf litter of subtropical evergreen broad-leaved forests.

**Remarks.** This species is similar to *SynprospHYMA suilla* but can be easily distinguished by the unique shape of its lunella.

***SynprospHYma jinhuo* sp. nov.**

金火瘤管螺

(Figure 1B)

**Type material.** *Holotype*. HBUMM10099 (mature shell), Shangzhichang Village [上纸厂村], Jianshui County [建水县], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, 103.0117°E 23.4664°N, 2070m a.s.l., leg. Yi-Feng Liu, August 2023. *Paratypes*. SWU 000005/1 (one mature shell), same date as holotype; LYFC/1 (one mature shell), Ying Mountain [阴山], Gejiu city [个旧市], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, 103.1849°E 23.3571°N, 2412m a.s.l., leg. Yi-Feng Liu, September 2020; LYFC/1 (one mature shell), Wulao Mountain [五老峰], Jianshui County [建水县], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, 102.8939°E 23.4461°N, 2350m a.s.l., leg. Yi-Feng Liu, July 2025.

**Diagnosis.** A *SynprospHYma* species characterised by a small shell with slender apex, a prominent sinulus formed by the superior lamella and principal plica, twisted body whorls, and dense rib-like striae.

**Description.** Shell small, sinistral, light yellowish, spindle-shaped, consisting of 7.5–9.5 whorls. Apex more slender than lower teleoconch. Teleoconch with dense, twisted rib-like striae, much stronger on neck. Basal keel of neck distinct, expanding lower columellar margin of aperture. Aperture oval-piriform. Peristome detached, expanded. Superior lamella strong, its height gradually decreasing toward smooth transition into spiral lamella. Inferior lamella visible through aperture, its margin expanded to aperture. Subcolumellar lamella not visible through aperture, deeply situated. Principal plica started ventrolaterally and reaching peristome margin. Superior lamella and principal plica forming respiratory tube (sinulus). Lunella dorsolateral, uppermost part bent and not reaching principal plica, remaining part straight. Lunella fused with lower palatal plica; posterior lower palatal plica longer than anterior one. Clausilium plate visible through aperture.

**Measurements.** Shell height 13.6–15.0 mm, shell width 3.2–3.7 mm; aperture height 3.0–3.3 mm; aperture width 2.3–2.5 mm ( $n=4$ ).

**Etymology.** This species is named after Jinghuo Niangniang [金火娘娘], the patron saint of the pottery industry in its type locality.

**Ecology.** *SynprospHYma jinhuo* sp. nov. live in the leaf litter and tree hollows of the limestone area. This species is difficult to find due to its scattered distribution pattern.

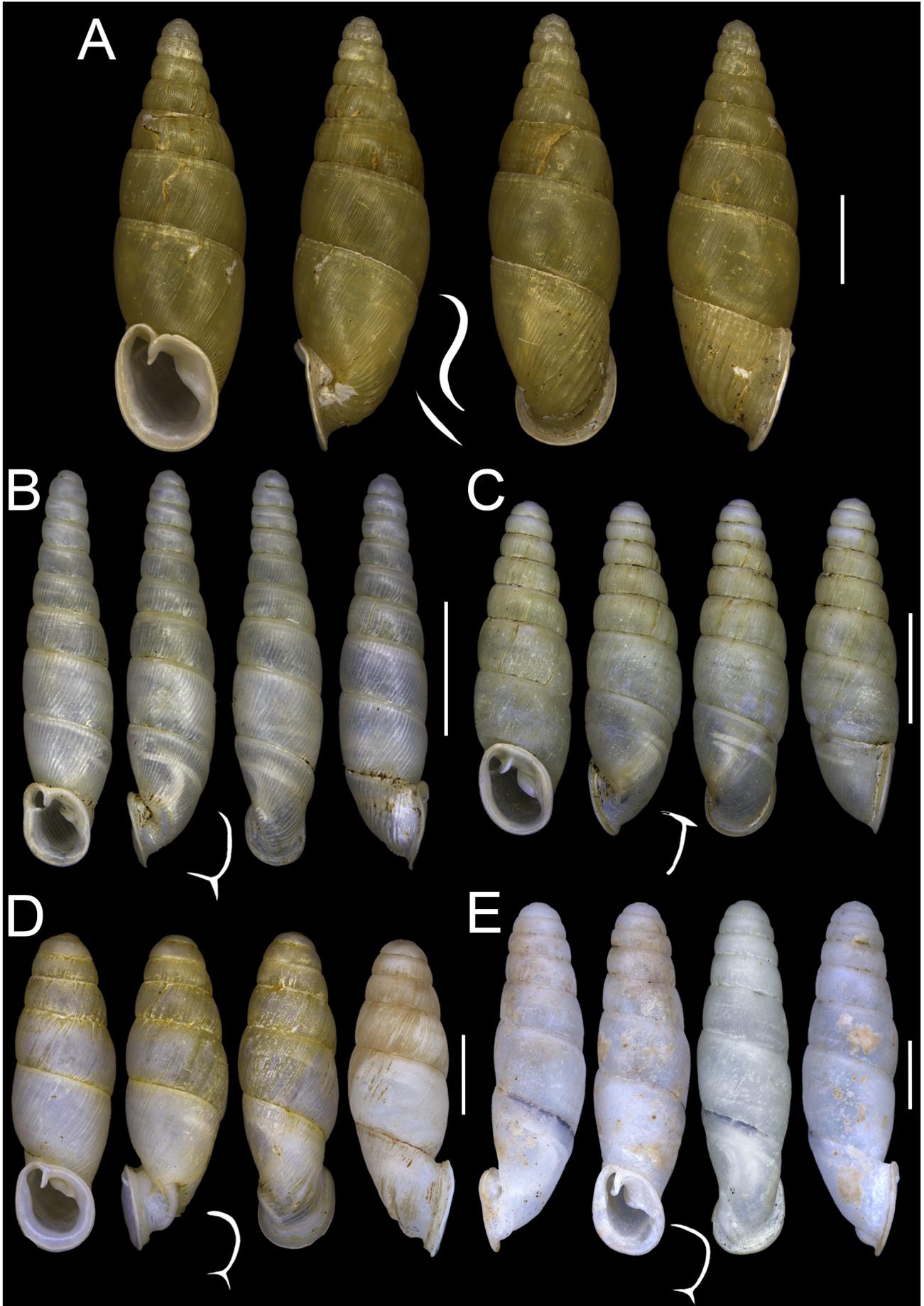
**Remarks.** This new species is similar to the species of *SynprospHYma suilla* species group [*S. aegrota* Hunyadi & Szekeres, 2016, *S. phuonganhae* Do & Szekeres, 2019, *S. thachi* Grego & Szekeres, 2019 and *S. cervicalis* (Bavay & Dautzenberg, 1909)] that have a respiratory tube (sinulus) formed by the superior lamella and principal plica, but it can be easily distinguished by its unique small size.

***SynprospHYma longmen* sp. nov.**

龙门瘤管螺

(Figure 1C)

**Type material.** *Holotype*. HBUMM10100 (mature shell), Kecha [壳查], Mao County [茂县], Aba Tibetan and Qiang Autonomous Prefecture [阿坝藏族羌族自治州], Sichuan Province [四川省], China, leg. Lu Qiu and Yi-Feng Liu, 20 June 2024. *Paratypes*. LYFC/2 (two mature shells), same date



as holotype.

**Diagnosis.** A *Synprosphyra* species characterised by a small shell with a weak basal crest, a principal plica and a subcolumellar lamella not extend to the aperture, and a straight lunella connected to a straight upper palatal plica.

**Description.** Shell small, sinistral, light yellowish, spindle-shaped, with 8.5–9 whorls. Apical part obtuse and slightly enlarged. Shell surface with fine, dense striation. Basal keel weak. Aperture elliptical. Peristome white, expanded but not reflexed, detached from body whorl. Superior lamella strong, smoothly continuous with spiral lamella. Inferior lamella ascending straight and not reaching aperture. Subcolumellar lamella deeply situated, only terminal part visible through aperture. Principal plica starting dorsolaterally and ending near peristome. Lunella straight, reaching upper palatal plica and forming a “T”-shaped structure. Lower palatal plica absent. Clausilium plate invisible through aperture.

**Measurements.** Shell height 16.1–16.5 mm, shell width 4.1–4.5 mm; aperture height: 3.5–3.9 mm; aperture width: 3.1–3.5 mm ( $n=3$ ).

**Etymology.** The species is named after Mount Longmen, the type locality.

**Ecology.** This species resides beneath a decaying tree.

**Remarks.** The new species is most similar to *S. gibbosula* (Deshayes, 1870), but differs by a weaker basal crest. It is also similar to *S. monachorum* Hunyadi & Szekeres, 2016, but differs by a thicker apex and elliptical aperture.

### *Synprosphyra muzzybbep* sp. nov.

目则山瘤管螺

(Figure 1D)

**Type material.** Holotype. HBUMM10101 (mature shell), Ying Mountain [阴山], Gejiu city [个旧市], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, 103.1849°E 23.3571°N, 2100m a.s.l., leg. Yi-Feng Liu in September, 2021; Paratypes. HBUMM10102/2 (two mature shells), LYFC/10 (10 mature shell), same date as holotype; LYFC/10 (10 mature shells), Baiyun Village [白云村], Gejiu city [个旧市], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, 103.1849°E, 23.3571°N, 2200m a.s.l., leg. Yi-Feng Liu, February 2023.

**Diagnosis.** A *Synprosphyra* species characterised by a medium-sized and oospirous shell with a blunt apical part, strong duplicated peristome and inner peristome is near the outer one.

**Description.** Shell medium-sized, sinistral, light yellowish, consisting of 6.5–7.0 swollen whorls. Apex obtuse. Teleoconch ventricose. Shell surface smooth, with dense, twisted rib-like striae on body whorls, much stronger on neck and forming several ridges near aperture. Basal keel of neck distinct. Aperture elliptical. Peristome strongly duplicated, inner peristome close to outer one. Superior lamella strong, its portion linking to spiral lamella abruptly reduced, spiral lamella nearly

**FIGURE 1 (on left).** Shells of *Synprosphyra* spp. **A.** *Synprosphyra abiens* sp. nov., holotype, HBUMM10097. **B.** *Synprosphyra jinhua* sp. nov., holotype HBUMM10098. **C.** *Synprosphyra longmen* sp. nov., holotype HBUMM10100. **D.** *Synprosphyra muzzybbep* sp. nov., holotype HBUMM10101. **E.** *Synprosphyra segersi* Grego & Szekeres, 2017, LYFC, Maguan County [马关县], Wenshan, Yunnan Province, China, 104.3721°E 23.0468°N, leg. Yi-Feng Liu, 2024. Scale bars all 5 mm, refer to shells on left. Line drawings of the lunella and palatal plicae not to scale.

absent. Inferior lamella visible through aperture, its margin expanded toward aperture. Subcolumellar lamella not reaching aperture, deeply situated within shell. Principal plica initiating dorsolaterally and not reaching peristome margin. Lunella dorsolateral, bent and not reaching principal plica. Lunella fused with lower palatal plica; posterior lower palatal plica longer than anterior one. Clausilium plate visible through aperture.

**Measurements.** Shell height 18.6–20.7 mm, shell width 5.7–6.6 mm; aperture height 5.2–5.6 mm; aperture width 4.6–5.0 mm ( $n=7$ ).

**Etymology.** This species is named after Muzzybep [目则山], the Nisu-language name of the type locality used by the Yi people inhabiting the area. The name translates as “celestial mountain.”

**Ecology.** Found in the leaf litter of limestone areas.

**Remarks.** This species is similar to *S. incrustata* H. Nordsieck, 2016 by the presence of the doubled peristome, but differs by the closer doubled peristome and presence of several ridges formed by striae on the shell near the aperture. The new species is sympatric with *S. segersi* Grego & Szekeres, 2017 (Fig. 1E) but can be easily distinguished from latter by its smaller size, doubled peristome and obvious striae near the aperture.

### *Synprosphyra subserrata* sp. nov.

锯齿瘤管螺

(Figure 2A)

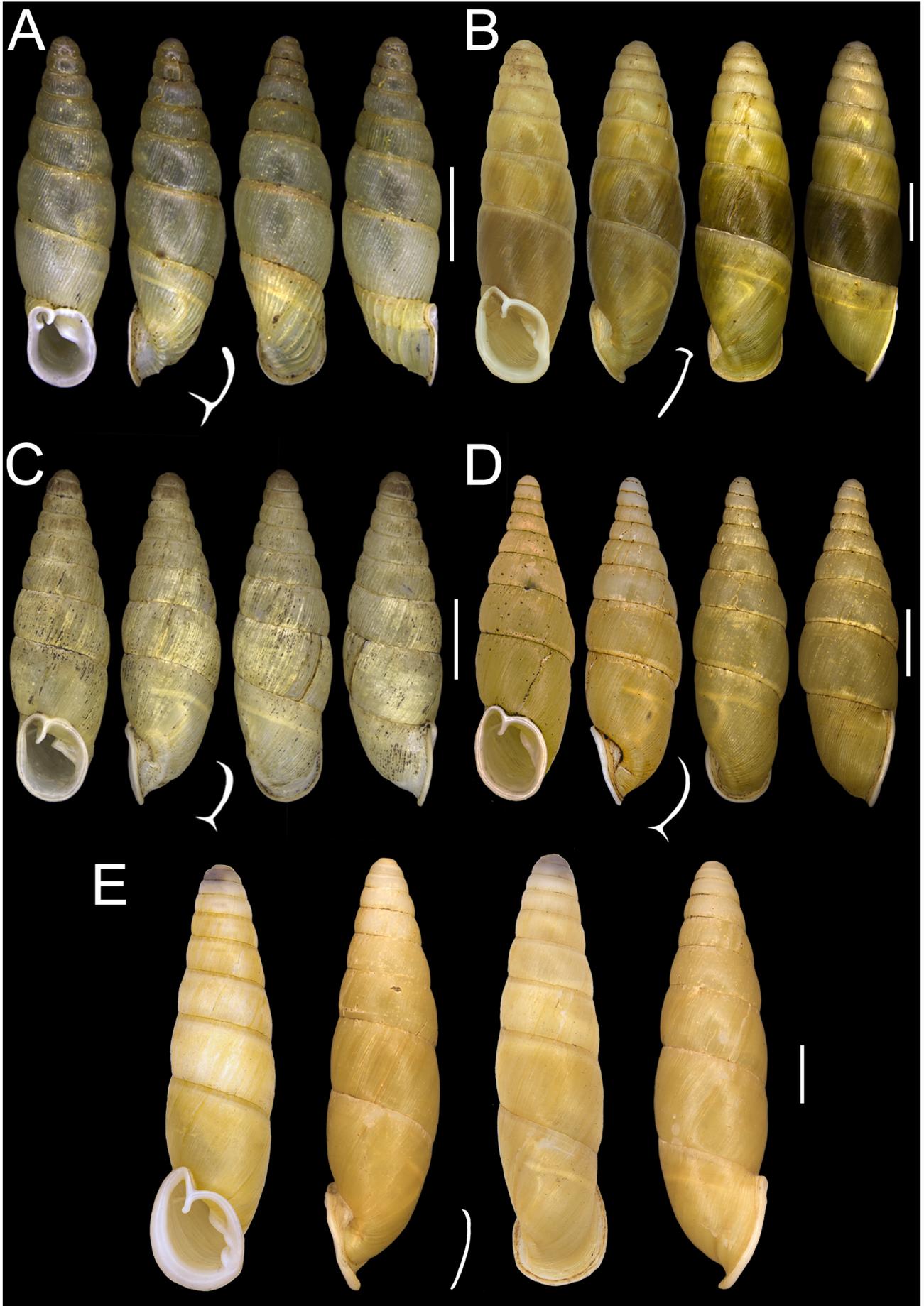
**Type material.** Holotype. HBUMM10103 (mature shell), Mount Dawei [大围山], Pingbian Miao Autonomous County [屏边苗族自治县], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, leg. Yi-Feng Liu, August 2020. Paratypes. HBUMM10104 (two mature shells with soft body stored in alcohol; one mature shell), same date as holotype; LYFC/3 (three mature shells), Mount Dawei [大围山], Pingbian Miao Autonomous County [屏边苗族自治县], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, leg. Yi-Feng Liu, April 2022.

**Measurements.** Shell height 16.0–19.4 mm, shell width 4.2–4.7 mm; aperture height 3.8–4.5 mm; aperture width 2.9–3.4 mm ( $n=7$ ).

**Diagnosis.** A *Synprosphyra* species characterised by a serrated upper peristome margin and dense rib-like striae on the shell surface, twisted on the body whorls and very strong on the neck.

**Description.** Shell small, sinistral, light yellowish, spindle-shaped, with 8.5–9 whorls. Apical part slender. Shell surface coarse, with dense rib-like striae, twisted on body whorls and much stronger on neck. Basal keel of neck distinct and well developed. Peristome white, detached. Upper peristome margin bearing several small denticles. Superior lamella connected with spiral lamella. Inferior lamella ascending straight and reaching aperture, forming a respiratory tube with superior lamella. Subcolumellar lamella not visible through aperture. Principal plica starting ventrolaterally and reaching peristome. Lunella dorsolateral and straight, uppermost part bent and not reaching principal plica. Lower palatal plica fused with lunella. Posterior lower palatal plica as long as anterior upper palatal plica. Clausilium plate visible through aperture.

**FIGURE 2 (on right).** Shells of *Synprosphyra* spp. **A.** *Synprosphyra subserrata* sp. nov., holotype, HBUMM10103. **B.** *Synprosphyra wumeng* sp. nov., holotype, HBUMM10105. **C.** *Synprosphyra yuanqini* sp. nov., holotype, HBUMM10107. **D.** *Synprosphyra suilla* (Bavay & Dautzenberg, 1909). **E.** *Synprosphyra imperatrix* (O. Boettger & Schmacker, 1894). Scale bars all 5 mm, refer to shells on left. Line drawings of the lunella and palatal plicae not to scale.



**Etymology.** Sub serrata, meaning ‘slightly serrated’ in Latin, refers to this species having several tiny teeth along the upper peristome margin.

**Ecology.** This species lives in the deadwood of subtropical evergreen broad-leaved forests.

**Remarks.** The new species can be easily distinguished from all *Synprosphyra* species by its unique serrated upper peristome margin and small size.

***Synprosphyra wumeng* sp. nov.**

乌蒙瘤管螺

(Figure 2B)

**Type material.** Holotype. HBUMM10105 (mature shell), Xiaocaoba Provincial Scenic Area [小草坝省级风景名胜区], Yiliang County [彝良县], Zhaotong city [昭通市], Yunnan Province [云南省], China, leg. Yi-Feng Liu, July 2023; Paratype. HBUMM10106/1 (one mature shell), LYFC/1 (one mature shell), same date as holotype.

**Measurements.** Shell height 31.7–34.8 mm, shell width 9.1–9.6 mm; aperture height: 8.4–8.8 mm; aperture width: 6.6–7.2 mm ( $n=3$ ).

**Diagnosis.** A *Synprosphyra* species characterised by a large, turgid, cylindrical shell, a subtle basal crest, a subcolumellar lamella not reaching the aperture, and a principal plica not projecting beyond the aperture.

**Description.** Shell large, sinistral, light yellowish, cylindrical, with 8–9 whorls. Apical part obtuse and slightly more slender than the remaining turgid shell. Body whorls with dense rib-like striae. Basal keel of neck present but weak. Peristome white, detached, thickened. Superior lamella strong, smoothly continuous with spiral lamella. Inferior lamella ascending straight and reaching aperture. Subcolumellar lamella not reaching aperture. Principal plica starting dorsolaterally and ending near peristome. Lunella dorsolateral and straight, its uppermost part curved and fused with upper palatal plica, forming a distinct portion of lunella and not reaching principal plica. Lower palatal plica absent. Clausilium plate visible through aperture.

**Etymology.** The species is named after Mount Wumeng, its type locality.

**Ecology.** This species lives in the leaf litter of subtropical evergreen broad-leaved forests. During the investigation, only three specimens were found in a very small area.

**Remarks.** This species is similar to *Synprosphyra imperatrix* but can be distinguished from it by its smaller size, a more straightly ascending inferior lamella, a subcolumellar lamella not reaching the aperture, and a lunella with a curved uppermost part.

***Synprosphyra yuanqini* sp. nov.**

愿琴瘤管螺

(Figure 2C)

**Type material.** HBUMM10107 (mature shell), Jianbao [捡宝], Guiding County [贵定县], Qiannan Buyi and Miao Autonomous Prefecture [黔南布依族苗族自治州], Guizhou Province [贵州省], China, leg. Xiao-Bo Qian, November 2024; Paratype: LYFC/1 (one mature shell), same date as holotype.

**Measurements.** Shell height 21.9–22.3 mm, shell width 6.5–6.9 mm; aperture height: 5.3–5.5 mm; aperture width: 4.5–5.0 mm ( $n=2$ ).

**Diagnosis.** A *SynprospHYMA* species characterised by a medium-sized, spindle-shaped shell, a short principal plica not reaching the aperture, a weakened subcolumellar lamella not reaching the aperture, and an upper peristome margin not detached.

**Description.** Shell medium-sized, sinistral, light yellowish, spindle-shaped, with 8.5–9 whorls. Apical part rounded. Body whorls with slightly prominent, dense rib-like striae. Basal keel of neck distinct. Peristome white, not detached, only central part in contact with body whorl. Superior lamella strong, connected with spiral lamella. Inferior lamella ascending straight and not reaching aperture. Subcolumellar lamella not reaching aperture. Principal plica starting dorsolaterally and ending near peristome. Dorsolateral lunella curved. Lower palatal plica reaching lunella. Clausilium plate visible through aperture.

**Etymology.** This species is named after Yuan-Qin, which is the net name of Xiao-Bo Qian, the collector of the specimen.

**Ecology.** This species lives in the leaf litter of artificial Chinese fir forests.

**Remarks.** This species is similar to *SynprospHYMA pallgergelyi* Hunyadi & Szekeres, 2016, but can be distinguished from it by its smaller size and the shorter junction between the body whorl and the peristome.

### *SynprospHYMA suilla* (Bavay & Dautzenberg, 1909)

壮硕瘤管螺

(Figure 2D)

*Clausilia suilla* Bavay & Dautzenberg, 1909: 88, 89, pl.1, figs 7, 8.

*Hemiphaedusa* (*SynprospHYMA*) *suilla* – Nordsieck, 2001: 34; Schileyko, 2011: 12.

*SynprospHYMA* (*SynprospHYMA*) *suilla* – Nordsieck, 2007: 22.

*SynprospHYMA suilla* – Wagner, 1920: 13; Nordsieck, 2021b: 4.

**Type locality.** “Muong-Bo et Binh Lu”.

**Material examined.** LYFC/1 (one mature shell), Baohua Town [宝华镇], Honghe County [红河县], Honghe Hani and Yi Autonomous Prefecture [红河哈尼族彝族自治州], Yunnan Province [云南省], China, leg. Yi-Feng Liu, February 2024; LYFC/3 (three mature shells), Mount Xilong [西隆山], Jinping Miao, Yao and Dai Autonomous County [金平苗族瑶族傣族自治县], Yunnan Province [云南省], China, leg. Yi-Feng Liu, July 2022;

**Measurements.** Shell height 25.9–30.2 mm, shell width 7.3–9.2 mm, aperture height: 6.9–7.6mm, aperture width: 5.2–6.0 mm ( $n=3$ ).

**Diagnosis.** A *SynprospHYMA* species characterised by a large, spindle-shaped shell, with the subcolumellar lamella and principal plica not projecting beyond the aperture.

**Re-description.** Shell medium-sized, sinistral, light yellowish, spindle-shaped, consisting of 9–9.5 whorls. Apical part slender. Rib-like striae dense and twisted on body whorls. Basal keel of neck distinct or weak. Peristome white, detached, thickened. Superior lamella strong, its portion linking with spiral lamella smooth. Inferior lamella ascending straight and reaching aperture. Subcolumellar lamella not reaching aperture. Principal plica starting dorsolaterally and ending near peristome. Lunella dorsolateral and curved, its uppermost part fused with upper palatal plica, forming a bent portion of lunella and not reaching principal plica. Short lower palatal plica connected with lunella. Clausilium plate visible through aperture.

**Ecology.** This species lives in the leaf litter of the subtropical evergreen broad-leaved forest of

the stream bank in the mountain valley (Mount Xilong) and brushwood in the mountain (Baohua Town).

**Remarks.** Bavay & Dautzenberg (1909) recorded the distribution of the *SynprospHYma suilla* (Bavay & Dautzenberg, 1909) in Northern Vietnam, including Muong-Bo and Binh-Lu (Mường Bô, Lào Cai Province and Bình Lư, Lai Châu Province), and Muong-Hum and Pac-Kha (Mường Hum, Lào Cai Province and Bắc Hà, Lào Cai Province). The new distributions are close to these areas.

### *SynprospHYma imperatrix* (O. Boettger & Schmacker, 1894)

首要瘤管螺

(Figure 2E)

*Clausilia* (*Hemiphaedusa*) *imperatrix* O. Boettger & Schmacker, 1894: 113, 114, fig. 4.

*Hemiphaedusa imperatrix* – Yen, 1938: 443; Yen, 1939: 93, pl. 9., fig. 4; Zilch, 1954: 12.

*Hemiphaedusa* (*SynprospHYma*) *imperatrix* – Nordsieck, 2001: 30.

*SynprospHYma* (*SynprospHYma*) *imperatrix* – Nordsieck, 2007: 22; 2012d: 64.

*SynprospHYma imperatrix* – Nordsieck, 2021: 4.

**Type locality.** “Mu-ssu-kow, in Western Sytshouan”.

**Material examined.** LYFC/1 (one mature shell), Longcanggou Town [龙苍沟镇], Yingjing County [荣经县], Ya’an City [雅安市], Sichuan Province [四川省], China, leg. Yi-Feng Liu, June 2023; LYFC/4 (four mature shells), Mount Emei [峨眉山], Leshan City [乐山市], Sichuan Province [四川省], China, leg. Yi-Feng Liu, July 2021.

**Measurements.** Shell height 37.6–44.2 mm, shell width 8.5–10.1 mm, aperture height: 9.0–11.0 mm, aperture width: 7.0–8.0 mm ( $n=5$ ).

**Diagnosis.** A *SynprospHYma* species characterised by the largest, cylindrical shell among its congeners.

**Re-description.** Shell large, sinistral, light yellowish, cylindrical, consisting of 9.5–10 whorls. Apical part obtuse and broad, or slightly more slender than the remaining shell. Rib-like striae dense and twisted on body whorls. Basal keel of neck distinct or weak. Peristome white, detached, thickened. Superior lamella strong, its portion linking with spiral lamella smooth. Inferior lamella ascending straight and reaching aperture. Subcolumellar lamella projecting beyond the aperture. Principal plica starting dorsolaterally and ending near peristome. Lunella dorsolateral and straight, its uppermost part fused with upper palatal plica, forming a distinct, unbent portion of lunella and not reaching principal plica. Lower palatal plica absent. Clausilium plate visible through aperture.

**Ecology.** All specimens were collected from the leaf litter of subtropical evergreen broad-leaved forests or artificial Chinese fir forests.

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## References

- Bavay, A. & Dautzenberg, P. (1909) Description de coquilles nouvelles de l' Indo-Chine (4 e (Suite) 1). *Journal de Conchyliologie*, 57 (2): 81–105.
- Boettger, O. & Schmacker, B. (1894) Descriptions of new Chinese Clausiliae. *Proceedings of the Malacological Society of London*, 1 (3): 100–117.
- Boettger, O. (1877) Clausilienstudien. *Palaeontographica (Neue Folge)*, suppl. 3 (6): 1–122.
- Deshayes, G. P. (1870) Diagnoses d'espèces nouvelles de mollusques terrestres et fluviatiles de la principauté de Moupin, Thibet oriental, envoyées au Muséum d'histoire naturelle de Paris par M. l'abbé Armand David, missionnaire. *Nouvelles Archives du Muséum d'Histoire Naturelle*, 6: 19–27.
- Do, D. S., Grego, J. & Szekeres, M. (2019) New taxa and distribution data of Clausiliidae (Gastropoda: Pulmonata) from karst regions of Southeast Asia. *Journal of Conchology*, 43: 303–312.
- Gray, J. E. (1855) *Catalogue of Pulmonata or air-breathing Mollusca in the collection of the British Museum, Part I*. Taylor & Francis, London, 192 pp.
- Grego, J. & Szekeres, M. (2011) New taxa of Asiatic Clausiliidae (Mollusca: Gastropoda). *Visaya*, 3: 4–22.
- Grego, J. & Szekeres, M. (2017) New Clausiliidae (Mollusca: Gastropoda) from China. *Visaya*, 4: 79–93.
- Grego, J. & Szekeres, M. (2020) Six new species of Clausiliidae (Mollusca: Gastropoda) from southern China. *Visaya*, 5: 51–59.
- Hunyadi, A. & Szekeres, M. (2016) New taxa and distribution data of Clausiliidae (Gastropoda: Pulmonata) from southeastern China. *Journal of Conchology*, 42: 129–150.
- Lindholm, W. A. (1925) A supplement to the revised systematic list of the genera of the Clausiliidae. *Proceedings of the Malacological Society of London*, 16 (6): 261–266.
- Magonyi, N. M., Fehér Z, Szekeres, M. & Páll-Gergely, B. (2024) The phylogeny and diversification of the western Eurasian Phaedusinae (Gastropoda: Stylommatophora: Clausiliidae). *Zoological Journal of the Linnean Society*, 202: 1–18.
- Nordsieck, H. (2001) Revision of the system of the Phaedusinae from mainland China with the description of new taxa (Gastropoda: Stylommatophora: Clausiliidae). *Archiv für Molluskenkunde*, 129: 25–63.
- Nordsieck, H. (2002) Annotated check-list of the South East Asian Phaedusinae, with the description of new taxa (Gastropoda, Pulmonata, Clausiliidae). *Basteria*, 66: 85–100.
- Nordsieck, H. (2007) *Worldwide Door Snails (Clausiliidae), Recent and Fossil*. Conchbooks, Hackenheim, 214 pp.
- Nordsieck, H. (2012a) Clausiliidae of Guangxi, southern China (Gastropoda, Pulmonata, Stylommatophora). *Acta Conchyliorum*, 12: 3–56.
- Nordsieck, H. (2012b) Check-list of the Clausiliidae of mainland China (Gastropoda, Stylommatophora). *Acta Conchyliorum*, 12: 63–73.
- Nordsieck, H. (2016) New species taxa of Clausiliidae (Gastropoda, Stylommatophora) from China and Vietnam. *Conchylia*, 47: 37–57.
- Nordsieck H (2021) Taxonomic important shell characters of Asiatic Phaedusinae. *Acta Conchyliorum*, 20: 3–56.
- Schileyko, A. A. (2011) Check-list of land pulmonate molluscs of Vietnam (Gastropoda: Stylommatophora). *Ruthenica*, 21 (1): 1–68.
- Uit De Weerd D, Gittenberger, E., Mamos, T. & Sulikowska-Drozd, A. (2023) The phylogenetic position of

- Synprosphyma* A.J. Wagner, 1920 within Clausiliidae: biogeographic and taxonomic implications. *Archiv für Molluskenkunde*, 152 (2): 257–267.
- Wagner, A. J. (1920) Zur Anatomie und Systematik der Clausiliiden. *Archiv für Molluskenkunde*, 52 (1): 1–13.
- Wagner, A. J. (1922) Ergänzungen und Erläuterungen zur Systematik der Clausiliiden. *Annales Zoologici Musei Polonici Historiae Naturalis*, 1 (2/3): 96–111, 95, pl. 3-6.
- Yen, T. C. (1938) Notes on the gastropod fauna of Szechwan Province. *Mitteilungen aus dem Zoologischen Museum Berlin*, 23 (2): 438–457.
- Yen, T. C. (1939) Die chinesischen Land- und Süßwasser-Gastropoden des Natur-Museums Senckenberg. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 444: 1–233.
- Zilch, A. (1954) Die Typen und Typoide des Natur Museums Senckenberg, 12: Mollusca, Clausiliidae (1): Phaedusinae, Neniinae. *Archiv für Molluskenkunde*, 83 (1/3): 1–63.

## 中国西南地区瘤管螺属七新种记述及两已知种附记 (柄眼目：烟管螺科)

刘屹峰<sup>1</sup> 乔俐敏<sup>2</sup>

<sup>1</sup>新冠路 城区街道 个旧 661000 云南 中国

<sup>2</sup>中国农业大学深圳研究院 深圳 518000 广东 中国

### 摘 要

本文报道了产自中国西南地区的瘤管螺属 *SynprospHYma* Wagner, 1920 七个新种：裂褶瘤管螺 *SynprospHYma abiens* sp. nov.、金火瘤管螺 *SynprospHYma jinhuo* sp. nov.、目则山瘤管螺 *SynprospHYma muzzybbep* sp. nov.、锯齿瘤管螺 *SynprospHYma subserrata* sp. nov. 和乌蒙瘤管螺 *SynprospHYma wumeng* sp. nov. 均产自云南省；龙门瘤管螺 *SynprospHYma longmen* sp. nov. 产自四川省；愿琴瘤管螺 *SynprospHYma yuanqini* sp. nov. 产自贵州省。上述新种在贝壳形态上与已知瘤管螺属物种存在显著差异，可与同属其他种类明确区分。此外，本文基于新采集材料对首要瘤管螺 *SynprospHYma imperatrix* (Boettger & Schmacker, 1894) 和壮硕瘤管螺 *SynprospHYma suilla* (Bavay & Dautzenberg, 1909) 进行了重新描述。

关键词：陆生贝类，系统学，新物种，管螺亚科，分类学