

## A New Subgenus and Three New Species of Epitoniid (Gastropoda: Epitoniidae) from Taiwan

Yen-chen Lee • Wen-lung Wu\*

*Institute of Zoology, Academia Sinica, Taipei, Taiwan.*

**Yen-Chen Lee and Wen-Lung Wu (1998)** A new subgenus and three new species of Epitoniid (Gastropoda: Epitoniidae) from Taiwan. *Bulletin of Malacology, Taiwan, ROC*, 22:61-66. After comparing three epitoniids from Taiwan with the other species of the family Epitoniidae, we found these to be a new subgenus and three species and they will be described and illustrated with clear pictures and be named as *Strephoscala*, *Variciscala reticulata*, *Epitonium taiwanica* and *Epitonium chinglinae* in this paper.

**Key words:** Gastropoda, Epitoniidae, New Subgenus, n. sp., Taiwan.

### INTRODUCTION

The fishing boat of NE Taiwan trawled shrimp at the Kue-Shan Island, Lu-Tao, even at the Paratas Island and brought back thousands of molluscan species. We got more than 60 species of epitoniids from the shrimp fishermen. Including of these two are new in science. Besides, on the beach of Ho-Mei we got some micro epitoniids, one of them has never been found in the past, and will be described as a new species in this paper.

### MATERIALS AND METHODS

The epitoniids in this study were collected directly from the beach and the fishing ports of Taiwan. The specimens were took back to the laboratory and well cleaned for identification. The distributions of the epitoniids are based on the fishing grounds of the prawns (Yu 1986) and lobsters (Chan 1993), which are trawled with the epitoniids.

**Genus *Epitonium* Röding, 1798** (海螵螺屬)

**Subgenus *Labeoscala* de Boury, 1921** (小網海螵螺亞屬)

Shell has distinct spiral cords between costae, which are not peaked. The umbilicus is closed. Lip thick.

---

\*: To whom correspondence and reprint requests should be addressed. Institute of Zoology, Academia Sinica, Nankang, Taipei, Taiwan 115-29, Tel: +886-2-27899553, Fax: +886-2-27899547. zomalacolg@ccvax.sinica.edu.tw

***Epitonium (Labeoscala) reticulata* n. sp. 窗格海螵螺 (新種) (Plate I)**

**Shell:** Shell very small, pure white, pyramidal, with 20 to 30 axial costae which are reticulated with distinct spiral cords of 7 to 11 in number, outer lip very thick, aperture oval, umbilicus closed. Spiral whorls are continuous and the costae are continued from the frontal whorl to the inferior one. Without a basal disk. Protoconch conical but apex missed in type specimens.

**Type locality:** Only several specimens were collected from the beach of Ho-Mei, Taipei County, NE of Taiwan.

**Dimensions:** Holotype, 2.56 x 1.15mm. Paratype 1, 2.70 x 1.40mm. Paratype 2, 2.50 x 1.30mm. Paratype 3, 2.20 x 1.10mm.

**Inventory:** Holotype, ASIZ199806, Academia Sinica, Taipei, Taiwan. Paratype 1, G960107-1, in senior author's collection. Paratype 2, No. NMNS-3001001, National Museum of Natural Science, Taichung, Taiwan.

**Etymology:** reticulate.

**Remarks:** The present species resembles to *Epitonium (Pariscala) crispatum* (Pease, 1867), which distributes from the Indo-Pacific to the Red Sea. But the present species is smaller, wider in shape and the axial ribs are not coronate. *E. thelcterium* (Melvill et Standen, 1903) is another analog of this species, however the present species has fairer whorls.

**Subgenus *Strephoscala* n. subgen. (新亞屬：扭海螵螺亞屬)**

**Description:** Shell acuminate, dim surface, last 1/4 to 2<sup>nd</sup> whorls disjunct, axial ribs profuse, coronated, intervals sculptured with numerous striae, umbilicus narrowly opened.

**Remarks:** Both the present subgenus and *Kiiscala* (subgenus of *Epitonium*) have disjunct whorls and numerous coronal ribs. However, we can find these characters in other genus of the family Epitoniidae. Those may be the homoplasy characters. The acuminate shape, dim surface and sculptured intervals make *Strephoscala* be well defined to prove as a different subgenus.

**Etymology:** *Strepho* (Strephein to twist) + *scala* (stem name for the group),

**Type species:** *Epitonium taiwanica* n. sp.

***Epitonium (Strephoscala) taiwanica* n. sp. 臺灣海螵螺 (新種, Plate II)**

**Shell:** Shell acuminate, surface white, less glossy, with dense axial ribs of 35 to 41 in number, sculptured with numberless spiral striae between the ribs, the ribs have a small spine near the shoulder under magnifier, protoconch missed in type specimens, having a black operculum, with a very narrow umbilicus, last 1/4 to 2<sup>nd</sup> whorls disjunct. All the type specimens, except paratype 1 are subadult. The whorls very near the aperture are separated partially. The fully matured and old individuals like paratype 1 have about 2 whorls disjunct.

**Type locality:** Collected by shrimp fishermen from the Paratas Island of the South China Sea, about 200m in depth.

**Dimensions:** Holotype, 22.15 x 7.80mm. Paratype 1, +26 x 9.40mm (Spire broken). Paratype 2,

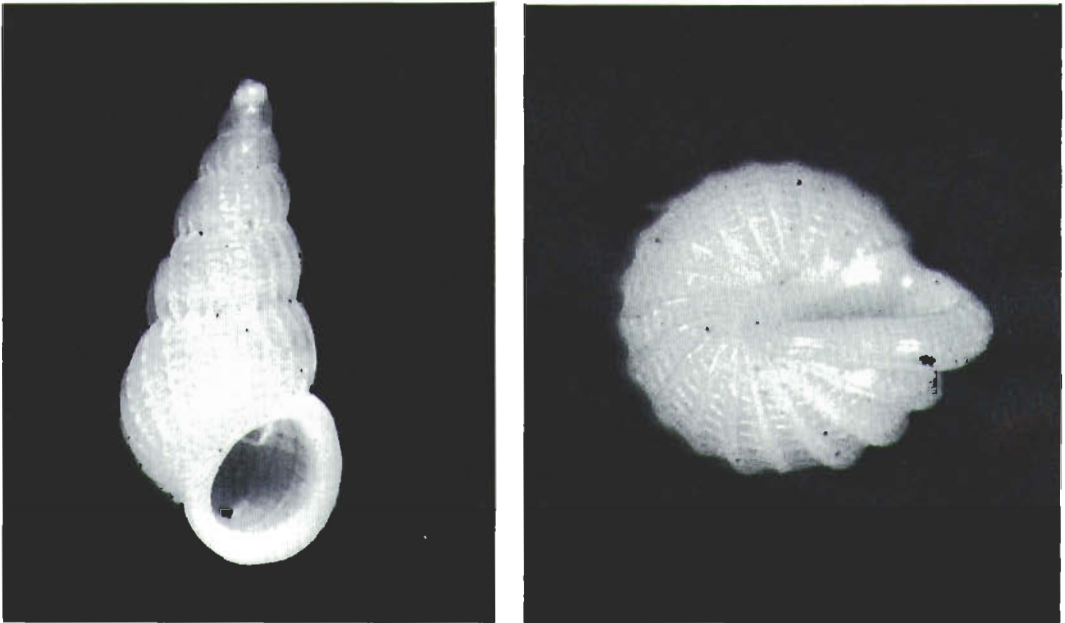


Plate I. *Variciscala reticulata* n. sp. (窗格海蛳螺)

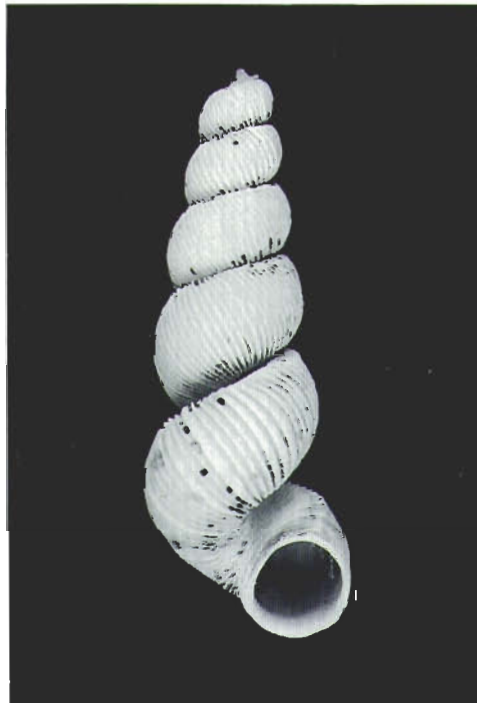


Plate II-1. *Epitonium (Strephoscala) taiwanica* n. sp. (台湾海蛳螺 Paratype 1)

23.50 x 8.30mm. Paratype 3, 21.30 x 7.25mm.

**Inventory:** Holotype, ASIZ199807, Academia Sinica, Taipei, Taiwan. Paratype 1, ASIZ199807-01, Academia Sinica, Taipei, Taiwan. Paratype 2, No. NMNS-3001002, National Museum of Natural Science, Taichung, Taiwan. Paratype 3, G951119-1, in senior author's collection.

**Etymology:** Taiwan.

**Remarks:** This species resembles *Amaea thielei* (de Boury, 1913), distributing in the western Pacific, but with more axial costae, fainter spiral striae and disjunct whorls that make the difference.

### **Subgenus *Parviscala* de Boury, 1887 (肩棘海蛸螺亞屬)**

Shell pyramidal to acuminate, with sharp or weak spiral cords between axial costae which have distinct spines or weak angle at the shoulder. Umbilicus always closed. Shell usually small.

### ***Epitonium (Parviscala) chinglinae* n. sp. 精靈海蛸螺 (新種) (Plate III)**

**Shell:** Shell acuminate, dirty white in color, paler to the aperture, but brown when it is fresh. Protoconch of two whorls glossy and brown in color, with 18 to 26 axial costae, which have spines at the shoulder, with distinct spiral cords of 10 to 12 in number, with a translucent yellow operculum. Umbilicus closed. The axial costae are not straight, somewhat in ">" shape, sometimes they become very strong near the aperture. This is a very special character in the family Epitoniidae.

**Type locality:** Collected by shrimp fishermen at the Kue-shan Island, about 200m in depth.

**Dimensions:** Holotype, 7.20 x 2.70mm. Paratype 1, 8.15 x 3.05mm. Paratype 2, 8.40 x 3.25mm.

**Inventory:** Holotype, ASIZ199808, Academia Sinica, Taipei, Taiwan. Paratype 1, G961031-2, in senior author's collection. Paratype 2, NMNS-3001003, National Museum of Natural Science, Taichung, Taiwan.

**Etymology:** Named after my friend Ching-ling Liao.

**Remarks:** This species somewhat resembles *Cinctiscala eusculptum* (Sowerby, 1933) and *Cinctiscala sagamiense* (Pilsbry, 1911) illustrated by Yoshimura in 1930. But this species has brownish color, more axial costae and the umbilicus is closed. *E. vestalis* (Hinds, 1844) is another analogue. The umbilicus of this new species is closed, but *E. vestalis* has distinct umbilicus. *E. carchedon* (Iredale, 1936) is another analogue, but slenderer in shape.

## **ACKNOWLEDGMENTS**

The author wishes to thank Mr. KH Chang for providing some valuable specimens for this study, and Mr. TC Lan for his identified help and reviewed this manuscript. Thanks are extended to Mr. Taisei Nakayama for his suggestion and assistance.

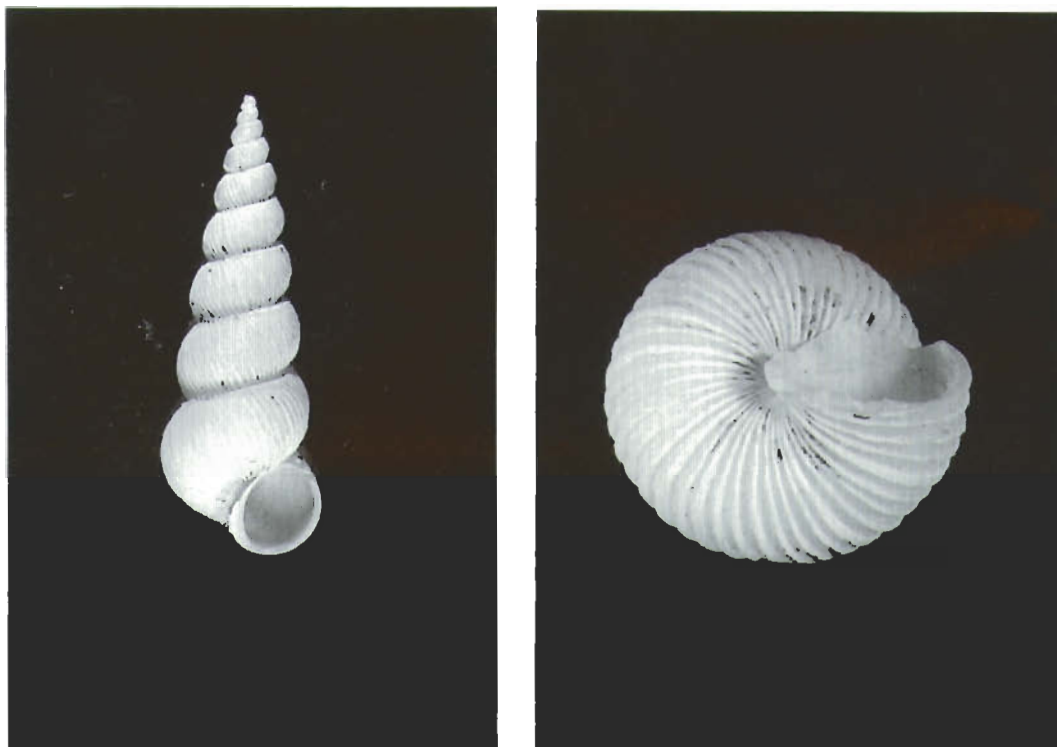


Plate II-2. Holotype of *Epitonium (Strophoscala) taiwanica* n. sp. (台灣海蛸螺)

### LITERATURE CITED

- Abbott RT 1978 *Standard Catalog of Shells*. American Malacologist, Inc., Delaware, USA.
- Abbott RT and KJ Boss 1989 *Classification of the Living Mollusca*. American Malacologist, Inc. Melbourne, USA, XII+189p.
- Chan TY and HP Yu 1993 *The Illustrated Lobsters of Taiwan*. Southern Materials Center, Inc., X+247p. Taipei, Taiwan.
- Iredale T 1936 Australian Molluscan notes 2. *Records of the Australian Museum*, 19(5):294-306.
- Kilburn RN 1985 The family Epitoniidae (Mollusca:Gastropoda) in southern Africa and Mozambique. *Annals of the Natal Museum*, 27(1):339-337.
- Yoshimura E 1930 Notes on some species of Epitoniidae from Noto. *Venus*, 2(1):13-17.
- Yu HP and TY Chan 1986 *The Illustrated Penaeoid Prawns of Taiwan*. Southern Materials Center, Inc., XIV+183p. Taipei, Taiwan.

## 臺灣產海螵螺科的一新亞屬及三新種

李彥錚·巫文隆

中央研究院動物研究所

本文描述發現於台灣海域產之三種海螵螺—窗格海螵螺、台灣海螵螺及精靈海螵螺等三種因異於所有已知之海螵螺，故擬訂為新種。此外經比對台灣海螵螺與海螵螺屬中其他亞屬的特徵後發現台灣海螵螺不屬於海螵螺屬中之任一亞屬，作者認為有必要建立一新亞屬—扭海螵螺亞屬。

關鍵詞：腹足綱，海螵螺科，新亞屬，新種，台灣。



Plate III. *Epitonium Parviscala chinglinae* n. sp. (精靈海螵螺)