BATHYAL AND ABYSSAL POLYCHAETES (ERRANT SPECIES)

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ABSTRACT

A total of 105 species representing 17 families of errant polychaetes were obtained from 40 bathyal and 43 abyssal stations by the Galathea Expedition 1950-52. Sixteen species were found only in the abyssal zone, 54 only in the bathyal zone, and 35 in both. Two species are pelagic. One genus (*Telodrieschia*) and nineteen species (*Aphrodita abyssalis, Eunoe kermadeca, Harmothoe australis, H. panamensis, Lagisca longipalpa, L. torbeni, Telodrieschia galatheae, Bathyvitiazia pettibonae, Glycera knoxi, Glycinde hanseni, Goniada beiraensis, G. clavata, Typosyllis bathyalis, Hediste kermadeca, Neanthes suluensis, Rullierinereis abyssalis, Nephtys bruuni, Kinbergonuphis bathyalis, Ninoe ninetta*) are new to science. The known distribution of many deep-water species is extended. *Aglaophamus elamellata* Eliason was previously known only from the Central Atlantic and the Kermadec Trench and has now been recorded from several intervening localities.

CONTENTS

INTRODUCTION

The present paper deals with 17 errant families of polychaetes obtained by the Galathea Expedition 1950-52. The remaining families will be treated in a later publication.

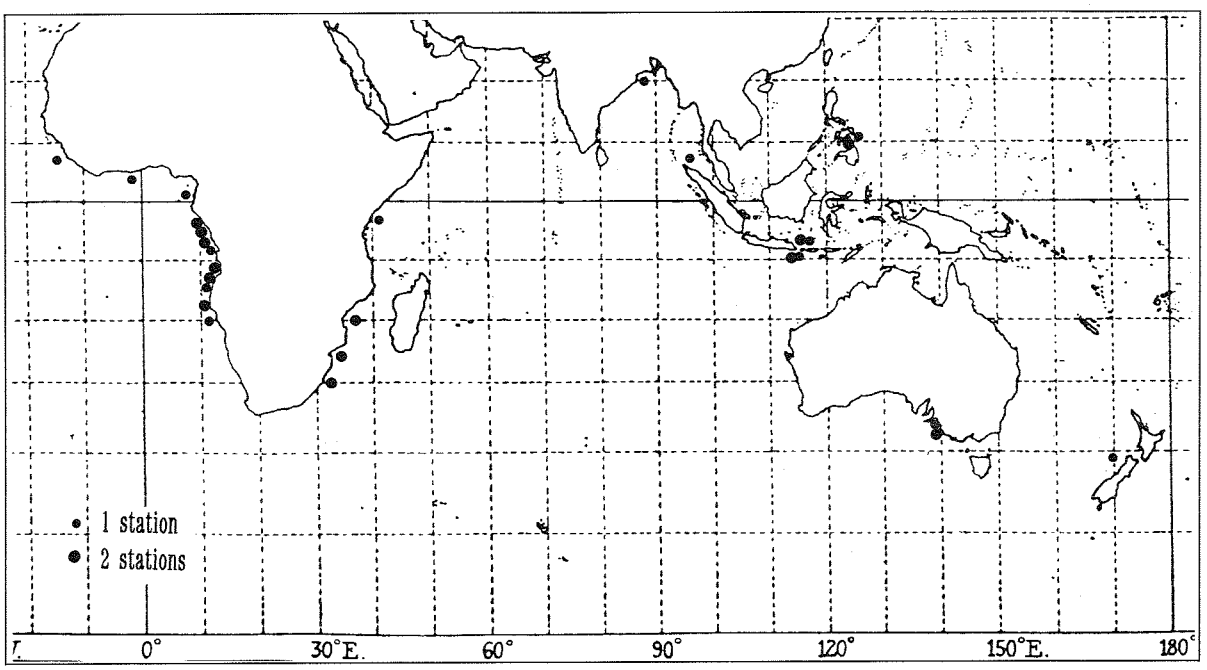

Fig. 1. Forty bathyal Galathea stations with polychaetes.

The 17 families comprise 105 species of which 19 are new to science. These species were obtained from 83 stations in the southeast Atlantic, Indian, and southern Pacific Oceans. Forty of these stations were located at bathyal depths (400-2000 m, Fig. 1) and 43 at abyssal depths (2000-6000 m, Fig. 2). An earlier publication deals with the hadal polychaetes (6000-10,000 m), comprising 15 recognizable species (Kirkegaard 1956). Of the 105 species in the present paper, 16 were only found at abyssal depths, 54 only at bathyal depths, and 33 were found in both areas. Two species are pelagic.

Material and Methods

All material was obtained by "Galathea" in 1950-52.

References to good figures and descriptions are given for each species. Lists of stations and abbreviations of the collecting gear used are found in Bruun

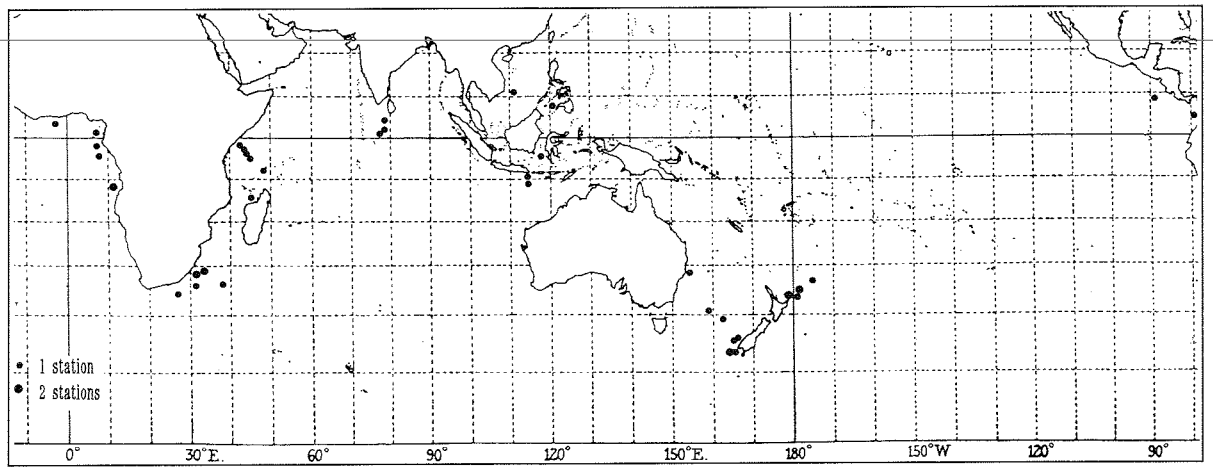

Fig. 2. Forty-three abyssal Galathea stations with polychaetes.

1957-59. All specimens were measured in mm, length and width are mentioned (length first). When the specimen is complete, this is also mentioned. All material, including type material, has been deposited in the collection of the Zoological Museum, University of Copenhagen (ZMUC).

Acknowledgements
Figures of the new species were drawn by the artist Robert Nielsen, the manuscript was carefully corrected by my colleagues Danny Eibye-Jacobsen and Mary E. Petersen and typed by Else Højgaard (all ZMUC), to whom I extend my most cordial thanks.

SYSTEMATIC PART

Family APHRODITIDAE Malmgren, 1867

Aphrodita abyssalis **n.sp.**

Fig. 3

Material:
St. 668, Kermadec Trench, 36°23'S 177°14'E, 2640 m, HOT, holotype (ZMUC-POL-00021): 55×25 mm (complete).

Description: Holotype complete, with 39 setigers: 55×25 mm. Body oval with arched dorsal side and flat ventral side. 15 pairs of smooth elytra, completely covered by a thick, close felt of dorsal setae beset

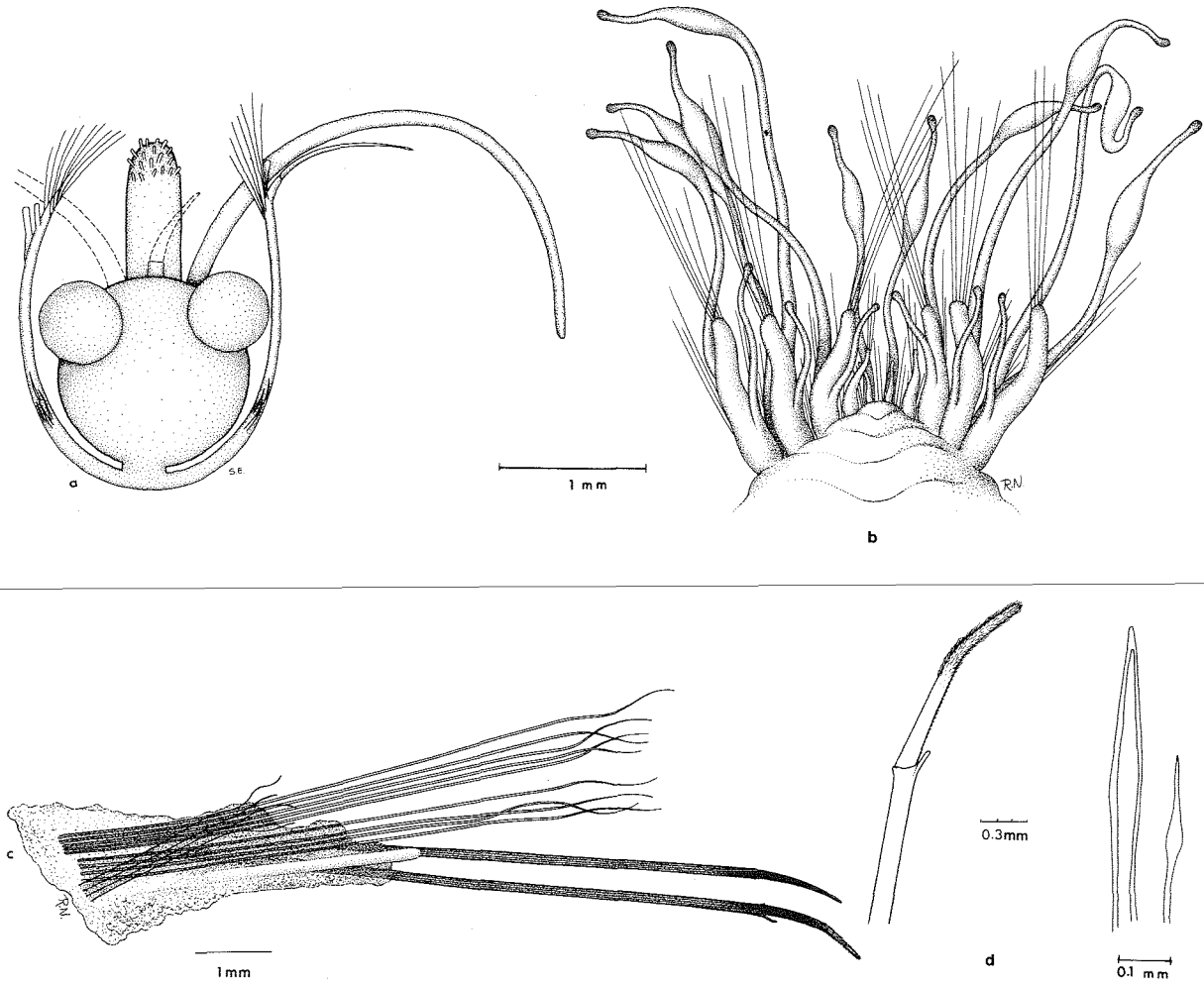

Fig. 3. *Aphrodita abyssalis* n.sp. (holotype); a, anterior end, dorsal view; b, posterior end, ventral view; c, parapodium; d, compound and hastate neurosetae.

with mud. Prostomium round with a short antenna and two globulose eyes, no pigment (Fig. 3a). Large facial tubercle. Palps reaching 8th setiger. Two pairs of tentacular cirri. Dorsal cirri longer than parapodia, ventral cirri shorter than the parapodia. Dorsal cirri of posteriormost setigers very long and clavate (Fig. 3b). Notosetae of two kinds: numerous thin ones, forming the felt, and stout light brown ones, lying backwards over the dorsum (Fig. 3c). No iridescent setae. Neurosetae stout, compound, bending distally and plumose (Fig. 3d). The foremost neuropodia with some bipinnate and some hastate setae (Fig. 3d).

Remarks: This species is very similar to *A. alta* Kinberg, 1855, which has a wide distribution in the oceans. It differs in the presence of hastate setae and the long clavate posterior dorsal cirri.

Distribution: Pacific, Kermadec Trench; 2640 m.

Laetmonice benthaliana McIntosh, 1885

(Day 1967, fig. 1.1 f-l)

Fig. 4

Records: *L. producta* var. *benthaliana* McIntosh, 1885 p. 45, pl. 8 figs 4-5, pl. 4A fig 12, pl. 5A figs 1-2. *L. producta benthaliana* Hartman 1964 p. 12, pl. I figs 4-5. *L. benthaliana* Uschakov 1962 p. 147; Day 1963 p. 356, 1967 p. 33.

Material:
St. 186, SE of Natal, 32°33'S 32°01'E, 3620 m, SOT, 2 specimens: 50×20 mm (complete, 34 setigers), 50×20 mm (bad condition). – St. 192, off Durban, 32°00'S 32°41'E, 3530 m, SOT, 5 complete specimens, 34 setigers: 20×5, 35×15, 40×15, 45×15, 45×20 mm; 1 destroyed specimen. – St. 198, off Durban, 30°32'S 34°27'E, 2700 m, ST100, 1 complete specimen, 34 setigers: 34×12 mm. – St. 217, Mozambique Channel, 14°20'S 45°09'E, 3390 m, HOT, 1 complete specimen, 34 setigers: 40×15 mm. – St. 233, N of Madagascar, 7°24'S 48°24'E, 4720 m, ST300, 1 specimen, 34 setigers: 55×20 mm. – St. 235, E of Mombasa, 4°47'S 46°19'E, 4810 m, HOT, 1 specimen, 34 setigers: 60×15 mm. – St. 238, off Kenya, 3°23'S 44°04'E, 3960 m, 43 specimens: 50×20 mm. – St. 241, off Kenya, 4°00'S 41°27'E, 1510 m, HOT, 1 specimen: 10×5 mm (smashed). – St. 601, SW of New Zealand, 45°51'S 164°32'E, 4400 m, HOT, 7 complete specimens, 34 setigers: 35×10-45×15 mm, 3 fragments: 20×8-40×15 mm. – St. 607, SW of New Zealand, 44°18'S 166°46'E, 3580 m, HOT, 10 specimens, 34 setigers: 10×5-33×15 mm. – St. 661, Kermadec Trench, 36°07'S 178°32'W, 5340 m, ST600, 3 complete specimens: 23×10, 30×12, 35×12 mm. – St. 663, Kermadec Trench, 36°31'S 178°38'W, 4410 m, HOT, 181 specimens, 33-34 setigers: 15×5, 35×10 mm. – St. 664, Kermadec Trench, 36°34'S 178°57'W, 4540 m, HOT, 76 specimens, many destroyed: 35×12 mm. – St. 665, Kermadec Trench, 36°38'S 178°21'E, 2470 m, HOT, 3 complete specimens: 20×10, 20×10, 25×12 mm; 1 fragment. – St. 716, Gulf of Panama, 9°23'N 89°32'W, 3570 m, HOT, 1 specimen: 30×10 mm.

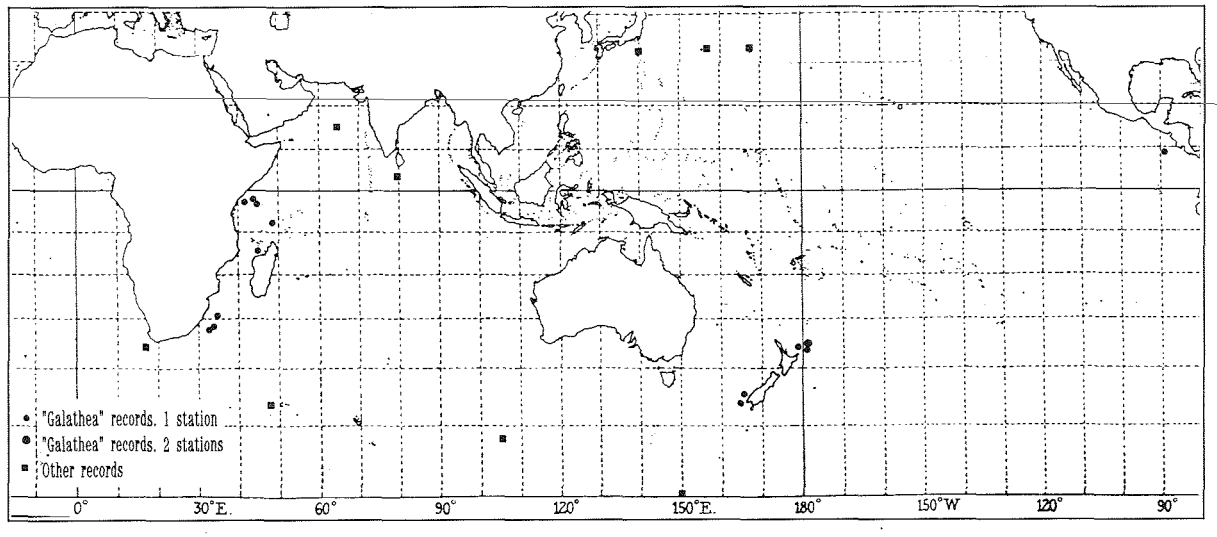

Fig. 4. *Laetmonice benthaliana* McIntosh, 1885; 1510-6875 m.

Remarks: This species was originally described as a subspecies of *Laetmonice producta* by McIntosh, (1885). Uschakov (1962) raised it to species level and so did Day (1963). It differs from the stem species by its smooth venter and by always having 15 pairs of elytra as opposed to 18-20 pairs in *L. producta.* The number of setigers is also smaller, 33-34 in *L. benthaliana* and 45-47 in *L. producta. L. benthaliana* can be distinguished from *L. filicornis* by the papillose venter and the longer ventral cirri, which reach the bases of the inferior neurosetae, while they are much shorter in *L. filicornis.*

Distribution: Antarctic; Indian Ocean (E and S of Africa, Arabian Sea, S of Ceylon); Pacific (W of New Zealand, Kermadec Trench, Japan, Central Pacific, Gulf of Panama); 1510-6875 m.

Laetmonice filicornis Kinberg, 1855

(Fauvel 1923, fig. 12 a-f)

Records: Fauvel 1923 p. 36; Pettibone 1963 p. 11; Hartmann-Schröder 1971 p. 41.

Material:
St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, HOT, 2 complete specimens, 32 setigers: 12×8, 18×10 mm.

Remarks: This species has also 15 pairs of elytra and 34 setigers like *L. benthaliana.* As mentioned above, it is easy to recognize and separate from this species. It has a worldwide distribution and is found from sublittoral to abyssal depths.

Distribution: Davis Strait, Iceland, North Atlantic, West Indies, Gulf of Mexico; Australien waters; 40-5200 m.

Family POLYNOIDAE Malmgren, 1867

Subfamily Harmothoinae Horst, 1917

Antinoella antarctica (Bergström, 1916)

(Hartman 1964, pl. III figs 6-8)

Records: Hartman 1964 p. 15. *Antinoe antarctica* Knox 1960 p. 87, figs 37-38.

Material:
St. 607, off SW New Zealand, 44°18'S 166°46'E, 3580 m, HOT, 1 specimen in two pieces: 17×6 mm (33 segm.). St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, ST300, 1 specimen (anterior part): 4×3 mm.

Remarks: The material of this species consists of poor specimens, the largest in two pieces with the posterior piece regenerating and the anterior part small. However, the specimens agree well with descriptions and figures in Hartman and Knox.

Distribution: Antarctic; South Georgia; E and W of New Zealand; 23-3580 m.

Eunoe kermadeca n.sp.

Fig. 5

Material:
St. 601, SW of New Zealand, 45°51'S 164°32'E, 4400 m, HOT, 2 specimens: 22×9, 25×12 mm. – St. 607, SW of New Zealand, 44°18'S 166°46'E, 3580 m, HOT, 2 specimens: 10×2, 13×5 mm. – St. 663, Kermadec Trench, 36°31'S 178°38'W, 4410 m, HOT, 7 specimens: 1 holotype (ZMUC-POL-00022), 6 paratypes (ZMUC-POL-00023): 30×10, 30×8 mm (complete specimens), 32×10 mm (holotype), 20×14, 22×14, 24×14, 30×14 mm (anterior ends). – St. 664, Kermadec Trench, 36°34'S 178°57'W, 4540 m, HOT, 2 specimens: 25×8, 33×14 mm (anterior ends).

Description: Holotype, 39 segments: 32×10 mm. Prostomium without eyes and with two small frontal peaks (Fig. 5a). Median antenna anterodorsal, arising between these peaks. It is absent on the holotype, but present on a small specimen from St. 607, where it is nearly twice as long as the prostomium. The lateral antennae (present in some paratypes) ventral to median antenna, nearly as long as the prostomium. All antennae with a large, short ceratophore. Styles tapering, with a thin tip and a few small papillae. Tentacular cirri are also absent on the holotype, but present on the small specimen from St. 607. Here they are twice as long as the prostomium with a stout seta at the base. One palp is present on a paratype, it is long, slim and smooth. No elytra are present on any specimen, but 15 pairs of elytrophores are present on segments 2, 4, 5, 7 . . . 23, 26, 29, 32. Dorsal cirri on middle and posterior segments are much longer than parapodia including setae, smooth and placed on a large cirrophore. The parapodia with cir-

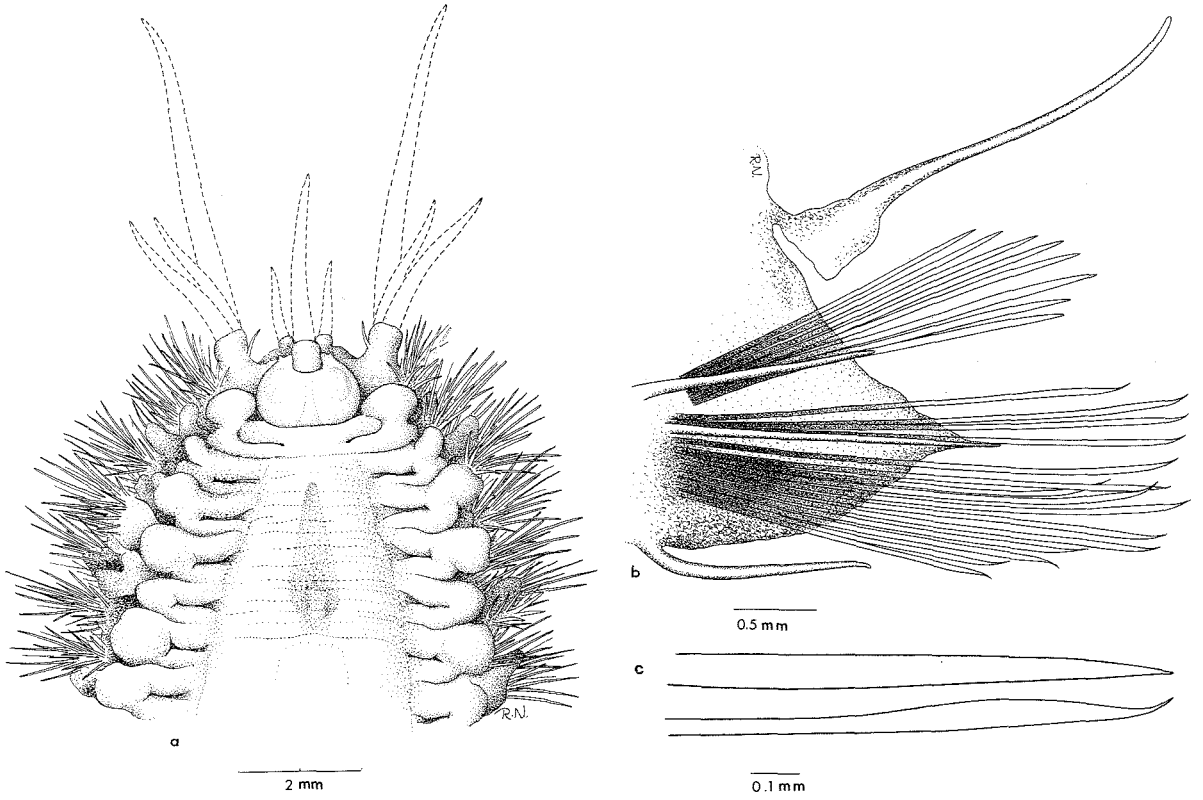

Fig. 5. *Eunoe kermadeca* n.sp. (holotype); a, anterior end, dorsal view; b, anterior parapodium; c, notoseta (upper), neuroseta (lower).

ri have a large pear-shaped nodule at the dorsal base (Fig 5a). Parapodia are short, both noto- and neuropodia with a large bundle of stout, dark yellow setae (Fig. 5b). Notosetae are as thick as the neurosetae, slightly serrated along the margin. Neurosetae unidentate with a prominent arched tip (Fig. 5c). They are slightly serrated along the inner margin of the distal part. Long thin ventral cirri and two small anal cirri.

Remarks: It is unfortunate that no elytra are present, which may cause some uncertainty in recognition. The prostomium is very similar to that of *Eunoe assimilis* McIntosh, 1925, which also lacks eyes, and the setae resemble the figured setae of *E. abyssorum* McIntosh, 1885. *E. assimilis* has longer antenae than *E. kermadeca,* and *E. abyssorum* has large eyes.

Distribution: Pacific, SW and NE of New Zealand; 3580-4540 m.

Harmothoe australis n.sp.

Fig. 6

Material:
St. 554, Great Australian Bight, 37°28′S 138°55′E, 1340 m, ST300, 4 specimens: 10×4 mm (holotype (ZMUC-POL-00024), 37 segments), 14×5, 25×8, 30×8 mm (3 paratypes (ZMUC-POL-00025), 40-42 segments).

Description: Holotype complete, with 37 segments: 10×4 mm. Body flat, with lateral sides parallel, prostomium globular, as broad as long, with two small frontal peaks (Fig. 6a). Minute eyes on lateral side of prostomium, anteriormost pair at middle of side. Median antenna with large ceratophore and long style with small papillae, ending in thin thread. It reaches the 7th segment. Paired antennae very small, ventrally placed. Two short, stout palps. Tentacular cirri nearly as long as the median antenna, also ending in thin thread. A few sable-shaped bristles are found at their base. The 15 pairs of elytra nearly cover the dorsum. Elytra of anterior segments are rounded and those of the middle and posterior parts are oblong ovate (Fig. 6d). Elytra without marginal or surface papillae but with small tubercles on lateral part and a few larger globular tubercles on posterior part of the surface. The basis of the segments without elytra with large, globular caruncle. Notopodia small, neuropodia larger and longer, conical with a long presetal tip (Fig. 6b). Notosetae and neurosetae yellow, of equal thickness.

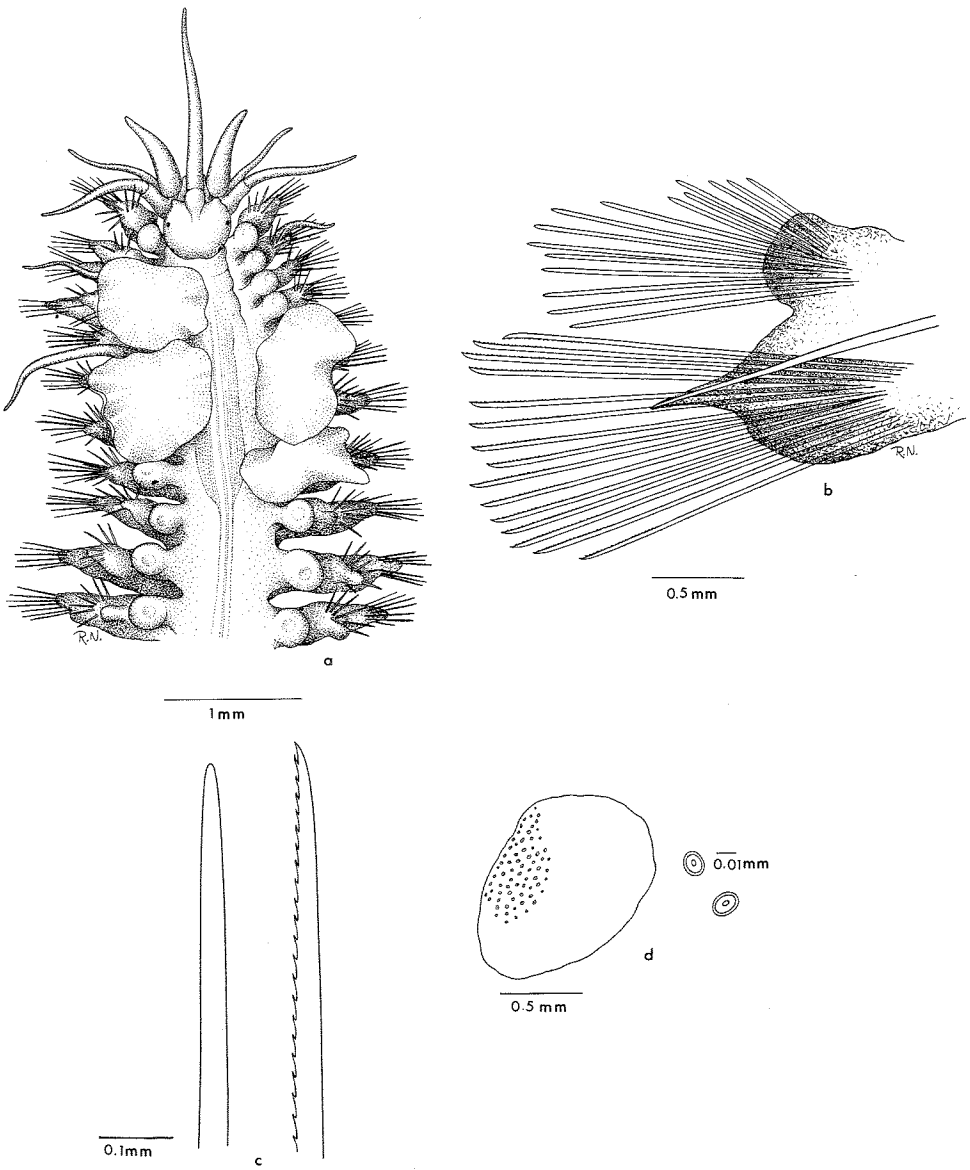

Fig. 6. *Harmothoe australis* n.sp. (holotype); a, anterior end, dorsal view; b, parapodium; c, notoseta (left), neuroseta (right); d, elytron, right: tubercles from same.

Notosetae in a spread bundle, many of them in a vertical position (Fig. 6c). They are slightly serrated along the uppermost edge. Neurosetae in a lateral fan, beset with small spines nearly to tips. Some neurosetae are unidentate and other have a small secondary thin tooth beneath the main fang (Fig. 6c).

Remarks: Two of the paratypes are much larger than the holotype. They lack elytra, but have the same kind of setae except that on these many of the neurosetae lack a secondary tooth or have only the basis of one. The number of segments is also a little higher: 40-42, rather than 37. This species is similar to *H. fraserthomsoni* McIntosh, 1897, with anterior eyes at the middle of the prostomium and a small secondary tooth on some neurosetae, but differs by the smaller size of the large tubercles on the elytra.

Distribution: Great Australian Bight, S of Adelaide; 1340 m.

Harmothoe panamensis n.sp.

Fig. 7

Material:

St. 726, Gulf of Panama, 5°49′N 78°52′W, 3670-3270 m, in sunken wood, HOT, holotype (ZMUC-POL-00026): 28×12 mm.

Description: Holotype complete, with 37 seg-

ments: 28×12 mm. Body flattened, broad; prostomium without eyes, broader than long, with two globular lobes and very small cephalic peaks (Fig. 7a). Median antenna with large ceratophore and style nearly as long as the two stout palps. Lateral antennae inserted ventrally, with large ceratophores and small subulate styles. Tentacular cirri with long cylindrical tentaculophores and styles nearly as long as median antenna, without acicular processes but with three setae on inner side of each pair of tentaculophores. Buccal segment with biramous parapodia and long ventral buccal cirri. All antennae, tentacular cirri and parapodial cirri are beset with dispersed small papillae. There is a raised facial ridge ventral to the prostomium (not seen on the figure). The 15 pairs of oval elytra completely cover the dorsum. They are densely covered with cylindrical microtubercles and some larger cone-shaped macrotubercles near the edge. The tubercles have an uneven surface, but have no multispinous tips (Fig. 7d). A few papillae along the edge. Parapodia with smaller notopodium and longer conical neuropodium ending in a presetal acicular process (Fig. 7b). The notopodia are rounded with a projecting aciculum on the lower side. Notosetae stouter than neurosetae, sable-shaped with spinous rows and bare tips (Fig. 7c). All neurosetae are bifid, slender, with a long spinous region. The tips are slightly curved and the secondary tooth is long and slender. Dorsal cirri with long styles, ventral cirri are shorter and subulate, placed at the middle of the ventral side of the neuropodium (missing on Fig. 7b). No nephridial papillae present on the ventral side. The cirri-bearing segments with dorsal nodular tubercles.

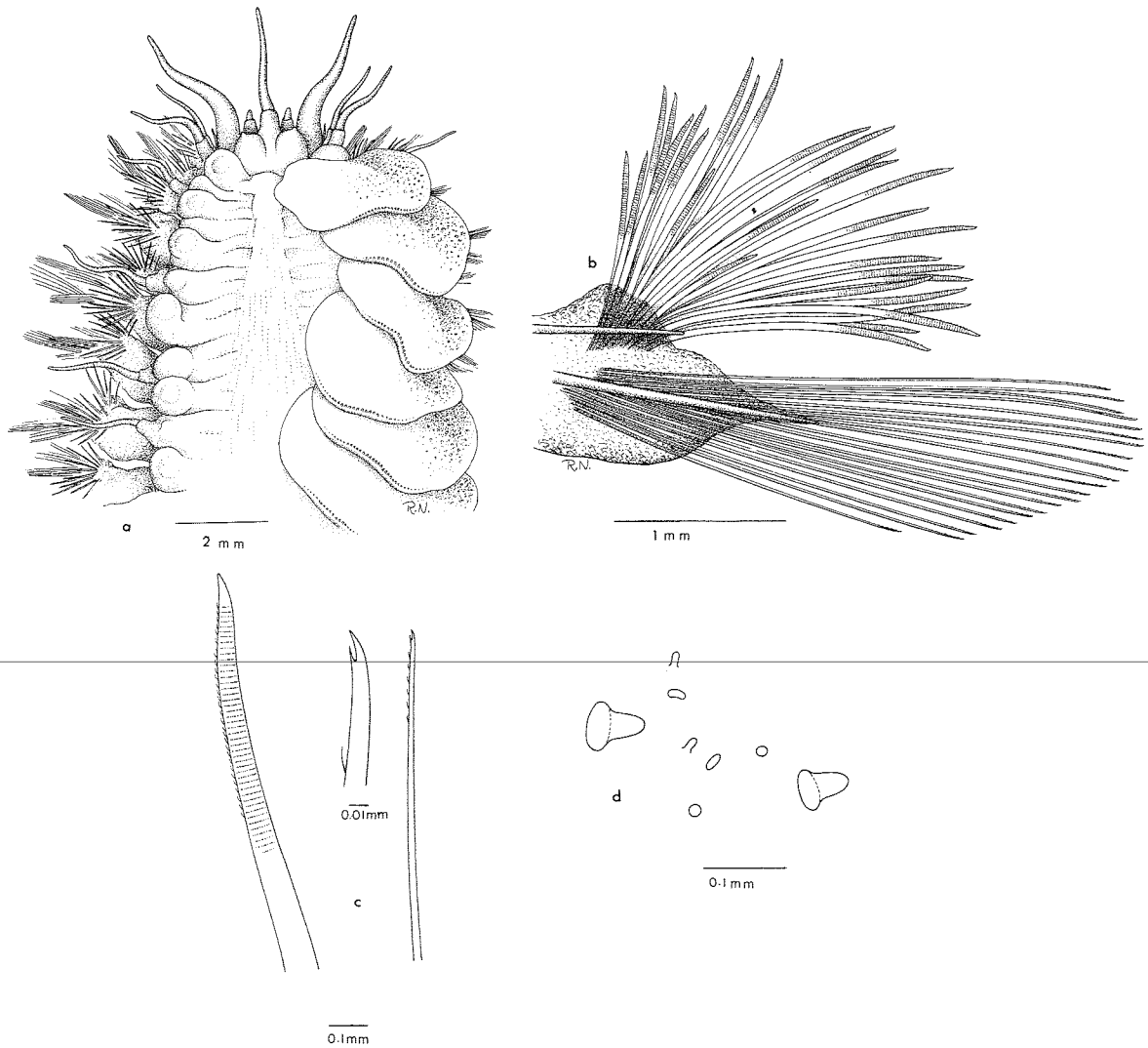

Fig. 7. *Harmothoe panamensis* n.sp. (holotype); a, dorsal view of anterior end, parapodium on left side of segment 9 is hidden underneath body; b, parapodium; c, notoseta (left), neuroseta (right) with detail of tip; d, tubercles from elytron.

Remarks: *Harmothoe panamensis* n.sp. is very close to other eyeless *Harmothoe* species: *H. ingolfiana* Ditlevsen, 1917, *H. vagabunda* Pettibone, 1985 and *H. macnabi* Pettibone, 1985. They can be separated by the shape of the tubercles on the elytra:

1. Elytra with multispinous tubercles .. *ingolfiana*
   Elytra without multispinous tubercles 2
2. Without macrotubercles ..... *macnabi*
   With macrotubercles 3
3. With conical microtubercles..... *vagabunda*
   With cylindrical microtubercles ... *panamensis*

H. ingolfiana and *H. vagabunda* are recorded from the northern part of the Atlantic, where both species are found in burrows of wood-boring bivalves in sunken wood at large depths, 1836-3506 m and 2066-3995 m (Wolff 1979). This was also the case with the present species. *H. macnabi* is recorded from the Galapagos Rift at 2492 m.

Distribution: Gulf of Panama; 3670-3270 m. In sunken wood.

***Hermadion africanus* Hartman, 1974**

(Hartman 1974, fig. 3 a-f)

Record: Hartman, 1974 p. 204.

Material:

St. 202, off Natal, 25°20'S 35°17'E, 595-575 m, ST300, 8 specimens: 10×2 (36 set.), 17×2 (44 set.), 21×3 mm (48 set.), all complete specimens; 5 anterior parts.

Remarks: The specimens agree well with Hartman's description and figures. She found three specimens off Portuguese East Africa (Mozambique) and three in the Gulf of Oman. The number of setigers in these animals varies from 43 to 46 and the type measures 14×1.3 mm.

Distribution: Western part of the Indian Ocean (off Mozambique, off Natal, and the Gulf of Oman); 121-960 m.

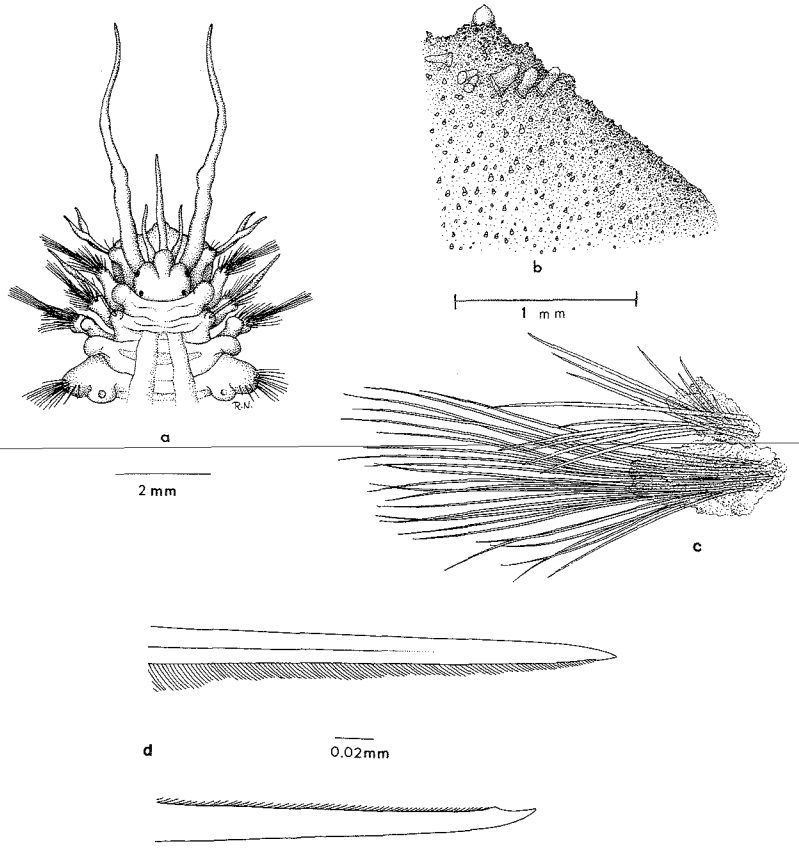

Fig. 8. *Lagisca longipalpa* n.sp. (holotype); a, dorsal view of anterior end; b, inner edge of elytron with tubercles; c, parapodium; d, notoseta (upper), neuroseta (lower).

Lagisca longipalpa n.sp.

Fig. 8

Material:

St. 607, SW of New of Zealand, 44°18'S 166°46'E, 3580 m, HOT, 1 specimen: 35×7 mm (holotype (ZMUC-POL-00027), complete specimen), 8×3-24×7 mm (ZMUC-POL-00028) 20 paratypes. Small specimens with 40-42 segments.

Description: Holotype complete, with 45 segments: 35×7 mm. Body long and slender, tapering gradually posteriorly. Prostomium with small anterior peaks and four eyes with lenses (Fig. 8a), with anterior pair of eyes situated laterally just in front of the median line of the prostomium. Median antenna with large swollen ceratophore and style two times as long as lateral antennae. Lateral antennae a little longer than prostomium. Palps very long and slender, reaching 10th segment. Tentacular cirri as long as lateral antennae, with acicula and two setae at the base. Antennae and tentacular cirri all beset with small papillae; palps are smooth. 15 pairs of elytra on segments 2, 4, 5, 7, 9, 11, 13 . . . 29, 26, 29, 32, the last ten segments thus not covered by elytra. Elytra oval, covered with small conical tubercles, some of which longer with broken tops, looking like small crowns. Very few papillae along edge. Elytra of the middle part of body with inner edge with a few large cylindrical or cone-shaped tubercles (Fig. 8b). Notosetae are stouter than the neurosetae (Fig. 8c), unidentate, with transverse rows of small spines, nearly to the tip (Fig. 8d). Neurosetae are unidentate or bidentate with a very small secondary tooth (Fig. 8d).

Remarks: This species is similar to *Harmothoe crosetensis* (McIntosh, 1885), but the latter has shorter palps and only 37-39 segments.

Distribution: SW of New Zealand; 3580 m.

Lagisca torbeni n.sp.

Fig. 9

Material:

St. 554, Great Australien Bight, 37°28'S 138°55'E, 1340-1320 m, ST300, 2 specimens: 28×7 mm (holotype (ZMUC-POL-00029), complete specimen, 45 segments), 10×5 mm (paratype (ZMUC-POL-00030), 39 anterior segments). – St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, ST300, 2 anterior ends: 4×5, 15×5 mm; 1 posterior end.

Description: Holotype complete, with 45 segments: 28×7 mm. Body long and slim, with parallel sides. Prostomium with small anterior peaks and two pairs of eyes with lenses (Fig. 9a), anterior pair of eyes slightly anterior to middle of the prostomium, posterior pair near posterior edge. Median antenna with large ceratophore, style missing (also on remaining specimens). Lateral antennae very small, subulate and arising ventrally. Two broad, short palps, reaching segment 3. Tentacular cirri short, with one sabre-shaped seta at the base of each pair. Buccal segment with long ventral cirri. Antennae, tentacular cirri and parapodial cirri with small thin papillae. Upper lip with three facial ridges. 15 pairs of oval elytra. Elytra have long thin papillae along the outer edge and are covered by a large number of short thornlike chitinous tubercles, some of which have a tip, looking like a small crown (Fig. 9d). Notopodia short with large bundle of long, stout setae (Fig. 9b); notosetae stouter than the neurosetae and provided with a long region with transverse rows of short spines (Fig. 9c). This region almost reaches the tip of the seta. Neuropodia with a long digitiform process and a fan of setae with bifid tips and transverse rows of spines. Secondary tooth very small, absent on some of the neurosetae. Tips are bare. Dorsal cirri with long slender styles, ventral cirri small, arising near the setae.

Remarks: This species is named after Dr. Torben Wolff, deputy scientific leader of the Galathea Expedition. *Lagisca torbeni* is similar to *L. longipalpa* n.sp. and *Harmothoe crosetensis* (McIntosh, 1885). The latter only has 37-39 segments and *L. longipalpa* has much longer palps and the tubercles on the elytra are different.

Distribution: Great Australian Bight (S of Adelaide), Tasman Sea (W of New Zealand); 610-1340 m.

Undeterminable Harmothoinae

Harmothoe sp.

Material:

St. 607. SW of New Zealand, 3580 m. 1 specimen, 32 segments. No elytra, no eyes. Bidentate neurose-

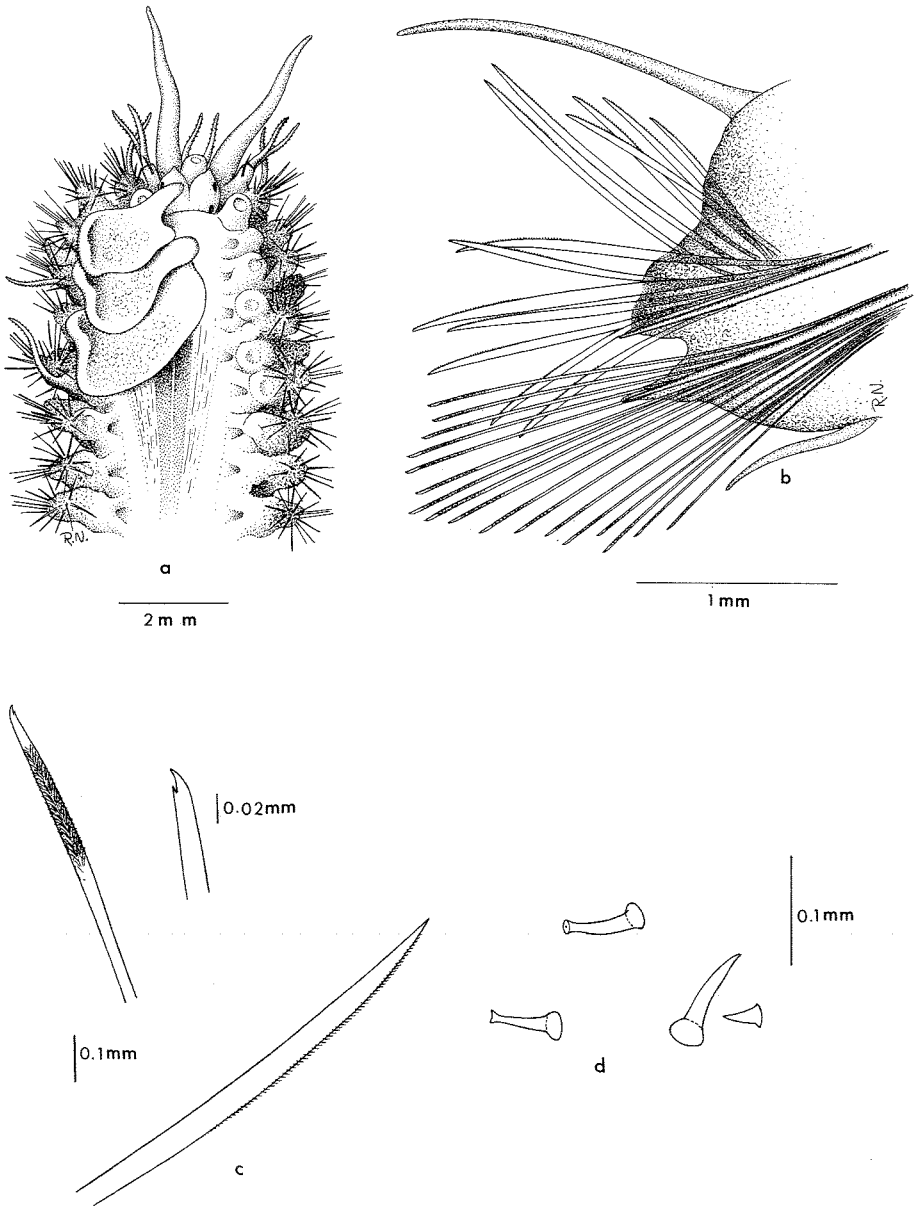

Fig. 9. *Lagisca torbeni* n.sp. (holotype); a, anterior end, dorsal view; b, parapodium; c, neurosetae (above), notoseta (below); d, tubercles from elytron.

tae. – St. 661. Kermadec Trench, 5340-5320 m, ST600. 1 juv. specimen: 5×1 mm, 23 segments, 12 elytrophores. Short, bulbous paired antennae. Short broad palps. Elytra with short thornlike papillae on entire surface. Neurosetae of two kinds: broad with bidentate tips and long with capillary unidentate tips.

Scalisetosus sp.

Material:

St. 241. Off Kenya, 1551 m. Fragment with 12 segments. Typical *Scalisetosus* setae, no elytra, no eyes.

Subfamily Lepidonotinae Willey, 1902

Lepidasthenia grimaldi (Marenzeller, 1892)

(Fauvel 1916, pl. 1 figs 8-20)

Record: *Nectochaeta grimaldii* Fauvel 1916 p. 32.

Material:

St. 66, off Gabon, 4°00′S 8°25′E, 4020 m, 16 ST300 + D45, 6 specimens: 4-7×1 mm (3 complete

specimens, 24-27 segments, 12 pairs of elytra), 3-5×1 mm (3 specimens without posterior part).

Remarks: The specimens agree well with Fauvel's description. They have long, unidentate neurosetae and may be juvenile specimens of *L. maculata* Potts, 1910, as indicated by Fauvel (1923, p. 89). *L. maculata* is common along the west coast of Africa (Kirkegaard 1983). The specimens are certainly pelagic and it is thus impossible to know from what depths they were captured. If the species is identical with *L. maculata* it has a much wider distribution than indicated below (Kirkegaard 1988).

Distribution: Bay of Biscay, the Canaries, Azores-Gibraltar, Mediterranean, west coast of Africa; 0-?4000 m.

Telodrieschia n.gen.

Type species: *Telodrieschia galatheae* n.sp.

Description: Body long and slender with up to 67 segments. 24 pairs of elytrophores on segments 2, 4, 5, 7, alternate segments to 23, thereafter on every third segment to end of body. Elytra unknown. Prostomium broad with two palps and three antennae. Antennae with large ceratophores, base of median one situated slightly posterior to the base of the lateral antennae. Pharynx with four jaws, mouth opening surrounded by soft papillae. Segment 1 with two pairs of tentacular cirri and an acicular lobe without setae. Segment 2 with first pair of elytrophores and long ventral buccal cirri. Neuropodia on this segment shorter than on the following. Notopodia absent on all segments, but there is always a small acicula and sometimes a small dorsal knob. Neuropodia very long, cylindrical. Neurosetae long, unidentate of two types, dorsally capillary, ventrally limbate. Dorsal cirri very long with cylindrical cirrophores, ventral cirri shorter, but also long and thin, placed at the middle of the ventral side of the neuropodia. Two long thin anal cirri.

Diagnosis: 24 pairs of elytra, 67 segments. Large cylindrical cirrophores. No notopodia and no notosetae except an acicula. Neuropodia long, cylindrical with capillary setae dorsally and limbate, unidentate ventrally.

Remarks: The genus differs from *Drieschella* Augener & Pettibone (Pettibone 1970c) by having up to 67 segments and 24 pais of elytra against 47 segments and 20 pairs of elytra in *Drieschella*. The latter has only one kind of setae. Another closely related genus, *Drieschia* Michaelsen, 1892, has 28 segments and 13 pairs of elytra and this genus has short falcate setae among the neurosetae.

Telodrieschia galatheae n.sp.

Fig. 10

Material:

St. 188, off Durban, 29°55'S 31°13'E, 440 m, ST300, 1 specimen: 22×10 mm (anterior part). – St. 203, off Natal, 25°36'S 35°21'E, 700 m, HOT, 1 specimen: 32×11 mm (complete specimen, 67 segments, paratype (ZMUC-POL-00032)). – St. 217, Mozambique Channel, 14°20'S 45°09'E, 3390 m, HOT, 1 specimen: 40×12 mm (holotype (ZMUC-POL-00031)).

Description: Holotype complete, with 61 segments: 40×12 mm without setae, width 16 mm including setae. Body long and slender with very long neuropodia and long thin neurosetae. Prostomium broader than long, anterior margin deeply incised with two rounded peaks (Fig. 10a). Four large eyes with lenses. Median antenna nearly as long as palps, situated on large ceratophore in the anterior notch of the prostomium. Lateral antennae subterminal to rounded lobes with ceratophores a little smaller than that of median antenna and styles half as long as that of median antenna. Two fairly long smooth palps. Tentacular cirri longer than palps. All elytra are missing on all the specimens, but elytrophores are prominent. Neuropodia ending in short postsetal lobe and longer presetal one (Fig. 10b). The surface of neuropodia smooth, without papillae or knobs. Neurosetae forming long fan, superior part of which comprises long capillary setae with a long fine tip, inferior part with limbate capillary setae ending in a long fine tip and with broadest part bearing long spines along the edge (Fig. 10c). Dorsal cirri very long, nearly reaching tip of setae and arising from enormous cylindrical cirrophores, in anterior end as long as neuropodia (including setae), posteriorly half as long as these. Ventral cirri short and thin, placed at the middle of ventral side of neuropodium. Two long thin anal cirri. The pharynx with four jaws and 13+13 papillae around the mouth opening.

Remarks: Since the species appears to live a pelagic

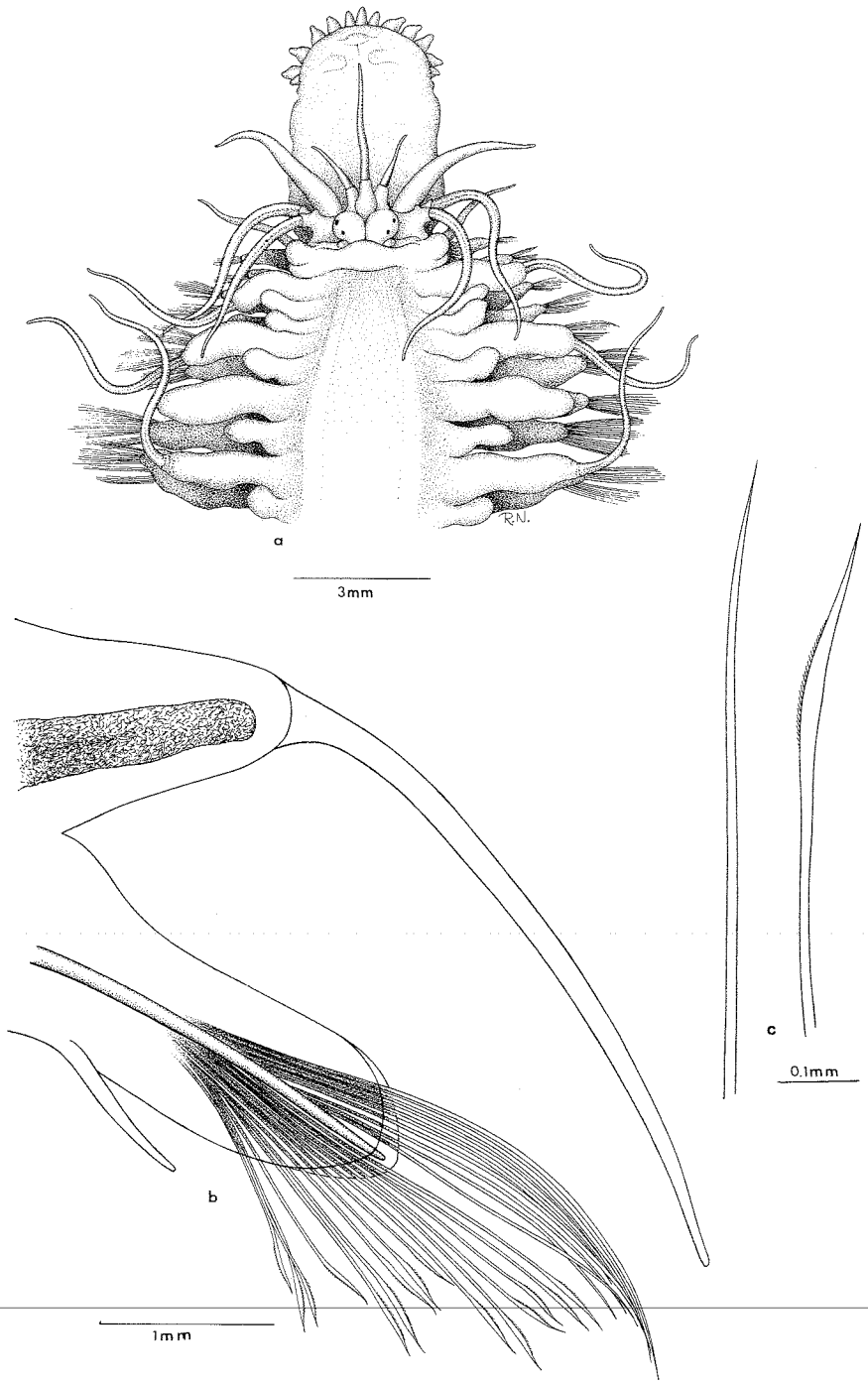

Fig. 10. *Telodrieschia galatheae* n.gen. n.sp. (holotype); a, dorsal view of anterior end, pharynx extended; b, parapodium; c, neurosetae.

life it is impossible to know at what depths the specimens were captured.

Distribution: SE of Natal, South Africa, Mozambique Channel; 0-?3390 m.

Subfamily Macellicephalinae Hartmann-Schröder, 1971

***Bathyeliasona kirkegaardi* (Uschakov, 1971)**

(Pettibone 1976, figs 15-17)

B. kirkegaardi Pettibone 1976 p. 27.

Records: *Macellicephala kirkegaardi* Uschakov, 1971 p. 37; Hartmann-Schröder 1975 p. 55. *Macellicephala abyssicola* Kirkegaard 1956 p. 64.

Material:
St. 654, Kermadec Trench, 32°10'S 175°54'W, 5850-5900 m, HOT, 2 fragments, 2 proboscides.

Remarks: The species was identified by its very expanded, flattened neurosetae on the fragments, an anterior and a posterior end.

Distribution: Aleutian Trench, Kermadec Trench; Sunda Trench; off Portugal; 5275-7880 m.

Bathyeliasona nigra (Hartman, 1967)

(Pettibone 1976, figs 18-19)

B. nigra Pettibone 1976 p. 30.

Record: *Herdmanella nigra* Hartman, 1967 p. 25.

Material:
St. 194, off Durban, 34°09'S 30°45'E, 4360 m, SOT, 1 specimen: 40×20 mm. – St. 281, SW of Sri Lanka, 3°38'N 78°15'E, 3310 m, ST300, 1 specimen: 35×10 mm.

Remarks: The specimen from St. 281 is in a very bad condition, but the shape of the setae, the black pigment, the number of segments (18 as opposed to 17 in *B. kirkegaardi*) and the shape of the prostomium fit with Pettibone's description and figures. However, the species from St. 194 has no setae on segment 1.

Distribution: Antarctic (South Sandwich Isl.); Indian Ocean (E of South Africa and S of Sri Lanka); 2553-4360 m.

Bathyvitiazia pettibonae n.sp.

Fig. 11

Material:
St. 601, SW of New Zealand, 45°51'S 164°32'E, 4400 m, HOT, holotype (ZMUC-POL-00033): 25×12 mm (complete specimen).

Description: Holotype complete, with 17 segments: 25×12 mm (incl. setae). Prostomium with two rounded anterior lobes and a smal ceratophore for the median antenna (Fig. 11a). Style missing. Palps smooth, tapering, reaching 5th segment. No eyes. Two pairs of cirrophores for the tentacular cirri; styles are missing. No setae at base of tentacular cirri. Round globular lobe ventral to prostomium. Ventral buccal cirri on segment 2 longer than those of following segments. All elytra missing. Elytrophores on segments 2, 4, 5, 7, 9, 11, 13 and 15, i.e., eight pairs of elytra. Dorsal cirri on last two segments. Small dorsal tubercles on cirrigerous segments at middle of body and small nephridial papillae ventral to bases of parapodia. Parapodia biramous with notopodia much shorter than neuropodia, both rami ending in an acicular process (Fig. 11c). Notosetae with blunt tips and fine serration along the edge and transverse rows of small denticles (Fig. 11d). Neurosetae numerous, flattened with a sharp bent tip and transverse rows of small denticles which become longer at edge of flattened part. Dorsal cirri long and slender, nearly reaching the tip of the neurosetae, ventral cirri small and thin, placed at middle of ventral side of neuropodium. Pygidium rounded with dorsal anus. Pharynx with large papillae around the opening and two large jaws. The edge of each jaw is sharp and without teeth (Fig. 11b).

Remarks: This species is very similar to *B. pallida* (Levenstein 1971) from the Kamchatka Trench. However, it deviates from this species in the shape of the notosetae, which are flattened with serrations along the edge, and that of the neurosetae, which have a flat top and prominent serrations along the lateral edges in *B. pallida*. Furthermore, the jaws of *B. pallida* have many small teeth along the edge, which are not present in *B. pettibonae*. In this species the tubercles on the setigerous segments are also distinct and so are the ventral nephridial papillae at the base of the parapodia. This was not the case in the single specimen described by Levenstein.

B. pettibonae is named after Dr. Marian H. Pettibone (National Museum of Natural History, Smithsonian Institution, Washington, D.C.) for her excellent revision of the genus *Macellicephala*.

Distribution: Tasman Sea, SW of New Zealand; 4400 m.

Macellicephala mirabilis (McIntosh, 1885)

(Pettibone 1976, figs 1-2)

M. mirabilis Pettibone 1976 p. 10.

Records: Day 1967 p. 45. *Polynoe (Macellicephala) mirabilis* McIntosh, 1885 p. 121.

Material:

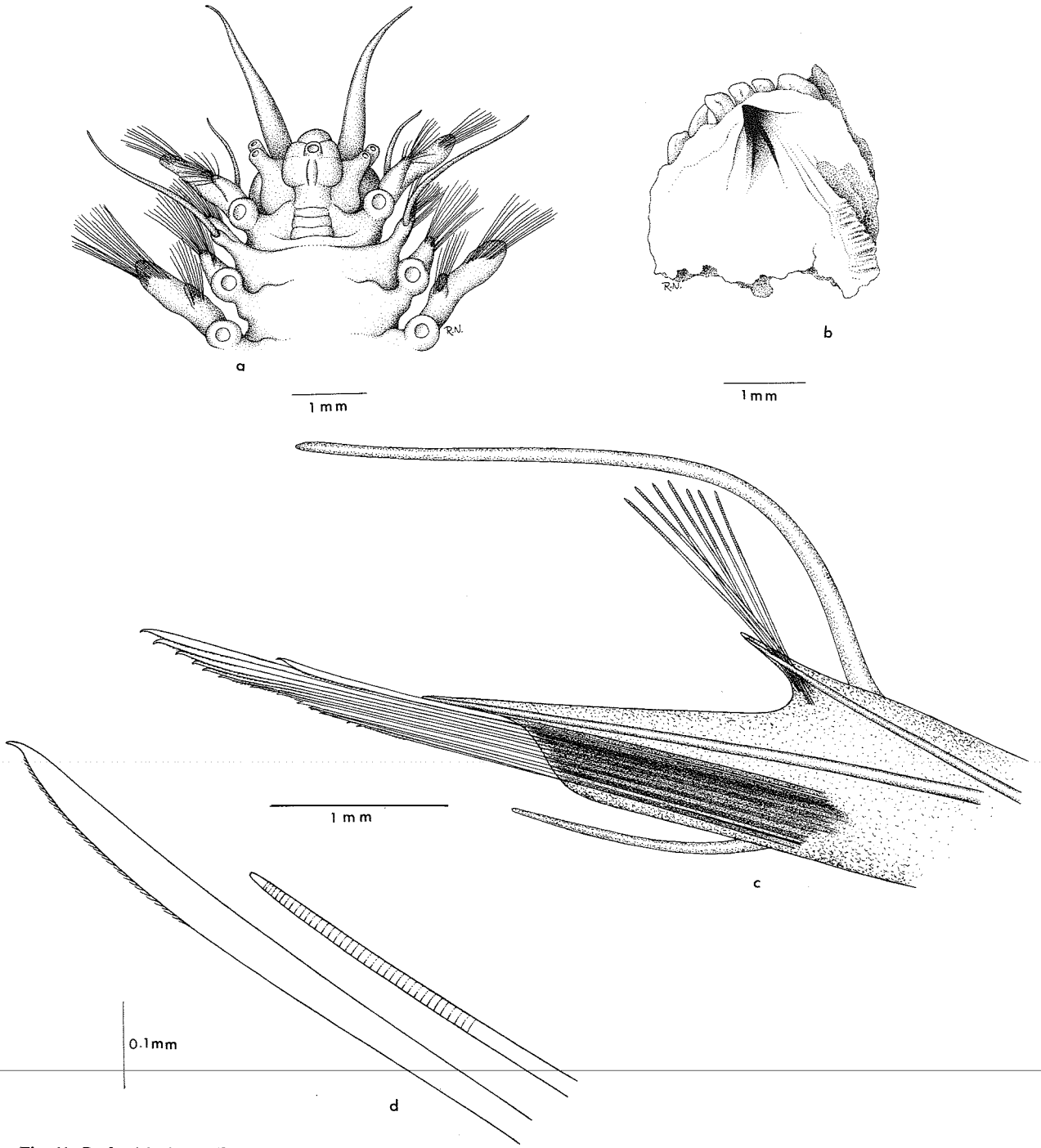

Fig. 11. *Bathyvitiazia pettibonae* n.sp. (holotype); a, anterior end, dorsal view; b, one of the two jaws, six circumoral papillae also visible; c, parapodium; d, notoseta (above), neuroseta (below).

St. 137, off SW Africa, 20°04'S 11°56'E, 537 m, ST300, 18 specimens: 18×17-23×10 mm.

Remarks: This fairly large number of specimens agree well with the description and figures given by Pettibone (1976). A coloured sketch made just after capture by the "Galathea" off SW Africa shows a strong violet colour.

Distribution: Antarctic; South Georgia, Princess Astrid Coast, South Africa; 155-1280 m.

Indeterminable Macellicephalinae

Material:

St. 550. NE of Sydney, Australia, 4530 m. Large

specimen: with setae, but with destroyed prostomium.
St. 575. Tasman Sea, 3710 m. 1 specimen: no prostomium, large pharynx.
St. 654. Kermadec Trench, 5850-5900 m. 2 fragments: prostomium missing, unusual neurosetae with bifid tips.
St. 716. Acapulco-Panama, 3570 m. Large specimen: 120×15 mm, no setae, no prostomium.

Indeterminable Polynoidae

Material:
St. 575. Tasman Sea, 3710 m. 1 specimen: 18 segments, no elytra, no eyes, globular anterior prostomial lobes, unusual neurosetae with tapering tips.
St. 626. W of New Zealand, 610 m. 2 fragments, anterior and posterior parts: anterior part with prostomium with two small anterior peaks and two small ventrally placed lateral antennae. Long thin tentacular cirri and long buccal cirri on segment 2. Dark pigment on posterior part of prostomium and darkly pigmented broad transverse band on each of anterior segments. Posterior fragment with thin unidentate neurosetae with long teeth and strong thick notosetae with prominent teeth.
St. 664. Kermadec Trench, 4540 m. 1 specimen: only fragments with long parapodia and round, smooth elytra without papillae.

Family ACOETIDAE Kinberg, 1858

***Panthalis fauveli* Pettibone, 1989**

(Pettibone 1989, figs 35-36)

P. fauveli Pettibone, 1989 p. 56.

Material:
St. 443, Mindanao Sea, 8°48′N 124°19′E, 1500 m, ST300, 1 specimen: 25×12 mm.

Remarks: This species was described by Pettibone on specimens from the Arabian Sea and Bay of Bengal identified by Fauvel (1932) as *P. oerstedi*. It differs from *P. oerstedi* by its large globular ommatophores, which are wider than the prostomium. It differs from *P. mutilata* (Treadwell) by its shorter lateral antennae and by having small papillae on the ceratophore of the median antenna and along the inner side of the tentaculophores.

Distribution: Bay of Bengal, Arabian Sea, Mindanao Sea; 60-1500 m.

***Panthalis mutilata* (Treadwell, 1906)**

(Pettibone 1989, figs 39-40)

P. mutilata Pettibone 1989 p. 59.

Record: *Polynoe mutilata* Treadwell, 1906, p. 1152.

Material:
St. 302, Bay of Bengal, 19°42′N 86°48′E, 1190 m, ST300, 3 specimens: 50×8, 40×9, 28×9 mm. – St. 443, Mindanao Sea, 8°48′N 124°09′E, 1500 m, ST300, 1 specimen: 28×11 mm, fragments.

Remarks: This species has large globular ommatophores but has no papillae on the ceratophore of the median antenna. Its lateral antenna are much longer than the ommatophores.

Distribution: Bay of Bengal, Philippine Islands, Mindanao Sea; Hawaii; 584-1500 m.

***Panthalis novaezelandiae* Knox, 1960**

(Knox 1960, figs 7-10)

P. novaezelandiae Pettibone 1989 p. 62.

Record: Knox, 1960 p. 81.

Material:
St. 302, Bay of Bengal, 19°42′N 86°48′E, 1190 m, ST300, 2 specimens: both 30×9 mm. – St. 626, W of New Zealand, 42°10′S 170°10′E, 610 m, HOT, 2 specimens: 5×3 mm (23 segments), 15×7 mm (35 segments).

Remarks: This species is characterized by its club-shaped tentacular cirri, which were also found in the specimens from the Bay of Bengal.

Distribution: Off New Zealand, Bay of Bengal; 250-1190 m.

***Panthalis oerstedi* Kinberg, 1857**

(Fauvel 1923, fig. 38a-h)

P. oerstedi Pettibone 1989 p. 53.

Record: Fauvel 1923 p. 98.

Material:
St. 137, off SW Africa, 20°04'S 11°56'E, 537 m, ST300, 2 specimens: 20×9, 35×9 mm (anterior ends).

Remarks: On one of the specimens from SW Africa the first pair of parapodia are similar to the second, with slender shape and thin setae. The other specimen is just like European specimens of this species, with only the first pair of parapodia differing from the following. McIntosh (1925) and Day (1967) refer specimens from South Africa to the subspecies *P. o. capensis* as the setae vary somewhat from the European specimens. They provide no figures of these setae and I see no reason to keep this subspecies.

Distribution: Atlantic Ocean from Sweden to SW Africa; 15-760 m.

Family SIGALIONIDAE Malmgren, 1867

***Ehlersileanira incisa* (Grube, 1877)**

(Pettibone 1970a, figs 10-12)

E. incisa Pettibone 1970a p.19.

Records: *Sthenelais incisa* Grube, 1877 p. 519. *Leanira incisa* Augener 1918 p. 107; Fauvel 1953 p. 9.

Material:
St. 474, Sunda Trench, 9°49'S 114°13'E, 3840-3810 m, ST300, 2 specimens: 18×1, 20×1 mm, 1 fragment. All somewhat damaged.

Remarks: Although in bad condition the specimens agree well with Pettibone's description and figures. This species has a very wide distribution, both geographically and bathymetrically.

Distribution: North and South Atlantic; Malay Archipelago, Philippine Islands; 15-3840 m.

***Leanira quatrefagesi* Kinberg, 1855**

(Pettibone 1970a, figs 1-3)

Fig. 12

L. quatrefagesi Pettibone 1970a p. 4.

Records: Wesenberg-Lund 1962 p. 27. *Leanira hystricis* Day 1963 p. 360.

Material:
St. 214, off Beira, 20°12'S 35°15'E, 380 m, PG 0,2, 1 specimen: 25×5 mm (anterior end). – St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, 3 specimens: 22×6, 30×8, 32×7 mm (anterior end). – St. 453, Makassar Strait, 3°56'S 118°26'E, 2000 m, ST300, 1 specimen: 45×4 mm. – St. 480, S of Bali, 8°49'S 115°00'E, 440 m, PG 0,2, 1 specimens: 8×0.5 mm (anterior end). – St. 491, Makassar Strait, 4°56'S 117°39'E, 1560 m, ST300, 1 specimen: 22×4 mm (anterior end), 1 fragment. – St. 554, Great Australian Bight, 37°28'S 138°55'E, 1340-1320 m, ST300, 16 specimens: 9×0.5-33×1 mm (anterior ends). – St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, HOT, 10 specimens: 5×1-22×1 mm (anterior ends), 2 posterior ends, 3 fragments. – St. 665, Kermadec Trench, 36°38'S 178°21'E, 2470 m, HOT, 13 specimens: 12×1-32×6 mm (anterior ends), 8 fragments. – St. 668, Kermadec Trench, 36°23'S 177°41'E, 2640 m, HOT, 1 fragment, possibly this species (only median parapodia with setae).

Remarks: This fairly large material of specimens from different parts of the world oceans agrees well with Pettibone's description and figures.

The species has probably often been mistaken for *L. hystricis* Ehlers, which is very similar to *L. quatrefagesi.* The differences are mainly in the number and shape of the neuropodial stylodes and the shape of the labial lobes (see Pettibone 1970a p. 4).

Distribution: South Atlantic off Argentina, Falkland Islands, West and South Africa; Indian Ocean off Mozambique, Malaya Archipelago; Pacific off Chile, W of New Zealand, Kermadec Trench, Magellan area; Antarctic; 0-6150 m.

***Neoleanira tetragona* (Oersted, 1845)**

(Pettibone 1970b, figs 1-4)

N. tetragona Pettibone 170b p. 368.

Records: Kirkegaard 1983 p. 198. *Leanira tetragona* Fauvel 1923 p. 117.

Material:
St. 17, off Sierra Leone, 7°17'N 13°28'W, 1260 m,

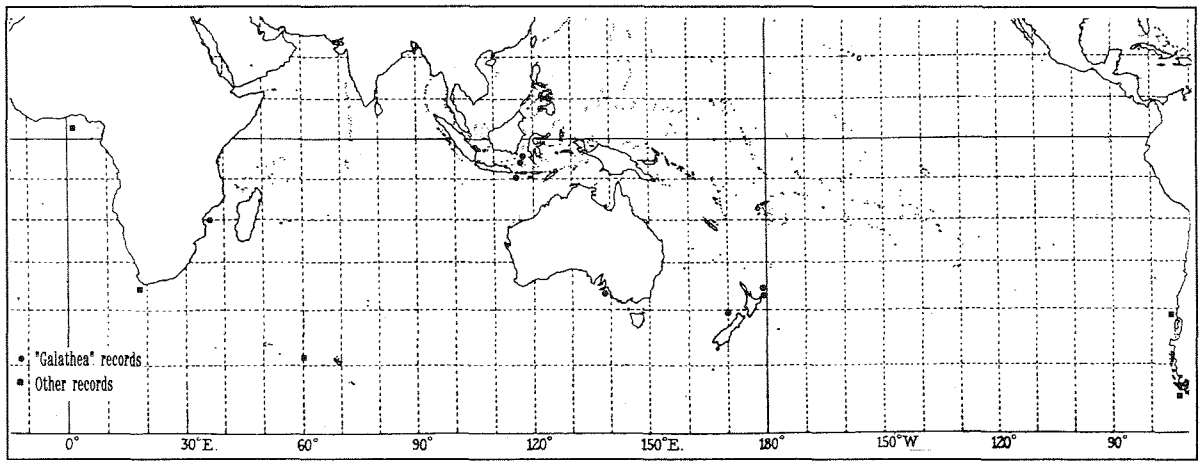

Fig. 12. *Leanira quatrefagesi* Kinberg, 1855; 0-6150 m.

ST100, 4 fragments of 1 specimen. – St. 63, off Gabon, 2°00′N 9°14′E, 1520 m, SOT, 1 specimen: 37×4 mm. – St. 101, off Angola, 8°50′S 12°32′E, 990 m, ST300, 2 specimens: 32×3, 45×6 mm, 6 fragments. – St. 137, off SW Africa, 20°04′S 11°56′E, 537 m, ST300, 3 specimens: 15×2, 35×3, 55×5 mm.

Remarks: The specimens found all agree well with Pettibone's description and figures in her revision of some species of *Leanira* (Pettibone 1970b). The species was well known from the northern part of the Atlantic, but appears also to be distributed along the west coast of Africa to South Africa.

Distribution: Arctic; Gulf of St. Lawrence to off Chesapeake Bay, Norway to the Azores and the Mediterranean, West Africa to South Africa; 40-2200 m.

Sigalion ?squamatum Delle Chiaje, 1841

(Day 1967, figs 1.19 a-f)

Records: Fauvel 1923 p. 104; Day 1967 p. 104.

Material:
St. 196, off Durban, 29°55′S 31°20′E, 430 m, ST300, posterior fragment: 40×7 mm.

Remarks: This record is questionable because the anterior end with the prostomium is missing on the single specimen present.

Distribution: North Atlantic, Mediterranean, South Africa; 10-400 m.

Sthenelanella ehlersi (Horst, 1916)

(Horst 1917, pl. 27 figs 1-5)

S. ehlersi Pettibone 1969 p. 434, figs 4-5.

Records: *Euleanira ehlersi* Horst, 1917 p. 122; Day 1967 p. 101.

Material:
St. 196, off Durban, 29°55′S 31°20′E, 430 m, ST300, 7 specimens: 7×1-20×2 mm, 1 posterior end, 3 fragments.

Remarks: This species was described by Horst from Madura Strait, Indonesia and has been recorded a few times off Natal. The depth distribution appears to be from the sublittoral zone down to the upper edge of the bathyal, resulting in an unusually wide distribution in the Indian Ocean.

Distribution: Indian Ocean (Natal, Indonesia); 56-430 m.

Sthenolepis japonica (McIntosh, 1885)

(Horst 1917, pl. 24 figs 1-3)

Records: Day 1967 p. 112. *Leanira japonica* McIntosh, 1885 p. 154; Fauvel 1953 p. 69. *Leanira sibogae* Horst 1917 p. 115.

Material:
St. 453, Makassar Strait, 3°56′S 118°26′E, 2000 m, ST300, 1 specimen: 16×1 mm.

Remarks: Although there is only one tiny specimen

present it agrees well with McIntosh's and Horst's descriptions and figures. However, there were no elytra on the specimen. This species has a very wide distribution.

Distribution: Pacific (Japan); Indonesia; Indian Ocean (Bay of Bengal, Sri Lanka, Gulf of Oman, Mozambique); 10-2000 m.

Family PHYLLODOCIDAE Williams, 1851

Eulalia sp.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, ST300, 1 specimen: 8×0.5 mm (anterior end).

Description: Prostomium small, almost as broad as long. Four small antennae at anterior edge of prostomium and a small median antenna. No eyes. Ventral tentacular cirri on segment 2 somewhat flattened. Setae on segments 2 and 3. Dorsal cirri cordiform, nearly as broad as long. Proboscis unknown.

Remarks: The single small specimen has some of the characters of *E. bilineata* so it belongs in this group. However, it differs in the shape of the dorsal cirri and in that the colour is uniformly brown with no longitudinal stripes.

Pterocirrus sp.

Material:
St. 471, Sunda Trench, 10°26'S 114°15'E, 2990-2810 m, ST300, 1 specimen: 10×1 mm (anterior part).

Description: Frontal antennae thick, median antenna has fallen off. Four pairs of tentacular cirri. Only on the dorsal side of segment 3 present. All dorsal and ventral cirri missing. Proboscis with diffusely distributed, filiform papillae. This and the shape of setae refer the species to *Pterocirrus*.

Family LACYDONIIDAE Bergström, 1914

Paralacydonia paradoxa Fauvel, 1913

(Fauvel 1923, figs 74 a-d)

Records: Fauvel, 1913 p. 544, 1923 p. 198; Uschakov 1958 p. 416, 1972 p. 216; Pettibone 1963 p. 184; Day 1967 p. 350; Kirkegaard 1988 p. 13. *Paralacydonia weberi* Horst 1923 p. 221; Fauvel 1953 p. 129. *Paralacydonia mortenseni* Augener 1924 p. 311.

Material:
St. 471, Sunda Trench, 10°26'S 114°15'E, 2810-2990 m, ST300, 1 specimen: 12×0.5 mm.

Remarks: The only specimen present in the material agrees with Fauvel's description and figures (Fauvel 1923). However, on the posterior segments there are two long papillae at the tip of each neuropodium; these are not mentioned in any description of the species.

Distribution: Atlantic (NW Atlantic, Mediterranean, Morocco, West Africa); Indian Ocean (Natal, Mozambique, India, Burma, Indonesia); Pacific (Gulf of Tonkin, South China Sea, Yellow Sea, off North America, New Zealand); 7-5498 m.

Family GLYCERIDAE Grube, 1850

Glycera benguellana Augener, 1931

(Day 1967, fig. 16.1 m-p)

Records: Day 1967 p. 358. *Glycera capitata* var. *benguellana* Augener, 1931 p. 303.

Material:
St. 241, off Kenya, 4°00'S 41°27'E, 1510 m, HOT, 1 specimen: 32×2 mm.

Remarks: The specimen agrees well with Day's description and figures including the presence of the characteristic ringed papillae on the proboscis. It may have a wider distribution than indicated by Day.

Distribution: Namibia, Cape, off Kenya; shallow to 1510.

Glycera lapidum Quatrefages, 1866

(Fauvel 1923, fig. 151 a-m)

Records: Fauvel 1923 p. 386; Pettibone 1963 p. 211; O'Connor 1987 p. 184; Kirkegaard 1988 p. 14.

Material:
St. 281, SW of Sri Lanka, 3°38'N 78°15'E, 3310 m, ST300, 1 specimen: 6×4 mm (anterior end). - St.

282, SW of Sri Lanka, 5°32'N 78°41'E, 4040 m, HOT, 1 specimen: 45×5 mm (anterior end). – St. 405, South China Sea, 10°25'N 112°37'E, 2910 m, PG 0.2, 1 specimen: 10×0.5 mm. – St. 489, Bali Sea, 7°38'S 116°08'E, 1160 m, ST300, 1 specimen: 45×5 mm. – St. 599, SW of New Zealand, 45°47'S 164°39'E, 4390 m, ST300, 1 specimen: 40×2 mm. – St. 601, SW of New Zealand, 45°51'S 164°32'E, 4400 m, HOT, 2 specimens: 33×2 mm, 35×2 mm.

Remarks: All the specimens in the material agree well with the description given by O'Connor (1987). They conform greatly to *Glycera minica* Hartman, 1965, which O'Connor regards as a deep-water variety of *G. lapidum.*

Distribution: Arctic; North Atlantic to Portugal and the Mediterranean and Davis Strait to Rhode Island, West Africa from Morocco to Zaire; Indian Ocean; Pacific from Alaska to Gulf of California and Japan to New Zealand; Antarctic; shallow to 4400 m.

Glycera knoxi n.sp.

Fig. 13

Material:

St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, ST300, holotype (ZMUC-POL-00034): 53×5 mm.

Description: Holotype incomplete, with 109 setigers: 53×5 mm (posterior end missing). Body pale, light brown, three rings on every segment. Prostomium a short cone with eight rings and two small tentacles (two are missing) (Fig. 13a). Eyes absent. Proboscis with many papillae, some of them cylindrical, others more coneshaped. Jaw supports (ailerons) with a long slender ramus and a much shorter one (Fig. 13b). Light plate between them. No branchiae. Parapodia with two long, cone-shaped presental lobes and two short rounded postsetal lobes (Fig. 13c). On anteiror segments the two postsetal lobes are faintly bilobed. Dorsal cirri small cone-shaped knobs, ventral cirri triangular, of length as the presetal lobes. Notosetae simple capillary, neurosetae compound spinigers faintly serrated along the edge.

Remarks: The species is named after the polychaetologist Prof. G. A. Knox, Christchurch, New Zealand. It is closely related to *G. tesselata* Grube, 1863 (q.v.), but the jaw supports (ailerons) in this species are quite different with two long branches, and a deep incision between these.

Distribution: W of New Zealand; 610 m.

Glycera papillosa Grube, 1857

(Day 1967, fig. 16.1 j-l)

Records: Augener 1922 p. 203; Day 1967 p. 358, 1973 p. 45.

Material:

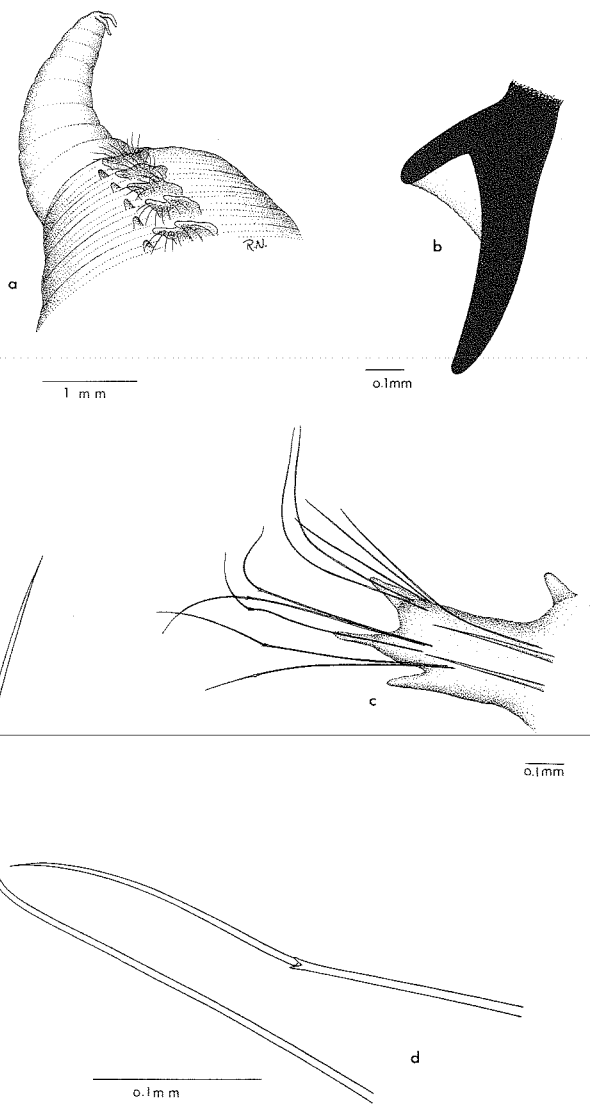

Fig. 13. *Glycera knoxi* n.sp. (holotype); a, anterior end, lateral view; b, jaw support; c, left parapodium; d, neuroseta (above), notoseta (below).

St. 196, off Durban, 29°55'S 31°20'E, 430 m, ST300, 1 specimen: 15×1 mm.

Remarks: Although this species is mostly recorded from shallow water it has a strangely scattered distribution.

Distribution: Chile; North Carolina; South Africa (Cape and Natal); 20-430 m.

Glycera rouxii Audouin & Milne-Edwards, 1833

(Fauvel 1923, fig. 153 a-c)

Records: Fauvel 1914 p. 203, 1923 p. 389, 1953 p. 297; Day 1967 p. 362; Kirkegaard 1988 p. 16.

Material:
St. 73, off Congo River, 5°41'S 11°26'E, 430 m, PG 0.2, 1 specimen: 35×2 mm.

Remarks: This well known European species is distributed all along the west coast of Africa from Morocco to South Africa, mostly in shallow water.

Distribution: Arctic; Eastern Atlantic (Norway to South Africa, Mediterranean); Indian Ocean (India, Iranian Gulf, Natal, Mozambique, Madagascar); Pacific (Japan, California); 10-4380 m.

Glycera tesselata Grube, 1863

(Fauvel 1923, fig. 152 a-c)

Records: Fauvel 1923 p. 387, 1953 p. 291; Day 1967 p. 359; Kirkegaard 1988 p. 17.

Material:
St. 302, Bay of Bengal, 19°42'N 86°48'E, 1190 m, ST300, 1 specimen: 110×5 mm. - St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, 1 specimen: 25×2 mm. - St. 477, S of Bali, 9°01'S 114°48'E, 780 m, PG 0.2, 1 specimen: 21×1 mm.

Remarks: This species is easy to recognize by its characteristic jaw support (aileron), which consists of two thin arms forming an acute angle with an apophyse on the inner edge of one of them. It is a common warm water species and thus also distributed along the west coast of Africa.

Distribution: Atlantic (Scotland to West Africa, North Carolina); Indian Ocean (Madagascar, Red Sea, India, Indonesia); Pacific (Japan, Canada to California); 20-1500 m.

Family GONIADIDAE Kinberg, 1866

Glycinde hanseni n.sp.

Fig. 14

Material:
St. 607, W of New Zealand, 44°18'S 166°46'E, 3830 m, VG 0.2, holotype (ZMUC-POL-00035): 20×0.5 mm (anterior end).

Description: Holotype incomplete, with 73 segments: 20×0.5 mm, posterior end missing. Prostomium conical without annulation, with four tiny antennae at tip (Fig. 14a, antennae lost). No eyes. Proboscis with two longitudinal bands of papillae, each band with four rows of characteristic papillae. Two macrognaths with four teeth and 40 micrognaths present (Fig. 14b). Anterior region consists of 35 segments with uniramous parapodia. Parapodia in this region with rounded presetal lobe and triangular postsetal lobe. No transition zone. Parapodia of posterior region biramous, with ventral postsetal lobe a little longer than presetal one (Fig. 14c, presetal lobe not visible). Digitiform dorsal and ventral cirri. Neurosetae compound, spinigerous.

Remarks: The only specimen present is in very poor condition; however, the micrognaths justify a new species. The species is named for Dr. Bent Hansen, zoologist on the "Galathea".

Distribution: W of New Zealand; 3830 m.

Goniada beiraensis n.sp.

Fig. 15

Material:
St. 215, off Beira, 20°12'S 35°15'E, 720 m, PG 0.2, holotype (ZMUC-POL-00036): 10×0.5 mm.

Description: Holotype complete, with 104 segments: 10×0.5 mm. Prostomium with eight faint rings and four tiny antennae (Fig. 15a, antennae lost). Proboscis with nine chevrons on each side and two macrognaths with four teeth. Nine X-shaped micrognaths dorsally between macrognaths and four micrognaths ventrally. Anterior region com-

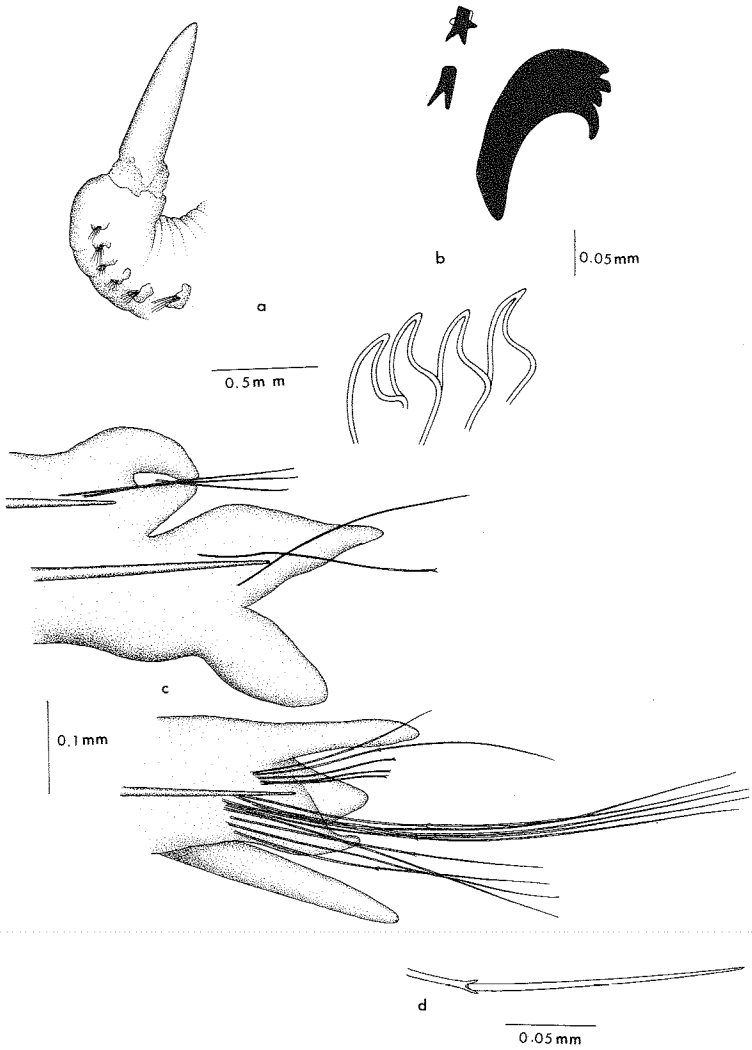

Fig. 14. *Glycinde hanseni* n.sp. (holotype); a, anterior end with prostomium, lateral view; b, papillae, macro- and micrognaths from proboscis; c, posterior parapodium, posterior view (above), anterior parapodium, posterior view (below); d, homogomph spiniger.

posed of 42 segments with uniramous parapodia. Presetal lobe long, finger-shaped, postsetal lobe rounded (Fig. 15b). No transition zone. Posterior segments have notopodia with one acicula and two acicular setae. Above these a large, thick cirra. The parapodium is conical. No postsetal lobe (Fig. 15c). Neuropodia conical with a bundle of spinigerous compound setae (Fig. 15d). Two long presetal lobes and a faint, rounded postsetal lobe. Digitiform dorsal and ventral cirri.

Remarks: This new species is similar to *G. emerita* Audouin & Milne-Edwards, 1833, but has fewer chevrons (9 as opposed to 12-17) and micrognaths, and the anterior region has fewer segments. The species is named for the type locality, off the town of Beira, Mozambique.

Distribution: Off Mozambique; 720 m.

Goniada clavata n.sp.

Fig. 16

Record: *Goniada ?brunnea* Knox 1960 p. 136.

Material:

St. 491, Makassar Strait, 4°56′S 117°39′E, 1560 m, ST300, holotype (ZMUC-POL-00037): 35×2 mm.

Description: Holotype incomplete, with 76 segments: 35×2 mm, posterior end missing. Prostomium a short cone composed of eight rings, ending in a broad square tip with four tiny antennae, the two

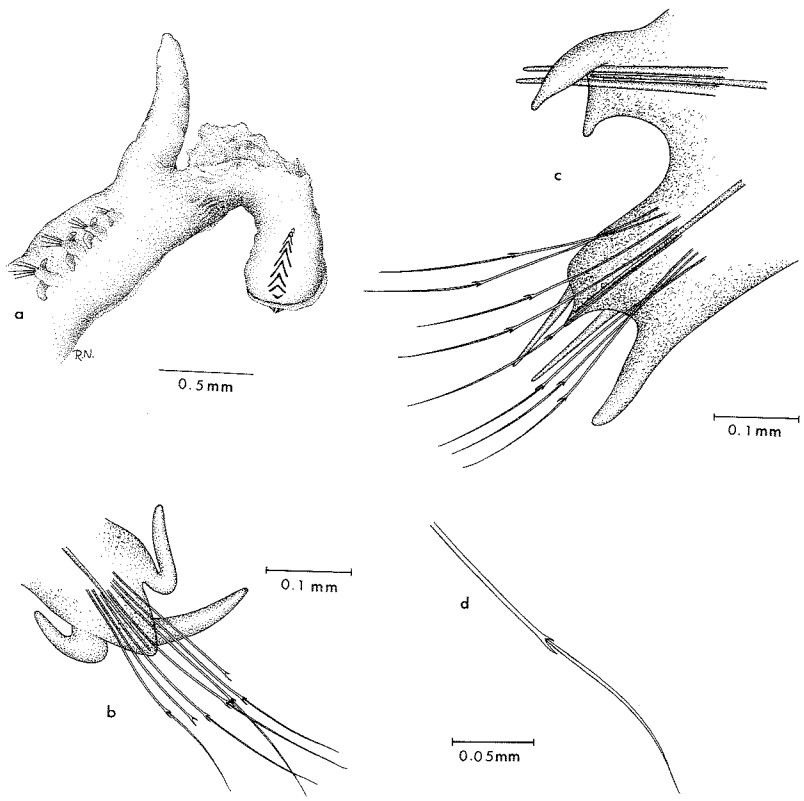

Fig. 15. *Goniada beiraensis* n.sp. (holotype); a, anterior end with prostomium and proboscis, lateral view; b, anterior parapodium; c, posterior parapodium; d, compound neuroseta.

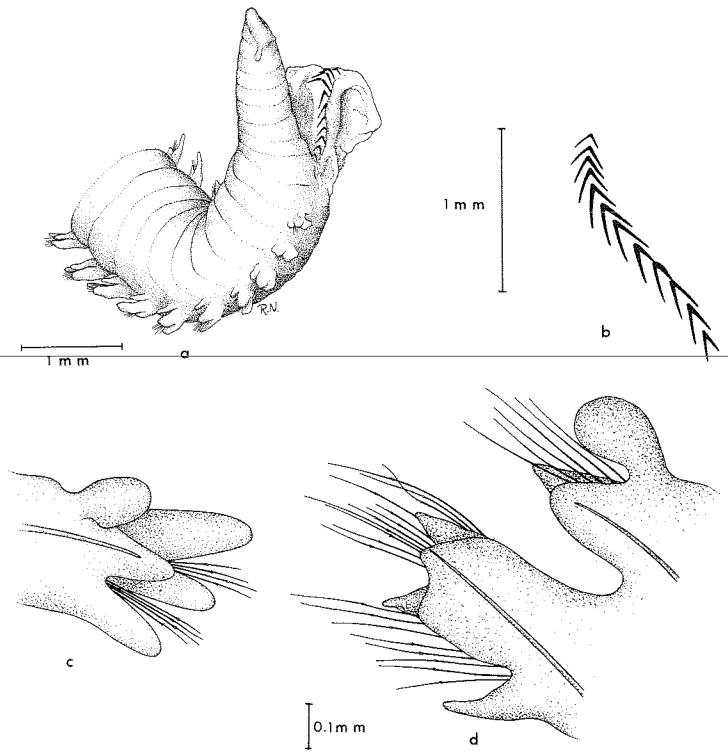

Fig. 16. *Goniada clavata* n.sp. (holotype); a, anterior end; b, chevrons; c, anterior parapodium, posterior view; d, posterior parapodia, posterior view.

foremost at the anterior corner (Fig. 16a, lost on the figure). Proboscis with 12 chevrons on each side (Fig. 16b) and small low papillae, which are subcircular with flaring flange. Two macrognaths with four teeth, eight ventral X-shaped micrognaths and four dorsal, very small and pale Y-shaped ones. Anterior 46 segments with uniramous parapodia. These parapodia have two long, conical presetal lobes and a shorter rounded postsetal lobe (Fig. 16c). No transition zone. Posterior region with biramous parapodia has bilobed notopodia with the presetal lobe a little longer than the postsetal lobe (Fig. 16d). Posterior neuropodia with two long conical presetal lobes and one slightly shorter triangular postsetal lobe. All dorsal cirri are clavate, with a flat, broad distal part and a narrow base. Ventral cirri are shorter, finger-shaped. Notosetae capillary, neurosetae compound spinigers.

Remarks: This new species is very similar to Knox's description of animals from the Chatham Islands referred by him to *G. brunnea* Treadwell, 1906. Pettibone (1963 p. 228) stated that Knox's specimens are not *G. brunnea,* probably because of the presence of dorsal Y-shaped micrognaths, which are not found in *G. brunnea.*

Distribution: Makassar Strait; 1560 m. ?New Zealand.

Goniada congoensis Grube, 1877

(Kirkegaard 1988, fig 1)

Records: Day 1967 p. 365, fig. 16.4 j; Kirkegaard 1988 p. 20.

Material:
St. 69, off Congo, 5°18'S 11°08'E, 1430 m, PG 0.2, 1 specimen: 18×0.5 mm (anterior part).

Remarks: The only specimen present in the material is small but in quite good agreement with Day's description with 14 chevrons and 27 anterior uniramous segments. The species appears to be fairly common along the tropical part of West Africa.

Distribution: West Africa; 7-1430 m.

Goniada maculata Oersted, 1843

(Fauvel 1923, fig. 154 a-g)

Records: Fauvel 1923 p. 392; Pettibone 1963 p. 225; Day 1967 p. 367; Kirkegaard 1988 p. 22.

Material:
St. 33, SW of Accra, Ghana, 4°00'N 1°43'W, 1445 m, PG 0.2, 1 specimen: 31×1 mm (anterior end). – St. 69, off Congo River, 5°18'S 11°08'E, 1430 m, PG 0.2, 1 specimen: 22×0.5 mm (anterior end).

Remarks: The two specimens are similar to European material of this well known species. It has a scattered distribution along the coast of West Africa and has previously been recorded from fairly deep water off Ghana (1400 m).

Distribution: Arctic; Atlantic (Norway to South Africa and Gulf of St. Lawrence to North Carolina); Iranian Gulf; Pacific (Japan, Alaska to Southern California); shallow to 2500 m.

Family HESIONIDAE Sars, 1862

Kefersteinia cirrata (Keferstein, 1863)

(Fauvel 1923, fig. 89 a-e)

Records: Fauvel 1923 p. 238; Day 1967 p. 228, fig. 11.2 d-f; Kirkegaard 1983 p. 213.

Material:
St. 241, off Kenya, 4°00'S 41°27'E, 1520 m, PG 0.2, 1 specimen: 5×0.5 mm (anterior end).

Remarks: The specimen is similar to European representatives of this species.

Distribution: Atlantic (Iceland to South Africa), Mediterranean; Indian Ocean (Natal, Kenya); Pacific (Vietnam); Antarctic; 0-1520 m.

Leocratides filamentosus Ehlers, 1908

(Pettibone 1970c, figs 27-29)

Records: Ehlers, 1908 p. 63; Pettibone 1970c p. 230. *Leocrates ehlersi* Horst, 1921 p. 82. *Leocratides ehlersi* Fauvel 1953 p. 107.

Material:
St. 443, N of Borneo, 8°48'N 124°09'E, 1500 m, ST300, 7 complete specimens: 15×2, 18×4, 20×4, 22×4, 23×5, 27×4, 28×4 mm, 1 posterior end: 20×4 mm.

Remarks: All the specimens in the fairly large

material of this species show the characteristic features described by Pettibone (1970c), i.e., double dorsal jaws.

Distribution: Indian Ocean (Andamans, Mindanao Sea, Sumbawa); tropical and northwestern Pacific (Japan); 108-1500 m.

Family SYLLIDAE Grube, 1850

Ehlersia cornuta (Rathke, 1843)

(Fauvel 1923, fig. 100 g-i)

Records: Kirkegaard 1983 p. 216. *Syllis (Ehlersia) cornuta* Fauvel 1923 p. 267, 1953 p. 153. *Syllis (Langerhansia) cornuta* Day 1967 p. 244, fig. 12.2 s-u.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, ST300, 2 specimens: 8×0.5, 10×0.5 mm.

Remarks: The specimens agree well with the description of this common European species.

Distribution: Arctic; Atlantic (Iceland to South Africa, Greenland to Florida), Mediterranean; Indian Ocean (Natal, Mozambique, Madagascar, Red Sea, Iranian Gulf, India); Pacific (Alaska to Panama, Japan); Antarctic; shallow to 3000 m.

Haplosyllis spongicola (Grube, 1855)

(Fauvel 1923, fig. 95 a-d)

Records: Kirkegaard 1983 p. 217. *Syllis (Haplosyllis) spongicola* Fauvel 1923 p. 257, 1953 p. 147; Day 1967 p. 240, fig. 12.1-e-i.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, ST300, 1 specimen: 12×1 mm.

Remarks: This species is easy to recognize by its characteristic setae. The specimen agrees well with Fauvel's description.

Distribution: East Atlantic (English Channel to South Africa), Mediterranean; Indian Ocean (Natal, Mozambique, Madagascar, Sri Lanka, Thailand); Pacific (Japan, China Sea); 10-430 m.

Typosyllis armillaris (Müller, 1776)

(Fauvel 1923, fig. 99 a-f)

Records: Kirkegaard 1983 p. 221. *Syllis (Typosyllis) armillaris* Fauvel 1923 p. 264; Day 1967 p. 249, fig. 12.4 a-d.

Material:
St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, 2 specimens: 10×0.5, 15×0.5 mm.

Remarks: This species is found all over the world. The present two specimens agree in all characters with Fauvel's description and figures.

Distribution: Arctic; Atlantic (Norway to South Africa, West Indies); Indian Ocean (Natal, Mozambique); Pacific (New Zealand, Australia); Antarctic; 10-1500 m.

Typosyllis bathyalis n.sp.

Fig. 17

Material:
St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, holotype (ZMUC-POL-00038): 8×0.5 mm,

Description: Holotype complete, with 64 setigers: 8×0.5 mm. Prostomium broader than long with two pairs of eyes, anterior pair farther apart and only slightly anterior to posterior pair (Fig. 17a). Palps large, as long as prostomium. Lateral antennae a little longer than the prostomium, with 14 annuli. Median antenna shorter with only 10 annuli. Dorsal tentacular cirri with 24 annuli, ventral ones much shorter with only 10 annuli. Dorsal cirri on setiger 1 very long, with 30 annuli. Dorsal cirri on midbody with 24 annuli (Fig. 17b). Ventral cirri very short. All setae compound, on anterior parapodia with lanceolate blades, three times as long as broad, with bidentate tips; one seta with a large clawlike tip (Fig. 17c). Posterior setae with shorter and very broad blades, slightly bidentate; one with a large clawlike blade. Proventriculus reaches segment number 6, ventriculus of same length.

Remarks: This new species looks very much like *Typosyllis annularis* Verrill, 1900 from Bermuda, but both antennae, tentacle cirri and dorsal cirri are shorter and with fewer annuli in *T. bathyalis*. Also the ventriculus and proventriculus are shorter. *T. an-*

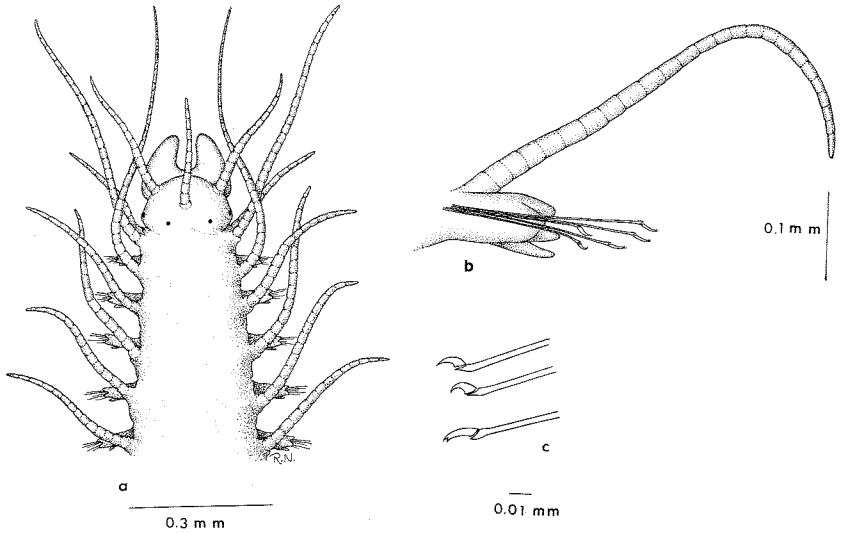

Fig. 17. *Typosyllis bathyalis* n.sp. (holotype); a, dorsal view of anterior end; b, parapodium from midbody; c, compound setae.

nularis has distinctly banded cirri with 8-10 small dark green spots, every fourth annulus having a very distinct, darkly pigmented area. The present species has no such pigmentation. However, the blades of the compound setae are very similar, with strongly bent, clawlike tips. The lengths of the two known specimens of *T. annularis* are 7.5 mm for 32 segments and 14.5 mm for 57 segments.

Distribution: Mindanao Sea; 1500 m.

Typosyllis variegata (Grube, 1860)

(Fauvel 1923, fig. 97 h-n)

Records: Kirkegaard 1983 p. 224. *Syllis (Typosyllis) variegata* Fauvel 1923 p. 262; Day 1967 p. 248, fig. 12.3 j-l.

Material:
St. 196, off Durban, 29°55′S 31°20′E, 430 m, ST300, 3 specimens: 11×1, 15×1, 25×1 mm.

Remark: The present three specimens agree well with animals from Europe.

Distribution: Atlantic from North Sea to France, Mediterranean, along the west coast of Africa to South Africa; Indian Ocean from Natal, Mozambique, Red Sea, Iranian Gulf, Sri Lanka and India; Pacific from Japan to Vietnam and New Zealand, California; 10-430 m.

Family NEREIDAE Johnston, 1845

Hediste kermadeca n.sp.

Fig. 18

Material:
St. 663, Kermadec Trench, 36°31′S 178°38′W, 4410 m, HOT, holotype (ZMUC-POL-00039): 27×5 mm.

Description: Holotype complete, with 45 setigers: 27×5 mm. Prostomium somewhat broader than long, with two anterior broad, biannulated palps (Fig. 18a), palpostyles with broad, ring-shaped tips. Two antennae, a little shorter than length of prostomium, anteriorly placed and some distance apart. No eyes. Four pairs of tentacular cirri, the dorsal pair much longer than the others, reaching 6th setiger. Remaining tentacular cirri of equal length, reaching 2nd setiger. Formula of paragnaths: I=1, II=7, III=12, IV=8, V=0, VI=4, VII-VIII = a broad belt of many small paragnaths. Notopodia throughout with two flat triangular lobes and a few short setae between them (Fig. 18b). Dorsal cirri thin, a little longer than lobes. Neurosetae in cone-shaped acicular lobe, somewhat shorter than ventral neuropodial lobe, which is as long as lobes of notopodium. Ventral cirri as long and thin as dorsal cirri. Notosetae all homogomph spinigers, neurosetae in supraacicular bundle homogomph spinigers and falcigers, in subacicular bundle heterogomph spinigers and falcigers (Fig. 18c).

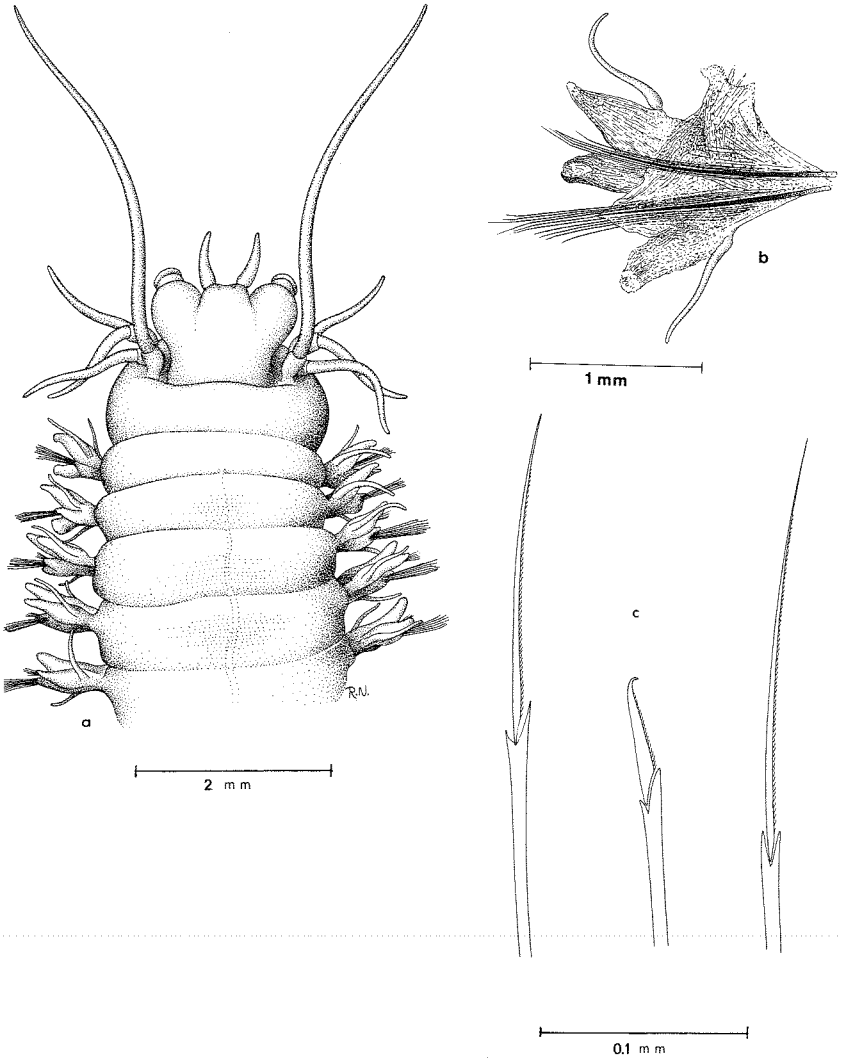

Fig. 18. *Hediste kermadeca* n.sp. (holotype); a, anterior end, dorsal view; b, parapodium; c, left to right: heterogomph spiniger, heterogomph falciger, homogomph spiniger.

Remarks: Like *Nereis profundi* Kirkegaard, 1956 from the Banda Trench, this species has no eyes, but the arrangement of the paragnaths is different in the two species. In *N. profundi* the arrangement is: I=6, II=14, III=25, IV=27, V=2, VI=1, VII-VIII = a single row.

Distribution: Kermadec Trench; 4410 m.

Neanthes suluensis n.sp.

Fig. 19

Material:

St. 444, Sulu Sea, 7°54′N 121°30′E, 5050 m, HOT, holotype (ZMUC-POL-00040): 25×1 mm (somewhat damaged).

Description: Holotype complete, with 58 setigers: 25×1 mm. Prostomium as broad as long, with four very small eyes (Fig. 19a). Two biannulated palps and two small antennae, the latter nearly half as long as length of prostomium. Four pairs of tentacular cirri, dorsal pair the longest, reaching setiger 7 (6 tentacular cirri lost before drawing). All areas on proboscis with paragnaths; however, it is impossible to discern their distribution, as many were floating freely in the pharynx. There seems to be only one row of paragnaths on areas VII-VIII. Notopodia with a dorsal triangular lobe and two long, pointed acicular lobes (Fig. 19b). Small finger-shaped dorsal cirri. Neuropodia also with two long pointed acicular lobes as well as a triangular ventral lobe. Ventral cirri very small. All notosetae homogomph spinigers. Two bundles of neurosetae, upper one with homogomph

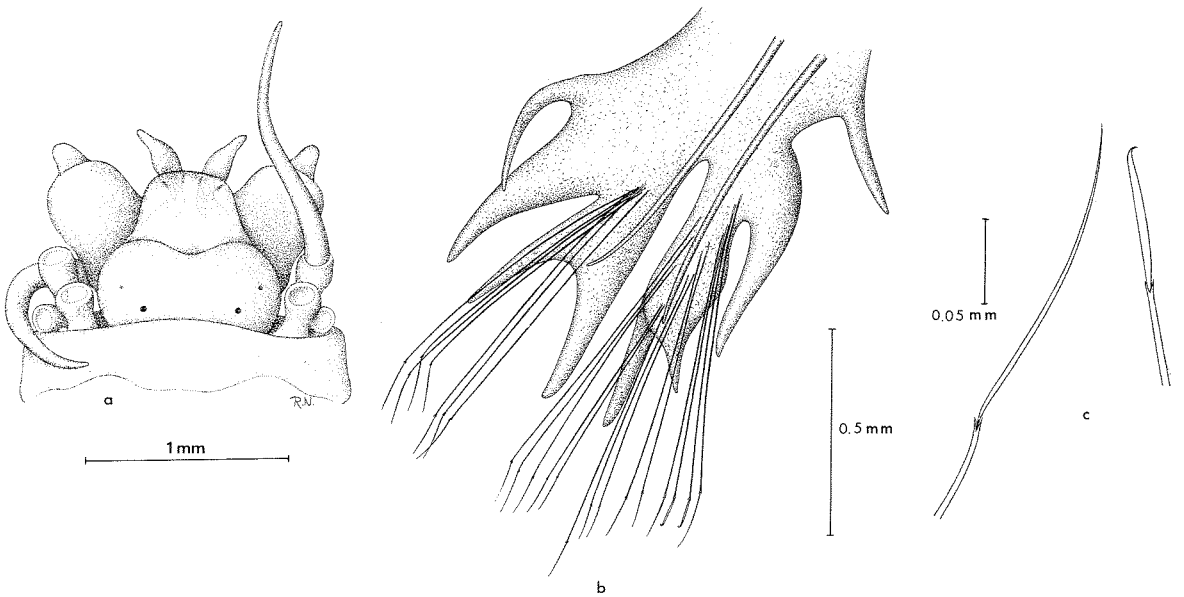

Fig. 19. *Neanthes suluensis* n.sp. (holotype); a, prostomium, dorsal view; b, left parapodium; c, homogomph spiniger and falciger.

spinigers, the lower one with homogomph spinigers and falcigers. The falcigers have very long blades, ending in a recurved tip.

Remarks: The parapodia are very similar to those of *Neanthes arenaceodentata* (Moore, 1903), but the falcigers of this species are very different. As *N. suluensis, N. kerguelensis* (McIntosh, 1885) only has one row of paragnath on areas VII-VIII, but the falcigers have a different shape. Since only homogomph spinigers and homogomph falcigers exist, it is impossible to place it in any known genus. Possibly a Heteronereis of *Neanthes.*

Distribution: Sulu Sea; 5050 m.

Nereis articulata Knox, 1960

(Knox 1960, figs 174-179)

Record: Knox, 1960 p. 122.

Material:

St. 663, Kermadec Trench, 36°31'S 178°38'W, 4410 m, HOT, 16 specimens: 6 complete: 20×2, 20×2, 22×2, 25×3, 35×4, 35×4 mm, anterior ends: 6-20×2 mm. - St. 664, Kermadec Trench, 36°34'S 178°57'W, 4540 m, HOT, 4 specimens: 22×2, 24×3 mm (complete), 9×1, 10×2 mm (anterior ends), 3 fragments.

Remarks: Our material corresponds well to Knox's description of the species. The arrangement of the paragnaths and the distribution of the glandular areas on the parapodia are identical. The cirrophores of the tentacular cirri are only weakly ringed. The species was originally described on the basis of one specimen from a depth of 10 m off one of the Chatham Islands, so the new records from more than 4000 m extend its depth range a great deal.

Distribution: Pacific (Chatham Isl., Kermadec Trench); 10-4540 m.

Nereis ?profundi Kirkegaard, 1956

(Kirkegaard 1956, fig. 4 a-c)

Record: Kirkegaard, 1956 p. 67.

Material:

St. 474, Sunda Trench, 9°49'S 114°13'E, 3840 m, ST300, 1 specimen: 45×6 mm (almost complete).

Remarks: The single specimen has no eyes and is very similar to *N. profundi* from the Banda Trench. The shape of the prostomium, length of tentacular cirri and shape of parapodia are identical. However, most of the paragnaths are missing or found floating loose in the pharynx, making the identification doubtful.

Distribution: Banda Trench; 7290 m. ?Sunda Trench; 3840 m.

Rullierinereis abyssalis n.sp.

Fig. 20

Material:

St. 234, off Mombasa, 5°25'S 47°09'E, 4800 m, PG 0.2, holotype (ZMUC-POL-00041), 8×0.5 mm (complete).

Description: Holotype complete, with 43 setigers: 8×0.5 mm. Prostomium with two short antennae and four large eyes (Fig. 20a). Palps biarticulate. Four pairs of tentacular cirri, the longest ones reaching setiger 8. No paragnaths or papillae on the proboscis. Two anterior setigers with uniramous parapodia. Following parapodia biramous, notopodia with two rounded lobes and one rounded acicular lobe. Neuropodia with one short, rounded acicular lobe and a triangular ligule. Dorsal cirri longer than parapodial lobes, placed basally on dorsal notopodial lobe. Neuropodia with homogomph spinigers and heterogomph falcigers with short unidentate blades. From setiger 10 parapodial lobes become longer and conical (Fig. 20b). Posterior notopodia with two homogomph spinigers and one homogomph falciger with a fairly long unidentate blade with dentate edge (Fig. 20c). Two anal cirri.

Remarks: The species agrees in many characters with *R. mexicana* (Treadwell, 1942), but the shape of the heterogomph falcigers is different.

Distribution: Indian Ocean, off Mombasa; 4800 m.

Rullierinereis gallardoi Pettibone, 1971

(Pettibone 1971, fig. 22)

R. gallardoi Pettibone, 1971 p. 39.

Record: *Nicon maculatus* Gallardo 1968, pl. 15 figs 3-7.

Material:

St. 489, Bali Sea, 7°38'S 116°08'E, 1160 m, ST300, 1 specimen: 11×1 mm, 23 setigers.

Remarks: The single specimens present in this material is an anterior end with 23 setigers. However, it corresponds well to Pettibone's description and figures and in all the important characters.

Distribution: Vietnam, Bali Sea; 26-1160 m.

Websterinereis glauca (Claparède, 1870)

(Pettibone 1971, figs 14-16)

W. glauca Pettibone 1971 p. 27.

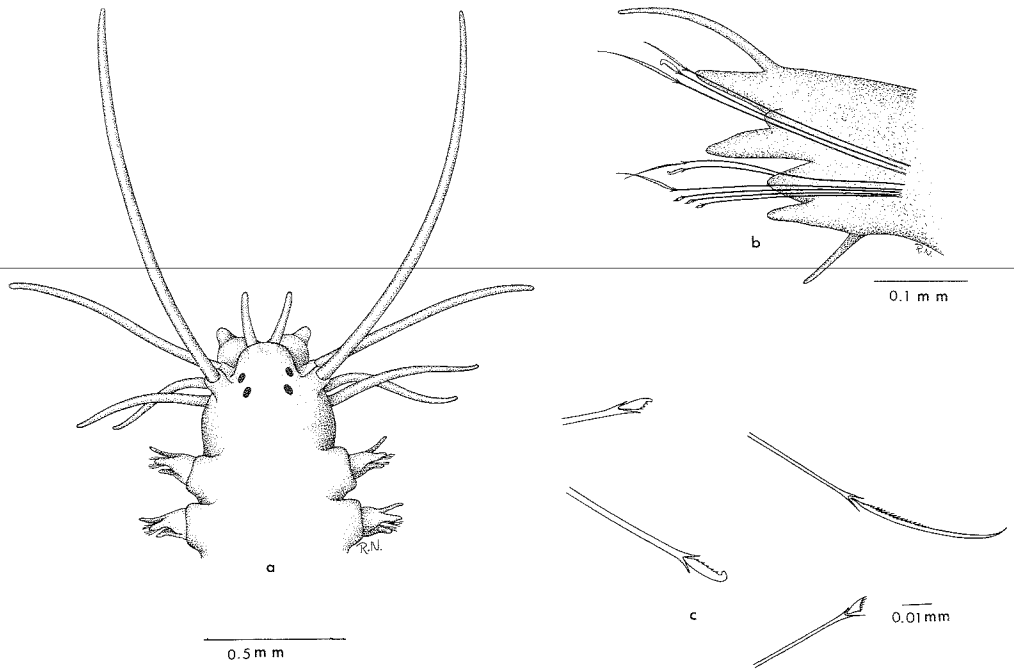

Fig. 20. *Rullierinereis abyssalis* n.sp. (holotype); a, anterior end, dorsal view; b, posterior left parapodium; c, 1 homogomph spiniger, 2 heterogomph falcigers and 1 homogomph falciger.

Records: Kirkegaard 1983 p. 238. *Leptonereis glauca* Fauvel 1923 p. 333, fig. 129 a-d. *Laeonereis glauca* Hartmann-Schröder 1971 p. 191.

Material:

St. 52, off Cameroun, 1°42′N 7°51′E, 2550 m, SOT, 3 specimens: 5×1, 10×1, 12×1 mm. – St. 65, off Gabon, 2°17′S 8°10′E, 2770 m, ST300, 1 specimen: 10×1 mm (anterior end). – St. 83, off Congo, 6°02′S 12°12′E, 800 m, PG 0.2, 2 specimens: 12×1, 20×2 mm. – St. 281, SW of Sri Lanka, 3°38′N 78°15′E, 3310 m, 2 specimens: 10×2 mm (anterior end), 16×1 mm (complete specimen).

Remarks: This well known species from the NE Atlantic has earlier been recorded along the west coast of Africa as far south as Angola. The present record from the abyss south of Sri Lanka is the first record from the Indian Ocean.

Distribution: E Atlantic from W Greenland to Angola; Indian Ocean, S of Sri Lanka; 5-3310 m.

***Websterinereis punctata* (Wesenberg-Lund, 1949)**

(Pettibone 1971, figs 12-13)

W. punctata Pettibone 1971 p. 25.

Records: *Leptonereis punctata* Wesenberg-Lund, 1949 p. 289, figs 21-23. *Laeonereis ankyloseta* Day 1957 p. 83, 1967 p. 303.

Material:

St. 196, off Durban, 29°55′S 31°20′E, 430 m, PG 0.2, 1 specimen: 18×1 mm (45 anterior segments).

Remarks: The single small specimen agrees well with Pettibone's description. She described a few stout falcigers with a complete fusion of blades to shafts. No sign of such a fusion were seen in our material. The tube of the specimen contained eggs. It was obtained in the middle of February.

Distribution: Iranian Gulf, Mozambique, South Africa (False Bay to Natal); 2-430 m.

Family NEPHTYIDAE Grube, 1850

***Aglaophamus elamellata* (Eliason, 1951)**

(Eliason 1951, fig. 2)

Fig. 21

Records: *Nephthys elamellata* Eliason, 1951 p. 133; Kirkegaard 1956 p. 68, fig. 7.

Material:

St. 101, off Angola, 8°50′S 12°32′E, 990 m, ST300, 2 specimens: 20×2 mm (anterior ends). – St. 108, off Lobito, Angola, 12°00′S 13°00′E, 1470 m, 1 specimen: 20×2 mm (anterior end). – St. 192, off Durban, 32°00′S 32°41′E, 3430 m, ST100, 1

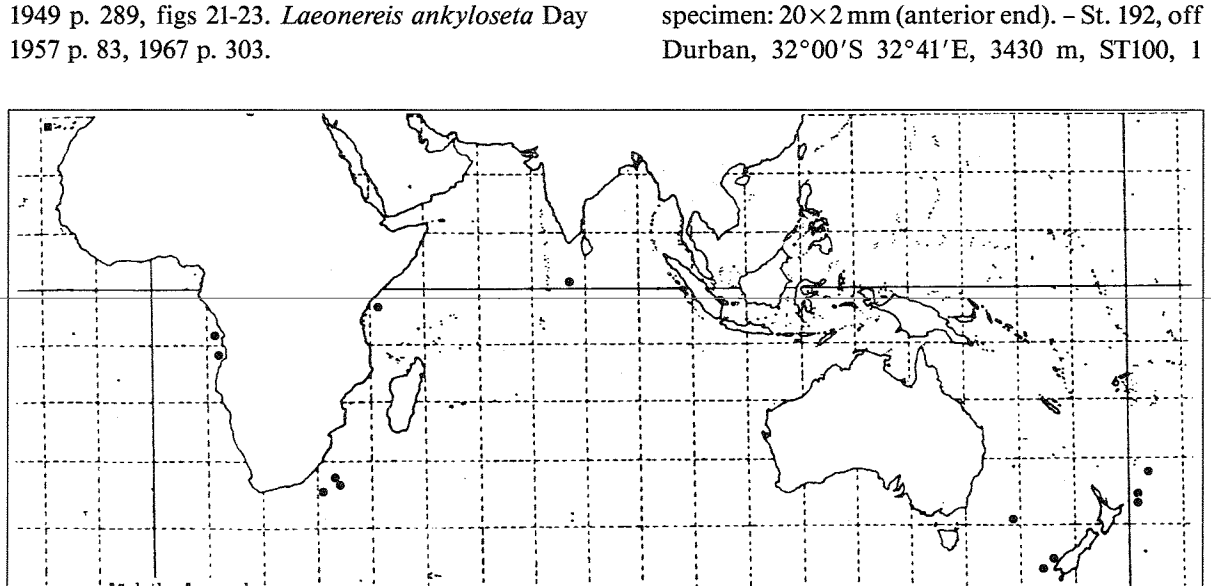

Fig. 21. *Aglaophamus elamellata* (Eliason, 1951); 990-7000 m.

specimen: 20×3 mm (anterior end). – St. 193, off Durban, 32°34′S 31°52′E, 3680 m, SOT, 4 specimens: 3×2, 6×2, 10×4, 22×3 mm (anterior ends). – St. 194, off Durban, 34°09′S 30°45′E, 4360 m, SOT, 3 specimens: 5×2, 18×2, 25×2 mm (anterior ends). – St. 241, off Kenya, 4°00′S, 41°27′E, 1510 m, HOT, 1 specimen: 10×2 mm (anterior end). – St. 279, SW of Sri Lanka, 1°00′N 76°17′E, 4320 m, 1 specimen: 5×0.5 mm (complete, juvenile?) – St. 574, Tasman Sea, 39°45′S 159°39′E, 4670 m, ST600, 1 specimen: 22×4 mm (anterior end). – St. 601, W of New Zealand, 45°51′S 164°32′E, 4400 m, HOT, 3 specimens: 16×5, 20×5, 25×5 mm. – St. 607, off SW New Zealand, 44°18′S 166°46′E, 3830 m, VG 0.2, 4 specimens: 10×2, 15×3, 15×3, 15×3 mm (anterior ends). – St. 654, Kermadec Trench, 32°10′S 175°54′W, 5850-5900 m, HOT, 2 specimens: 38×5, 40×5 mm (complete, 54 setigers). – St. 663, Kermadec Trench, 36°31′S 178°38′W, 4410 m, HOT, 18 specimens: 10-40×5 mm (anterior ends). – St. 664, Kermadec Trench, 36°34′S 178°57′W, 4540 m, HOT, 1 specimen: 15×3 mm.

Remarks: This species was described from specimens found in the Central Atlantic. It was later recorded from the bottom of the Kermadec Trench (Kirkegaard 1956). The present records are from many intervening localities and from other stations in the Kermadec Trench. I can find no differences between the Atlantic specimens and those from deep water in the Indian Ocean and around New Zealand. It thus appears that this is a deep water species with a cosmopolitan distribution.

Distribution: Atlantic (Azores, Canary Islands, off West Africa); Indian Ocean (off East Africa, Sri Lanka); Pacific (Tasman Sea, Kermadec Trench); 990-7000 m.

Aglaophamus profundus Rainer & Hutchings, 1977

(Rainer & Hutchings 1977, figs 4-6)

Records: Rainer & Hutchings, 1977 p. 313. *Nephthys macrura* Benham 1915 p. 203, fig. 57. ?*Aglaophamus verrilli* Paxton 1974, p. 199, fig. 1.

Material:

St. 554, Great Australian Bight, 37°28′S 138°55′E, 1360 m, PGI 0.2, 10 specimens: 33×5 mm (1 specimen), 7-21×1 mm (anterior ends), 2 fragments. – St. 556, S of Adelaide, Great Australian Bight, 37°18′S 138°43′E, 795 m, PGI 0.2, 1 specimen: 10×1 mm.

Remarks: This species was originally described by Benham as *Nephthys macrura* Schmarda, 1861 on a specimen obtained by F.T.S Endevour northeast of Tasmania at a depth of 2195 m. Rainer & Hutchings observed certain differences from Schmarda's species and described a new species which thus until now was known only for the holotype (i.e., the specimen reported by Benham). The present material agrees in all characters with their description and figures.

Distribution: Great Australian Bight (S of Adelaide), NE of Tasmania; 795-2195 m.

Aglaophamus verrilli (McIntosh, 1885)

(McIntosh 1885, pl. 36 figs 6-7, pl. 32A fig. 8)

Records: *Nephthys verrilli* McIntosh, 1885 p. 163. *Aglaophamus verrilli* Knox 1960 p. 115; Pettibone 1963 p. 190; Rainer & Hutchings 1977 p. 316.

Material:

St. 626, W of New Zealand, 42°10′S 170°10′E, 610 m, ST300, 3 specimens: 20×2 mm (complete).

Remarks: This species is very similar to *A. profundus,* as pointed out by Rainer & Hutchings (1977), but differs from it in having dorsal cirri on setiger 1, lyrate setae and longer dorsal parapodial lobes. Knox (1960) reports it as one of the most common nephtyid species around New Zealand.

Distribution: Eastern North America; India; Australia, New Zealand, Gulf of California; 0-610 m.

Inermonephtys inermis (Ehlers, 1887)

(Fauchald 1968 figs 31-35)

Records: Fauchald 1968 p. 16; Kirkegaard 1988 p. 11. *Nephthys (Aglaophamus) inermis* Ehlers, 1887 p. 125, pl. 38 figs 1-6. *Nephthys inermis* Fauvel 1923 p. 375; Hartman 1940 p. 234; Day 1973 p. 42.

Material:

St. 214, off Beira, 20°12′S 35°15′E, 380 m, PG 0.2,

2 specimens: 50×5 mm (complete), 28×1 mm (without posterior end).

Remarks: I agree with Fauchald (1968) that the absence of terminal papillae on the proboscis, the different shape of the jaws, and the probable absence of the second pair of antennae separate this species (and some others) so much from other species of *Aglaophamus* that it calls for a new genus. The species has a wide distribution.

Distribution: Florida, North Carolina and tropical Atlantic (West Africa from Morocco to Angola), Mediterranean; Gulf of Suez, Aden, Mozambique; Maldives, Vietnam; California; 0-450 m.

***Nephtys bruuni* n.sp.**

Fig. 22

Material:

St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, PGI 0.2, 2 specimens: 11×3 mm (Holotype: ZMUC-POL-00042), 9×3 mm (Paratype: ZMUC-POL-00158).

Description: Holotype incomplete, with 24 anterior segments: 11×3 mm. Prostomium with 2 pairs of small cone-shaped antennae (Fig. 22a). No dorsal cirri on setiger 1. Branchiae from setiger 7, long, thin and recurved. Dorsal cirri long and pointed. Notopodium coneshaped with reduced preacicular lobe and large oval postacicular lobe (Fig. 22b). Neu-

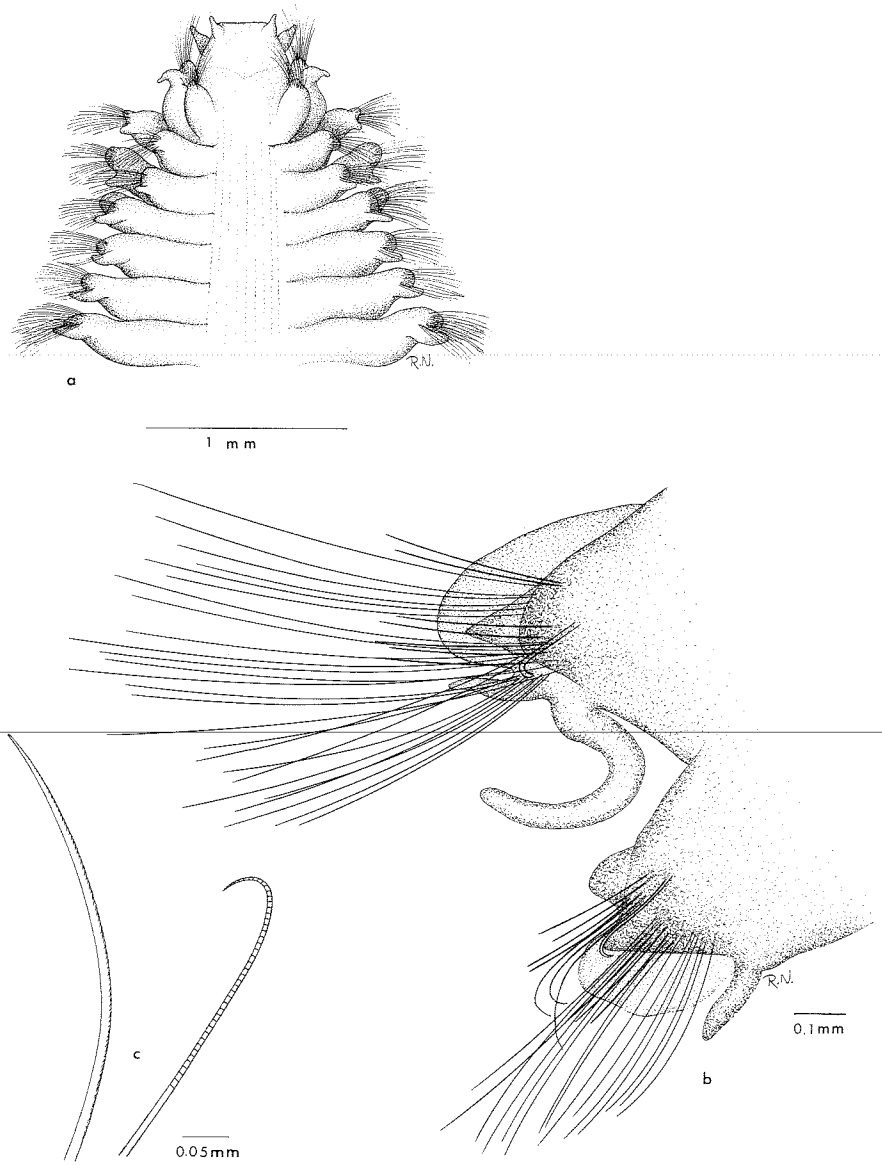

Fig. 22. *Nephtys bruuni* n.sp. (holotype); a, dorsal view of anterior end; b, right parapodium; c, setae.

ropodium also cone-shaped, with fairly large preacicular lobe and large postacicular lobe. No dorsal cirri on the neuropodia, but with long finger-shaped ventral cirri. Acicula light brown, ending in a curved tip. Short barred preacicular and long capillary postacicular setae, faintly dentate along the edge (Fig. 22c).

Remarks: This new species shows some resemblance to *Nephtys mesobranchia* Rainer & Hutchings, 1977 in which the branchiae also begin on setiger 7. However, the shapes of the parapodia and their lobes are different from those of *N. bruuni.* The species is named for Dr. Anton Bruun, Leader of the Galathea Expedition.

Distribution: W of New Zealand; 610 m.

Nephtys paradoxa Malm, 1874

(Fauvel 1923, fig. 146 f-i)

Records: Fauvel 1923 p. 375; Pettibone 1963 p. 200; Rainer & Hutchings 1977 p. 338, fig. 43.

Material:

St. 63, off Gabon, 2°00'N 9°14'E, 1520 m, SOT, 1 specimen: 30×4 mm (anterior end). – St. 65, off Gabon, 2°17'S 8°10'E, 2770 m, ST300, 7 specimens: 20×1-38×4 mm. – St. 101, off Angola, 8°50'S 12°32'E, 990 m, ST300, 1 specimens: 20×2 mm (anterior end). – St. 107, off Angola, 11°33'S 11°51'E, 2370 m, PG 0.2, 1 specimens: 22×2 mm (anterior end), fragments. – St. 112, off Angola, 12°16'S 13°17'E, 715 m, PG 0.2, 1 specimen: 24×2 mm. – St. 137, off SW Africa, 20°04'S 11°56'E, 537 m, ST300, 14 specimens: 30×3 mm (complete), 37×5-20×2 mm (without posterior end), 7 fragments.

Remarks: This well known European species appears to have a worldwide distribution and is mainly a deep-water species. It is not found at low water in tropical waters, i.e., off West Africa.

Distribution: Arctic; Iceland to South Africa, Gulf of St. Lawrence to off Delaware; Sea of Okhotsk, Japan, off Chile, Australia; 50-8000 m.

Nephtys squamosa Ehlers, 1887

(Hartman 1940, pl. 41 figs 98-99)

Records: Hartman 1940 p. 237; Pettibone 1963 p. 194, fig. 47e; Day 1973 p. 43.

Material:

St. 137, off SW Africxa, 20°04'S 11°56'E, 537 m, ST300, 1 specimen: 20×2 mm (anterior part), 1 fragment. – St. 489, Bali Sea, 7°38'S 116°08'E, 1160 m, ST300, 1 specimen: 40×6 mm (anterior part). – St. 491, Makassar Strait, 4°56'S 117°39'E, 1560 m, St300, 1 specimen: 8×1 mm (anterior part).

Remarks: The specimens agree well in all characters with Hartman's (1940) and Pettibone's (1963) descriptions and figures of the species. The material adds new records to its geographical distribution.

Distribution: North America (Massachusetts to Florida, southern California), West Indies, Brazil, Morocco, SW Africa; Bali Sea; 26-1560 m.

Family AMPHINOMIDAE Savigny, 1818

Bathychloeia sibogae Horst, 1912

(Horst 1912, figs 12-17)

Record: Horst, 1912 p. 25.

Material:

St. 241, off Kenya, 4°00'S 41°27'E, 1520 m, PG 0.2, 1 specimen: 9×4 mm (complete, 16 setigers). – St. 550, NE of Sydney, 31°27'S 153°33'E, 4090 m, PGI 0.2, 1 specimens: 9×4 mm (complete, 12 setigers).

Remarks: This species is similar to *Chloenea atlantica* McIntosh, 1885 which was recorded from the Bay of Biscay, but differs from this species in having very large branchiae on setiger 5 and in lacking eyes. Horst also mentioned a difference in the number of dorsal cirri: two in *C. atlantica* and one in *B. sibogae.* The two specimens recorded here agree in all characters with Horst's description and figures, but have two dorsal cirri on the parapodia. Fauchald (1977) suggested a new generic name for *Chloenea,* because this name is a homonym and changed it to *Chloenopsis.* Most likely, *B. sibogae* belongs to *Chloenopsis,* but for the time being I prefer to keep Horst's old name *Bathycloeia* and thus change its diagnosis to two dorsal cirri instead of one. Horst's description of the species was made on one small specimen, 7 mm long.

Distribution: East Africa; Banda Sea; Tasman Sea; 1158-4090 m.

Paramphinome indica Fauvel, 1932

(Fauvel 1932, pl. I figs 9-16, textfig. 10)

Record: Fauvel, 1932 p. 51, 1953 p. 91, figs 44a-h, 45a-f.

Material:
St. 471, Sunda Trench, 10°26'S 114°15'E, 2780 m, PGI 0.2, 1 specimen: 5×0.5 mm, 28 setigers.

Remarks: This small specimen agrees well with Fauvel's description and figures. The only difference is the presence of two eyes that are absent in Fauvel's specimens. However, they were so loosely attached to the prostomium that they fell off when handling the specimen.

Distribution: Arabian Sea, S of India, Sunda Trench; 1000-2780 m.

Pseudeurythoe acarunculata Monro, 1937

(Monro 1937, fig. 2)

Records: Monro, 1937 p. 249; Fauvel 1953 p. 89, figs 43 d-m.

Material:
St. 477, S of Bali, 9°01'S 114°48'E, 780 m, PG 0.2, 1 specimen: 7×1 mm (26 setigers). - St. 607, SW of New Zealand, 44°18'S 166°46'E, 3830 m, VG 0.2, 20 specimens: 8-18×1 mm (26-42 setigers).

Remarks: This fairly large material is quite similar in all characters to the only specimen (holotype) hitherto known, except that the bushy branchiae are only present on the anterior 10 setigers, whereas Monro's specimen has branchiae to setiger 50. His specimen is also larger than mine, 30×1 mm, and has 75 setigers.

Distribution: Maldives; S of Bali; SW of New Zealand; 37-3830 m.

Family ONUPHIDAE Kinberg, 1865

Anchinothria abranchiata (McIntosh, 1885)

(McIntosh 1885, pl. 21A fig. 27, pl. 22A figs 1-3, pl. 40 figs 1-12)

A. abranchiata Paxton 1986a p. 29.
Paradiopatra abranchiata Fauchal 1982 p. 81.

Records: *Nothria abranchiata* McIntosh, 1885 p. 314; Hartman 1964 p. 112, pl. 35 figs 1-3.

Material:
St. 601, SW of New Zealand, 45°51'S 164°32'E, 4400 m, HOT, 3 specimens: 35×6, 35×6, 40×6 mm (anterior ends), 4 fragments, 1 tube. - St. 602, SW of New Zealand, 43°58'S 165°24'E, 4510 m, ST300, 1 specimen: 30×6 mm (anterior end), 1 tube (composed of clay with foraminiferans).

Remarks: This species has until now only been recorded twice: N of Tristan da Cunha and in the Antarctic. The present specimens agree well with the descriptions and figures provided by McIntosh and Fauchald. The maxillary formula of the largest specimen is: 1+1, 10+8, 10+0, 10+8 and 1+1, which is only slightly different from that given by McIntosh (1+1, 8+8, 10+0, 8+8, 1+1).

Distribution: South Atlantic, Antarctic (S of Australia), SW of New Zealand; 2800-4510 m.

Anchinothria pycnobranchiata (McIntosh, 1885)

(McIntosh 1885, figs 74-76, pl. 22A figs 4-5, pl. 40 figs 13-15)

A. pycnobranchiata Paxton 1986a p. 29.
Paradiopatra pycnobranchiata Fauchald 1982 p. 87.

Records: *Nothria pycnobranchiata* McIntosh, 1885 p. 317. *Paradiopatra pycnobranchiata* Pettibone 1970c p. 258 (in part).

Material:
St. 554, Great Australian Bight, 37°28'S 138°55'E, 1340 m, ST300, 2 specimens: 10×1, 32×10 mm (anterior ends). - St. 555, Great Australian Bight, 37°21'S 138°44'E, 875 m, PGI 0.2, 2 specimens: 8×1, 10×1 mm (anterior ends).

Remarks: The four specimens present in this material agree with the descriptions by McIntosh and Fauchald. However, there seems to be some variation in the appearance of the first intrafascicular

hooks. Fauchald mentions that these hooks start at setiger 11. In my specimens it varies between 7, 9 and 11. In the small specimens the first appearance of the branchiae is on the 12th setiger, in the large ones on setiger 17.

Pettibone (1970c) synonymized several other species with *A. pycnobranchiata,* but Fauchald (1982) does not agree that the variation of the characters can be so great. For the time being, the distribution of the species is uncertain.

Distribution: Indonesia; Australia, S of Adelaide; off Chile; 828-3931 m (possibly wider).

Diopatra cuprea (Bosc, 1802)

(Pettibone 1963, fig. 66)

Records: Pettibone 1963 p. 250. *Diopatra cuprea cuprea* Day 1967 p. 417, fig. 17.12 a-d; Kirkegaard 1988 p. 24.

Material:

St. 137, off SW Africa, 20°04'S 11°56'E, 537 m, ST300, 7 specimens: 40×2, 55×2 mm (complete); 13×1, 15×1, 20×1, 30×4, 50×5 mm (anterior ends). - St. 196, off Durban, 29°55'S 31°20'E, 425 m, ST100, 1 specimen: 6×2 mm (anterior end), 1 fragment.

Remarks: The comb setae have 16-18 small teeth and there are no spots on the dorsum of the anterior segments like those described by Day (1967) for the subspecies *D. cuprea punctifera* Ehlers, 1908. The present material is therefore referred to the nominate subspecies *D. cuprea cuprea.*

Distribution: Atlantic (New England to Florida, Gulf of Mexico, Brazil, Cape Verde Islands to South Africa); Indian Ocean (Natal, Mozambique, Zanzibar, Mombasa, India); 10-500 m.

Diopatra dubia Day, 1960

(Day 1967, fig. 17.11 g-j)

Records: Day 1967 p. 415; Kirkegaard 1988 p. 27.

Material:

St. 134, off Kunene River, 17°13'S 11°21'E, 412 m, PG 0.2, 7 specimens: 8-25×1 mm (anterior ends).

Remarks: This species is very characteristic with its spadelike frontal antennae and the lateral projections on the ringed ceratophores of the occipital antennae. The present specimens agree in all characters with Day's description and figures.

Distribution: Off Namibia and South Africa; 10-412 m.

Hyalinoecia robusta Southward, 1977

(Southward 1977, pl. 1 figs a-j, pl. 2 figs a-b)

Fig. 23

Records: Southward, 1977 p. 173; Kirkegaard 1988 p. 34.

Material:

St. 17, off Sierra Leone, 7°17'N 13°28'W, 1260 m, ST100, 22 specimens: 60×3-100×5 mm, tubes. - St. 32, off Ghana, 4°05'N 2°13'W, 2100 m, SBT, 2 specimens: 25×4, 40×4 mm, tube. - St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, 1 specimen, 40 setigers: 40×5 mm. - St. 453, Makassar Strait, 3°56'S 118°26'E, 2000 m, ST300, 20 specimens: 18×2-55×6 mm (anterior ends), 4 fragments, 4 tubes. - St. 489, Bali Sea, 7°38'S 116°08'E, 1160 m, ST300, 6 specimens: 20×2-80×5 mm, 4 tubes. - St. 491, Makassar Strait, 4°56'S 117°39'E, 1560 m, ST300, 2 specimens: 25×3, 40×7 m, 2 fragments.

Remarks: All specimens agree well with Southward's description and figures. The specimen from the Mindanao Sea has a few branchiae with three filaments, but agrees in all other characters.

H. robusta was described by Southward from the Bay of Biscay (1500-2300 m) and off Gomera, the Canary Islands (1100 m). Later it was recorded by Hartmann-Schröder (1982), Rosenfeldt (1982) and Kirkegaard (1988) from Northwest and West Africa (260-2800 m). Its distribution is now extended to include Indonesia (1160-2000 m). It appears that its main distribution is on the continental slope down to the upper part of the abyss.

Distributio: Eastern Atlantic; Indonesia; 260-2810 m.

Hyalinoecia tubicola (Müller, 1788)

(Fauvel 1923, fig. 166 i-q)

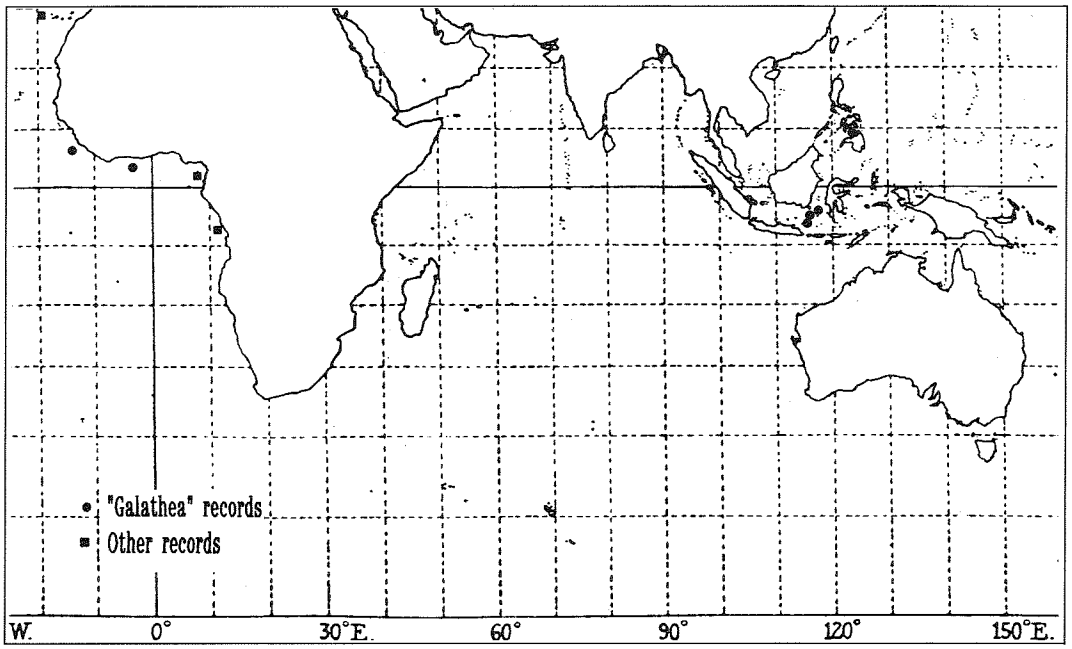

Fig. 23. *Hyalinoecia robusta* Southward, 1977; 260-2810 m.

Records: Fauvel 1923 p. 421; Pettibone 1963 p. 254; Knox 1960 p. 126; Kirkegaard 1988 p. 34; Day 1967 p. 411.

Material:

St. 626, W of New Zealand, 42°10′S 170°10′E, 610 m, PGI 0.2, 8 specimens: 8×1-50×4 mm, 7 tubes.

Remarks: All specimens agree well with the well known European species, which appears to have a worldwide distribution. Knox (1960) mentions it as a common species around New Zealand.

Distribution: Both sides of the Atlantic from Greenland to Argentina and South Africa; India; Japan; California, Peru, Australia, New Zealand; 15-5000 m.

Kinbergonuphis ?abyssalis (Fauchald, 1968)

(Fauchald 1968, pl. 4 a-f)

K. abyssalis Fauchald, 1982 p. 14 fig. 6d.

Record: *Nothria abyssalis* Fauchald, 1968 p. 19.

Material:

St. 453, Makassar Strait, 3°56′S 118°26′E, 2000 m, ST300, 1 specimen: 18×1 mm, tube of clay. – St. 471, Sunda Trench, 10°26′S 114°15′E, 2780 m, PGI 0.2, 1 specimen: 20×1 mm.

Remarks: The species has until now only been recorded from the type locality in the Pacific, off Baja California, 2604-2713 m. The present specimens are very similar in all characters but are in poor condition, which makes the identification uncertain.

Distribution: Indonesia; Pacific, off Baja California; 2000-2780 m.

Kinbergonuphis bathyalis n.sp.

Fig. 24

Material:

St. 421, W of Philippine Trench, 10°26′N 126°05′E, 1000 m, PGI 0.2, holotype (ZMUC-POL-00043): 60×5 mm (anterior 101 setigers).

Description: Holotype incomplete, with 101 anterior setigers: 60×5 mm. Ventral lateral occipital antennae short, reaching the 2nd setiger. Dorsal lateral and median antennae long, reaching setiger 8 (Fig. 24a). Ceratophores with six rings. Ventral lateral ceratophores shorter than styles. Branchiae present from setiger 6, maximum number of branchial filaments four (Fig. 24c). Ventral cirri cirriform and pointed on setigers 1-9 (Fig. 24b), thereafter

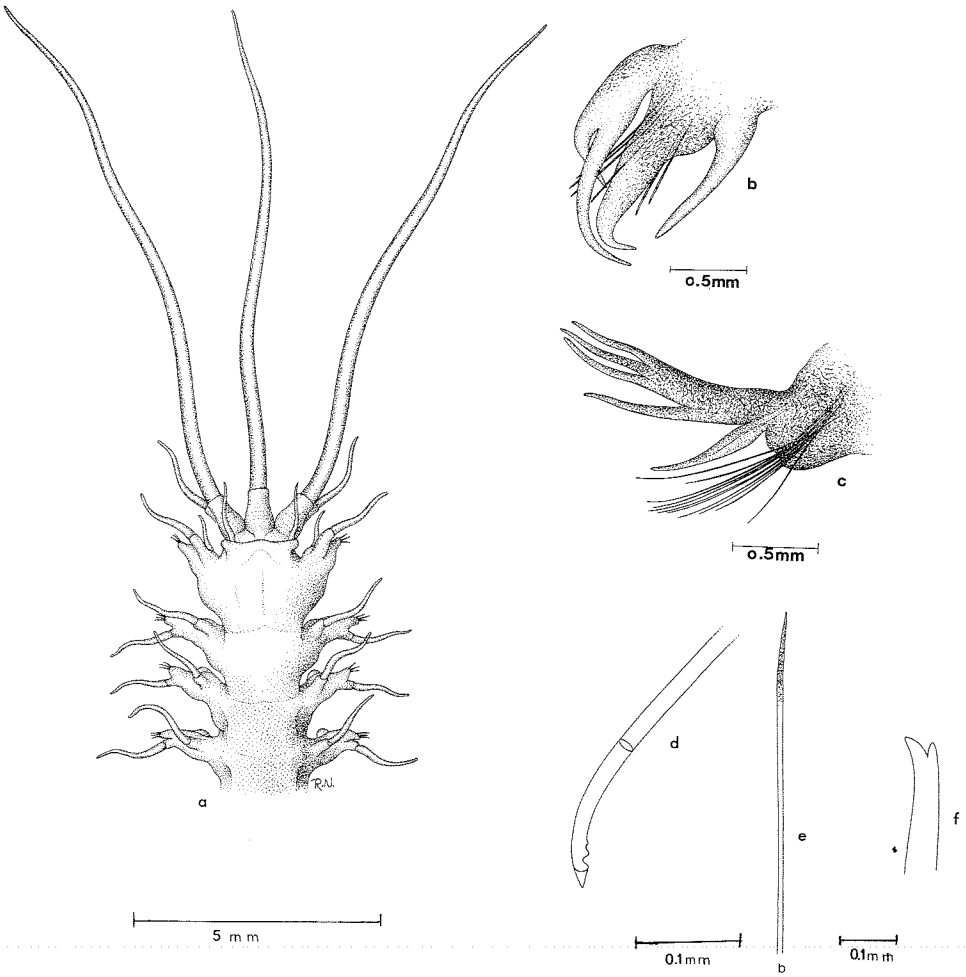

Fig. 24. *Kinbergonuphis bathyalis* n.sp. (holotype); a, dorsal view of anterior end; b, left anterior parapodium; c, parapodium from setiger 12; d, tridentate pseudocomb hook; e, capillary seta; f, subacicular hook.

short, rounded. Postsetal lobes long and pointed in setigers 1-22, thereafter short, rounded. Tridentate pseudocomb hooks present in setigers 1-10 (Fig. 24d). A bundle of ab. 10 long capillary setae on the anterior parapodia, in the posterior parapodia they are short (Fig. 24e). Subacicular hooks from setiger 28 (Fig. 24f). Maxillary formula: 1+1, 6+7, 6+0, 6+8, 1+1. Posterior end missing.

Remarks: This species is most closely related to *Kinbergonuphis geminata* (Fauchald, 1980), which also has nine cirriform ventral cirri. It differs in having fewer rings on the occipital ceratophores, pseudocompound hooks in 10 setigers instead of seven and subacicular hooks present from setiger 28 instead of 23. The maximum number of branchial filaments is only four instead of eight or nine.

Distribution: W of Philippine Trench; 1000 m.

***Kinbergonuphis investigatoris* (Fauvel, 1932)**

(Fauvel 1932, fig. 21, pl. 6 figs 1-6)

Figs 25, 26

K. investigatoris Fauchald 1982 p. 22.

Records: *Onuphis investigatoris* Fauvel, 1932 p. 147, 1953 p. 258.

Fig. 25. *Kinbergonuphis investigatoris* (Fauvel, 1932); pectinate seta.

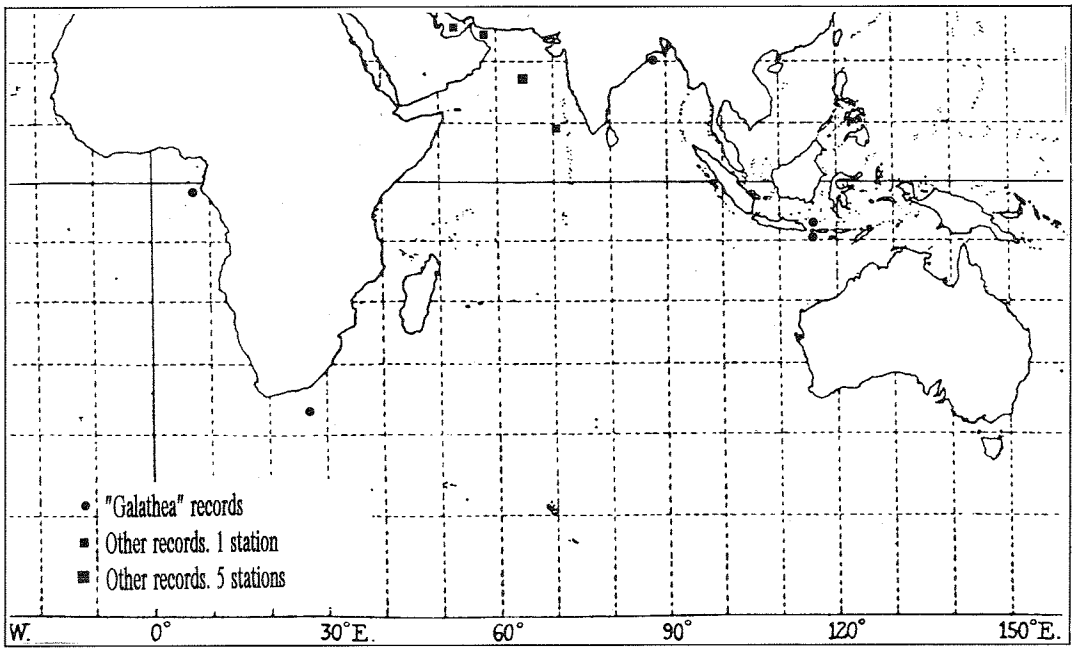

Fig. 26. *Kinbergonuphis investigatoris* (Fauvel, 1932); 70-4350 m.

Material:

St. 65, off Gabon, 2°17′S 8°10′E, 2770 m, ST300, 1 specimen: 45×5 mm (anterior end). – St. 176, S of South Africa, 35°12′S 27°35′E, 4350 m, ST300, 1 specimen: 12×1 mm (anterior end). – St. 302, Bay of Bengal, 19°42′N 86°48′E, 1190 m, 1 specimen: 55×6 mm (anterior end). – St. 478, S of Bali, 8°50′S 114°55′E, 600 m, PG 0.2, 2 specimens: 45×2, 20×1 mm, 2 fragments. – St. 489, Bali Sea, 7°38′S 116°08′E, 1160 m, ST300, 14 specimens: 15×2-105×4 mm, many fragments, 1 tube of clay.

Remarks: Until now this species has only been known from the original description by Fauvel (1932). The present fairly large material shows that there is some variation in the maxillary formula, which in the present material is: 1+1 (1+1), 7-11+9 (9+9), 9-10+0 (10+0), 7-8+9-11 (7+12) and 1+1 (1+1); Fauvel's indications in brackets. The setiger upon which the subacicular hooks appear is not mentioned by Fauvel. In the present material it varies between setiger 20 and 24. Fig. 25 indicates the structure of the pectinate setae, which was not shown by Fauvel.

The distribution of *K. investigatoris* appears to be wider than recorded by Fauvel.

Distribution: Off West Africa, S of Africa; Arabian Sea, Gulf of Oman, Gulf of Iran, Laccadive Sea, Bay of Bengal, Indonesia; 70-4350 m.

Kinbergonuphis proalopus (Chamberlin, 1919)

(Knox 1960, figs 199-204)

K. proalopus Fauchald 1982 p. 29.

Records: *Onuphis proalopus* Chamberlin, 1919 p. 265, pl. 40 figs 3-8, pl. 41 figs 1-10; Knox 1960 p. 128. *Onuphis profundi* Fauchald 1968, p. 40, 1972 p. 133.

Material:

St. 490, Bali Sea, 5°25′S 117°03′E, 570-545, ST300, 1 specimen: 30×4 mm. – St. 626, W of New Zealand, 42°10′S 170°10′E, 610 m, ST300, 12 specimens: 8×1-43×2 mm (anterior ends), fragments.

Remarks: The present material corresponds well to earlier descriptions and figures of this species.

Distribution: Bali Sea; New Zealand, Peru, Banja California; 12-2794 m.

Notonuphis antarctica (Monro, 1930)

(Paxton 1986a, fig. 21 a-i)

N. antarctica Paxton 1986a p. 35.
N. minuta Fauchald 1982 p. 99.

Records: *Leptoecia antarctica* Monro, 1930 p. 133. *Paronuphis antarctica* Hartman 1964 p. 117; Day 1967 p. 412. *Nothria minuta* McIntosh 1885 p. 334.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, PG 0.2, 1 specimen: 20×0.5 mm.

Remarks: The only specimen agrees well with Paxton's description and figures. The species appears to have a wider distribution in the southern bathyal areas of the oceans than was indicated in the description by Monro.

Distribution: South Shetland Islands, South Africa; New Zealand; Antarctic; 175-1437 mm.

Onuphis eremita Audouin & Milne-Edwards, 1833

(Fauvel 1923, fig. 163)

O. eremita Fauchald 1982 p. 39.

Records: Fauvel 1923 p. 414; Pettibone 1963 p. 248; Kirkegaard 1988 p. 36.

Material:
St. 96, off Congo River, 7°00'S 11°10'E, 1435 m, PG 0.2, 1 specimen: 25×0.5 mm.

Remarks: The specimen agrees well in all characters with Fauvel's description and figures. It is a common species in southern Europe and is distributed all along the west coast of Africa.

Distribution: East Atlantic from France to South Africa, West Atlantic from Long Island Sound to Venezuela; Indian Ocean from Arabia to Burma; Pacific from China to California and Mexico; 10-1600 m.

Onuphis opalina (Verrill, 1873)

(Pettibone 1963, fig. 64)

O. opalina Fauchald 1982 p. 50.

Record: Pettibone 1963 p. 245.

Material:
St. 489, Bali Sea, 7°38'S 116°08'E, 1160 m, ST300, 25 specimens: 90×2-10×1 mm (anterior ends), fragments: 40×3-80×4 mm.

Remarks: It is astonishing that the specimens in this fairly large material agree well with Pettibone's and Fauchald's descriptions and figures of specimens from New England. The distance from the first records in the North Atlantic to the Bali Sea is great.

Distribution: Gulf of St. Lawrence to off Chesapeake Bay, West Indies, Bali Sea; 30-2500 m.

Onuphis rullieriana (Amoureux, 1977)

(Amoureux 1977 fig. 1)

O. rullieriana Fauchald 1982 p. 51.

Record: *Nothria rullieriana* Amoureux, 1977 p. 399.

Material:
St. 63, off Gabon, 2°00'N 9°14'E, 1520 m, SOT, 1 specimen: 85×3 mm (anterior end). – St. 110, off Lobito, 12°05'S 13°08'E, 975 m, PG 0.2, 1 specimen: 40×2 mm. – St. 137, off SW Africa, 20°04'S 11°56'E, 537 m, ST300, 15 specimens: 20×1-50×2 mm (anterior ends), 10 fragments.

Remarks: Fauchald (1982) mentions that this species is very similar to *O. opalina* and *O. iridescens*, which differ mainly in the number of anterior segments with digitiform postsetal lobes. However, there are also different numbers of teeth on the maxillae. Amoureux's formula for the maxillae fits well with the present material and some of the specimens have digitiform postsetal lobes on 12 anterior setigers, as indicated by Amoureux. Others were in so poor condition that they have lost some of the digitiform lobes.

Distribution: East Atlantic from Britain to South Africa; 500-1520 m.

Paradiopatra fragosa (Ehlers, 1887)

(Ehlers 1887, pl. 20 figs 7-14, pl. 21 figs 1-4)

P. fragosa Paxton 1986a p. 36.
Sarsonuphis fragosa Fauchald 1982 p. 70.

Record: *Diopatra (Paradiopatra) fragosa* Ehlers, 1887 p. 75.

Material:
St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, ST300, 4 specimens: 10, 18, 20, 20×0.5 mm.

Remarks: The present specimens all agree well with the description by Fauchald (1982), but the new record is far from the type locality (Caribbean Sea), which until now was the only known locality for this species.

Distribution: Caribbean Sea, New Zealand; 557-792 m.

Paradiopatra hartmanae (Kirkegaard, 1980)

(Kirkegaard 1980, fig. 2 a-d)

P. hartmanae Paxton 1986a p. 38.
Sarsonuphis hartmanae Fauchald 1982 p. 73.

Record: *Nothria hartmani* Kirkegaard, 1980 p. 87.

Material:
St. 575, W of New Zealand, 40°11'S 163°35'E, 3710 m, SOT, 1 specimen: 30×1 mm.

Remarks: Although far from the type locality the specimen is very similar to those from deep water in the North Atlantic. The small black spot on the median part of the posterior margin of the prostomium is present, as are the lateral projections on the ceratophores. The subacicular hooks begin on setiger 12.

Distribution: North Atlantic off Great Britain and New England; Tasman Sea; 3710-4265 m.

Paradiopatra paucibranchis (Ehlers, 1908)

(Ehlers 1908, pl. 10 figs 12-16, pl. 11 figs 1-6)

Fig. 27

P. paucibranchis Paxton 1986a p. 38.
Sarsonuphis paucibranchis Fauchald 1982 p. 77.

Record: *Diopatra paucibranchis* Ehlers, 1908 p. 81.

Material:
St. 182, SE of Durban, 33°28'S 38°32'E, 5110 m, SOT, 1 specimen: 18×1 mm (poor condition). – St. 192, off Durban, 32°00'S 32°31'E, 3430 m, ST100, 1 specimen: 26×1 mm (anterior end). – St. 550, NE of Sydney, 31°27'S 153°33'E, 4530 m, ST200, 2 specimens: 10×1 mm, 20×1 mm (anterior ends), 4 fragments. – St. 665, Kermadec Trench, 36°38'S 178°21'E, 2470 m, HOT, 6 specimens: 18, 20×1, 20, 28, 32, 32×3 mm (anterior ends), fragments, tubes. – ?St. 668, Kermadec Trench, 36°23'S 177°41'E, 2640 m, HOT, 1 specimen: 10×0.5 mm (anterior end), 1 fragment. All in poor condition.

Remarks: All specimens have six rings on the ceratophores, ventral cirri are cirriform in the first three setigers and digitate posterior lobes are present in the first seven setigers. The first appearance of the branchiae varies between setigers 16 and 20, subacicular hooks are present in some specimens from setiger 9 (as in the holotype), but in some others from setiger 10.

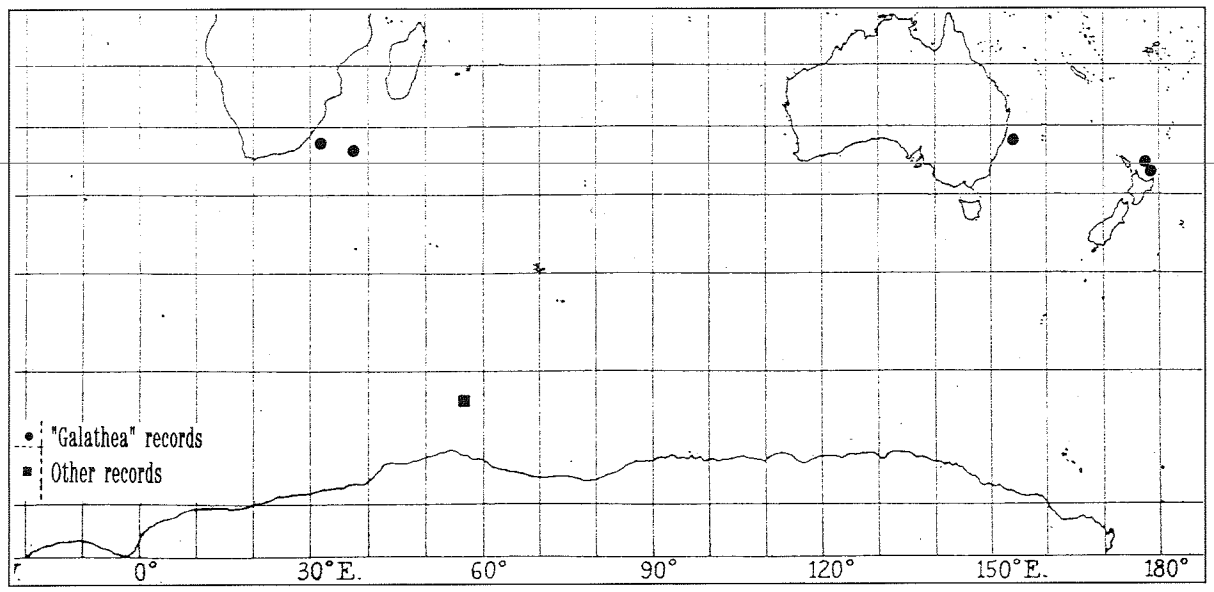

Fig. 27. *Paradiopatra paucibranchis* (Ehlers, 1908); 2470-5110 m.

This species is very similar to *P. armandi* (McIntosh), which differs only by having short ceratophores. The present specimens all have long ceratophores.

Distribution: Off South Africa; Tasman Sea, Kermadec Trench; Antarctic; 2470-5110 m.

Paradiopatra ?quadricuspis (Sars, 1872)

(Fauvel 1923, fig. 165 f-p)

P. quadricuspis Paxton 1986a p. 38.
Sarsonuphis quadricuspis Fauchald 1982 p. 66.

Record: *Onuphis quadricuspis* Fauvel 1923 p. 418.

Material:
St. 477, S of Bali, 9°01'S 114°48'E, 780 m, PG 0.2, 1 specimen: 20×1 mm (anterior end).

Remarks: This specimen probably represents a new species. Its main characters correspond to the European *Onuphis quadricuspis,* i.e., the branchiae begin on setiger 6, long ventral cirri on the first two setigers and subacicular hooks present from setiger 9. The only difference is that the digitiform postsetal lobes are only present on the first six setigers against on 9-10 in the European species and that there are six branchial filaments instead of four.

However, I find the material too sparse to describe a new species.

Distribution: North Atlantic, West Africa; ?Indonesia; 50-1600 m.

Rhamphobrachium (Spinigerium) brevibrachiatum (Ehlers, 1875)

(Paxton 1986b, fig. 9)

R. brevibrachium Paxton 1986b p. 89.
Diopatra brevibrachiata Ehlers, 1875 p. 49.

Records: *Rhamphobrachium brevibrachiatum* Ehlers, 1887 p. 72. *Onuphis brevibrachiata* Fauvel 1923 p. 417.

Material:
St. 202, off Natal, 25°20'S 35°17'E, 595 m, ST300, 27 specimens: 20×1-35×5 mm (anterior ends).

Remarks: This fairly large material from the Indian Ocean agrees well with the description and figures given by Paxton (1986b).

Distribution: North Atlantic (both sides), NE South America, off Natal (South Africa); 120-1470 m.

Family EUNICIDAE Savigny, 1818

Eunice laticeps Ehlers, 1868

(Fauchald 1992, fig. 62)

E. laticeps Fauchald 1986 p. 251.

Records: Fauchald 1992 p. 188. *Eunice tentaculata* Quatrefages, 1866 p. 317; Fauvel 1917 p. 209, 1953 p. 234; Knox 1960 p. 124.

Material:
St. 423, E of Cebu, 10°27'N 124°18'E, 750 m, ST300, 1 specimen: 65×10 mm.

Remarks: This specimen agrees well with the above descriptions and figures of this species.

Distribution: Indian Ocean, Indonesia; Australia, New Zealand; 10-750 m.

Eunice pennata (Müller, 1776)

(Fauvel 1923, fig. 156 h-o)

Records: Fauvel 1923 p. 400; Pettibone 1963 p. 242; Hartman 1964 p. 118.

Material:
St. 491, Makassar Strait, 4°56'S 117°39'E, 1560 m, ST300, 2 specimens: 30×6, 35×6 mm.

Remarks: These specimens agree well with Fauvel's and Pettibone's descriptions and figures.

Distribution: Arctic; Atlantic from Greenland to South Africa; Indonesia; Antarctic; 5-3500 m.

Eunice vittata (Delle Chiaje, 1822)

(Fauvel 1923, fig. 158 h-n)

Records: Fauvel 1923 p. 404; Knox 1960 p. 125; Gardiner 1976 p. 181; Kirkegaard 1988 p. 43.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, ST300, 1 specimen: 15×1 mm (anterior end). - St. 202, off Natal, 25°20'S 35°17'E, 575 m, ST300, 1 specimen: 25×1 mm. - St. 490, Bali Sea, 5°25'S 177°03'E, 570 m, ST300, 1 specimen: 15×1 mm (anterior end, poor condition).

Remarks: All specimens agree well with the above descriptions of this worldwide distributed species.

Distribution: Atlantic (West Indies and English Channel to South Africa); Indian Ocean; Pacific (California, Japan, New Zealand); 10-600 m.

***Marphysa ?belli* (Audouin & Milne-Edwards, 1833)**

(Fauvel 1923, fig. 161 i-q)

Records: Fauvel 1923 p. 410; Ehlers 1887 p. 95, pl. 28 figs 1-8; Gallardo 1968 p. 80. ?*Marphysa stragulum* Fauvel 1953 p. 247.

Material:
St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, 1 specimen: 40×5 mm (anterior end).

Remarks: This single specimen agrees well with Gallardo's description of specimens from Nha Trang. The branchiae begin on setiger 7 and simple bidentate hooks on setiger 19. The formula of the maxillary apparatus is also identical to that in Ehlers' description (1887). However, I am not sure that it belongs to the same species as the European animals. Fauvel (1923) indicates that the branchiae begin on the 12-15th setiger and the ventral hooks on setiger 35. Fauvel (1953) is of the opinion that *M. stragulum* (Grube) is identical to *M. belli*. *M. stragulum* was described from the Philippine Islands and later recorded from India and Sri Lanka, while *M. belli* is from the Atlantic Ocean, Mexican Gulf, South Vietnam and Thailand. These species no doubt should be revised based on a larger material.

Distribution: English Channel to Portugal, Mediterranean, Gulf of Mexico; Vietnam, Thailand, the Philippines; 30-1500 m.

Family LUMBRINERIDAE Malmgren, 1867

***Augeneria tentaculata* Monro, 1930**

(Monro 1930, fig. 52 a-k)

Records: Monro, 1930 p. 140; Hartman 1964 p. 119, pl. 37 figs 1-2; Day 1967 p. 430 fig. 17.14 h-i.

Material:
St. 101, off Angola, 8°50'S 12°32'E, 990 m, ST300, 1 complete specimen: 55×2 mm.

Remarks: This is another species from the Antarctic and Subantarctic islands that extends its distribution to South Africa.

Distribution: Antarctic, South Orkneys, Palmer Archipelago, off Angola; 200-1000 m.

***Lumbrineris acutiformis* Gallardo, 1968**

(Gallardo 1968, pl. 29 figs 2-8)

Record: Gallardo, 1968 p. 82.

Material:
St. 556, S of Adelaide, Great Australian Bight, 37°18'S 138°43'E, 795 m, PGI 0.2, 2 specimens: 10×0.5, 15×0.5 mm (anterior ends).

Remarks: The present two small specimens agree well with Gallardo's description and figures.

The species is characterized by its simple hooded hooks from the first setiger, its long, slender, acute prostomium, the teeth on the cutting edge of maxilla I and the three blunt teeth on each of maxilla II.

Distribution: Southern Vietnam, Great Australian Bight, S of Adelaide; 20-800 m.

***Lumbrineris amboinensis* (Grube, 1877)**

(Gallardo 1968, pl. 29 figs 9-10, pl. 30 figs 1-8)

Record: Gallardo 1968 p. 82.

Material:
St. 491, Makassar Strait, 4°56'S 117°39'E, 1560 m, ST300, 1 specimen: 60×4 mm (anterior end).

Remarks: This species was described from Indonesia by Grube and later redescribed by Gallardo on a fairly large material from Nha Trang. The present specimen is similar to those described and figured by Gallardo.

Distribution: Maldives, Indonesia (Amboina, Makassar Strait), Vietnam; 20-1560 m.

Lumbrineris brevicirra **(Schmarda, 1861)**

(Knox 1960, figs 205-208)

Fig. 28

Records: Knox 1960 p. 130; Day 1963 p. 363, 1967 p. 435.

Material:

St. 196, off Durban, 29°55'S 31°20'E, 430 m, PG 0.2, 1 specimen: 20×1 mm (anterior end), 2 fragments. – St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, ST300, 14 specimens: 14× 1-15×1 mm (anterior ends), fragments. – St. 665, Kermadec Trench, 36°38'S 178°21'E, 2470 m, HOT, 4 specimens: 22×2, 25×3, 55×5, 65×5 mm (anterior ends). – St. 716, Panama Bight, 9°23'N 89°32'W, 3570 m, HOT, 1 specimen: 52×6 mm (anterior end).

Remarks: This species has been recorded from deep water from several localities, e.g., from a depth of nearly 3000 m SW of Cape (Day 1963) and 600 m at the Chatham Islands (Knox 1960).

Distribution: South Africa; Australia, N Pacific, New Zealand, Chile, Panama; 1-3570 m.

Lumbrineris brevipes **(McIntosh, 1903)**

(McIntosh 1903, textfig. 3, pl. 12 figs 33-34)

Records: McIntosh, 1903 p. 147; Pettibone 1963 p. 260. *Ninoe fusca* Moore 1911 p. 285, pl. 19 figs 110-118.

Material:

St. 599, SW of New Zealand, 45°47'S 164°39'E, 4390 m, ST300, 1 specimen: 50×2 mm. – St. 601, SW of New Zealand, 45°51'S 164°32'E, 4400 m, PG 0.2, 1 specimen: 40×2 mm.

Remarks: The two specimens agree well with Pettibone's description and the figures provided by Moore (1911). The vascular lobes were also present in some of the segments as was the papilla in the deep, nuchal pocket in one of the specimens.

Distribution: North Atlantic (Massachusetts to North Carolina, off Spain); Pacific (S of New Zealand, off southern California); Antarctic; 100-4420 m.

Lumbrineris coccinea **(Renier, 1804)**

(Fauvel 1923, fig. 172 g-n)

Records: Fauvel 1923 p. 432; Pettibone 1963 p. 257; Day 1967 p. 436; Kirkegaard 1988 p. 52.

Material:

St. 302, Bay of Bangal, 19°42'N 86°48'E, 1190 m, ST300, 1 specimen: 19×1 mm (anterior end).

Remarks: This well known European species appears to have a worldwide distribution. The present specimen is very similar to the European ones.

Distribution: West and East Atlantic from English Channel to South Africa and Massachusetts to

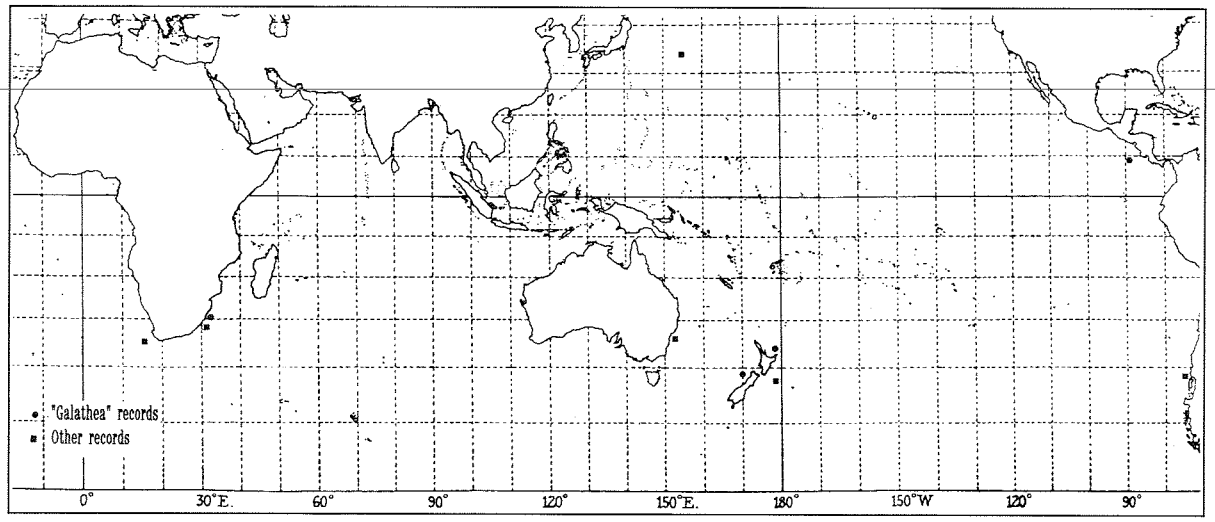

Fig. 28. *Lumbrineris brevicirra* (Schmarda, 1861); 1-3570 m.

Gulf of Mexico and West Indies; Indian Ocean from Mozambique to Bay of Bengal; Pacific (Japan, Alaska to California); 30-1400 m.

Lumbrineris fragilis (Müller, 1766)

(Pettibone 1963, fig. 69)

Records: Fauvel 1923 p. 430; Pettibone 1963 p. 262.

Material:
St. 63, off Gabon, 2°00'N 9°14'E, 1520 m, SOT, 1 specimen: 50×2 mm. - St. 106, off Angola, 11°24'S 11°15'E, 3660 m, PG 0.2, 1 specimen: 15×1 mm.

Remarks: The specimens agree well with Fauvel's and Pettibone's descriptions and figures, so this species, hitherto recorded only from the North Atlantic, is also distributed in deep water off West Africa.

Distribution: Arctic; East Atlantic from Iceland to West Africa, West Atlantic from Hudson Bay to Virginia; Bering Sea, Japan Sea; 10-4000 m.

Lumbrineris gracilis (Ehlers, 1868)

(Fauvel 1923, fig. 172 a-f)

Records: Fauvel 1923 p. 432; Kirkegaard 1988 p. 53.

Material:
St. 72, off Congo River, 5°39'S 11°19'E, 735 m, PG 0.2, 1 specimen: 10×1 mm (anterior end). - St. 110, off Lobito, 12°05'S 13°08'E, 975 m, ST300, 2 specimens: 15×2, 20×1 mm (anterior ends). - St. 137, off SW Africa, 20°04'S 11°56'E, 537 m, ST300, 4 specimens: 15, 18, 20, 22×1 mm (anterior ends).

Remarks: This species is well known from European waters, but appears also to be distributed along the west coast of Africa in both shallow and deep water.

Distribution: East Atlantic Ocean from Norway to South Africa; 10-1000 m.

Lumbrineris latreilli Audouin & Milne-Edwards, 1834

(Fauvel 1923, fig. 171 m-r)

Records: Fauvel 1923 p. 431, 1953 p. 266; Pettibone 1963 p. 258; Kirkegaard 1988 p. 55.

Material:
St. 63, off Gabon, 2°00'N 9°14'E, 1520 m, SOT, 1 specimen: 15×0.5 mm. - St. 109, off Angola, 12°06'S 13°08'E, 1170 m, PG 0.2, 1 specimen: 5×1 mm (anterior end), 1 fragment. - St. 135, off Cunene River, 17°13'S 11°16'E, 720 m, PG 0.2, 1 specimen: 85×6 mm (anterior end). - St. 443, Mindanao Sea, 8°48'N 124°09'E, 1500 m, ST300, 1 specimen: 45×2 mm (anterior end).

Remarks: There are no differences between the specimens from West Africa, the Philippines and Europe; this is a true cosmopolitan species, which is also bathyal-abyssal in its distribution.

Distribution: Atlantic (Greenland to West and South Africa and New Brunswick to North Carolina and Gulf of Mexico); Indian Ocean (Red Sea to India and the Philippines); Pacific (Japan, Queen Charlotte Islands to California, Mexico, Peru); 1-2500 m.

Lumbrineris magalhaensis Kinberg, 1865

(Day 1967, figs 17.15 a-g)

Record: Hartman 1964 p. 123, pl. 37 figs 9-10; Day 1967 p. 432; Kirkegaard 1988 p. 55.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, PG 0.2, 1 specimen: 8×0.5 mm (anterior end). - St. 239, off Kenya, 3°59'S 42°03'E, 3290 m, PG 0.2, 2 specimens: 20×3, 8×1 mm (anterior ends).

Remarks: All specimens agree with Day's and Hartman's descriptions and figures. This species is most common in the Antarctic and at subantarctic islands, but it extends its distribution to South Africa and Chile.

Distribution: West Africa, South Africa; East Africa; Chile; Antarctic (Kerguelen Islands, South Georgia, Bouvet Island); 30-3300 m.

Ninoe africana (Augener, 1918)

(Intès & Le Loeuff 1975, figs f-m)

Records: Intès & Le Loeuff 1975 p. 319; Kirkegaard

1988 p. 10. *Lumbriconereis africana* Augener, 1918 p. 367, pl. 7 figs 261-262, textfig. 42.

Material:
St. 17, off Sierra Leone, 7°17'N 13°28'W, 1260 m, ST100, 1 specimen: 35×1 mm (anterior end). - St. 65, off Gabon, 2°17'S 8°10'E, 2770 m, St300, 1 specimen: 30×1 mm. - St. 71, off Congo River, 5°23'S 11°28'E, 880 m, PG 0.2, 1 specimen: 20×1 mm. - St. 110, off Lobito, 12°05'S 13°08'E, 975 m, PG 0.2, 2 specimens: 27×1, 28×1 mm (anterior ends). - St. 135, off Cunene River, 17°13'S 11°16'E, 710 m, PG 0.2, 2 specimens: 18×1, 20×1 mm (anterior ends).

Remarks: The specimens agree with earlier descriptions and figures and also with material from more shallow water (Kirkegaard 1988). It is known only from coasts of West Africa.

Distribution: West Africa (Liberia to Namibia); 20-2770 m.

Ninoe ninetta n.sp.

(Knox 1960, figs 211-219)

Record: *Ninoe falklandica* Knox 1960 p. 132. Not Monro, 1936.

Material:
St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, HOT, 4 specimens: 20×1 (holotype (ZMUC-POL-00044)), 12×1, 12×1, 17×1 mm (anterior ends, 3 paratypes (ZMUC-POL-00045).

Description of holotype: Body long and slender with 62 segments, 20×1 mm. Posterior part missing. Prostomium conical, a little longer than broad. First segment (peristomium) with two rings and without parapodia and setae. Following five segments with parapodia with a cirriform postsetal lobe, but no branchiae. From setiger 6 to 13 a short finger-shaped branchia ventral to the cirriform postsetal lobe. From setiger 14 to 27 there are two branchial lobes present on the ventral part of the parapodia together with the long finger-shaped postsetal lobes, which become more like dorsal cirri. The branchial lobe is once again single on setigers 28 and 29. From setigers 30 no branchiae are present and the postsetal lobe becomes smaller and smaller. In the anterior end the parapodia have limbate capillary setae and hooded hooks with narrow flanges and denticulated tip. In the branchial region the parapodia have a dorsal bundle of limbate setae, a median bundle of 3-4 elongated, hooded hooks and a ventral bundle of 1-2 limbate setae. In the posterior region there are no ventral limbate setae and fewer dorsal limbate setae and hooks. In all parapodia are 3-4 dark aciculae. The maxillary formula is: 1+1, 6+7, 2+2; Mx IV have finely denticulated inner edge.

Remarks: Members of this new species have earlier been described by Knox (1960) but were referred to *Ninoe falklandica* Monro, 1936, which was later referred to *Ninoe nigripes* by Pettibone (1963). The present four specimens agree very well with the description and figures of Knox, but both these and the specimens from W of New Zealand differ from *N. nigripes* Verrill in having fewer lobes on the branchiae and in the maxillary formula, since *N. ninetta* has two teeth on MxIII instead of one as in *N. nigripes.*

Distribution: New Zealand; 10-610 m.

Ninoe nigripes Verrill, 1873

(Pettibone 1963, fig. 68 a-g)

Records: Pettibone 1963 p. 266. *Ninoe falklandica* Monro 1936 p. 156. Not *Ninoe falklandica* Knox 1960.

Material:
St. 101, off Angola, 8°50'S 12°32'E, 990 m, ST300, 2 specimens: 10×1, 10×1 mm (anterior ends). - St. 109, off Angola, 12°06'S 13°08'E, 1170 m, PG 0.2, 1 specimen: 12×0.5 mm. - St. 112, off Angola, 12°16'S 13°17'E, 715 m, PG 0.2, 2 specimens: 12×0.5 mm (anterior ends). - St. 113, off Angola, 12°15'S 13°21'E, 400 m, PG 0.2, 1 specimen: 25×2 mm (anterior end), fragments. - St. 477, S of Bali, 9°01'S 114°48'E, 780 m, PG 0.2, 1 specimen: 22×1 mm. - St. 480, S of Bali, 8°49'S 115°00'E, 440 m, PG 0.2, 1 specimen: 35×1 mm.

Remarks: If Pettibone is correct in placing *N. falklandica* Monro as a synonym of *N. nigripes,* this species has a remarkably large distribution. However, the present specimens agree both with Monro's and Pettibone's descriptions and figures.

Distribution: Atlantic (Gulf of St. Lawrence to Florida, Spain to South Africa, Falkland Islands); Indian Ocean, S of Bali; Chile; Antarctic; 10-1300 m.

Family OENONIDAE Kinberg, 1865

Arabella iricolor (Montagu, 1804)

(Fauvel 1923, fig. 175 a-h)

Records: Fauvel 1923 p. 438, 1953 p. 274; Pettibone 1963 p. 269, fig. 71 a-e; Day 1967 p. 446; Kirkegaard 1988 p. 59.

Material:
St. 196, off Durban, 29°55'S 31°20'E, 430 m, ST300, 1 specimen: 55×1 mm (anterior end).

Remarks: This is one of the cosmopolitan species; it is common along the west coast of Africa, around South Africa to Natal and Mozambique.

Distribution: Both sides of the Atlantic from the English Channel to South Africa and Massachusetts to Venezuela; Indian Ocean (Red Sea, Natal and Madagascar to India); Pacific (Japan, China and Vancouver Island to Mexico, Strait of Magellan); 5-430 m.

Arabella mutans (Chamberlin, 1919)

(Day 1967, fig. 17.18 f-h)

Records: Fauvel 1953 p. 275; Day 1967 p. 446.

Material:
St. 202, off Natal, 25°20'S 35°17'E, 575 m, ST300, 1 specimen: 45×2 mm (anterior end).

Remarks: The specimen agrees well with Day's description; the maxillary formula is the same as that indicated by him.

Distribution: Atlantic (North Carolina, West and South Africa); Indian Ocean (Natal, Mozambique, Zanzibar, Maldive Archipelago); Pacific (Galapagos Islands, California, Easter Island); 10-600 m.

Drilonereis filum (Claparède, 1868)

(Fauvel 1923, fig. 174 a-h)

Records: Fauvel 1923 p. 436, 1953 p. 276.

Material:
St. 63, off Gabon, 2°00'N 9°14'E, 1520 m, SOT, 1 specimen: 20×0.5 mm (anterior end). - St. 188, off Durban, 29°55'S 31°13'E, 440 m, ST300, 1 specimen: 20×0.5 mm (anterior end).

Remarks: This species was originally described from Europe, but has since been reported from many places all over the world.

Distribution: Europe from North Sea to Mediterranean, North Carolina to Florida and Panama, West Africa to Cameroun; Indian Ocean, Natal, Red Sea, Iranian Gulf, Bay of Bengal; Pacific, California; 1-1520 m.

Drilonereis logani Crossland, 1924

(Gallardo 1968, pl. 37 figs 9-10)

Fig. 29

Records: Crossland 1924 p. 64, figs 80-88; Gallardo 1968 p. 89.

Material:
St. 324, Strait of Malacca, 6°38'N 96°00'E, 1140 m, ST300, 1 specimen: 30×1 mm. - St. 556, S of Adelaide, Great Australian Bight, 37°18'S 138°43'E, 795 m, PGI 0.2, 1 specimen: 35×1 mm (complete). - St. 626, W of New Zealand, 42°10'S 170°10'E, 610 m, ST300, 2 specimens: 10×0.5, 27×0.5 mm (anterior ends).

Remarks: The present specimens agree well with Crossland's and Gallardo's descriptions and figures. They extend the distribution of this species from the Indian Ocean to the Pacific off Australia and New Zealand.

Distribution: Indian Ocean (Zanzibar, Maldives, South Vietnam, Strait of Malacca); Pacific (S of Australia, New Zealand); 20-1200 m.

Drilonereis magna Webster & Benedict, 1887

(Day 1967, fig. 17.19 a-f)

Records: Webster & Benedict 1887 p. 725; Pettibone 1963 p. 273. *Drilonereis falcata* Moore 1911 p. 298, pl. 120 figs 150-154; Day 1967 p. 447.

Material:
St. 188, off Durban, 29°55'S 31°13'E, 440 m,

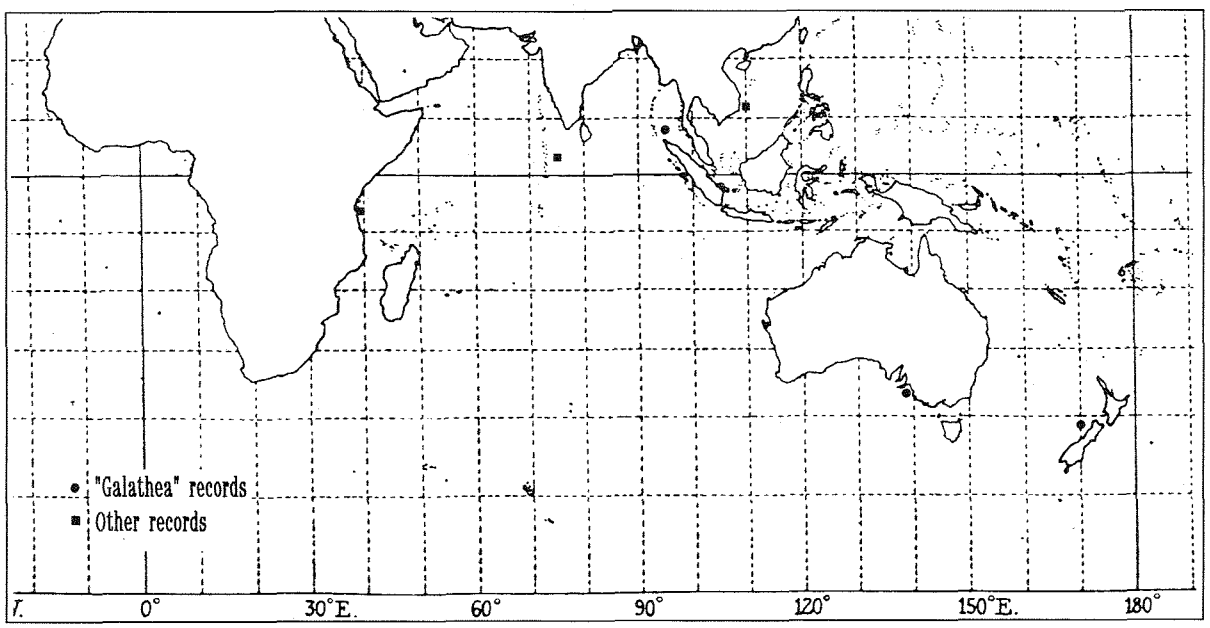

Fig. 29. *Drilonereis logani* Crossland, 1924; 20-1200 m.

ST300, 2 specimens: 10×0.5, 20×0.5 mm (anterior ends). - St. 202, off Natal, 25°20'S 35°17'E, 595 m, ST300, 1 specimen: 13×4 mm (anterior end).

Remarks: The specimens agree well with Moore's and Day's descriptions and figures of *D. falcata,* which Pettibone (1971) refers to *D. magna.*

Distribution: Off Newfoundland to South Carolina, Gulf of Mexico; South Africa (Namibia, Cape, Natal); Washington to California; 5-1200 m.

ZOOGEOGRAPHY

Geographical distribution

Many abyssal invertebrates have a worldwide distribution, and this is especially the case with polychaetes. *Laetmonice benthaliana* (McIntosh) thus appears to be a common abyssal species in both the Central, East and Southwest Pacific, the Indian Ocean, the Antarctic and southwest of South Africa (Fig. 4, p. 10). At the Galathea stations it was present in fairly large numbers. Also *Leanira quatrefagesi* Kinberg has a wide distribution from off West Africa in the Atlantic and through the Indian Ocean to Australia and New Zealand, although with fewer records at the latter localities (Fig. 12, p. 24). *Bathyeliasona kirkegaardi* (Uschakov) is known from three widely separated trenches: the Sunda, the Kermadec, and the Aleutian Trenches; it has now also been recorded from off Portugal (5275 m) (Hartmann-Schröder 1975). *Aglaophamus elamellata* (Eliason) was described in 1951 from the Central Atlantic and was also recorded in the Kermadec Trench (Kirkegaard 1956). The present material provided many new records from intervening localities off West, South, and East Africa, south of India and from the abyss southwest of New Zealand (Fig. 21, p. 36). *Hyalinoecia robusta* Southward was described from bathyal depths in the East Atlantic. The present material extends its distribution to Indonesia (Fig. 23, p. 42). *Kinbergonuphis investigatoris* (Fauvel) was known from the Arabian Sea and the Iranian Gulf, but is now also recorded from off West and South Africa, the Bay of Bengal and Indonesia (Fig. 26, p. 44).

A special kind of distribution is found in species recorded from the Antarctic (and probbaly spreading from there), the subantarctic islands, South Africa, and the southern parts of the Indian and Pacific Oceans (Australia and New Zealand). *Paradiopatra*

paucibranchis (Ehlers) has such a distribution (Fig. 27, p. 46). In the present material there are many other examples, such as: *Antinoella antarctica, Bathyeliasona nigra, Macellicephala mirabilis, Anchinothria abranchiata, Notonuphis antarctica, Lumbrineris magalhaensis* and *Augeneria tentaculata.*

The fact that sublittoral and bathyal species can also have a wide distribution is shown by *Drilonereis logani* Crossland (Fig. 29, p. 53).

It is striking that 11 of the 19 new species described above were from areas south of Australia and around New Zealand, an area which is very poorly investigated.

Vertical distribution

A total of 105 species, belonging to 17 errant families, were obtained by the Galathea Expedition. Of these, nearly half (51 species) were distributed in the abyssal zone. However, 35 of these species extend their vertical distribution to the bathyal and some even to the littoral zone, e.g., *Leanira quatrefagesi* and *Lumbrineris brevicirra. Laetmonice benthaliana* was described as a subspecies of *Laetmonice producta,* with a characteristic distribution in abyssal areas. However, although most of the specimens of this species were obtained from very deep water down to 4500 m in the Kermadec Trench, it was also recorded from 1510 m off Kenya. *Aglaophamus elamellata* was recorded down to 4600 m in the Central Atlantic and to 7000 m in the Kermadec Trench, but it was also found at a depth of 990 m off Angola in West Africa.

Some of the species from hadal depths in the trenches from where the Galathea obtained material (Kirkegaard 1956) were also recorded from lower depths in the same trench. *Aglaophamus elamellata* was f. inst. obtained from 6140-7000 m in the Kermadec Trench (three stations) and is now also recorded from 4410, 4540 and 5850 m in this trench. *Nereis profundi,* a blind nereid, was described from hadal depths in the Banda Trench (7250-7290 m); what seems to be the same species was found in the Sunda Trench at 3840 m. Another blind nereid, *N. kermadeca,* is described in the present paper from 4410 m in the Kermadec trench.

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