

Two New Species of Syllidae (Annelida, Polychaeta) from Korea

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ABSTRACT

Two new species each belonging to the genera *Opisthosyllis* and *Syllis* collected from Cheju Is. are described under the name of *Opisthosyllis convexa* and *Syllis cirrita*, respectively.

Key words: Annelida, Polychaeta, Syllidae, new species, Korea

INTRODUCTION

The genera *Opisthosyllis* Langerhans, 1879 and *Syllis* Savigny, 1818 comprise few species. Only four species of *Opisthosyllis* have been known in the world. These are *O. viridis* Langerhans, 1879, *O. longicirrata* Monro, 1939, *O. brunea* Langerhans, 1879 and *O. japonica* Imaijima, 1966.

All members of the genus *Opisthosyllis* are characterized by a mid-dorsal tooth which is present at a considerable distance from the anterior margin. The genus *Syllis* is distinguished from *Typosyllis* Langerhans by having pseudocompound or simple seta in addition to compound setae.

Up to now two species of *Syllis* have been described from Korean Sea. These are *Syllis spongiphila* Verrill, 1818 (Paik, 1982) and *Syllis amica* Quatrefages, 1865 (Lee and Rho, 1992).

This paper deals with the description of two new species each belonging to *Opisthosyllis* and *Syllis*. All the type specimens are deposited in the Department of Biology, Ewha Womans University.

DESCRIPTION

Subfamily Syllinae Rioja, 1925 참염주발갯지렁이아과

Genus *Opisthosyllis* Langerhans, 1879

***Opisthosyllis convexa* n. sp. (Fig. 1)**

Type specimen. Holotype: one specimen (SOH 900701), Hup'ŏ, Ch'uja-do, 24 Jul, 1990 (Lee).

Paratype: two specimens (SOP 900702), collection details as the holotype; two specimens (SOP 881203), Taep'ŏ, Cheju Is. (Lee & Seo).

Description. Largest individual measuring 13.4 mm long and 1.3 mm wide excluding parapodia, consisting of 114 setigerous segments. Body creamy colored and without color markings. Dorsum covered with minute conical papillae. Prostomium subglobular, wider than long. Two pairs of eyes redish brown in trapezoidal arrangement; anterior eyes larger than posterior ones. Median antenna arising between posterior eyes or from center of prostomium, consisting of 27 annulations. Lateral antennae arising from anterior submargin of prostomium; each about two-thirds as long as median one, with 18 annulations. Palps triangular lobes, basally fused. Tentacular segment covering posterior part of prostomium (Fig. 1a). Pharynx redish brown, with one middorsal tooth at level of 7th or 11th setigerous segment (Fig. 1a). Proventriculus located in 5-6 setigerous segments. Dorsal tentacular cirri as long as median antenna, and ventral tentacular cirri approximately two-thirds as long as dorsal one. First dorsal cirri longer than median antennae, each consisting of 37 annulations. Second dorsal cirri short and with 24 annulations. Third dorsal cirri (Fig. 1d) with 33 annulations. Fifth dorsal cirri short and with 27 annulations. Sixth dorsal cirri long and 31 annulations. Seventh and eighth ones short. Following ones alternated by long (Fig. 1c) and short (Fig. 1b) ones, with 21-22 and 11-12 annulations. Seta in anterior parapodia slender than those of median one; its short blade with 1 minute accessory tooth; their cutting margin with coarse serrations. Blade of superior compound seta with length of 1.98 μ m and one of inferior compound seta (Fig. 1f) 1.78 μ m on setigerous segment 1. Blades of compound seta on anterior and median parapodia similar in size. In addition, posterior parapodia with 2 simple setae (Fig. 1i, j). One of these setae located in superior and the other in inferior position. Acicula (Fig. 1k) numbering 4 in anterior parapodia and decreasing posteriorly to only one; each ends in blunt tip.

Remarks. *Opisthosyllis convexa* n. sp. shows similarity to *O. viridis* Langerhans, 1879, in location of the tooth at inner wall of the pharynx, and the shapes of the seta and the surface of the body with many small papillae. The new species is easily distinguished from *O. viridis* as follows: 1) pharynx of *O. convexa* are approximately half as wide as the proventriculus, while in *O. viridis* width of the pharynx and proventriculus about equal; 2) the dorsal cirri of *O. convexa* taper to the end, while those of *O. viridis* do not; 3) the ratio of the blade of the superior compound seta to inferior one on the first segment 10:9 (3:2 in *O. viridis*); 4) anterior margin of the occipital flap of the new species is convex which is concave in *O. viridis*; 5) in median parapodial seta of the new species has second tooth on median part of cutting margin which is positioned near tip in *O. viridis*.

Habitat. Among seaweed in intertidal zone.

Etymology. The specific name, *convexus*, is derived from Latin meaning arched outward, and refers

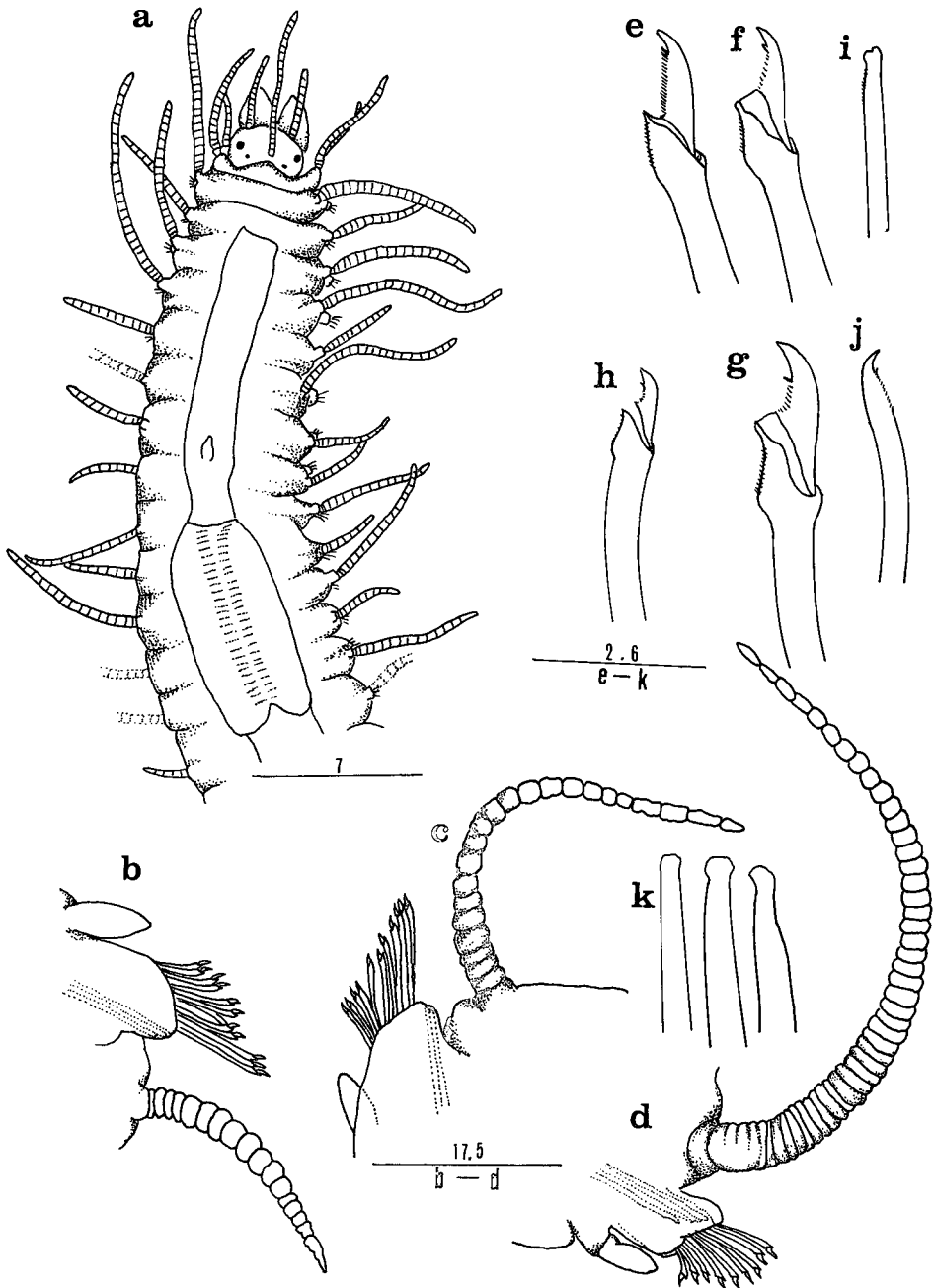


Fig. 1. *Opisthosyllis convexa* n. sp.: a, anterior end, dorsal; b, median parapodium with short cirri; c, median parapodium with long cirri; d, 3rd parapodium; e, superior compound seta from 1st parapodium; f, inferior compound seta from the same; g, compound seta from median parapodium; h, compound seta from posterior parapodium; i, superior simple seta from the same; j, inferiormost simple seta from the same; k, acicula. (Unit of each scale- 1: mm, b-k: μm)

to the shape of tentacula segment which covers posterior part of prostomium.

Genus *Syllis* Savigny, 1818

***Syllis cirrita* n. sp. (Fig. 2)**

Type specimen. Holotype: one specimen (SSH 911001), Ch'aguido, Cheju Is. 23 October, 1991, depth 18 m (J.I. Song). Paratype: six specimens (SSP 911002), collected together with the holotype.

Description. Body cream colored, 13.5 mm long 0.48 mm wide excluding parapodia with 68 setigerous segment. Prostomium subglobular, approximately twice wider than long. Two pairs of redish brown eyes in trapezoidal arrangement, anterior pair slightly larger. Antennae, tentacular cirri, dorsal cirri indistinctly annulated partly, and its terminal irreguallary wrinkled. Median antenna arising between posterior eyes, approximately 5.47 times as long as prostomium. Lateral antennae arising from submargin of prostomium, each half as long as median antenna. Palps fused at their base, slightly longer than prostomium. Tentacular segment half as long as first setigerous segment. Dorsal tentacular cirri approximately 1.27 times as long as median antenna. Ventral tentacular cirri as long as lateral antennae. Pharynx (Fig. 2a) yellow and with 1 subterminal, middorsal tooth in its inner wall. Proventriculus extending from setigerous segments 5-8. First dorsal cirri twice as long as median antenna. Second dorsal cirri slightly more than one-fourth as long as first cirri. Third cirri 2.48 times as long as second one. In median region, dorsal cirri alternated by long and short ones; long cirri (Fig. 2d) approximately 1.6 times as long as median antenna; short dorsal cirri (Fig. 2c) less than half length of long dorsal one. Three kinds of setae; bidentate pseudocompound seta (Fig. 2e), compound falcigerous seta (Fig. 2h) with short bidentate blade bearing secondary tooth weaker than primary and unidentate simple setae (Fig. 2f, g). Pseudocompound and simple setae with 1 small lateral enlargement (Fig. 2e-g). Bidentate pseudocompound setae and bidentate compound setae with moderately hooked tip; unidentate simple setae with strongly hooked near tip; pseudocompound seta numbering 1-2, simple seta 1-2, compound seta 1-2 in each parapodium of anterior segment. In posterior region, another simple seta substitute for simple seta of anterior. Acicula (Fig. 2i) numbering 4 in anterior and decreasing to only one posteriorly; stouter on posterior parapodia.

Remarks. *Syllis cirrita* n. sp. has resemblance to *S. spongiphila* Verrill, 1855 (Verrill, 1855; Hartman, 1944; Imajima, 1966), but many characters are not in agreement. *Syllis cirrita* differs from descriptions of *S. spongiphila* in the following characters: 1) The lateral antennae are approximately half length of median one, while they are two-thirds as long in *S. spongiphila*. 2) *S. spongiphila* (Imajima, 1966) has not unidentate simple seta in anterior parapodium, while it is present in *S. cirrita*. 3) simple seta of *S. cirrita* in posterior segments is unidentate, but *S. spongiphila* has bidentate simple seta as described by Imajima.

Habitat. Among seaweeds and on coral.

Etymology. The specific name, *cirrita*, is derived from Latin meaning "filamentous", referring to the very long cirri.

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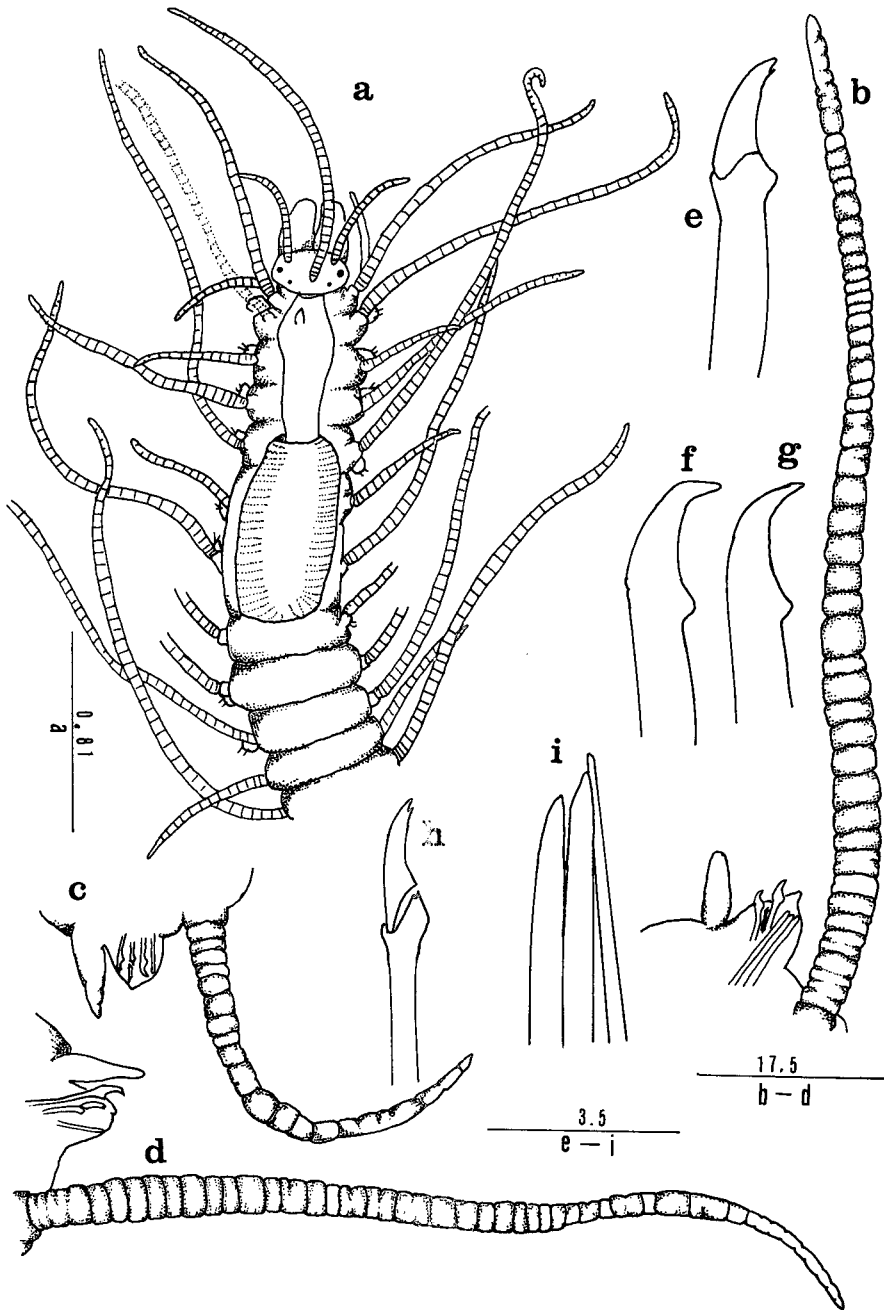


Fig. 2. *Syllis cirrita* n. sp.: a, anterior end, dorsal view; b, 9th parapodium, c, median parapodium with short cirri; d, median parapodium with long cirri; e, bidentate pseudocompound seta; f, g, unidentate simple seta; h, bidentate compound seta; i, acicula from 9th parapodium. (Unit of each scale- a: mm, b-i: μ m)

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한국 해산 염주발갯지렁이과(환형동물문, 다모강)의 2신종

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요 약

1988년 12월 제주도 대포와 1990년 7월 상추자도의 후포에서 채집된 *Opisthosyllis*속, 1991년 10월 제주도의 차귀도에서 채집된 *Syllis* 속의 염주발갯지렁이류 2종을 각각 *Opisthosyllis convexa* 및 *Syllis cirrita*로 명명하여 기재한다.