

东海放射虫甘葡萄虫科的一新属 及其两新种*

張作人

譚智源

(中国科学院海洋研究所; 华东师范大学生物学系) (中国科学院海洋研究所)

1958—1961 年在东海陆棚区进行放射虫的調查研究时,发现甘葡萄虫科 (Glycobotrydidae) 的一新属及其两新种。

剑葡萄虫属(新属) Genus *Xiphobotrys*, gen. nov.

头具 1 或 2 棘,胸有 3 棘,有或无胸翼。本新属形态与 *Neobotrys* 属相似,但无矢环,头胸部生出的系实心棘而不是小管,其分类地位属于罩籠虫目 (Order Nassellaria),葡萄虫亚目 (Suborder Botryodea),甘葡萄虫科 (Family Glycobotrydidae)。

模式种 蒜头剑葡萄虫(新种) *Xiphobotrys clavata*, sp. nov.

本新属最显著之特征为本科内其他各属所无者,即头胸两部具实心棘;胸棘恆为 3 根,后头叶后方一,額叶下方的两侧各一。内骨骼无矢环构造(以 *X. clavata* 为例),从顶面观,头棘与各胸棘在中央相联而呈三脚架形(图 4)。根据 Popofsky (1913) 所作的罩籠虫目系統发育图解看来,編网亚目 (Plectoidea) 的 *Plagiocarpa* 型骨骼演化可分为数支,其中一支发展为籠形亚目 (Cyrtoidea) 的 *Lithomelissa brevispicula* 型,另一支演化为葡萄虫亚目 (Botryodea) 的 *Neobotrys* 型;本属的骨骼,若单就三脚架形的内骨骼看来,其亲緣关系接近于 *Plagiocarpa* 型,但从头已分叶和外壳已长成头胸两部的情形看来,則明显的具 Botryodea 的特征而与 *Neobotrys* 型接近,不过,其内骨骼无矢环且棘为实心却又与 *Lithomelissa brevispicula* 型相似,因此,它可能是 *Plagiocarpa* 型进化至 Botryodea 当中介乎 *Neobotrys* 型与 *Lithomelissa brevispicula* 型之間的一个分支。

本新属包括下列两新种:

1. 蒜头剑葡萄虫(新种) *Xiphobotrys clavata*, sp. nov. (图 1—7)

头分两叶,后头叶呈盔形,長約为額叶的 $1\frac{1}{2}$ —2 倍,寬則相差无几。后头叶的前方生出一蒜头状棘。額叶卵圆形。胸部圓筒形,收口处略窄。胸部具三棘,后头叶后方一棘,額叶下方的两侧各一棘。胸翼数目因个体老幼不同而异,成体者胸翼可增至 5—6 个,长度大小几与胸棘相同。全壳具大小不同、排列不規則的开孔。

此外,我們还找到一些后头棘有两根,胸棘有 4 根的变态的标本。

正模标本 IOAS-R31a, 身長 135 微米、寬 55 微米。

产地 29°N, 123°30'E (1959 年 10 月)。采集者: 譚智源。

副模标本 IOAS-R31 b—v, 身長 102—105 微米、寬 55 微米。其幼体身長 55—105 微米、寬 52—58 微米。

* 中国科学院海洋研究所調查研究報告第 283 号;本文承張璽教授,刘瑞玉、郑执中、吳宝鈴副教授提供宝贵意見,高洪緒同志参加采集及繪图特此一并致謝。

产地: 29°N, 123°30'E; 28°N, 124°E (1959年10月); 28°N, 124°E (1959年12月)。采集者: 譚智源, 高洪緒。

地理分布 本种分布在东海 31°N 以南的外海, 仅发现于 10—12 月。据我們在南海的初步調查, 海南島以南 (17°N, 110°30'E) 亦有发现。

2. 雀形剑葡萄虫(新种) *Xiphobotrys passerina*, sp. nov. (图 8)

头分 4 叶, 1 額叶、1 后头叶和 2 口腔叶。額叶比后头叶小, 卵圓形, 其正前方具一額棘, 末端削尖, 基端稍側扁。后头叶呈盔形, 頂生一棘, 形状与額棘相仿。口腔叶甚小, 位于額叶与后头叶之間, 呈小球状。胸棘瘦細, 位于額叶下方的兩側和后头叶的后方各一。胸壁較光滑, 圓筒形, 收口处稍窄。全身具大小不同的小孔。本种与前种相异之处, 在于头上多一額棘, 无胸翼。

正模标本 IOAS-R32a, 身長 86.5 微米、寬 50 微米。

产地 29°N, 120°30'E (1959年10月)。采集者: 譚智源。

副模标本 IOAS-R32b, 身長 65 微米、寬 48 微米。

产地 17°N, 110°30'E (1959年7月)。采集者: 高洪緒。

地理分布 本种数量稀少, 仅于 1959 年 10 月在东海 29°N, 123°30'E 一站及 1959 年 7 月在海南島以南 (17°N, 110°30'E) 各找到一个标本。

上述两新种的正副模标本均保存于中国科学院海洋研究所。

参 考 文 献

- [1] Bailey, J. W., 1856. Notice of microscopic forms found in the soundings of the Sea of Kamtschatka. *Am. Journ. Sci. and Arts*, Ser. 2, 22:1—6.
- [2] Campbell, A. S., 1951. New genera and subgenera of Radiolaria. *J. Paleont.* 25:527—530.
- [3] Campbell, A. S., 1954. Radiolaria. In: *Treatise on Invertebrate Paleontology*. Pt. D. Protista 3, D11-D163. figs. 6—86.
- [4] Deflandre, G., 1953. Radiolaires fossiles. In: Grassé, P.-P. *Traité de zoologie*. T. 1. Fasc. 2, pp. 389—436, figs. 295—332.
- [5] Ehrenberg, C. G., 1873. Mikrogeologischen Studien über das keinste Leben der Meeres-Tiefgründe aller Zonen und dessen geologischen Einfluss. *Abhandl. k. Akad. Wiss. Berlin*. 1872 pp. 131—399, Taf. 1—12. 1 map.
- [6] Ehrenberg, C. G., 1875. Fortsetzung der mikrogeologischen Studien als Gesamt-Uebersicht der mikroskopischen Paläontologie gleichartig analysirten Gebirgsarten der Erde. mit specieller Rücksicht auf den Polycystinen-Mergel von Barbados. *Abhandl. k. preuss. Akad. Wiss. Berlin*, 1875, pp. 1—226, Taf. 1—30.
- [7] Haeckel, E., 1881. Prodromus Systematis Radiolarium. In: *Jenaische Zeitschr. Med. Nat.* 15: 418—472.
- [8] Haeckel, E., 1862. Die Radiolarien (Rhizopoda Radiolaria) Eine Monographie. Berlin, pp. 1—572, Taf. 1—35.
- [9] Haeckel, E., 1887. Report on the Radiolaria collected by H. M. S. Challenger during the years 1873—1876. *Rept. Sci. Res. H. M. S. Challenger, Zool.*, 18-i-cxxxvii, 1—1893. pls. 1—140.
- [10] Popofsky, A., 1913. Die Nassellarien des Warmwassergebietes der Deutschen Südpolar-Expedition 1901—1903. In: *Deutsche Südpolar-Expedition* 14 (Zool. 6), H. 2, pp. 217—416, Taf. 28—38, text-figs. 1—140.

A NEW GENUS AND TWO NEW SPECIES OF GLYCOBOTRYDIDAE FROM THE EAST CHINA SEA

TCHANG TSO-RUN

(Institute of Oceanology, Academia Sinica and
Dept. of Biology, Huatung Pedagogical University)

TAN ZHI-YUAN

(Institute of Oceanology, Academia Sinica)

ABSTRACT

Among the radiolaria collected from the shelf region of the East China Sea during 1958—1959 a new genus and two new species are found. These holotypes and paratypes are deposited in the Institute of Oceanology, Academia Sinica, Tsingtao. They are described as follows:

Genus *Xiphobotrys*, gen. nov.

Cephalis with one or two spines; thorax with three spines, with or without thoracic wings. This new genus is similar to *Neobotrys*, but it has no sagittal ring and the cephalic or thoracic spines are solid, without tubules, belonging to the Order Nassellaria, Suborder Botryodea, Family Glycobotrydidae.

Remarks The main feature of this genus, a shell made up of a lobated cephalis and thorax, is characteristic of the Family Glycobotrydidae. However, the solid nature of its spines, brings it closer to the *Lithomelissa brevispicula*—type of the Cyrtoidae. Compared with the different genera of Nassellaria as presented by Popofsky (1913) in his diagram of the phylogeny of this group, this genus seems to be an intermediate between Cyrtoidae and Botryodea.

Type-species: *Xiphobotrys clavata*, sp. nov.

Gender: Feminine

Etymology: The generic name is derived from the Greek, *xiphos*=sword, *botrys*=grapes.

This new genus comprises two new species:

1. *Xiphobotrys clavata*, sp. nov. (Fig. 1—7)

Cephalis bilobate. Occipital lobe helmet-shaped with a clavate spine $1\frac{1}{2}$ to 2 times longer than the frontal lobe, width of occipital and of frontal lobes about equal. Frontal lobe ovate. Thorax cylindrical, mouth somewhat contracted. Thoracic spines 3, one behind the occipital lobes and two below the lateral sides of the frontal lobe. Number of thoracic wings varies according to its stage of development, in adults, with five to six wings about the same length as thoracic spines. Pores of different sizes, irregularly arranged.

Holotype IOAS-R31a, length of the shell 135μ , breadth 55μ . Type locality: 29°N , $123^{\circ}30'\text{E}$ (October, 1959).

Paratype IOAS-R31b-v, length of the shell 55 — 105μ , breadth 52 — 58μ , young individuals: length of the shell 55 — 105μ , breadth 52 — 58μ . Type locality: 29°N , $123^{\circ}30'\text{E}$, 28°N , 124°E (October, 1959). 28°N , 124°E (December, 1959).

2. *Xiphobotrys passerina*, sp. nov. (Fig. 8)

Cephalis quadrilobate, frontal and occipital lobes odd, buccal lobes paired. Frontal lobe smaller than occipital lobe, ovate, with a compressed tapering spine. Occipital lobe helmet-shaped, with spine similar to that of frontal lobe. Paired buccal lobes very small, bulbous, between frontal and occipital lobes. Thoracic spines slender, one pair below the lateral sides of the frontal lobe, the other one behind the occipital lobe. Thoracic wall rather cylindrical, mouth slightly contracted. Pores of different size.

Remarks This species differs from the preceding in having two frontal spines but no thoracic wings.

Holotype IOAS-R32a length of the shell 86.5μ , breadth 45μ . Type locality: 29°N , $123^{\circ}30'\text{E}$ (October, 1959).

Paratype IOAS-R32b length of the shell 65μ , breadth 48μ . Type locality: 17°N , $110^{\circ}30'\text{E}$ (July, 1959).

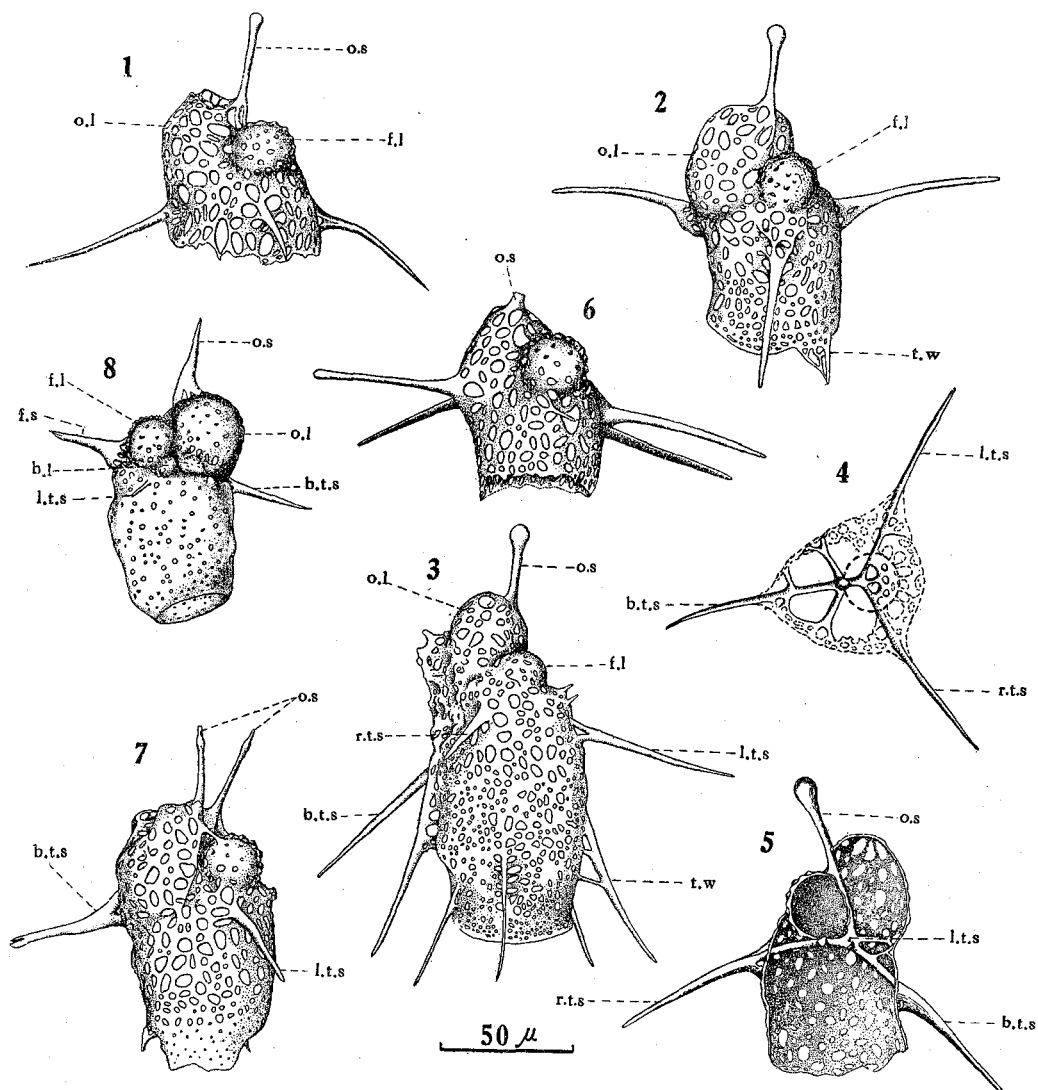


图 1—7 蒜头剑葡萄虫 (新种) Fig. 1—7. *Xiphobotrys clavata* sp. nov.

- | | |
|-------------------------------|---|
| 1. 头胸部尚未长成的个体; | 1. Individual with cephalis and thorax not yet fully developed; |
| 2. 头已长成, 胸部部分地发育并生出一胸翼; | 2. Individual with fully developed cephalis and with partly developed thorax and thoracic wing; |
| 3. 成体, 具延长的胸部和 6 个胸翼; | 3. Adult, with elongated thorax and six thoracic wings; |
| 4. 顶面观, 示三胸棘源出于一点, 虚圆线示额叶的位置; | 4. Top view of an individual to show the origin of the three spines, broken lines showing the position of frontal lobe; |
| 5. 矢切面观, 示内骨骼相連情形; | 5. Sagittal section showing the connection of the internal skeleton; |
| 6. 变态的个体, 具四胸棘 (头棘已断); | 6. Abnormal individual having four thoracic spines (the occipital spine broken off); |
| 7. 变态的个体, 有两个后头棘。 | 7. Abnormal individual having two occipital spines. |

图 8 雀形剑葡萄虫 (新种) Fig. 8. *Xiphobotrys passerina* sp. nov.

- | | | | |
|----------|---------------------------|-------|-----------------------|
| o. s. | 后头棘 occipital spine | f. l. | 额叶 frontal lobe |
| f. s. | 额棘 frontal spine | b. l. | 口腔叶 buccal lobe |
| l. t. s. | 左胸棘 left thoracic spine | t. | 胸部 thorax |
| r. t. s. | 右胸棘 right thoracic spine | t. w. | 胸翼 thoracic wings |
| b. t. s. | 后胸棘 behind thoracic spine | i. s. | 内骨骼 internal skeleton |
| o. l. | 后头叶 occipital lobe | | |