

POLYCHAETOUS ANNELIDS COLLECTED OFF THE WEST COAST OF KAMCHATKA

I. NOTES ON SPECIES FOUND IN THE COLLECTION OF 1957-58¹⁾

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With 14 Text-figures and 1 Table

The following accounts of the polychaetous annelids are based upon a collection made by dredging at 66 to 125 m deep stations off the west coast of Kamchatka during the ecological survey of the king crab, *Paralithodes camtschatica* (TILESIUS), carried out by members of the Hokkaidō Regional Fisheries Research Laboratory in the years 1957-58. The positions of the stations are shown in Table 1 and Text-figure 1. The collection comprises the following 19 species belonging to ten families, most of which are the species found commonly in the circumpolar regions.

Family Polynoidae

1. *Harmothoë extenuata* (GRUBE)
2. *Arcteobia* sp.
3. *Gattyana ciliata* MOORE
4. *Eunoë spinicirris* ANNENKOVA

Family Nereidae

5. *Nereis pelagica* LINNAEUS

Family Nephtyidae

6. *Nephtys longosetosa* OERSTED
7. *Nephtys caeca* (FABRICIUS)
8. *Nephtys punctata* HARTMAN
9. *Nephtys discors* EHLERS
10. *Nephtys ciliata* (MÜLLER)

Family Opheliidae

11. *Travisia brevis* MOORE

Family Maldanidae

12. *Praxillella gracilis orientalis* ZACHS
13. *Axiothella* sp.

1) Contribution No. 5 from the Shirikishinai Marine Station for Biological Instruction, Hokkaido Gakugei University.

Family Owenidae

14. *Owenia fusiformis* DELLE CHIAJE

Family Sternaspidae

15. *Sternaspis scutata* (RANZANI)

Family Ampharetidae

16. *Amphicteis scaphobranchiata* MOORE

Family Terebellidae

17. *Terebellides stroemi* SARS

Family Sabellidae

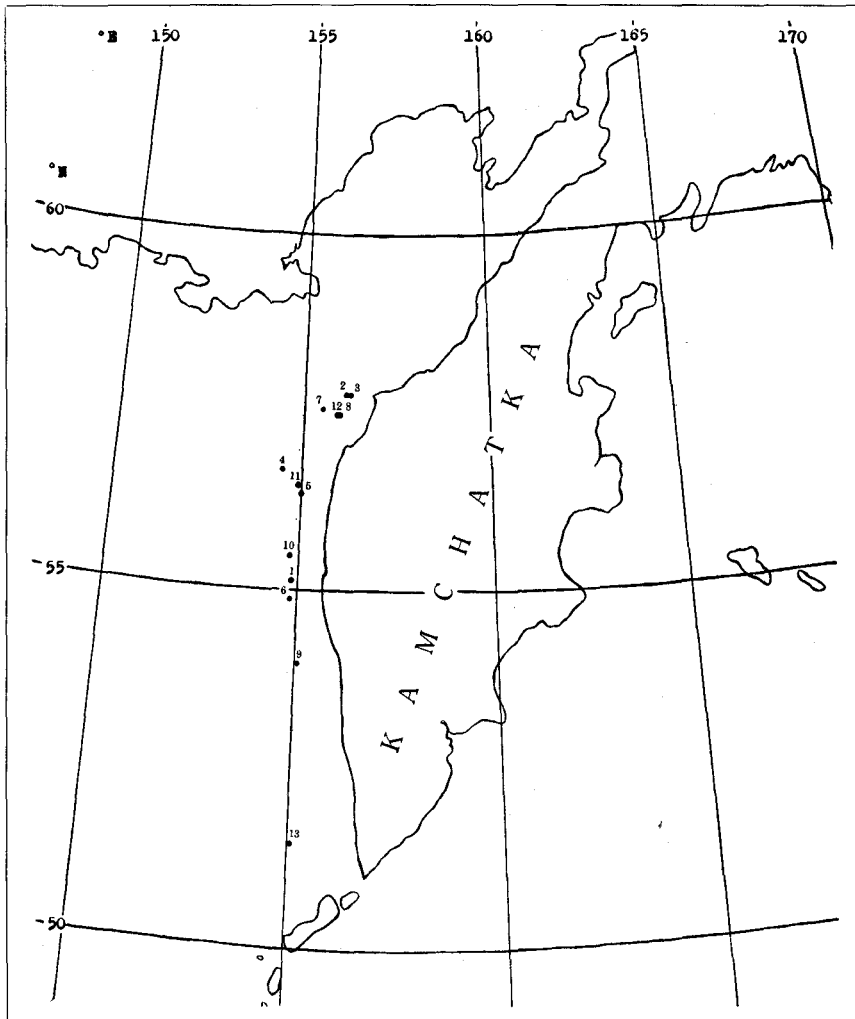
18. *Potamilla neglecta* (SARS)19. *Chone infundibuliformis* KRÖYER

Fig. 1. Locality map of Kamchatka. Numerals indicate the stations at which polychaetes were found.

Table 1. List of station and date of collection.

No. of Station	Date of collection	Station	Depth in m
1	Jun. 10, 1957	55°10'N., 154°49'E.	100
2	Jun. 24, 1957	57°52'N., 156°24'E.	97
3	Jun. 24, 1957	57°52'N., 156°26'E.	97
4	Jun. 29, 1957	56°42'N., 154°22'E.	122
5	Jun. 29, 1957	56°22'N., 155°00'E.	93
6	Jul. 4, 1957	54°50'N., 154°49'E.	92
7	Jul. 11, 1957	57°36'N., 155°34'E.	117
8	Aug. 8, 1957	57°32'N., 156°10'E.	66
9	May 28, 1958	54°00'N., 155°05'E.	95
10	May 31, 1958	55°30'N., 154°43'E.	125
11	Jun. 2, 1958	56°30'N., 154°57'E.	85
12	Jun. 15, 1958	57°30'N., 156°10'E.	70
	Jul. 27, 1958		
13	Jul. 15, 1958	51°30'N., 156°05'E.	105

Before proceeding further, I wish to tender my sincere thanks to Dr. Toraichiro KINOSHITA and Mr. Isamu TAKEUCHI of the Hokkaido Regional Fisheries Research Laboratory for their kindness in placing the material at my disposal, and my cordial thanks are due to Prof. Tohru UCHIDA, Hokkaido University, and Dr. Olga HARTMAN, Allan Hancock Foundation of the University of Southern California, for their various helpful suggestions and also to Dr. Marian H. PETTIBONE of the University of New Hampshire for her kindness in sending me copies of her papers indispensable for this work. I am deeply indebted to Prof. Hideji YAMAGUCHI, Hokkaido Gakugei University, for his kind guidance and for his kindness in reading the manuscript.

Description of the Species

Family POLYNOIDAE

Harmothoë extenuata (GRUBE)

Harmothoë propinqua: DITLEVSEN, 1917, p. 14, pl. 3, figs. 1, 3.

Lagisca extenuata: FAUVEL, 1923, p.76, fig. 28; WESENBERG-LUND, 1950, p. 8.

Harmothoë extenuata: PETTIBONE, 1953, p. 31; —, 1954, p. 222.

Occurrence: St. 7.

The body measures 18 mm in length for 35 setigerous segments and some regenerating segments in the caudal region, and 6 mm width including parapodia at the middle region. The length of the prostomium is shorter than its basal width, both the lateral margins bulge prominently at the middle portion and

there is a well defined peak at each side. It has two pairs of well developed eyes, the anterior ones being about twice the posterior in size. Elytra in 15 pairs are arranged as usual in the genus. They are reniform, membranous and fairly adherent. Most of the surface of the elytra is covered by tubercles with sharp curved tips or bifid tips, but along the anterior border it is entirely free from spines. In addition to the tubercles, there are soft globular or ellipsoid papillae, narrowing basally and arranged in series at some intervals, in the surface near the posterior margin and other parts of the elytra. The posterior and lateral margins are fringed with other slender papillae. The notopodial setae are unidentate and distally serrated. The neuropodial setae are bifid. Nephridial papillae begin to occur on the 8th parapodium. The allied species *H. multisetosa* differs from this species in the tubercles of elytron.

Arcteobia sp.

Occurrence: St. 11.

A single incomplete specimen, which had lost the head and all elytra, was collected. It measures 18 mm for 35 setigerous segments. Elytrophore are found in segments 2, 4, 5, 7---23, 26, 29, 32. The notopodial setae of one form are finer and provided with a very long capillary tip, and the other is short, slightly curved and denticulate. The neuropodial setae consist of a few long, slender setae with capillary tip born on the superior region of the neuropod and numerous stouter bidentate setae on the inferior region. Though the prostomium and the elytra were not examined, it was attributed to this genus from the elytrophore number and features of the notopodial and neuropodial setae.

Gattyana ciliata MOORE

Gattyana ciliata: ANNENKOVA, 1937, p. 148, pl. II, fig. 9, pl. IV, fig. 33; BERKELEY and BERKELEY, 1948, p. 12, fig. II; PETTIBONE, 1953, p. 40, pl. 19, figs. 164-173.

Occurrence: St. 12.

An incomplete specimen was examined, which has lost the caudal portion and all elytra. The long palpi is covered with numerous small filiform papillae. The lobes of the prostomium have faint peaks. The anterior eyes are more dominant than the posterior eyes. There are found elytrophores of 11 pairs that present 2, 4, 5, 7---19, 21. Notopodial setae are very numerous, delicate, and have very long hair-like tipes. Neuropodial setae with rows of pectinae are simply a little curved. Though I could not examine elytra because of the damage to the specimen, it is identical with the present species from features of the notopodial setae and the ventral insertion of the lateral antennae.

Eunoë spinicirris ANNENKOVA

(Text-fig. 2, a-g)

Eunoë spinicirris: ANNENKOVA, 1937, p. 150, pl. I, fig. 7, pl. II, fig. 2, pl. III, fig. 24, pl. IV, figs. 31, 32.

Occurrence: St. 3.

Two complete specimens and two anterior body fragments were observed. The largest specimen with 38 setigerous segments measures 67 mm by 27 mm including parapodia. The prostomium (Fig. 2 a) is about 2 times broader than its length. The length of the median tentacle is approximately twice that of the lateral tentacle. The palps are stout, and nearly 2.5 times as long as the lateral tentacle. The entire surface of the palpi is densely beset with triangular papillae arranged in six longitudinal rows. The tentacular cirri are slightly shorter than the median tentacle. The surface of the median tentacle and the tentacular cirri has sparsely a few shorter papillae. The two pairs of well developed eyes are situated far back on the prostomium. The elytra are firmly attached, covering the dorsum but leaving the mid-dorsal line of the anterior exposed, and are attached to segments 2, 4, 5, 7---23, 26, 29, 32. On the surface of the elytra (Fig. 2 b) very large conical horn-like tubercles are sparsely scattered in the posterior margin and furnish closely uni- or bidentate small tubercles at the anterior margin, which is usually covered by the just anterior elytron. Their margin has no fringe. The parapodium (Fig. 2 c), well developed and elongated, is divided into two unequal rami. Dorsal cirri are covered with sparse unidentate papillae. The notopodial setae are arranged in 3 transverse rows, of which the first row consist of simple setae with a sharp end (Fig. 2 d). In the second and third rows there are two kinds of setae; one of them (Fig. 2 f) is very long, stout, straight having minute serrations on the whole exposed length, and is provided with a truncate tip with a very small middle projection, the other one (Fig. 2 e) is slightly curved, shorter and finer than the former. Though the notopodial setae of *E. Hozawai* OKUDA closely resemble those of this species, it is clearly distinguishable by lacking the small projection. The neuropodial setae (Fig. 2 g) are unidentate. The first pair of nephridial papillae begins on the 6th segment. The species was first recorded by ANNENKOVA from the north Japan Sea and Bering Sea. The present specimens are more or less different in having the elytra with a few conical tubercles at the posterior margin, but in other respects, they agree with ANNENKOVA's description.

Family NEREIDAE

Nereis pelagica LINNAEUS

Nereis pelagica: IZUKA, 1912, p. 154, pl. 17, figs. 1-6; FAUVEL, 1923, p. 336, fig. 130, a-f; OKUDA, 1939, p. 230.

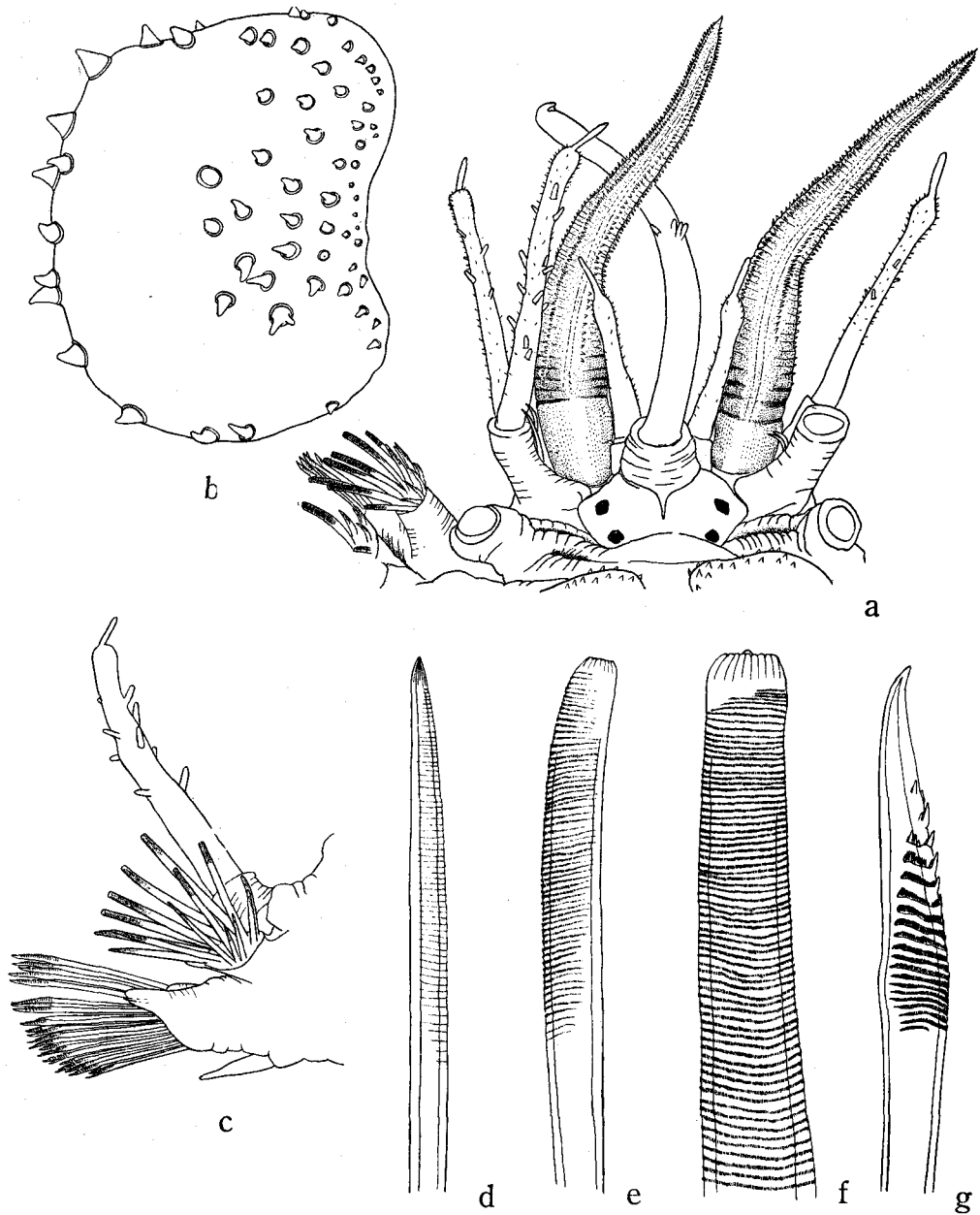


Fig. 2. *Eunoë spinicirris* ANNENKOVA.

a, Dorsal view of anterior portion, omitted on the right parapodium; *b*, 6th elytron; *c*, 7th parapodium; *d, f*, Notopodial setae; *a-c*, ca. $\times 32$; *d-g*, ca. $\times 260$.

Occurrence: St. 2, 1 specimen; St. 3, 1 spec.; St. 8, 1 spec.

Three specimens, of which the largest one with 74 chaetigers measures 113 mm by 10 mm at the widest part excluding parapodia. The arrangement of the paragnathi in the proboscies is as follows: I, 3 in a line; II, 12-14 in 2 oblique rows; III, 10-12 in a cluster; IV, 20-24 in a rough cluster of 3 rows; V, absent; VI, 4-5; VII-VIII, in several transverse rows, of which paragnathi of the anterior row are larger in size than those of the posterior rows. In the 1st and 2nd parapodia they are lacking inferior ligule of notopodium and notosetae. The first parapodium is comparatively large in size. The dorsal inferior ligules of the posterior parapodium from the 7th chaetiger are slightly longer than that of the other ones. The notopodial setae are all homogomph spinigers which are replaced by homogomph falcigers in the 26th-32th parapodium. Every homogomph falciger bears a bluntly rod-shaped apex, and is without teeth. In the superior division of the neuropodium there occur homogomph spinigers and heterogomph falcigers, and in the inferior division there are heterogomph falcigers and heterogomph spinigers.

Family NEPHTYIDAE

Nephtys longosetosa OERSTED

(Text-fig. 3)

Nephtys longosetosa: FAUVEL, 1923, p. 367, fig. 143, f-h; BERKELEY and BERKELEY, 1942, p. 193; —, 1948, p. 52, fig. 76.

Nephtys longosetosa: PETTIBONE, 1954, p. 268, fig. 30, 1.

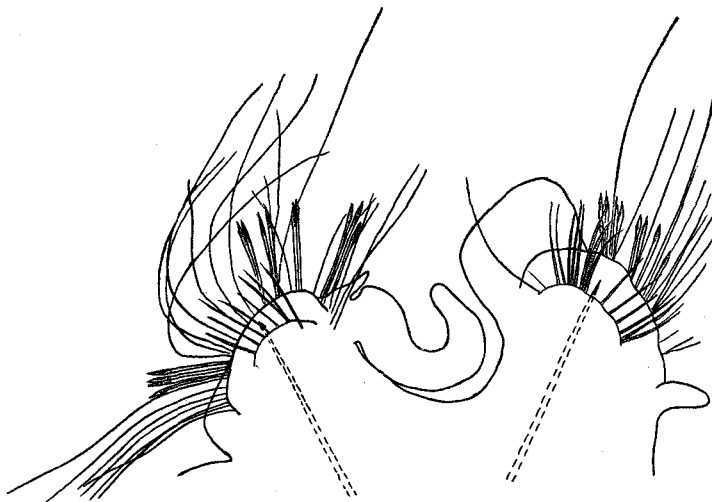


Fig. 3. *Nephtys longosetosa* OERSTED.
40th parapodium, anterior view. ca. $\times 33$.

Occurrence: St. 1.

Two specimens were examined, of which the larger one measures 65 mm by 5 mm for 77 setigerous segments and the other 58 mm by 4 mm. The proboscis is furnished with 22 rows of papillae, 3 or 4 in each row. There is a long median papilla. Acicular lobes of the parapodium (Fig. 3) are round and have no incision in the median region. Neuropodial postsetal lamella is much longer than the notopodial one which bears two unequal lobes. The dorsal cirri are scanty. The branchiae are present first from the 3rd setigerous segment are rather large, sickle-shaped, and continue almost to the posterior end.

Nephtys caeca (FABRICIUS)

(Text-fig. 4)

Nephtys caeca: FAUVEL, p. 365, fig. 142, a-1; OKUDA, 1938, p. 123; OKUDA and YAMADA, 1954, p. 186, fig. 4.

Nephtys caeca: HARTMAN, 1950, p. 95.

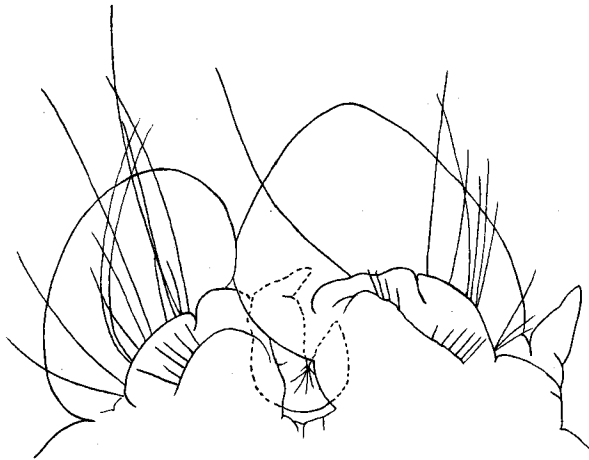


Fig. 4. *Nephtys caeca* (FABRICIUS).
30th left parapodium, anterior view. ca. $\times 20$.

Occurrence: St. 7.

A complete specimen measures 118 mm for 120 setigerous segments and by 9 mm. including parapodia. The proboscis was not everted, therefore, papillae with 22 longitudinal rows were examined by dissection. There is no median papilla. The branchiae are present, beginning first on the 4th setigerous segment. Both dorsal and ventral rami of the parapodium are separately located with some distance between them in the anterior part neuropodial postsetal lamella of the anterior region is more or less triangular and foliaceous, and that of the notopodium is oval. Acicular lobes of both notopodia and neuropodia are

distinctly divided into two lobes by a deep incision. The features of the parapodium (Fig. 4) agree well with FAUVEL's figures.

Nephtys punctata HARTMAN

(Text-fig. 5)

Nephtys punctata: HARTMAN, 1938, p. 155, fig. 67; —, 1950, p. 96.

Occurrence: St. 5, 1 spec.; St. 11, 1 spec.

A simple fragment of an animal obtained from St. 5, which has lost the posterior end, measures 55 mm long for 70 setigerous segments. Proboscis is provided with 22 rows of papillae and a long median dorsal papilla, and it is covered with minute prickly cones. Branchiae first appear on the 7th setiger

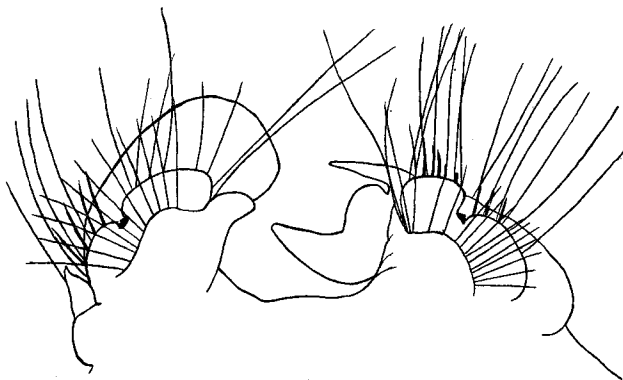


Fig. 5. *Nephtys punctata* HARTMAN.
50th parapodium, anterior view. ca. $\times 25$.

and are present as far as the posterior end of the fragment. They are sickle-shaped cirrus. In both parapodia (Fig. 5) acicular lobes are equally bilobed. The neuropodial postsetal lamellae are elongate as far as 50th setiger. Although this specimen agrees well with HARTMAN's species in many characteristics, it differs in the starting of the branchiae; in this specimen it begins on the 7th setiger, whilst in those of HARTMAN's specimen it begins on the 8th or 9th setiger.

Nephtys discors EHLERS

(Text-fig. 6, a-d)

Nephtys discors: EHLERS, 1868, p. 626, pl. 23, figs. 39, 40.

Nephtys rickettsi: HARTMAN, 1938, p. 153, fig. 66.

Nephtys discors: HARTMAN, 1950, p. 96; PETTIBONE, 1954, p. 270, fig. 30, m.

Occurrence: St. 9.

Two specimens and one anterior fragment of an animal were collected. The longest specimen measures 235 mm and is composed of 127 setigerous segments. Dorsal prostomial antennae are about a half as large as ventral antennae. The everted proboscis bears 20 rows of bifid terminal papillae and a single papilla in the two specimens, and the fragment has 21 rows of similar papillae and a single papilla. The subterminal papillae are arranged in 22 longitudinal rows of 4 to 6 papillae. The branchiae begin on the 6th or 7th segment, and at the outset they are rather small, then increase in size on the following segments. They are coiled inwards and are inflated on the basal half at the middle region (Fig. 6 a). In the posterior half of the body they are thick and club-shape, and continue

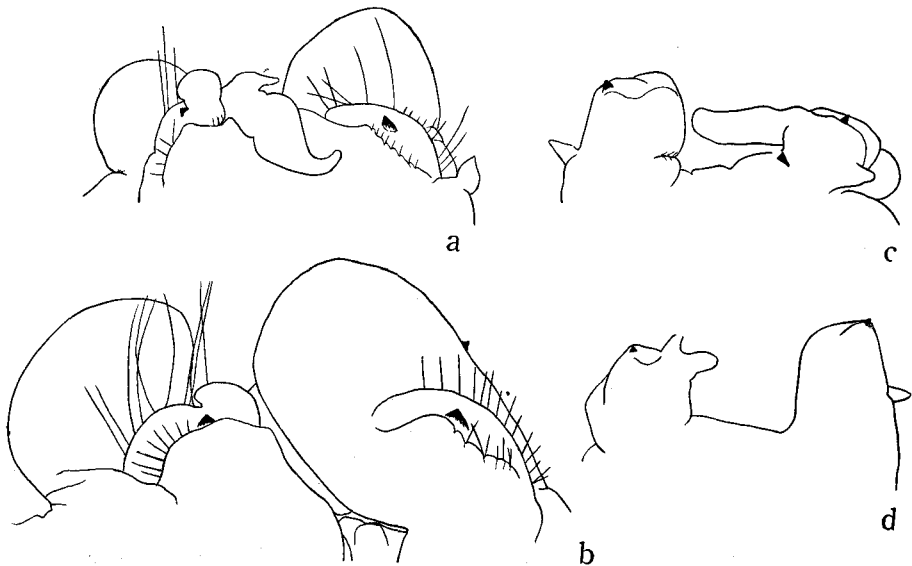


Fig. 6. *Nephtys discors* EHLERS.

a, 26th parapodium; b, 40th parapodium; c, Parapodium in posterior half of body; d, Posterior parapodium. All anterior view, ca. $\times 15$.

back to near the end of the body; a few of the last segments lack them (Fig. 6 c, d). In typical parapodia at the middle region the notopodial acicular lobe is incised in unequal bilobes, the neuropodial one is rounded. Postsetal lobes are broad and foliaceous; the notopodial one is much smaller in size than the neuropodial one (Fig. 6 b). In the posterior region noto- and neuropodial lobes are much rudimentary. The parapodium of the median region of these specimen well resembles those of PETTIBONE's figures.

Nephtys ciliata (MÜLLER)

Nephtys ciliata: FAUVEL, 1923, p. 371, fig. 145; BERKELEY and BERKELEY, 1948, p. 55.

Nephtys ciliata: PETTIBONE, 1954, p. 270, fig. 30, n.

Occurrence: St. 4, 1 spec.; St. 12, 1 spec.

Two anterior body fragments measure 68 mm (St. 4) and 110 mm (St. 12) in length respectively. The proximal surface of the proboscis is papillated, and there are 22 longitudinal rows of papillae and a long unpaired dorsal papilla. The branchiae, in the specimen from St. 4, are first present from the seventh setiger and in the specimen from St. 12 begin on 5th setiger, and are present as far as the posterior end of the fragment. Acicular lobes in both noto- and neuropodia are distinctly bilobed, and the neuropodial postsetal lobe is slightly larger in size than that of the notopodial one.

Family OPHELIIDAE

Travisia brevis MOORE

Travisia brevis: MOORE, 1923, p. 220; BERKELEY, 1929, p. 313; BERKELEY and BERKELEY, 1952, p. 90.

Occurrence: St. 4.

A single complete specimen measures 33 mm by 6 mm. There are twenty-nine segments. The body is elongated, grub-like, and is more pointed at the anterior end than the posterior. The surface of the body is covered with vesicles of various sizes. Branchiae, simple cirriform are present from the 3rd segment to the 24th. The ventral parapodial lappets from 15th segment to 25th segment are pointed and extend prominently at either side. These projections are not present on the last few segments which form a pre-anal tube. Notopodial and neuropodial setae are all slender and thread-like, and are present from the 2nd segment to the 25th. Pygidium consists of a ring of stout lobes.

Family MALDANIDAE

Praxillella gracilis orientalis ZACHS

(Text-fig 7, a-c)

Praxillella gracilis orientalis: ANNENKOVA, 1937, p. 182.

Occurrence: St. 13.

Three anterior body fragments were investigated, the largest one measuring 80 mm for 14 setigerous segments. The cephalic plate has a well developed rim, which has lateral and posterior notches, but the latter is very slight. The nuchal

grooves are long, and are slightly bent outwards at both the anterior and posterior parts. Prostomium is extended into a finger-like projection. In the first three chaetigers there are reduced crotchets, which have no gular bristle and have only 3 teeth above the main frang (Fig. 7, a-b). There are 7-9 reduced crotchets in each neuropodium. In the 4th chaetiger there are 17 developed crotchets, the crown of which bears 5-6 long slender teeth, and it has some long gular bristles curved upwards over the beak (Fig. 7c). Although the posterior end of these specimens could not be examined, I have attributed the present specimens to this subspecies, from the structure of the head and the number of reduced crotchets in the first three setigerous segment.

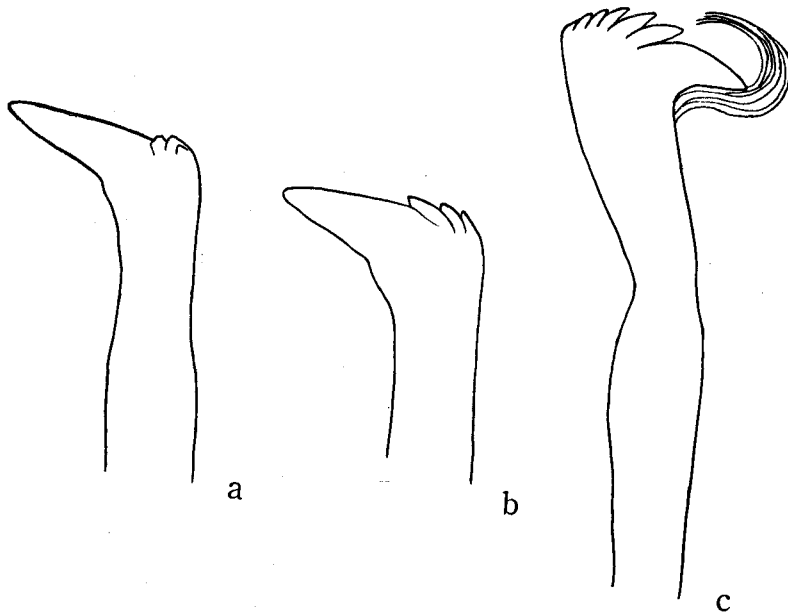


Fig. 7. *Praxillella gracilis orientalis* ZACHS.
a-b, Reduced crotchets from 2nd neuropod; c, Crotchet from
13th neuropod. ca. $\times 420$.

Axiothella sp.

(Text-figs. 8 and 9, a-b)

Occurrence: St. 1, 1 spec.; St. 4, 1 spec.; St. 11, 2 spec.

The largest one of these four anterior fragments measures 70 mm for 15 setigerous segments. The cephalic plate is elongated antero-posteriorly, and the lateral margin possesses a well defined rim which has two deep notches at the sides and is perfectly smooth in the mid-dorsal line (Fig. 8). The anterior segments to the 7th are rather shorter than the succeeding segments whose

length is about three times their width. The crotchets are present from the first setigerous segment, having 4-5 teeth above the main frang (Fig. 9a). There is a row of 12-18 crotchets, and the number is greater in the following segments. The crotchets of the first four chaetigers have no gular bristles nor nodules. The crotchets with gular bristles are present first from the 5th chaetigers (Fig. 9b). The dorsal bristles are slender and very thinly bordered by

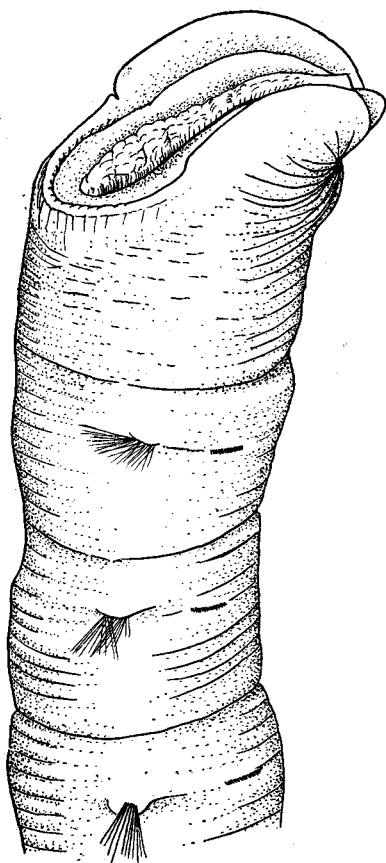


Fig. 8. *Axiothella* sp.
Lateral aspect of anterior part of
body. ca. $\times 13$.

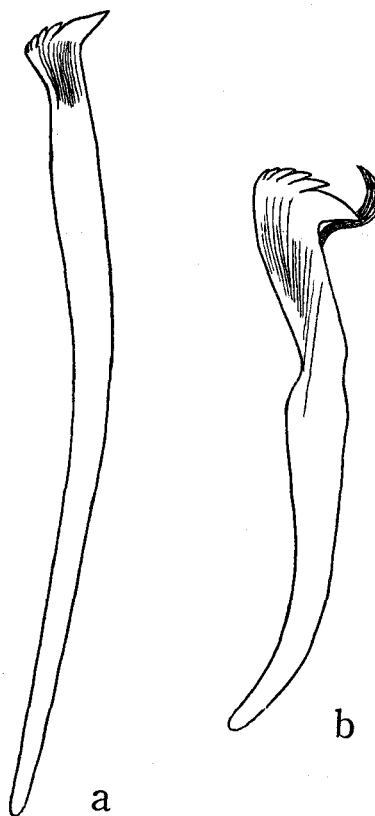


Fig. 9. *Axiothella* sp.
a, Crotchets from 1st neuropod;
b, Crotchets from 14th neuropod.
ca. $\times 260$.

capillaries. Because the posterior region was missing these specimens could not be identified aculately, but judging from the presence of the crotchets in all setigerous segment and the absence of the acicular setae in the first three chaetigers they may belong to the present genus and it seems that the specimens are closely related to *A. catenata* (MALMGREN) which has been reported by WESENBERG-LUND (1948) from the west coast of Greenland. *A. catenata* is

Arctic species, has also been recorded from Okhotsk Sea by ANNENKOVA (1937) and USCHAKOV (1955).

Family OWENIDAE

Owenia fusiformis DELLE CHIAJE

Owenia fusiformis: FAUVEL, 1927, p. 263, fig. 71, a-f; OKUDA, 1937, p. 252, fig. 27; WESENBERG-LUND, 1949, p. 345; USCHAKOV, 1955, p. 346, fig. 128.

Occurrence: St. 8.

A single anterior fragment with 7 setigerous segments was examined. The body is cylindrical and the prostomium is surmounted by a crown consisting of six membranous lobes branching at the terminal end. The dorsal setae are spinuous and are present from the first segment. There are no ventral uncini in the first three setigerous segments, and in the succeeding segments they have bidentates with elongated manubria arranged in transversal rows. Tube unknown.

Family STERNASPIDAE

Sternaspis scutata (RANZANI)

(Text-fig. 10, a-c)

Sternaspis costata: MARENZELLER, 1879, p. 34, pl. 6, fig. 4.

Sternaspis scutata: FAUVEL, 1927, p. 216, fig. 76, a-g; OKUDA, 1936, p. 151, fig. 5; PETTIBONE, 1954, p. 309, fig. 35, a, b.

Occurrence: St. 4.

Two specimens of which the anterior body was not everted, measure 11 and 12 mm in length respectively. The skin is densely covered with small papillae, more or less regularly spaced, and they are entangled with fine particles of mud. The anterior spines (Fig. 10, a-b) of the 2nd, 3rd and 4th segments were examined by dissection. These spines have the long characteristic, transparent tip. The caudal shield in the posterior region consists of two plates and it is about 7 mm in width, 4 mm in the longest longitudinal length. They have a series of ridges radiating from the centre, of which two conspicuous ridges divide it into three unequal areas. Accessory plates, anterior pair of the shield which is covered by the skin, are slightly transparent and of the two specimens one possesses 4-5 denticles in the anterior border of this plate (Fig. 10 c), the other having a normal anterior ridge, without any denticles. The form of the anterior border of the accessory plates seems to vary to some extent. The posterior plates are slightly convex in the posterior border and have a longitudinal deep notch. Numerous bundles of setae are present around the caudal shield; there are ten

pairs of setae in the lateral sides of the shield, those at the outer posterior angles are especially long; and also 6-7 pairs of bundles are situated at the posterior border. The setae of those bundles are longitudinally striated, slender and covered with fine short hairs. There are blend with 6-7 very long capillary setae in only one bundle at each caudolateral corner and are nearly as long as that of the anterior body. Concerning the affinity of the present species to *S. costata* recorded by MARENZELLER from Japan, OKUDA (1936) thoroughly discussed it.

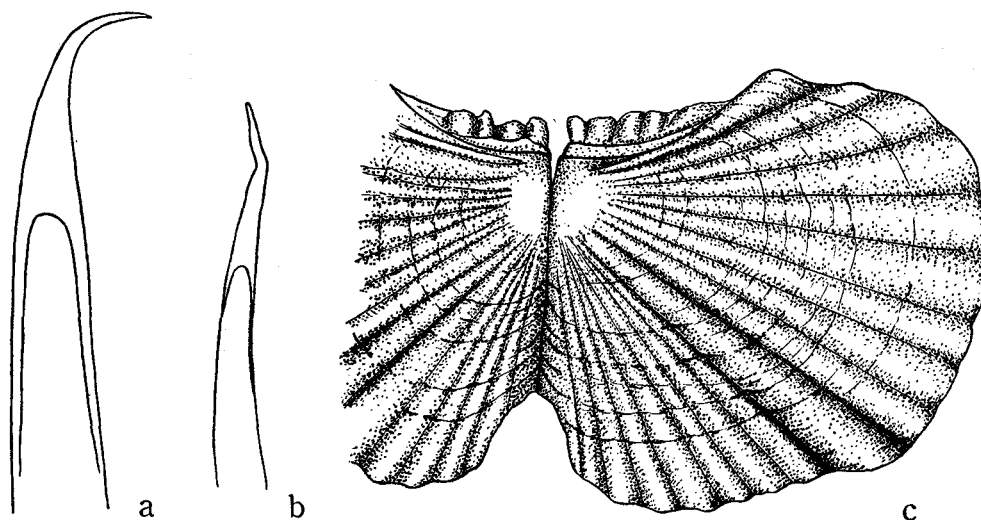


Fig. 10. *Sternaspis scutata* (RANZANI).
a-b, Anterior spines. ca. $\times 150$; c, Caudal shield, left part omitted. ca. $\times 20$.

Family AMPHARETIDAE

Amphicteis scaphobranchiata MOORE

(Text-fig. 11, a-c)

Amphicteis scaphobranchiata: MOORE, 1906, p. 255, pl. 22, figs. 54-61; BERKELEY and BERKELEY, 1952, p. 68, figs. 139-141.

Occurrence: St. 1, 1 spec.; St. 10, 1 spec.

Two specimens are examined, of which one specimen is particularly well preserved. The large one measures 56 mm long. They are 17 thoracic setigerous segments and 15 abdominal segments. The median lobes of the prostomium are almost parallel, slightly diverging anteriorly. There are four pairs of branchiae, one of which is subterminally broad and then narrows and bends

on itself into a hook (Fig. 11 a). Paleae are well developed and extend slightly beyond the prostomium. They are 21-23 in number, and have very long, acute tips (Fig. 11 b). Uncini have 5-6 teeth, with a process between the last and the antero-inferior end of the hook (Fig. 11 c). The tube is membranous, coated with greyish mud.

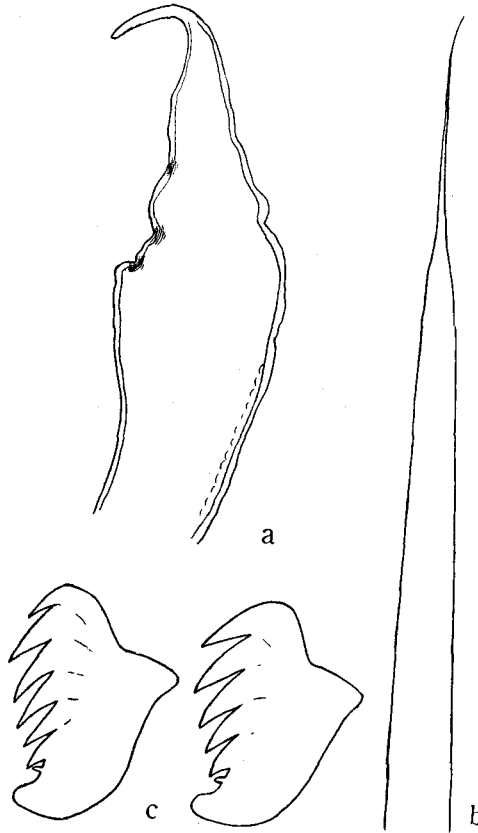


Fig. 11. *Amphicteis scaphobranchiata* MOORE.
 a, Anterior end of specialized branchia. ca. $\times 10$;
 b, Palea. ca. $\times 60$; c, Abdominal uncinus. ca. $\times 180$.

Family TERESELLIDAE

Terebellides stroemi SARS

Terebellides stroemi: FAUVEL, 1927, p. 291, fig. 100; BERKELEY and BERKELEY, 1952, p. 75, figs. 152, 153.

Occurrence: St. 13.

A single specimen measures 65 mm for 56 setigerous segments. Thoracic

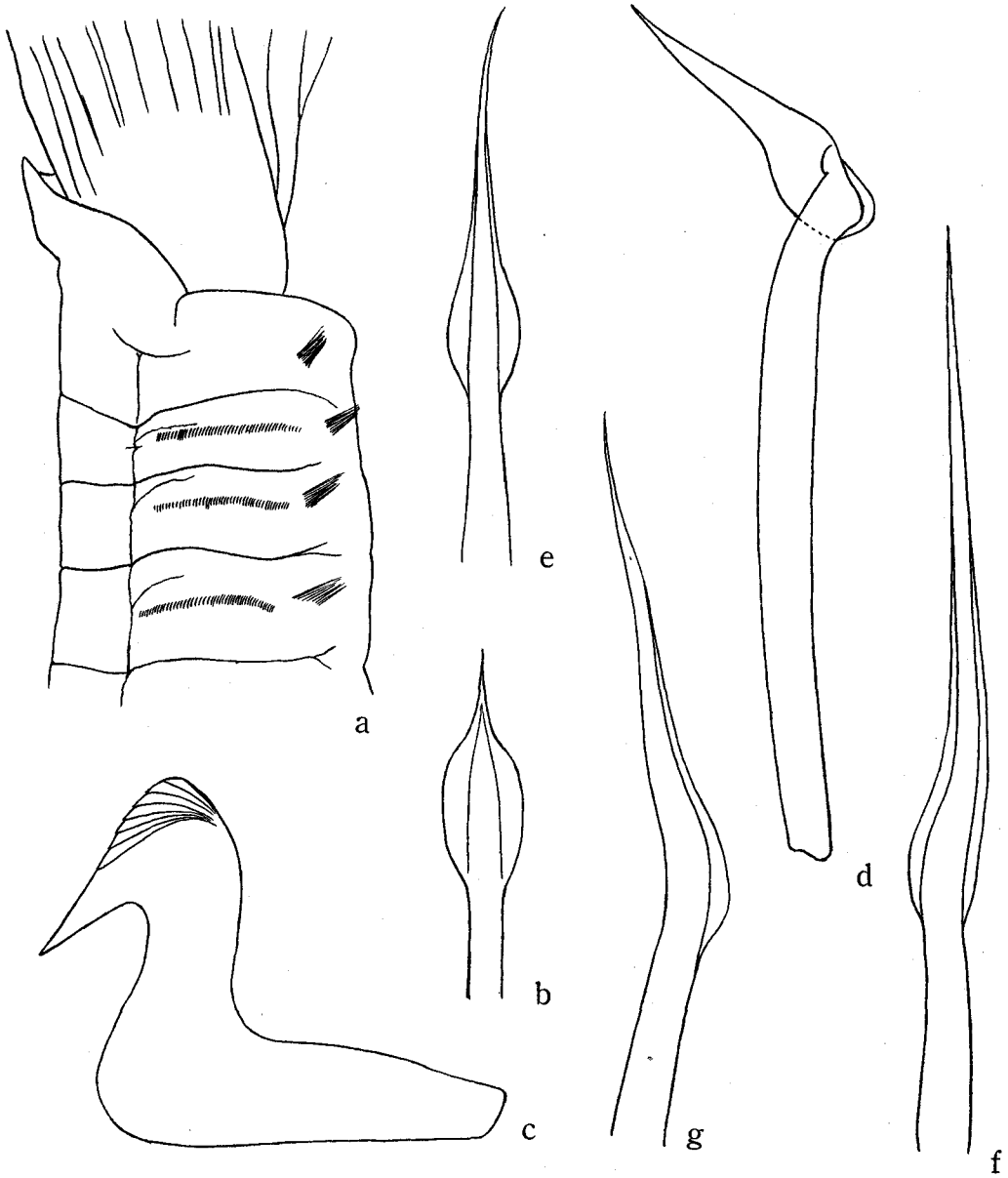


Fig. 12. *Potamilla neglecta* (SARS).

a, Anterior region of body, lateral view, end of branchial filaments removed. ca. $\times 13$;
b, Spatulate seta from thoracic segment. ca. $\times 420$; *c*, Avicular uncinus from thoracic
segment. ca. $\times 600$; *d*, Pennoned seta from thoracic neuropod. ca. $\times 600$; *e-g*, Abdominal
neurosetae. ca. $\times 420$.

setigerous segments are 18 in number. A pair of branchiae with a heavy trunk arises from the second and third segments, and the third one is a solid mass and divided into four pectinate branches. The dorsal bladed capillary setae begin at the 3rd segments. The crotchets of the thoracic region are first present from the 8th neuropodium and continue back to the end of this region; they are a long, slightly curved shaft with a crown of small teeth. The abdominal nucini has some teeth arranged in a crown on the main fang.

Family SABELLIDAE

Potamilla neglecta (SARS)

(Text-fig. 12, a-g)

Potamilla neglecta; EHLERS, 1908, p. 154, pl. 22, figs. 5-17.

Occurrence: St. 6.

A single complete specimen measures 47 mm including the branchiae which measures 10 mm. There are 92 setigerous segments, 8 thoracic and 74 abdominal. The branchiae are 12 filaments on each side. There is no eye. The collar is vertical and almost meeting at the dorsal surface, and is extended ventrally into a long triangular point. There are scanty incisions at the lateral side (Fig. 12 a). The collar setae are the only bladed capillary setae and spatulate setae with finely pointed tips which are present on the notopodium (Fig. 12 b), and there are also avicular uncini (Fig. 12 c) and pennoned setae (Fig. 12 d) on the neuropodium. In the abdomen notopodial avicular uncini are similar to thoracic ones, and the neurosetae consist of two sorts of setae; the one long, symmetrically or asymmetrically double-winged capillary setae (Fig. 12 e-g) and the other short, spatulate setae similar to those of the thoracic one. The feature of collar and setae corresponds well with EHLER's descriptions and figures.

Chone infundibuliformis KRÖYER

(Text-figs. 13, a-b and 14, a-f)

Chone infundibuliformis: MALMGREN, 1865, p. 404, pl. 38, fig. 87; FAUVEL, 1927, p. 334, fig. 116; BERKELEY and BERKELEY, 1952, p. 123, figs. 252, 253; PETTIBONE, 1954, p. 338, fig. 39.

Occurrence: St. 6.

A colony consisting of 8 tubes were collected. The specimens are 31-44 mm in total length, of which the branchial length measures 11-13 mm. There are 50-56 setigerous segments, the thorax consisting of 8 setigerous segments. The

collar, well developed, is complete at the ventral side and on the dorsal side almost meets and the deep incision continues to the end of the 2nd chaetiger. The 2nd setigerous segment bears a row of glands in a white transversal band (Fig. 13 a-b). Branchial filaments bear 11-14 filaments on each lobe. In the specimens I examined there are not so many branchiae as in FAUVEL's description. The branchial tip is more or less foliaceous, and some specimens bear very long terminal barbules and they are long enough to cover the branchial tips as shown in *Chone ecaudata*. But in the majority of the specimens terminal barbules do

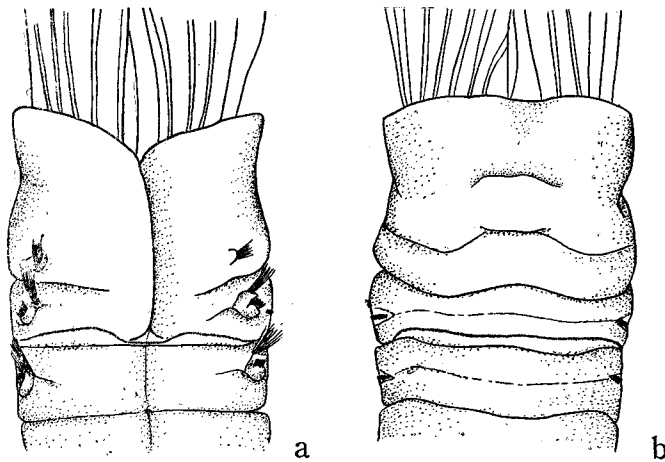


Fig. 13. *Chone infundibuliformis* KRÖYER.
a, Anterior region, dorsal view; *b*, Anterior region, ventral view. All end of branchial filament omitted. ca. $\times 15$.

not reach the branchial tip (Fig. 14 a). The 1st setigerous segment bears only winged collar setae and fine winged geniculate setae. The notopodium of the thoracic segments contains three kinds of setae: long winged capillary setae, spatulate setae with mucrons of moderate length, and geniculate setae (Fig. 14 b-d). In the thoracic neuropodium there are found only stout crotchet setae (Fig. 14 e). In the abdominal segments the notopodium has a row of uncini which bear 3-4 teeth at the side (Fig. 14 f), and the neuropodium has winged capillary setae which are longer than those in the thoracic segments.



Fig. 14. *Chone infundibuliformis* KRÖYER.

a, Tip of branchial filament. ca. $\times 25$; *b*, Thoracic capillary seta. ca. $\times 420$; *c*, Thoracic spatulate seta from 5th chaetiger. ca. $\times 420$; *d*, Thoracic geniculate seta. ca. $\times 420$; *e*, Crotchet seta from 4th thoracic neuropodium. ca. $\times 600$; *f*, Abdominal uncinus. ca. $\times 600$.

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