

## 东海厚缘苔虫属两新种一新纪录\*

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厚缘苔虫属 genus *Crassimarginatella* Canu 1900 隶于外肛动物门(苔藓虫类)的丽苔虫科 Calloporidae Norman 1903(唇口目无囊亚目软壁超科)。自 Kirkpatrick (1890) 报道一种厚缘苔虫<sup>1)</sup>分布在我国南沙群岛郑和滩以来,至今尚未有人记载该属种类在我国的分布。1979年10月,中国科学院海洋研究所在浙江省进行海岸带调查时,在平阳县下关公社潮间带采到一个群体,附着在石块上,与日本厚缘苔虫 *C. japonica* (Ortmann, 1890) 近似,但区别明显,经鉴定确认为一新种,取名为新月厚缘苔虫 *Crassimarginatella lunata* sp. nov.。我们在东海(1975—1976)底栖生物拖网标本中也发现了两种厚缘苔虫:一种为熊氏厚缘苔虫 *C. kumatae* (Okada, 1923) 另一种与熊氏厚缘苔虫十分相似,但个虫排列方式及体壁构造等特征区别显著,经研究确认为一新种,取名为中国厚缘苔虫 *Crassimarginatella sinica* sp. nov., 现将其种描述如下。

### 1. 新月厚缘苔虫(新种) *Crassimarginatella lunata* sp. nov. (图1 a—b)

**正模标本** 标本号: 79BTE003, 1979年10月7日采于浙江省平阳县下关公社潮间带,一个群体附着在石块上。正模标本保存在中国科学院海洋研究所(青岛)。

群体白色、单层,被覆在石块上。个虫呈五点星形交错排列,室间无沟。个虫长方形,末端圆形,中部两侧稍膨胀。墙缘厚而隆起,表面光滑,几乎与个虫前表面垂直。前膜卵圆形,占前区绝大部分,通常末端比始端稍宽,中部两侧膨大。始端裸壁发达。隐壁仅分布在始端,呈新月形,底部较宽,两侧较狭,内缘呈细锯齿状;隐壁从底部向两侧延伸不超过膜下孔中部以上;有时在膜下孔中部以上区域,侧壁常向膜下孔内作齿状突出(隐壁小刺),但不呈片状。室口和口盖均小,半圆形。未发现鸟头体。口上卵胞少,扁球形,宽大于长,前表面隆起,颗粒状。

新种个虫形状和裸壁发育程度和日本厚缘苔虫 *C. japonica* (Ortmann, 1890) 十分相似,但两者明显的区别是:(1) 新种前膜卵圆形,后者圆形;(2) 新种卵胞顶端无突起,卵胞两侧端壁无刺,后者卵胞顶端有一与卵胞中轴一致的中央突起,卵胞两侧端壁常各有一端刺;(3) 新种有一新月形始端隐壁,膜下孔中部以上区域有隐壁小刺,后者无片状隐壁,

\* 中国科学院海洋研究所调查研究报告第707号。

本刊编辑部收到稿件日期: 1981年1月4日。

1) Kirkpatrick (1890) 鉴定为 *Membranipora crassimarginatella* Hincks 1880 (= *C. crassimarginata*)。根据 Hastings (1945), 本人认为 Kirkpatrick (1890) 取自中国南沙群岛郑和滩的标本实际上有两个种,其中一种不属厚缘苔虫属,另一种虽属于该属,但由于鸟头体颞骨呈长匙形而与 *C. crassimarginata* 不同,与 *C. intermedia* Canu et Bassler 1933 相似,然又与后者不同,即其卵胞有横脊却无中央突起。按照 Hastings 的图 1B, Kirkpatrick (1890) 报道郑和滩的一种厚缘苔虫显然与 *C. crassimarginatella* 不同。由于目前我们尚未获得 Kirkpatrick 描述的标本,故现在很难确定 Kirkpatrick 记载我国南沙群岛郑和滩的厚缘苔虫的种名。

仅有隐壁小刺。

2. 熊氏厚缘苔虫 *Crassimarg inatella kumatae* (Okada, 1923) (图 1c—e)

*Membranipora kumatae* Okada 1923:223, figs. 19—20.

*Crassimarginatella kumatae*, Harmer 1926:224; Silén 1938:271, text-figs. 34—46; 1942:24, text-fig. 19; Anderosova 1958:105, text-fig. 14; Mawatari 1963:7; 1971:602, fig. 55a.

群体黄色或白色, 单层, 被覆在贝壳、石块上。个虫卵圆形或圆形, 呈五点星形紧密排列, 室间无沟。墙缘极厚, 隆起, 颗粒状。裸壁不发达。隐壁细狭、光滑, 内缘锯齿形。前膜卵圆形或圆形, 几占整个前区。室口和口盖均小, 半圆形。通常个虫末端两侧各有一端

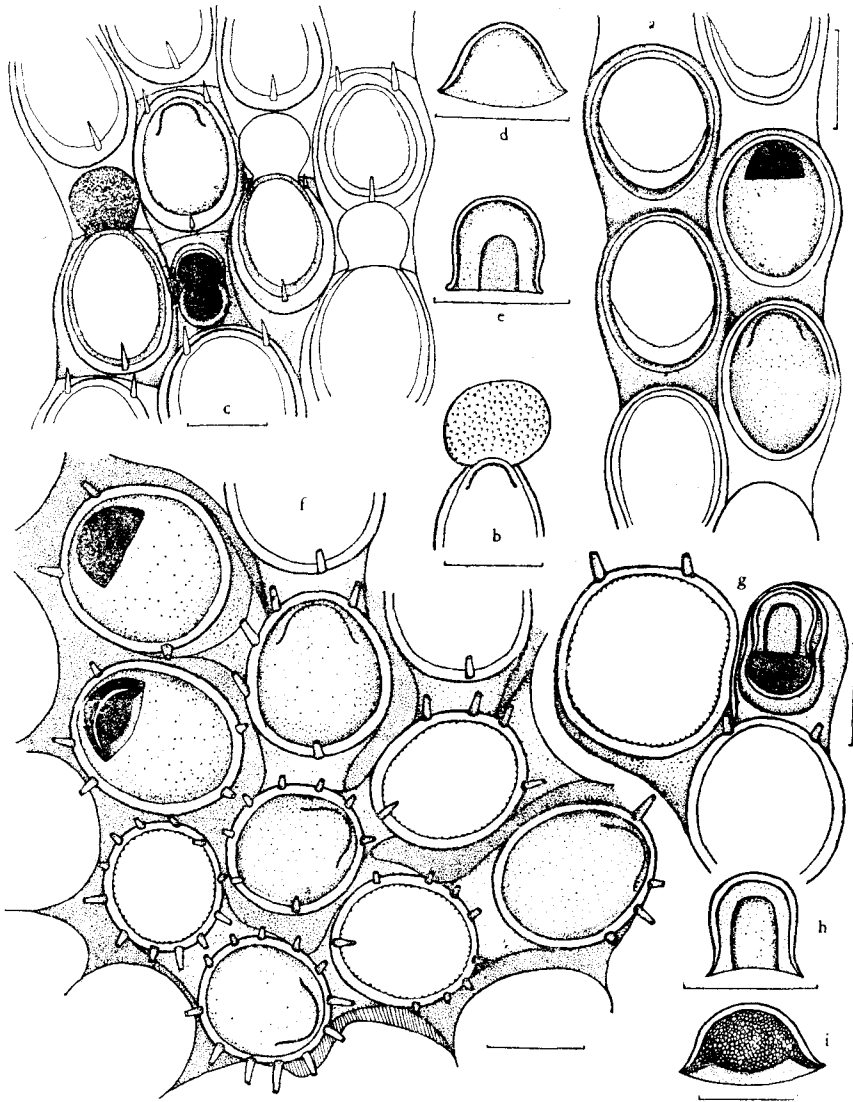


图 1 中国东海三种厚缘苔虫

新月厚缘苔虫(新种) *Crassimarginatella lunata* sp. nov. a. 示个虫、室口、口盖、前膜、裸壁和隐壁; b. 示口上卵胞; 熊氏厚缘苔虫 *Crassimarginatella kumatae* c. 示个虫、口盖、裸壁、隐壁、刺、口上卵胞、代位鸟头体; d. 示口盖; e. 示鸟头体颞骨。中国厚缘苔虫(新种) *Crassimarginatella sinica* sp. nov. f. 示个虫、初虫、室口、口盖、刺; g. 示代位鸟头体; h. 示鸟头体颞骨; i. 示口盖。(比例尺均为 0.2mm)

刺,始端中央墙缘上有一中央小刺;这些刺基部均无关节。端刺均指向个虫末端,始端的中央刺有时指向个虫末端,有时与个虫前表面垂直,稍向内弯。多数刺常断损,仅留痕迹。代位鸟头体近长方形,端壁几乎平直,其大小约为自个虫的二分之一,吻的底边呈明显锯齿状,颞骨几呈半圆形,指向末端。代位鸟头体虽位于个虫列分歧处,但仅作为母个虫的端芽长出,因而位于母个虫的顶端(而不在侧位)。卵胞口上型,球状,长大于宽,前表面中央隆起,颗粒状。

**标本采集地** 东海大陆架 (29°00'N, 126°20'E, 底质为泥质粗砂,水深为 110 米; 27°30'N, 124°30'E, 底质为砂、贝壳,水深为 79 米)。

**地理分布** 日本海北部、能登半岛、五岛列岛、小笠原群岛。中国系首次纪录。

### 3. 中国厚缘苔虫(新种) *Crassimarginatella sinica* sp. nov. (图 1 f—i)

**正模标本** 标本号: 76BBE015, 1976 年 8 月 28 日采于东海大陆架, 27°30'N, 126°00'E, 底质为细砂, 水深为 135 米, 两个群体, 附着在贝壳上。正模标本保存在中国科学院海洋研究所(青岛)。

群体白色、单层, 被覆在贝壳上。个虫呈放射排列, 室间有细沟。个虫大多数呈亚圆形, 少数呈卵圆形。墙缘宽而平坦、光滑。前膜亚圆形或卵圆形, 几占整个前区。室口 and 口盖均小, 几呈半圆形; 口盖表面大部分有钙质沉淀。裸壁不发达。无隐壁, 但有稀疏的隐壁小刺。双生初虫呈圆形, 墙缘上有 12 根粗壮的短刺, 大多与个虫前表面垂直。与初虫相邻的个虫刺减少到 4—8 根, 这些刺通常稍斜向外, 与个虫前表面略垂直。远离初虫的个虫刺较少, 通常 2—3 根, 其中两根端刺(每侧 1 根)始终存在, 均指向末端, 墙缘始端个虫中线上的 1 根刺一般指向末端, 或与个虫前表面垂直, 但有时该刺移向侧面, 常与个虫前表面垂直。新种的鸟头体与熊氏厚缘苔虫很相似, 即长方形的鸟头体位于母个虫的顶端、颞骨几呈半圆形且指向末端, 但其端壁呈圆形, 吻的底边光滑无齿。未发现卵胞。

新种鸟头体形状及个虫形态和熊氏厚缘苔虫极其相似, 但两者十分明显的区别是: (1) 新种无隐壁仅有稀疏的隐壁小刺, 后者有狭片状的隐壁、隐壁小刺细而密, 呈明显锯齿状; (2) 新种个虫呈放射排列、室间有沟、刺较粗壮, 后者个虫呈五点星形排列、室间无沟、刺通常细弱或无刺; (3) 新种墙缘平坦光滑, 后者隆起颗粒状; (4) 新种鸟头体端壁呈圆形、吻的底边隆起但光滑, 后者端壁几乎平直、吻的底边锯齿形。

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## TWO NEW SPECIES AND ONE FIRST RECORD OF GENUS *CRASSIMARGINATELLA* FROM THE EAST CHINA SEA\*

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### ABSTRACT

This paper deals with three species of the genus *Crassimarginatella* (Bryozoa) Canu 1900 (Cheilostomata: Anasca: Malacostegoidea: Calloporidae), of which two are new to science and the third, *Crassimarginatella kumatae* (Okada, 1923), is first recorded from China. The type specimens are preserved in the Institute of Oceanology, Academia Sinica. The descriptions of the new species are given below.

#### 1. *Crassimarginatella lunata* sp. nov.

Colony white, unilaminar, encrusting. Zooids rectangular, round distally, expanded mid-laterally, arranged in a five-pointed figure. Mural rims thick, raised, nearly perpendicular to the frontal surface of zooids. Frontal membranes oval, occupying most of the front, usually wider distally than proximally. Proximal gymnocysts developed. Cryptocysts crescent. Avicularia not found. Ovicells hyperstomial, larger wide than long, and frontal surface convex, granulated.

This new species is very similar to *C. japonica* (Ortmann, 1890) in shape of zooids and in development extent of gymnocysts, but distinguished from the latter in its frontal membranes being oval, its ovicells having no central process at their extremely distal end and in its presence of crescent proximal cryptocysts.

#### 2. *Crassimarginatella sinica* sp. nov.

Colonies white, unilaminar, encrusting. Zooids mostly subcircular, arranged radiantly, separated by furrows. Mural rims wide, flat and smooth. Frontal membranes subcircular or oval, nearly occupying the whole of the front. Gymnocysts wanting or vestigial. Cryptocysts wanting, but cryptocystal spinelets present. Twin ancestrula circular, with 12 robust short spines around their mural rim. The zooids neighbouring to the ancestrula have 4—8 such spines, the zooids distant from the ancestrula 2—3. In the latter case, 2 distal spines always present. Avicularia placed at the bifurcations of zooidal rows as a distal one of the mother zooids, with rounded extremely edges, with elevated rostra and semicircular mandibles. The proximal margins of the rostra smooth. Ovicells not found.

This new species bears a resemblance to *C. kumatae* in shape of avicularia and in form of zooids, but distinct from the latter in its absence of cryptocysts, in its zooids being arranged radiantly and possessing robust spines, its mural rims being flat and smooth, and its avicularia whose rostra have smooth proximal margins.

\* Contribution No. 707 from the Institute of Oceanology, Academia Sinica.