

西沙群岛的蛭形科吸虫*

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蛭形科 *Hirudinellidae* Dollfus, 1932 的种类虽在 200 多年前(1730)已有发现,但直到现在仅发表了一个属——蛭形属 *Hirudinella* (Garsin, 1730), 约有 14 种左右。Skryabin 与 Guschanskaya (1955) 将外膜具棘, 生殖窦孔开口于肠叉之后, 并具尿肠管的种类, 另立新属——尿肠属 *Uroproctinella*。作者认为, 主要依据尿肠管来鉴定这样大型的吸虫有一定困难, 而生殖窦孔的位置在同一种中也有变化。所以我们同意 Yamaguti 的意见, 不赞成成立该属。蛭形科吸虫, 在我国尚未有过报道, 1977 年 3 月调查西沙群岛的吸虫区系时, 发现了该科的 2 个种, 其中有 1 个新种。经过对这 2 个种的形态观察, 更进一步提出了尿肠属不能成立的证据。本文为 2 个种的描述。文中虫体测量数据以毫米为单位, 卵子测量以微米为单位。模式标本保存于中国科学院海洋研究所。

1. 皮氏蛭形吸虫 *Hirudinella beebei* Chandler, 1937 (图 1)

寄生于刺鲀 *Acanthocybium solandri* Cuvier et Valenciennes 的胃脏。1977 年 3 月 11 日

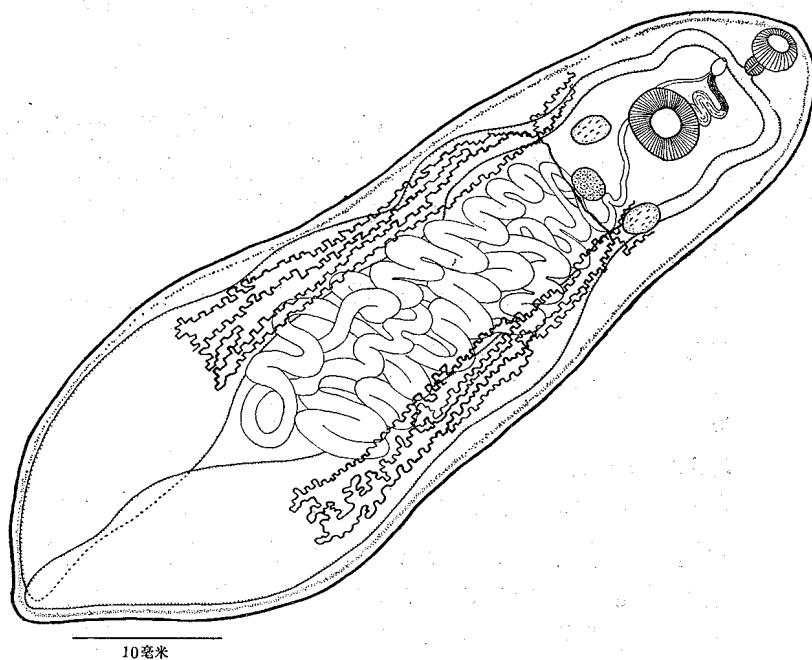


图 1 皮氏蛭形吸虫 *Hirudinella beebei* Chandler, 1937

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解剖 2 尾鱼,在每尾鱼体内各发现虫 2 个。与前人记载差异显著,故再描述。

描述(根据 4 个标本) 虫体极大而健壮,生活时收缩成梨形,吸食宿主血液使身体呈紫褐色。固定后虫体呈长茄形,体表角质层厚 0.102—0.119,具波浪状横环纹。体长 64.37—78.87。身体中间部分宽 14.68—18.22。口吸盘亚腹位,2.448—2.516 × 2.839—3.094。腹吸盘发达,近圆形,4.015—4.083 × 4.828—5.525,位于体前 1/3 中间,口、腹吸盘间距离为 4.548—6.499。

咽发达,纵卵形,1.445—1.683 × 1.190—1.309,食道很短,几近于无。肠管在肠叉处向左右平行,再折向下,肠管前部管径为 1.374—1.527,到体后 1/3 处膨胀粗大,膨胀部管径为 8.527—9.816,肠管内储有大量宿主血液。

睾丸 1 对,椭圆形,左右排列在腹吸盘后方两侧;左辜 1.462—3.111 × 1.717—1.734,右辜 2.295—3.094 × 1.105—1.751,两辜间距离为 5.466—7.748。每辜有输精小管在腹吸盘前缘背面汇合成输精管通于贮精囊。贮精囊管状,2.975—4.029 × 0.408—0.425,弯曲呈 S 形,位于腹吸盘之前。前列腺发达,生殖窦类球形,1.343 × 1.394,斜列在肠叉后,外壁肌质,包有射精管,生殖窦开口于肠叉右侧。

卵巢横椭圆形,1.615—1.700 × 2.103—2.312,位于两辜间稍后,与睾丸成鼎足排列,距腹吸盘后 2.649—3.734,向后腹面接有输卵管,未见受精囊。卵黄腺带状,宽 0.068—0.119,具有分枝,分布于肠管腹面身体两侧,前端在睾丸水平,后缘在体后 1/3 前,贮卵黄囊位于卵巢之后腹面。子宫很发达,在两肠管间盘曲,起始先下行,到体后 1/3 折向上,越过卵巢与腹吸盘,成子宫末段通入生殖窦,开口于两性管基部。卵子长椭圆形,壳厚,34—36 × 22—24。

排泄孔在体末。

西沙标本虫体及内部器官的测量均大于 Chandler, 1937 与 Yamaguti, 1970 的标本,而小于 Manter, 1940 的标本。除生殖窦不伸过肠叉及卵子稍小外,内部器官的位置与排列均相符合。测量差异,系由于年龄不同;宿主与寄生部位完全一致,故认为系同种,刺鲀属为该种的专性宿主。

2. 西沙蛭形吸虫(新种) *Hirudinella xishaensis* sp. nov. (图 2)

模式标本 正模: 887-1-1, 副模 888-1-1, 889-1-1。

宿主: 白卜鲀 *Euthynnus yaito* Kishinouye。

寄生部位: 胃脏。

采集日期: 1977 年 3 月 30 日。

感染强度: 解剖 10 尾鱼,发现 3 尾体内有虫为 1, 1, 2 个。

描述 虫体大,呈烧瓶状,生活时为紫褐色,体表光滑,具厚角质层,为 0.170—0.221,外表见有波浪状横行环纹。体全长 29.13—38.63,体后 1/3—1/4 部膨大呈球形,大小为 8.87—12.53 × 8.23—10.62。腹吸盘处体宽为 4.67—5.77。口吸盘端腹位,1.360—1.530 × 1.547—1.819,腹吸盘发达,略呈盘形,2.074—2.856 × 2.224—2.845,突出于体前 1/5 中央腹面,距口吸盘很近,仅 0.901—1.598。

咽发达,纵卵形,0.595—0.901 × 0.612—0.850,肌肉质。食道很短,肠叉向两侧上升,呈肩状折向后,肠管呈波浪状弯曲,管径 0.255—0.408,肠管通到体后 1/3 进入球形部

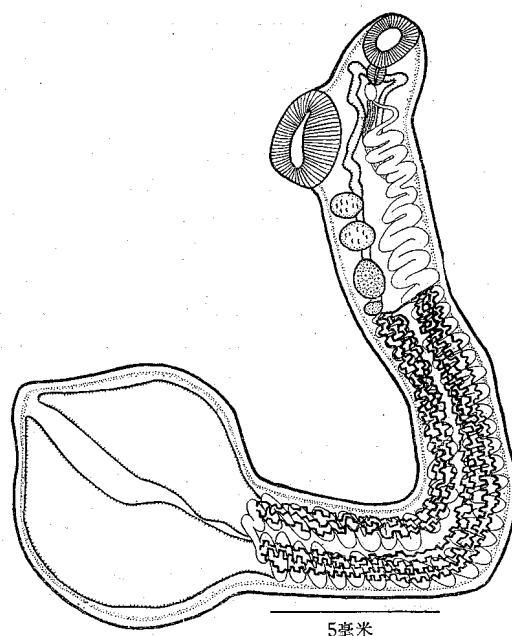


图2 西沙蛭形吸虫(新种) *Hirudinella xishaensis* sp. nov.

内,膨胀扩大,管径增至 3.82—5.17,储有大量宿主的血液。

两睾为横卵形,前后排列于腹吸盘之后,前睾 $0.595-1.377 \times 0.442-0.884$,后睾 $0.664-1.326 \times 0.408-1.139$,距腹吸盘 $0.629-1.258$,两睾向前通出输精小管,在腹吸盘背面汇合成输精管,通到贮精囊。贮精囊呈弯曲的管状,被发达的子宫遮盖,不能全部看清。前列腺发达,管径 $0.187-0.204$,向前通到生殖窦。生殖窦呈长椭圆形, $0.476-0.561 \times 0.306-0.527$,外壁肌质,包有射精管,生殖窦开口于咽后。

卵巢长卵形, $0.969-1.411 \times 0.714-1.547$,一线排列在后睾后面。卵形的受精囊位于卵巢右下方, $0.374-0.476 \times 0.748-0.782$ 。卵黄腺呈带形,弯曲如绦状,有分枝,成左右两组,每组约有 4 条,起自卵巢水平之后,终止于球形膨大部以前,卵黄腺宽 $0.051-0.085$ 。子宫发达,排列较有规律,起始沿体右侧盘曲下行,达球形部之前,又折向上,沿体左侧上行,通入生殖窦。卵子椭圆形,较小, $24-30 \times 15-18$ 。

排泄系统被生殖器官遮盖,不能看清。

讨论 本科仅 1 属,已知种均不具受精囊,而新种却有受精囊,显然不同。此外,其体形、器官大小与卵子等亦有不同特点。易与已知种相区别。

〔附〕 蛭形属 *Hirudinella* (Garcin, 1730) 种的检索表

- | | |
|---|------------------------------------|
| 1. 虫体外膜被棘,肠管与排泄管相连成尿管 (Uroproct), 生殖窦开口于肠叉之后..... | |
| | <i>H. spinulosa</i> Yamaguti, 1938 |
| 虫体外膜光滑,肠管一般不与排泄囊相连,生殖窦孔一般开口于咽后..... | 2 |
| 2. 睾丸对称排列于腹吸盘之后或其后的两侧..... | 3 |
| 睾丸相接斜列或前后排列于腹吸盘之后..... | 6 |

3. 卵黄腺起自辜丸水平..... 4
 卵黄腺起自辜丸与卵巢间水平..... 5
4. 虫体 44—54×21, 口、腹吸盘之比为 1:2, 辜丸位于腹吸盘后的两侧, 卵子 34.5×22.5.....
 *H. ingens* (Moniez, 1886)
 虫体 18—32×2—4, 口、腹吸盘之比为 1:1.5, 辜丸位于腹吸盘之后, 卵子 22—32×16—18.....
 *H. clavata* (Menzies, 1791)
5. 虫体 16—22×5—6, 口、腹吸盘比小于 1:2, 辜丸位于腹吸盘后的两侧, 生殖窦孔开口于咽后或肠叉后, 卵子 39—42×23—26.....*H. beebei* Chandler, 1937
 虫体 22.5×8.5, 口、腹吸盘比大于 1:2(1:2.2), 辜丸位于腹吸盘之后, 生殖窦孔开口于肠叉腹面.....
 *H. ventricosa* (Pallas, 1774)
6. 辜丸前后排列..... 7
 辜丸相接斜列..... 8
7. 虫体 7—40×2.24—8, 卵黄腺起自辜丸后水平, 无受精囊, 卵子 34—36×23—24.....*H. fusca* (Bose, 1802)
 虫体 29.13—38.63×8.87—12.53, 卵黄腺起自卵巢之后, 具受精囊, 卵子 24—30×15—18.....
 *H. xishaensis* sp. nov.
8. 虫体 45—55×3—4, 卵黄腺起自辜丸水平, 具尿管, 卵子 28—35×20—24.....
 *H. marina* (Garcin, 1730)
 虫体 28×4, 卵黄腺起自后辜丸后缘水平, 无尿管, 卵子 35—42×18—24.....*H. ahi* Yamaguti, 1970
- 注: *H. bonnacouri* Guiart, 1938; *H. oxydema* Guiart, 1938; *H. phalloides* Guiart, 1938; *H. poirieri* (Moniez, 1891) Dollfus, 1935; *H. siemeri* (Buttall-Reepen, 1900) Skrjabin et Guschanskaya 1957; 因文献缺少或描述过简未列入表内。

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DIGENETIC TREMATODES OF HIRUDINELLIDAE DOLLFUS, 1932 FROM THE XISHA ISLANDS*

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ABSTRACT

In the present paper two species of Hirudinellidae Dollfus, 1932 collected from marine fishes in waters of the Xisha Islands are described.

One of them is a known species, *Hirudinella beebei* Chandler, 1937 and the other is a new species. A key to the species of the genus *Hirudinella* (Garsin, 1730) is given. All the measurements are in mm, excepting ova in μm . The type specimens are deposited in the Institute of Oceanology, Academia Sinica, Qingdao, China.

1. *Hirudinella beebei* Chandler, 1937 (fig. 1)

Four worms were obtained from the stomach of two *Acanthocybium solandri* Cuvier and Valenciennes on March 11, 1977.

In our specimen the genital sinus is behind the intestinal ceca. The body and internal organs are larger than those described by Chandler 1937 and Yamaguti 1970 but smaller than those of Manter 1940. The measurements are as follows: body $64.37-78.87 \times 14.63-18.22$; oral sucker $2.448-2.516 \times 2.839-3.094$; acetabulum $4.015-4.083 \times 4.828-5.525$; pharynx $1.445-1.683 \times 1.190-1.309$; left testis $1.462-3.111 \times 1.717-1.734$; right testis $2.295-3.094 \times 1.105-1.751$; ovary $1.615-1.700 \times 2.103-2.312$; egg $34-36 \times 22-24$.

2. *Hirudinella xishaensis* sp. nov. (fig. 2)

Host: *Euthynnus yaito* Kishinouge

Location: stomach

Date: March 30, 1977

Infection: 1, 1 and 2 specimens from three of ten hosts.

Body large, flask-shaped, smooth, covered with very thick transversely corrugated cuticle, $29.13-38.63$ long, $4.67-5.77$ wide at acetabular level. The posterior end of body $1/3-1/4$ expanding into a globe, $8.87-12.53 \times 8.23-10.62$. Oral sucker $1.360-1.530 \times 1.547-1.819$. Acetabulum disc-shaped, $2.047-2.856 \times 2.224-2.854$, near oral sucker.

Pharynx $0.595-0.901 \times 0.612-0.859$. Esophagus short, intestinal caeca winding, extending to the posterior extremity of body, expanded.

Testes oval tandem, anterior testis $0.595-1.377 \times 0.442-0.844$, posterior testis $0.664-1.326 \times 0.408-1.139$. Ellipsoid genital atrium $0.476-0.561 \times 0.306-0.527$, opening behind pharynx.

* Contribution No. 921 from the Institute of Oceanology, Academia Sinica.

Ovary ovoid $0.969-1.411 \times 0.714-1.547$, post-testicular. Receptaculum seminis oval, $0.374-0.476 \times 0.748-0.782$, located at posterior right of ovary. Vitellaria ribbon-shaped, branched, divided into right and left groups. Uterus descending and ascending with regularity. Eggs ova, $24-30 \times 15-18$.

Discussion: *Hirudinella* is the only genus of the family Hirudinellidae Dullfus, 1932. Receptaculum seminis is absent in all species, but present in this new species. Moreover, it can be distinguished from all other species described in the genus in its characterized body shape, internal organs and egg size.