

中国二囊属吸虫三新种的描述*

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Yamaguti 1934 年建立的二囊属 *Bivesicula*, 原划入独睾科 Monorchidae, 以后(1939)因其无腹吸盘以及阴茎囊构造、卵黄腺形状和分布等特征, 另立新科——二囊科 Bivesiculidae。除二囊属为模式属外, 尚包括 *Bivesiculoides* Yamaguti, 1938^[5] 和 W. H. Coil, 1965 发表的 *Paucivitellosus* 属^[2], H. W. Manter 1961 发表了 *Treptodemus* 属, 但 Yamaguti, 1971 把它归入了新建立的 Treptodemidae 科中, 故二囊科迄今只有三属。

二囊属已报道的种类不多, 我国只在西沙群岛水域有发现。作者在整理标本中, 发现有三种二囊属吸虫为前人未曾记载, 现分别记述于后。

标本测量一律用毫米, 卵子为微米; 模式标本存放在中国科学院海洋研究所。

烟管鱼二囊吸虫(新种) *Bivesicula fistulariae* sp. nov. (图 1)

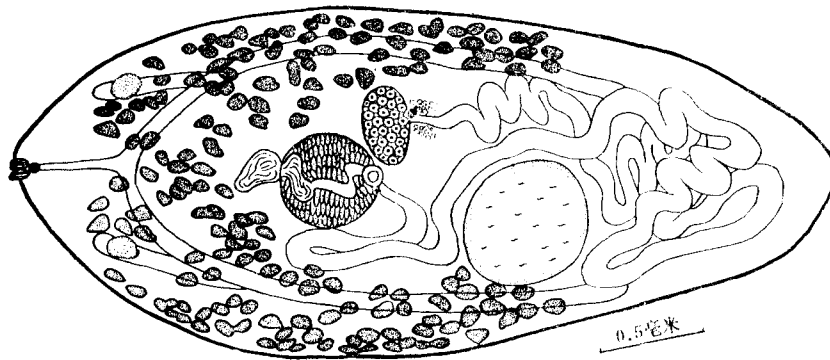


图 1 烟管鱼二囊吸虫(新种) *Bivesicula fistulariae* sp. nov. (ventral view 腹面图)

模式标本 正模 1042-1-1。
宿 主 鳞烟管鱼 *Fistularia petimba* Lacepede;
寄生部位 胃;
采集地点 浙江省, 宁波(1980年5月4日);
感 染 解剖 6 尾鱼, 其中 1 尾体内发现 1 个虫体。

描述 虫体较大、长椭圆形, 体表光滑。体长 3.910, 体中间宽 1.632。口吸盘 0.102×0.136 , 在身体顶端, 没有腹吸盘。在肠叉前面, 体两侧有明显的眼点。

* 中国科学院海洋研究所调查研究报告第 772 号。
承刘瑞玉教授审阅全文, 并提出宝贵意见, 谨此致谢。
本刊编辑部收到稿件日期: 1981 年 7 月 5 日。

咽很小,圆形,直径 0.045,食道细且长, 0.374×0.051 , 肠管直,向后伸,止于睾丸之后。

睾丸单个、圆形,直径 0.646,位于体后部1/3处,偏右侧,有输精管通到贮精囊。贮精囊分内外两部分,外贮精囊 0.340×0.153 ,呈梨形;内贮精囊 0.204×0.119 ,被包在阴茎囊内。阴茎囊圆形,直径 0.459,位于身体近中央处,囊内有发达的前列腺,周围并充满前列腺细胞。生殖孔周围有发达的肌肉纤维,称为生殖吸盘,呈椭圆形 0.119×0.136 ,位于靠近身体中线上。

卵巢扁椭圆形 0.221×0.374 ,在体中间偏左,靠近阴茎囊后缘,没有受精囊,卵巢后有发达的卵壳腺,范围 0.255×0.374 。卵黄腺滤泡始自肠叉稍前,沿两肠管向后延伸,止于睾丸处,不越过睾丸后缘水平。子宫起始沿左侧肠管内缘盘曲向下,到近体末又折向上,至睾丸后缘再下行,复又向上,经睾丸左侧向前,在睾丸与阴茎囊间形成盘曲,通到生殖孔。卵子稠密、豆形,较大, $84-93 \times 48-60$ 。

排泄管 V 形,两臂向前伸达眼点附近。

讨论 本种与 *B. australis* Crowcroft, 1947^[9] 相近,但其咽、食道长超过口吸盘,生殖孔在身体中线之前,卵子 $84-93 \times 48-60$ 。

海鲢二囊吸虫(新种) *Bivesicula megalopis* sp. nov. (图 2)

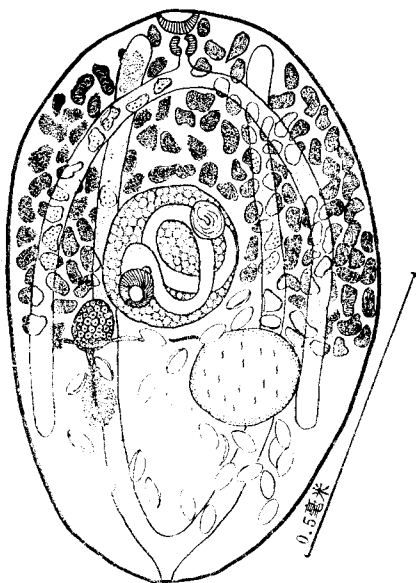


图 2 海鲢二囊吸虫(新种) *Bivesicula megalopis* sp. nov. (ventral view 腹面图)

模式标本 正模 89-2-1;副模 89-3-1, 89-3-2, 89-3-3, 89-6-1, 89-6-2, 89-6-3, 89-6-4, 89-6-5, 89-6-6。

宿主 大海鲢 *Megalops cyprinoides* (Broussonet);

寄生部位 肠;

采集地点 广东省海南岛崖县(三亚)(1959 年 12 月 6 日);

感染 在 1 尾鱼体内共采到 29 个虫体。

描述 虫体小、卵圆形,体表光滑。体长 0.867—1.269,中间部分宽 0.692—0.852。

口吸盘在体前顶端,似碟状 $0.021-0.051 \times 0.018-0.060$, 没有腹吸盘。口吸盘后缘两侧有眼点一对。

咽发达,肌肉质,近圆形 $0.030-0.068 \times 0.030-0.051$, 食道短 $0.020-0.027$, 肠直弧状,末端止于睾丸后缘水平。

睾丸一个、椭圆形 $0.153-0.284 \times 0.150-0.251$, 位于体后 $1/2$ 稍前偏左。贮精囊卵圆形 $0.051-0.085 \times 0.051-0.068$, 被包在阴茎囊内。阴茎囊圆球状,直径 $0.221-0.401$, 在身体中央,囊内有前列腺,周围布满前列腺细胞。生殖孔恰在体中线上,周围被肌肉纤维包围,形成生殖吸盘、圆形,直径 $0.057-0.069$ 。

卵巢在体右侧,阴茎囊后缘,靠近生殖吸盘,卵圆形 $0.085-0.167 \times 0.068-0.102$, 卵巢通出输卵管接成卵腔,周围被有发达的卵壳腺,其范围 0.102×0.153 。卵黄腺滤泡状,自体前部咽水平开始,向后止于睾丸之前。子宫简单,起始即下行,在睾丸后缘形成盘曲,旋沿睾丸一侧向上,经睾丸与阴茎囊间到生殖孔。子宫内卵子数目不多,一般 $21-56$ 枚,呈金黄色 $60-72 \times 33-39$ 。

排泄管两臂前伸,达咽部呈水平状。

讨论 二囊属 *Bivesicula* 中肠管伸过睾丸并具咽者, 只有 *B. fistulariae* sp. nov., 本种与其区别是体呈卵圆形, 食道长度小于口吸盘, 生殖孔在体中线上, 卵子 $60-72 \times 33-39$ 。

锯鳞鱼二囊吸虫(新种) *Bivesicula ostichthydis* sp. nov. (图3)

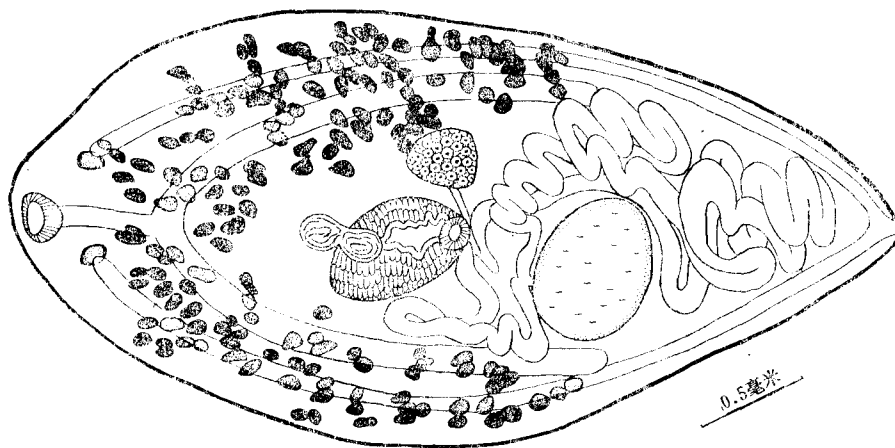


图3 锯鳞鱼二囊吸虫(新种) *Bivesicula Ostichthydis* sp. nov. (ventral view 腹面图)

模式标本 正模 1037-4-2; 副模 1037-4-4。

宿 主 锯鳞鱼 *Ostichthys japonicus* (Cuvier et Valenciennes);

寄生部位 胃;

采集地点 浙江省,宁波(1980年5月4日);

感 染 解剖1尾鱼,找到两个虫体。

描述 虫体长卵形,食道两侧附近有一对眼点。体长 $3.655-4.148$, 中部宽 $1.445-1.989$ 。口吸盘位于身体亚前端腹位, $0.136-0.187 \times 0.187-0.238$ 。

无咽,食道直且长, $0.357-0.476 \times 0.085-0.102$, 肠管弧形,末端不伸过睾丸。

睾丸椭圆形, $0.544-0.595 \times 0.697-0.731$, 位于体后 $1/2$ 稍前, 靠近右肠管。贮精囊分成内外两部分, 外贮精囊 $0.170-0.204 \times 0.187-0.204$, 在阴茎囊的左上方; 内贮精囊 $0.204-0.221 \times 0.170-0.187$, 包在阴茎囊内。阴茎囊橄榄形 $0.544-0.663 \times 0.408-0.476$, 在体中线之前, 内有发达的前列腺, 生殖吸盘圆形, 直径 $0.119-0.136$, 生殖孔开口恰在体中线上。

卵巢近似三角形, $0.306-0.320 \times 0.187-0.323$, 位于体中线上偏左侧。卵黄腺滤泡状, 起自肠叉之前, 沿肠管两侧向后, 不越过睾丸。输卵管后接子宫前段, 稍弯曲即下行, 沿睾丸一侧, 在体后形成数个盘曲, 又向上, 经阴茎囊与睾丸间, 通向生殖孔。卵子密集, 个大为 $99-105 \times 57-66$ 。

排泄管 V 形, 两臂前伸, 末端达眼点附近。

讨论 本种与 *B. auxisae* Gu et Shen 1979¹⁾ 相近, 但身体长大, 内部各器官亦大, 无咽, 卵巢位置不同, 卵子大为 $99-105 \times 57-66$ 。

二囊属 *Bivesicula* Yamaguti, 1934 种的检索表 (按 Cable et Nahhas, 1962 修改增补)

1. 肠管伸过睾丸 2
 肠管不伸过睾丸 5
2. 无咽 3
 具咽 4
3. 食道长超过口吸盘的 7 倍, 卵黄腺后端伸过睾丸, 生殖孔在体中线上
 *B. tarppins* Sogandare Bernal et Hutton, 1959
 食道短, 食道与口吸盘约等长, 卵黄腺后端不伸过睾丸, 生殖孔在体中线之后 *B. congeri* Yamaguti, 1970
4. 体长椭圆形, 食道长远超过口吸盘, 生殖孔在体中线之前, 卵子较大达 $84-93 \times 48-60$ *B. fistulariae* sp. nov.
 体卵圆形, 食道长小于口吸盘, 生殖孔在体中线上, 卵子小仅 $60-72 \times 33-39$ *B. megalopis* sp. nov.
5. 阴茎囊在体中线之前, 生殖孔接近体中央 6
 阴茎囊在体中线上或其后, 生殖孔不在体中央 8
6. 阴茎囊后缘接近肠叉, 卵巢具少数缺刻, 卵黄腺起自咽后 *B. carribbensis* Cable et Nahhas, 1962
 阴茎囊后缘远离肠叉, 卵巢全缘, 卵黄腺起自咽水平 7
7. 具咽, 卵巢在生殖吸盘右侧, 睾丸小仅 $0.153-0.323 \times 0.204-0.221$, 卵子 $72-84 \times 45-48$
 *B. auxisae* Gu et Shen, 1979
 无咽, 卵巢在生殖吸盘左侧, 睾丸大达 $0.544-0.595 \times 0.697-0.731$, 卵子 $99-105 \times 57-66$
 *B. ostichthydis* sp. nov.
8. 无咽 9
 具咽 10
9. 体极小, 体长不超过 $0.7(0.586-0.620)$, 卵子 $74-82 \times 40-46$ *B. hepsetiae* Manter, 1947
 体较大, 体长超过 1.5 以上, 卵子 $63-75 \times 33-42$ *B. lutiani* Gu et Shen 1979
10. 卵黄腺向前伸达咽水平, 肠管后端扩大, 卵子较大为 $90-102 \times 60-66$ *B. synodi* Yamaguti, 1938
 卵黄腺伸至咽后, 卵子较小 11
11. 阴茎囊宽在 0.35 以上, 后缘接近体中线, 睾丸距体后缘近, 卵子 $75-84 \times 45-48$
 *B. epinepheli* Yamaguti, 1938
 阴茎囊宽在 0.20 以下, 后缘远离体中线, 睾丸距体后缘较远 12
12. 睾丸前缘与生殖吸盘相接, 卵黄腺达睾丸前缘水平, 卵子 68×48 *B. claviformis* Yamaguti, 1934
 睾丸前缘远离生殖吸盘, 卵黄腺在睾丸之前, 卵子 $63-69 \times 33-48$ *B. xishaense* Gu et Shen 1979

1) 顾昌栋、申纪伟, 1979. 西沙群岛鱼类的复殖吸虫——I. (手稿)

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THREE NEW SPECIES OF GENUS *BIVESICULA* YAMAGUTI,
1934 (TREMATODE: BIVESICULIDAE) FROM MARINE
FISHES OF CHINA*

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ABSTRACT

The present paper deals with three new species of the genus *Bivesicula* Yamaguti, 1934 (Bivesiculidae) collected from South China Sea and East China Sea.

All the measurements are in mm; except ova in μm . The type specimens are deposited in the Institute of Oceanology, Academia Sinica, Qingdao.

Bivesicula fistulariae sp. nov (fig. 1)

Type species Holotype: 1042-1-1.

Host *Fistularia petimba* Laeepede;

Location intestine;

Locality Ningbao, Zhejiang Provance

Date May, 4. 1980;

Infection 1 specimen from 1 of 6 hosts.

Description Body oblong, 3.910 long, 1.632 wide, at equatorial level. Eye-spote

* Contribution No. 772 from the Institute of Oceanology, Academia Sinica.

situated at each side of intestinal ceca. Oral sucker small, 0.102×0.136 at anterior end of body.

Pharynx very small, 0.045 in diameter; esophagus 0.374×0.051 , ceca terminating near posterior end of testis.

Testis round, 0.646 in diameter, situated slightly to the right at posterior third of body. Vesicula seminalis divided into two parts, external seminal vesicle 0.34×0.153 , internal seminal vesicle 0.204×0.119 , enclosed in rounded cirrus pouch, which is 0.459 in diameter and just at central part of body, containing prostatic vesicle cells and genital atrium which is ellipsoid measuring 0.119×0.136 and open at middle line of body.

Ovary subellipsoid, 0.221×0.374 at center by left of body. Vitellaria follicles extending from level of intestinal ceca to posterior extremity of testis, never surpassing it. Uterus extending posteriorly to extremity of body, then turned anteriorly along left side of testis, and finally coiled between testis and cirrus pouch. Eggs large, $84-93 \times 48-60$.

Excretory vesicle V shaped, the arm terminated at each side of the eye-spots.

Discussion This species resembles closely to *B. sustralis* Crowcroft, 1947 but differs from it mainly in the pharynx being present, the esophagus being much longer than the oral sucker, the genital pore is situated at the anterior middle line of body, the eggs being larger, $84-93 \times 48-60$.

Bivesicula megalopis sp. nov. (fig. 2)

Type species Holotype: 89-2-1; paratype: 89-3-1; 89-3-2; 89-3-3; 89-6-1; 89-6-2; 89-6-3; 89-6-4; 89-6-5; 89-6-6.

Host *Megalops cyprinoides* (Broussonet);

Location intestine;

Locality Sangya, Hainan Island, Guangdong Province;

Date December, 6, 1959;

Infection 29 specimens from 1 host.

Description Body oval, 0.867—1.269 long by 0.692—0.852 wide. Oral sucker terminal, disc-shaped, $0.021-0.051 \times 0.018-0.060$. Acetabulum absent. There are eye-spots on both side of post-pharynx.

Pharynx round, $0.030-0.068 \times 0.030-0.051$. Esophagus short, 0.020—0.027. Ceca extending to the level of posterioren end of testis.

Testis ellipsoid, $0.153-0.284 \times 0.150-0.251$, immediately post-equatorial on left side, distance from testis to posterior end of body being 0.187—0.272. External seminal vesicula absent. Cirrus pouch rounded, 0.221—0.401 in diameter situated at the center of body. Internal seminal vesicula oval, $0.051-0.085 \times 0.051-0.068$, prostatic vesicle inflection, prostate cell surrounding all structures within cirrus pouch. Genital pore median equatorial.

Ovary oval, $0.085-0.167 \times 0.068-0.102$ at right side of and posterior to cirrus pouch. Vitellaria extending from pharynx posteriorly to level of anterior end at testis. Uterus extending posteriorly to extremity of body, turning forwardly and coiled between cirrus pouch and testis. Eggs usually 21—56 in number, $60-72 \times 33-39$.

Excretory vesicle with two arms, intercecal, terminated on each side of pharynx.

Discussion In the genus *Bivesicula* only the present new species and *B. fistu-*

lariae sp. nov. with their ceca extended posteriorly to the testis. The present new species differs from *B. fistulariae* in the body being ovate, the esophagus being shorter than oral sucker the genital pore being situated at the middle line of body, and the eggs being smaller $60-72 \times 33-39$.

***Bivesicula ostichthydis* sp. nov. (fig. 3)**

Type species Holotype: 1037-4-2; paratype: 1037-4-4.

Host *Ostichthys japonicus* (Cuvier et Valenciennes);

Location stomach;

Locality Ningbao, Zhejiang Province;

Date May, 4, 1980;

Infection 2 specimens from 1 host.

Description Body oval, 3.655—4.148 long, 1.445—1.989 wide. A pair of eye-spots at level of esophagus. Oral sucker subterminal, $0.136-0.187 \times 0.187-0.238$.

Pharynx absent; esophagus long $0.357-0.476 \times 0.085-0.102$. Ceca terminated near testis.

Testis ellipsoid, large $0.544-0.595 \times 0.697-0.731$, at posterior $1/3$ of body. External seminal vesicle $0.170-0.204 \times 0.187-0.204$. Cirrus pouch olive-shaped, $0.544-0.663 \times 0.408-0.476$, situated the before equatorial line, containing internal seminal vesicle $0.204-0.221 \times 0.170-0.187$, and developed prostate cells. Genital atrium round, $0.119-0.136$ in diameter, opened at the equatorial line of body.

Ovary sub-triangular, $0.306-0.320 \times 0.187-0.323$, situated at left side of genital atrium; vitellaria follicles distributed in the area from bifurcation of intestine to testis. Uterus extending posteriorly to end of body, and then turned forwardly to the ceca between cirrus pouch and testis, and finally reaching to the genital pore. Eggs large, $99-105 \times 57-66$.

Excretory vesicle V shaped, its two arms reaching to the eye-spots.

Discussion This new species resembles to *B. auxisae* Gu et Shen, 1979, but with the following differences:

1. The size of body and internal organs is larger;
2. The pharynx is absent;
3. Eggs $99-105 \times 57-66$;
4. The site of ovary is different.