

黄海小型砂间多毛类异触虫属一新种*

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提要 于1987年11月在青岛附近的脱岛采到属于异触虫科的小型砂间多毛类数条。经研究表明, 这些标本为异触虫属的新种——滑毛异触虫 *Pisione levisetosa*。本文对该新种进行了详细的描述并附有形态图。新种模式标本保存于国家海洋局第一海洋研究所。

多毛类异触虫科 Pisionidae 中绝大多数种为典型小型砂间生物, 虫体小而纤细, 但具明显的生殖交接器官, 迄今在中国沿海尚未见到有关于异触虫科的报道。于1987年中、西德两国学者在黄、渤海调查小型海洋生物时, 采到一批小型砂间多毛类标本。于1988—1989年在奥斯纳布吕克大学的小型生物研究室对标本进行了分类研究, 首次发现中国沿海异触虫属 *Pisione* 一新种。

1. 形态描述

滑毛异触虫, 新种 *Pisione levisetosa* nov. sp.

正、副模标本均采自山东青岛附近的脱岛 (35°56'27"N, 120°19'47"E 和 35°56'11"N, 120°19'15"E), 水深 24—30m, 底质泥沙, 1987年11月5日。

标本中最大的一个长 8.5mm; 不包括疣足宽为 0.25mm, 包括疣足宽 0.7mm; 具 48 个刚毛节。酒精标本体色为棕白色。虫体纤细。触手特长, 位于触须下方。触须两对, 向前伸出; 背触须分节不明显, 长约为触手的 1/7; 腹触须短小, 具两节(图 1a)。触须基部有一对粗钝的足刺刚毛伸出体外(图 2a)。眼一对, 位于第一和第二刚毛节间的背中部。脑向后延伸至第 3 刚毛节。两对颚器位于第 4 和第 5 刚毛节间。触须节与其后的刚毛节无明显的分界。有许多很小的尖乳突分布在触手和触须上。疣足的背肢完全退化, 仅余有一根足刺, 在体后部足刺伸出体外。腹肢发达, 具前后两个刚叶, 近末端分布有尖乳突。所有背须形状相同, 其基部膨大, 顶端细; 第一刚毛节的腹须与背触须等长, 似由 3 节组成, 其余的腹须与背须形状相同(图 1b, c)。背、腹须末端均具有尖的乳突。腹肢具 5 根刚毛和一根粗的足刺。刚毛为简单型和复型。简单型刚毛有两种: 位于上方的粗壮, 末端略呈刀形, 上具一排细长齿(图 2b); 另一种平滑, 为足刺状(图 2e), 此刚毛从体前部至体后部逐渐增长, 此外位于体部疣足的这种刚毛近末端处还有一横齿(图 2d)。复型刚毛均为异齿型, 共有 3 种: 位于上方的一根的齿片长, 上具细齿(图 2c); 位于中部一根的齿片上具粗齿, 柄节上的长齿具双瓣, 其下还有一个横齿(图 2f—g); 位于下方一根的齿片平滑,

* 国家自然科学基金 (38970187 号) 和联邦德国研技部 (BMFT) 资助项目。

收稿日期: 1990年6月6日。

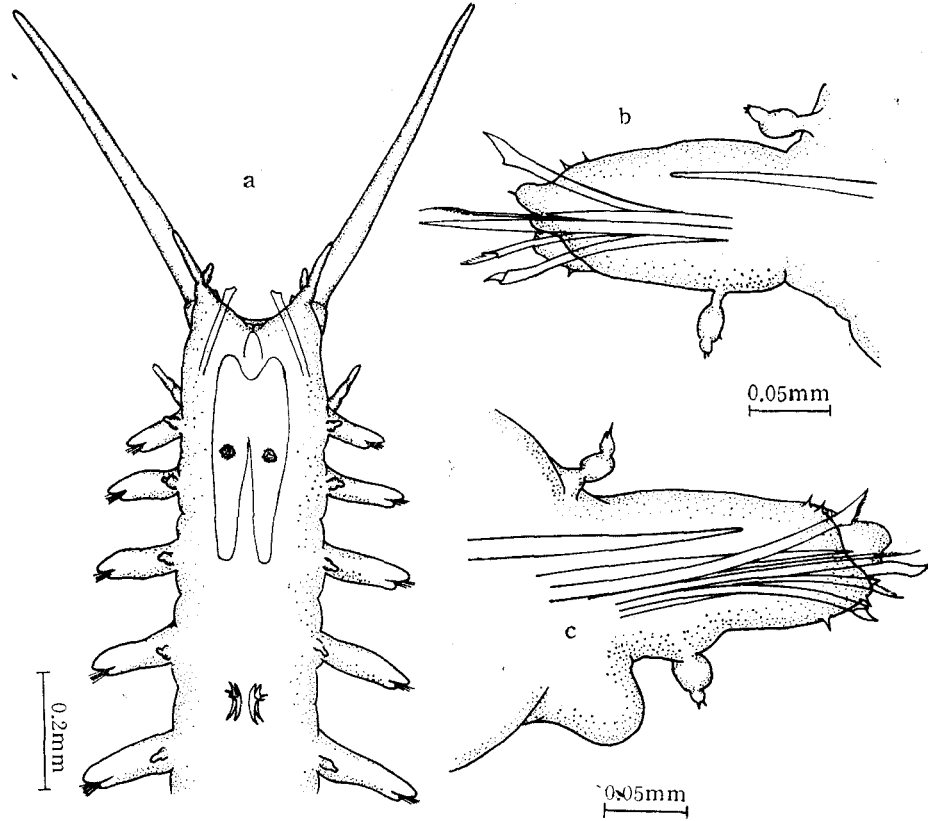


图1 滑毛异触虫,新种 *Pisione levisetosa* nov. sp.

a. 体前部背面观 (anterior end, dorsal view); b. 第12对疣足前面观(12th parapodium, anterior view); c. 第15对疣足后面观 (15th parapodium, posterior view)。

柄节上的长齿也具双瓣,下面也有一个横齿(图 2h-i)。肛节半圆形,具尖乳突。

正、副模标本均保存在青岛国家海洋局第一海洋研究所。

2. 讨论与结论

新种的刚毛结构同异触虫属已报道过的种有明显不同。根据第二刚毛节背须与其他刚毛节背须形状相同与否,异触虫属可分为两类。新种滑毛异触虫属于所有背须相同的一类,共有10种,它们是 *P. remota* (Southern, 1914); *P. gopalai* (Alikunhi, 1941); *P. puzae* Siewig, 1953; *P. koepkei* Siewig, 1955; *P. longipalpa* Ushakov, 1956; *P. reducta* Storch, 1967; *P. laubieri* Hartmann-Schröder, 1970; *P. corallicola* Hartmann-Schröder, 1974; *P. martinsi* Hartmann-Schröder, 1974; *P. galapagoensis* Westheide, 1974。其中 *P. gopalai*, *P. koepkei*, *P. longipalpa*, *P. reducta*, *P. laubieri*, *P. corallicola*, *P. martinsi*, *P. galapagoensis* 8种只具一种简单型刚毛,另外 *P. remota* 和 *P. puzae* 虽也有两种简单型刚毛,但都不具平滑齿片的复型刚毛,而新种滑毛异触虫具有两种简单型刚毛及带平滑齿片的复型刚毛。因此本文的标本与以上各种均有明显区别,滑毛异触虫可以确立为新种。

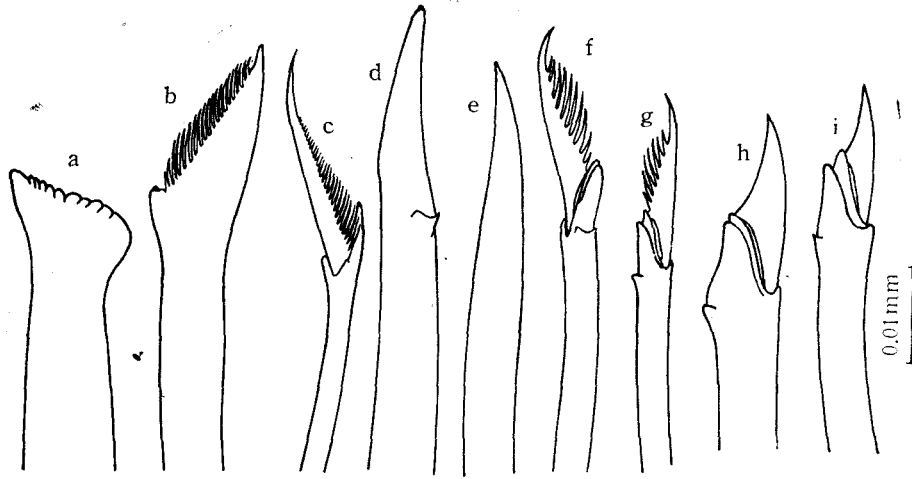


图2 滑毛异触虫,新种 *Pisione levisetosa* nov. sp.刚毛 (chaeta)

a. 触须基部旁的足刺刚毛 (acicular spine near bases of tentacular cirri); b. 第14对疣足的上方简单刚毛 (supra simple chaeta from 14th parapodium); c. 第12对疣足最上方的复刚毛 (superio-most compound chaeta from 12th parapodium); d. 第14对疣足的下方简单刚毛 (infra simple chaeta from 14th parapodium); e. 第20对疣足的下方简单刚毛 (infra simple chaeta from 20th parapodium); f. 第14对疣足的中间复刚毛 (middle compound chaeta from 14th parapodium); g. 第20对疣足的中间复刚毛 (middle compound chaeta from 20th parapodium); h. 第14对疣足的最下方复刚毛 (inferio-most compound chaeta from 14th parapodium); i. 第20对疣足的最下方复刚毛 (inferio-most compound chaeta from 20th parapodium)。

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**A NEW INTERSTITIAL SPECIES OF THE GENUS *PISIONE*
(POLYCHAETA: PISIONIDAE) FROM YELLOW
SEA, CHINA***

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ABSTRACT

Almost all pisionid species belong to meiofauna and live in interstices of sandy sediment. Until now Pisionidae has not been reported from China. In a study of polychaete meiofauna from Yellow Sea, an undescribed species of the genus *Pisione* was found in the littoral area of a small island near Qingdao (35°56'27"N, 120°19'47"E; 35°56'11"N, 120°19'15"E) in 1987. Both holotype and 4 paratypes have been deposited in the First Institute of Oceanography, State Oceanic Administration, Qingdao.

***Pisione levisetosa* nov. sp. (Fig. 1,2)**

Complete specimen up to 8.5 mm long, with up to 48 chaetigers; width 0.25 mm without parapodia, 0.7 mm with parapodia. Palps very long (Fig. 1 a), 0.7—0.8 mm. Two pairs of tentacular cirri; articulation of dorsal ones unobvious and about one seventh as long as the palps; ventral ones small and bi-articulated; their acicular spines distally enlarged with bluntly serrated asymmetrical distal margin (Fig. 2 a). One pair of eyes. Two pairs of jaws. Many pointed papillae scattered on palps and tentacular cirri. Uniramous parapodia with spherical flask-like dorsal and ventral cirri of same size and shape in all segments, except for the first chaetiger; here ventral cirri elongate and as long as the dorsal tentacular cirri (Fig. 1 b—c). Stiff sensory cilia on tips of dorsal and ventral cirri. Parapodial lobe with solitary positioned straight acicula and bundle of chaetae that usually consists of five distally projecting chaetae and one stout acicula. One supra-acicular simple chaeta stout, with oblique serrated apical part (Fig. 2 b). One sub-acicular pointed simple chaeta, with subdistal transverse ridge on anterior parapodia (Fig. 2 d—e); this chaeta about two times longer in the posterior parapodia. Three sub-acicular compound chaetae: the superior-most blade with long pointed, possessing long, slender serrations (Fig. 2 c); the middle one with stout blade, the serrations of which more prominent (Fig. 2 f—g); the inferior-most compound with stout, relatively short, smooth blade (Fig. 2 h—i). Shafts of middle and inferior-most compound chaetae with subdistal transverse ridge, distally bifid. All compounds unidentate. Pygidium with pointed papillae.

Pisione levisetosa nov. sp. belongs to a group of species, which do not possess dorsal cirri

* The project was supported by the National Natural Science Foundation of China and the Ministry for Research and Technology (BMFT), Bonn, FRG.

of different size and shape on the second chaetiger. Among these *P. gopalai* (Alikunhi, 1941); *P. koepkei* Siewig, 1955; *P. longipalpa* Ushakov, 1956; *P. reducta* Storch, 1967; *P. laubieri* Hartmann-Schröder, 1970; *P. corallicola* Hartmann-Schröder, 1974; *P. martinsi* Hartmann-Schröder, 1974; *P. galapagoensis* Westheide, 1974 are equipped with only one simple chaeta with in their parapodial lobes. *P. remota* (Southern, 1914) shows nearly identical simple chaetae of two types (Stecher 1960). Two types of sample were also described for *P. puzae* Siewig, 1953. However, *P. levisetosa* nov. sp. differs from these two species in possessing compound chaetae of different types with or without serration.