

setigers. The body is short and thick in front and tapers posteriorly; it grossly resembles an Amage. The prostomium is trilobed; it lacks eyespots. Paleae are absent. Thoracic uncini are present from the third setiger and number 14 pairs. Branchiae number three pairs and are inserted in a straight, transverse line; they are of one kind, long, tapering, thickest at the base, and each is pigmented along its outer edge, leaving a median longitudinal pale band; branchiae extend back to setiger 5 or 6.

Oral tentacles are smooth, all of one kind; they are inserted on the upper side of a broad, crescentic membrane. Abdominal notopodia are small, papillar lobes; neuropodia have transverse rows of uncini. The pygidium terminates in a pair of short, thick, lateral lobes. Some individuals are surrounded by a thin, translucent tube which is easily torn.

Distribution: Slope depths, 196 to 1102 m.

Genus Samythella Verrill, 1873

Samythella elongata Verrill, 1873

Samythella elongata Verrill, 1873, p. 98.

Record: Ch 103 (2, with tubes).

Diagnosis: Length is 20 mm, width 2.1 mm in widest part of thorax; the body consists of 15 thoracic setigers, of which 12 are uncinigerous, and the abdomen of 25 to 29 segments. Paleae are absent. Oral tentacles are long, smooth and numerous. The lower lip has an entire, straight margin. The prostomium is broad, flat, trilobed, and extends forward as a thin membrane over the oral area; its outer lateral areas are thickest. Branchiae number three pairs; all are smooth, inserted on an erect, transverse membrane which is continuous middorsally. Abdominal

notopodia are small, conical papillae; the corresponding neuropodia are transverse tori with single rows of uncini. Thoracic uncini are avicular, with teeth in one row. The tube is long, thin and externally covered with gravel.

Distribution: Abyssal depth, 2022 m.

ampharetid, apaleal

Records: Ch 85 (12); A 120 (3, small).

Remarks: Only small fragments are available. Paleae are absent. Oral tentacles are short and smooth. The nuchal region is prolonged, smooth and appears inflated. Branchiae may number three pairs; they are inserted on a raised, transverse membrane in a straight line; their styles are lost. The first setiger is smallest, and those following are increasingly larger.

Distribution: Abyssal depths, 3834 to 5023 m.

ampharetid, paleal

Records: Ch 85 (2); Ch 84 (31); A 122 (23); A 120 (4).

Remarks: Small, imperfect specimens, with conspicuous paleal fascicles, and three pairs of branchiae inserted on a raised, transverse membrane.

Distribution: Abyssal depths, 3834 to 5023 m.

ampharetid, with tattered tube

Record: A 126 (24, fgm).

Remarks: Most characteristic are the tattered, mucoid tubes which are much larger than the enclosed ampharetid fragments. Anterior thoracic notopodia have two kinds of setae, both long, slender and smooth; the larger are limbate subdistally and terminate in slender tips; the shorter resemble those farther back. The last thoracic setiger has two kinds of notosetae; a larger

kind, in superior position, is geniculate, and shorter, slenderer setae are present in the inferior end of the fascicle. Thoracic uncini are short, thick, avicular, and have many teeth in transverse rows.

Distribution: Abyssal depth, 3806 m.

#### ampharetids

Records: Ch 89 (60); Ch 105B (32); Ch 87 (50); A 73 (63); GH 3 (2, fgm); A 66 (61); A 72 (37); A 64 (48); A 63 (8); A 65 (fgm); A 71 (fgm); A 95 (fgm); A 126 (ca 200); A 69 (4, fgm); A 70 (3); A 109 (6); KK 4 (1); A 121 (28, fgm); A 125 (41); A 122 (6); A 123 (fgm); Ch 100 (20); Ch 80 (3, fgm); Ch 99 (3); Ch 83 (14); A 93 (17); Ch 81 (6, fgm); A 155 (20).

Distribution: Slope and abyssal depths, 196 to 5042 m.

#### Family TERESELLIDAE

#### Key to Subfamilies

1. Anterior end modified as a large proboscis . . . ARTACAMINAE
1. Anterior end not modified into a proboscis . . . . . 2
2. Neuropodia reduced or absent; branchiae absent  
     . . . . . POLYCIRRINAE
2. Neuropodia normally developed; branchiae present or absent  
     . . . . . 3
3. Uncini in double rows on some thoracic segments  
     . . . . . AMPHITRITINAE
3. Uncini in single rows throughout . . . . . THELEPINAE

Subfamily AMPHITRITINAE Hesse, 1917

Genus Leaena Malmgren, 1865

Leaena minima Hartman, 1965, emended

Leaena collaris minima Hartman, 1965, p. 225.

New Records: Ch 87 (126); A 72 (10, fgm).

Description: The body is long and linear; it measures about 17.5 mm long and 0.8 mm wide and consists of 17 thoracic and up to 38 abdominal segments, or about 55 in all. The first three segments are smooth rings; the second and third have slightly developed or hardly visible lateral lappets; branchiae and eyes are absent. The first and second setigerous fascicles are smaller than those farther back. Uncini are first present from the second setiger; they occur in single rows in the first six segments, then in double rows to the end of the thorax.

The body is noticeably slenderer in abdominal segments, which tend to be irregularly coiled. Setigers 3 to 11 have ventral scutes. The prostomium is broadly crescentic, plain, rounded in front and elevated in its posterior half. The first segment is a complete elevated ring; its dorsal half has the attached eight or nine tentacular cirri, inserted in a transverse row; its ventral half forms the smooth, short, lower lip.

Thoracic notosetae are in slightly transverse tufts; they include longer and shorter limbate setae, with smooth margins. Thoracic uncini are avicular; each has a large fang surmounted by several rows of small teeth. Abdominal segments are longer than wide; their parapodia are located at the posterior end of the segment. The pygidium is a short ring with ventroterminal anal pore, bounded by fleshy crenulations. The tube consists of a mud-covered sheath which closely surrounds the specimen. Ova

are present in many individuals, limited to thoracic segments; the largest measure about 0.1 mm across.

Leaena minima was first considered a subspecies of L. collaris Hesse (1917, p. 198) from South Georgia, in southern latitudes. It is elevated to specific rank because it lacks the conspicuous lateral lappets on setigers 3 to 5 which characterize L. collaris. L. minima differs from L. ebranchiata (Sars, 1865) in having 17, instead of 10, thoracic setigers, and from L. caeca Hartman (1960, p. 161), from southern California, which has 16 thoracic setigers.

Distribution: Slope and abyssal depths, 1102 to 2864 m.

Leaena sp.

New Record: A 95 (2, fgm).

Distribution: Abyssal depth, 3753 m.

Pista cristata (Müller, 1776)

Pista ?cristata Hartman, 1965, p. 225.

New Record: Ch 105B (1).

Depth: Slope depth, 530 m.

Subfamily ARTACAMINAE Chamberlin, 1919

Genus Artacama Malmgren, 1866

Artacama globosa, new species

(Plate 28, Figs. a-e)

Record: Ch 87 (1).

Description: The single specimen is in four pieces; total length is about 34 mm; width in the anterior proboscoidal or widest part is 7 mm, and in the thorax 3.6 mm. The thorax consists of 14 and the abdomen of 23 setigers; the body tapers in

far posterior segments to a narrow pygidial end; the last ten segments are successively shorter and appear crowded.

The prostomium is a small, bilobed arched structure, with the small oral aperture immediately below it. Each half is U-shaped. The tentacular cirri are attached on a pair of thick peristomial folds or pads behind the prostomium; a few tentacles which remain attached are short, slender and smooth (Fig. b). The enormous proboscis (Fig. a) extends forward in front as a thick, oval pouch and terminates in a papillated cone; its surface is covered overall with minute papillae arranged in widely spaced longitudinal rows.

Branchiae number three pairs and are inserted on the second, third, and fourth segments; each is a tuft of short lobes; the two of a pair are widely separated medially. The third segment has a pair of papillar nephridiopores in line with the more posterior notopodia; similar ones are visible on setigers 3 to 6, between notosetae and uncinial ridges. Uncini are first present from the second setiger; they are in linear series throughout. Each uncinus is a thick, compact avicular hook with large fang surmounted by several rows of much smaller teeth (Figs. d, e). The posterior end tapers to a terminal pygidium (Fig. c).

Artacama globosa differs from most other species of the genus in having inconspicuous papillae on the proboscis. A. zebuensis McIntosh, 1885, from the Phillipine Islands, also has small papillae, but they are dispersed instead of in linear series. A. canadensis McIntosh (1915, p. 52), from the Gulf of St. Lawrence, eastern Canada, has a thorax with 17, instead of 14, segments, and the proboscis is coarsely papillated.

Distribution: Slope depth, 1102 m.

## Subfamily POLYCIRRINAE Hesse, 1917

## Key to Genera

Notosetae well developed; neuropodia present in posterior thoracic segments; uncini are wedge-shaped . . . Polycirrus

Notosetae poorly developed; neuropodia absent or present only in posterior segments; neurosetae are simple, pointed spines . . . . . Amaeana

Amaeana trilobata (Sars, 1863)

Amaea trilobata Wollebaek, 1912, p. 76, pl. 17.

Record: A 63 (fgm).

Remarks: An anterior end is pale brownish violet; it measures 5.2 mm long by 1.8 mm wide and consists of 10 thoracic segments. The midventrum has a uniformly narrow raised longitudinal ridge; there is no indication of ventral pads or of neuropodial development. Notopodia are long, slender lobes through which the slender notosetae extend. The first seven pairs of lobes are longest, and thereafter they diminish in length. Uncini are absent.

A specimen from Sta. D 1, earlier reported (Hartman, 1965, p. 224) as Amaeana trilobata, is here referred to Polycirrus medusa, below.

Distribution: Abyssal depth, 2891 m.

Amaeana sp.

Record: Ch 33 (1).

Diagnosis: A complete individual is 20 mm long by 3.2 mm wide in the anterior thoracic region; it consists of eleven thoracic setigers, followed by a long, abdominal region without setae, then by five abdominal setigers, succeeded immediately by

a blunt pygidium with terminal pore. The first three notopodia have long, slender lobes through which the setae project; thereafter the lobes are short. Neuropodia are absent. A narrow, slightly raised ridge extends along the neural groove. Thoracic ventral pads are absent. Parapodia 4 through 9 have tumid, wide-open nephridial pores located in front of notopodial bases.

This specimen has eleven thoracic setigers instead of the ten characteristic of A. trilobata (see above); in this respect it agrees with Amaeana antipoda Augener (1926, p. 241) from New Zealand.

Distribution: Equatorial zone, off Dutch Guiana, 520-550 m.

Genus Polycirrus Grube, 1850

Polycirrus albicans (Malmgren, 1865)

Polycirrus albicans Hesse, 1917, p. 223.

Record: Ch 105B (7).

Remarks: Ventral thoracic plaques are obscure. Setae are present from segment 2; uncini are absent from the first 13 or 14 setigers, and then nowhere conspicuous. Setae are narrowly limbate and smooth along the cutting edge. Nephridia are present on segments 3 to 11 and inconspicuous.

Distribution: Slope depth, 530 m; off Greenland and in Arctic Ocean, in deep water.

Polycirrus medusa Grube, 1855

Polycirrus medusa Hartman, 1965, p. 226.

Amaeana trilobata Hartman, 1965, p. 224 (only for Sta. D 1).

New Records: D 1 (1); Ch 87 (fgm).

Remarks: Ventral pads of the first three segments are broadly fused to form a short, broad pad; others are medially



separated.

Distribution: Off New England, shelf and slope depths; Arctic to Mediterranean latitudes, in shallow to moderate depths.

Subfamily THELEPINAE Hessle, 1917

The THELEPINAE differ from other TERESELLIDAE in having thoracic uncini in single rows on all segments or totally lacking. The body is long, linear, consists of a variable number of thoracic and a large number of abdominal segments.

Genus Euthelepus McIntosh, 1885

Type E. setubalensis McIntosh, 1885

The genotype has a long, linear body with about 20 thoracic and many abdominal setigers. Peristomial tentacles are long, grooved, smooth or marginally crenulated. The buccal segment is dorsally frilled and ventrally has a median scute. More posterior scutes occur on 12 segments. Branchiae number one to three pairs and resemble those of the AMPHARETIDAE; each of the branchial segments has a small notosetal fascicle. Neuropodial uncini are first present from the fourth setiger; uncini have an oval base and a large fang surmounted by two or more smaller teeth.

The definition was extended by Caullery (1944, p. 182) to include species with a varying number of branchiae. The tube is mucoid, externally bristled due to the incorporation of needle-like sponge spicules.

Euthelepus abranchiatus, new species

(Plate 28, Figs. f-i)

Record: Ch 103 (3, TYPE).

Description: Length of a nearly complete specimen is 27 mm; width in the thorax or widest part is 3 mm. The body consists of 29 thoracic and about 50 abdominal setigers. All segments are uniannulate, wider than long, cylindrical and smooth. Ventral scutes are obscurely present on the first nine setigers, as slightly elevated bands across the midventrum. Branchiae and lateral lobes are absent. The peristomium is a short, broad segment to which the long, smooth tentacles are attached. The next two segments are setigerous, with the fascicles increasing in size. Transverse rows of uncini are first present from setiger 3, and continue posteriorly through setiger 27; all are in single rows, numbering 50 to 60 in a series in midthoracic segments. Each uncinus consists of a flat, long oval plate with a large fang surmounted by two or three smaller teeth (Fig. f) in a transverse row, or the median (Fig. g) tooth is uppermost. Noto-setae are of two kinds, all slightly limbate, distally pointed and slightly curved distally; the anterior, shorter (Fig. h) ones alternate with similar, longer (Fig. i) ones. At their greatest development they are arranged in oblique series. A small nephridial papilla is visible on the first uncinigerous segment.

Except for the absence of branchiae, these characters ally the species with Euthelepus. The tube is mucoid, translucent and lightly covered with orbicular foraminiferans and small sand grains. The species differs from others of the genus in lacking branchiae.

Distribution: Abyssal depth, 2022 m.

Euthelepus atlanticus, new species

(Plate 29, Figs. a-d)

Record: A 73 (1454+, TYPE).

Description: The numerous individuals are uniformly small,

long, linear; some are encased in tubes which adhere closely to the much shorter occupant. Length of the body is 11 to 25 mm, width 0.8 to 1 mm, and setigers include about 13 thoracic and 30 to 40 abdominal segments. The anterior end is conspicuous for the spiraled mass of peristomial tentacles and the equally long branchiae, directed forward in line with the axis of the body (Fig. a). The first 12 setigers are short and annulate; the next four are longer, cylindrical; they are followed by a median, flaccid region in which segmental lines are obscure, and the body wall very thin; the posterior region consists of about 16 segments which decrease in length posteriorly. The pygidium is terminal and lacks appendages (Fig. b).

The peristomium is a smooth ring to which the long, smooth tentacles are attached. The next two segments are complete, each with a pair of long, cirriform branchiae; the anterior pair is inserted nearer together than the posterior pair. Eyes and lateral lobes are absent. The first visible setiger is the second branchial segment. Parapodia are small, papillar, immediately behind the bases of the outer branchiae; the fascicle consists of about three simple setae, each thickest at the base and terminating distally in a slender, curved tip (Fig. c). Parapodia increase in size farther back to the fourth setiger. All notosetae are smooth and taper distally. Uncini are first present from setiger 3 and continue through setiger 13. Each uncinus has a long, oval base and a large fang surmounted by many small teeth in several rows to form a crest (Fig. d).

The median, flaccid region which separates thoracic from abdominal segments may be as long as the first region, but its segmental lines are so obscured as to make segmental counts difficult. Tubes are long, cylindrical and much longer than the animal within; they have a mucoid, translucent inner sheath and

are externally covered by shelly debris or orbicular foraminiferans attached on edge; tubes are easily torn.

E. atlanticus differs from E. abranchiatus (above) in having branchiae. It differs from E. setubalensis McIntosh in having two, instead of three, pairs of branchiae, and 13, instead of 20, thoracic setigers. It differs from E. tenuis (Verrill, 1901, p. 662), named from Bermuda as Protothelepus tenuis, in having two pairs of branchiae; the latter has at least 17 thoracic setigers, and peristomial tentacles are marginally crenulated.

Distribution: Slope depths, 1470-1330 m.

terebellid, abranchiate

Record: A 118 (1).

Diagnosis: A cylindrical, externally bristly tube contains a small, ovigerous individual measuring 3.25 mm long by 0.26 mm wide. It consists of peristomium, 14 thoracic and 5 abdominal setigers. Branchiae are absent. The thorax is barrel-shaped, its body wall distended with numerous ova. The anterior end is plain and has inconspicuous parapodia. Notosetae are few in a fascicle, and each is laterally coarsely serrated. Uncini are first present from the third setiger, and continue on 12 thoracic setigers; they are avicular. The specimen may represent an unknown genus and species, characterized by its low setigerous count and the fact that its notosetae are coarsely serrated.

Distribution: Bermuda rise, 1135-1153 m.

terebellids

Records: Ch 105B (29, jv); A 73 (fgm); Ch 103 (fgm); GH 4 (1); A 62 (fgm); GH 1 (1); A 95 (2, jv); A 125 (1); LL 1 (1); ?A 118 (100).

Remarks: Most specimens are fragments or juveniles. One

lot from Sta. A 118 may represent specimens of Euthelepus (above). Another one, from Sta. A 125, lacks branchiae and has peristomial eyespots; the thorax consists of 17 setigers, of which the last four are constricted; the tube is covered with silt.

Distribution: Slope and abyssal depths, 530 to 4977 m.

Family TRICHOBRANCHIDAE

Filibranchus sp.

Record: Ch 105B (1).

Distribution: Slope depth, 530 m.

Terebellides lobatus, new species

(Plate 30, Figs. a-f)

Records: A 73 (19); A 66 (7); A 64 (2); A 121 (3); A 125 (3); A 122 (9); A 124 (3); A 93 (14, TYPE); ?Ch 33 (9); ?Ch 12 (1).

Description: Length of a complete individual is 30 mm, of which the abdomen accounts for 9 mm; width is 3.5 to 4 mm, and segments include 18 thoracic and up to 27 abdominal setigers. The body is broadest in the thorax and tapers in the abdomen to a bluntly rounded pygidium. Segmental lines are obscure except in anterior thoracic segments. The prostomium is a broad, flat lobe extending laterally and frontally as a thin flange which overhangs the oral aperture (Fig. a); it is prolonged laterally as a pair of auricular lobes. Eyes or other color marks are lacking. A pair of raised nuchal organs is visible at the postmedian border of the prostomium.

The peristomium is enlarged as a conspicuous tentacular membrane; it is marginally folded and involuted, and has many short,

slender tentacles attached to its posterior side. This segment extends about the ventrum to form the lower lip. The second segment bears the single, long-stalked median branchia on a slender stem, and terminates in four equally long, well-separated lobes; each is transversely ridged into folds on the upper or exposed side (Fig. b). This segment is laterally reduced and is the first setigerous, represented by a small, short fascicle of pointed setae; a minute nephridial papilla is visible above the notopodium. The next segment is the second setigerous, and it resembles the first except that it is larger. The third setiger is laterally extended as a pair of broad lobes which extend across the midventrum as an anterior collarlike membrane; its setal fascicles are larger than those of the first two pairs, and it has a smaller superior and a larger inferior nephridial papilla above the notopodium.

The fourth setiger is as large as the second and on a level with it; it forms a thin, ventrolateral lappet and continues across the midventrum as a collarlike membrane; it lacks nephridial papillae. The fifth setiger is elevated above those in front; it lacks lateral lappets or there is a very short pair. The sixth setiger has a normal notosetal fascicle of long, distally pointed setae, and a neuropodial fascicle of five or six geniculate neurosetae, with each one distally pointed and bent (Fig. c).

The seventh setiger is the first with uncini; they occur in a short series of six to eight in a row, immediately below the notopodium; similar short series of uncini occur through the next few segments, and then longer series, to the end of the thorax. Each uncinus is long-handled, terminates in a large fang with many smaller superior teeth (Fig. d).

Abdominal parapodia are small, widely spaced, with rounded

tori, each with a single row of avicular uncini. Each uncinus has a large fang and a circlet of smaller curved teeth (Figs. e, f).

Terebellides lobatus is characterized by its conspicuous development of lateral lappets on the third and fourth setigerous segments. The single branchia is quadripartite, with the divisions separated to the base.

Two lots from the equatorial region, Sta. Ch 12 and Sta. Ch 33, differ from T. lobatus as described above, in the following respects: Length attains 83 mm and the body consists of 17 thoracic and about 64 abdominal segments; it is thus notably larger than T. lobatus. Branchiae are inserted on a median stalk and have four branches which are free from one another. Lateral lappets occur on the first four setigers and are reduced to low ridges farther back. The first five setigers have notosetae only; the next one has geniculate neurosetae, and thereafter neuropodia have long-handled uncini. The anteriormost five setigers have a transverse fleshy ridge across the dorsum, between parapodial bases; this is replaced by a thick welt across the dorsum of the ninth setiger. Thereafter the dorsum is smooth, lacks segmental furrows. Large nephridial papillae occur on the first three setigers, and much smaller ones at the upper bases of the last 11 thoracic segments, in some specimens.

These specimens differ from T. lobatus in having thick welts across the ninth and less conspicuous ridges across more anterior segments. In other respects they agree with it.

Distribution: Slope and abyssal depths, in 1330-5007 m; equatorial region, 520-550 m.

Terebellides stroemii Sars, 1835

Terebellides stroemii Hartman, 1965, p. 227.

New Records: Ch 89 (53); Ch 105B (34); Ch 87 (124); A 66 (2).

Distribution: Slope and abyssal depths, 196 to 2802 m.

Terebellides sp.

Terebellides stroemii Hartman, 1965, p. 277 (in part).

New Records: A 58 (2); Ch 103 (11); A 72 (5); A 63 (3); Ch 84 (4); A 123 (2, fgm); Ch 100 (5); Ch 80 (2); Ch 83 (1); A 120 (3); Be 1 (1).

Distribution: Abyssal depths, 2000 to 5023 m.

Trichobranchus americanus Hartman, 1965

Trichobranchus americanus Hartman, 1965, p. 228, pl. 49.

New Record: Ch 105B (5).

Distribution: Slope depth, 530 m.

Unobranchus abyssalis Hartman, 1965

(Plate 31, Figs. a-e)

Unobranchus abyssalis Hartman, 1965, p. 229, pl. 50.

New Records: A 121 (2); Ch 100 (1); A 93 (1); A 120 (3).

Diagnosis: Length of 17 thoracic setigers is 6.5 mm; width about 1.1 mm. The first 15 setigers are short and crowded; the next two are longer and thin-walled. Notosetae occur in stiff, erect fascicles in setigers 4 to 14. The peristomium is modified as a large, thin fold across the midventrum; it is medially somewhat incised (Figs. a, b). The oral aperture is small, between this large membrane and the base of the tentacular membrane. The second segment carries the single branchia middorsally (Fig. c); it is continued across the ventrum as a fleshy pad, then obliquely forward at the sides to join the branchial segment dorsally. The third segment forms the conspicuous pouched sac



ventrally; it is crenulated at its free edge, where it is re-curved; this is the first setiger; the setae are small, embedded, in lateral fascicles; they resemble those of the second setiger. Thereafter notosetae are in erect, long, stiff fascicles.

Distribution: Abyssal depths, 4800 to 5023 m.

trichobranchids

trichobranchid, Hartman, 1965, p. 230.

New Records: A 66 (fgm); A 122 (fgm); Ch 83 (1); A 155 (3).

Distribution: Abyssal depths, 2802 to 5000 m; equatorial region, 4825 m.

Family SABELLIDAE

Genus Chone Krøyer, 1856

Chone sp.

Records: Ch 105B (29); Ch 87 (fgm); A 58 (1).

Distribution: Slope depths, 530 to 2000 m.

Euchone incolor Hartman, 1965

Euchone incolor Hartman, 1965, p. 231, pl. 51.

New Records: Ch 89 (14); Ch 105B (76); Ch 87 (555); A 73 (147); ?Ch 100 (1); ?A 155 (1).

Remarks: A ciliary band surrounds the third abdominal segment. The anal funnel occupies the last three setigers.

Distribution: Slope and abyssal depths, 196 to 4892 m.

Euchone spp.

Euchone spp., Hartman, 1965, p. 232.

New Records: A 58 (4); Ch 103 (12); A 71 (1); A 95 (1).

Distribution: Abyssal depths, 2000 to 3753 m.

Jasmineira bermudensis Hartman, 1965

Jasmineira bermudensis Hartman, 1965, p. 233, pl. 52.

Remarks: Reverse legends for Figs. c and e of Plate 52 (Hartman, 1965, p. 233).

Jasmineira filiformis Hartman, 1965

Jasmineira filiformis Hartman, 1965, p. 233, pl. 52.

New Record: Ch 87 (56).

Diagnosis: The tentacular crown consists of three pairs of very long radioles, each with many long pinnules. The thoracic collar is oblique, with short, pointed dorsal lobes and much longer, pointed ventral lobes. A ciliary band crosses the body behind the second setigerous fascicle. The collar leaves the peristomium exposed. Five ventral scutes cross the thoracic ventrum; each is biannulated. The last four setigers are short, and the pygidial pore is middorsal, in the last setiger; this is followed by a posterior triangular flap. Ova are large, number one or two in a segment, and occur only in abdominal segments. The tube is smooth, gray, cylindrical, ornamented with scattered white orbicular foraminiferans.

Distribution: Slope depth, 1102 m.

Jasmineira sp.

Record: Ch 100 (16).

Distribution: Abyssal depths, 4743-4892 m.

Potamethus singularis Hartman, 1965

Potamethus singularis Hartman, 1965, p. 234, pl. 52.

New Records: Ch 87 (57); A 73 (36); A 93 (2); A 120 (7).

Remarks: Specimens from greatest depths have ventral collar

lobes greatly prolonged, resembling the ears of a rabbit. Length of body is at most 8 mm, width about 0.4 mm, and setigers include 8 thoracic and 25 abdominal segments. Thoracic uncini are long-handled, as is typical of the genus.

Distribution: Slope and abyssal depths, 196 to 5023 m.

sabellids

sabellids, Hartman, 1965, p. 235.

New Records: A 95 (22); A 70 (fgm); Ch 100 (2, fgm); A 93 (2); A 118 (3); A 119 (1); A 155 (2).

Remarks: Most are fragments, juveniles, or otherwise indeterminate.

Distribution: Abyssal depths, to 3753 m; Bermuda rise, 1135 to 2223 m; equatorial region, 4825 m.

Family SERPULIDAE

Subfamily SERPULINAE MacLeay

Genus Vermiliopsis Saint-Joseph, 1894

Vermiliopsis ?langerhansi Fauvel, 1909

Vermiliopsis langerhansi Fauvel, 1909, p. 61.

Record: Ch 103 (5).

Remarks: The white, calcareous tube is fully attached to a hard surface. The operculum consists of a simple, cylindrical stalk topped by a translucent ampule with a flat top, circular in full view and calcareous; it lacks ornamentation.

Distribution: Abyssal depth, 2022 m; off Azores, 4020 m.

## Subfamily FILOGRANINAE Rioja

Filogranula ?gracilis Langerhans, 1884

Filogranula gracilis Langerhans, 1884, p. 282, fig. 47.

Record: A 118 (2).

Remarks: The slender tubes are white, calcareous, fully attached to dead coral. The exposed length has high ridges which are closely dentate from end to end. The distal end of the tube is stellate, with 7 equally long serrations; the lumen is cylindrical, as shown by Langerhans (1884, fig. 47). The operculum has a horny funnel with closely spaced, small marginal crenulations, on a cylindrical stalk that lacks basal barbules.

Distribution: Bermuda rise, 1135-1153 m; off Madeira.

?Filogranula spp.

Records: Ch 85 (66, and tubes); Ch 100 (1); A 155 (1).

Remarks: Long, straight tubes, from Sta. Ch 85, are square in cross section, externally smooth and have a cylindrical lumen. The small, slender body measures less than 10 mm long, consists of 5 thoracic and 30 to 40 abdominal setigers; the crown consists of four or five pairs of radioles, of which the dorsalmost is modified as an operculum, with thick, fleshy stalk and sparse numbers of barbules limited to its ventrobasal part. The opercular disk is circular, infundibular, lightly chitinized and minutely crenulated at its margin. The collar segment is the longest; it has simple collar setae, and the last four setigers are uncinigerous. Abdominal segments are short and crowded.

Distribution: Abyssal depths, 3834 to 4892 m; equatorial region, 4825 m.

Genus Spirodiscus Fauvel, 1909

Spirodiscus is transferred from the subfamily SERPULINAE to the FILOGRANINAE because the opercular stalk has barbules.

Spirodiscus grimaldii Fauvel, 1909

Spirodiscus grimaldii Fauvel, 1914, p. 335, pl. 29, figs. 7-21.

Records: ?Ch 100 (tube); A 118 (2); A 119 (10).

Diagnosis: All are small, come from slender calcareous tubes which are basally coiled sinistrally, then straight, erect, or the tube may be angular along a part of its length. The enclosed specimens measure about 1.5 mm long by 0.14 mm wide; they consist of four thoracic and 9 or 10 abdominal segments. The opercular stalk is unique; it is erect, rising as one of the dorsalmost radioles, with a few barbules on its basal half; then smooth and cylindrical to rise beyond the pinnules, and terminate in a structure resembling a small spool with larger base and smaller distal disk. The thoracic collar is voluminous. Thoracic setae are limbate, and abdominal setae are geniculate. Uncini are platelike and have many marginal teeth. The first thoracic setiger has simple, capillary setae, and the next three (or to five) have limbate notosetae and uncini.

Distribution: Bermuda rise, 1135-2223 m; questionably equatorial region, 4743-4892 m; off Azores, 1846-1900 m.

## Subfamily SPIRORBINAE Chamberlin

spirorbid, with dextral tube

Record: A 121 (1).

Distribution: Abyssal depth, 4800 m.

spirorbid, with opercular incubation

Records: A 125 (2); A 124 (2).

Distribution: Abyssal depths, 4825 and 4862 m.

serpulids

Records: A 58 (6); A 119 (1); A 155 (2).

Remarks: The specimens from Sta. A 58 lack opercula; one occupies a longitudinally ridged tube, another a cylindrical tube. Specimens from Sta. A 155 occupy tubes of two kinds. One is 5-keeled with a cylindrical lumen; a detached operculum has a long, slender stalk terminating in a flattened disk. Another is in a thin-walled tube; the operculum consists of a slender stalk surmounted by a hemispherical vesicle. Some of the specimens agree fully with Serpula quadrangularis Fauvel (1914, p. 339, pl. 29).

Distribution: Northwest Atlantic Ocean and Bermuda rise, in 2000 to 2223 m; equatorial region, in ~~4825~~ m. 3730-3783 m

CHARACTERISTICS OF THE ABYSSAL POLYCHAETES FROM  
THE NORTHWEST ATLANTIC OCEAN

The single most conspicuous feature of the abyssal polychaetes from the northwest Atlantic Ocean is the uniformly small size and the reduced number of body segments at maturity, as compared with their shallow water relatives. The body tends to be linear, plain; parapodia are reduced to small, papillar elevations, with little lamellar development, and armed with smooth, capillary setae which are rarely coarsely serrated or spinose along their free lengths. They lack the highly characteristic modifications uniquely developed in shallow water species.

Most species have muted colors if any, or the body is trans-

lucent to dusky or black, with no visible pattern. Surface or epithelial modifications are rare. Polynoid elytra and cirri tend to be smooth, fragile, dehiscent, and seldom ornate; they are generally surpassed by the long, hairlike setae directed laterally; in littoral forms the elytra are often tough, ornate, and may completely cover the setae. Flabelligerids in shallow water habitats are typically spinous and richly papillated; in deep bottoms they have smooth or lightly papillated surfaces, or are thickly covered with ooze over surface papillae, as in Ilyphagus. Phyllodocids known from shallow depths for their beautiful, iridescent coloration, their leaflike cirri and often sinuous body, lack these conspicuous features in deep water but retain the cephalisation patterns of their better known relatives. In many abyssal polychaetes the muscular system is so reduced that the body is flaccid, thin-walled; the strongest muscles are in the anterior or masticatory region and in the posterior end, involved in the movements through tubes or burrows and the expulsion of waste products.

Many species, both errant and sedentary, are tubicolous, occupying tubes which may be several times as long as the occupant; they are frequently externally covered with silt or ooze, and may have attached orbicular foraminiferans, bits of pteropod shells, or sponge spicules. The tube may be lined with a thin to thick mucoid sheath, which is particularly thick in some flabelligerids and tough in some oweniids, so that it is difficult to tear.

Cephalic eyes are absent, reduced in size or variable in occurrence; they are usually small dark pigment spots on the prostomium, or sometimes lenticulated (some nereids). The prostomium tends to be reduced to a simple lobe projecting over the oral aperture, or its frontal margin may have simple antennae.

In some scalibregmids and flabelligerids, the characteristic cephalic structures have been lost (Fauveliopsis and Neolipobranchius). Strong family characters, such as the areolation or longitudinal striations of the scalibregmid epithelium, the typical crenulated and furcate setae of orbiniid notopodia, the rostrate bearded uncini of maldanids, and the unique hooded setae of spionids, are deep-rooted features and can be identified even though specimens are fragmented and incomplete.

Gut contents are difficult to assess for feeding groups, because the alimentary tract is often empty or contains only oozy debris after animals are recovered from great depths. It may be anticipated that polychaetes are diversified in their trophic requirements, as indicated by the kinds of oesophageal structures. Among the 56 families represented in this deep water fauna, some have a muscular pharynx with jaw pieces, suggesting that they are predators or carnivores. Others have an unarmed epithelial pouch characteristic of deposit feeders, and some have a ciliary oral apparatus found in filter feeders. The problem of available food supplies for diversified feeding groups in deep bottoms, despite man's concern over the lack of primary (plant) foods, distance from continents, seeming sparsity of living things, and adverse biological conditions, has been solved by the animals themselves, as evidenced by the fact that they are not only present, but are highly diversified and relatively abundant in all sampled depths.

Reproductive stages are indicated by the presence of mature ova in the coelom, or by ova attached to parapodia, as in some EXOGONINAE. Occurrences of advanced stages have been noted under the specific descriptions of the species. Reproduction may proceed throughout the year for some species, shown by the presence of stages ranging from chaetosphaere larvae to young and to



reproductive individuals.

One of the most conspicuous facts is the preponderance of many species in some families which have few representatives in the better known shallow sea bottoms. This is illustrated in the lists of species and genera; the family AMPHARETIDAE is represented by 15 genera, PARONIDAE, SCALIBREGMIDAE, and FLABELLIGERIDAE by seven genera each, and the rare TRICHOBRANCHIDAE by four genera. Other unusual occurrences are species in genera which are typically recovered from shallow depths; such are species in the families PISIONIDAE, CTENODRILIDAE, NEREIDAE, and PHYLLODOCIDAE.

The theory of a highly endemic abyssal fauna in the northwest Atlantic Ocean is substantiated anew as more collections are taken from approximately the same or adjacent areas as those reported on in 1965. The new collections add considerably to kinds of species, and seldom duplicate those from previous finds, indicating that these faunas are still poorly known.

The CHARTS, below, illustrate another significant fact concerning most species in abyssal depths; they have a broad vertical range into deep slope, but not shelf, depths. Relatively few species are limited to one or a few locations (but see RARE SPECIES, below). However, most species attain a maximum development and abundance-pattern at few places, as shown in the CHARTS, where numbers of individuals from each depth class are given. This pattern of abundance may be determined not so much by actual depth as by other factors, such as availability of suitable foods and lack of predators. This is demonstrated by the presence of the highly diversified, abundant fauna along the axis of the Gulf Stream, for example Sta. A 95 and Sta. A 126, as compared with the sparse or impoverished fauna under the northern end of the Sargasso Sea, as in examples from areas at Stations KK, LL, MM.

## THE MOST ABUNDANT SPECIES

The 50 most abundant species, or those represented by more than 200 specimens each, are listed in order of numerical abundance, with total numbers of specimens and the areas from which they originate. S refers to slope depths, A to abyssal depths, B to Bermuda, and E to equatorial regions; x indicates limited, c wide distribution.

x	<u>Paramphinoe jeffreysii</u>	with 6105 specimens from	S, A, B, E
x	<u>Paraonis reductus</u>	1897	S, A, E
c	<u>Prionospio steenstrupi</u>	1803	S, A
c	<u>Lumbrineris latreilli</u>	1670	S, A, B
x	<u>Euthelepus atlanticus</u>	1454	S
x	<u>Glycera mimica</u>	1408	S, A, B, E
c	<u>Spiophanes kroeyeri</u>	1262	S, A, B, E
x	<u>Euchone incolor</u>	1234	S, A, B, E
c	<u>Auchenoplax crinita</u>	1230	S, E
c	<u>Polydora caulleryi</u>	1168	S
x	<u>Ammotrypane abranchiata</u>	1137	S, A, B, E
c	<u>Clymenura borealis</u>	1068	S, A
c	<u>Lysippe labiata</u>	1045	S
c	<u>Tharyx marioni</u>	1037	S, A, E
x	<u>Cossura longocirrata</u>	977	S, A, E
c	<u>Ampharete arctica</u>	956	S, A, E
x	<u>Tharyx annulosus</u>	836	S, A, E
x	<u>Kesun gravieri</u>	790	S, A, E
c	<u>Exogone dispar</u>	693	S, A, B, E
c	<u>Notomastus latericeus</u>	686	S, A, B, E
c	<u>Aedicira belgicae</u>	649	S, A, B, E
c	<u>Spiophanes spp.</u>	631	S, A, B, E
c	<u>Chaetozone setosa</u>	628	S, A, B, E

x <u>Ilyphagus octobranchus</u>	with 609 specimens from	S, A, B, E
x <u>Aricidea tetrabranchia</u>	588	S, A, E
x <u>Fauveliopsis scabra</u>	549	S, A, B, E
c <u>Heteromastus filiformis</u>	543	S, A
x <u>Paraonis cornatus</u>	513	S, A
c <u>Prionospio cirrifera</u>	511	S, A, B, E
x <u>Nothria atlantisa</u>	468	S, E
x <u>Melinnata americana</u>	458	A
x <u>Pholoe anoculata</u>	455	S, A, E
x <u>Laonice antarcticae</u>	447	S, A, E
x <u>Amphicteis vestis</u>	393	S, A
x <u>Paraonides monilaris</u>	382	A, E
c <u>Terebellides stroemii</u>	377	S
c <u>Myriochele</u> nr <u>heeri</u>	370+	S, A
x <u>Langerhansia anoculata</u>	353	S, A, E
x <u>Potamethus singularis</u>	317	S, A
x <u>Paradoneis lyra</u>	301	S
x <u>Chaetozone gayheadia</u>	277	S
c <u>Laonice cirrata</u>	261	S, B
x <u>Paraonis uncinatus</u>	245	S, A, B
c <u>Lumbrineris</u> spp.	237	S, A, B
x <u>Spiophanes wigleyi</u>	230	S
x <u>Paraonides rubriceps</u>	223	S, A
c <u>Aricidea suecica</u>	208	S, A, E
x <u>Cirrophorus lyriformis</u>	201	S

## THE RARE SPECIES

Those species represented by few individuals or coming from one or two localities only, are regarded as rare species. They are present in all depth classes, and distributed among a wide range of families and genera.

From slope depths they include:

- PHYLLODOCIDAE: Anaitides, oculate; Cirrodoce cristata; Nereiphylla antennata.
- SYLLIDAE: Exogonella longipedata; Pionosyllis procerata; Typosyllis tegulum.
- NEREIDAE: Eunereis sp.; Nicon uncinatus.
- NEPHTHYIDAE: Aqilaophamus igalis.
- nr SPIONIDAE: Aberranta enigmatica.
- CTENODRILIDAE: Zeppelinella prolonga.
- FLABELLIGERIDAE: Flabelligella cirrata.
- CAPITELLIDAE: Leiocapitella atlantica.
- AMPHARETIDAE: Sosanelle apalea.
- TEREBELLIDAE: Artacama globosa, Euthelepus atlanticus.

From Bermuda localities they include:

- SIGALIONIDAE: Psammolyce globula; Sthenelais sp.
- PEISIDICIDAE: Peisidice bermudensis.
- AMPHINOMIDAE: Pareurythoe sp.
- PHYLLODOCIDAE: Notalia sp.
- POECILOCHAETIDAE: Poecilochaetus bermudensis.
- FLABELLIGERIDAE: Flabelligera sp.
- BOGUEIDAE: Boguella ornata.
- AMPHARETIDAE: Muggoides cinctus.

From abyssal depths they include:

- PISIONIDAE: Pisionura abyssorum.

- EUPHROSINIDAE: Euphrosine sp.
- PHYLLODOCIDAE: ?Anaitides, anoculate; Austrophyllum maculatum;  
phyllodocid, aberrant.
- SYLLIDAE: Exogonita oculata; Exogoninae, unknown.
- SPHAERODORIDAE: Ephesiopsis guayanae; Clavodorum atlanticum.
- ARABELLIDAE: Haematocleptes leaenae.
- ORBINIIDAE: orbiniid, unknown.
- PARAONIDAE: Aparaonis abyssalis; Cirrophorus aciculatus.
- SCALIBREGMIDAE: Neolipobranchius glabrus; Scalispinigera cir-  
rata.
- CAPITELLIDAE: Capitella aberranta; Leiochrides sp.
- MALDANIDAE: Notoproctus abyssus.
- AMPHARETIDAE: Neopaiwa cirrata; Phyllampharete longicirra.
- TEREBELLIDAE: Euthelepus abranchiatus.
- From equatorial regions they include:
- SPHAERODORIDAE: Sphaerodoropsis elegans.
- ONUPHIDAE: Rhamphobranchium agassizi.
- SPIONIDAE: Nerinides nr tridentata; Prionospio delta; spionid  
unknown.
- FLABELLIGERIDAE: Buskiella borealis.

## LOCATIONS NAMED IN THIS REPORT

Arabic numbers refer to stations in the Northwest Atlantic Ocean and Equatorial regions, shown in map at end of volume; they represent the following station numbers:

1 = C 1	19 = A 119, GH	37 = KK 4
2 = Ch 89	20 = A 62	38 = A 121
3 = S1 2	21 = GH 1	39 = A 125
4 = S1 3	22 = A 66	40 = A 155
5 = S1 4	23 = Ch 76	41 = A 122
6 = D 1	24 = A 72	42 = KK 1
7 = Ch 33	25 = A 64	43 = A 124
8 = Ch 105	26 = A 63	44 = Ch 100
9 = Ch 12	27 = A 65	45 = LL 1
10 = E 3	28 = HH 3, A 112	46 = Ch 83
11 = Ch 87	29 = A 71, II, Ch 75	47 = A 93
12 = A 118	30 = A 95	48 = A 120
13 = A 73	31 = A 126	29b = II 1
14 = F 1	32 = Ch 85	29c = II 2
15 = Ch 34	33 = JJ 1, Ch 35	31a = Ch 77
16 = G 1	34 = A 69	31b = Ch 78
17 = A 58	35 = A 70	33b = JJ 3
18 = Ch 103	36 = Ch 84	34a = OO 2

LIST OF STATION NUMBERS IN NORTHWEST ATLANTIC OCEAN  
AND EQUATORIAL REGIONS, CROSS-REFERENCED TO  
ARABIC NUMBERS SHOWN ON MAP

Be 1-8 = off Bermuda	Ch 76 = 23	A 69 = 34
Sl 2-4 = 3-5	Ch 77, 78 = 31	A 70 = 35
C 1 = 1	Ch 83 = 46	A 71 = 29
D = 6	Ch 84 = 36	A 72 = 24
E = 10	Ch 85 = 32	A 73 = 13
F = 14	Ch 87 = 11	A 93 = 47
G 1 = 16	Ch 89 = 2	A 95 = 30
GH = 21	Ch 100 = 44	A 118 = 12
HH = 28	Ch 103 = 18	A 119 = 19
II = 29	Ch 105 = 8	A 120 = 48
JJ = 33	A 58 = 17	A 121 = 38
KK = 37, 42	A 62 = 20	A 122 = 41
LL = 45	A 63 = 26	A 124 = 43
OO = 34	A 64 = 25	A 125 = 39
Ch 12 = 9	A 65 = 27	A 126 = 31
Ch 33 = 7	A 66 = 22	A 155 = 40
Ch 34 = 15		

ANALYSES OF STATIONS, FROM THE NORTHWEST ATLANTIC  
 OCEAN, IN SLOPE AND ABYSSAL DEPTHS, SHOWING  
 ASSOCIATIONS OF SPECIES IN ALPHABETICAL ARRANGEMENT  
 (see also Hartman, 1965, pp. 17-48)

Sta. Ch 89, in 196 m

<u>Aglaphamus minusculus</u>	<u>Myriochele ?pygidialis</u>
<u>Amage</u> sp.	<u>Neopodarke woodsholea</u>
<u>Ammotrypane aulogastrella</u>	<u>Nephtys</u> nr <u>squamosa</u>
<u>Ammotrypane cylindricaudatus</u>	<u>Nereiphylla paretii</u>
<u>Ampharete arctica</u>	<u>Nothria conchylega</u>
ampharetids	<u>Nothria pallidula</u>
<u>Amphicteis vestis</u>	<u>Notomastus</u> sp.
<u>Anaitides</u> , oculate	<u>Paramphinome jeffreysii</u>
<u>Antinoana fusca</u>	<u>Paraonis gracilis</u>
<u>Aricidea</u> sp.	<u>Phylo felix</u>
<u>Cirrodoco cristata</u>	<u>Polydora</u> sp.
<u>Cossura longocirrata</u>	<u>Potamethus</u> sp.
<u>Euchone incolor</u>	<u>Prionospio</u> sp.
<u>Exogone dispar</u>	<u>Progoniada regularis</u>
<u>Glycera</u> sp.	<u>Protomystides bidentata</u>
<u>Harmothoe</u> sp.	<u>Samytha sexcirrata</u>
<u>Laetmonice filicornis</u>	<u>Sphaerodoropsis longipalpa</u>
<u>Langerhansia anoculata</u>	<u>Sphaerosyllis brevifrons</u>
<u>Laonice</u> sp.	<u>Spiophanes kroveri</u>
<u>Lumbrineris latreilli</u>	<u>Terebellides stroemii</u>
<u>Lysippe labiata</u>	<u>Therochaeta collarifera</u>
maldanids	<u>Tomopteris</u> sp.
<u>Microrbinia linea</u>	<u>Typosyllis tegulum</u>



Sta. Ch 105B, in 530 m

<u>Aedicira parva</u>	<u>Glycera</u> sp.
<u>Ammotrypane abranchiata</u>	<u>Heteromastus filiformis</u>
<u>Ammotrypane cylindricaudatus</u>	<u>Hyalinoecia tubicola</u>
<u>Ampharete arctica</u>	<u>Ilyphagus octobranchus</u>
ampharetids	<u>Leanira minor</u>
<u>Amphicteis trichophora</u>	<u>Lumbriclymene</u> sp.
<u>Ancistrosyllis groenlandica</u>	<u>Lumbrineris latreilli</u>
<u>Anobothrus gracilis</u>	<u>Lumbrineris nr tenuis</u>
<u>Antinoana fusca</u>	<u>Maldane sarsi</u>
<u>Apistobranchnus typicus</u>	maldanids
<u>Asychis biceps</u>	<u>Myriochele ?pygidialis</u>
<u>Auchenoplax crinita</u>	<u>Neopodarke woodsholea</u>
<u>Brada villosa</u>	<u>Nothria conchylega</u>
<u>Braniella pupa</u>	<u>Nothria pallidula</u>
<u>Ceratocephale loveni</u>	<u>Paramphinome jeffreysii</u>
<u>Chaetozone gayheadia</u>	<u>Paraonis cornatus</u>
<u>Chaetozone setosa</u>	<u>Paraonis gracilis</u>
<u>Chone</u> sp.	<u>Paraonis uncinatus</u>
<u>Clymenura borealis</u>	<u>Phylo felix</u>
<u>Cossura longocirrata</u>	<u>Pista cristata</u>
<u>Disoma watsoni</u>	<u>Polycirrus albicans</u>
<u>Dorvillea rudolphi anoculata</u>	<u>Prionospio cirrifera</u>
<u>Drilonereis</u> sp.	<u>Protodorvillea minuta</u>
<u>Euchone incolor</u>	<u>Pseudomystides limbata punctata</u>
<u>Eulalia anoculata</u>	<u>Pseudoscalibregma parva</u>
? <u>Eumida</u> sp.	<u>Sphaerodoropsis corrugata</u>
<u>Exogone dispar</u>	<u>Sphaerosyllis brevifrons</u>
<u>Fauveliopsis scabra</u>	<u>Spiophanes kroeyeri</u>
<u>Filibranchnus</u> sp.	<u>Terebellides stroemii</u>
<u>Flabelligella cirrata</u>	<u>Tharyx annulosus</u>

Tharyx spp.Trichobranchus americanusTherochaeta collarifera

Sta. Ch 87, in 1102 m

Aedicira belgicaeEunice norvegicaAedicira parvaExogone disparAglaophamus groenlandiaeFauveliopsis scabraAmage sp.Glycera mimicaAmmotrypane abranchiataGlyphanostomum pallescensAmmotrypane cylindricaudatusGoniada norvegica

ampharetids

Haematocleptes leaenaeAmphicteis sp.Heteromastus filiformisAncistrosyllis groenlandicaHyalinoecia sp.Anobothrus gracilisIlyphagus octobranchus✓ Antinoana fuscaJasmineira filiformisAricidea neosuecicaKesun gravieriAricidea tetrabranchiaLangerhansia anoculataArtacama globosaLaonice antarcticaeAsychis bicepsLeanira minorCalifia schmittiLumbrineris crassicephalaCeratocephale loveniLumbrineris fragilisChaetozone gayheadiaLumbrineris latreilliChone sp.Lumbrineris nr tenuisClymenura borealisLumbrineris sp.Cossura longocirrataLysippe labiata✓ Disoma watsoniMaldane sarsiDorvillea rudolphi anoculata

maldanids

Ephesiella macrocirris

melinnid

Euchone incolorMyriochele ?pygidialisEulalia anoculataNamalycastis profundus? Eumida sp.Neopodarke woodsholea

<u>Ninoe brevipes</u>	<u>Potamethus singularis</u>
<u>Ninoe dibranchia</u>	<u>Praxillella gracilis</u>
<u>Notomastus latericeus</u>	<u>Prionospio ehlersi</u>
<u>Notomastus teres</u>	<u>Prionospio</u> sp.
<u>Notomastus</u> sp.	<u>Pseudomystides limbata punctata</u>
<u>Paramphinome jeffreysii</u>	<u>Pseudoscalibregma parva</u>
<u>Paranaitis wahlbergi</u>	<u>Samytha sexcirrata</u>
<u>Paraonides rubriceps</u>	<u>Scoloplos</u> sp.
<u>Paraonis gracilis</u>	<u>Sigambra tentaculata</u>
<u>Paraonis reductus</u>	<u>Sphaerodoropsis longipalpa</u>
<u>Paraonis uncinatus</u>	<u>Sphaerosyllis brevifrons</u>
<u>Pholoe anoculata</u>	<u>Spiophanes kroeyeri</u>
<u>Phyllochaetopterus</u> sp.	<u>Sthenolepis tetragona</u>
<u>Pirakia lanceolata</u>	<u>Tharyx annulosus</u>
<u>Poecilochaetus fulgoris</u>	<u>Tharyx marioni</u>
<u>Polycirrus medusa</u>	<u>Tharyx nigrorostrum</u>

Sta. A 73, in 1330 m

<u>Aedicira belgicae</u>	<u>Aricidea tetrabranchia</u>
<u>Aedicira parva</u>	<u>Califia schmitti</u>
<u>Aglaphamus groenlandiae</u>	<u>Clymenura borealis</u>
<u>Ammotrypane abbranchiata</u>	<u>Cossura longocirrata</u>
<u>Ammotrypane chaetifera</u>	<u>Disoma watsoni</u>
<u>Ammotrypane cylindricaudatus</u>	<u>Dorvillea rudolphi anoculata</u>
<u>Ammotrypane</u> sp.	<u>Dysponetus gracilis</u>
<u>Amphicteis</u> sp.	<u>Euchone incolor</u>
<u>Ancistrosyllis</u> sp.	? <u>Eumida</u> sp.
<u>Antinoana fusca</u>	<u>Eunice norvegica</u>
<u>Aricidea abbranchiata</u>	<u>Euthelepus atlanticus</u>
<u>Aricidea suecica</u>	<u>Exogone dispar</u>
<u>Aricidea suecica</u> , anoculate	<u>Ephesiella macrocirris</u>

<u>Fauveliopsis brevis</u>	<u>Notoproctus abyssus</u>
<u>Fauveliopsis scabra</u>	<u>Paramphinome jeffreysii</u>
<u>Flabelligella papillata</u>	<u>Paranaitis wahlbergi</u>
<u>Glycera mimica</u>	<u>Paraonis cornatus</u>
<u>Glyphanostomum pallescens</u>	<u>Paraonis reductus</u>
<u>Goniada norvegica</u>	<u>Pholoe anoculata</u>
<u>Haploscoloplos fragilis intermedius</u>	<u>Phyllochaetopterus</u> sp.
<u>Heteromastus filiformis</u>	<u>Pirakia lanceolata</u>
<u>Ilyphaqus</u> sp.	<u>Poecilochaetus fulgoris</u>
<u>Kesun gravieri</u>	<u>Potamethus singularis</u>
<u>Langerhansia anoculata</u>	<u>Prionospio</u> spp.
<u>Laonice cirrata</u>	<u>Protodorvillea</u> sp.
<u>Leanira minor</u>	<u>Pseudomystides limbata punctata</u>
<u>Lumbrineris latreilli</u>	<u>Pseudoscalibregma parva</u>
<u>Lysippe labiata</u>	<u>Sclerobregma branchiata</u>
<u>Maldane sarsi</u>	<u>Sphaerodoropsis corrugata</u>
maldanids	<u>Sphaerodoropsis longipalpa</u>
<u>Myriochele ?pygidialis</u>	<u>Sphaerosyllis brevifrons</u>
<u>Nereimyra ?punctata</u>	<u>Spiophanes kroeyeri</u>
<u>Ninoe brevipes</u>	<u>Terebellides lobatus</u>
<u>Ninoe</u> sp.	<u>Terebellides stroemii</u>
<u>Notomastus latericeus</u>	<u>Tharyx marioni</u>
<u>Notomastus teres</u>	<u>Tomopteris</u> sp.

Sta. A 58, in 2000 m

<u>Aedicira parva</u>	<u>Capitella</u> nr <u>capitata</u>
<u>Ammotrypane cylindricaudatus</u>	<u>Chone</u> sp.
<u>Aricidea suecica</u>	<u>Clymenura borealis</u>
<u>Aricidea tetrabanchia</u>	<u>Cossura longocirrata</u>
<u>Barantolla</u> nr <u>americana</u>	✓ <u>Disoma watsoni</u>
<u>Califia schmitti</u>	<u>Drilonereis</u> sp.

<u>Euchone</u> sp.	<u>Notoproctus oculatus</u> , anoculate
<u>Eulalia anoculata</u>	<u>Paramphinome jeffreysii</u>
<u>Eunice</u> sp.	<u>Paraonis cornatus</u>
<u>Glycera mimica</u>	<u>Paraonis reductus</u>
<u>Glycera tessellata</u>	<u>Pholoe</u> sp.
harmothoid	<u>Phyllochaetopterus</u> sp.
<u>Heteromastus filiformis</u>	<u>Praxillella praetermissa</u>
<u>Kesun gravieri</u>	<u>Prionospio</u> sp.
<u>Lumbrineris atlantica</u>	<u>Pseudoscalibregma aciculata</u>
<u>Lumbrineris fragilis</u>	<u>Pseudoscalibregma parva</u>
<u>Melinnata americana</u>	<u>Sigambra tentaculata</u>
<u>Nicomache lumbricalis</u>	<u>Spiophanes</u> sp.
<u>Ninoe brevipes</u>	<u>Terebellides stroemii</u>
<u>Notomastus latericeus</u>	<u>Tharyx marioni</u>

Sta. Ch 103, in 2022 m

<u>Aedicira belgicae</u>	<u>Fauveliopsis scabra</u>
<u>Aqlophamus groenlandiae</u>	<u>Glycera mimica</u>
<u>Ammotrypane cylindricaudatus</u>	<u>Goniada norvegica</u>
<u>Ammotrypane</u> sp.	<u>Ilyphagus</u> sp.
<u>Ampharete arctica</u>	<u>Kesun gravieri</u>
<u>Antinoana fusca</u>	<u>Laetmonice</u> sp.
<u>Aricidea neosuecica</u>	<u>Langerhansia anoculata</u>
<u>Aricidea tetrabranchia</u>	<u>Laonice antarcticae</u>
<u>Disoma watsoni</u>	<u>Leanira minor</u>
<u>Euchone</u> sp.	<u>Lumbrineris latreilli</u>
<u>Eulalia anoculata</u>	<u>Lumbrineris</u> sp.
<u>Eunice norvegica</u>	<u>Melinnata americana</u>
<u>Euthelepus abranchiatus</u>	melinnid
<u>Exogone dispar</u>	<u>Myriochele nr heeri</u>
<u>Fauveliopsis brevis</u>	<u>Myriochele ?pygidialis</u>

<u>Neopodarke woodsholea</u>	<u>Pseudomystides limbata punctata</u>
<u>Nicomache lumbricalis</u>	<u>Pseudoscalibregma parva</u>
<u>Notomastus latericeus</u>	<u>Samythella elongata</u>
<u>Ophryotrocha</u> sp.	<u>Scalispinigera cirrata</u>
<u>Paramphinome jeffreysii</u>	<u>Sphaerodoropsis longipalpa</u>
<u>Pholoe anoculata</u>	<u>Spiophanes</u> sp.
<u>Phyllochaetopterus</u> sp.	<u>Terebellides stroemii</u>
<u>Pirakia lanceolata</u>	<u>Tharyx marioni</u>
<u>Praxillella praetermissa</u>	<u>Vermiliopsis ?langerhansi</u>
<u>Prionospio</u> sp.	

Sta. GH 3  
(see Hartman, 1965, p. 33, for station data)

<u>Ammotrypane cylindricaudatus</u> ampharetids	<u>Paradoneis abbranchiata</u>
<u>Ancistrosyllis groenlandica</u>	<u>Paramphinome jeffreysii</u>
<u>Aricidea suecica</u>	<u>Paraonis cornatus</u>
<u>Aricidea suecica</u> , anoculate	<u>Pholoe anoculata</u>
<u>Dorvillea rudolphi anoculata</u>	<u>Praxillella gracilis</u>
<u>Glycera mimica</u>	<u>Praxillella praetermissa</u>
<u>Kesun gravieri</u>	<u>Prionospio cirrifera</u>
<u>Langerhansia anoculata</u>	<u>Pseudoscalibregma parva</u>
<u>Leanira minor</u>	<u>Synelmis albini</u>
<u>Nephtys paradoxa</u>	<u>Tharyx</u> sp.
<u>Notomastus latericeus</u>	<u>Travisiopsis lanceolata</u>

Sta. A 62, in 2496 m

<u>Aedicira belgicae</u>	<u>Aricidea suecica</u>
<u>Aglaphamus groenlandiae</u>	<u>Aricidea suecica</u> , anoculate
<u>Ammotrypane abbranchiata</u>	<u>Aricidea tetrabanchia</u>
<u>Ammotrypane aulogastrella</u>	<u>Chaetozone</u> sp.
<u>Ammotrypane cylindricaudatus</u>	<u>Clymenura borealis</u>
<u>Antinoana fusca</u>	<u>Ephesiella macrocirris</u>

<u>Exogone dispar</u>	<u>Notomastus</u> sp.
<u>Fauveliopsis brevis</u>	<u>Paramphinome jeffreysii</u>
<u>Fauveliopsis scabra</u>	<u>Paraonis reductus</u>
flabelligerids	pectinariid
<u>Glycera mimica</u>	<u>Pholoe</u> sp.
<u>Kesun gravieri</u>	<u>Phyllochaetopterus</u> sp.
<u>Langerhansia anoculata</u>	<u>Prionospio</u> sp.
<u>Leanira minor</u>	<u>Pseudomystides limbata punctata</u>
<u>Lumbriclymene</u> sp.	<u>Pseudoscalibregma aciculata</u>
<u>Lumbrineris fragilis</u>	<u>Pseudoscalibregma parva</u>
<u>Lumbrineris latreilli</u>	<u>Pseudoscalibregma</u> sp.
<u>Melinnata americana</u>	<u>Scoloplos</u> sp.
<u>Myriochele</u> nr <u>heeri</u>	<u>Spiophanes kroyeri</u>
<u>Myriochele</u> sp.	<u>Tachytrypane jeffreysii</u>
<u>Ninoe brevipes</u>	<u>Tharyx marioni</u>
Sta. A 66, in 2802 m	
<u>Aqlophamus groenlandiae</u>	<u>Ceratonereis versipedata</u>
<u>Ammotrypane abranchiata</u>	<u>Chaetozone</u> sp.
<u>Ammotrypane aulogastrella</u>	<u>Clymenura borealis</u>
<u>Ammotrypane</u> sp.	<u>Cossura longocirrata</u>
<u>Ammotrypanella arctica</u>	<u>Dysponetus gracilis</u>
<u>Ampharete arctica</u>	<u>Ephesiella macrocirris</u>
ampharetids	<u>Eulalia anoculata</u>
<u>Amphicteis gunneri</u>	<u>Exogone dispar</u>
<u>Amphicteis trichophora</u>	<u>Fauveliopsis brevis</u>
<u>Antinoana fusca</u>	<u>Flabelligella minuta</u>
<u>Aricidea neosuecica</u>	<u>Glycera mimica</u>
<u>Aricidea tetrabranchia</u>	<u>Glyphanostomum pallescens</u>
<u>Barantolla</u> nr <u>americana</u>	<u>Haploscoloplos</u> sp.
<u>Ceratocephale loveni</u>	<u>Heterospio longissima</u>

<u>Kesun gravieri</u>	<u>Pholoe</u> sp.
<u>Langerhansia anoculata</u>	<u>Praxillella praetermissa</u>
<u>Leanira minor</u>	<u>Prionospio steenstrupi</u>
<u>Lumbriclymene</u> sp.	<u>Prionospio</u> sp.
<u>Lumbrineris atlantica</u>	<u>Pseudomystides limbata punctata</u>
<u>Lumbrineris fragilis</u>	<u>Pseudoscalibregma aciculata</u>
<u>Lumbrineris paradoxa</u>	scalibregmid
<u>Nephtys paradoxa</u>	<u>Scoloplos</u> sp.
<u>Ninoe brevipes</u>	<u>Spiophanes kroyeri</u>
<u>Ophryotrocha</u> sp.	<u>Tachytrypane jeffreysii</u>
<u>Paradoneis abranchiata</u>	<u>Terebellides lobatus</u>
<u>Paramphinome jeffreysii</u>	<u>Terebellides stroemii</u>
<u>Paraonides rubriceps</u>	<u>Tharyx annulosus</u>
<u>Paraonis uncinatus</u>	<u>Tharyx marioni</u>
paraonid	trichobranchid

Sta. Ch 76, in 2862 m

<u>Ammotrypane abranchiata</u>	<u>Ilyphagus</u> sp.
<u>Ammotrypane cylindricaudatus</u>	<u>Kesun gravieri</u>
<u>Ampharete</u> sp.	<u>Langerhansia anoculata</u>
<u>Ancistrosyllis</u> sp.	<u>Leanira minor</u>
<u>Antinoana fusca</u>	<u>Lumbrineris</u> sp.
<u>Aricidea neosuecica</u>	<u>Myriochele nr heeri</u>
<u>Ceratonereis versipedata</u>	<u>Myriochele</u> sp.
<u>Eulalia anoculata</u>	<u>Nephtys paradoxa</u>
<u>Fauveliopsis glabra</u>	<u>Paramphinome jeffreysii</u>
<u>Fauveliopsis scabra</u>	<u>Praxillella</u> sp.
<u>Glycera</u> sp.	<u>Prionospio</u> sp.
<u>Glycinde profunda</u>	<u>Tharyx</u> sp.

Sta. A 72, in 2864 m

<u>Aglaophamus groenlandiae</u>	<u>Ammotrypane aulogastrella</u>
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ampharetid	<u>Laonice antarcticae</u>
<u>Antinoana fusca</u>	<u>Leanira minor</u>
<u>Aricidea neosuecica</u>	<u>Lumbrineris atlantica</u>
<u>Chaetozone</u> sp.	<u>Melinnata americana</u>
<u>Chloeia</u> sp.	<u>Myriochele</u> nr <u>heeri</u>
<u>Fauveliopsis brevis</u>	<u>Myriochele</u> sp.
<u>Fauveliopsis scabra</u>	<u>Nephtys paradoxa</u>
<u>Glycera</u> sp.	<u>Paramphinome jeffreysii</u>
<u>Glyphanostomum pallescens</u>	<u>Paraonides monilaris</u>
<u>Heterospio longissima</u>	<u>Prionospio</u> sp.
<u>Ilyphagus octobranchus</u>	<u>Pseudoscalibregma aciculata</u>
<u>Kesun gravieri</u>	<u>Spiophanes kroeyeri</u>
<u>Langerhansia anoculata</u>	<u>Terebellides stroemii</u>

Sta. A 64, in 2886 m

<u>Aglaophamus groenlandiae</u>	<u>Exogone dispar</u>
<u>Amaeana</u> sp.	<u>Fauveliopsis brevis</u>
<u>Ammotrypane abbranchiata</u>	<u>Fauveliopsis glabra</u>
<u>Ammotrypane aulogastrella</u>	<u>Glycera mimica</u>
<u>Ammotrypane chaetifera</u>	<u>Ilyphagus</u> sp.
<u>Ammotrypane</u> sp.	<u>Kesun gravieri</u>
<u>Ampharete arctica</u>	<u>Langerhansia anoculata</u>
ampharetid	<u>Leanira minor</u>
<u>Amphicteis vestis</u>	<u>Lumbrineris atlantica</u>
<u>Antinoana fusca</u>	<u>Lumbrineris fragilis</u>
<u>Aricidea neosuecica</u>	<u>Myriochele</u> sp.
<u>Asclerocheilus intermedius</u>	<u>Nephtys paradoxa</u>
<u>Capitella</u> nr <u>capitata</u>	<u>Ninoe brevipes</u>
<u>Ceratocephale loveni</u>	<u>Notoproctus oculatus</u> , anoculate
<u>Eulalia anoculata</u>	<u>Paradoneis abbranchiata</u>
<u>Eunoe</u> cf <u>spinulosa</u>	<u>Paramphinome jeffreysii</u>

<u>Paranaitis wahlbergi</u>	<u>Scoloplos</u> sp.
<u>Phyllochaetopterus</u> sp.	<u>Sphaerodoropsis corrugata</u>
<u>Poecilochaetus</u> sp.	<u>Sphaerodoropsis elegans</u>
<u>Praxillella</u> sp.	<u>Spiophanes</u> sp.
<u>Prionospio</u> sp.	<u>Tachytrypane jeffreysii</u>
<u>Progoniada regularis</u>	<u>Terebellides lobatus</u>
<u>Pseudomystides limbata punctata</u>	<u>Tharyx</u> sp.

Sta. A 63, in 2891 m

<u>Aedicira belgicae</u>	<u>Leanira minor</u>
<u>Amaeana</u> sp.	<u>Lumbrineris atlantica</u>
<u>Ammotrypane abranchiata</u>	<u>Lumbrineris fragilis</u>
ampharetid	<u>Ninoe brevipes</u>
<u>Ancistrosyllis groenlandica</u>	<u>Notomastus</u> sp.
<u>Ancistrosyllis</u> sp.	<u>Paradoneis abranchiata</u>
<u>Aricidea tetrabranchia</u>	<u>Paranaitis wahlbergi</u>
<u>Ceratocephale loveni</u>	<u>Paraonis cornatus</u>
<u>Chaetozone</u> sp.	<u>Paraonis gracilis</u>
<u>Cossura longocirrata</u>	<u>Paraonis reductus</u>
<u>Eulalia anoculata</u>	<u>Prionospio steenstrupi</u>
<u>Exogone dispar</u>	<u>Prionospio</u> sp.
<u>Fauveliopsis brevis</u>	<u>Pseudomystides limbata punctata</u>
<u>Fauveliopsis glabra</u>	<u>Spiophanes</u> sp.
<u>Glycera mimica</u>	<u>Terebellides stroemii</u>
<u>Heteromastus filiformis</u>	<u>Tharyx marioni</u>
<u>Langerhansia anoculata</u>	

Sta. A 65, in 2891 m

<u>Aedicira belgicae</u>	ampharetids
<u>Aglaophamus</u> sp.	<u>Amphicteis gunneri</u>
<u>Ammotrypane abranchiata</u>	<u>Aricidea neosuecica</u>
<u>Ammotrypane aulogastrella</u>	<u>Ceratocephale loveni</u>

Cossura longocirrata  
Exogone dispar  
Glycera mimica  
Heterospio longissima  
Kesun gravieri  
Langerhansia anoculata  
Leanira minor  
Lumbrineris atlantica  
Notomastus teres  
Paradoneis abbranchiata  
Paramphinome jeffreysii  
Paraonides rubriceps

Paraonis cornatus  
Paraonis uncinatus  
Phyllochaetopterus sp.  
Prionospio sp.  
 scalibregmid  
Scoloplos sp.  
Sphaerodoropsis corrugata  
Spiophanes kroyeri  
Sternaspis sp.  
Tharyx annulosus  
Tharyx marioni

Sta. A 71, in 2946 m

Ammotrypane abbranchiata  
Ammotrypane chaetifera  
Ampharete sp.  
 ampharetids  
Amphicteis trichophora  
Antinoana fusca  
Aricidea neosuecica  
Euchone sp.  
Exogone dispar  
Glycera mimica  
Heterospio longissima  
Kesun gravieri  
Leanira minor

Lumbrineris latreilli  
Myriochele sp.  
Nereis caecoides  
Notomastus sp.  
Paraonis cornatus  
Paraonis uncinatus  
Prionospio steenstrupi  
Pseudomystides limbata punctata  
Pseudoscalibregma parva  
Sphaerodoropsis corrugata  
Spiophanes kroyeri  
Tharyx marioni

Sta. A 95, in 3753 m

Aedicira belgicae  
Aedicira parva  
Ammotrypane abbranchiata

Ammotrypane aulogastrella  
Ammotrypane chaetifera  
Ampharete arctica

- ampharetids  
Ancistrosyllis sp.  
Antinoana fusca  
Aricidea tetrabranchia  
Barantolla nr americana  
Braniella pupa  
Ceratocephale loveni  
Chaetozone setosa  
Chaetozone sp.  
Clymenura borealis  
Cossura longocirrata  
 ✓ Disoma watsoni  
Euchone sp.  
Eulalia anoculata  
Exogone dispar  
Fauveliopsis brevis  
Fauveliopsis glabra  
Fauveliopsis scabra  
Glycera mimica  
Haploscoloplos sp.  
Heterospio longissima  
Kesun gravieri  
Laonice sp.  
Leanira minor  
Lopadorrhynchus ?uncinatus  
Lumbrineris atlantica  
Lumbrineris fragilis  
Lumbrineris sp.  
Magelona sp.
- Maldane sarsi  
Monorchos varians  
Myriochele nr heeri  
Myriochele sp.  
Nicon sp.  
Ninoe brevipes  
Notoproctus abyssus  
Ophryotrocha sp.  
Paradoneis abranchiata  
Paranaitis wahlbergi  
Paraonides monilaris  
Paraonides rubriceps  
Paraonis gracilis  
Paraonis gracilis, aristate  
Paraonis uncinatus  
Phyllochaetopterus sp.  
Potamethus singularis  
Praxillella praetermissa  
Prionospio steenstrupi  
Progoniada regularis  
Pseudomystides limbata punctata  
Rhodine sp.  
 sabellariid  
 sabellid  
Sphaerodoropsis corrugata  
Sphaerodorum sp.  
Spiophanes kroyeri  
Tachytrypane jeffreysii  
Tharyx annulosus

## Sta. A 126, in 3806 m

ampharetid, tattered tube	<u>Leiochrides</u> sp.
ampharetids	<u>Magelona</u> sp.
<u>Amphicteis sargassoensis</u>	<u>Monorchos varians</u>
<u>Anaitides</u> , anoculate	<u>Myriochele</u> nr <u>heeri</u>
<u>Aricidea</u> sp.	<u>Myriochele</u> sp.
<u>Braniella pupa</u>	<u>Ninoe dibranchia</u>
<u>Ceratonereis versipedata</u>	<u>Ninoe</u> sp.
<u>Chaetozone</u> sp.	<u>Nothria textor</u>
<u>Clymenura borealis</u>	<u>Notoproctus abyssus</u>
<u>Disoma</u> sp.	<u>Paranaitis wahlbergi</u>
<u>Eulalia anoculata</u>	<u>Paraonides monilaris</u>
<u>Exoqone dispar</u>	<u>Prionospio</u> sp.
<u>Exogonita oculata</u>	<u>Progoniada regularis</u>
<u>Fauveliopsis brevis</u>	<u>Pseudomystides limbata punctata</u>
<u>Fauveliopsis scabra</u>	<u>Rhodine</u> sp.
<u>Glycera</u> sp.	sabellariid
<u>Glycinde profunda</u>	<u>Spiophanes</u> sp.
<u>Goniada</u> sp.	<u>Tharyx nigrorostrum</u>
harmonthoid	<u>Tharyx</u> sp.
<u>Ilyphagus octobranchus</u>	<u>Tomopteris</u> sp.
<u>Laetmonice</u> sp.	

## Sta. Ch 78, in 3828 m

<u>Aedicira belgicae</u>	<u>Maupasia</u> sp.
<u>Aqilaophamus</u> sp.	<u>Myriochele</u> sp.
<u>Ammotrypane</u> sp.	<u>Ninoe brevipes</u>
<u>Ampharete</u> sp.	<u>Nothria</u> sp.
<u>Leanira</u> sp.	<u>Progoniada regularis</u>
<u>Lumbrineris fragilis</u>	<u>Spiophanes kroeyeri</u>

## Sta. Ch 85, in 3834 m

<u>Aglaophamus groenlandiae</u>	<u>Lopadorrhynchus</u> sp.
<u>Ammotrypane</u> sp.	<u>Lumbrineris atlantica</u>
ampharetid, apaleal	<u>Lumbrineris fragilis</u>
ampharetid, paleal	<u>Monorchos varians</u>
<u>Amphicteis sargassoensis</u>	<u>Myriochele</u> nr <u>heeri</u>
<u>Antinoana fusca</u>	<u>Ninoe dibranchia</u>
<u>Chaetozone</u> sp.	<u>Paraonides monilaris</u>
<u>Clavodorum atlanticum</u>	paraonids
<u>Clymenura borealis</u>	<u>Paraonis reductus</u>
<u>Eulalia anoculata</u>	<u>Phalacrostemma ?elegans</u>
<u>Fauveliopsis brevis</u>	<u>Phyllochaetopterus</u> sp.
<u>Filogranula</u> sp.	<u>Progoniada regularis</u>
<u>Goniada</u> sp.	<u>Pseudomystides limbata punctata</u>
<u>Heterospio longissima</u>	<u>Sphaerodoropsis corrugata</u>
<u>Ilyphagus</u> sp.	<u>Tharyx annulosus</u>
<u>Leanira minor</u>	<u>Tomopteris</u> sp.

## Sta. A 69, in 4663 m

ampharetids	orbiniid
<u>Aricidea</u> sp.	<u>Paradoneis abranchiata</u>
<u>Ceratocephale loveni</u>	<u>Paranaitis wahlbergi</u>
<u>Chaetozone</u> sp.	<u>Praxillella</u> sp.
<u>Fauveliopsis scabra</u>	<u>Progoniada regularis</u>
<u>Glycera</u> sp.	spionid
<u>Isocirrus planiceps</u>	<u>Spiophanes kroveri</u>
<u>Ilyphagus</u> sp.	<u>Tharyx</u> sp.
<u>Lumbrineris</u> sp.	

## Sta. A 70, in 4680 m

<u>Ammotrypane aulogastrella</u>	<u>Ampharete arctica</u>
<u>Ammotrypane chaetifera</u>	ampharetids

<u>Antinoana fusca</u>	<u>Myriochele</u> nr <u>heeri</u>
<u>Austrophyllum maculatum</u>	<u>Myriochele</u> sp.
cirratulid	nereid
<u>Disoma</u> sp.	<u>Notoproctus</u> sp.
<u>Exogone dispar</u>	<u>Phalacrostemma elegans</u>
<u>Fauveliopsis glabra</u>	phyllodocid
<u>Glycera mimica</u>	<u>Platynereis dumerilii</u>
<u>Goniada norvegica</u>	<u>Praxillella</u> sp.
<u>Heteromastus filiformis</u>	<u>Prionospio</u> sp.
<u>Hyalinoecia</u> sp.	<u>Pseudomystides limbata punctata</u>
<u>Isocirrus planiceps</u>	<u>Pseudoscalibregma parva</u>
<u>Laetmonice</u> sp.	sabellid
<u>Leanira minor</u>	<u>Scoloplos</u> sp.
lopadorrhynchid	spionid
<u>Lumbriclymene</u> sp.	<u>Spiophanes kroveri</u>
<u>Lumbrineris</u> sp.	typhloscolecid
<u>Macellicephala</u> sp.	<u>Tomopteris</u> sp.
<u>Melinnata americana</u>	<u>Vanadis</u> sp.
<u>Microrbinia linea</u>	

Sta. Ch 84, in 4747 m

alciopid	<u>Ceratonereis versipedata</u>
<u>Ammotrypane aulogastrella</u>	<u>Chaetozone</u> sp.
<u>Ammotrypane chaetifera</u>	<u>Clavodorum atlanticum</u>
<u>Ammotrypanella arctica</u>	<u>Clymenura</u> sp.
ampharetid, paleal	<u>Cossura longocirrata</u>
<u>Amphicteis sargassoensis</u>	<u>Disoma</u> sp.
<u>Antinoana fusca</u>	<u>Exogone dispar</u>
<u>Aricidea neosuecica</u>	<u>Fauveliopsis scabra</u>
<u>Capitella</u> sp.	<u>Glycera</u> sp.
<u>Ceratocephale loveni</u>	<u>Glycinde profunda</u>

<u>Goniada</u> sp.	<u>Nothria</u> <u>textor</u>
harmonthoid	<u>Notomastus</u> sp.
<u>Isocirrus</u> <u>planiceps</u>	<u>Paraonides</u> <u>monilaris</u>
<u>Ilyphagus</u> <u>octobranchus</u>	<u>Phalacrostemma</u> <u>elegans</u>
<u>Kesun</u> <u>gravieri</u>	phyllodocid
<u>Laetmonice</u> sp.	<u>Pirakia</u> <u>lanceolata</u>
<u>Leanira</u> sp.	<u>Progoniada</u> <u>regularis</u>
<u>Lopadorrhynchus</u> ? <u>uncinatus</u>	<u>Pseudomystides</u> <u>limbata</u> <u>punctata</u>
<u>Lumbrineris</u> ? <u>fragilis</u>	<u>Rhodine</u> sp.
<u>Lumbrineris</u> sp.	<u>Scoloplos</u> sp.
<u>Macellicephala</u> sp.	<u>Sigambra</u> <u>tentaculata</u>
<u>Magelona</u> <u>capax</u>	?spionid, unknown
maldanid	<u>Spiophanes</u> sp.
<u>Melinnata</u> <u>americana</u>	<u>Tachytrypane</u> <u>jeffreysii</u>
neriid	<u>Terebellides</u> sp.
<u>Ninoe</u> <u>brevipes</u>	<u>Tharyx</u> <u>marioni</u>

Sta. A 109, in 4750 m

<u>Ammotrypane</u> sp.	<u>Isocirrus</u> sp.
ampharetid	maldanid
<u>Fauveliopsis</u> <u>scabra</u>	<u>Nothria</u> <u>textor</u>
<u>Glycera</u> sp.	<u>Tachytrypane</u> <u>jeffreysii</u>

Sta. KK 4, in 4773 m

ampharetid	orbiniid
<u>Asclerocheilus</u> sp.	<u>Paradoneis</u> sp.
<u>Ceratocephale</u> <u>loveni</u>	<u>Praxillella</u> sp.
<u>Chaetozone</u> sp.	<u>Progoniada</u> <u>regularis</u>
<u>Exogone</u> <u>dispar</u>	<u>Sigambra</u> <u>tentaculata</u>
<u>Fauveliopsis</u> <u>scabra</u>	<u>Spiophane</u> <u>kroyeri</u>
<u>Glycera</u> sp.	<u>Tharyx</u> <u>nigrorostrum</u>
<u>Lumbrineris</u> sp.	



## Sta. A 121, in 4800 m

<u>Aedicira parva</u>	<u>Macellicephala</u> sp.
<u>Ammotrypane aulogastrella</u>	<u>Magelona</u> sp.
<u>Ammotrypane chaetifera</u>	maldanid
<u>Ammotrypane</u> sp.	<u>Melinnata americana</u>
<u>Ammotrypanella arctica</u>	neriid
ampharetids	<u>Progoniada regularis</u>
<u>Chaetozone</u> sp.	polynoid
<u>Cossura longocirrata</u>	<u>Prionospio</u> sp.
disomid	<u>Pseudoscalibregma aciculata</u>
<u>Glycera</u> sp.	spionid
<u>Glycinde profunda</u>	spirorbid, dextral
<u>Ilyphaqus octobranchus</u>	<u>Terebellides lobatus</u>
<u>Kesun gravieri</u>	<u>Tharyx</u> sp.
<u>Leanira</u> sp.	<u>Unobranchus abyssalis</u>
<u>Lumbrineris</u> sp.	

## Sta. A 125, in 4825 m

<u>Ammotrypane aulogastrella</u>	<u>Exogone</u> sp.
<u>Ammotrypane chaetifera</u>	<u>Exogonita oculata</u>
<u>Ammotrypane cylindricaudatus</u>	<u>Fauveliopsis scabra</u>
<u>Ammotrypane</u> sp.	<u>Glycera</u> sp.
<u>Ammotrypanella arctica</u>	harmonthoid
ampharetids	<u>Ilyphaqus octobranchus</u>
<u>Amphicteis sargassoensis</u>	<u>Isocirrus planiceps</u>
<u>Aricidea</u> sp.	<u>Kesun gravieri</u>
<u>Braniella pupa</u>	<u>Laetmonice</u> sp.
<u>Capitella</u> sp.	<u>Leanira minor</u>
<u>Clymenura ?borealis</u>	<u>Lumbrineris</u> sp.
<u>Cossura longocirrata</u>	<u>Melinnata americana</u>
<u>Disoma</u> sp.	neriid

<u>Nothria textor</u>	<u>Scalibregmella antennata</u>
<u>Paraonides monilaris</u>	<u>Scoloplos</u> sp.
<u>Phalacrostemma elegans</u>	spirorbid
phyllodocid	terebellid
phyllodocid, aberrant	<u>Terebellides lobatus</u>
<u>Prionospio</u> sp.	<u>Tharyx nigrorostrum</u>
<u>Progoniada regularis</u>	

Sta. A 122, in 4833 m

<u>Ammotrypane aulogastrella</u>	<u>Leanira</u> sp.
<u>Ammotrypane chaetifera</u>	<u>Lumbrineris</u> sp.
<u>Ammotrypane</u> sp.	<u>Lopadorrhynchus ?uncinatus</u>
<u>Ammotrypanella arctica</u>	<u>Magelona</u> sp.
ampharetid, paleal	<u>Melinnata americana</u>
ampharetid	<u>Notomastus</u> sp.
<u>Aricidea</u> sp.	orbiniid
<u>Asclerocheilus intermedius</u>	<u>Paraonis uncinatus</u>
capitellid	phyllodocid
<u>Chaetozone</u> sp.	<u>Prionospio</u> sp.
<u>Cossura longocirrata</u>	<u>Progoniada</u> sp.
<u>Dorvillea</u> sp.	<u>Scalibregmella antennata</u>
<u>Glycera</u> sp.	<u>Sigambra tentaculata</u>
harmonthoid	spionid
hesionid	<u>Spiophanes</u> sp.
<u>Ilyphagus octobranchus</u>	<u>Terebellides lobatus</u>
<u>Isocirrus</u> sp.	<u>Tharyx</u> sp.
<u>Kesun gravieri</u>	trichobranchid

Sta. A 123, in 4853 m

<u>Ammotrypanella arctica</u>	<u>Lumbrineris</u> sp.
ampharetid	maldanid
harmonthoid	<u>Melinnata americana</u>

Nothria textorTerebellides sp.Notomastus sp.

Sta. A 124, in 4862 m

alciopid

lumbrinerid

Ammotrypane aulogastrellaMelinnata americanaAmmotrypane sp.

nereid

Ammotrypanella arcticaNotomastus sp.Ampharete sp.Phalacrostemma elegansCapitella aberranta

phyllodocid

Capitella sp.

spirorbid

Cossura sp.Terebellides lobatusDisoma sp.Tharyx sp.Lumbrineris sp.

Sta. Ch 100, in 4892 m

Aedicira parvaFauveliopsis brevisAmmotrypane aulogastrellaFauveliopsis glabraAmmotrypane chaetiferaFilogranula sp.Ammotrypanella arcticaFlabelligella sp.Amphicteis sargassoensisGlycera mimica

ampharetid

Goniada sp.Aricidea sp.Ilyphagus sp.Braniella pupaJasmineira sp.Ceratocephale loveniLaetmonice sp.

chaetopterid

Laonice sp.Chaetozone setosaLopadorrhynchus sp.Chaetozone sp.Lumbrineris sp.Clymenura ?borealis

melinnid

?Euchone incolorMyriochele sp.Euphrosine sp.Nothria textorExogone dispar

orbiniid

<u>Paranaitis wahlbergi</u>	sabellid
<u>Paraonis uncinatus</u>	<u>Spiophanes</u> sp.
<u>Phalacrostemma elegans</u>	<u>Spirodiscus grimaldii</u>
phyllodocid	spirorbid, dextral
<u>Poecilochaetus</u> sp.	? <u>Telepsavus</u> sp.
<u>Prionospio</u> sp.	<u>Terebellides</u> sp.
<u>Progoniada regularis</u>	<u>Tharyx marioni</u>
<u>Pseudomystides limbata punctata</u>	<u>Typhloscolex</u> sp.
<u>Pseudoscalibregma aciculata</u>	<u>Unobranchnus abyssalis</u>

Sta. Ch 99, in 4977 m

<u>Ammotrypane</u> sp.	maldanid
ampharetid	<u>Myriochele</u> sp.
amphinomid	paraonid
<u>Califia schmitti</u>	<u>Scalibregmella antennata</u>

Sta. Ch 83, in 5000 m

<u>Aedicira parva</u>	<u>Magelona</u> sp.
<u>Ammotrypane aulogastrella</u>	maldanid
<u>Ammotrypane chaetifera</u>	<u>Myriochele</u> sp.
ampharetid	orbiniid
<u>Ancistrosyllis</u> sp.	<u>Praxillella</u> sp.
<u>Chaetozone</u> sp.	<u>Prionospio</u> sp.
<u>Eulalia anoculata</u>	<u>Progoniada regularis</u>
<u>Fauveliopsis brevis</u>	spionid
<u>Glycera</u> sp.	<u>Terebellides</u> sp.
lopadorrhynchid	<u>Tharyx marioni</u>
<u>Lopadorrhynchus</u> sp.	<u>Tomopteris</u> sp.
<u>Lumbrineris</u> sp.	

Sta. A 93, in 5007 m

<u>Ammotrypane aulogastrella</u>	<u>Ammotrypane chaetifera</u>
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ampharetid

Amphicteis sargassoensis

Anobothrus ?gracilis

Ceratocephale loveni

Fauveliopsis brevis

flabelligerid

Glycera mimica

Lumbrineris sp.

maldanid

melinnid

Myriochele sp.

Neopaiwa cirrata

Paraonis ?reductus

Phalacrostemma elegans

phyllodocid

Potamethus singularis

Prionospio ?steenstrupi

sabellid

syllid

Terebellides lobatus

Tharyx marioni

Unobbranchus abyssalis

Sta. A 120, in 5018 m

Ammotrypane aulogastrella

Ammotrypanella arctica

ampharetid, apaleal

ampharetid, paleal

Amphicteis sargassoensis

Aricidea sp.

Asclerocheilus beringianus

Ceratocephale loveni

Chaetozone sp.

Exogone dispar

Fauveliopsis scabra

Glycera mimica

Glycinde profunda

Haploscoloplos sp.

lopadorrhynchid

Lumbrineris sp.

Macellicephalo sp.

maldanid

Myriochele sp.

opheliid

Phalacrophorus pictus

Phyllampharete longicirra

phyllodocid

Pisionura abyssorum

Poecilochaetus sp.

Potamethus singularis

Prionospio sp.

Progoniada regularis

Scalibregmella antennata

Sigambra tentaculata

Spiophanes sp.

spirorbid

Terebellides sp.

Tharyx marioni

typhloscolecid

Unobbranchus abyssalis

The Bermuda rise is represented by ten samples of which eight (Be 1 to Be 8) were previously analyzed (Hartman, 1965, pp. 17-22). Two others are added.

Sta. A 118, in 1135 m

<u>Aedicira belgicae</u>	<u>Myriochele</u> sp.
<u>Aqloophamus groenlandiae</u>	<u>Notalia</u> sp.
<u>Ammotrypane</u> sp.	<u>Nothria ?pallidula</u>
? <u>Ampharete</u> sp.	<u>Nothria textor</u>
<u>Asclerocheilus intermedius</u>	<u>Notomastus</u> sp.
<u>Ceratonereis versipedata</u>	<u>Onuphis quadricuspis</u>
<u>Chloeia</u> sp.	<u>Ophelia profunda</u>
disomid	<u>Paramphinome jeffreysii</u>
<u>Dorvillea rudolphi anoculata</u>	<u>Paraonis uncinatus</u>
? <u>Euchone</u> sp.	<u>Pareurythoe</u> sp.
<u>Fauveliopsis glabra</u>	<u>Peisidice bermudensis</u>
<u>Fauveliopsis scabra</u>	<u>Prionospio</u> sp.
<u>Filogranula ?gracilis</u>	<u>Progoniada regularis</u>
<u>Flabelligella papillata</u>	<u>Protodorvillea minuta</u>
<u>Glycera mimica</u>	? <u>Psammolyce</u> sp.
<u>Glyphanostomum pallescens</u>	sabellid
<u>Goniada</u> sp.	sigalionid
harmothoid	spionid
<u>Hyalinoecia</u> sp.	<u>Spirodiscus grimaldii</u>
<u>Ilyphagus octobranchus</u>	<u>Syllis</u> sp.
<u>Laetmonice</u> sp.	<u>Synelmis albini</u>
<u>Leanira minor</u>	terebellid
<u>Lumbrineris</u> sp.	<u>Tharyx</u> sp.
<u>Magelona ?capax</u>	<u>Typosyllis</u> sp.
maldanid	<u>Vermiliopsis</u> sp.
<u>Monorchos varians</u>	

Sta. A 119, in 2095 m

<u>Aedicira belgicae</u>	<u>Nothria textor</u>
<u>Ammotrypane abranchiata</u>	<u>Notomastus</u> sp.
<u>Ammotrypane</u> sp.	<u>Paramphinome jeffreysii</u>
? <u>Amphicteis</u> sp.	<u>Paraonis uncinatus</u>
? <u>Anaitides</u> sp.	paraonids
✓ <u>Boquella ornata</u>	<u>Phalacrostemma cidariophilum</u>
<u>Ceratocephale loveni</u>	<u>Poecilochaetus bermudensis</u>
<u>Chaetozone ?setosa</u>	<u>Prionospio</u> sp.
<u>Chloeia</u> sp.	<u>Progoniada regularis</u>
chrysopetalid	<u>Pseudomystides limbata punctata</u>
<u>Exoqone ?dispar</u>	sabellid
<u>Fauveliopsis scabra</u>	scalibregmid
<u>Flabelligella minuta</u>	? <u>Scoloplos</u> sp.
<u>Flabelligella papillata</u>	serpulid
<u>Flabelligera</u> sp.	sigalionid
<u>Glycera mimica</u>	<u>Sphaerodoropsis longipalpa</u>
<u>Hesiocaeca bermudensis</u>	spionid
<u>Hyalinoecia</u> sp.	<u>Spirodiscus grimaldii</u>
<u>Lumbriclymene</u> sp.	? <u>Sthenelais</u> sp.
<u>Lumbrineris</u> sp.	<u>Synelmis albini</u>
maldanid	<u>Tharyx nigrorostrum</u>
<u>Myriochele</u> sp.	<u>Tharyx</u> sp.
<u>Notalia</u> sp.	

The equatorial region is represented by four samples, of which three (Ch 12, 33, 34) have been previously reported (Hartman, 1965, pp. 44-48). One is added:

Sta. A 155, in 3730 m

<u>Aedicira belgicae</u>	<u>Leanira minor</u>
<u>Aglaophamus</u> sp.	<u>Lumbrineris</u> sp.
<u>Ammotrypane aulogastrella</u>	<u>Macellicephala</u> sp.
<u>Ammotrypane</u> sp.	maldanid
<u>Amphicteis sargassoensis</u>	<u>Monorchos varians</u>
<u>Aricidea ?tetrabanchia</u>	<u>Myriochele</u> sp.
<u>Braniella pupa</u>	<u>Ninoe brevipes</u>
<u>Ceratocephale loveni</u>	<u>Nothria</u> sp.
<u>Chaetozone</u> sp.	<u>Notomastus</u> sp.
<u>Chloeia</u> sp.	<u>Paraonides monilaris</u>
cirratulid	<u>Phyllochaetopterus</u> sp.
<u>Clymenura</u> sp.	phyllocid
? <u>Euchone incolor</u>	<u>Prionospio</u> sp.
<u>Exogone dispar</u>	sabellariid
<u>Fauveliopsis scabra</u>	sabellid
? <u>Filogranula</u> sp.	serpulid
<u>Flabelligella minuta</u>	<u>Sigambra tentaculata</u>
<u>Flabelligella papillata</u>	<u>Sphaerodoropsis elegans</u>
<u>Glycera</u> sp.	spionid
<u>Glycinde profunda</u>	<u>Spiophanes</u> sp.
<u>Glyphanostomum</u> sp.	terebellid
<u>Ilyphaqus</u> sp.	<u>Tharyx</u> sp.
<u>Kesun gravieri</u>	trichobranchid



## SUMMARY OF ANALYSES

The polychaete fauna in slope depths, 97 to 2000 meters, is represented in 12 samples:

C 1	with 39 species	Ch 105	with 66 species
Ch 89	" 94 "	E 3	" 63 "
Sl 2	" 67 "	Ch 87	" 107 "
Sl 3	" 72 "	A 73	" 72 "
Sl 4	" 73 "	F 1	" 50 "
D 1	" 75 "	G 1	" 52 "

They contain a total of about 244 species, or 62 per cent of the total polychaete fauna. Highest numbers come from 1102 m, and lowest in the shallowest, 97 m, depth. About 70 per cent of the species occur in two or more depth classes, and the other 30 per cent may be expected to occur more abundantly in depths shallower than those sampled.

The polychaete fauna in upper abyssal depths, 2000 to 3834 m, is represented in 18 samples:

A 58	with 45 species	A 64	with 52 species
Ch 103	" 56 "	A 63	" 35 "
GH 4	" 27 "	A 65	" 34 "
GH 3	" 33 "	HH 3	" 41 "
A 62	" 46 "	A 71	" 27 "
GH 1	" 35 "	A 95	" 60 "
A 66	" 62 "	A 126	" 37 "
Ch 76	" 7 "	Ch 78	" 11 "
A 72	" 31 "	Ch 85	" 31 "

Total number of species is about 212, or 56.6 per cent of the total. Highest numbers come from Sta. A 66, in 2802 m, and Sta. A 95, in 3753 m; lowest from Sta. Ch 78, in 3828 m. About 78

per cent of the species occur in two or more depth classes; the other 12 per cent may be limited to this depth.

The polychaete fauna in middle abyssal depths, 4001 to 4900 m, is represented in 14 samples:

JJ 1	with 23 species	A 121	with 28 species
JJ 3	" 13 "	A 125	" 40 "
A 69	" 18 "	A 122	" 38 "
A 70	" 41 "	KK 1	" 19 "
Ch 84	" 50 "	A 123	" 9 "
A 109	" 9 "	A 124	" 16 "
KK 4	" 15 "	Ch 100	" 47 "

Total number of species is about 147, or 40 per cent of the total fauna. Highest numbers come from Sta. Ch 84, in 4749 m, and Sta. Ch 100, in 4743-4892 m; lowest numbers from Sta. A 109, in 4750 m, and Sta. A 123, in 4853 m. About 23 species, or 16 per cent of the total fauna, may be limited to this depth class.

The polychaete fauna in lower abyssal depths, 4950 to 5042 m, is represented in 9 samples:

NN 1	with 15 species	MM 1	with 10 species
Ch 80	" 12 "	A 93	" 24 "
Ch 99	" 8 "	A 120	" 37 "
LL 1	" 14 "	Ch 81	" 8 "
Ch 83	" 24 "		

Total number of species is about 89, or less than 23 per cent of the total fauna. Highest numbers come from Sta. A 120, in 5018-5023 m, and lowest from Sta. Ch 99, in 4977 m, and Sta. Ch 81, 5042 m. The samples are unique in that they contain three or more new genera (Pisionura, Phyllampharete, and Unobranchus), and perhaps others in amphinomid, opheliid, and nereid families.

The following is a systematic list of polychaetes limited to abyssal depths of more than 2000 meters:

<u>Eunoe cf spinulosa</u>	<u>Heterospio longissima</u>
<u>Pisione abyssorum</u>	<u>Flabelligella minuta</u>
<u>Anaitides</u> sp., anoculate	<u>Asclerocheilus beringianus</u>
<u>Austrophyllum maculatum</u>	<u>Neolipobranchius glabrus</u>
<u>Synelmis albini</u>	<u>Pseudoscalibregma aciculata</u>
<u>Exogonita oculata</u>	<u>Scalibregmella antennata</u>
<u>Ceratonereis versipedata</u>	<u>Scalispinigera cirrata</u>
<u>Nereis caecoides</u>	<u>Ammotrypanella arctica</u>
<u>Nephtys paradoxa</u>	<u>Tachytrypane jeffreysii</u>
<u>Clavodorum atlanticum</u>	<u>Barantolla nr americana</u>
<u>Glycinde profunda</u>	<u>Capitella aberranta</u>
<u>Nothria textor</u>	<u>Phalacrostemma ?elegans</u>
<u>Lumbrineris atlantica</u>	<u>Amphicteis sargassoensis</u>
<u>Lumbrineris paradoxa</u>	<u>Neopaiwa cirrata</u>
orbiniid, unknown	<u>Phyllampharete longicirra</u>
<u>Paradoneis abranchiata</u>	<u>Euthelepus abranchiatus</u>
<u>Paraonides monilaris</u>	<u>Unobranchus abyssalis</u>
?spionid, unknown	<u>Vermiliopsis ?langerhansi</u>

The polychaete fauna of the Bermuda rise, 1000 to 2500 m depths, is represented in ten samples:

Be 1 with 23 species	Be 3 with 19 species
Be 8 " 28 "	Be 4 " 28 "
A 118 " 49 "	Be 5 " 21 "
Be 6 " 21 "	A 119 " 44 "
Be 2 " 15 "	Be 7 " 16 "

Total number of species is about 115, of which 16 appear to be limited to this area; they are (in systematic arrangement):

<u>Psammolyce globula</u>	<u>Lumbrineris</u> sp. B
<u>Sthenelais</u> sp.	<u>Poecilochaetus bermudensis</u>
<u>Peisidice bermudensis</u>	<u>Flabelligera</u> sp.
? <u>Dysponetus</u> sp.	<u>Ophelia profunda</u>
<u>Pareurythoe</u> sp.	<u>Clymenura cirrata</u>
<u>Notalia</u> sp.	<u>Boquella ornata</u>
<u>Hesiocaeca bermudensis</u>	<u>Jasmineira bermudensis</u>
<u>Lumbrineris</u> sp. A	terebellid, abranchiate

The polychaete fauna of the equatorial region is represented in four samples coming from 520 to 4825 m. They are:

Ch 33 with 45 species	Ch 34 with 42 species
Ch 12 " 52 "	A 155 " 42 "

Total number of species is about 121. Highest numbers come from Sta. Ch 12, in 770-805 m, and largest numbers of specimens from Sta. Ch 33, in 520-550 m. The total number of species is about the same from shallowest to greatest depths. The kinds of species differ only slightly from those in more northern localities; three species, Buskiella borealis, Prionospio delta, and Terebellides ?lobatus, are unique to the area.

The benthic polychaete fauna along the axis of the Gulf Stream is represented in eight samples coming from latitudes between 37° to 40° N, and in depths of 3742 to 4540 m. They are:

- II 1, in 3742 m, with 13 species and 56 specimens;
- II 2, in 3753 m, with 16 species and 90 specimens;
- A 95, in 3753 m, with 68 species and 1253 specimens;
- A 126, in 3806 m, with 43+ species and about 3000 specimens;
- Ch 78, in 3838 m, with 12 species and 67 specimens;
- Ch 85, in 3834 m, with 37 species and 439 specimens;
- JJ 1, in 4436 m, with about 21 species and 156 specimens; and
- JJ 3, in 4540 m, with about 13 species and 58 specimens.

The dominant taxa differ with sample; in Sta. A 95 it is sponionids, whereas in Sta. A 126 it is a maldanid and myriochelids. A small paraonid, Paraonides monilaris, is consistently present.

The benthic polychaetes in the northern end of the Sargasso Sea are represented in eleven samples:

OO 2, in 4667 m, with 15 species and 32 specimens;  
KK 4, in 4773 m, with 15 species and 26 specimens;  
A 121, in 4800 m, with 29 species and 267 specimens;  
A 122, in 4833 m, with 38 species and 414 specimens;  
KK 1, in 4850 m, with 19 species and 69 specimens;  
Ch 100, in 4892-4743 m, with 48 species and 302 specimens;  
LL 1, in 4977 m, with 14 species and 32 specimens;  
Ch 83, in 5000 m, with 24 species and 70 specimens;  
MM 1, in 5001 m, with 10 species and 17 specimens;  
A 93, in 5007 m, with 25 species and 103 specimens; and  
A 120, in 5023-5018 m, with 38 species and 227 specimens.

#### ZOOGEOGRAPHICAL COMPARISON OF ABYSSAL POLYCHAETES

Deep water and abyssal polychaetes of two widely separated geographic areas have now been studied in sufficient detail to make possible a comparison of their phylogenetic compositions. These areas are the northwest North Atlantic Ocean, from New England to the northern end of the Sargasso Sea, and the Antarctic Ocean, in latitudes higher than 50° S. The results are not altogether parallel, for the objectives and techniques differed widely. The North Atlantic fauna is more completely known for the smaller species which occur in soft bottoms, whereas the Antarctic fauna is known for its larger forms from a variety of bottoms. The first is based on samples taken with a quantitative

sampler and screened with a fine mesh wire, and thus represents an unusually high number of minute forms such as paraonids, sylimids, spionids, and other minute species. The Antarctic samples were taken chiefly with trawls and dredges, coming from mixed and rocky as well as muddy bottoms, and taken over a long period of years by staffs not particularly concerned with recovering the small forms. It should be stressed, therefore, that the North Atlantic fauna may not be well enough known for its larger or macroscopic animals, whereas the Antarctic fauna may remain unknown for its smaller forms.

A comparison of 141 species from the Atlantic and 102 from the Antarctic area shows that there are remarkably few on generic and specific levels common to both areas. Only nine, or 3.7 per cent of the total number, can be considered widely dispersed or possibly cosmopolitan (preceded by c on the list). The records are taken from Hartman (1964 to 1967).

## North Atlantic Ocean

## Antarctic Ocean

## POLYNOIDAE

Antinoana fuscaAntinoella abyssicolaEunoe cf spinulosaAustrolaenilla antarcticaEunoe abyssorumHarmothoe crosetensisHerdmanella nigraLepidofimbria oculataLepidogyra albaMacellicephala eltaninaMacellicephala nationalisPolyeunoa rhombigera

## SIGALIONIDAE

Leanira minor

North Atlantic Ocean

Antarctic Ocean

## SIGALIONIDAE (cont)

Pholoe anoculata

## PISIONIDAE

Pisionura abyssorum

## CHRYSOPETALIDAE

Dysponetus gracilis

## AMPHINOMIDAE

Paramphinome jeffreysiiParamphinome australis

## PHYLLODOCIDAE

Austrophyllum maculatumAustrophyllum charcotiEulalia anoculataParanaitis wahlbergiPirakia lanceolataPseudomystides limbata  
punctata

## HESIONIDAE

Hesiocaeca bermudensis

## PILARGIDAE

c Ancistrosyllis groen-  
landicaAncistrosyllis cf groenlandicaSigambra tentaculataSynelmis albini

## SYLLIDAE

Braniella pupaBraniella palpataExogone disparExogonita oculataLangerhansia anoculata

## NEREIDAE

Ceratocephale loveniEunereis patagonicaCeratonereis versipedataNicon abyssalis

## North Atlantic Ocean

## Antarctic Ocean

## NEREIDAE (cont)

Nereis caecoidesNeanthes abyssorum

## NEPHTYIDAE

Aglaophamus groenlandiaeAglaophamus digitatusAglaophamus, acirrateAglaophamus foliosusNephtys hystericisAglaophamus posterobranchusNephtys paradoxaNephtys ferruginea

## SPHAERODORIDAE

Clavodorum atlanticumSphaerodorum parvumEphesiella macrocirrisSphaerodoridium antarcticumSphaerodoropsis corrugataSphaerodoropsis elegansSphaerodoropsis longipalpa

## GLYCERIDAE

Glycera mimicaGlycera tessellata

## GONIADIDAE

Glycinde profundaProgoniada regularis

## ONUPHIDAE

Nothria textorNothria abranchiataParanorthia atlanticaNothria armandiParonuphis bermudensisNothria nr conchylegaRhampobranchium agassiziNothria notialisParanorthia antarcticaParonuphis benthalianaOnuphis paucibranchis

## EUNICIDAE

Eunice sp.Eunice norvegica



## North Atlantic Ocean

## Antarctic Ocean

## LUMBRINERIDAE

Lumbrineris atlanticaLumbrineris antarcticaLumbrineris crassicephalaLumbrineris magalhaensisLumbrineris latreilliLumbrineris paradoxaNinoe brevipesNinoe dibranchiaNinoe gayheadia

## MYZOSTOMIDAE

Myzostomum compressumMyzostomum cysticumStelechopus hydrocrini

## ORBINIIDAE

Califia schmittiCalifia chilensisHaploscoloplos sp.Haploscoloplos abbranchiataMicrorbinia lineataHaploscoloplos kerquelensisNaineris quadricuspidaOrbiniella drakei

orbiniid, unknown

Scoloplos (L.) marginatus

## PARAONIDAE

c Aedicira belgicaeAedicira belgicaeAedicira parvaAricidea uschakoviAparaonis abyssalisParaonis abbranchiataAricidea neosuecicaAricidea tetrabranchiaParadoneis abbranchiataParaonides monilarisParaonides rubricepsParaonis cornatusParaonis reductus

## North Atlantic Ocean

## Antarctic Ocean

## PARAONIDAE (cont)

Paraonis uncinatus

## SPIONIDAE

Laonice antarcticaePrionospio steenstrupiSpiophanes kroyeri

spionid, aberrant

## MAGELONIDAE

Magelona capax

## DISOMIDAE

Disoma watsoni

## POECILOCHAETIDAE

Poecilochaetus bermu-  
densis

## HETEROSPIONIDAE

Heterospio longissima

## CIRRATULIDAE

c Chaetozone setosaChaetozone setosaChaetozone gayheadiac Tharyx annulosusTharyx annulosusc Tharyx marioniTharyx marioniTharyx nigrorostrum

## COSSURIDAE

Cossura longocirrataCossura abyssalis

## CTENODRILIDAE

Zeppelinina prolonga

## FLABELLIGERIDAE

Fauveliopsis brevisBrada gravieriFauveliopsis glabraBrada bransfieldiaFauveliopsis scabraFauveliopsis challengeriae

## North Atlantic Ocean

## Antarctic Ocean

## FLABELLIGERIDAE (cont)

Flabelligella minutaFauveliopsis sp.Flabelligella papillataFlabelligella nr papillataIlyphagus octobranchusFlota flabelligeraIlyphagus wyvilleiPherusa sarsi

## SCALIBREGMIDAE

Asclerocheilus beringi-  
anusProscalibregma lineaAsclerocheilus inter-  
mediusPseudoscalibregma aciculataNeolipobranchius glabrus

scalibregmid, stalked

Pseudoscalibregma acicu-  
lataPseudoscalibregma parvaScalibregma inflataScalibregmella antennataScalispinigera cirrataSclerobregma branchiata

## OPHELIIDAE

Ammotrypane abranchiataAmmotrypane nematoidesAmmotrypane ?aulogasterEuzonus profundusAmmotrypane aulogastrellaKesun abyssorumAmmotrypane chaetiferaTravisia profundiAmmotrypane cylindricau-  
datusTravisia antarcticaAmmotrypanella arcticaTravisia nigrocinctaKesun gravieriTachytrypane jeffreysii

## CAPITELLIDAE

Barantolla nr americana

North Atlantic Ocean

Antarctic Ocean

## CAPITELLIDAE (cont)

Capitella nr capitataCapitella aberrantaNotomastus latericeusNotomastus teres

## MALDANIDAE

Isocirrus planicepsAbyssoclymene annularisLumbriclymene nasutaLumbriclymenella robustac Maldane sarsiMaldane sarsic Nicomache lumbricalisNicomache lumbricalisNotoproctus abyssusNotoproctus oculatus antarcticusNotoproctus oculatus,  
anoculatePraxillella abyssorumPraxillella gracilisPraxillella praetermissa

## OWENIIDAE

Myriochele nr heeriMyriochele sp.Myriochele ?pygidialisMyrioglobula antarcticaOwenia ?fusiformis

## BOGUEIDAE

Boquilla ornata

## SABELLARIIDAE

Petta assimilisc Phalacrostemma elegansPhalacrostemma ?elegans

## AMPHARETIDAE

Ampharete arcticaAmage ?sculptaAmphicteis gunneriAmpharete ?kerquelensisAmphicteis sargassoensisAmpharana antarcticaAmphicteis vestisAmphicteis gunneri antarcticaAmphicteis trichophoraAnobothrella antarctica

## North Atlantic Ocean

## Antarctic Ocean

## AMPHARETIDAE (cont)

Anobothrus gracilisc Glyphanostomum pallescensGlyphanostomum pallescensMelinnata americanaGrubianella antarcticaNeopaiwa cirrataMelinna buskiiPhyllampharete longicirraMelinnantipoda antarcticaSamythella elongataMelinnexis collarisNeosabellides elongataNeosamytha gracilisWeddellia profunda

## TEREBELLIDAE

Amaeana trilobataEupistella grubeiEuthelepus abranchiatusHauchiella sp.Laphania boeckiiLeaena antarcticaLeaena minimaPista abyssicolaTerebellides lobatusPista spiniferaTerebellides stroemiiPista mirabilisUnobranthus abyssalisTerebellides sp.Thelepus ?cincinnatusThelepides koehleriAmpharetides hoffeni

## SABELLIDAE

Euchone incolorPotamethus scotiaeJasmineira sp.Potamethus singularis

## SERPULIDAE

Filogranula sp.Apomatus browniiSpirodiscus grimaldiiVermiliopsis ?langerhansi

Chronological List of Stations, 1961-1966,  
with reference to number of station, by depth

- May 21, 1961. Sta. HH 3. See no. 28.
- May 22, 1961. Sta. II 1. See no. 29b.
- May 24, 1961. Sta. F 1, G 1, II 2. See nos. 14, 16, 29c.
- May 25, 1961. Sta. C 1, E 3. See nos. 1, 10.
- Aug. 10, 1961. Sta. KK 1. See no. 42.
- Sep. 27, 1961. Sta. GH 1. See no. 21.
- Sep. 28, 1961. Sta. LL 1. See no. 45.
- Oct. 2, 1961. Sta. JJ 1. See no. 33.
- Oct. 3, 1961. Sta. GH 3, GH 4. See nos. 19b, 19a.
- May 23, 1962. Sta. D 1. See no. 6.
- May 25, 1962. Sta. JJ 3. See no. 33b.
- May 27, 1962. Sta. OO 2. See no. 34a.
- Aug. 28, 1962. Sta. S1 2, S1 3, S1 4. See nos. 3, 4, 5.
- Apr. 6, 1963. Sta. Ch 12. See no. 9.
- Apr. 25, 1963. Sta. Ch 33, Ch 34, Ch 35. See nos. 7, 15, 33a.
- Sep. 7, 1963. Sta. A 58. See no. 17.
- Aug. 21, 1964. Sta. A 62, A 63, A 64, A 65, A 66. See nos. 20,  
26, 25, 27, 22.
- Aug. 23, 1964. Sta. A 69, A 70. See nos. 34, 35.
- Aug. 24, 1964. Sta. A 71, A 72. See nos. 29, 24.
- Aug. 25, 1964. Sta. A 73. See no. 13.
- June 29, 1965. Sta. Ch 75, Ch 76. See nos. 29a, 23.
- June 30, 1965. Sta. Ch 77, Ch 78. See nos. 31a, 31b.
- July 4, 1965. Sta. Ch 84. See no. 36.
- July 5, 1965. Sta. Ch 85. See no. 32.
- July 6, 1965. Sta. Ch 87, Ch 89. See nos. 11, 2.
- Dec. 17, 1965. Sta. A 95. See no. 30.
- May 4, 1966. Sta. Ch 103. See no. 18.

May 5, 1966. Sta. Ch 105. See no. 8.

Aug. 9, 1966. Sta. A 112. See no. 28a.

✓ Aug. 18, 1966. Sta. A 118. See no. 12.

Aug. 19, 1966. Sta. A 119. See no. 19.

Aug. 21, 1966. Sta. A 121. See no. 38.

Aug. 23, 1966. Sta. A 125. See no. 39.

✓ Aug. 24, 1966. Sta. A 126. See no. 31.

Station List for Atlantis and Chain Cruises

	Sta. no.	Latitude	Longitude	Depth in m.
1.	C 1	40° 20' 30" N	70° 47' W	97
2.	Ch 89	40° 01.6' N	70° 40.7' W	196
3.	SI 2	40° 01.8' N	70° 42' W	200
4.	SI 3	39° 58' 24" N	70° 40' 18" W	300
5.	SI 4	39° 56' 30" N	70° 39' 54" W	400
6.	D 1	39° 54' 30" N	70° 35' W	466.7-508.7
7.	Ch 33	07° 52' to 07° 55' N	54° 31.5' W to 54° 35' W	520-550
8.	Ch 105	39° 56.6' N	71° 03.6' W	530
9.	Ch 12	07° 09' S to 07° 08' S	34° 25.5' W to 34° 25.0' W	770-805
10.	E 3	39° 50' 30" N	70° 35' W	823.5
11.	Ch 87	39° 48.7' N	70° 40.8' W	1102
12.	A 118	32° 19.4' to 32° 19.0' N	64° 34.9' W to 64° 34.8' W	1135-1153
13.	A 73	39° 46.5' N	70° 43.3' W	1470-1330
14.	F 1	39° 47' N	70° 45' W	1500
15.	Ch 34	08° 45.5' N to 08° 46.5' N	53° 44.0' W to 53° 48.0' W	1500
16.	G 1	39° 42' N	70° 39' W	2000



	Sta. No.	Latitude	Longitude	Depth in m.
17.	A 58	38° 34.3' N	72° 55.0' W	2000+-75
18.	Ch 103	39° 43.6' N	70° 37.4' W	2022
19.	A 119	32° 15.8' to 32° 16.1' N	64° 31.6' W to 64° 32.6' W	2095-2223
20.	A 62	39° 26' N	70° 33' W	2496
21.	GH 1	39° 25' 30" N	70° 35' W	2500
22.	A 66	38° 46.7' N	70° 08.8' W	2802
23.	Ch 76	39° 38.3' N	67° 57.8' W	2862
24.	A 72	38° 16' N	71° 47' W	2864
25.	A 64	38° 46' N	70° 06' W	2886
26.	A 63	38° 46.8' N	70° 05.7' W	2891
27.	A 65	38° 46.8' N	70° 06.8' W	2891
28.	HH 3	38° 47' N	70° 08' W	2900
29.	A 71	38° 08' N	71° 47.5' W	2946
30.	A 95	38° 33' N	68° 32' W	3753
31.	A 126	39° 37.0' to 39° 37.5' N	66° 47.0' W to 66° 44.0' W	3806
32.	Ch 85	37° 59.2' N	69° 26.2' W	3834
33.	JJ 1	37° 27' N	68° 41' W	4436
34.	A 69	36° 15' N	67° 51' W	4663

Sta. No.	Latitude	Longitude	Depth in m.
35.	A 70 36° 23' N	67° 58' W	4680
36.	Ch 84 36° 24.4' N	67° 56' W	4749
37.	KK 4 36° 24.7' N	68° 10.3' W	4719
38.	A 121 35° 50.0' N	65° 11.0' W	4800
39.	A 125 37° 24.0' to 37° 26.0' N	65° 54.0' to 65° 50.0' W	4825
40.	A 155 00° 03.0' S	27° 48.0' W	3730-3783
41.	A 122 35° 50.0' to 35° 52.0' N	64° 57.5' W to 64° 58.0' W	4833
42.	KK 1 36° 23' 30" N	68° 04' 30" W	4850
43.	A 124 37° 26.0' to 37° 25.0' N	63° 59.5' W to 63° 58.0' W	4862
44.	Ch 100 33° 56.8' N	65° 47' W	4892-4743
45.	LL 1 35° 35' N	67° 25' W	4977
46.	Ch 83 34° 46.5' N	66° 30' W	5000
47.	A 93 34° 39' N	66° 26' W	5007
48.	A 120 34° 43.0' to 34° 40.5' N	66° 32.8' W to 66° 35.0' W	5019-5023

Additional Station Data

	Sta. no.	Latitude	Longitude	Depth in m.
19a.	GH 4	39° 29' N	70° 34' W	2469
19b.	GH 3	39° 27' 30" N	70° 33' W	2478
28a.	A 112	38° 50.4' N	69° 54.7' W	2900
29a.	Ch 75	39° 32.5' N	68° 06' W	2961
29b.	II 1	37° 59' N	69° 32' W	3742
29c.	II 2	38° 05' N	69° 36' W	3752
31a.	Ch 77	38° 00.7' N	69° 16' W	3806
31b.	Ch 78	38° 00.8' N	69° 18.7' W	3828
33a.	Ch 35			4525
33b.	JJ 3	37° 13' 06" N	68° 39' 36" W	4540
34a.	00 2	33° 67' N	65° 02' 12" W	4667

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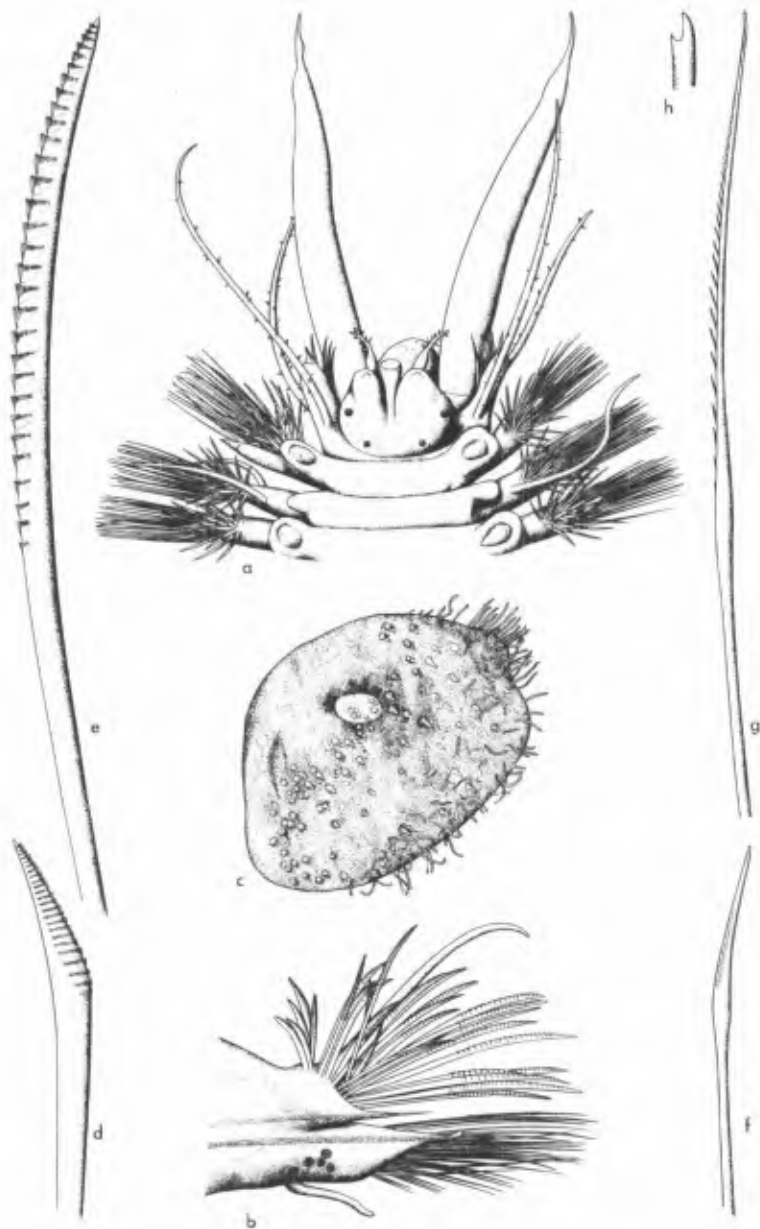
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## PLATE 1

*Antinoana fusca*, new genus, new species (Ch 87)

- a. Anterior end with elytra removed, in dorsal view, x 17.
- b. Parapodium 12, in anterior view, x 44.
- c. Elytrum from setiger 11, in dorsal view, x 42.
- d. Shortest notoseta from parapodium 12, x 195.
- e. Longest notoseta from parapodium 12, in lateral view, x 195.
- f. Inferiormost neuroseta from parapodium 12, x 195.
- g. Superiormost neuroseta from parapodium 12, x 195.
- h. Tip of superiormost neuroseta, in lateral view, x 1580.



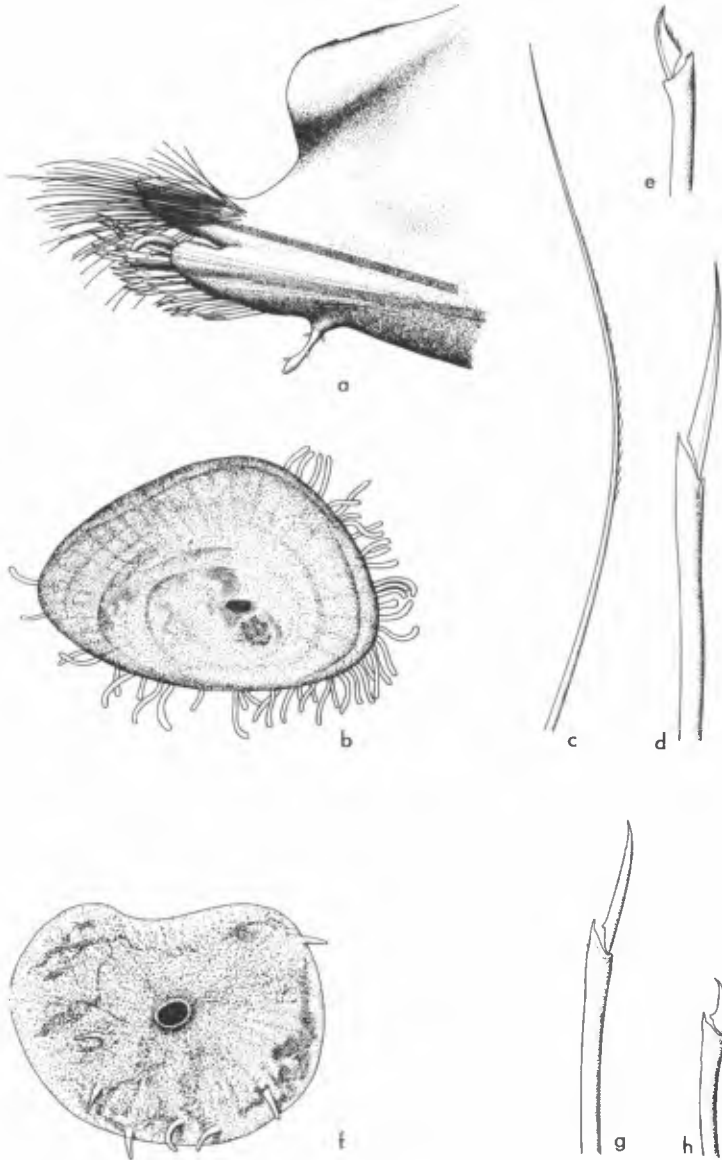
## PLATE 2

*Peisidice bermudensis*, new species (A 118)

- a. A median elytraphoral parapodium, elytrum removed, in anterior view, x 150.
- b. A median elytrum, in dorsal view, x 112.
- c. Notoseta with lateral spines, in lateral view, x 810.
- d. A long-appendaged neuroseta, x 810.
- e. A short-appendaged neuroseta, x 810.

*Pholoe anoculata* Hartman (S1 4)

- f. Elytrum from a median segment, x 180.
- g. Superior composite falciger, x 810.
- h. Inferior composite falciger, x 810.



## PLATE 3

*Cirrodoce cristata*, new genus, new species (Ch 89)

- a. Anterior end with prostomium and first seven setigers, x 36.
- b. Postmedian segments, with dorsal cirri reconstructed, in dorsal view, x 48.
- c. Composite spiniger from a postmedian segment, x 600.

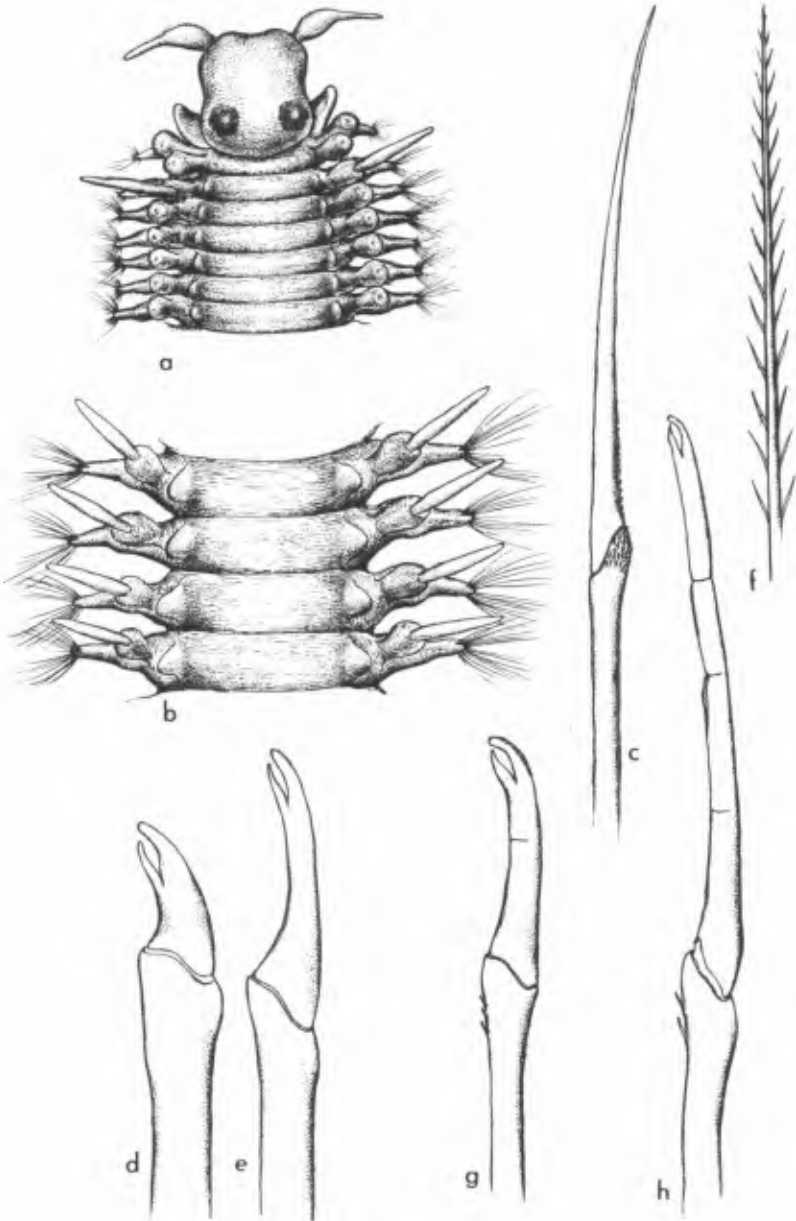
*Psammolyce globula*, new species (A 118)

- d. Short-appendaged falciger, in lateral view, x 600.
- e. Long-appendaged falciger, in lateral view, x 600.
- f. Distal end of spinose notoseta, x 600.

*Sthenelais* sp. (A 119)

- g. Neuropodial falciger, with two distal articles, x 600.
- h. Multi-articled neuropodial falciger, x 600.





## PLATE 4

*Pisionura abyssorum*, new genus, new species (A 120)

- a. Anterior end with first three asetigerous and first three setigerous segments, showing embedded pharynx, in dorsal view, x 140.
- b. Parapodium 9, showing biramous lobes and projecting composite spinigers, x 500.

*Glycinde profunda*, new species (A 121)

- c. Anterior end through fourth setiger, showing non-annulated prostomium, in ventral view, x 112.
- d. Parapodium 50, with notosetae and neurosetae, in posterior view, x 140.
- e. Distal end of inferiormost seta showing articulation, x 836.



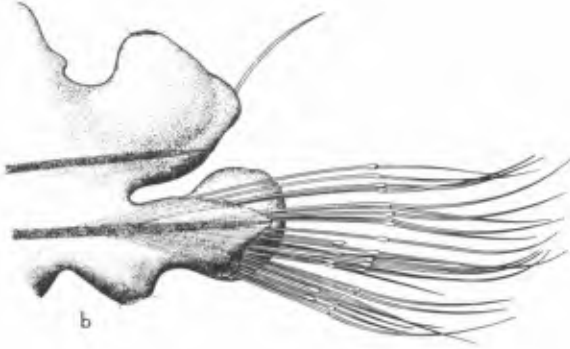
## PLATE 5

*Austrophyllum maculatum*, new species (A 70)

- a. Anterior end with prostomium and adjacent parts, in dorsal view, x 52.
- b. Median parapodium, lacking dorsal and ventral cirri, in anterior view, x 66.
- c. Composite seta from a median parapodium, in lateral view, x 460.
- d. Articulation of composite seta, x 1360.



a



b



c

d

## PLATE 6

*Eulalia anoculata*, new species (Ch 87)

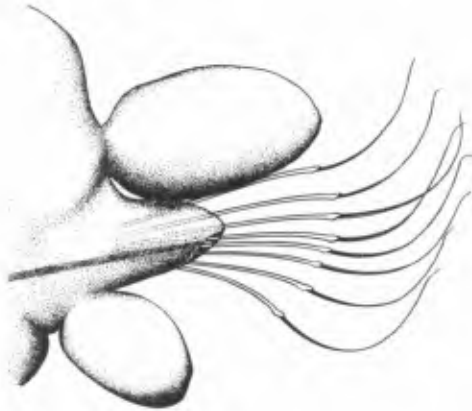
- a. Anterior end including first six segments, in dorsal view, x 83.
- b. Posterior end with last two segments, in dorsal view, x 83.
- c. Median parapodium, in anterior view, x 150.
- d. Composite seta from a median parapodium, in three-quarter view, x 450.



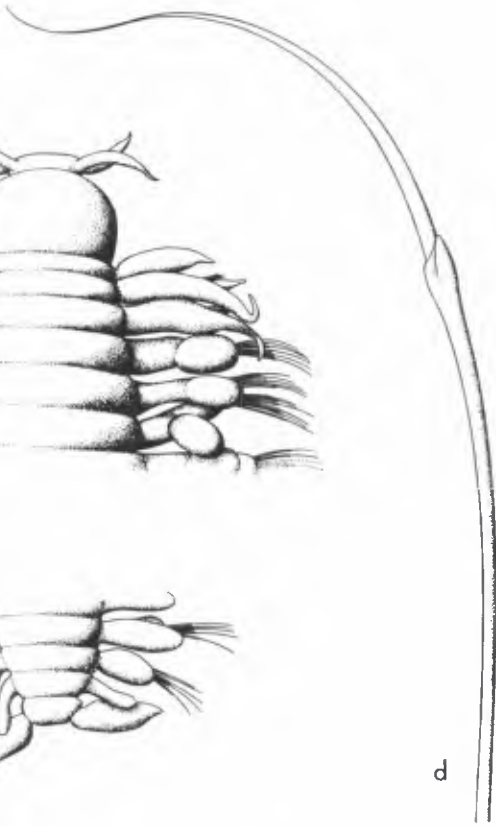
a



b



c



d

## PLATE 7

*Pirakia lanceolata*, new species (A 73)

- a. Anterior end through sixth segment, with proboscis extended, in dorsal view, x 26.
- b. A median parapodium, in anterior view, x 54.
- c. A composite seta, in lateral view, x 324.
- d. A composite seta, in frontal view, x 324.