

中国近海多穴苔虫属和格苔 虫属新种新纪录*

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作者在整理中国科学院海洋研究所收藏的苔藓虫标本中,发现无囊亚目片苔虫科(Hincksinidae)多穴苔虫属(*Antropora*)两个新种和三个新纪录¹⁾。本文系根据1958—1962年和1975—1976年底栖生物拖网资料(共26号标本)整理写成,报告两个新种和三个中国近海的新纪录。新种的模式标本保存在中国科学院海洋研究所。

种 的 描 述

1. 沔陵多穴苔虫(新种) *Antropora fenglingiana* sp. nov. (图版 I:1)

正模标本 标本号78BTE001, 1978年8月10日采自浙江省沔陵县松门养殖场, 许多群体附于中国鲎 *Tachyplesus tridentatus* Leach 的甲壳上。

群体单层, 淡黄色或灰白色, 被覆在鲎壳上。个虫长方形, 末端弧形, 呈五点星形排列。个虫界限明显, 其间由较深的细沟间开。墙缘薄而隆起、光滑。前膜细长, 两端较狭(或始端最狭)而中部宽度均匀, 占前区绝大部分。始端裸壁不发达, 表面呈颗粒状。隐壁稍发达而光滑, 从始端沿两侧伸向末端, 周缘细锯齿状, 有时在始端能见到生长线。室口 and 口盖皆小, 呈半圆形。每一个虫末端两隅各有一个三角形鸟头体。鸟头体小而凸, 颚骨长三角形, 斜向个虫中轴或指向末端。内陷卵胞不发达, 仅露痕迹, 埋于后续个虫的基部。现有标本虫体均已退化。

新种与日本多穴苔虫 *Antropora japonica* (Canu et Bassler, 1929) 有些相似, 尤其是鸟头体的形状和指向较近似, 但两种的个虫形状、内陷卵胞及隐壁等特征区别显著(表1)。

2. 瓶形多穴苔虫 *Antropora languncula* (Canu et Bassler, 1929) (图版 I:2)

Membredoecium langunculum Canu et Bassler, 1929: 95, pl. 6, figs. 6—11.

群体单层, 黄白色、桔黄色或黄褐色, 被覆在贝壳、海绵或其他苔虫上。个虫之间界限清晰, 由浅沟间开, 呈五点形交互排列, 长椭圆形。墙缘厚, 但不隆起, 表面颗粒状, 通常基部较宽, 末端较狭。前膜长椭圆形, 几占整个前区, 基部比末端宽。隐壁始端宽, 两侧狭, 末端最狭, 表面颗粒状, 内缘细锯齿状。内陷卵胞虽小但显著, 稍凸。每一个虫末端两隅

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1) 作者的“中国双胞苔虫科的种类记述”一文(印刷中)已报道了格苔虫属的九个种, 至于多穴苔虫属在中国的种类迄今尚无人报道。

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表 1 沔陵多穴苔虫和日本多穴苔虫的比较

Table 1 Comparison of *Antropora fenglingiana* sp. nov. and *A. japonica* (Canu & Bassler, 1929)

	1. 个虫形状	4. 前膜形状	7. 裸壁	10. 隐壁	13. 鸟头体	16. 内陷卵胞
沔陵多穴苔虫(新种) <i>A. fenglingiana</i> sp. nov.	2. 长方形	5. 近长椭圆形	8. 不发达, 颗粒状	11. 稍发达, 伸向末端	14. 三角形	17. 不发达, 仅露痕迹
日本多穴苔虫 ¹⁾ <i>A. japonica</i>	3. 卵圆形或 六角形	6. 近卵圆形	9. 很发达, 颗粒状	12. 很发达, 伸向末端	15. 纺锤形	18. 发达, 显著突出

1. shape of zooids 2. rectangular 3. oval or hexangular 4. shape of frontal membrane 5. nearly elliptical 6. nearly oval 7. gynocyst 8. developed little, granular 9. developed well, granular 10. cryptocyst 11. developed moderately, extending distally 12. developed well, extending distally 13. avicularia 14. triangular 15. fusiform 16. endoeccial ovicells 17. very reduced, nearly vestigial 18. developed, marked and convex.

1) Anderosova (1958), Kluge (1961) 把该种归于蛛苔虫属 (*Tegella* Levinsen, 1909) 的意见不妥, 因后者具口上卵胞。

各具一小而凸出的三角形鸟头体, 由于相邻个虫呈五点形交互排列, 故在每一个虫的两端和两侧, 这些鸟头体对称排列成六边形。颚骨长三角形, 指向末端或斜向个虫中轴。根据 Canu & Bassler (1929) 的原始描述, 本种个虫列间有特殊的瓶形个虫。这种瓶形个虫系墙缘末端两侧显著收缢变形而成。现有标本仅少数个虫末端稍有收缢, 但膜下孔不呈瓶形。看来瓶形个虫的存在与否是不稳定的。

标本采集地 东海, 27°30'N, 126°00'E, 水深 162 米; 27°30'N, 125°30'E, 水深 110 米。

地理分布 菲律宾宿务岛和雷伊泰近岸。中国系首次纪录。

3. 菱形多穴苔虫 *Antropora ogivalina* (Canu et Bassler, 1929) (图版 I:3)

Dacryonella ogivalina Canu et Bassler 1929: 132, pl. 13, fig. 8.

群体单层, 黄白色, 被覆在一种头帕类海胆壳及其刺上和贝壳上。个虫之间界限清晰, 由浅沟间开, 呈五点形交互排列。个虫两端细狭而两侧膨胀, 故整个轮廓呈菱形。墙缘薄而光滑, 平坦不凸, 但顶边隆起。室口和口盖均小, 呈半圆形。前膜占前区大部分, 末端呈尖形, 底边圆形或尖形(偶尔底边直), 两侧膨胀, 故整个前膜呈菱形或三角形。始端裸壁比其他种发达, 细长, 表面光滑。隐壁极发达, 表面呈明显颗粒状, 内缘具细齿。内陷卵胞小球形, 中央十分隆起。几乎每一个虫的最始端都有一小而凸出的三角形鸟头体, 其颚骨长三角形, 多半指向个虫主轴生长方向的末端。这些室间鸟头体在个虫的两端和两侧对称排列成斜四边形。我们的标本与 Canu & Bassler (1929) 的原始描述基本相符, 但隐壁表面仅内缘光滑, 绝大部分呈明显的颗粒状。

标本采集地 南海, 18°45'N, 110°45'E, 水深 110 米。

地理分布 菲律宾苏禄群岛、阿尼纳苏拉岛(位于菲律宾班乃岛和吕宋岛之间)。中国系首次纪录。

4. 卵形多穴苔虫 *Antropora ovata* (Canu et Bassler, 1929) (图版 I:4)

Membreoecium ovatum Canu et Bassler: 95, pl. 6, figs. 3—5.

群体单层, 桔黄色或黄白色, 被覆在贝壳或其他苔虫上。个虫之间界限清晰, 由深沟间开, 呈放射状排列, 通常呈梨形, 少数呈三角形, 基部宽, 末端狭。墙缘凸, 末端薄, 基部极度加宽并成为隐壁的一部分。室口和口盖均小, 呈半圆形。前膜通常呈卵圆形(个别三角

形)。隐壁宽,表面颗粒状,内缘具细齿。通常在个虫交角处有一室间鸟头体。鸟头体小而凸,三角形,其颞骨长三角形。颞骨在同一群体中指向相不一,但通常指向邻个虫主轴生长方向的末端。这些室间鸟头体因个虫呈放射状排列而呈现不对称分布,但在少数个虫的末端两侧也会出现对称排列的鸟头体。现有标本绝大多数群体均未发现卵胞;卵胞属内陷型,稍凸,光滑。

标本采集地 东海,28°30'N,126°30'E,水深85米;27°30'N,125°30'E,水深162米;27°30'N,126°30'E,水深131米。

地理分布 菲律宾苏禄群岛和朗布龙。中国系首次纪录。

5. 绢网格苔虫(新种) *Beania farreae* sp. nov. (图版 II: 1—3)

正模标本 标本号 78BBE001, 1978年6月6日采自东海,28°28.2'N, 128°20.0'E, 底质为软泥,水深为1420米,一个群体附于耙绢网海绵 *Farea onca* (Bowerbank) 上。

群体单层片状,淡黄色,几乎每一个虫始端侧面(左侧或右侧)都有一根侧附根,借以附着在基质上。除此侧附根外,别无其他附根。侧附根极长;当群体从其附着基上摘落置于培养皿中观察时,晃动皿水,即可清晰看到许多白色的细线状构造在水中荡漾,即所谓侧附根。可见群体并贴附在附着基上,而是具有类似于其他双胞科苔虫那样的直立生长特性。每一个虫的末端部分叠盖在其后续个虫的始端部分上,与草苔虫(*Bugula*)相似,但其侧缘常被一相邻个虫的侧缘所覆盖或叠覆在另一相邻个虫的侧缘上,故无论前视或背视,网孔皆被盖没,个虫的这种排列方式与膜孔苔虫类(Membraniporids)有些相似。每一个虫有6根极短的连接管,有的连接管仅显痕迹,故网孔不明显。每一个虫的末端部均前翘,两缘向前表面翻卷,末端在室口两侧收缢,中部膨胀后,遂向始端逐渐变狭,背面极凸,故整个个虫呈舟形。前膜长椭圆形,几占整个前区。每一个虫末端有4根粗壮的口刺,无侧刺,无鸟头体,无卵胞。胚胎在体腔内发育;在有的个虫内可见到巨大的桔黄色胚胎。口盖发达,近半圆形。虫体中等大小,触手约20根。

从表2可知,新种个虫形状与中介格苔虫有些相似,但两者区别明显。新种有6根连接管(尽管很短),群体单层片状,个虫无侧刺无鸟头体;中介格苔虫无连接管,群体单列枝状,个虫常有侧刺并始终有一对鸟头体。

表2 绢网格苔虫(新种)和中介格苔虫的比较

Table 2 Comparisons of *Beania farreae* sp. nov. and *B. intermedia* (Hincks, 1881)

	1. 群体生长特点	4. 个虫形状	7. 口刺	10. 侧刺	13. 鸟头体	16. 附根
<i>B. farreae</i> sp. nov	2. 连接管6根, 群体单层片状	5. 舟形, 侧缘向前表面翻卷	8. 4根, 粗壮	11. 无	14. 无	17. 仅有侧附根
<i>B. intermedia</i>	3. 无连接管, 群体单列枝状	6. 同5	9. 4根, 细弱	12. 通常有	15. 一对	18. 有侧附根和背附根

1. growth nature of colonies 2. connecting tubes six, colonies unilaminar 3. connecting tubes wanting, colonies uniserial branches 4. shape of zooids 5. boat-shaped, lateral margins involved frontally 6. the same as 5 7. oral spines 8. four, robust 9. four, weaker 10. lateral spines 11. absent 12. usually present 13. avicularia 14. absent 15. a pair present 16. rootlets 17. only lateral one present 18. both dorsal and lateral ones present.

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NEW SPECIES AND NEW RECORDS OF GENERA *ANTROPORA* AND *BEANIA* (ANASCA, BRYOZOA) FROM CHINA COASTS*

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ABSTRACT

This paper deals with 1 new species and 3 new records of Genus *Antropora* Norman 1903 and 1 new species of genus *Beania* Johnston 1840 from the China coasts. The type specimens of the new species are preserved in the Institute of Oceanology, Academia Sinica. The descriptions of the two new species are given below.

1. *Antropora fenglingiana* sp. nov. (plate I, fig. 1.)

Colonies unilaminar, yellowish or gray, encrusting the shell of the horse shoe crab *Tachypleus tridentatus* (Leach). Zooids rectangular, arranged in shape of a five-pointed star with their distal end arched. Zooids distinctly separated by very deep furrows. Proximal gymnocyst little developed and granulate. Cryptocyst moderately developed and extending from the proximal end to the distal end along both sides of the opesium, its peripheral edge being serrated. There is a triangular avicularium at each corner of the distal end of the zooid, its mandible triangular in shape and directing distally

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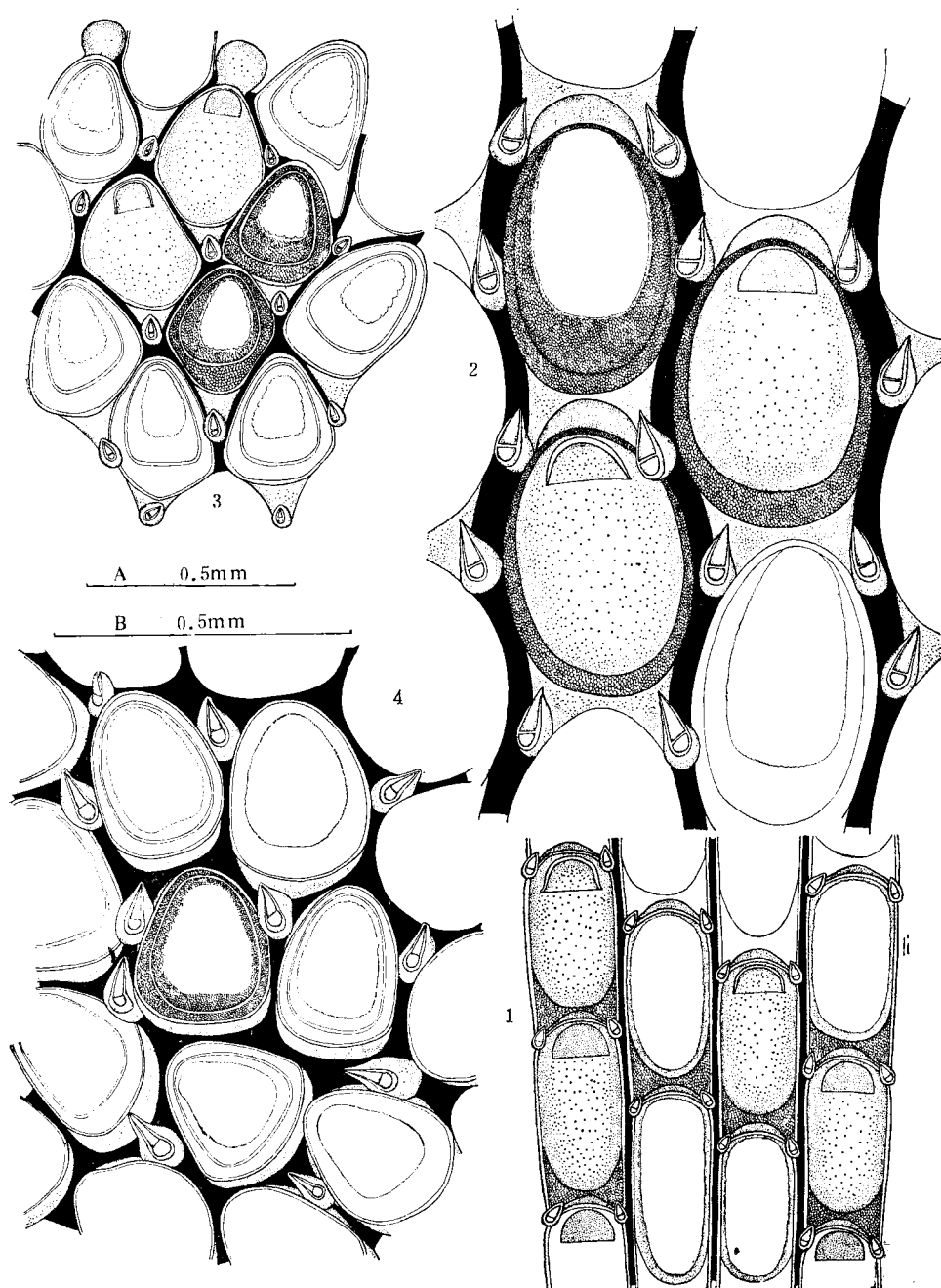
or toward the zooidal axis. Endozooecial ovicells little developed and flattened, sometimes vestigial, situated at the extremely distal end.

This new species is similar to *Antropora japonica* (Canu et Bassler, 1929), but differs from the latter in shape of its zooids and avicularia, especially in its reduced endozooecial ovicells and its smooth cryptocyst (see table 1).

2. *Beania farreae* sp. nov. (plate II, figs. 1—3.)

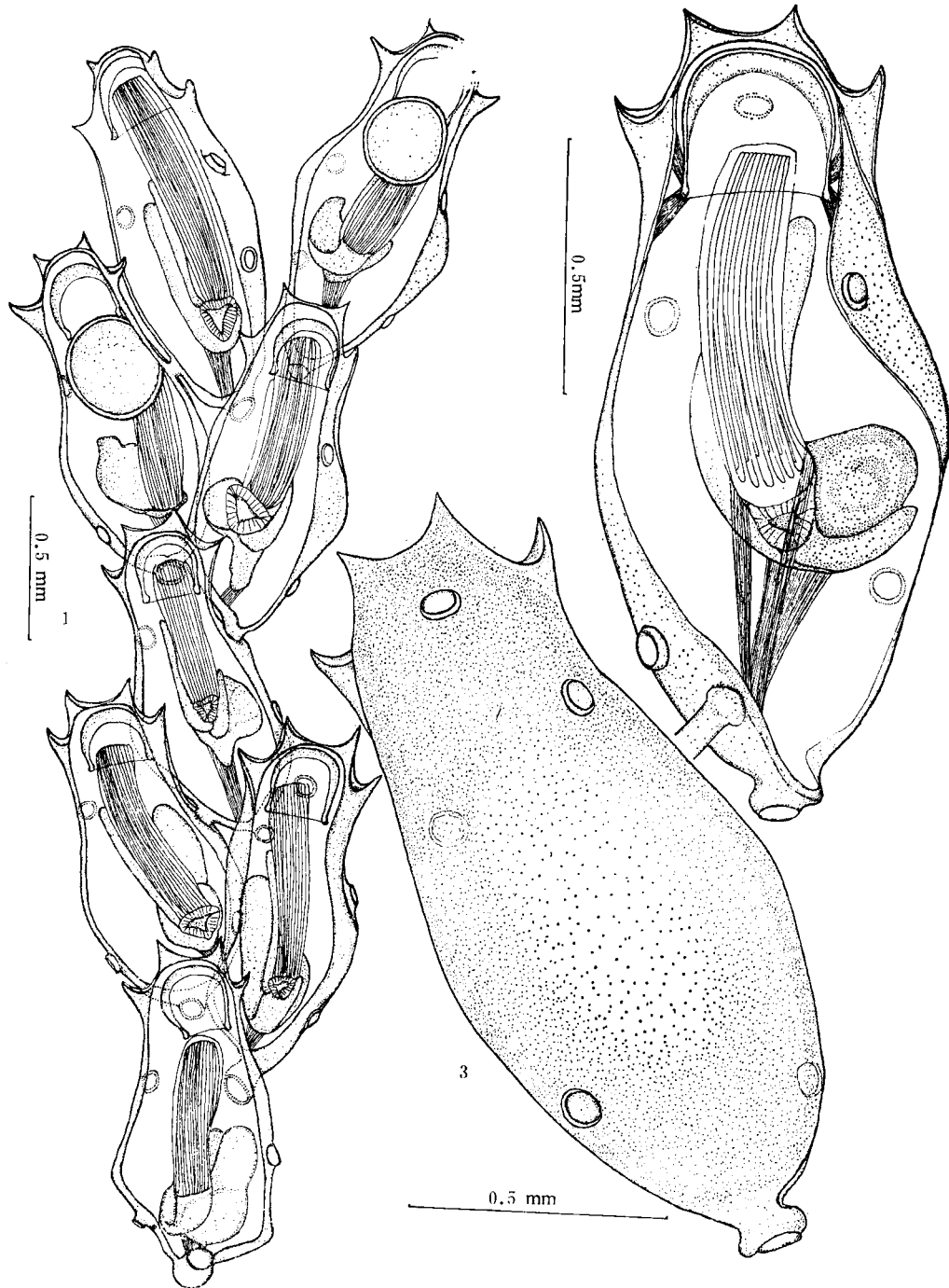
Colony yellowish, unilaminar, attached on *Farrea onca* (Bowerbank) by means of elongated rootlets. The rootlet is at one or the other side of the proximal end of every zooid. Each zooid has six connecting tubes which are extremely short and sometimes vestigial. The distal portion of the zooid overlaps the proximal portion of the successive zooid. The margin of one zooid covers the side of the neighbouring zooid or overlaid by the margin of the other neighbouring zooid, so that the fenestra between the zooids are concealed by the zooids. The distal portion of the zooid is always upturned forward. Its margins are involved toward its frontal surface. The lateral edges of its distal portion are constricted. Its middle portion is expanded and the portion proximal to the middle narrowed gradually. The zooid, therefore, looks like a boat in outline. There are four robust oral spines in each zooid. Lateral spines, avicularia and ovicells are wanting at all.

This new species bears resemblance to *Beania intermedia* (Hincks, 1881) in shape of zooids, it differs from the latter in its zooids having six connecting tubes and robust oral spines, but without avicularia and lateral spines, and in its colony being unilaminar instead of uniserial (see Table 2).



四种多穴苔虫多穴苔虫 (比例尺 0.5mm, 黑色表示室间沟)

1. 沅陵多穴苔虫(新种) *Antropora fenglingiana* sp. nov. 的正模标本; 个虫、室口、口盖、裸壁、隐壁、前膜、鸟头体和痕迹卵胞(比例尺 A)
2. 瓶形多穴苔虫 *Antropora langucula*: 个虫、室口、口盖、裸壁、隐壁、前膜、鸟头体和卵胞(比例尺 B);
3. 菱形多穴苔虫 *Antropora ogivalina*: 个虫、室口、口盖、裸壁、隐壁、前膜、鸟头体和卵胞(比例尺 A);
4. 卵形多穴苔虫 *Antropora ovata*: 个虫、裸壁和鸟头体。



绢网格苔虫(新种) *Beania farreae* sp. nov. 的正模标本(比例尺 0.5mm)

1. 前面观示个虫及其间连接、口盖、虫体、口刺和胚胎;
2. 一个虫前面观,示虫体、口盖和肌肉系;
3. 一个虫的背面观。