

SOME BENTHIC POLYCHAETOUS ANNELIDS FROM THE YELLOW SEA

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황해 저서산 다모환충류의 분류

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황해에서 채집된 다모환충류 7과 9종을 보고한다.

이들중 *Glycera chirori***를 제외한 6과에 속하는 8종에 대하여 형태학적인 기술을 하였으며,

이 8종은 한국 動物相에 최초로 기재된다.

INTRODUCTION

Some benthic polychaetous annelids were collected from the three bottom dredging stations in the Yellow Sea by the Geological and Mineral Institute of Korea(GMIK) in 1969. The geological locations are shown in Fig. 1 and the depth and bottom-water temperature of the stations are shown in Table 1.

Nine species of polychaetes representing seven families are reported with morphological descriptions. Among them eight species representing six families are newly recorded in the polychaetous annelid fauna of Korea.

Family Sigalionidae

1. *Sthenolepis japonica* (McIntosh, 1885)

Family Nephtyidae

2. *Nephtys caeca* (Fabricius, 1780)
3. *Nephtys longosetosa* Oersted, 1843

Family Glyceridae

4. *Glycera chirori* Izuka, 1912**

Family Onuphidae

5. *Nothria geophiliiformis* (Moore, 1903)

6. *Nothria shirikishinaiensis* Imajima, 1960

Family Lumbrineridae

7. *Lumbrineris heteropoda* (Marenzeller, 1879)

Family Pectinariidae

8. *Cistenides okudai* Imajima and Hartman, 1964

Family Trichobranchidae

9. *Terebellides stroemi* Sars, 1835

Table 1. Bottom depths and bottom-water temperatures of the three dredging stations

Dredging station	Depth(m)	Bottom-water temp. (°C)
35°20.1'N., 124°35.6'E.	84	6.7
35°51.3'N., 124°47.8'E.	85	6.2
36°19.8'N., 125°00.0'E.	74	5.7

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**This species was previously recorded in Korea (Rho and Song, unpublished)

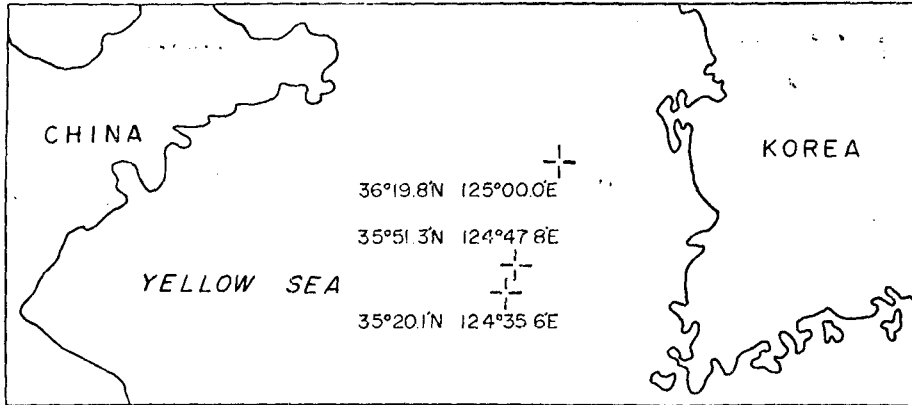


Fig. 1. Geographical location of the three dredging stations.

DESCRIPTION OF THE SPECIES

Family Sigalionidae

Sthenolepis japonica (McIntosh, 1885)

(Plate 1, Fig. A)

Leanira japonica McIntosh, 1885, p. 154, pl. 22, fig. 3; pl. 14a, figs. 1, 2.

Sthenolepis japonica Izuka, 1912, pp. 88-89, pl. 10, figs. 3-7.

Sthenolepis japonica Imajima and Hartman, 1964, p. 43.

Diagnosis: The body 50 mm long for 47 segments (anterior incomplete); it is 6.2 mm wide including parapodia. Posterior notosetae are simple, slender and have whorls of spikelet. Posterior neurosetae are compound spinigers with a long pointed tip; it is simple setae provided with distal whorls of spikes. Elytra are white.

Distribution: Japan; Indo-Pacific areas; Gulf of Suez; Yellow Sea.

Family Nephtyidae

Nephtys caeca (Fabricius, 1780)

(Plate 1, Figs. B-D)

Nephtys caeca Izuka, 1912, pp. 213-215.

Nephtys caeca Okuda, 1938b, pp. 123-124.

Nephtys caeca var. *ciliata* Okuda, 1939, p. 231, textfig. 6.

Nephtys caeca Hartman, 1950, p. 95.

Nephtys caeca Okuda and Yamada, 1954, pp. 186-187, textfig. 4.

Nephtys caeca Imajima, 1961, pp. 88-89, textfig. 4.

Nephtys caeca Fauchald, 1963, pp. 11-13, textfig. 2.

Nephtys caeca Imajima, 1963, p. 354.

Nephtys caeca Imajima and Hartman, 1964, pp. 156-157.

Nephtys caeca Imajima, 1967, p. 424.

Nephtys caeca Kirkegaard, 1929, pp. 44-45.

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Diagnosis: The body is 50mm long for 119 segments; it is 4 mm wide including parapodia. The dorsum is convex and the ventrum has a median longitudinal groove, which splits into two in front behind the central prominence and runs forwards one on each side to terminate at the mouth. The prostomium with slightly convex front, sides convex, posterior end is drawn out to a concavely triangular tip. First prostomial antennae is slender; second antennae is longer and much stouter, somewhat constricted at the base. The proboscis is sub-cylindrical with 22 longitudinal rows of papillae subdistally, each row a series of 4 to 6. There is no median papilla; it terminates in 20 forked processes and a median simple one. Neuropodial and notopodial postacicular lobes are well developed. Neuropodial and postacicular lobes are larger than those of notopodia; both are foliaceous. Neuropodial acicular lobes are distally incised at the tip of the aciculum. Strongly recurved interramal cirri are first present from the 4th segment to the posterior segment.

Distribution: Greenland; North Atlantic, Pacific and Arctic Oceans; Bering Sea; Japan; Norwegian Waters; Canadian Pacific region; New England region; subarctic, boreal, Lusitanian; Okhotsk Sea; Yellow Sea.

Nephtys longosetosa Oersted, 1843

(Plate 1, Figs. E, F)

Nephtys longosetosa Okuda, 1939, pp. 231-232.

Nephtys longosetosa Imajima, 1961, pp. 87-88, textfig. 3.

Nephtys longosetosa Fauchald, 1963, pp. 8-11.

Nephtys longosetosa Imajima and Hartman, 1964, p. 157.

Nephtys longosetosa Kirkegaard, 1969, pp. 52-55.

Diagnosis: The body is 58 to 81 mm long and 3 to 4.5 mm wide, and it has 108 to 115 segments. Prostomium with convex front bears two pairs antennae. First antennae is triangularly tapered; second antennae is conical and longer than the first one. The proboscis has 22 longitudinal rows of papillae subdistally, each row a series of 3 to 4. A median papilla in front of the row in dorsomedian line. In typical parapodia the preacicular lobe is small and evenly rounded; postacicular lobe is longer than the acicular lobe. Neuropodial acicular lobe is evenly rounded, somewhat more symmetrical than the notopodial one. Neuropodial preacicular lobe is short, simple and rounded; postacicular lobe is about twice as long as the acicular lobe and rounded oval. Intersegmental cirri present from the 3rd setigerous segment to the posterior end of the body. The postacicular setae narrow with a long, finely tapered tip. Subdistally it has a bristled structure. Preacicular setae is much shorter and stouter with conical tip and a barred structure.

Distribution: North Atlantic and Pacific Oceans; Panama; Japan; Norwegian Waters; Magellan Strait; Arctic, Lusitanian; Yellow Sea.

Family Glyceridae

Glyceria chirori Izuka, 1912

(Plate 2, Fig. A)

Glyceria chirori Izuka, 1912, pp. 245-246, pl. 2, fig. 18; pl. 24, fig. 13.

Glyceria chirori Okuda, 1938b, p. 125, textfig. 2.

Glyceria chirori Imajima and Hartman, 1964, pp. 161-162.

Glycera chirori Imajima, 1970, p. 116.

Glycera chirori Rho and Song, unpublished

Diagnosis: Five specimens were collected by dredging from muddy bottom. The largest one is 52 mm long and 1.9mm wide including parapodia, and it has 139 setigerous segment.

Distribution: Japan; China; Korea; Yellow Sea.

Family Onuphidae

Nothria geophiliformis (Moore, 1903)

(Plate 2, Figs. B, C)

Onuphis geophiliformis Izuka, 1912, pp. 103-104, pl. 11, figs. 8,9.

Nothria geophiliformis Hartman, 1944, p. 85.

Nothria geophiliformis Hartman, 1961, p. 22.

Nothria geophiliformis Imajima and Hartman, 1964, p. 244.

Nothria geophiliformis Fauchald, 1968, p. 22, pl. 6, figs. a-d.

Diagnosis: The body is 73mm long for 146 segments; it is 2.8mm wide including parapodia. In life the anterior dorsum is brown with brilliant iridescence; in formalic specimen it is whitish yellow. The prostomium is small and has 2 frontal antennae and 5 long occipital tentacles; their ceratophores have 8 to 12 nearly equal rings. Branchiae are first present from the 5th parapodium as along simple filament, and they continue back to the last 35th segment.

The first 4 pairs of parapodia are provided with 4 to 7 tridentate and pseudo-compound hooded setae. Capillarylike setae are present in all parapodia, however, they are sparse in the first 4. The stout subacicular hooks are present from setiger 12 and continue back to the posterior end of the body.

Distribution: Japan; California; Coast of Western Mexico; Yellow Sea.

Nothria shirikishinaiensis Imajima, 1960

(Plate 2, Figs. D-G)

Nothria shirikishinaiensis Imajima, 1960, pp. 55-58, textfigs. 1-14.

Nothria shirikishinaiensis Imajima and Hartman, 1964, pp. 245-246.

Diagnosis: Length of 58 segments (Posterior incomplete) is 25 mm and width is 2.9 mm at the 7th segment. In life the anterior dorsum is brown with brilliant iridescence; in formalic specimen, only a light brown. The prostomium is small and has 2 frontal antennae and 5 occipital tentacles; their ceratophores have 11 to 13 nearly equal rings and a longer distal one. The peristomium is slightly shorter than the first setiger and has a pair of tentacular cirri.

Branchiae are present from the first setiger as a simple filament. The anterior parapodia have 2 thick, tridentate, pseudo-compound hooded setae and slender tridentate ones. At the 5th parapodia the slender ones are replaced by bidentate pseudo-compound hooded setae; they are present through parapodia 6. Pectinate setae are first represent from the 6th. Subacicular hooks occur from parapodia 11 and continue posteriorly. Ventral cirri are cirriform through parapodia 7, and there after they are pedlike. Tubes are externally covered with fine sand.

Distribution: North Japan; Yellow Sea.

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Family Lumbrineridae

Lumbrineris heteropoda (Marenzeller, 1879)

(Plate 2, Figs. H-K)

Lumbriconereis heteropoda Izuka, 1912, pp. 141-142, pl 14, fig. 19.

Lumbrineris heteropoda Imajima and Hartman, 1964, pp. 262-263.

Diagnosis: The body is 36 to 45 mm long for 125 to 129 segments ; it is 1 to 2.6 mm wide including parapodia. The prostomium is conical, longer than broad. In median parapodia, the presetal and postsetal lobes are transformed so that the postsetal are the longer and directed obliquely upward. The anterior parapodia have only limbate capillary setae. The median parapodia have simple hooded hooks, accompanied by capillary setae; they continue in diminishing numbers to the end.

Distribution: Japan; Yellow Sea.

Family Pectinariidae

Cistenides okudai Imajima and Hartman, 1964

(Plate 3, Figs. A-D)

Pectinaria (Cistenides) sp. Okuda, 1938b, pp. 128-129, textfig. 6.

Cistenides okudai Imajima and Hartman, 1964, pp. 328-329.

Diagnosis: The body is 20mm long and 4.6 mm wide. There are 16 setigerous and 12 uncinigerous segments. The cephalic spines number 12 pairs. The antennular membrane is semicircular and has 18 short papillae at its free margin. The oral tentacles are massed below the antennular membrane. A pair of digitiform cirri is located at the outer side of the cephalic palaeae, and a posterior pair is at the side of the second segment. Two pairs of pectinated branchiae have the usual insertion. The scapha is ellipsoidal and entirely recurved ventrally. Scaphal hooks number 12 to 13 on a side; each tapers to a point. Uncini have 7 or 9 teeth and 3 or 4 minute teeth; their keel terminates in a small knob. It is associated with fine or muddy sand, but its tube is reddish yellow.

Distribution: Japan; Yellow Sea.

Family Trichobranchidae

Terebellides stroemi Sars, 1835

(Plate 3, Figs. E-G)

Terebellides stroemi Okuda, 1938a, p. 102.

Terebellides stroemii Kitamori, 1950, p. 278.

Terebellides stroemi Hartman, 1961, p. 42, 48.

Terebellides stroemi Imajima, 1961, pp. 96-98.

Terebellides stroemii Imajima and Hartman, 1964, pp. 352-353.

Terebellides stroemi Fauchald, 1972, pp. 324-325.

Diagnosis: The body is 30 mm long for 54 segments; it is 1.7 mm wide. The thorax has 18 setigerous segments; notosetae are first present from the 3rd segment; uncini are from the 7th.

The anterior margin of the cephalic lobe is rounded and undulate. Tentacles are numerous, short, longitudinally grooved, and they have enlarged tips. A single branchia is inserted on the second segment; it has a thick trunk and is distally divided into 4 pectinate branches which are sometimes interlocked to each other so that they resemble a solid mass. The first 4 setigerous segments have their anterior ventral borders extended to project forward. Uncini in the first thorax are long, distally bent, acicular. Those of other thoracic segments are long handled hooks, terminating in a large fang surmo-

unted by a crown of smaller teeth. Abdominal uncini are avicular, surmounted by crescentic row of small teeth (from Imajima and Hartman, 1964).

Distribution: Boreal and Arctic regions; Japan; California; Yellow Sea.

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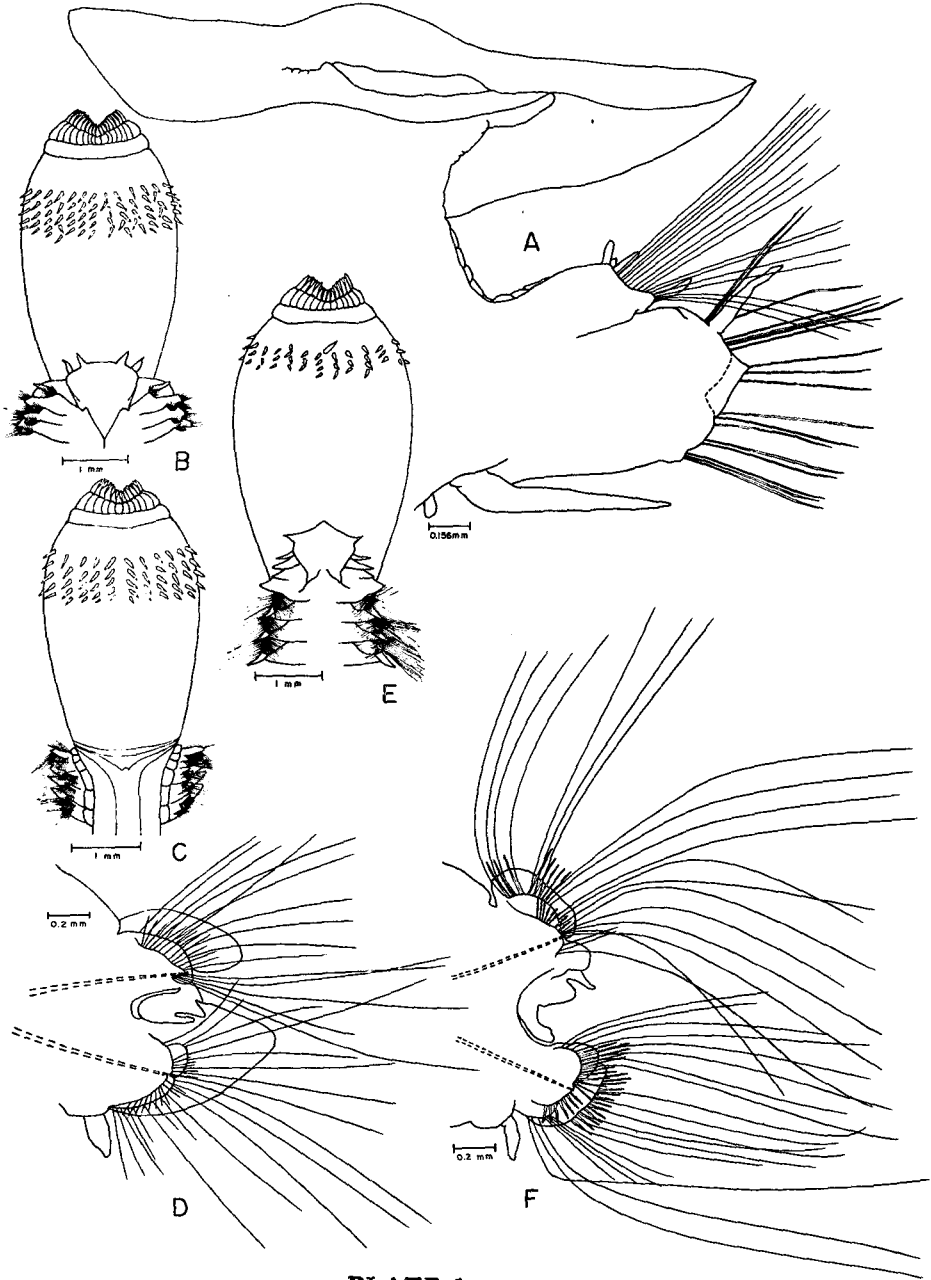


PLATE 1

Figure A, *Sthenolepis japonica* (McIntosh, 1885): posterior parapodium, in anterior view
 Figures B-D, *Nephtys caeca* (Fabricius, 1780): B, anterior end, in dorsal view; C, anterior end, in ventral view; D, the 40th parapodium, in anterior view
 Figures E-F, *Nephtys longosetosa* Oersted, 1843: E, anterior end, in dorsal view; F, the 40th parapodium, in anterior view

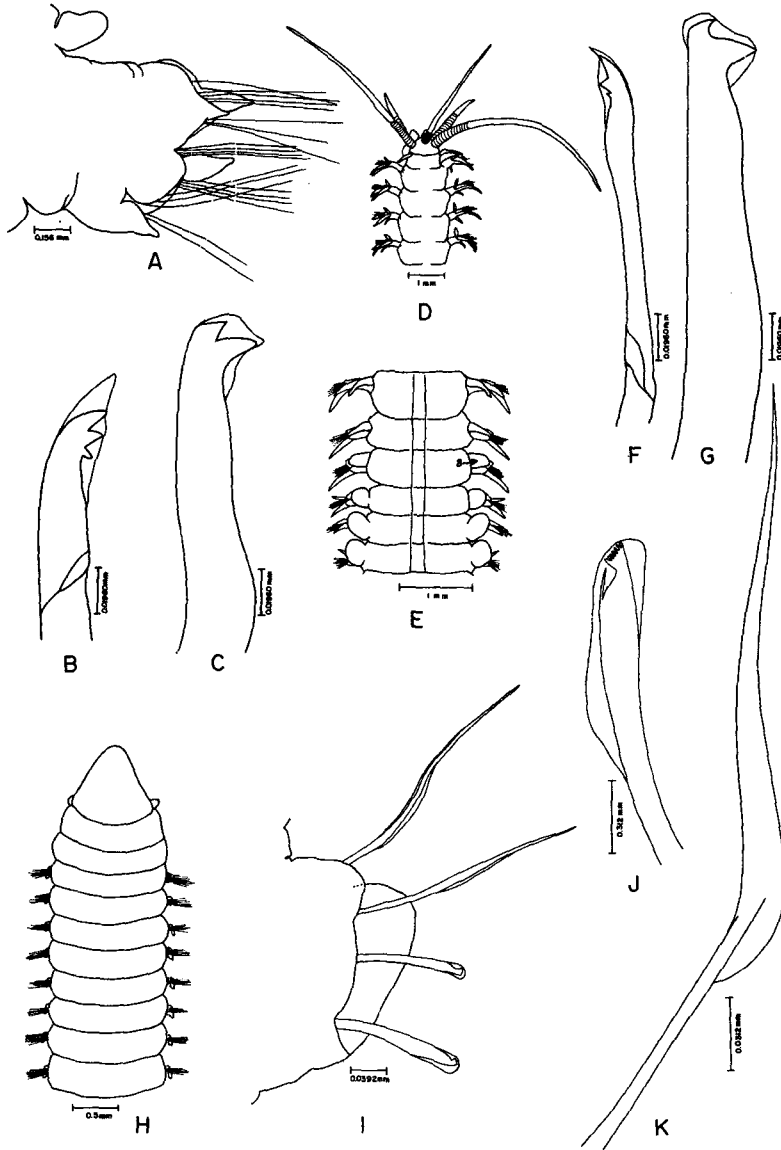


PLATE 2

Figure A, *Glycera chirori* Izuka, 1912: the 30th parapodium, in posterior view

Figures B-C, *Nothria geophiliformis* (Moore, 1903): B, tridentate hooded hook of the first parapodium; C, subacicular hook of the median parapodium

Figures D-G, *Nothria shirikishinaiensis* Imajima, 1960: D, anterior end, in dorsal view; E, pedlike ventral cirri, present from the 8th setiger(8→); F, tridentate hooded hook of the first parapodium; G, subacicular hook of the 12th parapodium

Figures H-K, *Lumbrineris heteropoda* (Marenzeller, 1879): H, anterior end, in dorsal view; I, median parapodium, in anterior view; J, simple hooded hook of the median parapodium; K, limbate capillary setae of the median parapodium

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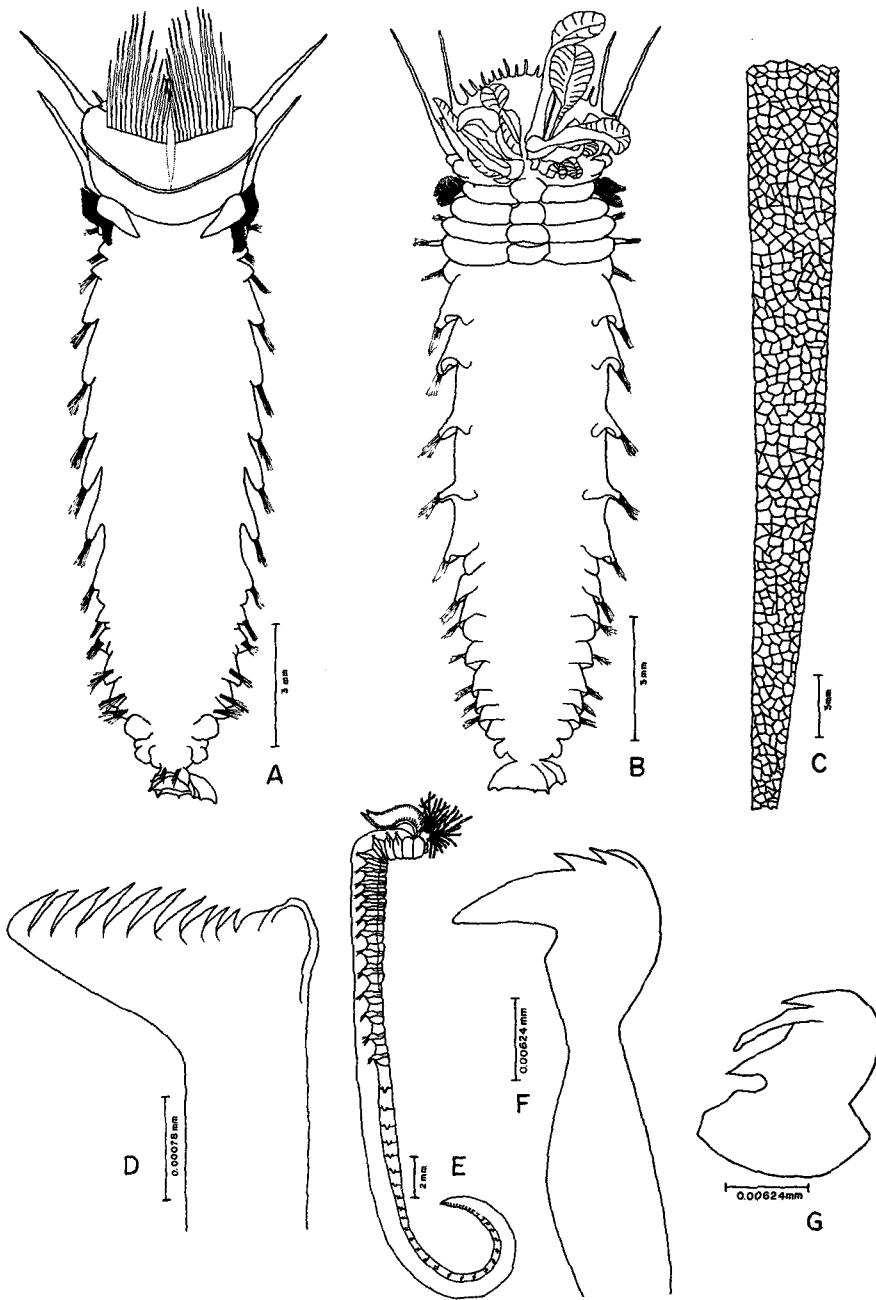


PLATE 3

Figures A-D, *Cistenides okudai* Imajima and Hartman, 1964: A, dorsal view; B, ventral view; C, tube, in lateral view; D, uncini, in lateral view
 Figures E-G, *Terebellides stroemi* Sars, 1835: E, lateral view; F, uncini, anterior parapodium; G, uncini, posterior parapodium