

中国海异稚虫属一新种*

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我们在整理中国海底栖多毛类环虫时,在黄海、东海和南海发现了稀见的异稚虫属(*Heterospio*)的一个新种。异稚虫科(*Heterospionidae*)是1965年 Hartman 建立的,目前只有一属两种。这一科的主要特征是体后区腹部的体节极长,几达前区胸部体节的数倍以至数十倍。迄今除南加利福尼亚及大西洋新英格兰外,尚未见到产于世界其他海域的报导,因此异稚虫在多毛类中被视为稀见的种类。

第一个异稚虫 *Heterospio longissima* 是 Ehlers 于1875年在西爱尔兰发现的,因其口前叶与围口节间伸出一对粗大的腹面具沟的触角,故置于海稚虫科(*Spionidae*)内。1944年, Hartman 在南加利福尼亚卡他利那岛(Catalina Island)采到一个体后部具特长体节的标本,定名为长节沙蚕 *Longosoma catalinensis*,为新属——长节沙蚕属(*Longosoma*)和新科——长节沙蚕科(*Longosomidae*)的唯一代表。1957年, Hartman 在南加利福尼亚水深11—82米的3个站连续采到34个标本,经过进一步研究发现了脱落的触角,观察到腹部刚毛是排成两行的,前一行的刚毛数目少,形状略似亚钩状毛(*subuluncini*)。1960年, Knox 简短地报导了在新西兰的豪克斯湾(Hawke's Bay),水深8—64米处发现的长节沙蚕属的一个新种,但迄今 Knox 对这个新种的描述尚未发表^[5]。1963年, Hartman 报导南加利福尼亚海谷的长节沙蚕时,发现 Ehlers 在1875年描述的异稚虫 *Heterospio longissima* 即长节沙蚕,至此已证明异稚虫 *Heterospio* 为最早的有效名称,而长节沙蚕 *Longosoma* 为异稚虫的同物异名应废弃不再使用。1965年, Hartman 在大西洋新英格兰一带采到异稚虫 *H. longissima*,她对此种除进行重新描述外,并正式建立了异稚虫科。

目前,异稚虫科仅记录两种:1. 异稚虫 *H. longissima* Ehlers, 1875 分布在北大西洋和南美东北,水深520—4,950米,为一深水种;2. 卡他利异稚虫 *H. catalinensis* (Hartman, 1944) 分布在南加利福尼亚,水深11—82米处。

异稚虫是多毛类中罕见的种类, Hartman (1965) 认为这一科是原始的环虫,大部恐已绝灭,因而目前在世界各海很少发现,此外,她又提出异稚虫因深居底内,采泥器不易采到,这也可能是很少发现的原因之一;但是在我国南北沿海,从黄海、东海一直到南海,都发现了异稚虫,看来与采泥器的取样关系不大,因为我们使用的就是“大洋50型”采泥器。此外,饶有趣味的是:虽然异稚虫在世界其他海域很罕见,但在我国沿海却很普遍,至于异稚虫是否为大部已绝灭的原始种类,在未获得化石资料前很难确定。

经过研究,中国海采到的异稚虫是一个尚未记录的新种,描述如下:

* 中国科学院海洋研究所调查研究报告第320号;中国科学院海洋研究所副所长张玺教授,以及刘瑞玉、郑执中副教授对本文初稿提出宝贵意见,底栖动物组同志采集标本,提供资料,谨致衷心的感谢。

中华异稚虫 新种 *Heterospio sinica* sp. nov. (图版 I, A—E)

正模标本长 58 毫米,宽 1.2 毫米,具前部短体节 9 个和后部特长的体节 6 个。一个最长的副模标本体长达 72 毫米,宽 1.4 毫米,前部具 9 个短体节,后部具 8 个特长体节。所有标本体末端均断失,没采到具肛节的完整标本。

口前叶略扁平,前端圆钝,无眼点。在口前叶和围口节之间有一对大而长具纵沟的触角,触角在固定标本时极易脱落,正模标本有一个触角没有脱落,向前方伸出(图版 I, A)。吻膜质,上面无任何附属物。

体分两区: 1. 前区又称胸部——具 9 个短的刚节; 2. 后区又名腹部——具特别长的刚节。第 I 刚节为双叶型,无鳃丝,第 II—IX 刚节每节具一对特别细长的须状鳃丝,鳃丝互相盘绕在体前区往往缠成一堆。前区 9 个刚节的疣足位于体侧面,背叶和腹叶稍稍分开,中间有一窄的空隙,背叶和腹叶很相似,均无显明的刚毛后叶,仅腹叶稍隆起一些为纵枕状。刚毛全部为简单型。前区胸部刚节上的刚毛为细毛状前端尖(图版 I, C),第 I 刚节腹叶无弯曲的粗钩状刚毛。

第 I 腹节的长度约为第 II 腹节的 1/3, 第 II 腹节的长度为第 III 腹节的 1/2, 第 III 腹节为第 IV 腹节的 3/4, 第 IV 腹节比第 V 腹节长,第 VI 腹节也比第 V 腹节长。腹部体节上的刚毛几围成一圈,刚毛排成前后两行,后面一行的刚毛数目多、细长、末端尖;前三个腹节的前一排刚毛较粗,一侧具小刺(图版 I, D),数目比后排少。从第 IV 腹节开始前排刚毛变的更粗,末端骤然变细,似钢笔杆末端的笔尖一般,其基部具细毛(图版 I, E),此末端尖细部分与粗的杆部截然断开称笔形刚毛,这种刚毛的数目比第 I—III 腹节上具刺的粗刚毛还要少。

中华异稚虫在黄海、东海和南海均有分布,水深 30—70 米,底质软泥。与中华异稚虫同时采到的其他多毛类有 *Neanthes oxypoda* (Marenzeller), *Glycera rouxii* Audouin et Milne-Edwards, *Sternaspis scutata* (Ranzani) 和 *Heteromastus* sp., 软体动物有 *Yoldia similis* Kuroda et Habe 和 *Tellina iridescens* Benson。

中华异稚虫与卡他利异稚虫 *H. catalinensis* 的形态很相似,两者均具有圆钝的口前叶和体后区腹部的刚毛排成前后两行;所不同处是新种第 I 刚节腹叶无粗而弯曲的钩状刚毛,和腹部体节前排刚毛的形状亦不同。新种与本属原有两种的重要区别(根据 Ehlers,

表 1

特 征	异 稚 虫 <i>H. longissima</i> Ehlers	卡他利异稚虫 <i>H. catalinensis</i> (Hartman)	中华异稚虫 <i>H. sinica</i> sp. nov.
1. 口前叶前端形状	尖锥形	钝圆形	钝圆形
2. 鳃	较短	长	很长
3. 第 I 刚节腹叶上的钩状刚毛	无	有	无
4. 体后区腹部体节上的刚毛	排成一行	排成两行	排成两行
5. 体后区腹部刚毛的种类	两种, 毛状刚毛和钩状刚毛交互排列	毛状刚毛和较粗的亚钩状刚毛	毛状刚毛和一侧具小刺的粗刚毛及笔形刚毛三种
6. 垂直分布	520—4,950 米	11—82 米	30—70 米
7. 地理分布	大西洋新英格兰、百慕大和南美东南外海	南加利福尼亚	黄海、东海和南海

1875; Hartman, 1944, 1957, 1963, 1965)见表 1。

模式标本: 正模(标本号 A-26), 东海, 水深 30 米, 底质泥; 副模(标本号 A-27), 采集地同正模, 均保存在青岛中国科学院海洋研究所无脊椎动物标本室。

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A NEW AND INTERESTING SPECIES OF THE GENUS *HETEROSPION* (POLYCHAETA, HETEROSPIONIDAE)

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ABSTRACT

In working on the polychaetous annelids from the China Sea, a new species of Heterospionid was found in the shallow depths in muddy sediments. It is referred to the interested and little known family Heterospionidae Hartman, 1965. Only one genus *Heterospio* Ehlers, 1875 of the family is known. The genus *Heterospio*, of which only two previous species were known, has attracted considerable interest in recent years. A third species of this genus was indicated by Knox (1960) from Hawke's Bay, New Zealand in 8—64 fms; its description has not yet been published. Description of the new species is as follows.

Family HETEROSPIONIDAE Hartman, 1965

Genus *Heterospio* Ehlers, 1875

Heterospio sinica sp. nov.

(Pl. I, Figs. A-E)

The holotype is 58 mm long by 1.2 mm wide and consists of 9 anterior setigerous segments, and 6 very long posterior segments. A paratype is 72 mm long by 1.4 mm wide, and consists of 9 anterior setigerous segments, and 8 very long posterior segments.

The prostomium is somewhat depressed, tapers anteriorly but is broadly rounded in

front, and lacks eyespots. A pair of long, large, longitudinally grooved palpi is attached in transverse slits between the prostomium and peristomium (Pl. I, A, B). The eversible proboscis is an unarmed pouch. The body is divided into an anterior region of nine short setigerous segments and an abdomen with greatly prolonged segments. The first abdominal segment is only about one third of the second, and the second about one half of the third, which is only about three fifth of the fourth. The fourth and the sixth longer than the fifth.

Abdominal parapodia consists of low ridges nearly encircling the body. The setae are in a double transverse row, with the posterior series all slender and distally pointed. In the firstthree abdominal segments the anterior series are fewer in number, stout capillary, which is armed with spine. From the fourth abdominal segment the stout capillary setae, instead of being broader in their distal parts and terminating in a shorter arista, are not continuous with the shaft; they resemble aristate setae. .

Distribution: *Heterospio sinica* is known only from shallow depths in the Chinese waters; it is associated with other polychaetes, *Neanthes oxypoda* (Marenzeller), *Glycera rouxii* Audouin et Milne-Edwards, *Sternaspis scutata* (Ranzani), *Heteromastus* sp. and mollusks, probably *Yoldia similis* Kuroda et Habe and *Tellina iridescens* Benson, in mud.

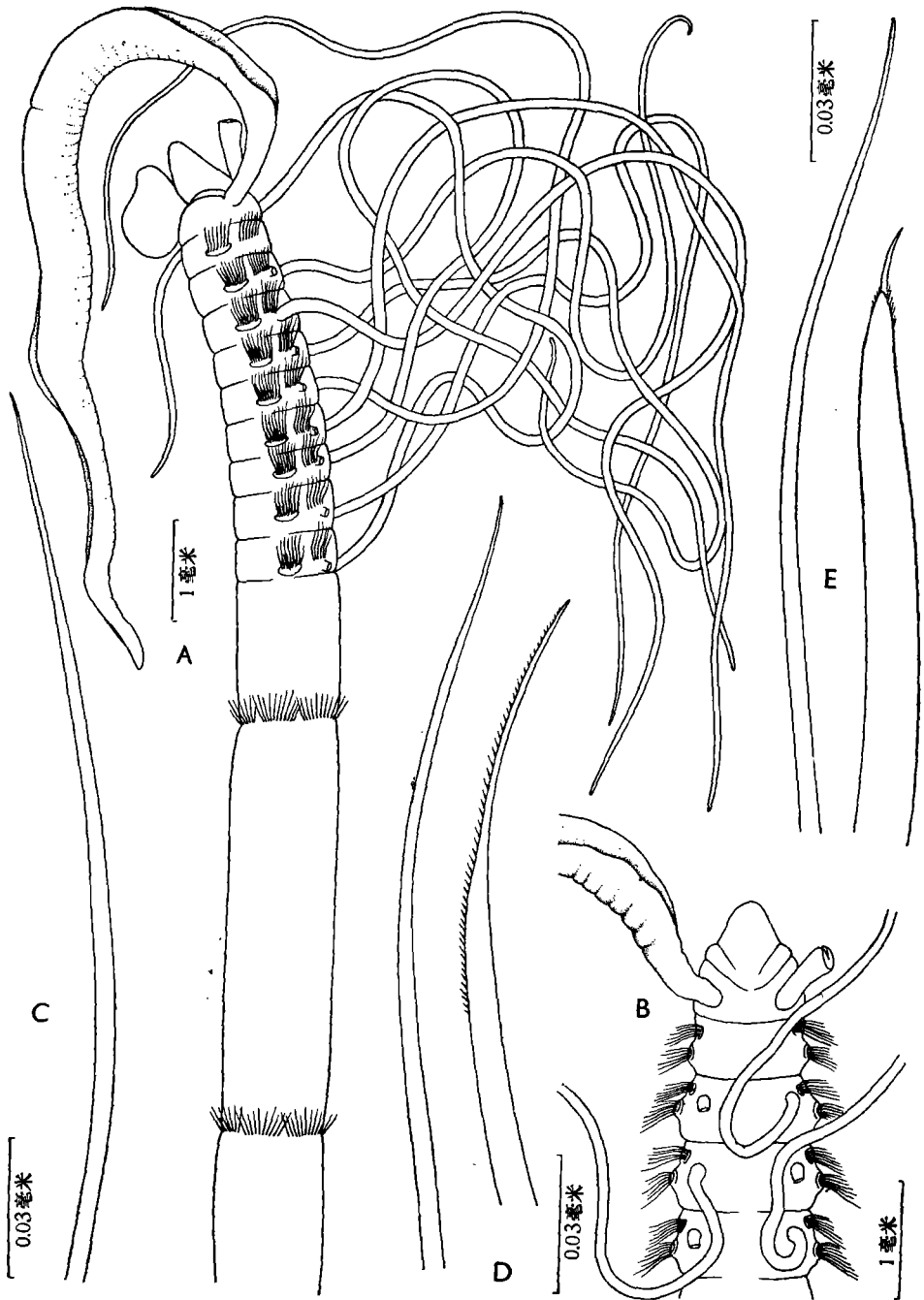
Comparison: The new species resembles *H. catalinensis* (Hartman) in having a broad rounded prostomium and a double transverse row of setae in abdominal segments. The two differ in that the first lacks acicular setae in the first setigerous segment and *Heterospio sinica* has capillary and aristate setae, whereas *H. catalinensis* lacks the aristate setae. A table comparing the described species of *Heterospio* is presented. It is based on the work of Ehlers (1875), Hartman (1944, 1957, 1963, 1965), and the present description.

Characters	<i>H. longissima</i> Ehlers, 1875	<i>H. catalinensis</i> (Hartman, 1944)	<i>H. sinica</i> sp. nov.
1. Anterior end of prostomium	pointed	broadly rounded	broadly rounded
2. Branchiae	short	long	very long
3. Acicular setae in the first setiger	absent	present	absent
4. Setae in posterior segments	1 row	double transverse rows	double transverse rows
5. Type of setae in abdominal setigers	acicular and capillary setae	capillary and resemble subuluncini	capillary, stout capillary, which armed with spine and resemble aristate setae
6. Depth where found	520-4,950 m	11-82 m	30-70 m
7. Distribution	off New England and Bermuda, off northeastern South America	Southern California, off oceanside	Yellow Sea, East China Sea and South China Sea

Type material: The Holotype (No. A-26) and two paratypes are deposited in the Institute of Oceanology, Academia Sinica, Tsingtao, China.

Type locality: East China Sea, 30 m.

Known range: Yellow Sea, East China Sea and South China Sea.



中华异稚虫 *Heterospio sinica* sp. nov.

- A. 体前端背侧面观；B. 体前端背面观；C. 体前区的细毛状刚毛；D. 第 I 腹节的粗毛状刚毛(一侧具刺，位前排)和细毛状刚毛(后排)；E. 第 IV 腹节的笔形刚毛(前排)和细毛状刚毛(后排)。
 A. anterior end, in dorso-lateral view; B. anterior end, in dorsal view; C. a capillary seta from an anterior segment; D. a stout capillary seta with an accompanying capillary seta from the first abdominal segment; E. an aristate seta with an accompanying capillary seta from the fourth abdominal segment.