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The Marine Fauna of the Ross Sea:

Polychaeta

G.A. Knox and D.B. Cameron

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COVER PHOTO: The sabellid *Potamilla antarctica,* one of the most abundant species in the NIWA collection.

Photo by Chris Battershill.

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WATER AND ATMOSPHERIC RESEARCH (NIWA)

The Marine Fauna of the Ross Sea: Polychaeta

by

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ABSTRACT

This paper reports on the polychaetous annelids of the Ross Sea sector of Antarctica. It is based on material from three sources : (1) collections made by Dr B.W. Balham, biologist with the Ross Sea party of the Trans-Antarctic (New Zealand) Expedition during 1956–58, (2) the extensive collections undertaken by the New Zealand Oceanographic Institute, DSIR during the course of two cruises in HMNZS *Endeavour* during the summers of 1958–59 and 1959–60, and (3) collections made as part of the Stanford University (California) Benthic Invertebrate Studies in Antarctica from 1958 to 1960. Data on previously reported polychaete records from the Ross Sea are summarised and descriptions are given for species not present in the collections listed above.

Of the 184 species now recorded from the Ross Sea (excluding Myzostomidae), descriptions are given of the 72 species represented in the collections studied. Of the latter, 38 had not previously been reported from the Ross Sea. Supplementary descriptions are given of 79 additional species based on the literature. Families with a large number of species are the Polynoidae (21), Syllidae (18), and Terebellidae (17). Three new species, *Aphrodita rossi* n.sp., *Typosyllis pennelli* n.sp., and *Clymenella antarctica* n.sp. are described. The following 14 species are known only from the Ross Sea region : *Aphrodita rossi* n.sp., *Austrolaemilla* sp., *Anaitides adarensis*, *Syllidia inermis*, *Autolytus longstaffi*, *Eurysyllis ehlersi*, *Typosyllis pennelli* n.sp., *Spio obtusa*, *Clymenella antarctica* n.sp., *Mellinoides nelsoni*, *Octobranchus phyllocomus*, *Polycirrus antarcticus*, *Myxicola sulcata*, and *Chitinopomoides wilsoni*.

The distribution and ecology of the Ross Sea polychaetes are discussed in the context of the three major faunal assemblages distinguished by Bullivant and Dearborn (1967), namely, the Deep Shelf Mixed Assemblage, the Deep Shelf Mud Bottom Assemblage, and the Pennell Bank Assemblage, plus two coastal assemblages, the Victoria Land Coastal Assemblage and the McMurdo Sound Shelf Assemblage. The most diverse assemblages are the latter two with 70 and 80 species of polychaetes respectively.

Keywords: Polychaeta, systematics, new species, marine fauna, New Zealand, Antarctica, Ross Sea

INTRODUCTION

This memoir is the ninth in a series of oceanographic memoirs on the fauna of the Ross Sea, based largely on the collections now housed at NIWA (incorporating the former N.Z. Oceanographic Institute).

The Ross Sea in the Pacific Sector of Antarctica between about 150° W and 170° E forms a large triangular embayment in the Antarctic continent (Fig. 1). It is bounded on the west by Victoria Land and on the east by Cape Colbeck (Marie Byrd Land). Its southern part is covered by the permanent ice of the Ross Ice Shelf, while its seaward edge, lying roughly at 78° S, merges into the circumpolar Southern Ocean.

Bottom Topography

The main topographical features of the Ross Sea floor as described by Kennett (1968) are summarised here (Fig. 1A). In contrast to most parts of Antarctica where the shelf is narrow or absent, the Ross Sea has a wide and deep continental shelf. As is typical round the continent the shelf break occurs at about 800 m (Brodie 1965). The shelf area is relatively deep, ranging from 100 m to 1000 m, and averaging 550 m. Two troughs deeper than 900 m occur immediately north of Ross Island.

The most conspicuous feature of the Ross Sea floor topography is the relatively shallow ridge which runs northwest from Cape Colbeck to the Pennell Bank, where it broadens to reach a minimum depth of 100 m. Taylor (1930) suggested that this bank represents a vast terminal moraine formed by a grounded ice shelf forms

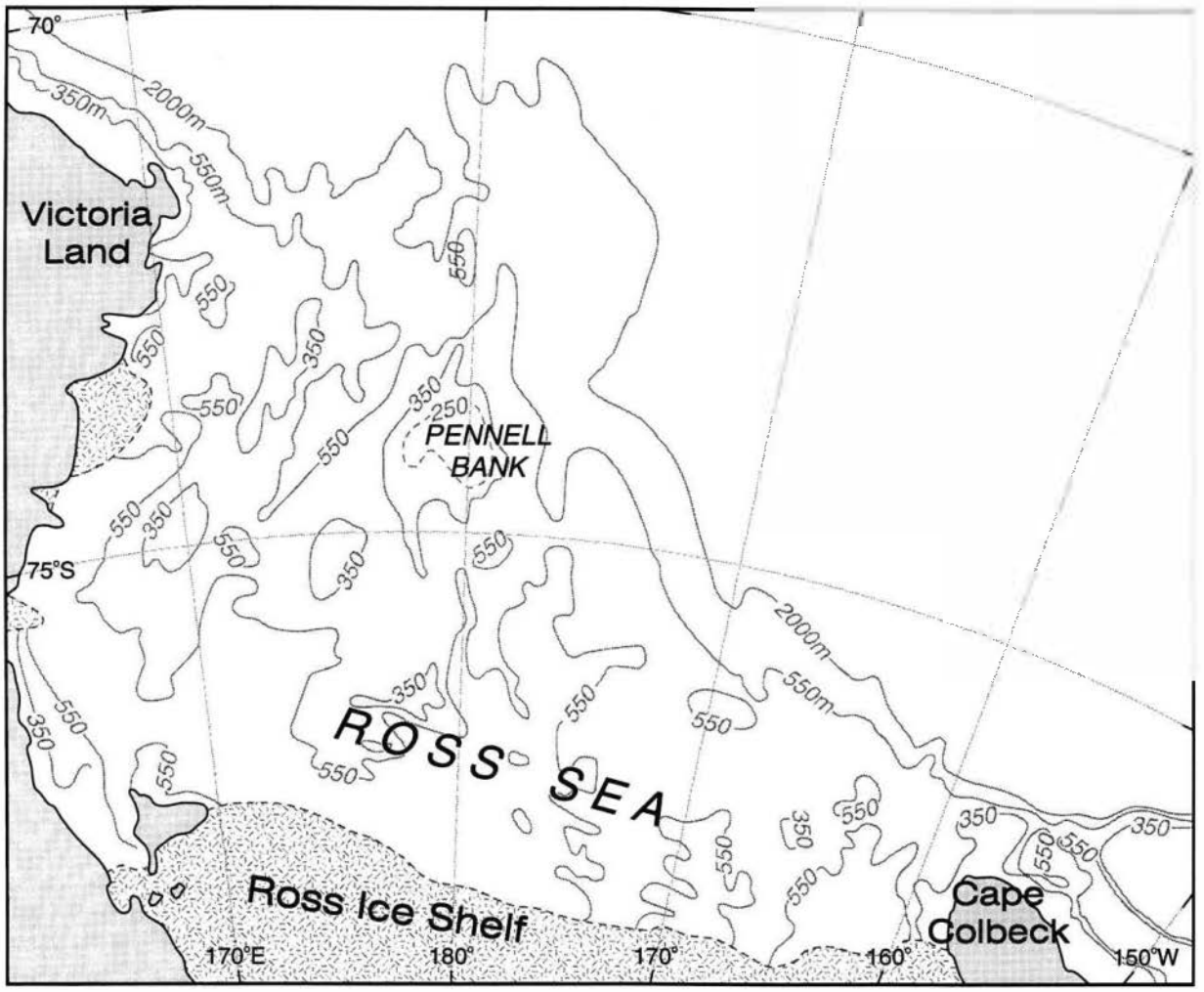


Fig. 1A. Bottom topography of the Ross Sea showing the 350, 550 and 2000 m contour intervals.

during a former glacial period. From this shallow rise the surface slopes gradually inland so that the rise forms a rim to a basin-like depression to the south and southwest. Strongly localised but large-scale glacial action in the past has given rise to the very irregular topography of the Ross Sea shelf.

Sediments

The surface of the shelf is typically covered with a terrigenous glacial sediment of silt, sand, gravel, and scattered erratic boulders. Kennett (1968) has summarised the sediment distribution as follows.

1. Sediments are generally poorly sorted through the whole region with sorting coefficients of around 2.0, but ranging from 1.5 to 6.3.
2. Despite the poor sorting a generalised sediment distribution pattern can be observed (Fig. 1B). Gravelly to sandy sediments are found, especially on the shallow Pennell Bank and immediately adjacent to the coasts. Muddy sediments with only a relatively small proportion of sand cover most of the shelf and slope, grading into coarser sediments in the central area around the Pennell Bank.
3. Varying amounts of organic materials are associated with the terrigenous sediments, sponge spicules, Foraminifera, and diatoms being the commonest constituents.
4. Near Ross Island, McMurdo Sound sediments contain varying amounts of detritus of volcanic origin.
5. The colour of the fine-grained sediments (muds and silts) generally ranges from greenish-black to black; sandier sediments are generally pale grey.

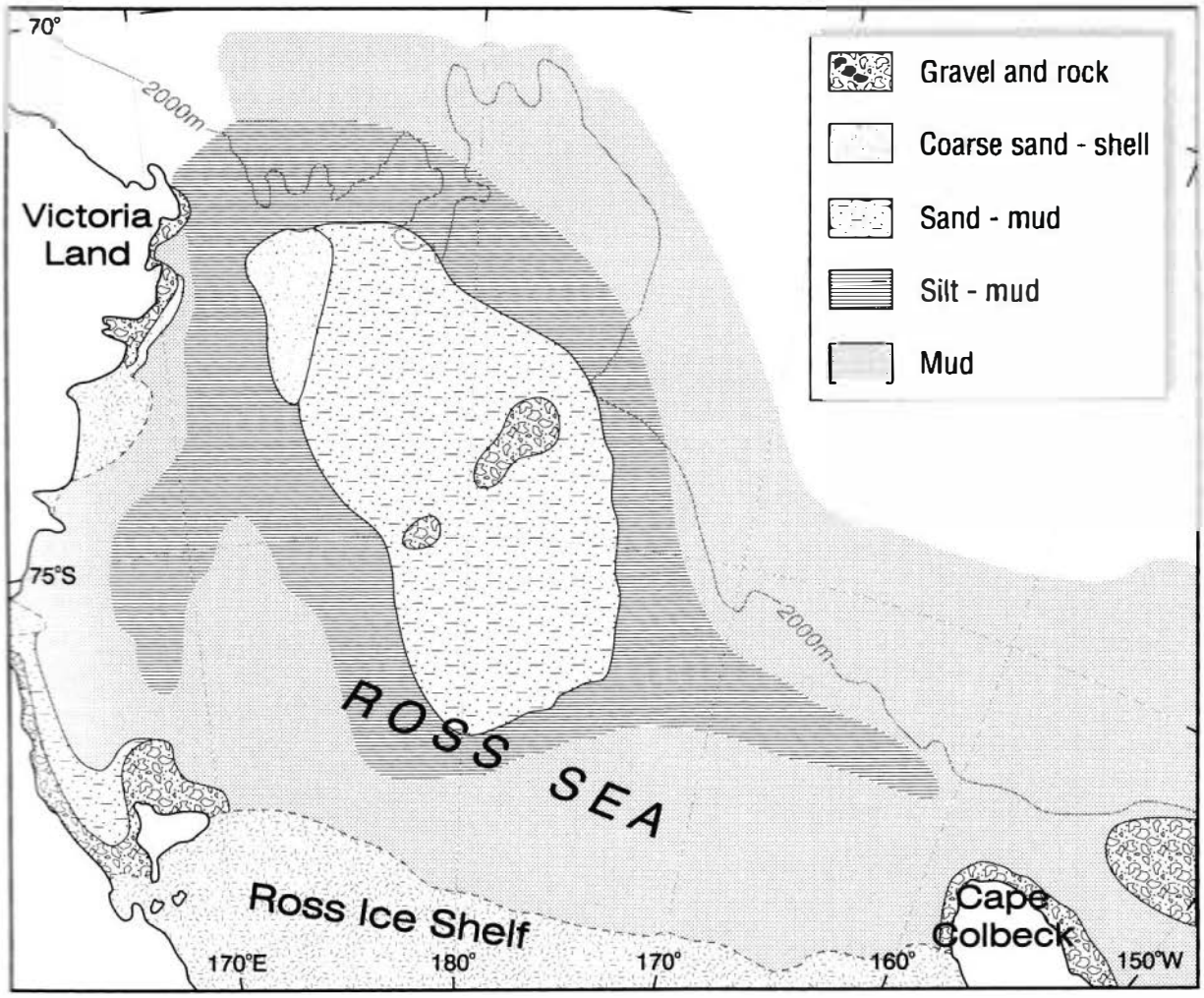


Fig. 1B. Distribution of bottom sediments in the Ross Sea. Materials with a diameter greater than 2.0 mm have been regarded as glacial erratics and have been excluded from the sediment analyses, except from those areas dominated by gravel or rock. Redrawn from Kennett (1968).

6. Calcium carbonate values are related to the type of microfauna present: arenaceous Foraminifera, diatoms, and sponge spicules (0–13%, averaging 8.5%), and calcareous Foraminifera (3.0–8.7%, averaging 2.3%).

Hydrology

Hydrological conditions in the Ross Sea have been described by Newson *et al.* (1965), Countryman and Gsell (1966), Jacobs *et al.* (1970, 1979), Pillsbury and Jacobs (1985), and Patterson and Whitworth (1990).

The Ross Sea is subject to considerable climatic change —ice cover and continuous darkness in the winter and continuous daylight and ice-free conditions in the summer.

The circulation on the Ross Sea shelf has been inferred from density distributions supplemented by some bottom photographic evidence and a few direct current measurements (e.g., Pillsbury & Jacobs 1985). The general surface current flows westward along the edge of the ice shelf and then north along the coast of Victoria Land to Cape Adare where it joins the general circum-Antarctic surface flow from west to east.

PREVIOUS WORK

The first collection of polychaetes was obtained during the voyage of the *Erebus* and *Terror* under James Clark Ross which penetrated the pack ice as far south as Cape Adare and Narcon Island in Victoria Land. Baird (1885b, 1870) recorded five species:

Terebella flabellum (Lanice flabellum)
?Lanice sp.
Eunice narconi (?Eunice pennata)
Thelepus sp.
Serpula narconensis

The first comprehensive collection was obtained by the "Southern Cross" Antarctic Expedition under the leadership of C.E. Borchgrevink during the years 1898–1900. The expedition was the first to spend a winter on the mainland, and collections were made at Cape Adare and Franklin Island at depths of 10 and 30 fathoms. Fifteen species from these collections were named by Willey (1902):

Malmgrenia crassicirrus (= Gorekia crassicirrus)
Lagisca crosetensis (= Harmothoe crosetensis)
Harmothoe spinosa fullo (= Harmothoe spinosa)
Harmothoe spinosa typica
Harmothoe spinosa
Eusyllis kerguelensis
Typosyllis hyalina
Scoloplos kerguelensis (= Haploscoloplos kerguelensis)
Hermadion magalhaensis
Aricia marginata (= Scoloplos (Leodamus) marginatus)
Nicolea agassizi (= Nicolea chilensis)
Ereutho antarctica (= Polycirrus antarcticus)
Thelepus antarcticus (= Thelepus cincinnatus)
Travisia kerguelensis

More extensive collections were made by the National Antarctic Expedition of 1901–1904 in the *Discovery* under the leadership of Robert F. Scott. This expedition wintered at Hut Point, McMurdo Sound, where numerous polychaetes were taken. Stummer-Fraunfels (1908) named a parasitic myzostome, *Myzostomum antarcticum*, from these collections. Ehlers (1912) recorded the following species:

Harmothoe crosetensis
Enipo rhombigera (= Polyeunoa laevis)
Eulalia magalaensis (= Steggoa magalhaensis)
Maupasia caeca
Pelagobia longicirrata
Sagitella cornuta (= Traviopsis levinseni)
Podarke comata (= Ophiodromus comatus)
Magalia inermis (= Syllidia inermis)
Autolytus longstaffi
Eusyllis kerguelensis
Pionosyllis comosa
Pionosyllis stylifera
Syllides articulosus
Syllides sp.
Syllis brachycola (= Typosyllis brachycola)
Trypanosyllis gigantea
Glycera capitata
Aricia marginata (= Scoloplos (Leodamus) marginatus)
Flabelligera mundata
Trophonia kerguelarum (= Pherusa kerguelarum)
Oncoscolex dicranochaetus
Sabellides elongatus (= Neosabellides elongatus)
Nicolea bilobata (= Lanicides bilobata)
Travisia kerguelensis
Myxicola sulcata
Laonome antarctica (= Potamilla antarctica)
Serpula vermicularis narconensis (= Serpula narconensis)
Spirorbis (Romanchella) perrieri (= Leodora perrieri)

At about the same time (1901–1903) the Deutsche Südpolar Expedition under Erich von Drygalski obtained one of the richest hauls of polychaetes taken in Antarctic seas. However, only two species were recorded from the Ross Sea by Ehlers (1913):

Spio obtusa
Samytha specularis

The British Antarctic Expedition of 1910–1913 in the *Terra Nova*, under Robert F. Scott collected extensively in the Ross Sea–McMurdo Sound region. Benham (1927) described 46 species:

Harmothoe abyssorum (= Eunoe abyssorum)
Hermadion rouchi (= Hermadion ferox)
Harmothoe spinosa
Exipo rhombigera (= Polyeunoa laevis)
Phyllodoce adarensis (= Anaitides adarensis)
Phyllodoce bowersi (= Anaitides bowersi)
Phyllodoce madeirensis (= Anaitides madeirensis)
Eulalia charcoti (= Austrophyllum charcoti)
Pterocirrus hunteri (= Steggoa hunteri)
Maupasia caeca
Pelagobia viguieri
Sagitella kowalewskii (= Traviopsis levinseni)
Sagitella mulleri (= Typhloscolex mulleri)
Autolytus charcoti
Autolytus maclearanus
Eurysyllis ehlersi
Exogone heterosetosa
Pionosyllis comosa
Trypanosyllis gigantea
Syllis brachychaeta (= Typosyllis armillaris)
Syllis brachycola (= Typosyllis brachycola)
Nicon loxenchini (= Platynereis australis)
Nephthys macroura (= Aglaophamus trissophyllus)
Glycera capitita
Nerionopsis hystricosa
Flabelligera mundata
Isocirrus yungi
Anobothrus patagonica (= Anobothrus patagonicus)
Malmoides nelsoni
Neosabellides elongatus
Amphitrite cirrata
Amphitrite keguelensis
Lanicides vayssierei (= Lanicides biolata)
Leaena wandelensis
Pista symbranchiata (= Pista corrientis)
Pista mirabilis
Pista godfroyi
Terebella ehlersi
Thelepus cincinnatus
Jasmineira scotti (= Jasmineira caeca)
Oria limbata (= Oriopsis limbata)
Potamilla antarctica
Euchone pallida
Serpula vermicularis narconensis (= Serpula narconensis)
Chitinopomoides wilsoni
Spirorbis sp.

Later, Benham (1929) recorded five pelagic species:

Callizona bongraini (= Rhynchonereella bongraini)
Sagitella kowalewskii (= Typhloscolex mulleri)
Tomopteris carpenterii
Tomopteris cavallii
Tomopteris septentrionalis

Stöp-Bowitz in 1949 recorded two pelagic species collected by the Norwegian Antarctic Expeditions of 1927–28, 1928–29, and 1930–31:

Tomopteris planktonis
Tomopteris septentrionalis

In 1952 Hartman recorded 13 species taken by the U.S. Navy Antarctic Expedition of 1947–48:

Harmothoe spinosa
Lumbrineris magalhaensis (= Lumbrineris kerguelensis)
Scoloplos (Leodamus) marginatus
Amphicteis gunneri antarctica
Leaena wandelensis
Pista corrientis
Thelepus cincinnatus
Octobranchus phyllocomus
Trichobranchus glacialis antarcticus
Euchone pallida
Potamilla antarctica
Serpula vermicularis narconensis (= Serpula narconensis)
Spirorbis sp.

Lowry (1976) sampled the infaunal benthos at two locations in the Ross Sea. These locations and the polychaete species recorded from them are listed below.

Stn CH1–4, Moubray Bay, Cape Hallett, Victoria Land Coast; 72°18' S, 170°12' E; 104–250 m depth.

Barrukia cristata
Anaitides adarensis
Eteone aurantiaca
Eulalia sp.
Syllidia inermis
Exogone miniscula
Typosyllis brachychaeta (= Typosyllis armillaris)
Pionosyllis comosa
Syllis amica
Aglaophamus ornatus (= Aglaophamus trissophyllus)
Glycera capitata
Lumbrineris magalhaensis (= Lumbrineris kerguelensis)
Lumbrineris antarctica (= Paraninoe antarctica)
Scoloplos marginatus (= Scoloplos (Leodamus) marginatus)
Haploscoloplos kerguelensis
Tharyx sp.
Spiophanes tcherniai
Paraonis gracilis
Chaetozone spinosa (= Chaetozone sp.)
Flabelligera gourdoni
Scalibregma inflatum
Travisia kerguelensis
Axiothella quadrimaculata
Maldane sarsi
Praxillella sp.
Rhodine loveni
Ampharete kerguelensis
Neosabellides elongatus
Ammotrypane syringopyge
Apistobranchus sp.
Lanice cirrata

Lanicides bilobata
Pista godfroyi
Terebellides stroemii
Streblosoma bairdi antarctica
Euchone pallida
Branchiomma sp.
Fabricia sp.
Jasmineira caeca
Myxicola sp.
Potamilla antarctica

Stn CB1-4, Cape Bird, Ross Island, McMurdo Sound; 77°13' S, 166°26' E; 35-54 m depth; 25 December to 11 January 1971.

Barrukia cristata
Syllidia intermis
Aglaophamus ornatus (= Aglaophamus trissophyllus)
Lumbrineris magalhaenis (= Lumbrineris kerguelensis)
Haploscoloplos kerguelensis
Micronephthys sp.
Spio obtusa
Spiophanes tcherniai
Spiophanes sp.
Tharyx sp.
Axiothella sp.
Praxilella kerguelensis
Pista cf. *abyssicola*
Potamilla antarctica

Oliver and Slattery (1986) in their benthic ecological studies in McMurdo Sound recorded the following species in 20 m off the McMurdo Station jetty, Ross Island:

Haploscoloplos kerguelensis
Myriochele cf. *heeri*
Spiophanes tcherniai
Tharyx sp.
Axiothella sp.
Maldane sp.

Blake (1983) in an account of the family Spionidae from Antarctica and the surrounding seas recorded the following species from the Ross Sea:

Scolelepis eltaninae
Laonice antarctica
Laonice weddellia
Spiophanes kroeyeri
Spiophanes tcherniai

Orensanz (1990) in a review of the Eunicimorph polychaete annelids from Antarctic and Subantarctic seas recorded the following species from the Ross Sea in depths from 311 m to 2350 m:

Eunice pennata
Nothria anoculata
Augeneria tentaculata
Lumbrineris kerguelensis
Paraninoe antarctica
Ophyrotrocha notialis

30 polychaete species were recorded by Cantone and Sanfilippo (1992) from Terra Nova Bay:

Leitoscoloplos kerguelensis minutus
Aedicira belgicae
Laonice cirrata
Spio filicornis
Spiophanes bombax
Phyllochaetopterus socialis
Chaetozone andersenensis
Tharyx epitoka
Tharyx fusiformis
Hyboscoles longiseta
Pseudoscalibregma sp.
Kesum abyssorum
Ophelia breviata
Trachytrypane jeffreysi
Notomastus latericeus
Euchymene grossa
Euchymene watsoni
Nichomache lumbricalis
Notoproctus occulatus antarcticus
Praxilella praetermissa
Owenia fusiformis
Myriochele heeri
Anabothrella antarctica
Axonice spinifera
Hauchiella tribullata
Nicolea venustula
Euchone analis
Proclea sp.
Paralaeospira antarctica
Paralaeospira sp.

Kudenov (1993) described the Amphinomidae and Euphrosinidae from Antarctic and Subantarctic collections taken primarily by the U.S. Antarctic Research Program cruises. Four species were recorded from the Ross Sea:

Paramphinome australis
Euphrosine monroi
Euphrosinella cirratoformis
Euphrosinopsis antipoda

SCOPE

This report is based on material from three sources. Firstly, collections made by Dr B.W. Balham, biologist with the Ross Sea party of the Trans-Antarctic (New Zealand) Expedition during 1956–58.

Secondly, the extensive collections undertaken by the New Zealand Oceanographic Institute (NZOI), DSIR, in the course of two cruises aboard HMNZS *Endeavour* during the summers of 1958–59 and 1959–60 (Bullivant & Dearborn 1967). The general planning of the expeditions was undertaken by the Director, Mr J.W. Brodie, and their comprehensive nature allowed for physical oceanographic and associated studies in addition to biological sampling.

The first cruise party comprised J.S. Bullivant, zoologist and leader; D.G. McKnight, assistant zoologist; A.G. Macfarlane, assistant hydrologist (all NZOI); Dr R.K. Dell, zoologist (Dominion Museum, Wellington); J. Reseck, Jr, zoologist (Long Beach State College, California); N.A. Powell, student assistant (Antarctic Division, DSIR).

The oceanographic party of the second cruise was J.S. Bullivant, zoologist and leader (NZOI), G.A. Harlen, assistant zoologist; E.C. French, technical assistant (both from Antarctic Division, DSIR).

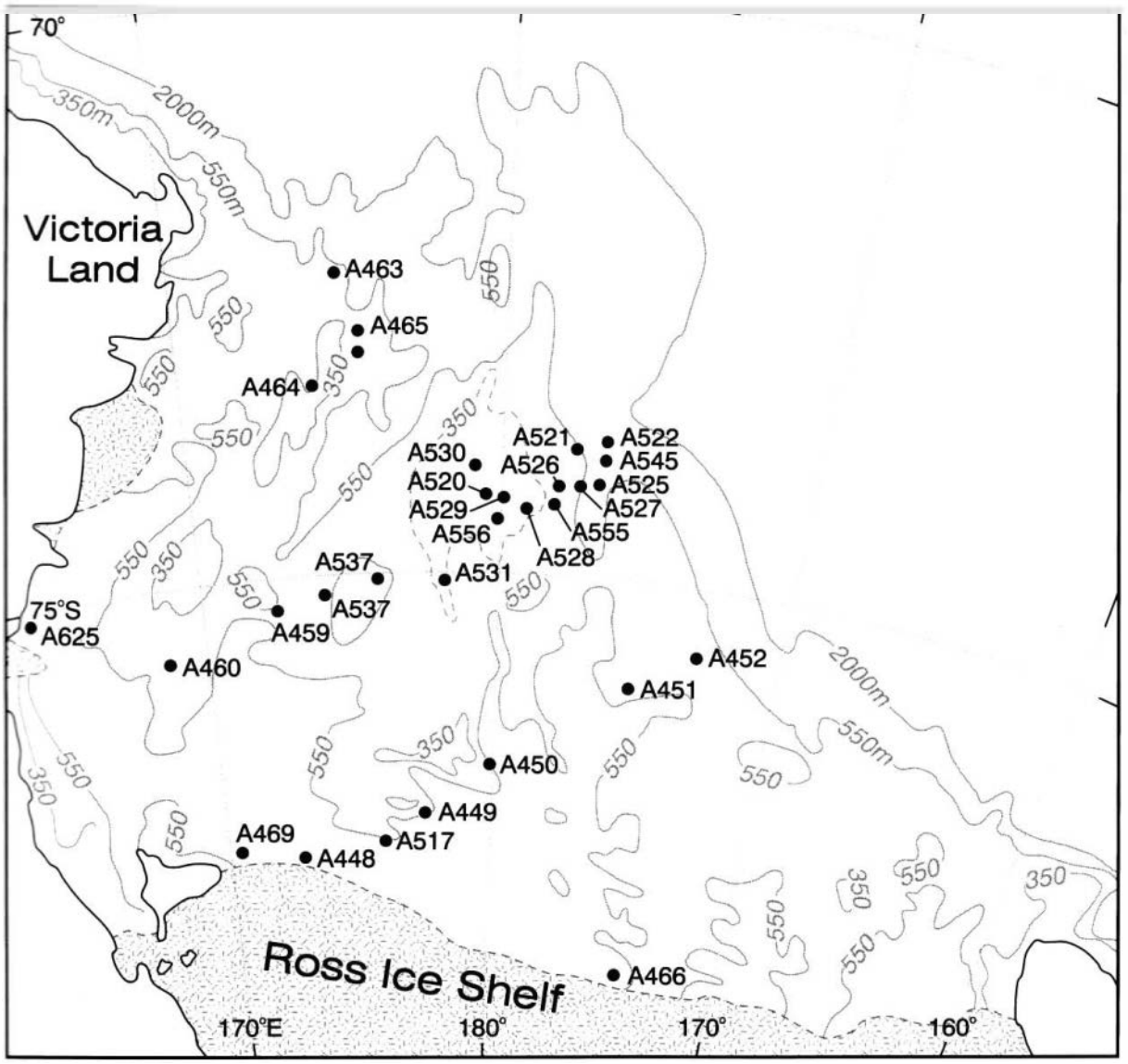


Fig. 2A. New Zealand Oceanographic Institute (NZOI) stations occupied in the Ross Sea between 1958 and 1961 from which Polychaeta were obtained.

The third source of material was from collections made as part of the Stanford University (California) benthic Invertebrate Studies in Antarctica from 1958 to 1960 (Fig. 2C). A large number of investigators and assistants participated in this programme which was under the leadership of John H. Dearborn (1967).

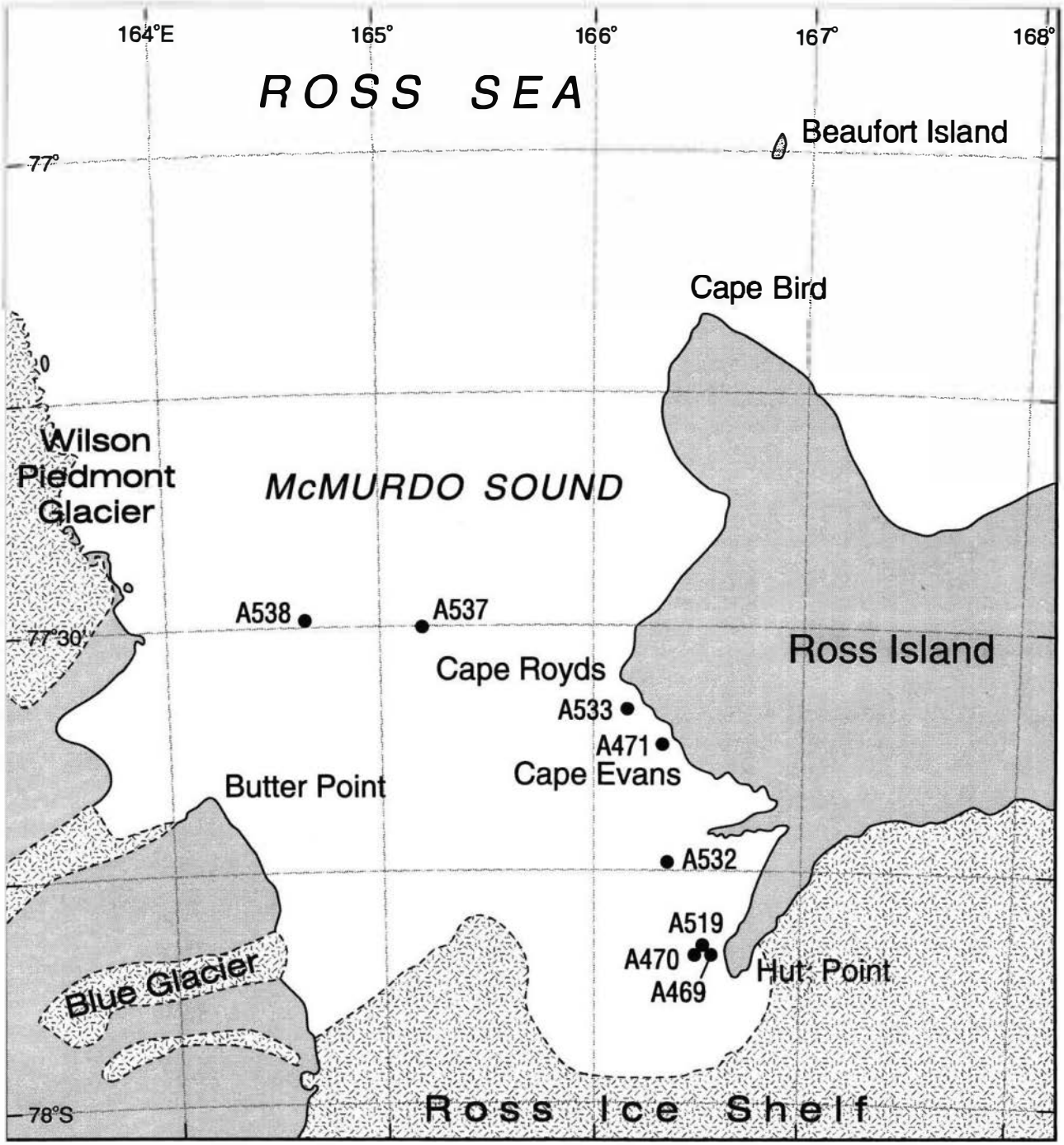


Fig. 2B. New Zealand Oceanographic Institute (NZOI) stations occupied in McMurdo Sound between 1958 and 1961 from which Polychaeta were obtained.

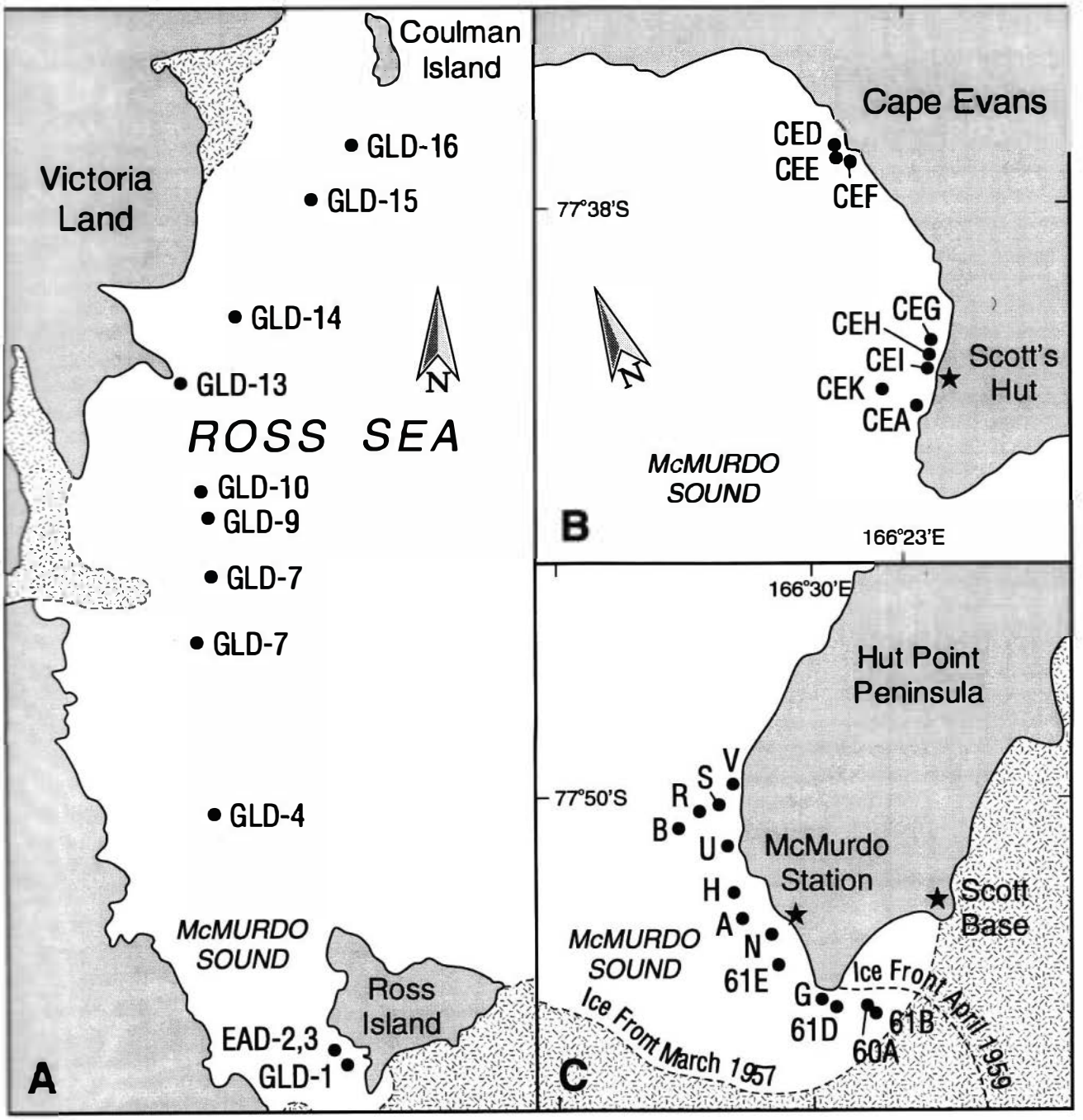


Fig. 2C. Stanford University stations occupied in the Ross Sea and McMurdo Sound in the period 1958–1960 from which Polychaeta were obtained. **A.** Victoria Land coastal stations made aboard USS *Glacier* in 1958 (GLD Stns) and USCGS *Eastwind* (EAD Stns) in 1960; **B.** Stations occupied at Cape Evans, Ross Island; **C.** Stations occupied at Hut Point, Ross Island.

CHECKLIST OF ROSS SEA POLYCHAETES

(* not described in this memoir)

Family APHRODITIDAE

Aphrodita rossi n.sp.
Laetmonice producta Grube

Family POLYNOIDAE

Austrolaenilla antarctica Bergstrom
Austrolaenilla hastulifera (Fauvel)
Austrolaenilla sp.
Barrukia cristata (Willey)
Barrukia curviseta (Monro)
Eucantra mollis (McIntosh)
Eulagisca corrientis McIntosh
Eulagisca gigantea Monro
Eunoe abyssorum McIntosh
Eunoe opalina McIntosh
Gorekia crassicirris (Willey)
Harmothoe crosetensis (McIntosh)
Harmothoe ernesti Augener
Harmothoe exanthema bergstromi Monro
Harmothoe hartmanae Uschakov
Harmothoe magellanica (McIntosh)
Harmothoe spinosa Kinberg
Hermadion ferox Baird
Hermadion magalhaensis Kinberg
Polyeunoa laevis McIntosh
Polynoe antarctica Kinberg

Family AMPHINOMIDAE

Paramphinome australis Monro

Family EUPHROSINIDAE

Euphrosine armadilloides Ehlers
**Euphrosine monroi* Kudenov
**Euphrosynella cirratoformis* (Averincev)
**Euphrosinopsis antipoda* Kudenov

Family PHYLLODOCIDAE

Anaitides adarensis (Benham)
Anaitides bowersi (Benham)
Anaitides longipes (Kinberg)
Anaitides madeirensis (Langerhans)
Austrophyllum charcoti (Gravier)
Eteone aurantiaca Schmarda
Eulalia sp.
Steggoa hunteri (Benham)
Steggoa magalhaensis (Kinberg)

Family ALCIOPIDAE

Rhynchonereella bongraini (Gravier)

Family LOPADORRHYNCHIDAE

Maupasia coeca Viguier
Pelagobia longicirrata Greeff
Pelagobia viguieri Gravier

Family TYPHLOSCOLECIDAE

Travisiopsis levenseni Southern
Typhloscolex mulleri Busch

Family TOMOPTERIDAE

Tomopteris carpenterii Quatrefages
Tomopteris cavalli Rosa
Tomopteris planktonis Apstein
Tomopteris septentrionalis Steenstrup

Family HESIONIDAE

Ophiodromus comatus (Ehlers)
Syllidia inermis (Ehlers)

Family SYLLIDAE

Autolytus charcoti Gravier
Autolytus longstaffi Ehlers
Autolytus maclearanus McIntosh
Eurysyllis ehlersi Benham
Eusyllis kerguelensis McIntosh
Exogone heterosetosa McIntosh
Exogone minuscula Hartman
Pionosyllis cosma Gravier
Pionosyllis maxima Monro
Pionosyllis stylifera Ehlers
Syllides articulosus Ehlers
Syllis amica Quatrefages
Trypanosyllis gigantea (McIntosh)
Typosyllis amillaris (Müller)
Typosyllis brachycola (Ehlers)
Typosyllis hyalina (Grube)
Typosyllis pennelli n.sp.
Typosyllis prolixa (Ehlers)

Family NEREIDIDAE

Neanthes kerguelensis (McIntosh)
Nicon ehlersi Harman
Platynereis australis (Schmarda)

Family NEPHTYIDAE

Aglaophamus trissophyllus (Grube)
Micronephthys sp.

Family GLYCERIDAE

Glycera capitata Orsted

Family EUNICIDAE

Eunice pennata (Müller)

Family ONUPHIDAE

Nothria anoculata Orensanz

Family LUMBRINERIDAE

Augeneria tentaculata Monro
Lumbrineris kerguelensis (Grube)
'Lumbrineris tetraura' (Schmarda)
Paraninoe antarctica (Monro)

Family IPHITIMIDAE

Ophryotrocha notialis (Ehlers)

Family ORBINIIDAE

Haploscoloplos kerguelensis (McIntosh)
**Haploscoloplos kerguelensis minutus* Hartman
Scoloplos (Leodamus) marginatus (Ehlers)

Family PARAONIDAE

**Aedicira belgicae* (Fauvel)
Paraonis gracilis (Tauber)

Family SPIONIDAE
Laonice antarcticae Hartman
Laonice cirrata (Sars)
Laonice weddellia Hartman
Nerinopsis hystricosa Ehlers
Scoletepis eltaninae Blake
Spio filicornis (Müller)
Spio obtusa Ehlers
Spiophanes bombax (Claparède)
Spiophanes kroyeri Grube
Spiophanes tcherniai Fauvel
Spiophanes sp.

Family CHAETOPTERIDAE
Phyllochaetopterus socialis (Claparède)

Family CIRRATULIDAE
Chaetozone andersenensis (Augener)
Chaetozone sp.
Cirratulus cirratus (Müller)
Tharyx cincinnatus (Ehlers)
Tharyx epitoka Monro
Tharyx fusiformis Monro
Tharyx sp.

Family APISTOBRANCHIDAE
Apistobranchus sp.

Family FLABELLIGERIDAE
Flabelligera gourdoni Gravier
Flabelligera mundata Gravier
Pherusa kerguelarum (Grube)

Family SCALIBREGMATIDAE
Hyboscolex longiseta Schmarda
Oligobregma collare (Levenstein)
Oligobregma notiale Blake
Pseudoscalibregma sp.
Scalibregma inflatum Rathke
Sclerocheilus antarcticus Ashworth

Family OPHELIIDAE
Kesum abyssorum Monro
Ophelia breviata (Ehlers)
Ophelina gymnopyge Ehlers
Trachytrypane jeffreysi McIntosh
Travisia kerguelensis McIntosh

Family CAPITELLIDAE
Notomastus latericeus (Sars)

Family MALDANIDAE
Axiothella quadrimaculata Augener
Axiothella sp.
Clymenella antarctica n.sp.
Euclymene watsoni Gravier
Euclymene grossa (Baird)
Isocirrus yungi Gravier
Maldane sarsi antarctica Arwidsson
Maldane sp.
Nichomache lumbricalis (Fabricius)
Notoproctus oculatus antarcticus (Ardwisson)
Praxillella kerguelensis (McIntosh)
Praxillella praetermissa (Malmgren)
Praxillella sp.
Rhodine loveni Malmgren

Family OWENIIDAE
Myriochele heeri McIntosh
Owenia fusiformis della Chiaje

Family AMPHARETIDAE
Ampharete kerguelensis McIntosh
Amphicteis gunneri antarctica Hessle
Amythas membranifera Benham
**Anobothrella antarctica* (Monro)
Anobothrus patagonicus (Kinberg)
Grubianella antarctica McIntosh
Mellinoides nelsoni Benham
Neosabellides elongatus (Ehlers)
Phyllocomus crocea Grube
Samytha ? spectulatrix Ehlers

Family TEREBELLIDAE
Amphitrite cirrata Müller
Amphitrite kerguelensis McIntosh
**Axonice spinifera* (Ehlers)
**Hauchiella tribullata* (McIntosh)
Lanicides bilobata (Grube)
Leaena collaris Hessle
Leaena wandelensis Gravier
Lysilla loveni macintoshi Gravier
Nicolea chilensis (Schmarda)
**Nicolea venustula* (Montagu)
Pista cf. *abyssicola* McIntosh
Pista corrientis McIntosh
Pista godfroyi (Gravier)
Pista mirabilis McIntosh
Polycirrus antarcticus (Willey)
Proclea sp.
Streblosoma bairdi antarctica Monro
Terebella ehlersi Gravier
Thelepides koehleri Gravier
Thelepus cincinnatus (Fabricius)

Family TRICHOBRANCHIDAE
Octobranchus phyllocomus Hartman
Terebellides stroemi kerguelensis McIntosh
Trichobranchus glacialis antarcticus Hessle

Family SABELLIDAE
Euchone analis (Kroyer)
Euchone pallida Ehlers
Fabricia sp.
Jasmineira caeca Ehlers
Myxicola sulcata Ehlers
Myxicola sp.
Oriopsis limbata (Ehlers)
Potamethus scotiae (Pixell)
Potamilla antarctica Kinberg

Family SERPULIDAE
Chitinopomoides wilsoni Benham
Serpula narconensis Baird

Family SPIRORBIDAE
Leodora perrieri (Caullery & Mesnil)
Paralaeospira antarctica Pixell
Paralaeospira sp.
Spirorbis spp.

SYSTEMATICS

Family APHRODITIDAE Savigny, 1818

KEY TO GENERA:

Harpoon-like dorsal spines present, neurosetae with one spur and a fringe of hairs ..... *Laetmonice*

No harpoon-like dorsal spines, notosetae include both stout spines and fine setae forming a thick felt ..... *Aphrodita*

Aphrodita Linnaeus, 1778

Aphrodita rossi n.sp. (Figs 3–8)

MATERIAL: NZOI Stn A521 (1).

DESCRIPTION:

Size: Length of body 20 mm; width, including parapodia, about 10 mm; segments number 33. Shape stout, without caudal prolongation.

Colour in alcohol: Dull, muddy, pale green on dorsum, pale yellow ventrally.

Prostomium: Smooth; 2 pairs of eyes set close together on pair of ocular prominences; median antenna missing, probably short and stout. Palps long and tapering, twice length of first pair of parapodia.

Dorsum: Covered with felt; projecting notosetae not meeting dorsally.

Ventrum: Heavily papillated.

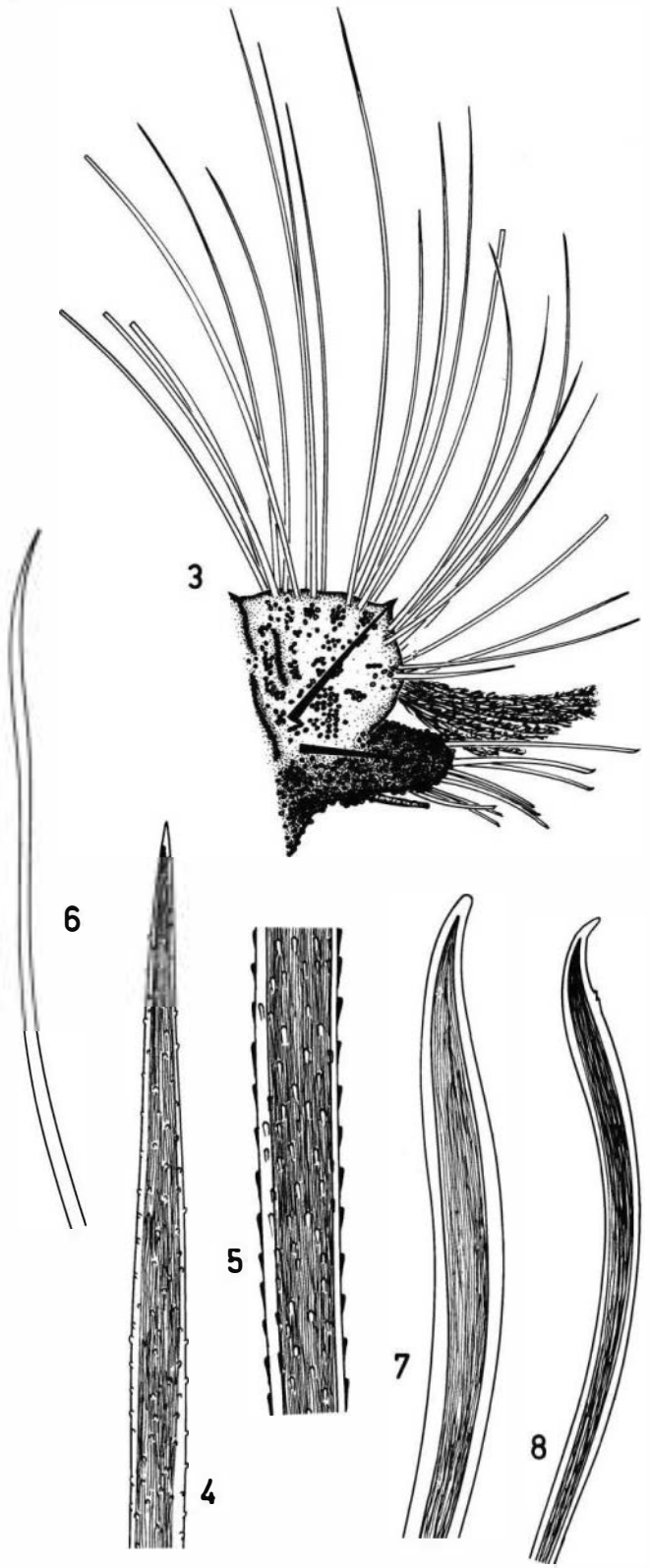
Parapodia: (Fig. 3) Densely papillated, especially neuropodia; ventral cirri not extending beyond parapodia.

Notosetae: (Figs 4, 5) Dark brown, stout and tapering to a fine tip; those of first parapodium long, slender, without ornamentation (Fig. 6).

Neurosetae: Superior neurosetae thick, dark brown with slightly curved entire tips (Fig. 7); inferior neurosetae shorter, recurved with weakly developed secondary teeth (Fig. 8).

TYPE LOCALITY: 77° S, 177° W, Pennell Bank, 558–582 m (Stn A521).

HOLOTYPE: In the NZOI (NIWA) collection No. H-677.



Figs 3–8. ***Aphrodita rossi*** n.sp. **3.** Anterior parapodium. **4.** Anterior end of notoseta. **5.** Notosetal shaft, illustrating details of ornamentation. **6.** Notoseta from first parapodium. **7.** Superior neuroseta. **8.** Inferior neuroseta.

REMARKS: Three species of *Aphrodita* have been described from Antarctic waters. The present species differs from *A. magellanica* and *A. longicornis* in possessing eyes, and from *A. alta* in that the notosetae project upwards and backwards through the dorsal felt, and in the absence of bearded neurosetae.

DISTRIBUTION: Ross Sea, 558–582 m.

Laetmonice Kinberg, 1855

Laetmonice producta Grube, 1877 (Figs 9–13)

Laetmonice producta: McIntosh 1885: 39–44, pl. 4A, figs 1–8; Gravier 1911: 4; Benham 1921: 31; Monro 1930: 39–40; Hartman 1964: 12, pl. 1, fig. 3; 1967: 17–18.

MATERIAL: NZOI Stns A455 (1), A459 (1), A527 (1), A528 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body 30–120 mm, width, including parapodia, 14–40 mm, segments number more than 42.

Body: Broadly fusiform, with conspicuous gold and brown setae.

Colour in alcohol: Pale yellow to white.

Prostomium: (Fig. 9) Round with a pair of prominent ocular peduncles, each with 2 small eyes, a pair of diagnostic purse-shaped lobes on the posterior lateral margins. Median antenna long and tapering, attached to a short base and terminating in a pear-shaped bulb. Palps long and tapering, 1.5 times the length of the median antenna.

Dorsum: Without felt.

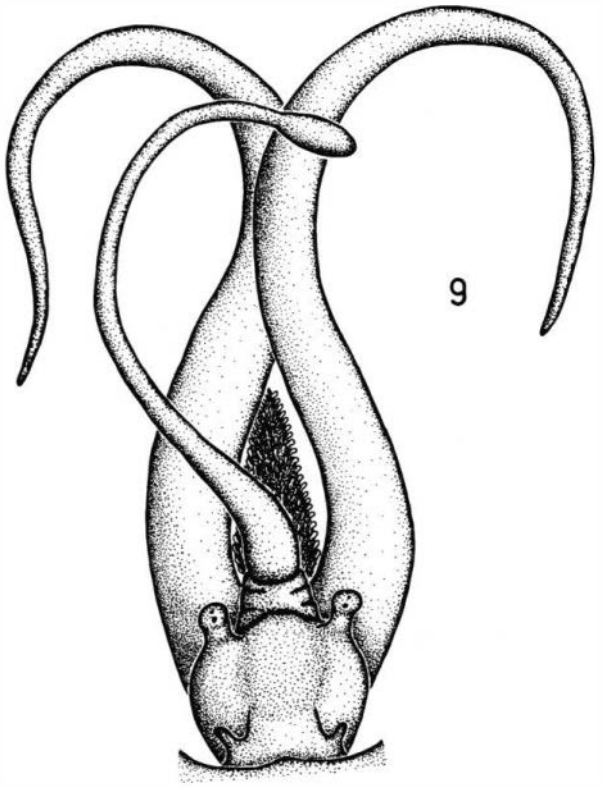
Ventrum: Heavily papillated.

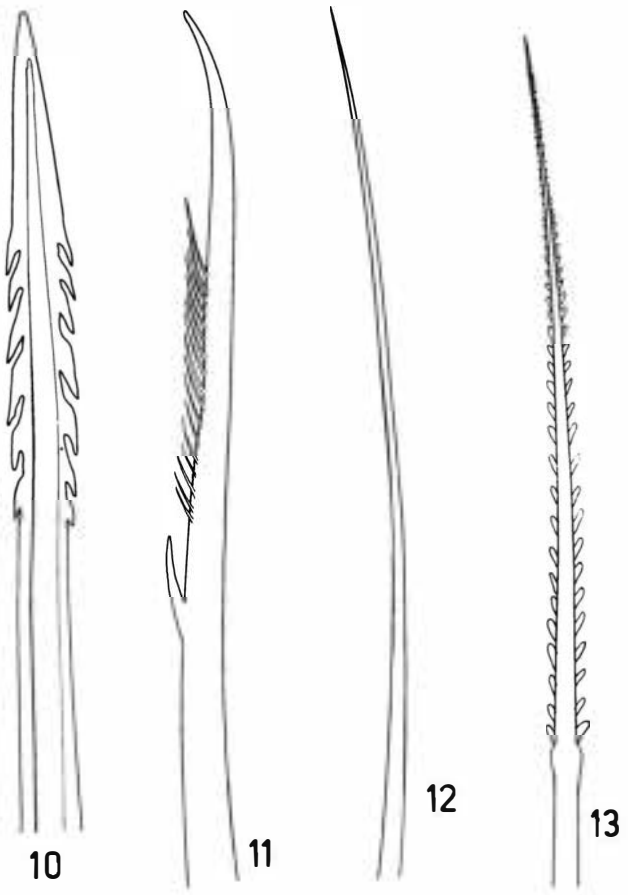
Elytra: 18–20 pairs; entirely covering the dorsum; their surface smooth, parchment-like, and slightly iridescent.

Parapodia: Heavily papillated; with short ventral cirri and long tapering dorsal cirri with a small sub-terminal swelling.

Notosetae: Two types: one golden brown, slender and capillary (Fig. 12); the other dark brown, harpoon-like with a variable number (usually 5–6) of lateral bars (Fig. 10).

Neurosetae: Those of the first 4 setigers slender and bipinnate (Fig. 13); the remaining ones prominent, stiff golden-brown spines with a prominent lateral spur, a moderately hooked tip and lateral hairs (Fig. 11).





Figs 9–13. ***Laetomonice producta*** Grube. **9**. Prostomium. **10**. Harpoon-like notoseta. **11**. Neuroseta from posterior end of body. **12**. Neuroseta from first parapodium. **13**. Neuroseta from 2nd parapodium.

REMARKS: Hartman (1964) listed *L. producta* and two varieties, var. *benthaliana* (McIntosh) and var. *wyvillei* (McIntosh). Uschakov (1962) considered the latter as a separate species, and Day (1963) also considered *L. benthaliana* to be a separate species. Based on an examination of the type material, Day distinguished *L. producta* and *L. p. wyvillei* from *L. benthaliana* and *L. filicornis* on the basis that the former have a body with 42 or more segments and 18 pairs of elytra, while the latter have a body with about 32 segments and 25 pairs of elytra. Hartman (1967) recognised the following species and subspecies: *L. producta, L. p. wyvillei, L. filicornis*, and *L. f. benthaliana*, thus recognising the two groups established by Day.

DISTRIBUTION: Circum-Antarctic seas, in moderate depths

Family POLYNOIDAE Malmgren, 1987

KEY TO GENERA:

1 Body with 15 pairs of elytra 2
– Body with more than 18 pairs of elytra, long and vermiform ..... ***Polyeunoa***
2 Body short, with 40 or fewer segments, completely covered by elytra 3
– Body long, with 40–50 segments, posterior segments not covered by elytra ..... ***Hermadion***
– Body much longer, with more than 50 segments, the posterior half of body not covered ..... ***Polynoe***
3 Lateral antennae inserted ventrally; without facial tubercle 4
– Lateral antennae inserted terminally; with facial tubercle ..... ***Euglasica***
4 Superior notosetae slender and capillary 5
– Superior notosetae thick, not capillary 6
5 Superior neurosetae with long spinous region, and capillary tips ..... ***Austrolaenilla***
– Superior neurosetae with minutely bifid tips ..... ***Eucantra***
6 Neurosetae distally tridentate, bifid, or unidentate types 7
– Neurosetae distally unidentate only ..... ***Eunoe***
7 Notosetae distally bearded ..... ***Barrukia***
– Notosetae not distally bearded 8
8 Some neurosetae distally tridentate ..... ***Gorekia***
– All neurosetae bifid, some unidentate ..... ***Harmothoe***

Austrolaenilla Bergström, 1916

Austrolaenilla antarctica Bergström, 1916

(Figs 14–17)

Austrolaenilla antarctica Bergström, 1916: 291–294, pl. 3, fig. 8, pl. 5, figs 1–2; Hartman 1967: 19; 1978: 129.

Antinoe antarctica: Monro 1930: 66–67, fig. 18; Fauvel 1936: 9–10, pl. 1, figs 37–38, 1, figs 7–11; Knox 1960: 87, figs 37–38.

Antinoella antarctica: Hartman 1964: 15, pl. 2, fig. 5, pl. 3, figs 6–8.

MATERIAL: NZOI Stn A448 (3), *Glacier* Stn GLD–13 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 53 mm; width, including parapodia, 3–13 mm.

Colour in alcohol: Whitish, usually with a dark, broad longitudinal band on the dorsum.

Prostomium: (Fig. 14) Broad and rounded; peaks small, acutely pointed, weakly to well-developed. 2 pairs of eyes, minute and widely separated. Median antenna long, hirsute, tapering to a fine point, ceratophore large; lateral antennae very short and pointed. Palps slightly longer than the median antenna, stout at the base, tapering to a fine point distally.

Elytra: Deeply imbricated, overlapping mid-dorsally, covered with small conical tubercles, and with slender clavate papillae on the outer margins.

Parapodia: (Fig. 15) Ventral cirri not extending to the end of the neuropodia, dorsal cirri hirsute, approximately twice the length of the parapodia.

Notosetae: (Fig. 16) Acicular, shorter and thicker than neurosetae, distally pectinated.

Neurosetae: (Fig. 17) Longer and more slender with lateral hairs and hirsute tips.

REMARKS: The present specimens mostly consist of anterior fragments without elytra. They agree in all respects with specimens recorded by Monro (1930) from South Georgia, and with a specimen recorded off the New Zealand coast (Knox 1960).

DISTRIBUTION: Antarctic Peninsula; Scotia Sea, South Georgia; South Orkney Islands; Ross Sea, New Zealand. Depth 23–639 m.

Austrolaenilla hastulifera (Fauvel, 1936)

(Figs 22–24)

Antinoe hastulifera Fauvel, 1936: 10–11, pl. 1, figs 1–6; Ushakov 1962: 177–172.

Antinoella hastulifera: Hartman 1964: 15, pl. 2, figs 3–4.

MATERIAL: NZOI Stns A459 (1), A460 (2), A464 (1), A537 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body 30–120 mm, width, including parapodia, 10–25 mm, segments number 45.

Colour in alcohol: Variable, generally pale yellow with dark bands on the parapodia.

Prostomium: As for *A. antarctica* except peaks and larger eyes. 2 pairs of large eyes in quadrate arrangement. Median cirrophore short and thick; median antenna long and tapering, lateral antennae shorter; no papillae. Palps extremely long and tapering.

Dorsum and ventrum: Both smooth.

Elytra: Thin, parchment-like and almost transparent; surface covered with very small fine tubercles; margins entire.

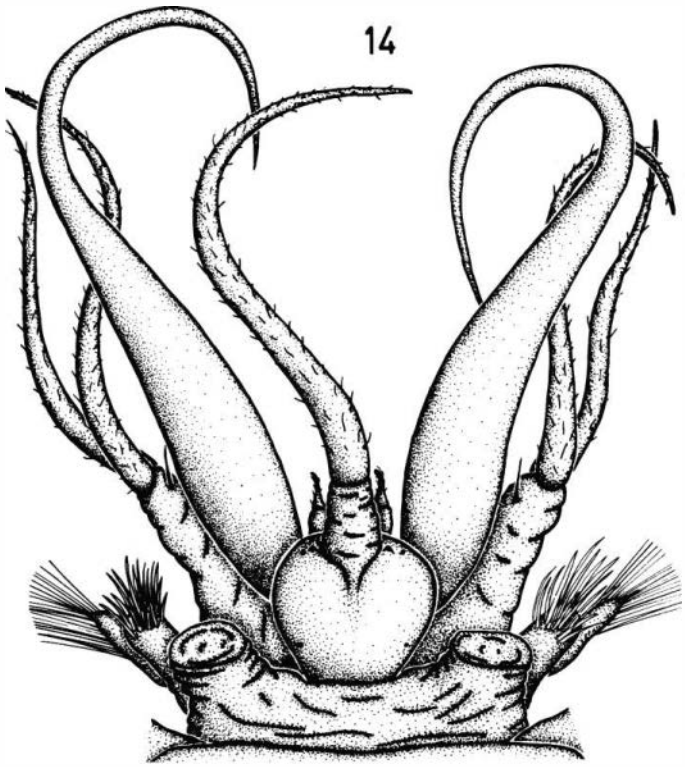
Parapodia: (Fig. 22) Both notopodial and neuropodial acicular lobes very elongated and tapering to fine points: otherwise as for *A. antarctica*.

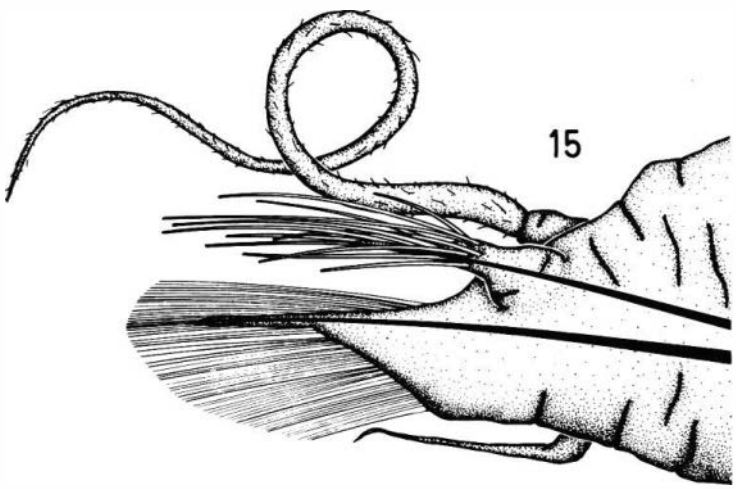
Notosetae: (Fig. 24) Short, few in number; shaft thick, acicular, nearly smooth and terminating in a rounded tip.

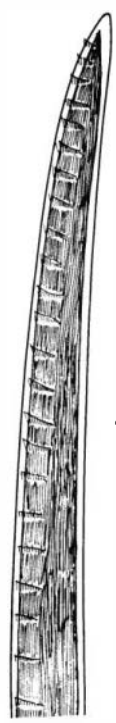
Neurosetae: (Fig. 23) Long and slender, tapering to distally plumose tips.

REMARKS: This is the first record of this species from western Antarctica. The present specimens reach a much larger size than those previously recorded. While some of the specimens lack elytra, a few are retained, enabling them to be described for the first time. Hartman (1967) described specimens from Antarctica as *Austrolaenilla* near *hastulifera* which differ from the present specimens in that the elytra are sparsely fringed laterally. This species is distinguished from other species of the genus by its large size, characteristic setae and very elongated palps.

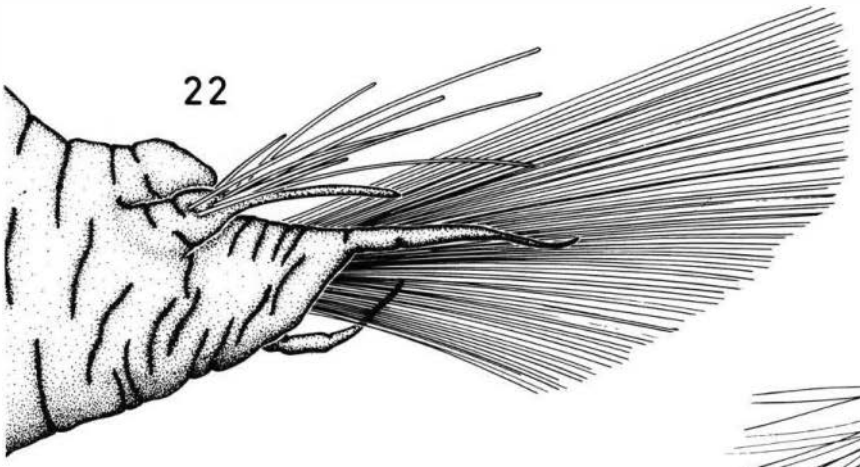
DISTRIBUTION: South Shetland Islands, Alexander Island, Bransfield Strait; eastern sector, Antarctic Peninsula and Ross Sea, in depths to 540 m.

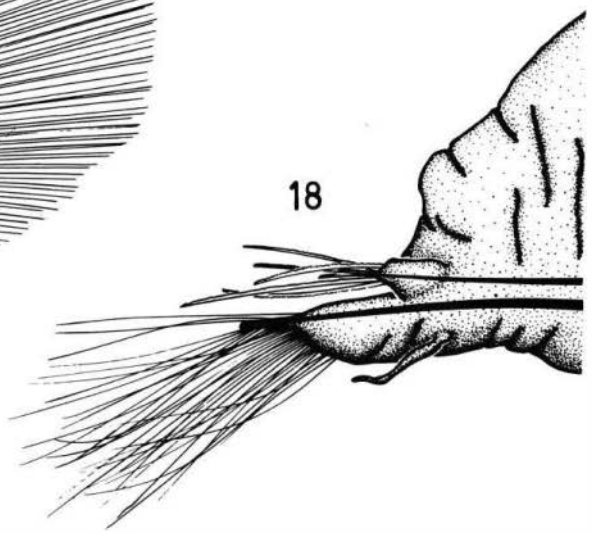


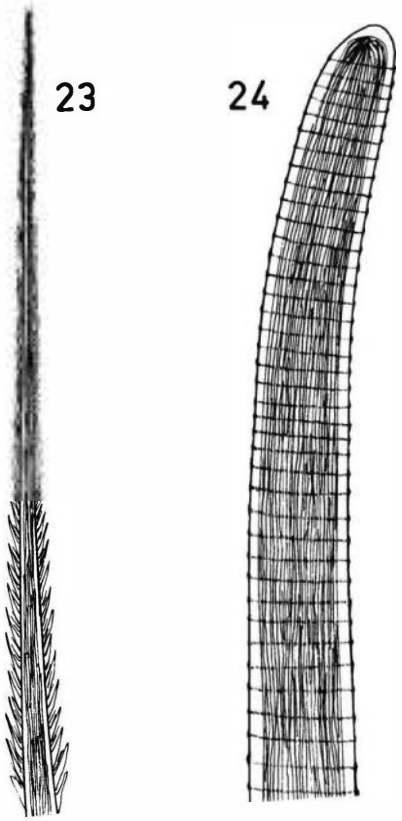




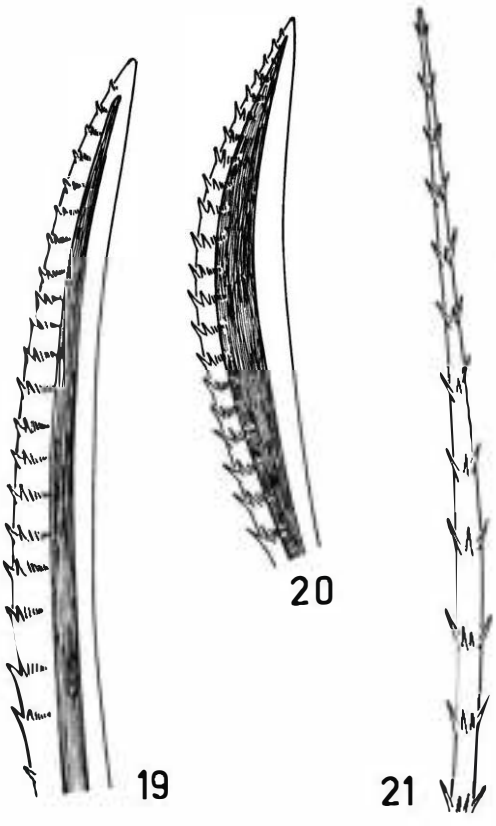
Figs 14–17. ***Austrolaenilla antarctica*** (Bergström). **14**. Anterior end. **15**. Anterior parapodium. **16**. Notoseta from anterior end of body. **17**. Neuroseta from anterior end of body.







Figs 22–24. *Austrolaenilla hastulifera* (Fauvel). **22**. Parapodium. **23**. Neuroseta. **24**. Notoseta.



Figs 18–21. *Austrolaenilla* sp. **18**. Parapodium. **19**. Neuroseta. **20**. Notoseta. **21**. Neuroseta.

Austrolaenilla sp. (Figs 18–21)

MATERIAL: Cape Evans Stn CEF(1).

DESCRIPTION:

Size: Length of body 9.0 mm, width, including parapodia, 3.0 mm; segments number 27.

Colour in alcohol: Pale cream to white all over.

Prostomium: Broadly rounded with a deep incision in front, no peaks present. 2 pairs of medium-sized eyes; anterior pair situated at widest part of prostomium on dorsolateral margin; posterior pair closer

together and situated at hind margin. Median antenna absent except for ceratophore which is about half the length of prostomium; lateral antennae situated ventrally, very short (half length of prostomium) and pointed. Palpi very long, 6 times length of prostomium, tapering gently to fine points.

Dorsum and ventrum: Smooth.

Elytra: Missing from present specimen.

Parapodia: (Fig. 18) Ventral cirri short, extending only halfway along neuropodia.

Notosetae: Of two distinct types; one long and gently curved with lateral spines arranged in transverse rows reaching nearly to bare tip (Fig. 19); the other much shorter and broader with a greater amount of curvature (Fig. 20), but with same arrangement of spines as longer variety.

Neurosetae: (Fig. 21) Very long thin capillaries, distally entire with whorls of lateral teeth arranged radially down shaft.

REMARKS: Present specimen, which lacks elytra, appears to be similar to *A. pelagica* described by Monro (1930) except for structure of setae.

DISTRIBUTION: Ross Island, in 4.5 m.

Barrukia Bergström, 1916

Barrukia cristata (Willey, 1920) (Figs 25–28)

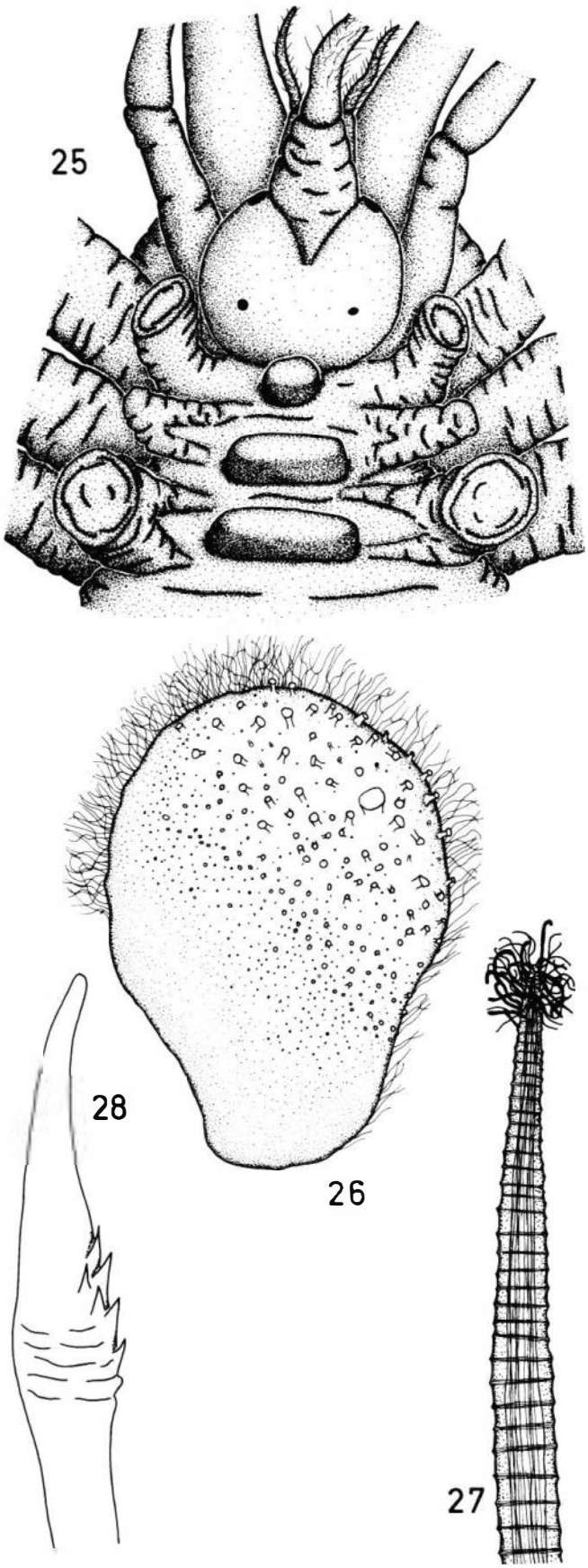
Gattyana cristata Willey, 1902: figs 1–4.
Harmothoe tuberosa: Benham 1921: 39–42, pl. 6, figs 22–29.
Harmothoe (Barrukia) cristata: Monro 1936: 89–90; Uschakov 1962: 166–168, pl. 7, figs A–D.
Barrukia cristata: Hartman 1964: 17–19, pl. 4, figs 1–2; Gallardo 1977: 66, figs 2a-p; Hartman 1978: 17; Hartmann-Schröder & Rosenfeldt 1988: 29.

Material: NZOI Stns A467 (3), A470 (1), A533 (2), A528 (1), A538 (1); *Glacier* Stn GLD-13 (2); *Eastwind* Stn EAD-2 (2); Cape Evans Stns CEA-1 (2), CEI (3); Trans-Antarctic Expedition Stn TAE-7 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 65 mm; width including parapodia up to 16 mm; segments number 35 or 36.

Prostomium: (Fig. 25) 2 pairs of eyes, widely separated; anterior pair large, elongate; posterior pair small, circular. Lateral antennae very small, inserted ventrally; median antenna with stout ceratophore.



Figs 25–28. ***Barrukia cristata*** (Monro). **25**. Anterior end. **26**. Elytrum from mid-body region. **27**. Notoseta, anterior end. **28**. Neuroseta, anterior end.

Dorsum: Each segment crested (Fig. 25), with crest of first elytral segment rotund, others transversely elongated.
Elytra: (Fig. 26) Broadly oval, narrowed anteriorly with crenate tubercles larger and few in number on posterior half, graduating in size to more numerous smaller ones on anterior half.
Notosetae: (Fig. 27) Longer notosetae tapering distally, terminal portion surrounded by tuft of fine hairs.
Neurosetae: (Fig. 28) Stout, falcigerous with few lateral teeth.

REMARKS: This is the first record of this species from the Ross Sea. Present specimens are identical with specimens in the British Museum (Natural History) from the South Sandwich Islands (Monro 1936).

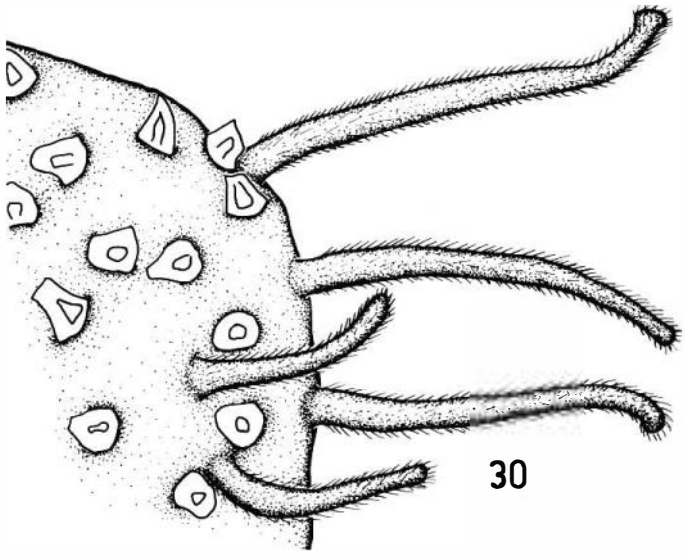
DISTRIBUTION: Bransfield Strait; Antarctic Peninsula; South Shetland Islands; South Orkney Islands; South Sandwich Islands; New Zealand sector to 64° S; Ross Sea. Depth 18–732 m.

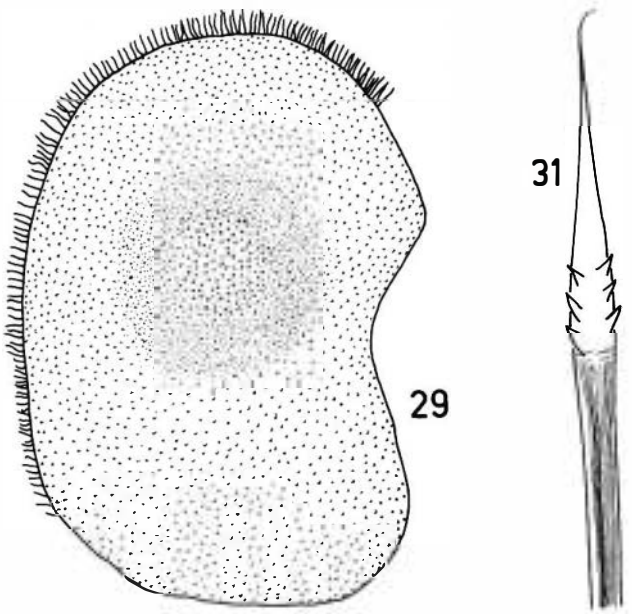
Barrukia curviseta (Monro, 1930) (Figs 29–31)

Harmothoe (Barrukia) curviseta Monro, 1930: 61–63, fig. 15a-e; 1939: 100.
Barrukia curviseta: Hartman 1964: 19, pl. 4, figs 3–4.

MATERIAL: NZOI Stns A448 (6), A520 (1); *Glacier* Stn GLD-16 (2). No previous records from the Ross Sea.

DESCRIPTION:
Size: Length of body up to more than 30 mm; width including parapodia up to 10 mm; segments number more than 24.
Colour in alcohol: Pale yellow.
Prostomium: Rounded in front; peaks present; 2 pairs of eyes, small and widely separated; antennae similar to those of *B. cristata*.
Dorsum: First 5 or 6 segments crested, first crest rotund, remainder transversely elongated.
Elytra: (Figs 29–30) Dotted throughout with small tubercles, truncated and irregular. Margins with fringe of elongated, blunt-tipped papillae covered with fine hairs. Papillae also sometimes present on elytral surface.
Parapodia: Dorsal cirri slender and papillated, with stout cirrophores.
Notoseta: Upper row shorter than others, strongly curved towards tips which are hairless. Others lightly pectinated with bearded tips.
Neurosetae: (Fig. 31) More slender than notosetae with 2 short series each with 2 or 3 lateral teeth, distally elongated into curved flagellum.





Figs 29–31. ***Barrukia curviseta*** (Monro). **29**. Elytrum. **30**. Elytral edge showing details of papillae. **31**. Neuroseta, anterior end.

REMARKS: This species differs from *B. cristata* in number of median dorsal tubercles, long slender neurosetae with flagellum-like tips, lack of large tubercles on elytra, and shorter elytral fringe. It has been recorded previously only from off the Antarctic Peninsula (Monro 1930, 1939). Like the specimens recorded by Monro, those in the present collection are all incomplete, the largest measuring 25 mm for 20 segments. This is the first record of this species from the Ross Sea sector of Antarctica.

DISTRIBUTION: Off the Antarctic Peninsula and in the Ross Sea. Depths up to 760 m.

Eunoe Malmgren, 1865

Eunoe abyssorum McIntosh, 1885 (Figs 32–34)

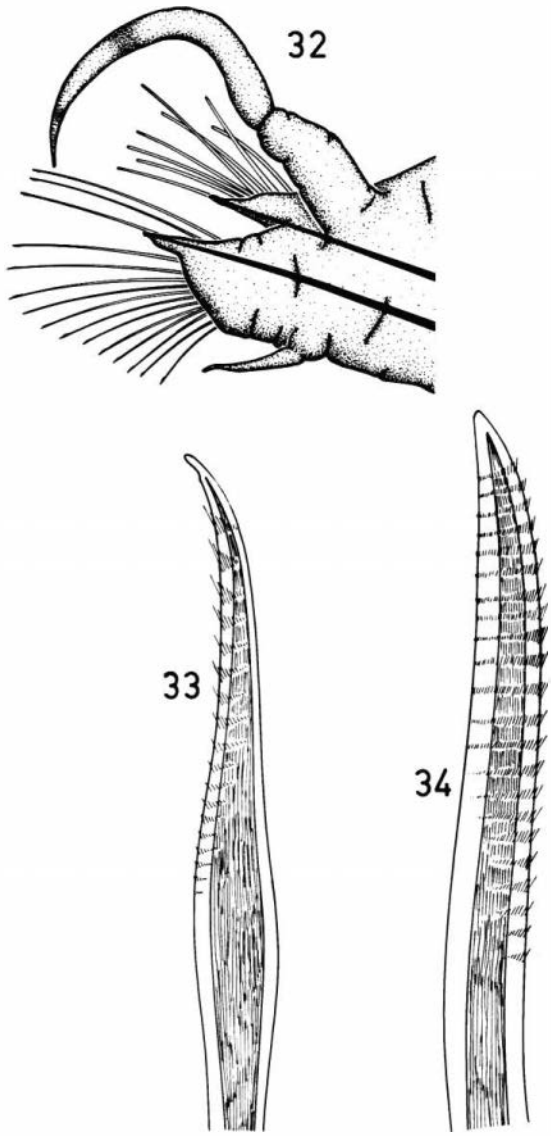
Eunoe abyssorum McIntosh, 1885: 73–74, pl. 11A, figs 14–16; Hartman 1964: 21, pl. 5, figs 3–4.
?*Harmothoe abyssorum*: Benham 1927: 72.

MATERIAL: McMurdo Sound Stn V (1). Previous records from the Ross Sea: Benham (1927), Cape Adare in 82–91 m.

DESCRIPTION:
Size: Length of body 20 mm, width including parapodia, up to 5.0 mm; segments number 36.
Colour in alcohol: Ventrum pale yellow; dorsum cream with reddish-brown bands across each segment, more pronounced anteriorly.
Prostomium: Peaks well developed; 2 pairs of eyes in typical harmothoid arrangement; median ceratophore large and bulbous; all antennae missing in single specimen. Palpi 4 times length of prostomium, with faint transverse annulations.
Elytra: Rounded, with pigment spot near scar; surface covered in very small microtubercles; a few hair-like papillae on posterior lateral margins, otherwise margins entire.
Parapodia: (Fig. 32) Very short ventral cirri; dorsal cirri with very elongated base nearly half the length of cirrus.
Notosetae: (Fig. 34) Short, thick, few in number, terminating in bare rounded entire tips, with a well-defined region of lateral spines.
Neurosetae: (Fig. 33) Slightly longer and thinner than notosetae, with simple, smooth curved tips, or with a minute secondary tooth; lateral spines well developed.
Posterior End: With long hirsute caudal prolongations.

REMARKS: The present specimen has been compared with McIntosh's type in the British Museum (Natural History) which is dried and lacks elytra. The number and type of setae agree in all respects. It does not, however, appear to be the same as the specimens recorded by Benham (1921, 1927). Benham's specimens had from 5 to 8 neurosetae, whereas the present specimen and the type have a large number. They are also more slender than notosetae, whereas in Benham's specimens the reverse was the case.

DISTRIBUTION: Australian sector and Ross Sea in 15–2600 m.



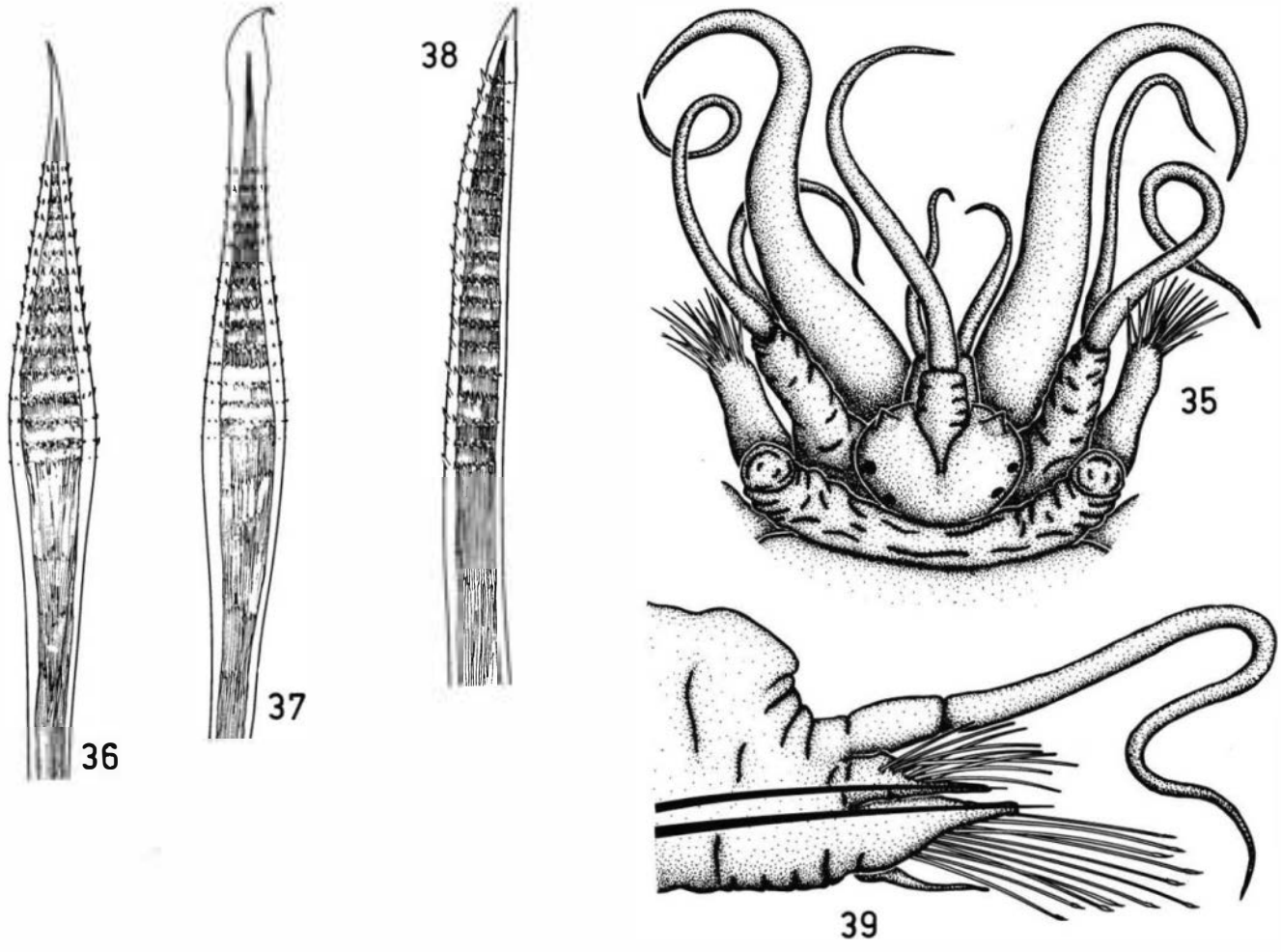
Figs 32–34. ***Eunoe abyssorum*** McIntosh. **32**. Parapodium. **33**. Neuroseta, anterior end. **34**.Notoseta, anterior end.

Eunoe opalina McIntosh, 1885 (Figs 35–39)

Eunoe opalina McIntosh, 1885: 71–72, pl. 10, fig. 5, pl. 19, fig. 2, pl. 8A, figs 9–11; Monro 1930: 50–51, fig. 12; Uschakov 1962: 163, pl. 6, figs G–E; Hartman 1964: 21–23, pl. 5, figs 8–9.

MATERIAL: NZOI Stn A448 (2). No previous records from the Ross Sea.

DESCRIPTION:
Size: Length of body up to 30 mm; width including parapodia, up to 12 mm; body broadest in anterior quarter; segments number 37.



Figs 35–39. ***Eunoe opalina*** McIntosh. **35.** Anterior end. **36.** Neuroseta. **37.** Neuroseta. **38.** Notoseta. **39.** Parapodium.

Colour in alcohol: Pale, with a light grey-green longitudinal band on dorsum; ventrum with smokey-grey patches on each segment and parapodium.

Prostomium: (Fig. 35) Broad in front with widely separated peaks. 2 pairs of eyes; anterior pair situated at widest point of prostomium, posterior pair closer together. Median antenna situated on a short stout ceratophore and reaching same length as lateral antenna which are inserted ventrally. Palpi long and tapering with transverse greenish-grey striations.

Elytra: 15 pairs; large and rounded, white and somewhat translucent; smooth, without fringe, and completely covering dorsum, overlapping mid-dorsally.

Parapodia: (Fig. 39) Ventral cirri short, not reaching end of neuropodia; dorsal cirri long and thin, attached to very elongated base.

Notosetae: (Fig. 38) Short, yellow, and slightly curved; terminating in rounded or pointed smooth tip with short region of lateral spines.

Neurosetae: Two types present; the more numerous long and yellow, terminating in a slightly curved fine capillary tip with short region of lateral spines (Fig. 36); the less numerous with bulbous tip ending in a sharp recurved spine (Fig. 37).

REMARKS: This is the first record of this species from the Ross Sea sector of Antarctica. The present specimens have been compared with the type in the British Museum (Natural History) with which they agree except for their larger size and greater degree of pigmentation. Another difference concerns the presence of neurosetae with bulbous tips which have not previously been recorded.

DISTRIBUTION: Bransfield Strait; Antarctic Peninsula; South Orkney Islands; Strait of Magellan; Ross Sea.

Eucantra Malmgren, 1865

Eucantra mollis (McIntosh, 1876) (Figs 40–42)

Eucantra mollis: Bergström 1916: 294–295; Monro 1939: 100–101; Uschakov 1962: 165, pl. 6, figs J–K; Hartman 1964: 19–21, pl. 4, figs 5–6; 1978: 181–182, figs 4a-c.

MATERIAL: NZOI Stns A448 (4), A451 (2), A459 (8), A460 (1), A461 (2); *Glacier* Stns GLD-8 (1), GLD-14 (1); Trans-Antarctic Expedition Stn TAE95 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body 20–54 mm, but some anterior fragments would have exceeded this if complete; width including parapodia, 8–12 mm; segments number not more than 40.

Colour in alcohol: Variable, from cream to dark brown.

Prostomium: (Fig. 40) Almost circular; no median incision, well-developed peaks. 2 pairs of eyes, anterior pair being larger and placed alongside prostomial peaks. Median antenna situated on a short ceratophore and of equal length to palpi; lateral antennae inserted ventrally, approximately half the length of palpi. Palps smooth, long, tapering distally.

Dorsum: Flecked by light to dark reddish-brown, irregular transverse bands.

Elytra: Thick, soft, nearly white in colour; smooth over their entire surface; margins without fringe.

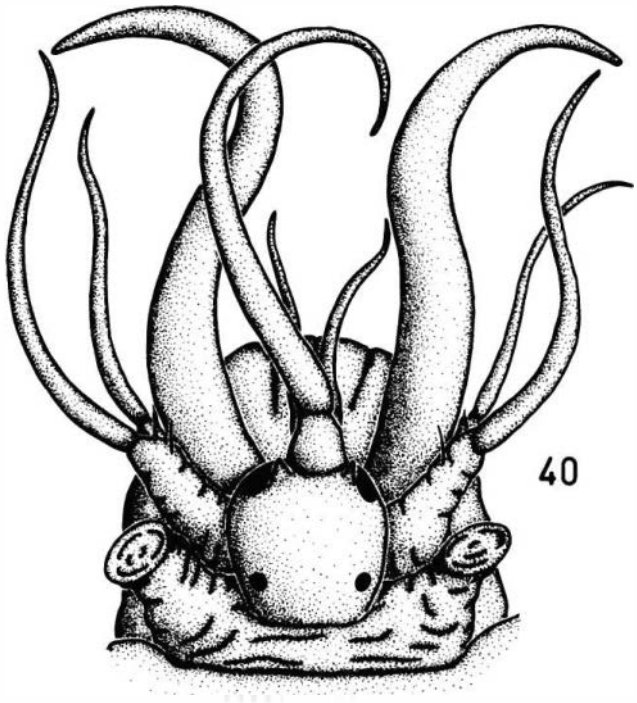
Parapodia: Long and slender; ventral cirri short; dirsal cirri long, extending to tip of neurosetae; finely striated.

Notosetae: Very large, straight, finely spinous or smooth.

Neurosetae: Of two distinct types; superior-most slender, spinous, terminating in fine needle-like bifid tips (Fig. 42); inferior ones very much stouter with shorter lateral spines, terminating in heavy bifid tips (Fig. 41).

REMARKS: This is the first record of this characteristic species from the Ross Sea.

DISTRIBUTION: Kerguelen; Antarctic Peninsula; eastern and western sectors of Antarctica; Ross Sea. Depth 38–300 m.



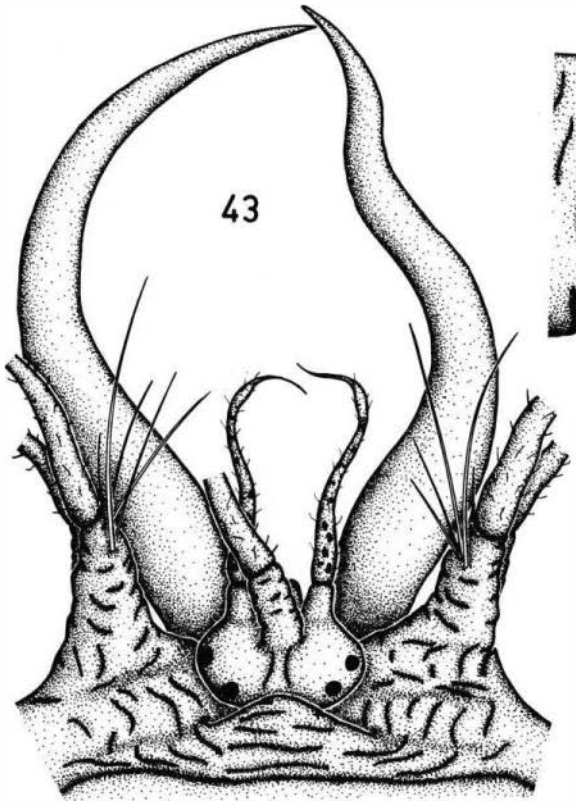
Figs 40–42. *Eucantra mollis* McIntosh.
40. Anterior end.
41. Inferior notoseta.
42. Superior notoseta.

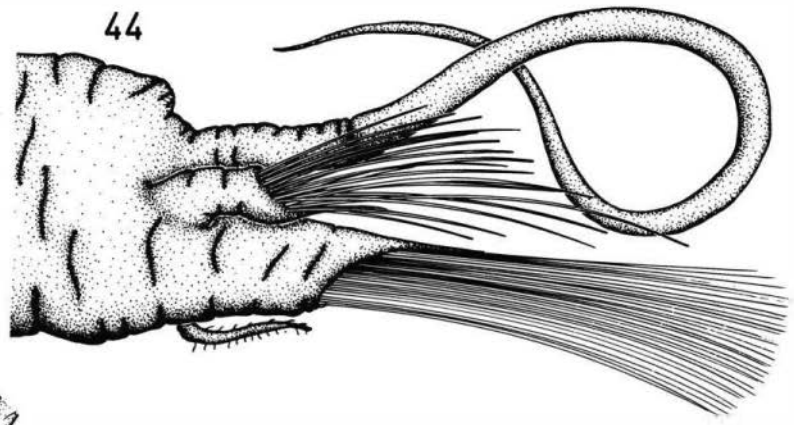
Eulagisca McIntosh, 1885

Eulagisca corrientis McIntosh, 1885 (Figs 43-44)

Eulagisca corrientis McIntosh, 1885: 91–93, pl. 13, fig. 4, pl. 7A, figs 3–4; Benham 1921: 43; Monro 1930: 48–50, fig. 11; Hartman 1964: 20, pl. 4, figs 9–10.

MATERIAL: NZOI Stn A459 (1 fragment). No previous records from the Ross Sea.





Figs 43–44. ***Eulagisca corrientis*** McIntosh. **43**. Anterior end. **44**. Parapodium.

DESCRIPTION:

Size: Length of body 30–80 mm; present specimen measuring 40 mm for 22 anterior segments; width including parapodia 25 mm.

Colour in alcohol: Light brown to yellow with conspicuous golden setae.

Prostomium: (Fig. 43) Somewhat bulb-shaped; a smooth globular facial tubercle present. 2 pairs of eyes; anterior pair situated halfway back on prostomium and widely separated; posterior pair closer together and situated on posterior margin of prostomium. Median antenna broken distally, borne on a large ceratophore; lateral antennae situated terminally, flecked with brown, approximately one-third the length of palpi with lateral cilia and a subterminal swelling.

Dorsum: Somewhat wrinkled.

Ventrum: Smooth.

Elytra: Missing in present specimen.

Parapodia: (Fig. 44) With very long dorsal cirri, short ventral cirri, the latter with lateral cilia.

Notosetae: Short, thicker, few in number than neurosetae; distally entire.

Neurosetae: Up to twice as long as notosetae, terminating in very faintly bifid tips, sometimes entire.

REMARKS: This is the first record of this species from the Ross Sea. In the present incomplete specimen all elytra are missing, but Hartman (1964) recorded the species as having comparatively small elytra, their surface flecked with brown, smooth and with few long cilia on their posterior margins.

DISTRIBUTION: Heard and Kerguelen Islands; Ross Sea, depth 93–342 m.

Eulagisca gigantea Monro, 1939 (Figs 45–46)

Eulagiscagigantea Monro, 1939: 103–105, fig. 4; Uschakov 1962: 174–175, pl. 9, figs D–J; Hartman 1964: 20–21, figs 1–2.

MATERIAL: NZOI Stn A457 (1). No previous records from the Ross Sea.

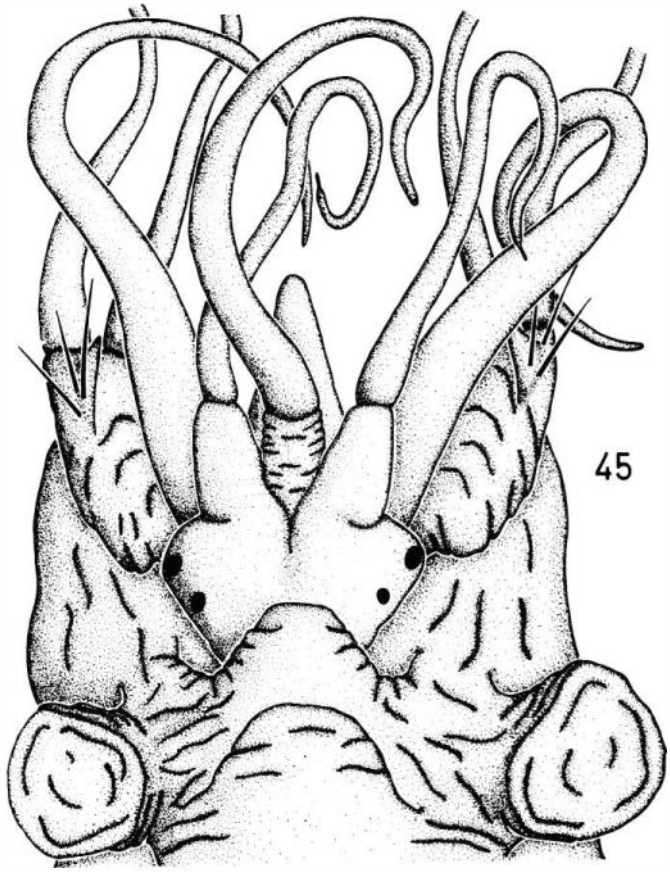
DESCRIPTION:

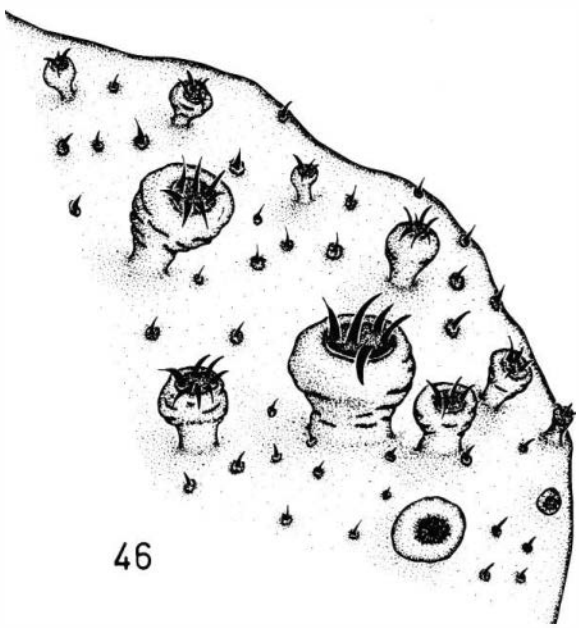
Size: Length of body up to 160 mm; width, including parapodia, up to 50 mm; segments number 37–39.

Colour in alcohol: Pale yellow to white.

Prostomium: (Fig. 45) Very small in relation to the huge size of animal; with nuchal hood overlapping posterior margin. A large conical facial tubercle present ventral to median antenna. 2 pairs of eyes similar to those of *E. corrientis*; median antenna and lateral antennae of equal length and inserted terminally; palpi long, tapering, equal in length to antennae.

Elytra: (Fig. 46) Flesh-coloured, thick and lacking a fringe; dorsal surface covered with many small





Figs 45–46. ***Eulagisca gigantea*** Monro. **45**. Anterior end. **46**. Elytral edge showing details of papillae.

spines, scattered large pedunculate tubercles with 4 or 5 large spines projecting from swollen distal end.
Parapodia: As for *E. corrientis*.
Notosetae: As for *E. corrientis*.
Neurosetae: As for *E. corrientis*.

REMARKS: This species differs from *E. corrientis* in having longer lateral antennae, a larger and cone-shaped facial tubercle, more heavily ornamented elytra, and being very much larger in size. This is the first record of this species from the Ross Sea sector of Antarctica.

DISTRIBUTION: Eastern sector Ross Sea; Drake Passage; South Shetland Islands; Bransfield Strait; South Orkney Islands.

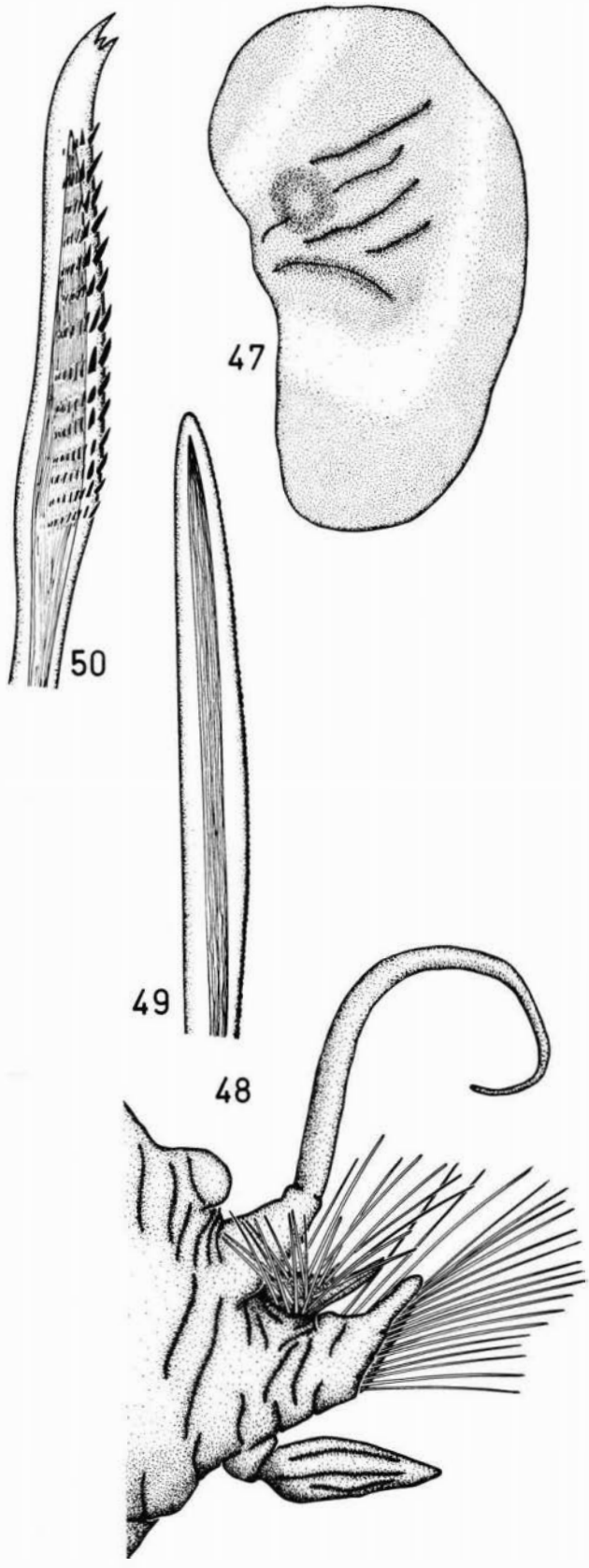
Gorekia Bergström, 1916

Gorekia crassicirris (Willey, 1902) (Figs 47–50)

Malmgrenia crassicirris Willey, 1902: 269–270, pl. 43, figs 3–4, pl. 44, figs 5–6.
Gorekia crassicirris: Bergström 1916: 295–297, pl. 3, fig. 9, pl. 5, figs 3–6; Fauvel 1936: 11–12; Uschakov 1962: 168–170, pl. 8, figs E–K; Hartman 1964: 23, pl. 6, figs 4–5; Averincev 1972: 125; Hartmann-Schröder & Rosenfeldt 1988: 29.

MATERIAL: NZOI Stn A459 (1). Previous records from the Ross Sea: Willey (1902) Cape Adare, 37-48 m.

DESCRIPTION:
Size: Length of body 14–18 mm; width, including parapodia, up to 6 mm.
Colour in alcohol: Reddish-brown to rust coloured, with white tips to cirri, palpi, and antennae.
Prostomium: Rounded in front, lacking peaks; 2 pairs of eyes. Lateral antennae inserted ventrally, about half as long as palpi. Median antenna same length as palpi. Palps long and tapering, with fine longitudinal striations.
Elytra: (Fig. 47) 15 pairs; dark brown with two striking white bands across their dorsal surface, which is almost smooth; margins entire.
Parapodia: (Fig. 48) Short and stumpy, with thick spindle-shaped ventral cirri extending beyond parapodial lobes.
Notosetae: (Fig. 49) Shorter and thicker than neurosetae, distally entire with faint serrations along convex side of shaft.
Neurosetae: (Fig. 50) Long and relatively thin, slightly expanded distally. Rows of lateral spines well developed, distal end tridentate, with 2 large prongs and a smaller tooth between them.



Figs 47–50. *Gorekia crassicirrus* (Willey). 47. Elytrum from mid-body region. 48. Parapodium. 49. Notoseta. 50. Neuroseta.

REMARKS: This is the second record of this species from the Ross Sea area. It can be distinguished by the characteristic colour patterns on the elytra, the spindle-shaped ventral cirri, and the tridentate neurosetae.

DISTRIBUTION: Antarctic Peninsula; South Orkney islands, Ross Sea.

Harmothoe Kinberg, 1855

Harmothoe spinosa Kinberg, 1855 (Figs 51–54)

Harmothoe spinosa Kinberg: 1855; Willey 1902: 264; Ehlers 1913: 438–442, pl. 26, figs 1–12; Bergström 1916: 284, pl. 2, figs 5–6; Benham 1927: 71; Hartman 1952: 231; 1964: 33–34, pl. VI, figs 8–9, pl. 8, fig 8, pl. 9, figs 1–2; 1971: 1416; 1978: 136; Averincev 1972: 116, pl. 6, figs 8–11; 1974: 246; 1982: 5; Bellan 1974: 786; Gallardo 1977: 68–70; Hartmann-Schröder 1986: 74; 1988: 32, pl. 2, figs 3–8; Hartmann-Schröder & Rosenfeldt 1988: 30–32, figs 1–5; 1990: 92–93.

Harmothoe spinosa fullo: Willey 1902: 265–266, pl. 43, 1, 4, 6–7.

MATERIAL: NZOI Stns A449 (3), A450 (9), A455 (1), A456 (4), A467 (3), A468 (6), A469 (4), A470 (1), A471 (11), A520 (3), A528 (1), A529 (1), A530 (1), A533 (2), A538 (3); *Glacier* Stn GLD-13 (3); McMurdo Sound Stns G-1 (1), G-3 (1), M (1), N (1), P (1), V (25), 61D (6), 61E (5), TOS (3); *Eastwind* Stns EAD-2 (4), EAD-3 (1); Cape Evans Stns CEA (4), CED (1); Trans-Antarctic Expe-dition Stns TAE5 (1), TAE74 (3), TAE78 (1), TAE99 (2), TAE100 (1). Previous records from the Ross Sea: Willey (1902) Cape Adare; Benham (1927) Cape Adare; Hartman (1952) Ross Island. Depth 55–201 m.

DESCRIPTION:

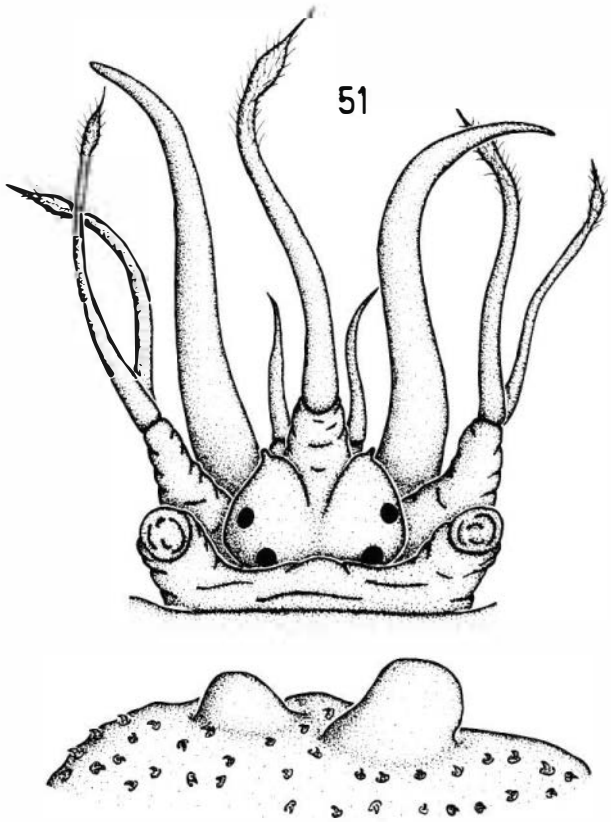
Size: Very variable; length up to 127 mm; width, including parapodia, up to 30 mm; segments number up to 41.

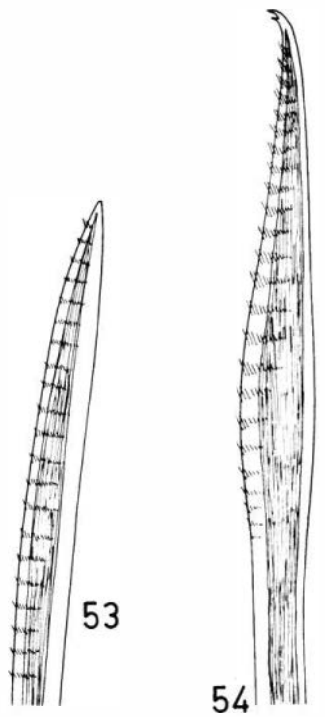
Colour in alcohol: Setae golden, body highly variable, from pale cream with no pigmentation to light brown with dark brown, greenish-grey or red bands on dorsum and parapodia.

Prostomium: (Fig. 51) Peaks variable, usually well developed, but may be weakly developed or absent; prostomium broader than long. 2 pairs of eyes in harmothoid arrangement, posterior pair being situated on hind margin of prostomium. Median antenna borne on a broad ceratophore, with a sub-terminal swelling as long as palpi; lateral antennae inserted ventrally; one-third length of palpi. Palpi smooth, broad at base, tapering to a fine point.

Dorstum and ventrum: Smooth.

Posterior End: With a series of long hirsute, caudal appendages, measuring in length up to 8 segments.





Figs 51–54. *Harmothoe spinosa* Kinberg. **51**. Anterior end. **52**. Elytral edge showing details of papillae. **53**. Notoseta. **54**. Neuroseta.

Elytra: 15 pairs; first pair smaller than others; pigment patches scattered over dorsal surface in variable concentrations; surface covered with tiny microtubercles resembling small hooks. Margins may have or lack a ciliary fringe; submarginal macrotubercles usually present (Fig. 52), either sparsely scattered along margin or forming border of tubercles on posterior and lateral margins; shape of macrotubercles variable.

Parapodia: With short ventral cirri and long slim dorsal cirri with subterminal swellings and hirsute tips.

Notosetae: (Fig. 53) Coarser than neurosetae, strongly pectinate to almost smooth.

Neurosetae: (Fig. 54) Longer and more numerous than neurosetae, terminating in bifid, curved tips with 2 teeth of almost equal length; a short spinous region with well developed lateral spines.

REMARKS: A common, very variable species.

DISTRIBUTION: Common through the Antarctic region, southern Chile, Falkland Islands, southern Australia, Subantarctic Islands, New Zealand.

Harmothoe hartmanae Uschakov, 1962 (Figs 55–56)

Harmothoe hartmanae Uschakov, 1962: 158–160, pl. 4, figs E–I, pl. 7, fig. A; Hartman 1964: 29, pl. 7, fig. 8.

MATERIAL: NZOI Stns A451 (1), A456 (1), A467 (1), A468 (10), A470 (1), A520 (1); *Glacier* Stn GLD-13 (2); McMurdo Sound Stns B (1), V (1), 61B(1); *Eastwind* Stn EAD-2 (1); Trans-Antarctic Expedition Stn TAE79 (1). No previous records from the Ross Sea.

DESCRIPTION:

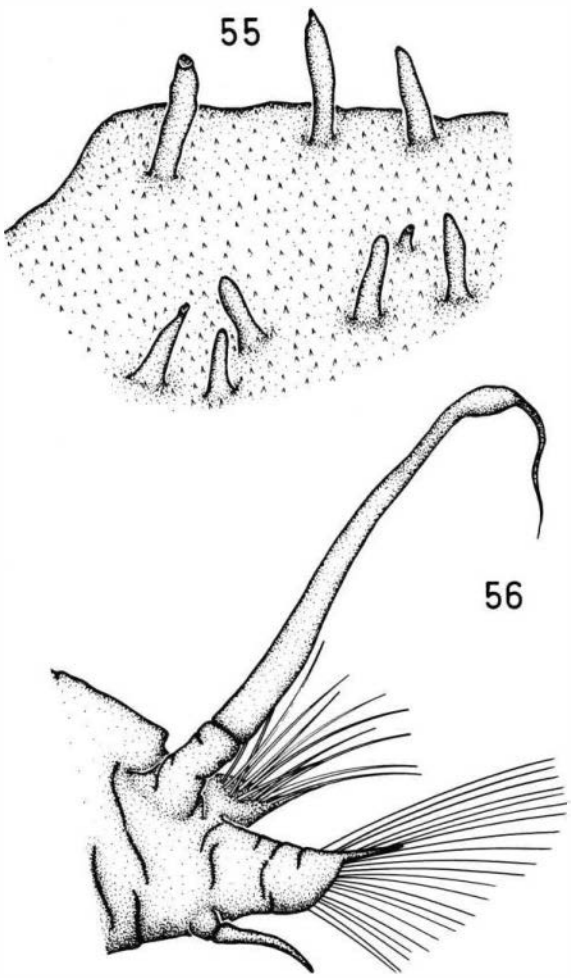
Size: Length of body up to 125 mm; width, including parapodia, up to 25 mm; segments number 39.

Colour in alcohol: Ventrum pale cream; dorsum with a greenish-grey band on each segment; a patch of similar pigment on upper surface of each parapodium.

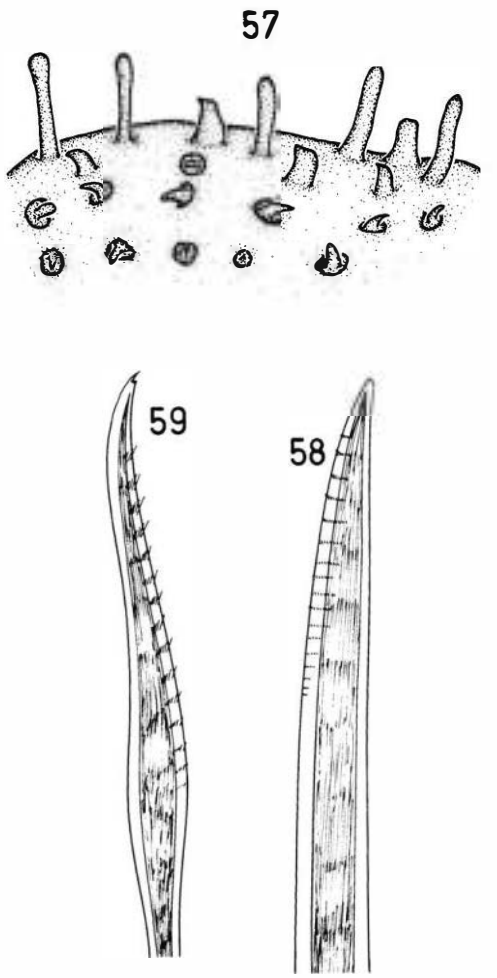
Prostomium: Peaks well developed; 2 pairs of eyes. Median antenna situated on a large round ceratophore, of equal length to palpi, with a subterminal swelling terminating in a smooth tip; lateral antennae inserted ventrally, short, often pigmented. Palpi grey to green in colour, long and tapering.

Dorsum and ventrum: Smooth.

Elytra: (Fig. 55) Large, surface covered in tiny needle-like spines, with long pencil-like macrotubercles scattered along posterior margins; usually no ciliary fringe.



Figs 55-56. ***Harmothoe hartmanae*** Uschakov. **55.** Elytral edge showing details of papillae. **56.** Parapodium.



Figs 57–59. ***Harmothoe magallanica*** (McIntosh). **57.** Edge of first elytrum. **58.** Notoseta. **59.** Neuroseta.

Parapodia: (Fig. 56) Short and stubby,, with thin pointed ventral cirri and smooth, elongated dorsal cirri with subterminal swelling.

Notosetae: Short, upturned, distally entire, laterally spinous.

Neurosetae: Thinner, longer, more numerous than notosetae, distally bifid, with a lateral spinous region.

REMARKS: This is the first record of this distinctive species from the Ross Sea sector of Antarctica.

DISTRIBUTION: Eastern sector, Ross Sea, in 165–540 m.

Harmothoe magellanica (McIntosh, 1885) (Figs 57–59)

Lagisca magellanica McIntosh, 1885: 82–83, pl. 13, fig. 5, pl. 18, figs 3–4, pl. 7A, figs 1–2.

Harmothoe magellanica: Bergström 1916: 220; Uschakov 1962: 148–150, pl. 2, figs A–B, pl. 3, fig. J; Hartman 1964: 33, pl. 8, figs 4–5; Hartmann-Schröder & Hartman 1962: 54; 1983: 257; 1986: 73–74; Averincev 1972: 117, pl. XI, figs 4–5; Bellan 1974: 786.

MATERIAL: NZOI Stns A450 (1), A468 (7), A471 (4), A519 (1), A529 (2); McMurdo Sound Stns N (1), V (2), 61E (6); *Eastwind* Stn EAD-3 (3); Trans-Antarctic Expedition Stn TAE79 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 45 mm; width, including parapodia, up to 10 mm; segments number up to 40.

Colour in alcohol: Ventral pale cream; dorsum pigmented with green and brown patches in an irregular distribution; base of each dorsal cirrus with a very prominent pigment patch.

Prostomium: Peaks present; 2 pairs of eyes. Median

antenna borne on a large ceratophore, terminating in a very slender, almost flagellum-like tip; lateral antennae similar but very much shorter, inserted ventrally. Palpi long, tapering, reddish-brown in colour.

Elytra: 15 pairs, smooth except for small patches of minute microtubercles; often with a pigment patch near the centre, or with greenish pigment scattered in patches across the surface. The first pair with a fringe of papillae (Fig. 57), others without a fringe.

Parapodia: Typical, with a large globular process situated above bases of dorsal cirri.

Notosetae: (Fig. 58) Almost transparent, short, thick, distally pointed, with very weakly developed lateral spines.

Neurosetae: (Fig. 59) Longer, thinner and more numerous than notosetae, with curved, faintly bifid tips and conspicuous spinous regions.

REMARKS: This is the first record of this common western sector species from the Ross Sea area. The present specimens have been checked against the type in the British Museum (Natural History) and they agree in all respects.

DISTRIBUTION: Scotia Sea, Bransfield Strait, South Georgia, Antarctic Peninsula, South Shetland Islands, Ross Sea and southern Chile; common on shallow bottoms.

Harmothoe crosetensis (McIntosh, 1885)

(Figs 60-61)

Lagisca crosetensis McIntosh, 1885: 88–89, pl. 8, fig. 6, pl. 13, fig. 2, pl. 18, fig. 7, pl. 11A, figs 4–6; Willey 1902: 266–267, figs 3, 9–11; Ehlers 1912: 10–11; Knox 1960: 83, figs 15–21.

Harmothoe crosetensis: Hartman 1964: 28, pl. 7, fig 5.

MATERIAL: NZOI Stns A448 (1), A454 (2), A525 (1), A527 (1), A528 (1), *Glacier* Stn GLD-10 (1); McMurdo Sound Stn TOS (1); Trans-Antarctic Expedition Stn TAE76 (2). Previous records from the Ross Sea: Willey (1902), Cape Adare, in 48 m; Ehlers (1912), Cape Adare, in 238–549 m.

DESCRIPTION:

Size: Length of body up to 40 mm; width, including parapodia, up to 15 mm; segments number 37–40.

Colour in alcohol: Usually pale cream, often with darkish longitudinal band on dorsum; setae yellow to golden-brown.

Prostomium: Peaks very sharp, almost papillae-like; slightly iridescent. 2 pairs of eyes; anterior pair the larger and situated at outer extremities of prostomium.

Median antenna long, thin with subterminal swelling, borne on a large round ceratophore; lateral antennae two-thirds length of median antenna, tapering to very fine tips. Palpi long, tapering, smooth.

Elytra: (Fig. 60) 15 pairs; broadly oval, overlapping mid-dorsally; covered with sharp spines ranging from very minute at anterior margin, to large conspicuous processes at posterior margins; posterior border with a fringe of cilia approximately the same length as the largest of the elytral spines.

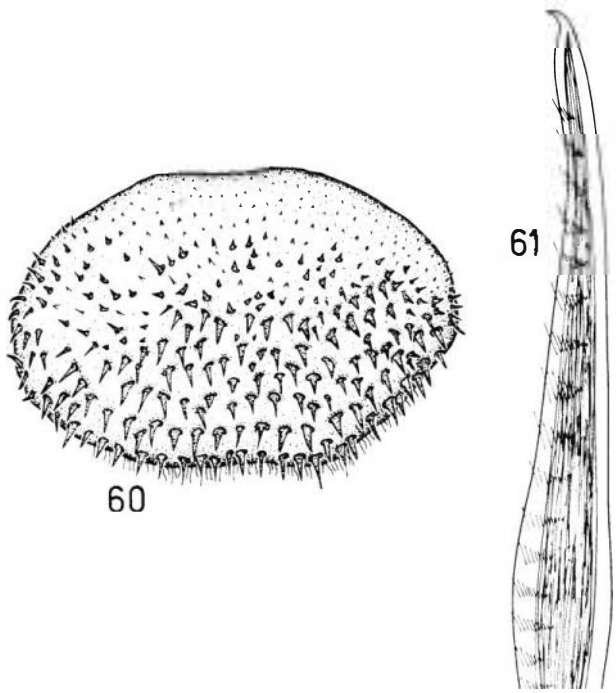
Parapodia: As for most species in this genus; dorsal cirri with only a slight subterminal swelling and dark bands above and below the swelling.

Notosetae: Stiff, brown, and nearly straight; well developed spinous region; tips entire.

Neurosetae: (Fig. 61) Thinner than notosetae, with curved unidentate tips and a very well developed spinous region; base shaft below spinous region and curved tip sometimes with a slight swelling.

Remarks: This species has a wide bathymetric range.

DISTRIBUTION: Eastern sector and the Ross Sea, in shallow to abyssal depths.



Figs 60–61. *Harmothoe crosetensis* (McIntosh). **60**. Elytrum from mid-body region. **61**. Neuroseta.

Harmothoe exanthema bergstromi Monro, 1936
(Figs 62–63)

Harmothoe exanthema bergstromi Monro, 1936: 65: Hartman, 1964: 29.

MATERIAL: NZOI Stn A457 (3). No previous records from the Ross Sea.

Description:

Size: Length of body up to 35 mm; width, including parapodia, 12 mm; segments number up to 40.

Colour in alcohol: Setae yellow, body pale cream with muddy grey or green patches on the dorsum of most segments.

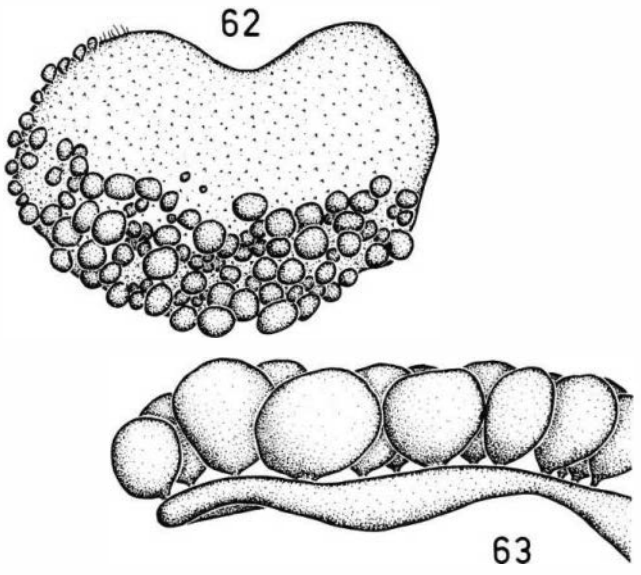
Prostomium: With well-developed peaks; slightly iridescent. 2 pairs of medium-sized eyes arranged as for other members of the genus. Median antennae missing in the present specimens, but situated on a stout dark-coloured ceratophore; lateral antennae approximately half the length of the palpi, with very short lateral hairs. Palpi long and tapering with a few sparse papillae.

Elytra: (Figs 62-63) Kidney-shaped, thick, with a very sparse ciliary fringe evident only in one or two places; the entire surface covered with tiny pointed microtubercles; the posterior third of the elytral surface covered with huge, almost spherical vesicles with a granulated surface and attached to the elytral surface by narrow bases, which can be seen only in lateral view (Fig. 63).

Parapodia: Dorsal cirri with subterminal swellings and hirsute for most of their length; a bulbous process situated above each dorsal cirrophore; ventral cirri short and pointed.

Notosetae: Short, stout, pectinated and distally entire.

Neurosetae: Longer and more numerous and thinner than the notosetae; lateral spines well developed; both entire and bifid tips present.



Figs 62–63. ***Harmothoe exanthema bergstromi*** Monro. **62.** Elytrum. **63.** Details of elytral papillae.

REMARKS: This subspecies differs from the stem species in having the posterior half of the elytra covered with a mass of globular vesicles attached by narrow bases. This is the first record of the species from outside the South American sector. The present specimens have been checked against the type in the British Museum (Natural History) with which they agree in all respects.

DISTRIBUTION: Southern South America and Ross Sea.

Harmothoe ernesti Augener, 1931 (Fig. 64)

Harmothoe ernesti Augener, 1931: 281–283, fig. 2; Monro, 1936: 88–89, fig. 7a-d; Hartman, 1964: 28, pl. 7, fig. 6.

MATERIAL: NZOI Stn A528 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 25 mm; width, including parapodia, up to 6.0 mm; segments number up to 41.

Colour in alcohol: Light cream to yellow, with dark transverse markings on dorsum.

Prostomium: Median ceratophore stout and dark in colour. 2 pairs of eyes; anterior pair slightly anterior to widest part of prostomium. Lateral antennae short, about same length as prostomium; palpi long and tapering, covered with fine cilia.

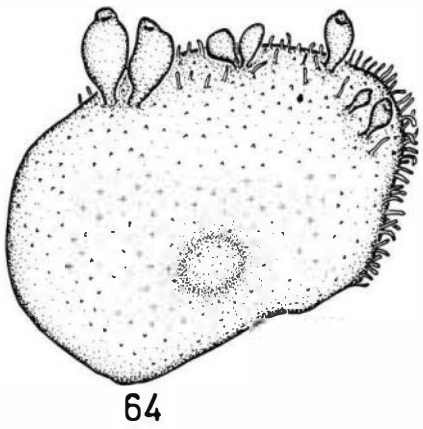


Fig. 64. ***Harmothoe ernesti*** Augener. Elytrum.

Dorsum: Slightly iridescent and smooth.
Ventrum: Smooth.
Elytra: (Fig. 64) 15 pairs, completely covering dorsum; surface covered with tiny, pointed microtubercles; posterior and lateral margins fringed with long thin papillae; a variable number of pedunculate macrotubercles ranging from smallish pear-shaped ones to large urn-shaped vesicles, the latter tending to be situated posterior to the former.
Parapodia: Dorsal cirri long, tapering and hirsute; a globular process situated dorsally to each dorsal cirrus; ventral cirri short and pointed.
Notosetae: Thick, short, strongly pectinated with smooth tips.
Neurosetae: Slender, longer than notosetae; spinous with bidentate tips.

REMARKS: This is the first record from the Ross Sea of this species which previously was known only from the South American sector.

DISTRIBUTION: Brazil, Southern Chile, Magellan area, Ross Sea.

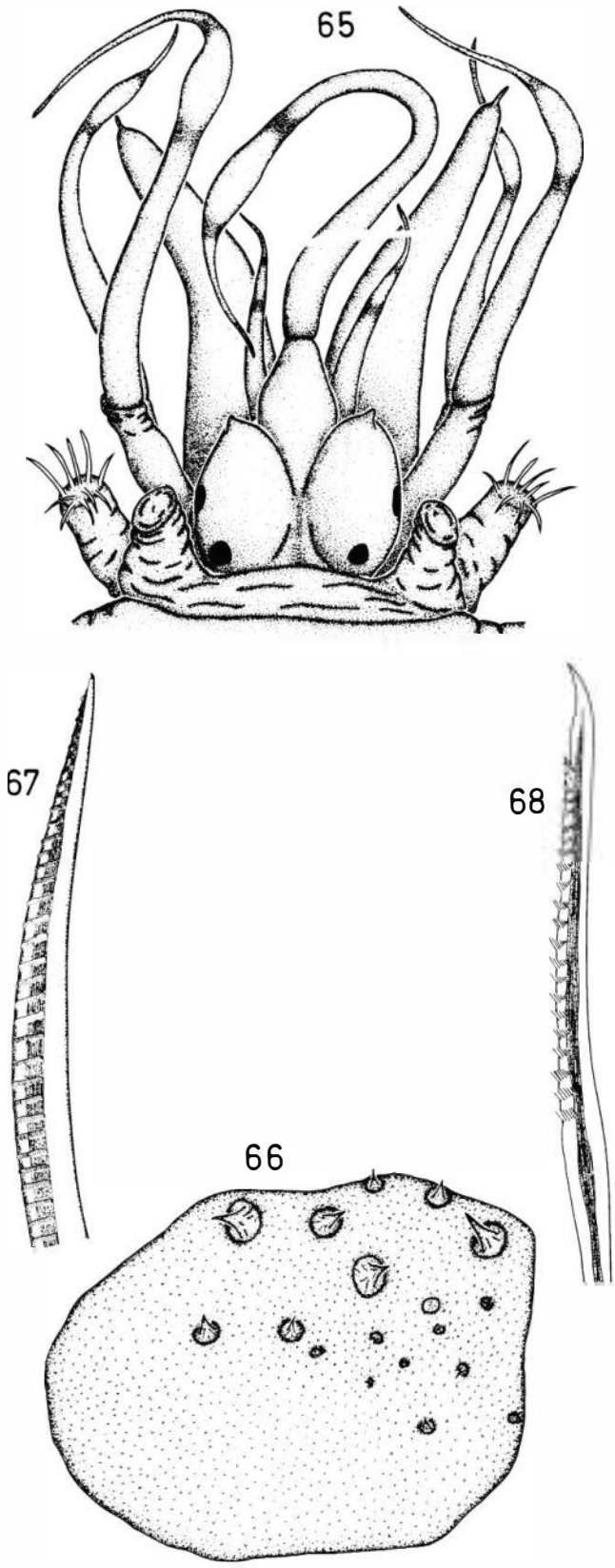
Hermadion Kinberg, 1855

Hermadion ferox Baird, 1865 (Figs 65–68)

Hermadion ferox Baird, 1865: 197–198; Hartman 1964: 33, pl. 10, figs 1–3.
Hermadion rouchi Gravier, 1911: 82–86, pl. 3, figs 33–34, pl. 4, figs 45–51, pl. 7, fig. 74; Benham 1927: 72.

MATERIAL: NZOI Stns A448 (2), A449 (1), A455 (3), A459 (3), A464 (2), A471 (4), A528 (1), A529 (1), A537 (4), A625 (3); *Glacier* Stns GLS-8 (1), GLD-10 (1), GLD-13 (4); McMurdo Sound Stns 60A (1), 61B (3); *Eastwind* Stn EAD-3 (2). Previous records from the Ross Sea: Baird (1865c) 74l°30' S, 175•30' E in 549 m; Benham (1927), McMurdo Sound in 256–549 m.

DESCRIPTION:
Size: Length of body up to 160 mm; width, including parapodia, up to 40 mm.
Colour in Alcohol: Extremely variable.
Prostomium: (Fig. 65) Prominent peaks present; 2 pairs of large black eyes. Lateral antennae inserted ventrally.
Dorsum: Pale, or with transverse black bands weakly to well developed.
Ventrum: Pale with a light midventral streak.
Elytra: (Fig. 66). Pale, or with varying amounts of black pigment on exposed surfaces; with large, round, prominent tubercles ending in sharp points.



Figs 65–68. ***Hermadion ferox*** Baird. **65**. Anterior end. **66**. Elytrum. **67**. Notoseta. **68**. Neuroseta.

Notosetae: (Fig. 67) Long, projecting dorsally to meet mid-dorsally, thick, slightly curved, serrated along their convex edge.

Neurosetae: (Fig. 68) Unidentate, longer, more slender and more numerous than notosetae with lateral serrations for about one-third their length.

REMARKS: Two species of *Hermadion* have been recorded from Antarctic waters, *H. ferox* and *H. magalhaensis*. *Hermadion ferox* is distinguished from *H. magalhaensis* by having giant elytral spines and notosetae in palisaded rows. As Benham (1950) has commented, there is considerable variation in the amount of pigmentation, ranging from none to dark bands across the dorsum, and the exposed surfaces of the elytra black. The largest specimen in the present collection is 55 mm in length and 20 mm wide including parapodia.

DISTRIBUTION: Bransfield Strait, South Georgia, Ross Sea, and south of New Zealand, in shallow to moderate depths.

Hermadion magalhaensis Kinberg, 1855

Hermadion magalhaensis Kinberg, 1855: 386: Gravier, 1911: 86–87; Ehlers 1912: 13; Fauvel 1916: 423–426, pl. 8, figs 10–11; Hartman 1964: 35–37; Uschakov 1962: 164; Bellan 1974: 786.
Hermadion longicirratus Kinberg, 1855: 23, pl. 6, fig. 33.
Hermadion kerguelensis: McIntosh, 1885: 105–108, pl. 11, fig. 5, pl. 12, fig. 1.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), Cape Adare, in 18–549 m.

DESCRIPTION:
Size: Length 60–80 mm; width 16–25 mm.
Prostomium: Without peaks. Lateral antennae inserted ventrally.
Elytra: 15 pairs inserted as in *Harmothoe* but with posterior segments uncovered. Variably coloured, brown and white; thickly covered with tubercles.
Notosetae: Dark brown, thick, upturned and smooth, or lightly pectinated.
Neurosetae: Distally unidentate, with well-developed lateral scales.

DISTRIBUTION: South of Punta Arenas, Magellan area, Patagonia, Falkland, and Kerguelen Islands; the common shore polychaete at Kerguelen. Usually confined to shallower than 50 m.

Polyeunoa McIntosh, 1885

Polyeunoa laevis McIntosh, 1885 (Figs 69–72)

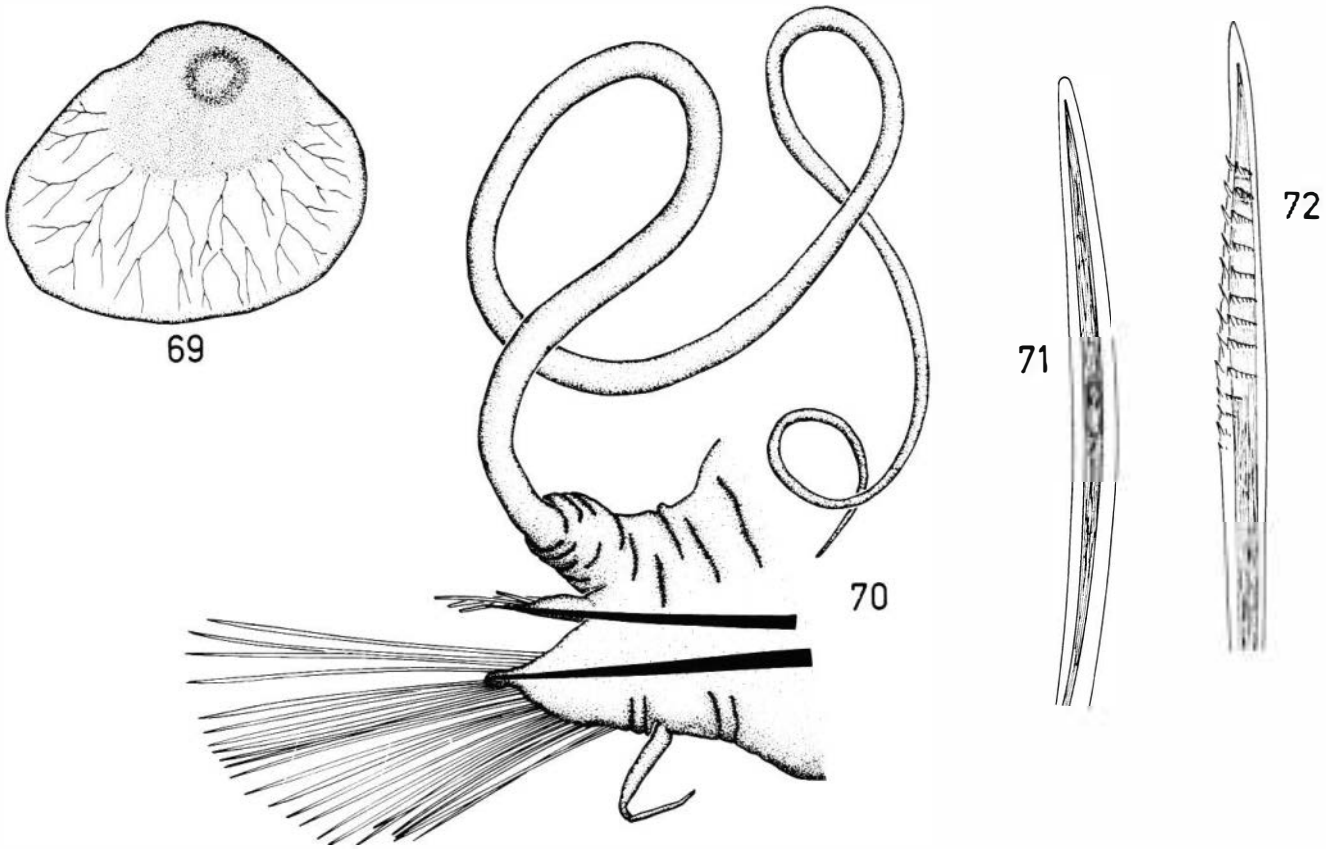
Polyeunoa laevis McIntosh, 1885: 76–77, pl. 12, fig. 2, pl. 20, fig. 8, pl. 7A, figs 11 & 13; Bergström 1916: 288–291, pl. 3, fig. 7; Knox 1960: 85, figs 27–29; Hartman 1964: 42, pl. 12, figs 5–7; Hartman 1978: 136–137; Bellan 1971: 72; Orensanz 1974a: 11; Averincev 1982: 11–12; Hartmann-Schröder 1983: 261; 1986: 74.
Enipo rhombigera: Ehlers 1912a: 47–49, pl. 4, figs 1–12; Ehlers 1912b: 13; Benham 1927: 64.

MATERIAL: *Glacier* Stn GLD-4 (2). Previous records from the Ross Sea: Ehlers (1912b) McMurdo Sound, Coulman Island in 176–549 m; Benham (1927) McMurdo Sound in 91–549 m.

DESCRIPTION:
Size: Length of body up to 55 mm; width, including parapodia, 6–11 mm; segments number 64–100.
Colour in alcohol: Pale yellow.
Prostomium: Longer than broad, rounded in front, without peaks. 2 pairs of eyes in harmothoid arrangement, each with a white lens in middle. Median antenna missing in present specimens, but probably long and tapering, ceratophore being large and stout; lateral antennae inserted ventrally, about half the length of palpi. Palpi very long and smooth.
Dorsum and ventrum: Both smooth.
Elytra: (Fig. 69) More than 19 pairs (up to 30 recorded); white and translucent; a dark patch surrounding scar, which is situated near anterior margin. A system of branching veins radiates out from scar; margins without fringe.
Parapodia: (Fig. 70) Very small notopodial lobe; short ventral cirri extending to tip of neuropodial lobe; dorsal cirri very long and tapering, approximately 14 times length of ventral cirri.
Notosetae: (Fig. 71) Short, thick, slightly curved, few in number and with smooth shafts.
Neurosetae: (Fig. 72) Longer than notosetae, distally entire, slightly expanded near tip, with a short region of well developed lateral spines.

REMARKS: Knox (1960) recorded this species from off the Chatham Islands. However, a comparison with the present material shows that the Chatham Island specimens belong to a different and probably new species.

DISTRIBUTION: Drake Passage, Falkland Islands, South Georgia, Antarctic Peninsula, Tierra del Fuego, Scotia Sea, South Shetland Islands, Bransfield Strait, South Orkney Islands, South Sandwich Islands, Ross Sea and South Africa.



Figs 69–72. ***Polyeunoa laevis*** McIntosh. **69**. Elytrum. **70**. Parapodium. **71**. Notoseta. **72**. Neuroseta.

Polynoe Savigny, 1818

Polynoe antarctica Kinberg, 1858 Figs (73–76)

Polynoe antarctica Kinberg, 1858: 23, pl. 10, fig. 58; Fauvel 1916: 426–427; Uschakov 1962: 175; Hartman 1964: 42–43; Averincev 1972: 124; Hartmann-Schröder, 1986: 75; Hartmann-Schröder & Rosenfeldt, 1988: 32.
Enipo antarctica: Ehlers 1901b: 47–49, pl. 4, figs 6–13.
Harmothoe antarctica: Bergström 1916: 279–280.

MATERIAL: NZOI Stns A448 (9), A449 (19), A455 (7), A456 (56), A457 (2), A459 (2), A461 (14), A463 (1), A464 (27), A465 (4), A466 (1), A467 (3), A468 (9), A469 (21), A516 (3), A519 (1), A522 (3), A526 (1), A527 (12), A528 (14), A532 (2), A536 (4), A537 (15), A538 (3), A625 (3); *Glacier* Stns GLD-4 (2), GLD-13 (5); *Eastwind* Stns EAD2 (8), EAD-3 (9); Trans-Antarctic Expedition Stns TAE-1 (2), TAE99 (2). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 80 mm; width, including parapodia 10–12 mm; segments number up to 88.

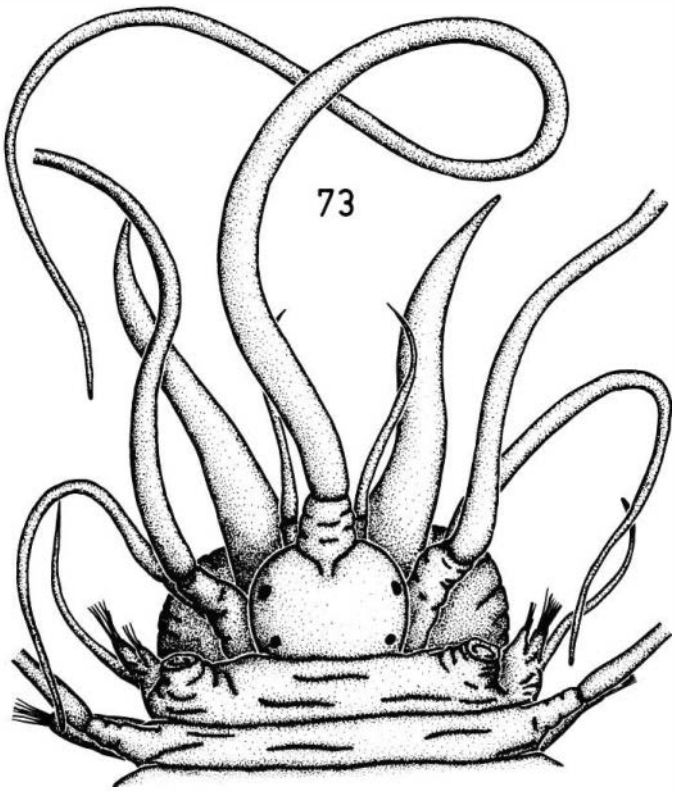
Colour in alcohol: Variable, usually pale yellow, with dark red bands across alternate segments anteriorly, and more irregular posteriorly; also a thin longitudinal dorsal pigment streak.

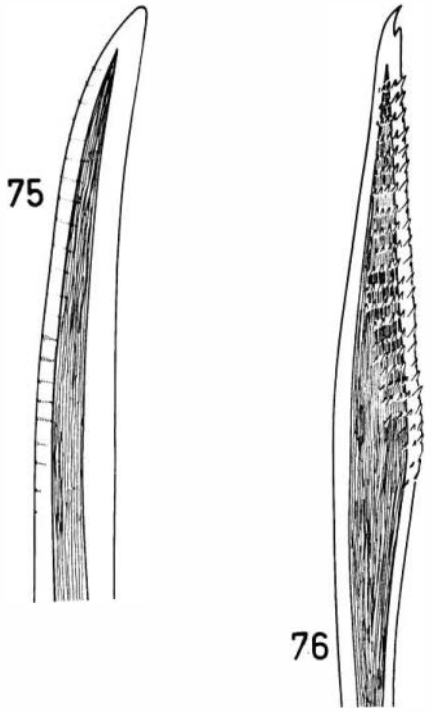
Prostomium: (Fig. 73) Rounded in front; usually without peaks, but some specimens may have very small ones present. 2 pairs of eyes in quadrate arrangement. Median antenna very long, twice the length of palps, and situated on a stout ceratophore; lateral antennae inserted ventrally, two-thirds the length of palps. Palpi stout at base tapering to fine points and covered with sparse papillae.

Dorsum and ventrum; Both smooth; posterior end of dorsum not covered by elytra.

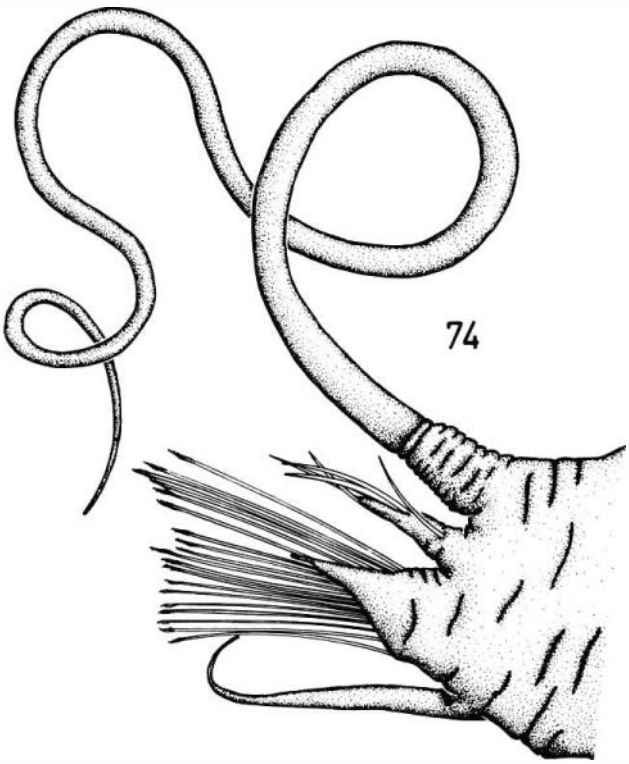
Elytra; 15 pairs; small, smooth except for a small group of microtubercles near scar; white and translucent.

Parapodia: (Fig. 74) Very similar to *Polyeunoa laevis*, but ventral cirri slightly longer, and post-setal neuropodial lobe more acutely pointed; dorsal cirri very elongated, especially in anterior region; in one specimen they were equal in length to 14 segments; dorsal cirri also have a subterminal dark brown band.





Figs 73–76. ***Polynoe antarctica*** Kinberg. **73**. Anterior end. **74**. Parapodium. **75**. Notoseta. **76**. Neuroseta.



Notosetae: (Fig. 75) Short, thick, few in number, lightly pectinated; distally entire and rounded.
Neurosetae: (Fig. 76) Longer than notosetae, distally bifid, with rows of well-developed lateral teeth.

REMARKS: This species is distinguished by its distinctive colour pattern; it is sometimes commensal with terebellids.

DISTRIBUTION: Booth Island, Falkland Islands, Patagonia, Strait of Magellan, Eastern sector of Antarctica and the Ross Sea.

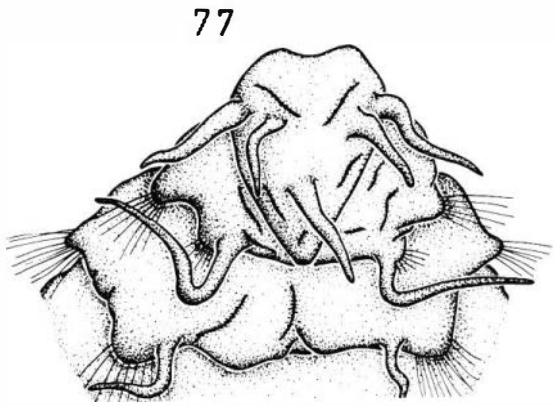
Family **AMPHINOMIDAE** Savigny, 1818

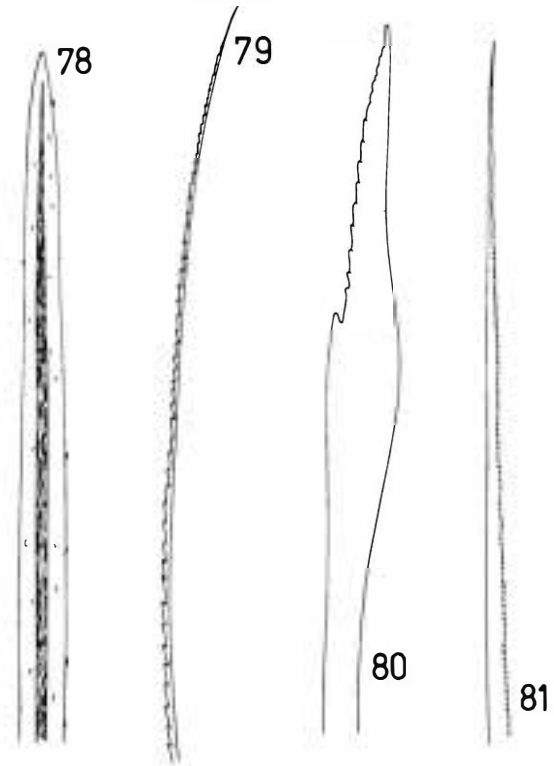
Paramphinome Sars, 1869

Paramphinome australis Monro, 1930 (Figs 77–81)

Paramphinome australis Monro, 1930: 32–34, fig. 3a-g; Hartman 1964: 45, pl. 14, figs 9–10; Hartman 1978: 137, fig. 7a-c.

MATERIAL: NZOI Stn A460 (1). No previous records from the Ross Sea.





Figs 77–81. ***Paramphinome australis*** Kinberg. **77**. Anterior end. **78**. Short, thick notoseta. **79**. Capillary notoseta. **80**. Short, stout neuroseta. **81**. Capillary neuroseta.

DESCRIPTION:

Size: Length up to 46 mm; width, including parapodia, up to 7 mm; segments number about 30.

Colour in alcohol: Pale brownish-yellow.

Prostomium: (Fig. 77) Longer than broad with 2 rounded prominences in front; tapering to a very narrow posterior margin; eyes absent. 2 pairs of small lateral antennae situated on anterior third of prostomium; a single median antenna situated on posterior third of prostomium.

Branchiae: Number about 13 pairs; first present on fourth setiger; each is richly branched and emerges immediately posterior to notopodia.

Parapodia: Dorsal cirri of the first parapodia considerably longer than those of other segments, and about twice the length of median prostomial antenna.

Notosetae: Of two distinct types; one short, thick, almost smooth and spear-like (Fig. 78); the other very much fewer in number, fine, long capillary and serrated along one side (Fig. 79).

Neurosetae: Also of two distinct types; one long and capillary with fine serrations along one edge (Fig. 81); the other fewer in number, somewhat knife-like, short and with a lateral spur, and a row of small teeth extending from this spur to tip (Fig. 80).

REMARKS: Monro (1930) mentioned a third type of neurosetae referring to them as "a few thick acicular setae each with an expanded tip". These were not seen in the present single specimen.

DISTRIBUTION: Southern South America, Scotia Sea, Bransfield Strait, South Orkney Islands and Ross Sea, in 244–430 m.

Family **EUPHROSINIDAE** Williams, 1851

Euphrosine Savigny, 1818

Euphrosine armadilloides Ehlers, 1900 (Figs 82–84)

Euphrosine armadilloides Ehlers 1900: 208; 1901b: 37–38, pl. 1, figs 6–8; 1913: 434–435; Hartman 1964: 45–46, pl. 14, figs 1–2; 1967: 45.

Euphrosine arctia: Monro 1930: 34–36, fig. 4.

MATERIAL: NZOI Stns A449 (1), A457 (1). No previous records from the Ross Sea.

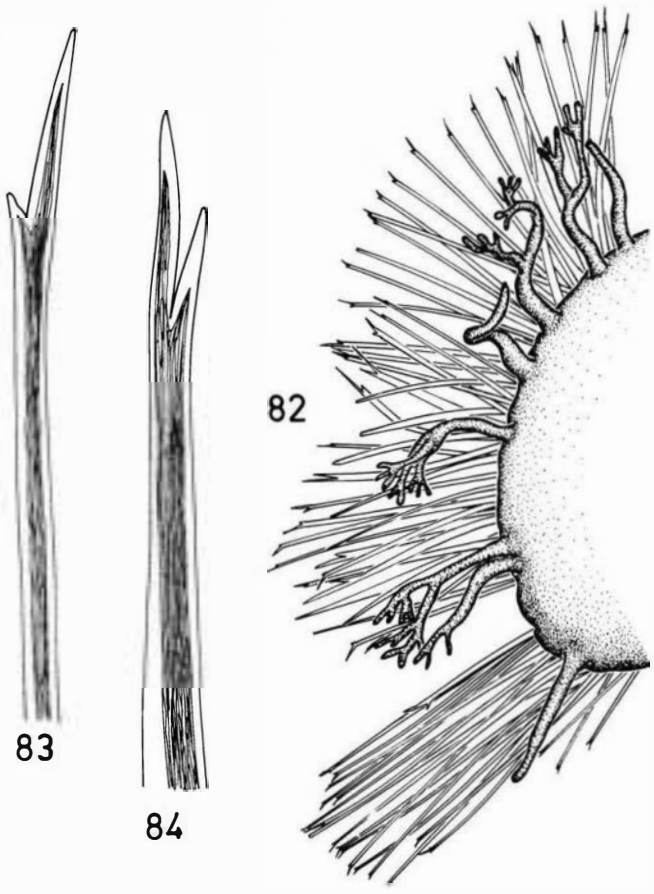
DESCRIPTION:

Size: Length of body up to 15 mm; width, including parapodia, up to 9.0 mm; segments number up to 25. Body curled tightly, nearly into a ball, protecting ventrum.

Colour in alcohol: Cream to reddish-brown.

Prostomium: Median caruncle present, extending back to segment 5; high and longitudinally ridged. 2 pairs of eyes, dorsal pair larger than ventral pair. Median antenna very short, only one-quarter the length of caruncle, two pairs of minute lateral antennae situated near each pair of eyes.

Branchiae: Present from first setiger, numbering up to 5 on each parapodium; each with a broad base and branching two or three times.



Figs 82–84. ***Euphrosine armadilloides*** Ehlers. **82**. Para-podium. **83,84**. Notosetae.

Parapodia: Almost semicircular in cross-section with 3 cirri, each approximately half the length of notosetae in dorsal, median, and ventral positions (Fig. 82). Setae covering all but a narrow median longitudinal band on dorsum.

Notosetae: (Figs 83–84) Slightly longer than branchiae; thick, smooth, with bifid tips, secondary tooth ranging from one-fifth to half the length of main tooth. Ringent (cross-ridged) setae may also be present.

Neurosetae: Longer than notosetae, more concentrated into a clump, but otherwise similar to notosetae.

REMARKS: This is the first record of this distinctive species from the Ross Sea.

DISTRIBUTION: Magellan area, Falkland Islands, Bransfield Strait, Enderby Land, Ross Sea, Pacific Antarctic Ridge.

Family **PHYLLODOCIDAE** Williams, 1852

KEY TO GENERA:

1 Anterior end with 2 pairs of tentacular cirri ..... *Eteone*
– Anterior end with 3 pairs of tentacular cirri 2
2 Parapodia biacicular or parapodia sub-biramous ..... *Austrophyllum*
– Parapodia uniacicular and uniramous 3
3 Ventral tentacular cirri of second pair foliaceous, and asymmetrical ..... *Steggoa*
– Ventral tentacular cirri of second pair not foliaceous and asymmetrical 4
4. Proboscis with longitudinal rows of papillae near the base ..... *Anaitides*
– Proboscis diffusely papillated ..... *Eulalia*

Anaitides Czerniavsky, 1882

Anaitides adarensis (Benham, 1927) (Fig. 85)

Phyllodoce adarensis Benham, 1927: 76-77, pl. 1, figs 23–26.
Anaitides adarensis: Hartman 1964: 49, pl. XVII, figs 7–8.

MATERIAL: NZOI Stn A467 (1); McMurdo Sound Stn V-3 (1). Previous records from the Ross Sea: Benham, (1927) Cape Adare, in 82–91 m.

DESCRIPTION:

Size: Length of body up to 70 mm; width, including parapodia, up to 6.0 mm; segments number over 200.

Colour in alcohol: Variable, from light pink to dark reddish-brown.

Prostomium: Broadly triangular, very narrow at anterior border. One pair of small eyes set well back on prostomium. 4 small antennae at anteriormost point of prostomium, each less than half the length of prostomium.

Tentacular cirri: First pair on segment 1; second and third pairs on segment 2; fourth pair on segment 3; all of uniform shape, round and tapering; the longest extending back to segment 10.

Proboscis: Covered with soft globular papillae; the proximal end of proboscis with papillae arranged in longitudinal rows.

Parapodia: (Fig. 85) With large foliaceous dorsal cirri, their width nearly equal to their length, terminating in blunt points, with a leaf-like venation; ventral cirri with a very rounded ventral edge, and terminating in a pointed tip extending just beyond setigerous lobe.

Setae: Long, almost straight, compound spinigers with the articulation denticulated and tapering to a fine point.

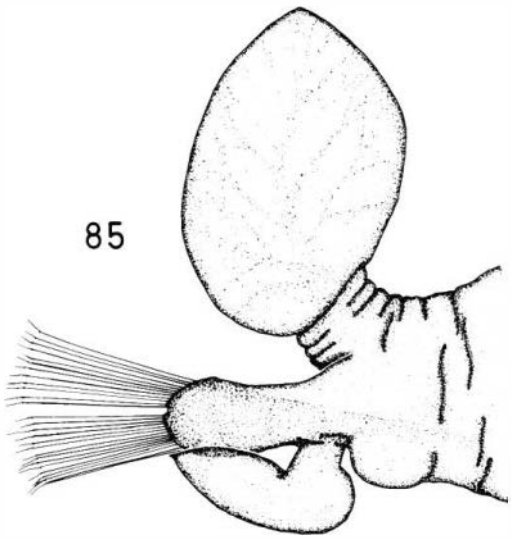


Fig. 85. *Anaitides adarensis* (Benham). Parapodium.

REMARKS: This is the second record of this species which is only known from the Ross Sea.

DISTRIBUTION: Cape Adare, Ross Sea.

Anaitides bowersi (Benham, 1927)

Phyllodoce bowersi Benham, 1927: 77, pl. 1, figs 27–31.
Phyllodoce (Anaitis) bowersi: Monro 1930: 72–73.
Anaitides bowersi: Uschakov 1962: 140–141, pl. 1, figs B–V; Hartman 1964: 49, pl. 15, figs 1–2.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), Ross Sea in 289 m.

DESCRIPTION:
Size: Length of body up to 60 mm; width, including dorsal cirri 5.0 mm; segments number about 120.
Colour in alcohol: Almost white.
Prostomium: As wide as long; approximately semi-circular; eyes absent. 2 pairs of antennae, short and widely separated, the length of each about half prostomial width.
Tentacular cirri: First segment with one pair as long as the width of segment; second segment with 2 pairs, dorsal pair longer; third segment with one long pair extending back to segment 8.
Proboscis: With papillae evenly dispersed over entire length.
Parapodia: Dorsal cirri elliptical with broad bases, overlapping but projecting outwards; each cirrus with a short, wide ceratophore; ventral cirri large, oval, extending nearly to end of parapodia.
Setae: Composite, number about 36 in a fascicle; appendage long and minutely serrated.

DISTRIBUTION: Ross Sea and Eastern sector of Antarctica.

Anaitides longipes (Kinberg, 1866) (Figs 86–87)

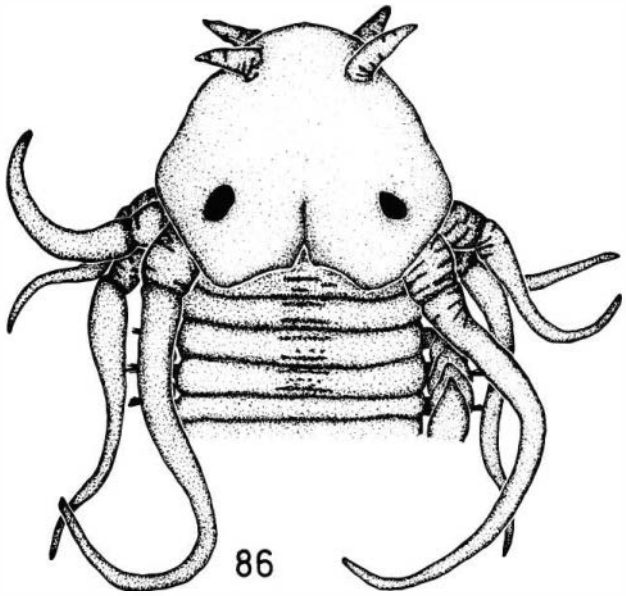
Phyllodice longipes Kinberg, 1866: 171.
Phyllodoce (Anaitides) longipes: Day 1963: 394–395, figs 3d-f.
Anaitides longipes: Hartman 1964: 49–50, pl. 15, figs 3–4.

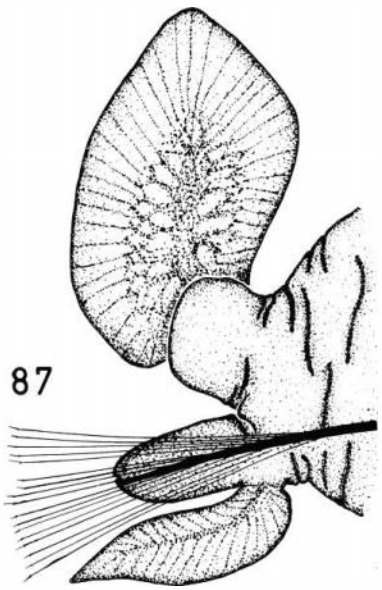
MATERIAL: NZOI Stns A448 (2), A451 (3), A456 (2), A468 (2), A527 (1), A529 (1); *Glacier* Stn GLD-1 (1); McMurdo Sound Stn 61E, (1). No previous records from the Ross Sea.

DESCRIPTION:
Size: Length of body up to 60 mm; width, including parapodia up to 8.0 mm; segments number more than 150.
Colour in alcohol: Usually cream, sometimes reddish-brown.
Prostomium: (Fig. 86) About as broad as long with a median posterior notch, but no nuchal papillae. One pair of eyes, large and widely separated; 2 pairs of short, stumpy antennae.
Tentacular cirri: 4 pairs on segments 1 (one pair), 2 (two pairs), and 3 (one pair); dorsal tentacular cirri on second segment the longest, reaching back to segment 15.
Dorsum: 2 or 3 rows of blurred spots on each of first 3 or 4 segments (Fig. 86); remaining segments usually with transverse pigment patches.
Proboscis: Proximal half with 6 longitudinal rows of papillae on each side, about 14 in each row; distal half with 6 rugose ridges.
Parapodia: (Fig. 87) Dorsal cirri very long and foliaceous, with characteristic patterning on either side; dorsal cirrophore large and rounded; ventral cirri also foliaceous and extending well beyond parapodial lobe, with a somewhat similar pattern to that of dorsal cirri.
Setae: Composite spinigers with articulation serrated along one side of shaft, tapering to a fine point.

REMARKS: Day (1963) figures a parapodium exhibiting a pointed presetal lobe; the present specimens do not appear to have this lobe developed to the same extent and in many cases it is not present at all. In all other respects it agrees with previous descriptions of the species.

DISTRIBUTION: Southern Chile, Port Lockley, South Africa, Ross Sea.





Figs 86–87. ***Anaitides longipes*** (Kinberg). **86.** Anterior end. **87.** Parapodium.

Anaitides madeirensis (Langerhans, 1880)

Phyllodoce madeirensis Ehlers, 1887: 25; 1913: 353–354; Benham, 1927: 74–75.
Phyllodoce (Anaitis) madeirensis: Willey 1902: 270–271, pl. 42, fig. 5, pl. 44, fig. 7.
Anaitides madeirensis: Hartman 1964: 51.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), Cape Adare, in 37 m; Benham (1927), McMurdo Sound, 347–457 m.

REMARKS: Willey (1902) first recorded this species under the name *Phyllodoce (Anaitis) madeirensis*. His specimen measured 72 mm long and 3 mm wide; the proboscis had 6 rows of papillae on each side, with 10–12 in each row, and a mid-dorsal row of 7 similar papillae; all papillae were brown on their oral sides; the composite setae had greatly prolonged appendages. Benham (1927) recorded a second individual from McMurdo Sound as *P. madeirensis*; this specimen measured 150 mm for 250 segments. He described the proboscis as having an anterior papillose portion with compressed papillae, and a posterior rugose portion with 5–6 muscular ridges. Whether these records are identical with *Anaitides madeirensis* (Langerhans, 1880) from the Mediterranean is impossible to determine but it is probable that they do not belong to *A. madeirensis* at all, but may represent a new species, or alternatively they possibly belong to *A. patagonica* which has been reported from South Georgia and the Antarctic Peninsula.

Austrophyllum Bergström, 1914

Austrophyllum charcoti (Gravier, 1911)

(Figs 88–89)

Eulalia charcoti Gravier, 1911: 57, pl. 1, figs 14–16, pl. 2, figs 17–18; Benham, 1927: 73.
Austrophyllum charcoti: Bergström 1914: 119, fig. 30; Hartman 1964: 52, pl. 15, fig. 7.

MATERIAL: NZOI Stns A448 (1), A456 (1), A461 (1), A528 (2), A529 (2); *Glacier* Stn GLD-8 (1); *Eastwind* Stn EAD-3 (2). Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 293–549 m.

DESCRIPTION:

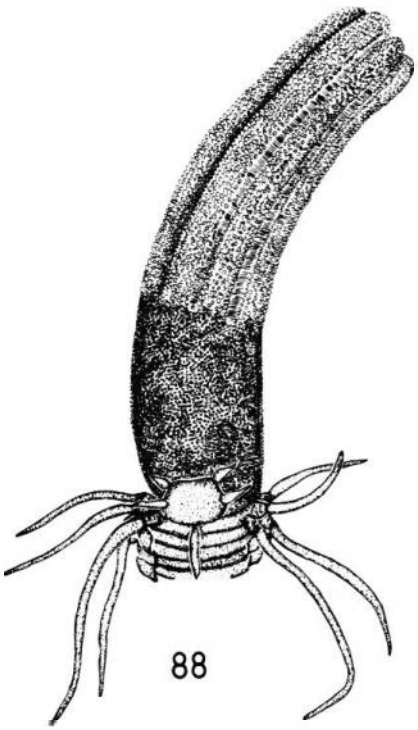
Size: Length of body up to 150 mm; width, including parapodia, up to 6.0 mm.

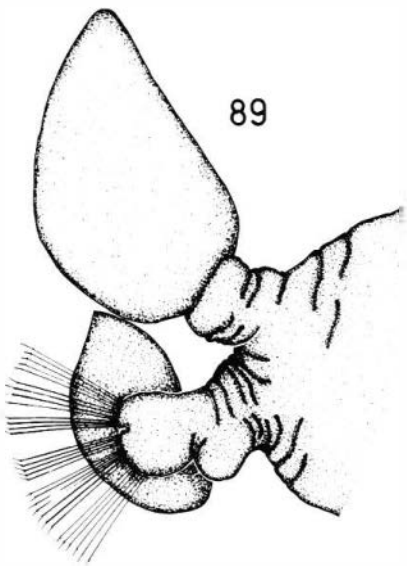
Colour in alcohol: Ranging from dark green to brownish-yellow; in life iridescent emerald-green.

Prostomium: (Fig. 88) Suboval, lacking eyes, slightly broader than long. 2 pairs of frontal antennae, short, and thick at base; a median antenna about twice as long as frontals, situated in the middle of posterior border of prostomium.

Proboscis: (Fig. 88) Covered with small papillae, forming 6 longitudinal rows on distal half and uniting into a continuous band of papillae on the proximal half.

Tentacular cirri: 4 pairs; on segment 1 (one pair), segment 2 (2 pairs), and segment 3 (one pair); second dorsal tentacular cirri longest, extending back to segments 20–23.





Figs 88–89. ***Austrophyllum charcoti*** Gravier. 88. Anterior end with everted proboscis. 89. Parapodium.

REMARKS: This is the second record of this species from the Ross Sea area.

DISTRIBUTION: South Shetland Islands, South Georgia, Ross Sea area, in 40–438 m.

Eteone Savigny, 1818

Eteone aurantiaca Schmarda, 1861

Eteone aurantiaca Schmarda, 1861: 85, figs a-d; Ehlers 1901: 80; 1913: 456–457; Bergström 1914: 201–203, fig. 7; Monro 1930: 71; 1939: 107; Hartman 1953: 17; 1964: 53, pl. 15, fig. 8.
Eteone spathocephala Ehlers, 1897: 32–33, pl. 1, figs 20–25.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

DESCRIPTION:
Size: Length of body up to 100 mm; segments number about 250.
Prostomium: Narrow, triangular
Tentacular cirri: 2 pairs similar to each other, but dorsal ones about two-thirds as large as ventral ones.
Parapodia: Dorsal cirri of the median segments asymmetrical, longer than wide; ventral cirri distally blunt.
Setae: Typical composite setae.
Anal process: Long, attenuate, about 4 times as long as broad.

DISTRIBUTION: Southern Chile, Falkland Islands, South Georgia, Cape Hallett (Ross Sea).

Eulalia Savigny, 1818

Eulalia sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m.

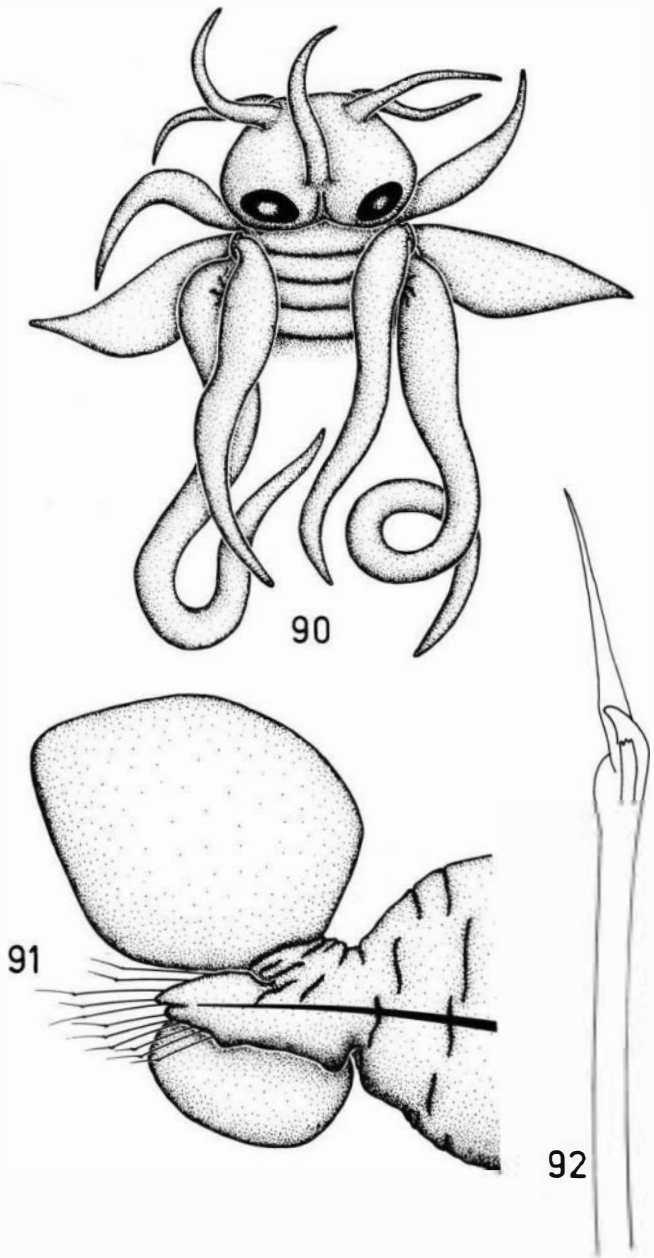
REMARKS: This genus is characterised by a prostomium somewhat longer than broad with 2 eyes, a median antenna, and 2 pairs of frontal antennae. *Tentacular cirri*: segment 1 (1), segment 2 (2), segment 3 (1). The proboscis is diffusely papillated.

Two species of the genus have been recorded from Antarctica, *E. sublufera* and *E. varia*. The specimens obtained by Lowry were not available for examination and consequently cannot be referred to either of these species.

Steggoa Bergström, 1914

Steggoa hunteri (Benham 1921) (Figs 90–92)

Eulalia (Pterocirrus) hunteri Benham, 1921: 53–55, pl. 7, figs 48–52; Uschakov 1962: 145, fig. 1.



Figs 90-92. ***Steggoa hunteri*** (Benham). **90**. Anterior end. **91**. Parapodium. **92**. Composite seta.

Pterocirrus hunteri: Benham 1927: 73–74, pl. 1, figs 21–22.
Steggoa hunteri: Hartman 1964: 57, pl. 17, figs 3–5.

MATERIAL: NZOI Stns A455 (2), A456 (2). Previous records from the Ross Sea: Benham, 1927, McMurdo Sound, in 256–441 m.

DESCRIPTION:

Size: Length of body up to 280 mm; width, including parapodia, up to 8.0 mm; segments number up to 800.

Colour in alcohol: Orange to pinkish-brown; dorsum with paired quadrate pigment patches on each segment.

Prostomium: (Fig. 90) Almost triangular, wider than long. One pair of eyes, large, situated well back on prostomium; a posterior median notch present. 2 small pairs of frontal antennae and a larger median one situated anterior to eyes.

Tentacular cirri: All are cirriform except for ventral cirrus of second segment, which is foliaceous and terminates in a fine point; first and second tentacular segments are without setae.

Parapodia: (Fig. 91) Short, with very long foliaceous dorsal cirri, and almost circular ventral cirri extending up behind parapodial lobe and setae; superior presetal lobe slightly extended and terminating in a blunt point.

Setae: (Fig. 92) Very characteristic composite setae with cusped articulations.

REMARKS: This is the first record from the Ross Sea of this widespread Antarctic species.

DISTRIBUTION: Commonwealth Bay, South Georgia, South Shetland Islands, Antarctic Peninsula and the Ross Sea.

Steggoa magalhaensis (Kinberg, 1866)

Eulalia magalhaensis Kinberg 1866: 241; Ehlers 1901b: 73–76, pl. 8, figs 1–8; Ehlers 1912b: 13.
Eulalia (Pterocirrus) magalhaensis: Gravier 1911: 56–57, pl. 1, figs 12–13; Monro 1939: 105–106.
Steggoa magalhaensis: Hartman 1964: 57–59, pl. 17, fig. 6; Averincev 1972: 100, figs 1–4; Bellan 1974: 787; Orensanz 1974: 91; Hartmann-Schröder 1986: 76.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), Coulman Island.

DESCRIPTION:

Size: Length of body up to 100 mm; width up to 3.5 mm; segments number 70–350.

Prostomium: One pair of large round eyes; median antenna inserted just behind middle of lobe and in front of eyes.

Tentacular cirri: Cirriform, except for ventral cirri of segment 2 which are flat and foliaceous; second segment lacks setae.

Proboscis: Diffusely papillated.

Parapodia: Dorsal cirri long, lanceolate, about 3 times as long as broad. Ventral cirri oval with blunt tips.

DISTRIBUTION: Circum-Antarctic, intertidal to 732 m.

Family **ALCIOPIDAE** Ehlers, 1864

Rhynchonereella Costa, 1864

Rhynchonereella bongraini (Gravier, 1911)

Rhynchonereella bongraini Gravier, 1911: 76–71, pl. 4, figs 39–43; Tebble 1960: 191–192; Hartman 1964: 59–61, pl. 18, figs 1–3.
Rhynchonereella fulgens: Ehlers 1913: 467.
Callizona bongraini: Benham 1929: 189–190, pl. 1, figs 11–12.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1929), entrance to Ross Sea, in 0–500 m.

DESCRIPTION:
Size: Length 2.8–7.0 mm; segments number 25–50.
Prostomium: Extends forward beyond the eyes; one pair of eyes, large, covering most of prostomial surface. Antennae 5 in number; 2 pairs short and foliaceous, set close together at frontal margin; median subulate one in a groove between eyes.
Tentacular cirri: 5 pairs; one pair on first segment, 2 pairs on each of second and third segments, second ventral cirrus being foliaceous; cirri on segment 3 about 3 times as long as other cirri.
Proboscis: Terminating distally in 12 blunt papillae.
Parapodia: With very small cirriform appendages on pedal lobes; ventral cirri small, flat to ovate.
Setae: First 7 or 8 segments with short composite setae, their appendages smooth to dentate; other segments with longer simple setae. Segmental glands rarely present before parapodia 10 and seldom pigmented.

DISTRIBUTION: Cosmopolitan; eurythermal; widely distributed horizontally and vertically into tropical regions.

Family **LOPADORRHYNCHIDAE** Claparède, 1868

KEY TO GENERA:
1 Tentacular cirri number 2 pairs, dorsal and ventral cirri slender ..... *Pelagobia*
– Tentacular cirri number 3 pairs, dorsal cirri foliaceous, ventral cirri pointed and conical ..... *Maupasia*

Maupasia Viguier, 1886

Maupasia coeca Viguier, 1886

Maupasia coeca Viguier, 1886: 382; Ehlers 1912: 15; Benham 1927: 79; Hartman 1964: 63–64, pl. 19, figs 34.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), Cape Adare, in 9 m; Benham (1927), Cape Evans, in 20 m.

DESCRIPTION:
Size: Length 3–5 mm; segments number 15; body short and broad.
Prostomium: With projecting nuchal organs and no eyes.
Proboscis: Large and unarmed.
Parapodia: First segment not distinct from prostomium, with 2 pairs of long tentacular cirri and a setigerous parapodial lobe. Second segment distinct, with 2 pairs of long tentacular cirri, and a setigerous lobe. All other segments with normal dorsal and ventral cirri, and conical parapodia; dorsal cirri broadly cordate terminating in a point; ventral cirri as long, or longer.
Setae: Composite spinigers.

DISTRIBUTION: Cosmopolitan in surface waters to 750 m.

Pelagobia Greeff, 1879

Pelagobia longicirrata Greeff, 1879

Pelagobia longicirrata Ehlers, 1912: 14; Augener 1929: 291; Stöp-Bowitz 1949: 4; Dales 1957: 107–108, figs 11–13; Hartman 1964: 64, pl. 19, figs 5–6.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), Coulman Island and Cape Adare, in 7–18 m.

DESCRIPTION:
Size: Length 2–5 mm; or to 12 mm; segments number 25.
Prostomium: Conical or truncated in front; one pair of eyes, and 2 pairs of thread-like antennae.
Tentacular cirri: 2 pairs, long, subulate, each of first segments with setigerous parapodia. Second segment lacks dorsal cirri. All following segments with slender, tapering dorsal and ventral cirri.
Parapodia: Each with a single acicula.
Setae: Numerous, long, delicate and composite; the appendages denticulated and head of shaft usually smooth, rarely denticulated, differing therein from warm-water form, in which head of shaft is toothed.

DISTRIBUTION: Cosmopolitan, Arctic to Antarctic seas, in 250–3000 m

Pelagobia viguieri Gravier, 1911

Pelagobia viguieri Gravier, 1911: 62–65, pl. 2, figs 22–25: Benham 1927: 78; Hartman 1964: 64, pl. 19, figs 7–8.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), off Cape Royds, McMurdo Sound in plankton.

DESCRIPTION:

Size: Length 6–10 mm; width, including setae, 4.0 mm; segments number 20–24.

Prostomium: Nuchal organs well developed, one on each side, inserted in the form of a cross. One pair of eyes; 2 pairs of antennae; anterior pair much longer, and posterior pair inserted ventrally.

Tentacular cirri First segment with 2 pairs, very long, with a small parapodium between these cirri.

Pharynx: Short, terminating distally in a circlet of papillae without teeth.

Parapodia: Dorsal and ventral cirri resemble tentacular cirri but are much shorter.

Setae: Of one kind; composite, strongly heterogomph with very long straight appendages.

DISTRIBUTION: Antarctic; pelagic, surface to 950 m.

Family **TYPHLOSCOLECIDAE** Uljanin, 1878

KEY TO GENERA:

Prostomium with dorsal and ventral ciliated epaulettes ..... *Typhloscolex*

Prostomium with nuchal organs forming a caruncle ..... *Travisiopsis*

Travisiopsis Levinsen, 1885

Travisiopsis levenseni Southern, 1910

Travisiopsis levenseni Southern, 1910: 234–235; Stop-Bowitz 1949: 19; Hartman 1964: 65–67, pl. 20, figs 9–10.

Sagitella kowalewskii: Gravier 1911: 74–76, pl. 3, figs 30–32; Benham 1927: 80–81, pl. 2, figs 33–34.

Sagitella lobifera: Ehlers 1912: 24, pl. 3, figs 1–4.

Sagitella cornuta: Ehlers 1912: 25.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound in 9 m; Benham (1927), 70°29' S, 160°00' W, in 160 m.

DESCRIPTION:

Size and shape: Length of body 10–30 mm; width 3–6 mm; segments number 23–25; body spindle-shaped.

Colour in alcohol: Yellow to pale green.

Prostomium: A tapering cone with filiform palpode. A foliaceous cirrus on each side of prostomium; next 2 segments each with a pair of cirri. Nuchal organ situated in the median dorsal line, directed backwards as a tongue-shaped process, and at sides a pair of pinnate lobes directed back, about as long as prostomium; these pinnate lobes with up to 5 or 6 branches on each side of main stem.

Parapodia: After first 3 segments dorsal and ventral cirri present on every segment. With an acicula surrounded by a cylindrical sheath.

Setae: Begin on segment 6 or 7, simple with curved tips; 2 or 3 per parapodium.

DISTRIBUTION: North and South Atlantic, South Georgia and into the Antarctic regions; pelagic to depths of 2200 m.

Typhloscolex Busch, 1851

Typhloscolex muelleri Busch, 1851

Typhloscolex muelleri Busch, 1851: 115; Ehlers 1913: 530; Monro 1930: 90; Stöp-Bowitz 1949: 17–18, fig. 8; Hartman 1964: 67, pl. 20, fig. 13.

Sagitella kowalewskii: Benham 1927: 80; Monro 1930: 12.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), Ross Sea.

DESCRIPTION:

Size and Shape: Length of body 2–10 mm, including anal cirri; segments number 17–30; body short and spindle-shaped.

Prostomium: With dorsal and ventral ciliated epaulettes, the dorsal with 2 small wings; prolonged forward into a palpode.

Anterior segments: Prostomium followed by 3 short narrow segments fused together with a cirrus on each side, whereas all other segments have 2 pairs of large foliaceous cirri. Fourth segment short followed by up to 23 larger segments.

Parapodia: Large dorsal and ventral cirri are compressed backwards against body.

Setae: Present from segment 11; 2 or 3 in a fascicle; each a strait-pointed, colourless acicula.

Pharynx: A short truncated cone.

DISTRIBUTION: North and South Atlantic, Mediterranean Sea, Antarctic waters; pelagic, surface to 3000 m.

Family **TOMOPTERIDAE** Grube, 1848

Tomopteris Eschscholtz, 1825

Tomopteris carpenterii Quatrefages, 1865

Tomopteris carpenterii Quatrefages, 1865: 227–228, pl. 20, figs 1–2; Ehlers 1917: 229–231, pl. 12, figs 9–12; Benham 1929: 191–195, pl. 11, figs 18–23; Hardy & Gunther 1936: 115; Hartman 1964: 67–69, pl. 20, fig. 1.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1929), various stations in the Ross Sea and McMurdo Sound; Hardy and Gunther (1935), in 0–1000 m.

DESCRIPTION:

Size: Length of body 7–70 mm; width 7–15 mm; segments number 29–37.

Prostomium: Without median notch; neck region short and broad, cerebral ganglion transversely elongated and slightly bilobed. One pair of eyes, black; maybe not visible in the adult.

Parapodia: First segment without parapodia; second pair with a pair of conspicuous long appendages, extending distally about three-quarters of body length. Parapodia conical, pinnules oval and long. A conspicuous hyaline gland from third parapodium continued further back, on the neuropodial pinnule somewhat above and beyond the apex of pedal trunk. A very large chromophile gland from fourth neuropodium, located below the apex of the pedal trunk. Gonads occur in both notopodia and neuropodia.

REMARKS: *Tomopteris carpenterii* is the first known polychaete taken from the Antarctic. It was collected by the *Zelée*, on the Dumont D'Urville Expedition 1837–1840, at 60°03' S, and 1°00' W.

DISTRIBUTION: Antarctic seas, eurybathic, surface to 2800 m.

Tomopteris cavalli Rosa, 1908

Tomopteris cavalli Rosa, 1908: 304; Ehlers 1917: 231–232; Benham 1929: 197; Hartman 1964: 64, pl. 21, fig. 2.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1929), Ross Sea, 71°49' S, 167°57' W.

DESCRIPTION:

Size: About 12 mm in length; parapodia number 20 pairs.

Prostomium: Deeply notched in front. Cerebral ganglion transversely oval and elongated. One pair of eyes, brown. First segment without setigerous appendages; second segment with a pair of very long appendages, extending back for two-thirds of body length.

Parapodia: Rami not widely separated, pinnules broadly rounded. A large chromophile gland present from fourth neuropodium, continued back to posterior end, located on inferior side of pinnule below tip of ventral trunk. Hyaline glands absent. Gonads confined to the neuropodia.

DISTRIBUTION: South Atlantic Ocean into Antarctic sea; pelagic, surface to 3000 m.

Tomopteris planktonis Apstein, 1900

Tomopteris planktonis: Augener, 1929: 303–304; Stöp-Bowitz 1949: 13; Hartman 1964: 70, pl. 21, fig. 4.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Stöp-Bowitz (1949), Ross Sea in 300–400 m.

DESCRIPTION:

Size: Length of body 2–10.5 mm; width 0.5–3.0 mm; segments number 10–17.

Prostomium: One pair of eyes, prominent. Frontal antennae continuous across midfront.

Parapodia: First pair without setae; second pair large, with setae two-thirds as long as body. Hyaline glands apical on neuropodial pinnules of all parapodia but sometimes indistinct. Chromophile glands in neuropodia, first in inferior border of fourth neuropodia; when best developed they extend to proximal base of pinnules.

DISTRIBUTION: South Altantic Ocean, into Antarctic seas, circumpolar; pelagic to 400 m.

Tomopteris septentrionalis Steenstrup, 1849

Tomopteris septentrionalis: Gravier, 1911: 3; Benham 1929: 195; Stöp-Bowitz 1949: 12; Hartman 1964: 70, pl. 21, fig. 5.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1929), Cape Adare; Stöp-Bowitz (1949), Ross Sea, 0–400 m.

DESCRIPTION:

Size: Length of body 10–15 mm; parapodia number 10–23 pairs.

Prostomium: With a slight anterior notch; cerebral ganglion oval and bilobed. Neck region wide and short. One pair of eyes, brown.

Parapodia: First segment lacks parapodia. Second segment with parapodia almost as long as body. Chromophile glands present from the fourth parapodia and continue further back, located in neuropodia just beyond apex of ventral trunk; their size variable, sometimes small, just inside the border of pinnule, and occupying entire distance from tip of trunk to end of pinnule. A small and sometimes indistinct hyaline gland above and beyond chromophile gland. Ventral surface of neuropodial pinnules with many fine, parallel tubules which appear to open at ventral border of pinnule. Gonads in the notopodia.

DISTRIBUTION: Atlantic and Pacific Oceans; cosmopolitan; eurybathic, surface to 400 m.

Family **HESIONIDAE** Malmgren, 1867

KEY TO GENERA:

Parapodia uniramous ..... *Syllidia*
Parapodia biramous ..... *Ophiodromus*

Ophiodromus Sars, 1861

Ophiodromus comatus (Ehlers, 1912)

Podarke comata Ehlers, 1912: 15; Ehlers 1913: 469–471, pl. 30, figs 1–4.
Ophiodromus comatus: Hartman 1964: 71, pl. 22, figs 1–2.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound.

DESCRIPTION:

Size: Length more than 9.0 mm; width 2.0 mm; segments number more than 24. Body depressed and widest at the eighth segment.

Colour in alcohol: Dorsum pale yellow, crossed by transverse brown lines, each band consisting of 3 closely spaced stripes.

Prostomium: Quadrate, widest posteriorly. Eyes, 2 pairs near middle of prostomium; anterior pair larger and wider apart. 3 slender antennae, median one between eyes, others further forward; each as long as prostomium. One pair of palps; thick, inserted ventral to antennae.

Tentacular cirri: 6 pairs, prolonged; 2 pairs on each of first 3 segments; longest extending back to 12th segment.

Proboscis: With single row of papillae; without jaws.

Parapodia: Biramous, notopodia shorter; dorsal cirri long; ventral cirri only about one-third the length of dorsal cirri.

Notosetae: Simple, coarsely serrated along cutting edge.

Neurosetae: Composite; appendages much longer than wide, distally falcate, finely serrated.

DISTRIBUTION: Victoria Land; Wilhelm II Coast, in 329 m.

Syllidia Quatrefages, 1865

Syllidia inermis (Ehlers, 1912)

Magalia inermis Ehlers, 1912: 15–17, pl. 2, figs 1–5.
Syllidia inermis: Hartman 1964: 75, pl. 23, figs 5–6.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound in 18 m.

DESCRIPTION:

Size: Length of body 10 mm; segments number 38.

Prostomium: Quadrate, broader than long; 4 dark eyes in trapezoid arrangement, anterior pair larger and wider apart. A pair of frontal antennae half as long as prostomium. One pair of palpi, large and biarticulated, inserted ventral to antennae.

Tentacular cirri: The first 3 segments are free from each other, the first being longer than second and third together. First segment with 3 pairs of tentacular cirri, the second with 2 pairs, and third with a single pair.

Proboscis: With 12 widely-spaced conical papillae in a circlet; jaws absent.

Parapodia: Uniramous, dorsal cirri articulated, extending to near ends of setae; ventral cirri short and simple.

Setae: Composite falcigers, length of appendages variable.

DISTRIBUTION: McMurdo Sound, Ross Sea, in 18 m.

Family **SYLLIDAE** Grube, 1850

KEY TO SUBFAMILIES AND GENERA:

1 Ventral cirri distinct 2
– Ventral cirri absent, dorsal cirri not jointed, palps partly or completely fused (AUTOLYTINAE) ..... *Autolytus*

2 Palps separate. 2 pairs of tentacular cirri, dorsal cirri jointed (SYLLINAE) 3
– Palps fused basally, 2 pairs of tentacular cirri, dorsal cirri usually smooth (EUSYLLINAE) 5
– Palps fused for at least half their length, one or two pairs of tentacular cirri, dorsal cirri smooth, usually short (EXOGONINAE) 7
3 Pharynx with a single large anterior tooth plus a trepan; body flattened, often ribbon-like ..... *Trypanosyllis*
– Pharynx with only a single anterior tooth 4
4 Mainly compound setae anteriorly, then a few large simple setae formed by the loss of the blades ..... *Syllis*
– Only compound setae present ..... *Typosyllis*
5 Pharynx unarmed, ventral cirri longer than the setigerous lobes ..... *Syllides*
– Pharynx armed, ventral cirri not longer than the setigerous lobes 6
6. Rim of pharynx smooth ..... *Pionosyllis*
– Rim of pharynx denticulated ..... *Eusyllis*
7. One pair of tentacular cirri, 3 antennae, dorsal cirri papilliform and not longer than the setigerous lobes ..... *Exogone*
– Two pairs of tentacular cirri, dorsum with rows of globular papillae ..... *Eurysyllis*

Autolytus Grube, 1850

Autolytus charcoti Gravier, 1906 (Figs 93–95)

Autolytus charcoti: Gravier, 1906: 283; 1907: 7–8, pl. 1, figs 1–2; Benham 1921: 27, pl. 5, figs 7–10; 1927: 60; Monro 1936: 131–132; Hartman 1964: 77, pl. 24, fig. 1; Bellan 1971: 74; Averincev 1972: 165, pl. 28, figs 1–6; Orensanz 1974: 27; Hartmann-Schröder & Rosenfeldt 1988: 21; 1988: 45–46.
Autolytus (Regulatus) charcoti: Hartman 1967: 53–54.

MATERIAL: McMurdo Sound Stns 61B (fragments), 61D (3), 61E (1). Previous records from the Ross Sea: Benham (1927), Cape Adare, in 82–91 m.

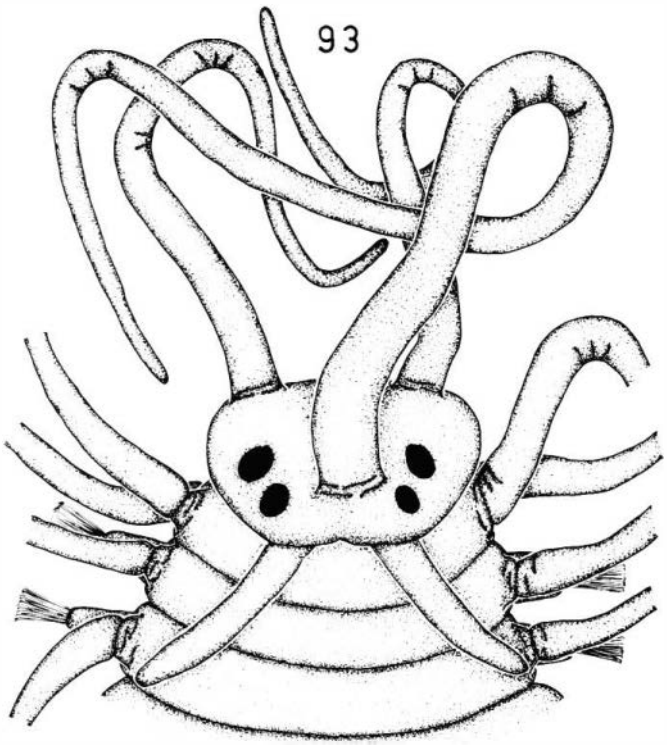
DESCRIPTION:

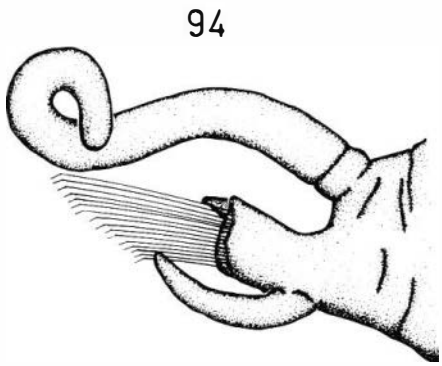
Size: Length of body up to 24 mm or more; width, including parapodia, up to 5.0 mm; segments number up to 100.

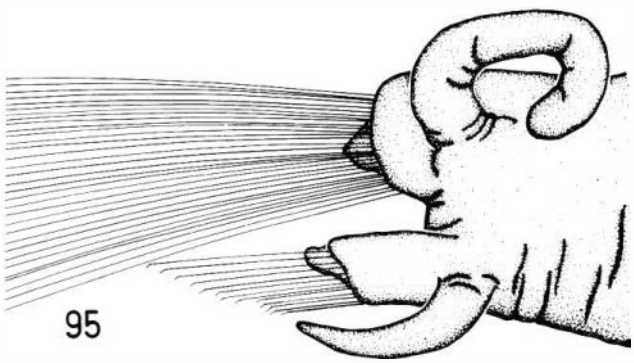
Colour in alcohol: Pale yellow; dorsum may be reddish-brown.

Prostomium: (Fig. 93) Broader than long, widest in front; a pair of diverging nuchal epaulettes reaching back to third setigerous segment. 2 pairs of eyes, anterior pair slightly larger and wider apart; a pair of frontal antennae, smooth and nearly 6 times the length of prostomium; a median antenna inserted between eyes, nearly twice as long as frontals.

Tentacular cirri: 2 pairs, on first segment, long and smooth, first segment without setae.







Figs 93–95. ***Autolytus charcoti*** Gravier. **93**. Anterior end. **94**. Parapodium. **95**. Biramous polybostrichus parapodium.

Parapodia: Dorsal cirri smooth and slightly longer than body width, the first dorsal cirrus elongated up to half the length of the dorsal tentacular cirrus; ventral cirri one third the length of the dorsal cirri; superior presetal lobe sharply pointed (Fig. 94).

Polybostrichus stage with first 5 parapodia normal, the remainder biramous (Fig. 95); notopodia with very elongate natatory setae, and developed as a large lobe anterior to the dorsal cirri with a triangular shaped presetal lobe.

Setae: Natatory setae simple, approximately 3 times the length of normal setae which are composite falcigers, the end pieces distally bidentate, with lateral denticulations.

REMARKS: The present specimens agree with previous descriptions of this species apart from the absence of the dark intersegmental bands. Such bands are also absent from specimens in the British Museum collections from the Antarctic labelled *A. charcoti*.

DISTRIBUTION: Tierra del Fuego, Strait of Magellan, South Shetland Islands, Bransfield Strait, South Georgia, Falkland Islands, Antarctic Peninsula, Ross Sea, Pacific Antarctic Ridge, Southern South America, South Africa, New Zealand.

Autolytus longstaffi Ehlers, 1912 (Figs 96–98)

Autolytus longstaffi Ehlers, 1912: 91–92, pl. 2, fig. 6; Hartman, 1964: 78, pl. 24, fig. 3.

MATERIAL: McMurdo Sound Stn H (20); Cape Evans Stn C EA (3, plus fragments). Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound, in 18 m.

DESCRIPTION:

Size: Length of body up to 20 mm; width, including parapodia, up to 5.0 mm; segments number up to 70.

Colour in alcohol: Uniformly cream to yellow.

Prostomium: (Fig. 96) Somewhat wider than long; 2 pairs of very large eyes, one pair dorsal, one pair ventral; frontal antennae very thick at base, bifurcated at their basal third, the outermost branch being longer; median antenna situated on a large base between dorsal eyes, long smooth and tapering, nearly twice the length of frontal antennae.

Tentacular cirri: 2 pairs on first segment, dorsal pair twice the length of ventral pair.

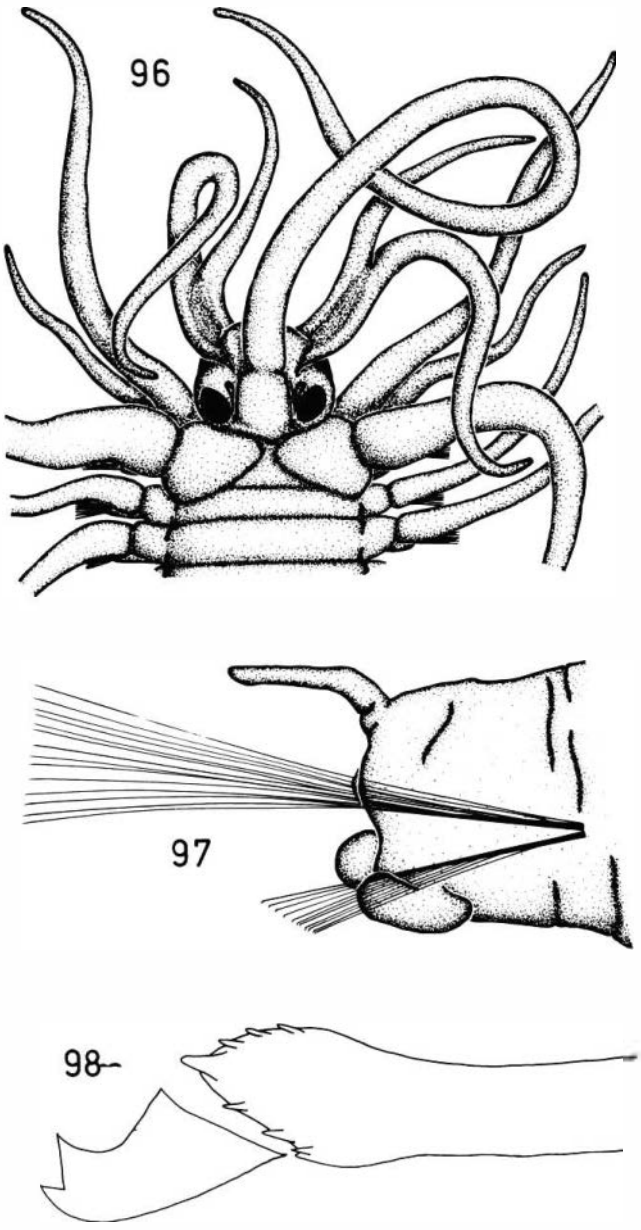
Parapodia: Neuropodia with globular presetal lobes, and reduced, oval-shaped ventral cirri; dorsal cirri short and smooth. From segment 14 on, parapodia with very small notopodia and long natatory setae (Fig. 97).

Notosetae: From segment 14, long simple capillaries.

Neurosetae: (Fig. 98). Short, stouter than notosetae, composite falcigers with short bidentate appendages, and distal end of main shaft swollen and surrounded by small spines.

REMARKS: All the present specimens are male epitokes (polybostrichus stage) and the above description is based on this stage only.

DISTRIBUTION: McMurdo Sound, Ross Sea.



Figs 96–98. ***Autolytus longstaffi*** Ehlers. **96**. Anterior end. **97**. Biramous polybostrichus parapodium. **98**. Neuroseta.

Autolytus maclearanus McIntosh, 1885

Autolytus maclearanus McIntosh, 1885: 207–208, pl. 29, fig. 6, pl. 33, fig. 5, pl. 15A, fig. 15; Ehlers 1913: 488–490, pl. 33, figs 9–11, pl. 34, figs 1–5; Hartman 1964: 78–79, pl. 24, figs 4–5; Bellan 1974: 787; Blankensteyn & Lana 1986: 60, figs 16–19; HartmannSchröder & Rosenfeldt 1990: 100.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 10 m.

DESCRIPTION:

Size: Length of body 13–22 mm; width 1.5 mm; segments number about 35.

Prostomium: With 2 pairs of brown eyes.

Dorsum: Slightly arched.

Ventrum: Medially grooved, marked laterally with prominent cushions at bases of parapodia.

Parapodia: Thick and fleshy. Ventral to parapodial notch about 15 short setae extend laterally, each seta with a dilated shaft and a short distally bifid appendage.

Pygidium: With a lappet-like median cirrus.

Epitokous specimens: With 3 body regions; the first 12–13 segments unmodified, the next 35 with natatory setae, and the last 20 or more segments again unmodified. *Autolytus polybostrichus* (male epitoke) taken in March 1902 is shown in a coloured plate by Ehlers (1913, pl. 34, fig. 1).

DISTRIBUTION: Kerguelen Islands, Wilhelm II Coast, Ross Sea, southern South America, southern Africa, New Zealand, in depths to 385 m.

Eurysyllis Ehlers, 1864

Eurysyllis ehlersi Benham, 1927

Eurysyllis ehlersi Benham, 1927: 58–60, pl. 1, figs 2–8; Hartman 1964: 79–80.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), Cape Evans, Ross Island in 10 m.

DESCRIPTION:

Size: Length of body 4.0 mm.

Prostomium: Twice as wide as long; 4 eyes in nearly a transverse line, the outer ones being much larger and located at lateral edges of lobe; antennae very small, rounded, median one larger and inserted near frontal margin of head, paired lateral ones in line with median one. Palpi a pair of subquadrate lobes free from each other.

Dorsum: Surface epithelium smooth.

Anterior Segments: First segment a smooth ring without cirri; second segment with dorsal and ventral tentacular cirri, both rounded, and parapodia, but no setae; thereafter parapodia cylindrical.

Pharynx: Short, about as broad as long, extending through 6 segments, lacking teeth.

Notosetae: Present from segments 12–14 onwards.

Neurosetae: Composite falcigers with long, marginally dentate appendages; superiormost with longest, and inferiormost with shortest appendages.

DISTRIBUTION: Cape Evans, Ross Sea.

Eusyllis Malmgren, 1867

Eusyllis kerguelensis McIntosh, 1885 (Figs 99–100)

Eusyllis kerguelensis McIntosh, 1885: 191–192, pl. 29, fig. 4, pl. 33, fig. 3, pl. 15A, fig. 13: Willey 1902: 274; Gravier 1907: 17–19, pl. 2, figs 14–16; Ehlers 1912: 18; Monro 1930: 94–95, fig. 30a-c; Hartman 1964: 181–182, pl. 25, figs 2–3; Bellan 1971: 74; Averincev 1972: 157, pl. 24; 1974: 218; Bellan 1974: 787; Hartmann-Schröder, 1986: 77; Hartman-Schröder & Rosenfeldt, 1988: 39; 1990: 87.

MATERIAL: McMurdo Sound Stn TOS (4 plus fragments). Previous records from the Ross Sea: Willey (1902), Cape Adare, 37–44 m; Ehlers (1912), Cape Adare, in 37 m, McMurdo Sound in 238 m.

DESCRIPTION:

Size: Length of body up to 25 mm; width, including parapodia, up to 5.0 mm; segments number more than 54.

Colour in alcohol: Pale yellow with brown markings on dorsum.

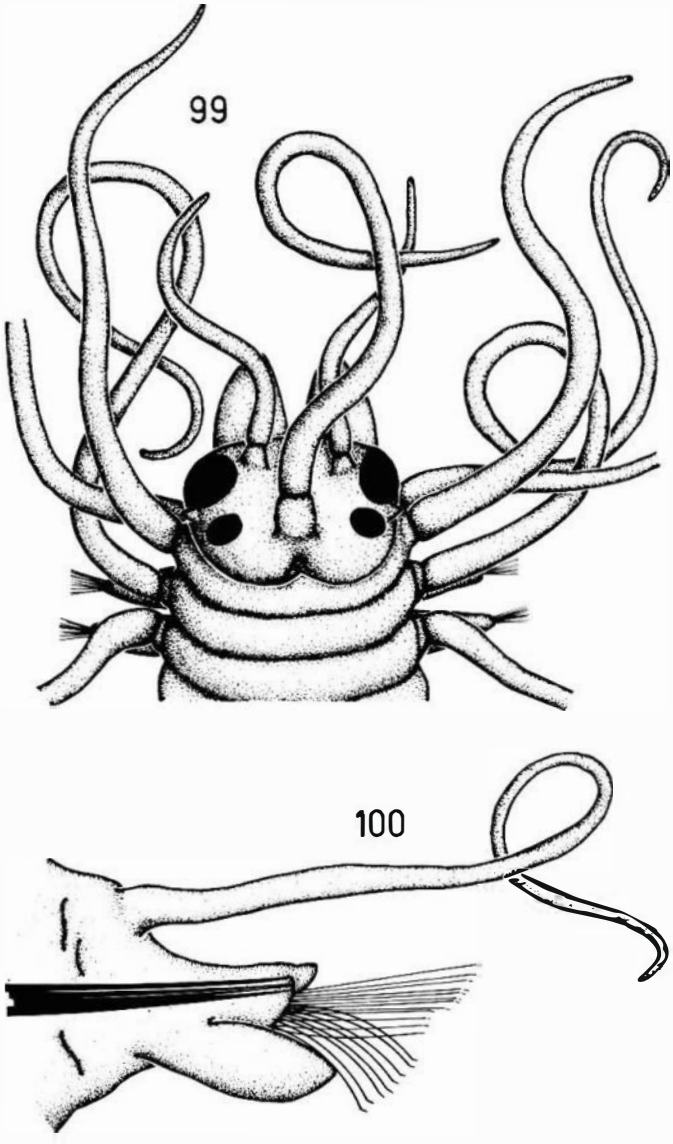
Prostomium: (Fig. 99) With a deep median, posterior groove, and slight lateral prominences between 2 pair of eyes which are widely separated with anterior pair much larger. A pair of frontal antennae situated beside anterior eyes and approximately twice the length of prostomium; median antenna situated between posterior pair of eyes, and approximately twice the length of frontals; palpi more or less triangular-shaped.

Dorsum: Massive and arched.

Ventrum: Flat.

Tentacular cirri: All long and tapering.

Parapodia: (Fig. 100) First 18 unmodified with a single parapodial lobe; dorsal cirri long, tapering and smooth; ventral cirri modified, large, heavy, oval lobes; superior presetal lobe with a blunt tip. From segment 19 onwards, natatory setae present, otherwise parapodia similar to anterior ones.



Figs 99–100. ***Eusyllis kerguelensis*** McIntosh. **99**. Anterior end. **100**. Parapodium.

Notosetae: Natatory; long, very fine with simple capillary tips.

Neurosetae: Very much shorter, composite falcigerous, with bidentate and laterally serrated end pieces; these appendages longer in superior neurosetae and shorter in inferior ones.

REMARKS: The above description is based on sexual forms with natatory setae. The anterior parapodia, however, are unmodified. This widely distributed Antarctic species has been recorded previously from Cape Adare.

DISTRIBUTION: New Zealand, southern South America, Falkland Islands, South Georgia, Drake Passage, South Orkney Islands, Ross Sea, Kerguelen Islands.

Exogone Ørsted, 1845

Exogone heterosetosa McIntosh, 1885

Exogone heterosetosa McIntosh, 1885: 203, pl. 33, figs 15–16, pl. 34A, fig. 11; Ehlers 1887: 51, pl. 3, figs 61–65; Benham 1927: 61–62; Monro 1939: 115–116, fig. 9; Hartman 1964: 81-81, pl. 25, figs 4–5; Day 1967: 274, fig. 12.10m-o; Bellan 1974: 43; Orensanz 1974: 24; Blankensteyn & Lana 1985: 63, figs 32–34; Hartmann-Schröder & Rosenfeldt 1988: 43-44; 1990: 99.
Exogone anomalochaeta Benham, 1921: 24, pl. 5, figs, 11–13; 1927: 62, pl. 1, figs 9–10.

MATERIAL: No specimens in collection. Previous records from the Ross Sea: Benham (1927), Ross Sea in 293 m.

DESCRIPTION:

Size: Length of body about 3.0 mm; width about 0.3 mm: segments number 34.

Prostomium: Broader than long with 2 pairs of eyes and sometimes anterior eye specks as well; median antenna equal to prostomial length, laterals shorter. Tentacular segment distinct.

Proboscis: With marginal papillae and a large tooth.

Parapodia: Dorsal cirri ovoid, absent from setiger 2.

Notosetae: Natatory; may occur behind the 12th parapodium.

Neurosetae: 3 kinds: anterior ones composite with curved shafts and dilated tips, followed by longer ones with beaked tips; and some with spatulate tips and a terminal filament.

DISTRIBUTION: Southern Australia, New Zealand, Subantarctic Islands, southern South America, Drake Passage, Bransfield Strait, Antarctic Peninsula, Scotia Sea, South Georgia, South Orkney Islands, Ross Sea, usually in shallow depths.

Exogone minuscula Hartman, 1953

Exogone minuscula Hartman, 1953: 26–27, fig. 5a-f; Hartman 1964: 82, pl. 25, figs 6–8; 1967: 56; 1978: 149.

MATERIAL: No specimens in the collection. Previous Records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

DESCRIPTION:

Size: Length of body 3 mm; width 0.2 mm; segments number 24-35.

Prostomium: Broader than long, with 4 eyes in rectangular arrangement; 3 antennae inserted in a transverse row between the eyes, the laterals very short

and the median one extending distally beyond the large completely fused palpi.

Parapodia: Inconspicuous.

Setae: Composite setae of 2 kinds, some are long, others short falcigers with serrated cutting edges; the largest appearing spinigerous. Acicula yellow, distally knobbed. Median segments with simple, distally serrated setae.

Pygidium: With a pair of long slender, ventrolaterally attached cirri.

DISTRIBUTION: South Georgia, Falkland Islands, Moubray Bay, Cape Hallett in 12–250 m.

Pionosyllis Malmgren, 1867

Pionosyllis cosma Gravier, 1906

Pionosyllis cosma: Gravier, 1906: 286; 1907: 15–17, figs 12–13; Ehlers 1912: 18; Ehlers 1913: 473, pl. 32, figs 1–4; Benham 1927: 60; Hartman 1964: 84–87, pl. 26, figs 7–8.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound in 18 m; Benham (1927), Cape Adare, in 82–91 m.

DESCRIPTION:

Size: Length of body 21 mm; Width 2.0 mm; segments number more than 59.

Colour in alcohol: Pale yellow with vivid reddish-brown transverse bands across dorsum.

Prostomium: Notched posteriorly, notch hidden by a flap or hood formed by first segment; 2 pairs of eyes; 3 antennae, much longer than prostomium; palpi fused basally.

Pharynx: Armed with a single tooth, no crown of papillae; extends posteriorly to segment 10, proventriculus back to segment 24.

Dorsum: Massive and arched.

Tentacular cirri: First segment with 2 pairs of tentacular cirri. Dorsal pair nearly twice as long as ventral pair.

Parapodia: Dorsal cirri alternately long and short, longest being about twice the length of parapodia including setae.

Setae: Falcigers with short, distally entire appendages.

DISTRIBUTION: Northern and Eastern sectors of Antarctica, Antarctic Peninsula, South Georgia, Falkland Islands, Ross Sea.

Pionosyllis maxima Monro, 1930 (Figs 101–103)

Pionosyllis maxima Monro, 1930: 92–94, figs 29a-c; Hartman 1964: 87–88, pl. 27, figs 3–5.

MATERIAL: NZOI Stn A521 (1, plus an anterior fragment). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length more than 21 mm; width, including parapodia up to 3 mm; segments number more than 59.

Colour in alcohol: Pale yellow, with dark markings transversely across dorsum.

Prostomium: (Fig. 101) Oval to rectangular in shape, wider than long; 2 pairs of overlapping eyes widely spaced; one pair of frontal antennae, one and a half times the length of prostomium, smooth; median antenna situated between or just behind eyes, about twice the length of frontals; palpi large and bulbous, fused at base.

Tentacular cirri: 2 pairs, dorsal more than twice the length of ventral.

Parapodia: (Fig. 102) Dorsal cirri alternately long and short, long ones equal to body width in length, all smooth and tapering; ventral cirri thick, nearly as large as setal lobe; setal lobe almost triangular, 3 aciculae terminating just above setae to form apex.

Setae: (Fig. 103) Slender, composite falcigers; the main shaft slightly dilated at tip and surmounted by 3 or 4 small spines; appendages short, unidentate with lateral teeth.

REMARKS: This is the first record of this species from the Ross Sea; it previously was known only from South Georgia. Apart from the length of the prostomial antennae, which in Monro's specimen were only slightly longer than the prostomium, the present specimens are identical with the type in the British Museum (Natural History).

DISTRIBUTION: South Georgia, Ross Sea.

Typosyllis pennelli n.sp. (Figs 104–106)

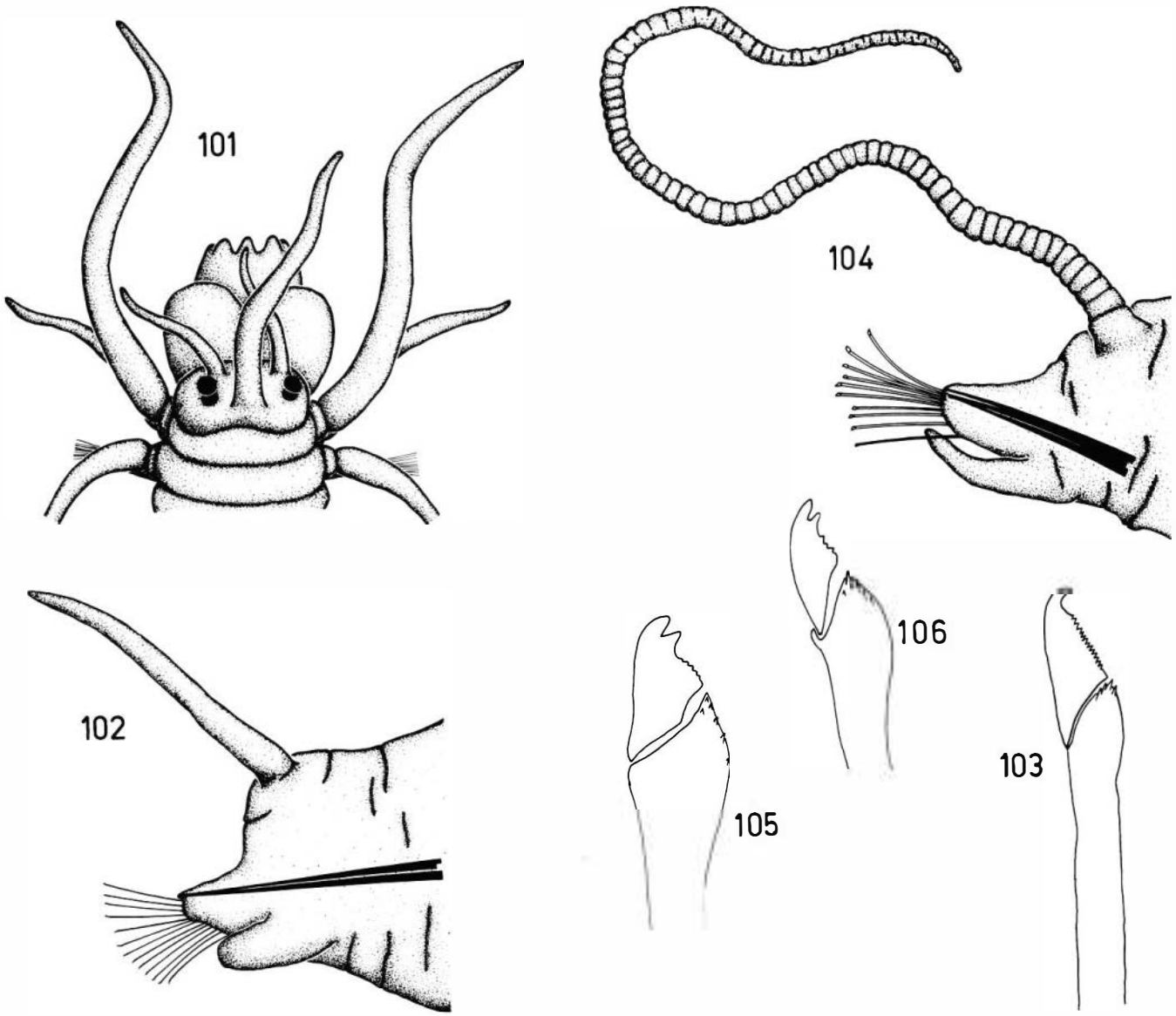
MATERIAL: NZOI Stn A456 (1).

DESCRIPTION:

Size: Length of body 35 mm; width, including parapodia, 4.0 mm; segments exceed 120.

Colour in alcohol: Pale yellow.

Prostomium: Somewhat triangular, stout, twice as wide as long with 2 pairs of prominent eyes, anterior pair larger, almost forming a transverse line. Median antenna inserted between anterior pair of eyes, about 3 times the length of prostomium; lateral antennae



Figs 101–103. ***Pionosyllis maxima*** Monro. **101**. Anterior end. **102**. Parapodium. **103.** Composite falciger.
Figs 104–106. ***Typosyllis pennelli*** n.sp. **104**. Parapodium. **105** & **106**. Composite falcigers.

inserted at anterior margin of prostomium in line with outer pair of eyes, about two-thirds the length of median.

Pharynx: With an anterior horny rim surrounded by a circle of about 12 blunt papillae.

Parapodia: (Fig. 104) Dorsal cirri alternately long and short, the former with 50 or more articles; ventral cirri as long as setal lobe, and tapering to a point; setal lobe more or less rounded and supported by up to 3 aciculae.

Setae: All are composite falcigers, the end pieces very short, stout and bifid with poorly developed lateral teeth; distal end of main shaft swollen and surmounted by a series of smaller teeth in anterior parapodia (Fig. 105), and a more prominent series characterised by one larger apical tooth in posterior parapodia (Fig. 106); approximately 6–8 setae per parapodium.

TYPE LOCALITY: 74°30' S, 179°40' W, Pennell Bank, Ross Sea.

HOLOTYPE: In the NZOI (NIWA) collection Wellington, No. H-678.

REMARKS: In general appearance this species resembles *Syllis sclerolaema* but it differs in lacking simple setae and has very characteristic pseudo-compound setae.

The setae with their very short, wide end pieces and swollen denticulated ends to the shaft, are highly characteristic and differ from all other species of the genus from Antarctic and southern cold-temperate regions.

DISTRIBUTION: Pennell Bank, Ross Sea.

Pionosyllis stylifera Ehlers, 1912

Pionosyllis stylifera Ehlers, 1912: 18; 1913: 474, pl. 31, figs 6–10; Monro 1939: 111, fig. 6; Hartman 1964: 88, pl. 27, figs 8–9; Hartmann-Schröder & Rosenfeldt 1990: 97.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound in 18–22 m.

DESCRIPTION:

Size: Length of body 15 mm; width 1.0 mm; segments number about 50.

Prostomium: Broadly oval; 2 pairs of eyes in trapezoid arrangement, anterior pair larger and wider apart; antennae long, irregularly annulated; median antenna longest, inserted near anterior margin of prostomium.

Tentacular cirri: First segment has 2 pairs, dorsal pair longer and similar to antennae.

Pharynx: With a smooth terminal margin and a large anterior tooth; extending through 5–10 segments; proventriculus long, with about 40 transverse rows.

Parapodia: All dorsal cirri smooth, cirriform, extending somewhat beyond tips of setae.

Setae: Composite, with appendages varaible in length, distal ends unidentate.

DISTRIBUTION: New Zealand, Subantarctic Islands, Wilhelm II Coast, Knox Coast, Ross Sea.

Syllides Ørsted, 1845

Syllides articulosus Ehlers, 1897

Syllides articulosus Ehlers, 1897: 42–45, pl. 2, figs 48–52; 1912: 18; 1913: 487, pl. 3, figs 4–5; Hartman 1953: 24; 1964: 89–90, pl. 28, figs 5–6; Banse 1971: 1475; Bellan 1974: 787; Orensanz 1974: 27; Hartman,1967: 149; 1978: 149; Hartmann-Schröder & Rosenfeldt 1988: 39–40; 1990: 98.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound.

DESCRIPTION:

Size: Pelagic mature females 5–10 mm in length; width 1.0 mm; segments number 35–40.

Prostomium: 3 pairs of eyes, anterior pair very small and others in quadrate arrangement.

Pharynx: Lacks a tooth.

Parapodia: Dorsal cirri moniliform.

Notosetae: Natatory setae present from segment 11 or 12 and continued to end of body.

Neurosetae: With very minute appendages, a secondary tooth cannot be distinguished.

DISTRIBUTION: Southern Australia, southern South America, Bransfield Strait, South Georgia, Falkland Islands, Ross Sea.

Syllis Savigny, 1818

? *Syllis amica* Quatrefages, 1865

Syllis amica Quatrefages, 1865: 20, pl. 5, figs 16–22; Fauvel 1923: 258–259, fig. 95e-n.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m.

REMARKS: Lowry (1976) recorded this species from Cape Hallett. *Syllis amica* is a European species that has not previously been recorded from Antarctica. Two *Syllis* species have been recorded from Antarctica, *S. gracilis antarctica* from the Straits of Magellan and *S. sclerolaema* from southern South America, South Georgia, and the Falkland Islands. Lowry's specimens were not available for examination and it is possible that they belong to one of these species.

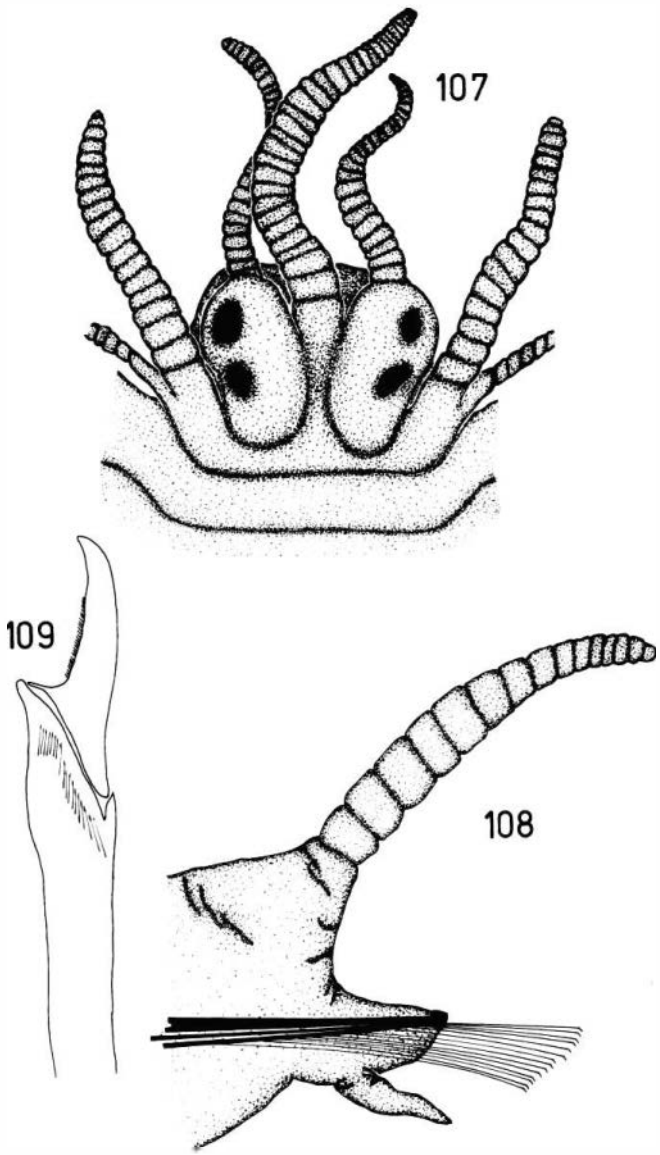
Trypanosyllis Claparède, 1864

Trypanosyllis gigantea (McIntosh, 1885)

(Figs 107–109)

Syllis gigantea McIntosh, 1885: 193–195, pl. 30, figs 1–3, pl. 33, fig. 4, pl. 15A, fig. 14: Ehlers 1912: 17; 1913: 475–476; Benham 1927: 56–58, pl. 1, fig.1; Monro 1936: 126, fig. 18; Hartman 1964: 93, pl. 29, figs 1–2; Averincev 1972: 153, pl. 23, figs 1–6; 1974: 217; Rullier 1973: 12; Hartmann-Schröder 1983: 263–264; 1988: 38.

MATERIAL: NZOI Stns A449 (2), A455 (2), A456 (1), A468 (5), A526 (fragment), A528 (2); *Glacier* Stn GLD-13 (fragment), McMurdo Sound Stn A (1), *Eastwind* Stn EAD-3 (1); Trans-Antarctic Expedition Stn TAE79 (1). Previous records from the Ross Sea: Ehlers (1912),



Figs 107–109. ***Trypanosyllis gigantea*** (McIntosh). **107**. Anterior end. **108**. Parapodium. **109**. Composite falciger.

McMurdo Sound, in 10–130 fathoms; Ehlers (1913), McMurdo Sound, in 380 m; Benham (1927), McMurdo Sound in 50–300 m.

DESCRIPTION:

Size: A giant syllid, dorsoventrally flattened; length up to 160 mm or more; width up to 7.0 mm; segments number 300 or more.

Colour in alcohol: Pale yellow to deep orange-brown.

Prostomium: (Fig. 107) Broadly bilobed, forming 2 ocular prominences; 2 pairs of large eyes, anterior pair slightly wider apart; median antenna situated between prostomial lobes, clearly articulated and about twice the length of prostomium; lateral antennae inserted at frontal margins of prostomial lobes, articulated and slightly shorter than median antenna.

Parapodia: (Fig. 108) Short stubby, articulated dorsal cirri with up to approximately 15 articulations; ventral cirri short, smooth and pointed, extending beyond blunt setal lobes which are supported by up to 5 or more aciculae.

Setae: (Fig. 109) Slender shafts, composite, with falcigerous appendages terminating in rounded unidentate tips with fine lateral spines.

REMARKS: This large syllid is widely distributed in Antarctic waters from the intertidal to more than 1100 m.

DISTRIBUTION: Southern South America, southern Australia, New Zealand, Bransfield Strait, Antarctic Peninsula, South Georgia, South Orkney Islands, Kerguelen Islands, Ross Sea.

Typosyllis Langerhans, 1879

Typosyllis armillaris (Müller, 1771) (Figs 110–111)

Syllis (Typosyllis) brachychaeta: Augener 1918: 247–254, pl. 4, figs 83–85, pl. 5, fig. 98, text-fig. 20.
Syllis closterobranchia: Benham 1921: 20.
Syllis armillaris: Fauvel 1923: 264, fig. 90a-f; Day 1954: 10.
Syllis brachychaeta: Benham 1927: 55–56.
Typosyllis brachychaeta: Hartman 1953: 21; Hartman 1964: 93–95, pl. 29, figs 3–4; Bellan 1974: 87.
Typosyllis armillaris: Hartmann-Schröder 1986: 76; Hartmann-Schröder & Rosenfeldt 1988: 38.

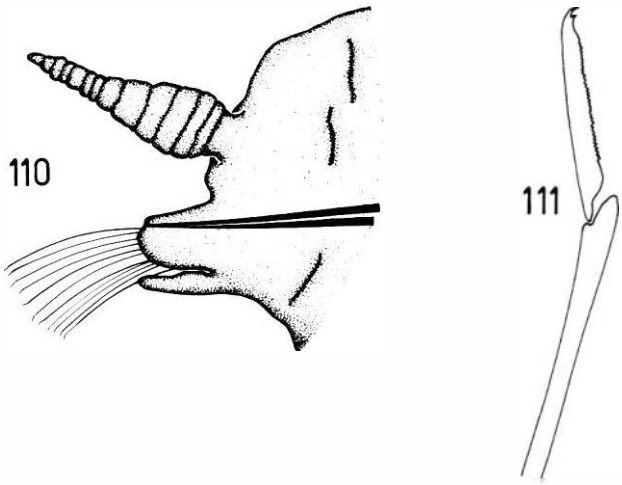
MATERIAL: NZOI Stn A528 (1). Previous records from the Ross Sea: Benham (1927), Cape Adare in 82–91 m; Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m.

DESCRIPTION:

Size: Length of body 9–30 mm; width, including parapodia, up to 3.0 mm; segments number 80 or more.

Colour in alcohol: Light orange to yellow with faint brown transverse markings on arched dorsum.

Prostomium: Broader than long; 2 pairs of eyes in trapezoid arrangement, a pair of minute spots anteriorly; 3 antennae of approximately equal length, or with median somewhat longer, articulated, median one emerging from behind eyes; palpi large and triangular-shaped.



Figs 110–111. ***Typosyllis armillaris*** (Müller). 110. Parapodium. 111. Composite falciger.

Parapodia: (Fig. 110) Characteristic spindle-shaped dorsal cirri, articulated, with up to 15 articles; ventral cirri stout and slightly tapering, not extending to ends of setal lobes, which are rounded and supported by 2 aciculae.

Setae: (Fig. 111) Usually with short, often unidentate blades; anterior and posterior parapodia with slender composite falcigers with narrow appendages terminating in fine bifid tips, and possessing lateral teeth.

REMARKS: *Typosyllis armillaris* and *T. brachychaeta* have been regarded as separate species. However, Day (1954) stated that he had examined many hundreds of specimens of *T. brachychaeta* from the type locality, and compared them in detail with specimens of *T. armillaris* from Europe and found no constant differences, although there was considerable variation in the number of articulations of the dorsal cirri and in the strength of the secondary tooth in the setae.

DISTRIBUTION: Cosmopolitan from the Arctic and tropics to Antarctica.

Typosyllis brachycola (Ehlers, 1897)

Syllis brachycola Ehlers, 1897: 38–40, pl. 2, figs 46–47; Gravier 1907: 20, pl. 2, fig. 17, text-fig. 14; Ehlers 1912: 18; Benham 1927: 55; Monro 1930: 100–101, fig. 33a-b.
Typosyllis brachycola: Hartman 1964: 95.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound, in 18 m; Benham (1927), Cape Adare, in 82–91 m.

DESCRIPTION:

Size: Length about 20 mm, width 0.75 mm; segments number about 90; body small and thread-like.

Colour in alcohol: Anterior part brown, pigment extending onto the dorsal cirri.

Prostomium: Short, squat, with 2 pairs of very small eyes; median antenna inserted far back near posterior border and between posterior pair of eyes.

Parapodia: Dorsal cirri of middle segments with 40–50 articulations.

Setae: Appendages short and broad with bifid tips.

DISTRIBUTION: Straits of Magellan, Falkland Islands, Antarctic Peninsula, South Orkney Islands, South Georgia, Ross Sea; intertidal to 380 m.

Typosyllis hyalina (Grube, 1863)

Syllis hyalina Ehlers, 1897: 36–37; Gravier 1911: 49–53.
Syllis (Typosyllis) hyalina: Day 1967: 246, fig. 12.2v-x.
Typosyllis hyalina: Willey 1902: 274, pl. 45, figs 1–3; Hartman 1964: 95–96, pl. 29, fig. 5.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), Cape Adare in 15 m.

DESCRIPTION:

Size: A small slender translucent syllid; length to 12–35 mm.

Prostomium: With 4 eyes and sometimes 2 ocular specks as well; antennae short, with about 10–15 articulations.

Pharynx: Long, with an anterior tooth; proventriculus short.

Parapodia: Dorsal cirri short, but not stout and with alternately 6–7, and 8–12 articulations.

Setae: Composite, with very long, strongly bifid appendages.

DISTRIBUTION: Cosmopolitan.

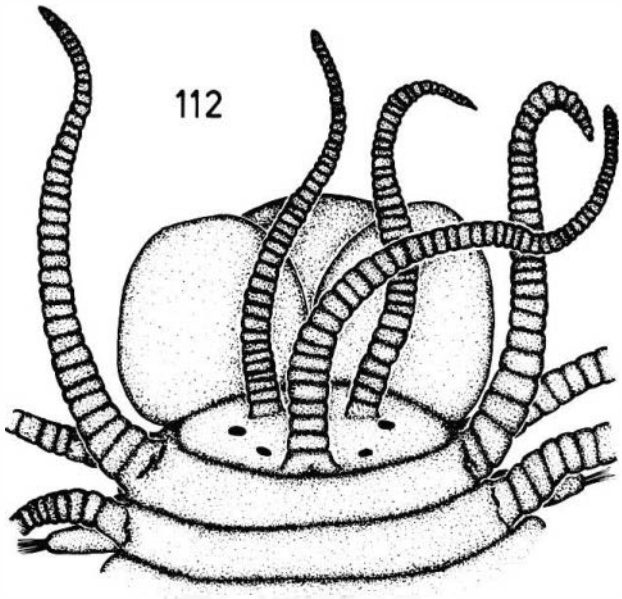
Typosyllis prolixa (Ehlers, 1901) (Figs 112–113)

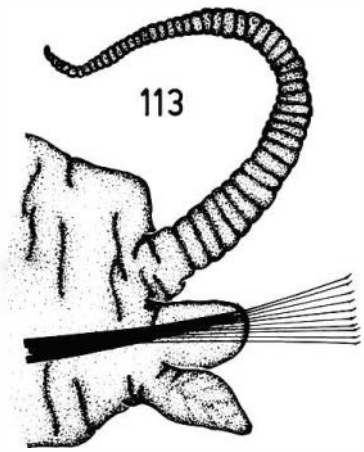
Syllis prolixa Ehlers, 1901b: 92–95, pl. 9, figs 1–7; Monro 1930: 100, fig. 32.
Typosyllis prolixa: Hartman 1953: 21; Hartmann-Schröder 1985: 81–82; Hartman 1964: 95–96, pl. 29, figs 67.

MATERIAL: NZOI Stn A464 (2). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 20 mm; width, including parapodia, 2.0 mm; segments number 60 or more.





Figs 112–113. ***Typosyllis prolixa*** (Ehlers). **112**. Anterior end. **113**. Parapodium.

Prostomium: (Fig. 112). Lens-shaped, very much broader than long; two pair of eyes in trapezoid arrangement, the anterior pair further apart. 3 antennae of almost equal length, approximately 5 times the length of the prostomium; all articulated, the median one inserted far back on the prostomium; the lateral pair inserted in front of the anterior pair of eyes. Palpi very broad and rounded, about twice the length of the prostomium, fused at the base.

Parapodia: (Fig. 113). Dorsal cirri long and tapering, articulated with up to 50 articles; ventral cirri somewhat constricted at the base, short and tapering to a point beyond the setigerous lobes, which are rounded, small, and supported by four acicula.

Setae: Composite falcigers having unidentate appendages with lateral teeth.

REMARKS: This is the first record of this species from the Ross Sea sector of Antarctica; it is characterised by its unidentate setae and long, multi-articulated dorsal cirri.

DISTRIBUTION: Falkland Islands, South Georgia, Ross Sea.

Family **NEREIDIDAE** Johnston, 1845

KEY TO GENERA:

1 Proboscis without paragnaths or other processes ..... *Nicon*
– Proboscis with pharyngeal processes 2
2 Pharyngeal processes include paragnaths and pectinae or transverse serrated ridges ..... *Platynereis*
– Pharyngeal processes only paragnaths, notopodia with only spinigers ..... *Neanthes*

Neanthes Kinberg, 1866

Neanthes kerguelensis (McIntosh, 1885)

(Figs 114–117)

Nereis kerguelensis McIntosh, 1885: 225, pl. 35, figs 10–12, pl. 16A, figs 17–18; Ehlers 1897: 65, pl. 4, figs 81–93.
Neanthes kerguelensis: Hartman 1964: 97–98, pl. 30, figs 5–6; Hartman 1967: 64; Rullier 1973: 13; Bellan 1974: 788; Hartmann-Schröder & Rosenfeldt 1988: 47.

MATERIAL: NZOI Stn A528 (6). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 41 mm; width, including parapodia, up to 6.0 mm; segments number 40–70.

Colour in alcohol: Light brown to yellow, with a longitudinal reddish streak (dorsal blood vessel) on dorsum.

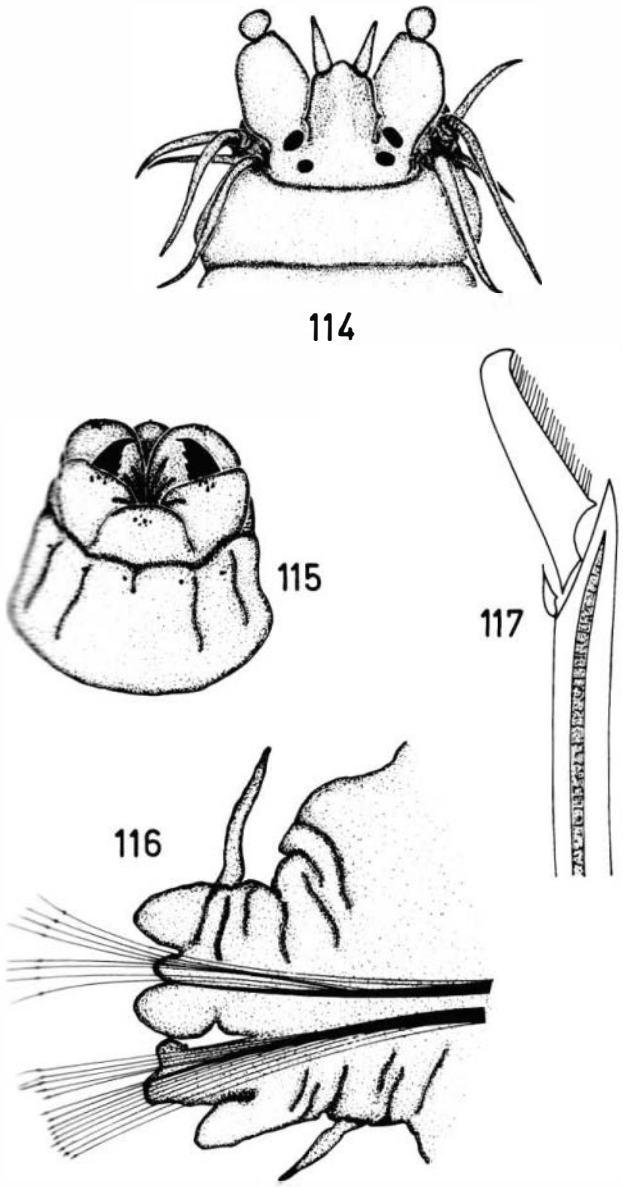
Prostomium: (Fig. 114) Longer than broad, dominated by large palps. 2 pairs of oval eyes; one pair of short and sharply pointed antennae. Palpi large and almost rectangular, divergent, palpostyle bulbous.

Peristomial tentacles: 4 pairs, long and thin, tapering, usually smooth; longest extending back to first setigerous segment.

Ventrum: With a median longitudinal furrow.

Proboscis: (Fig. 115) With heavy terminal jaws. Maxillary ring paragnaths: area I with one cone; II with a crescentic patch; III with a small patch; IV with a crescentic patch; area V none; VI with one cone; VII and VIII with a row of about 5 cones.

Parapodia: (Fig. 116) Short dorsal and ventral cirri; notopodia with rounded superior and inferior lobes of equal size; neuropodia with very small superior



Figs 114–117. *Neanthes kerguelensis* (McIntosh). **114**. Anterior end. **115**. Proboscis. **116**. Parapodium. **117**. Heterogomph composite falciger.

lobe, and elongated inferior lobe.

Notosetae: All of one type; long composite spinigers, with very long, finely pointed appendages.

Neurosetae: Two types; the superiormost 3 or 4 similar to notosetae, the rest composite falcigers, heterogomph, with unidentate finely serrated appendages (Fig. 117).

REMARKS: This is the common shallow-water and intertidal nereid of the subantarctic. The present record from Pennell Bank is the most southerly record for the species.

DISTRIBUTION: Southern New Zealand, southern South America, Bransfield Strait, Antarctic Peninsula, South Georgia, Kerguelen Islands, Ross Sea, from the inter-tidal to 240 m.

Nicon Kinberg, 1866.

Nicon ehlersi Hartman, 1953 (Figs 118–119)

Nereis loxechini: Ehlers 1908: 73, pl. 7, figs 8–12.
Leptonereis loxechini: Monro 1930: 107–109, fig. 38.
Nicon ehlersi Hartman, 1953: 29; 1964: 101–102, pl. 31, figs 4–5.

MATERIAL: NZOI Stns A450 (2), A528 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 175 mm; width, including parapodia, up to 8.0 mm.

Colour in alcohol: Uniform pale yellow to orange.

Prostomium: (Fig. 118) 2 pairs of eyes in trapezoid arrangement; antennae, straight and smooth, as long as prostomium; palpi large and rectangular with palpostyle bulbous.

Peristomial tentacles: 4 pairs, very long and smooth, dorsal pair longest, reaching back to segment 7 or 8.

Parapodia: (Fig. 119) Dorsal cirri longer than notopodial lobes, ventral cirri shorter than neuropodial lobes. Median notopodia with 2 large pointed lobes, lower one longer; a minute lobe situated halfway along this lower lobe at point where acicula emerges; median neuropodia with 2 lobes, upper one less pointed but longer than lower one.

Notosetae: All long homogomph spinigers.

Neurosetae: Superior neurosetae of 2 types; heterogomph falcigers, and homogomph spinigers. Inferior neurosetae mainly heterogomph falcigers, but also with a few heterogomph spinigers.

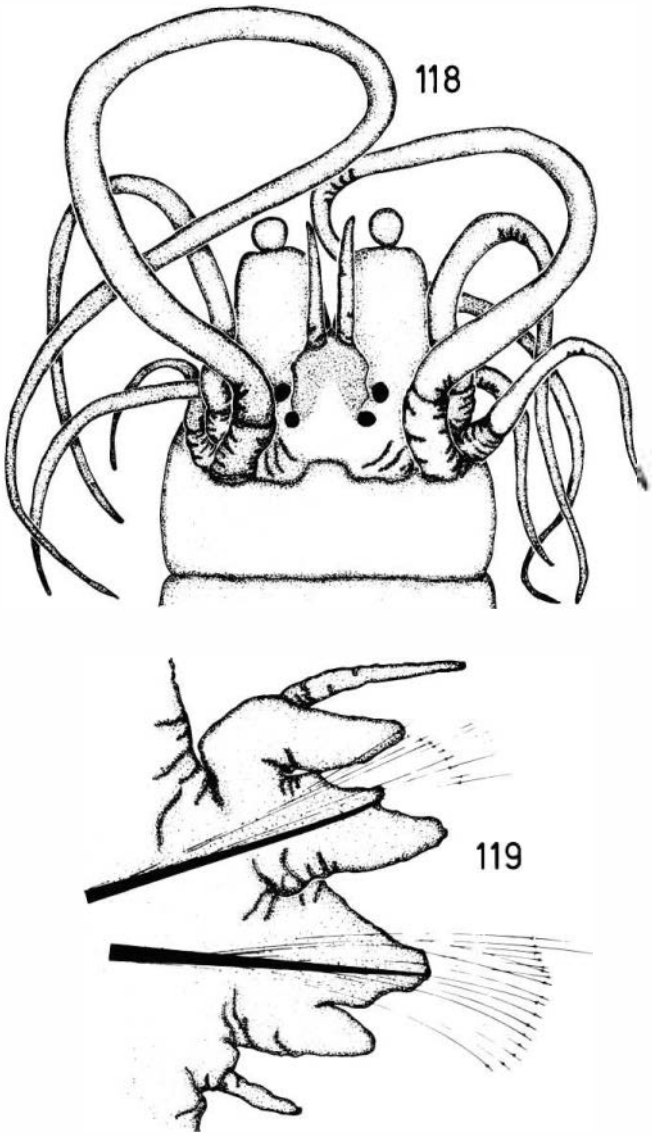
REMARKS: This is the first record of this common South American sector species from the Ross Sea.

DISTRIBUTION: Southern South America, Falkland Islands, Scotia Sea, Drake Passage, Antarctic Peninsula, South Shetland Islands, South Orkney Islands, Pacific Antarctic Ridge, Ross Sea, from shallow waters to 1200 m.

Platynereis Kinberg, 1866

Platynereis australis (Schmarda, 1861)

Heteronereis australis Schmarda, 1861: 101, pl. 31, fig. 242.



Figs 118–119. *Nicon ehlersi* Hartman. **118**. Anterior end. **119**. Parapodium.

Platynereis magalhaensis Kinberg, 1866: 177.
Nicon loxechini: Benham 1921: 65.
Platynereis australis: Knox 1951: 223–225, pl. 49, figs 34–40; Hartmann-Schröder 1986: 108–110.
Platynereis magalhaensis: Hartman 1964: 102–103, pl. 31, figs 8–9.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 329–549 m.

DESCRIPTION:
Size: Length up to 200 mm; width 5.5 mm; segments number up to 150.

Prostomium: Longer than broad; a pair of diverging antennae equal in length to prostomium; palpi longer than antennae with globular palpostyles. Eyes moderately large, anterior pair larger and further apart.
Tentacular cirri: Long, slender, variable in length, longest reaching from 6th–12th setigerous segments.
Proboscis: Paragnaths arranged as follows: area I, 0; II, 0; III, a transverse group of 4 or 5 interrupted lines; IV, several rows of pectinae; V, 0; VI, a small patch of 3 or 4 imperfect lines; VII and VIII, five small groups of minute paragnaths.
Parapodia: Notopodia in anterior region with 2 short, blunt, rounded ligules of equal length; notopodia with short pointed setal lobes and a blunt ligule shorter than notopodial ligules. There are 3 pairs of glands in dorsal surface of parapodia in the middle and posterior regions of body.
Notosetae: Homogomph spinigers in the anterior region; in middle and posterior region homogomph falcigers are present.
Neurosetae: Homogomph spinigers and heterogomph flacigers superiorly, and heterogomph spinigers and heterogomph falcigers inferiorly.

DISTRIBUTION: Magellanic region, Falkland Islands, South Georgia, Antarctic Peninsula, Ross Sea.

Family **NEPHTYIDAE** Grube, 1850

Aglaophamus Kinberg, 1866

Aglaophamus trissophyllus (Grube, 1877)

(Fig. 120)

Nephthys trissophyllus Grube, 1877: 533; McIntosh 1885: 159–161, pl. 26, figs 1–5; Hartman 1978: 150–151; Knox in preparation.
Nephthys macroura: Fauvel 1916: 436, pl. 8, figs 1–3.
Nephtys (Aglaophamus) macroura: Day 1967: 343, fig. 15j-m.
Aglaophamus macroura: Hartman 1964: 103, pl. 32, fig. 1.
Aglaophamus ornatus Hartman, 1967: 76–78, pl. 24; Bellan 1974: 789; Robaczylo & Castilla 1974: 188; Hartman n Schröder & Rosenfeldt 1988: 47; 1990: 101.

MATERIAL: NZOI Stns A451 (2), A456 (1), A460 (1), A519 (4), A520 (1), A529 (7), A537 (1); *McMurdo Sound* Stns 61E (1), TOS (1); Cape Evans Stns CEG (1), CEK (1), Trans-Antarctic Expedition Stn TAE78 (2). Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m; Cape Bird, Ross Island, in 35–54 m (as *A. ornatus*).

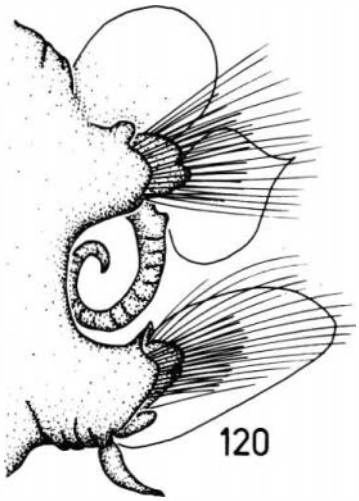


Fig. 120. ***Aglaophamus trissophyllus*** (Grube). Parapodium.

DESCRIPTION:

Size: Large individuals measure up to 200 mm long and 7 mm wide for up to 200 segments.

Colour in alcohol: Variable, ranging from flesh-coloured to purple; some specimens may have a purplish mid-ventral stripe.

Prostomium: Subrectangular, often wider than long, with 2 pairs of antennae, the smaller on frontal corners, and others inserted far back and ventro-laterally.

Parapodia: (Fig. 120) Dorsal cirri large, foliaceous, ventral cirri conical. Notoacicular lobes bifid; neuroacicular lobe with a longer upper margin which may be bifid and a lower, small, somewhat rounded, often finger-like division. Notopodial preacicular lobes bifid with a small rounded dorsal lobe and a large sometimes crenulated ventral lobe, neuropodial preacicular lobe entire. Notopodial postacicular lobe small, often bifid; neuropodial post acicular lobe greatly prolongated, broad, extending distally beyond most of neurosetae. A superior neuropodial lobe is variably developed, in median segments it may be an erect digitate lobe. The ventral edge of neuropodium may be crenulated.

Branchiae: Present from the second or third segments, at first very small and inconspicuous; they increase so as to form a spiral-coil filling the interramal space, and continue to about the last 6 segments. Branchial cirri when best developed are broadly foliaceous, terminating in an acuminate tip.

Setae: Preacicular setae are transversely barred; post acicular setae are slender and smooth or lightly serrate along the cutting edge. Furcate setae are absent.

Proboscis: Terminates in 20 bifid papillae, with shorter midventral and middorsal triangular processes. Subterminal papillae of 14 main rows of 8–10 papillae, decreasing in size and terminating in triangular patches of small papillae. Proximal surface smooth.

REMARKS: There has been considerable confusion over the specific status of this widespread Antarctic and subantarctic nephtyid, most specimens having been assigned either to the New Zealand species *A. macroura* or the magellanic species *A. virginis*. Hartman (1967) assigned some specimens to a new species, *A. ornatus*. Knox (in preparation) is reviewing the Antarctic species of the genus *Aglaophamus* and has established the above synonomy. *Aglaophamus trissophyllus* was first described from the Falkland Islands.

DISTRIBUTION: Widely distributed to moderate depths throughout the Antarctic and Subantarctic extending to off the coasts of the southern main land masses.

Micronephthys Friedrich, 1939

Micronephthys sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976) Cape Bird, Ross Island, in 35–54 m.

REMARKS: The genus *Micronephthys* is characterised by having no (or only very rudimentary) notopodial lamellae.

Family **GLYCERIDAE** Grube, 1850

Glycera Savigny, 1818

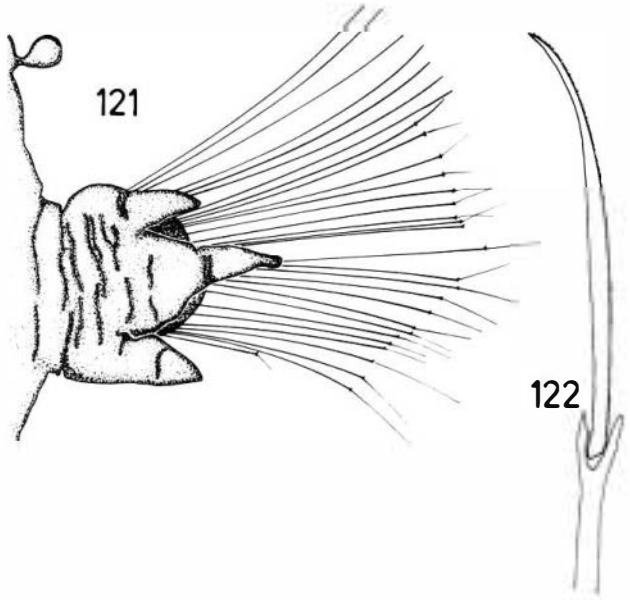
Glycera capitata Ørsted, 1843 (Figs 121–122)

Glycera capitata Ørsted, 1843: 44, pl. 7, figs 87–88, 90–94, 99; Arwidsson 1899: 7, pl. 1, figs 1–6, pl. 4, fig. 54; Ehlers 1912: 22; Benham 1927: 96; Hartman 1964: 107–109, pl. 33, fig. 7.

MATERIAL: NZOI Stns A450 (1), A470 (2), A520 (1), A522 (1), A530 (1); *Glacier* Stn GLD-4 (1); McMurdo Sound Stn 61B (1). Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound, in 183 m; Benham (1927), McMurdo Sound, in 289–451 m; Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

DESCRIPTION:

Size: Length of body 25–60 mm; width, including parapodia, up to 4 mm.



Figs 121–122. *Glycera capitata* Ørsted. **121.** Parapodium. **122.** Homogomph spiniger.

Colour in alcohol: Reddish-brown all over.
Prostomium: Conical, with about 8 annulations; eyes absent; 4 minute antennae at distal end of prostomium.
Proboscis: With papillae of two kinds, the more numerous long and cylindrical, the others short and ovoid.
Parapodia: (Fig. 121) Short, each with 2 anterior and one posterior lobe; anterior lobes conical and superiormost somewhat shorter than inferior ones; post-setal lobe short, broad, rounded; dorsal cirri small, globular, set high above parapodia.
Setae: (Fig. 122) Long slender homogomph spinigers, with finely serrated appendages.

DISTRIBUTION: Cosmopolitan in shallow depths to 1080 m.

Family **EUNICIDAE** Savigny, 1818

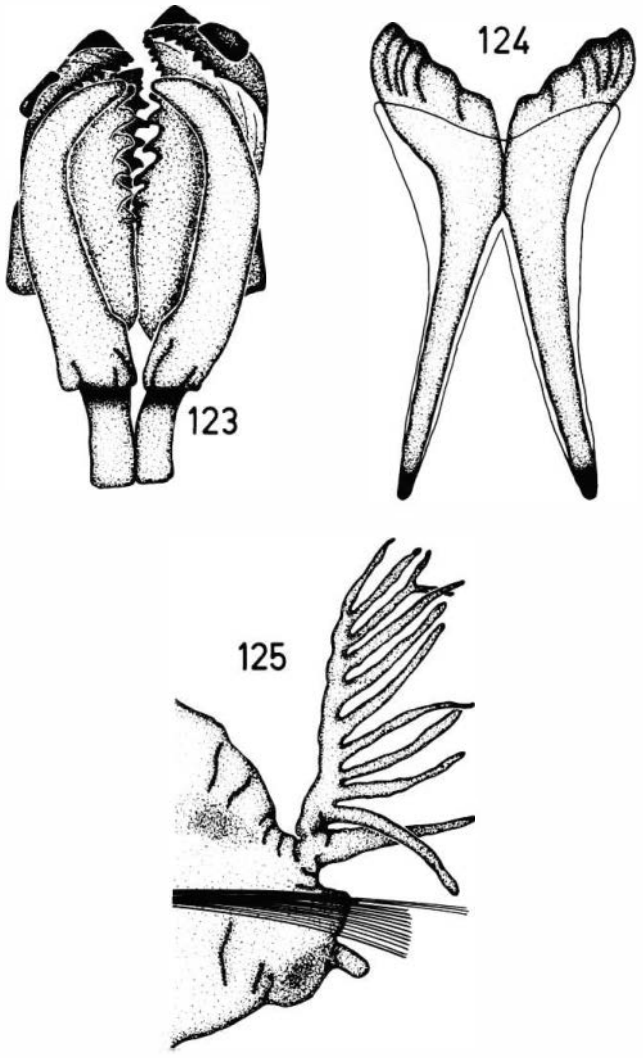
Eunice Cuvier, 1817

Eunice pennata (Müller, 1776) (Figs 123–125)

Eunice pennata Müller, 1776: 217; Monro 1930: 118–119, fig. 42; Fauvel 1936: 21; Hartman 1964: 118; 1967: 99; Averincev 1972: 177, pl. 30; Orensanz 1975: 93, pl. 3; 1990: 66-68, pl. 17, figs a-f, text-fig. 18, chart 3A; Hartmann-Schröder 1983: 267; 1986: 81.
Eunice narconi Baird, 1870: 350.

MATERIAL: Cape Evans Stn C ED (25); McMurdo Sound Stn V2 (25). Previous records from the Ross Sea: Baird (1870), Narcon Island; Orensanz (1990), 76°30' S, 174°54–58' E, 445–448 m; 53°30' S, 169°45–48' E, 589–584 m; 72°26–27' S, 177°04–12' E, 1883–1890 m.

DESCRIPTION:
Size: Length of body up to 70 mm; width, including parapodia, up to 4.0 mm; segments number up to 120.
Colour in alcohol: Light brown to yellow or cream.
Prostomium: Slightly incised anteriorly; one pair of eyes, nearly covered by peristomium; 5 antennae, long and irregularly annulated.
Peristomium: Broad, with a pair of short, annulated, tentacular cirri.
Pharynx: Armed with a characteristic set of jaws (Figs 123–124). Left maxilla III subequal to left maxilla II. Mandibles (Fig. 124) have expanded ends with blunt unequal teeth.



Figs 123–125. *Eunice pennata* (Müller). **123, 124,** Jaw apparatus. **125.** Parapodium.

Branchiae: Present from segments 3–8, limited to next 38–50 segments; largest branchiae in middle segments of branchial region with up to 11 or 12 branches (Fig. 125).

Parapodia: (Fig. 125) Dorsal cirri long and pointed, slightly larger than bottom branchial filament; ventral cirri very short, stumpy and oval-shaped; acicula yellow, 2 or 3 in number, projecting slightly beyond setal lobe.

Setae: Subacicular hooks, yellow, hooded, bidentate, present in posterior two-thirds of body; a few simple setae superiorly, remaining setae composite falcigers with bidentate tips and hooded appendages. Pectinate setae with few teeth, one of the laterals longer than others.

DISTRIBUTION: Cosmopolitan, in the Antarctic and Subantarctic mostly in slope depths (86–2691 m).

Family **ONUPHIDAE** Kinberg, 1865

Nothria Malmgren, 1867

Nothria anoculata Orensanz, 1974

Onuphis conchylega: Monro 1936: 150.
Nothria conchylega: Hartman 1964: 113; Orensanz, 1976: 36.
Nothria (Nothria) aff. *conchylega*: Averincev 1974: 219.
Nothria conchylega anoculata Orensanz, 1974: 99, pl. 8.
Nothria anoculata: Orensanz 1990: 44–48, pl. 9, fig. 14, chart 3B.

MATERIAL: No specimens in the collection. Previous records from Orensanz (1990), Ross Sea, 1772–1890 m.

DESCRIPTION:
Size: Up to 65 setigers.

Prostomium: Rounded, short, no eyes; with a pair of short, rounded frontal antennae. Five antennae, anterior pair short, 3 posterior ones larger, extending back to about 9th setiger. Ceratophores annulated, each with three rings.

Peristomium: Short with a pair of slender, short tentacular cirri.

Branchiae: Simple branchiae beginning on setigers 10–14, and extending to posterior end of body.

Parapodia: First 3 parapodia enlarged with presetal lobe bluntly rounded. Enlarged parapodia may be present in only 1 or 2 segments in juveniles. The number of setigers with cirriform ventral cirri, and setal composition also varies ontogenetically (Orensanz 1990). Dorsal cirri continue to end of body but becoming small towards posterior end. Ventral cirri cirriform on first 3 setigers; auricular presetal lobes on all parapodia.

Setae: Anterior hooks present on first 3 setigers, being simple on first setiger; simple and pseudocomposite on second setiger, and pseudocomposite on third setiger. Subacicular hooks begin around setigers 11–13.

REMARKS: The above synonymy has been established by Orensanz (1990), who noted that the diagnostic characteristics are subject to ontogenetic variation.

DISTRIBUTION: Typically from shelf and slope areas in Subantarctic areas: shelf around Tierra del Fuego, slope off Argentina, north of Drake Passage, the South Georgia shelf, the Pacific-Atlantic and Macquarie Ridges, and the Antipodes-Bounty and Prince Edward- Marion shelves. The two Ross Sea records of Orensanz (1990) are the only true Antarctic records and they are unusual as they come from deep waters.

Family **LUMBRINERIDAE** Malmgren, 1867

KEY TO GENERA:

1 Setae include simple limbates, composite hooded hooks and simple hooded hooks 2
– Setae include simple limbates and simple hooded hooks ..... *Paraninoe*
2 Maxilla IV in the form of expanded plates with whitish central area, maxilla V absent; mandible with short, thick divergent shafts. Three small peristomial antennae ..... *Augeneria*
– Maxilla IV and mandible normal, maxilla V present and adjacent to Maxilla IV. No peristomial antenna ..... *Lumbrinereis*

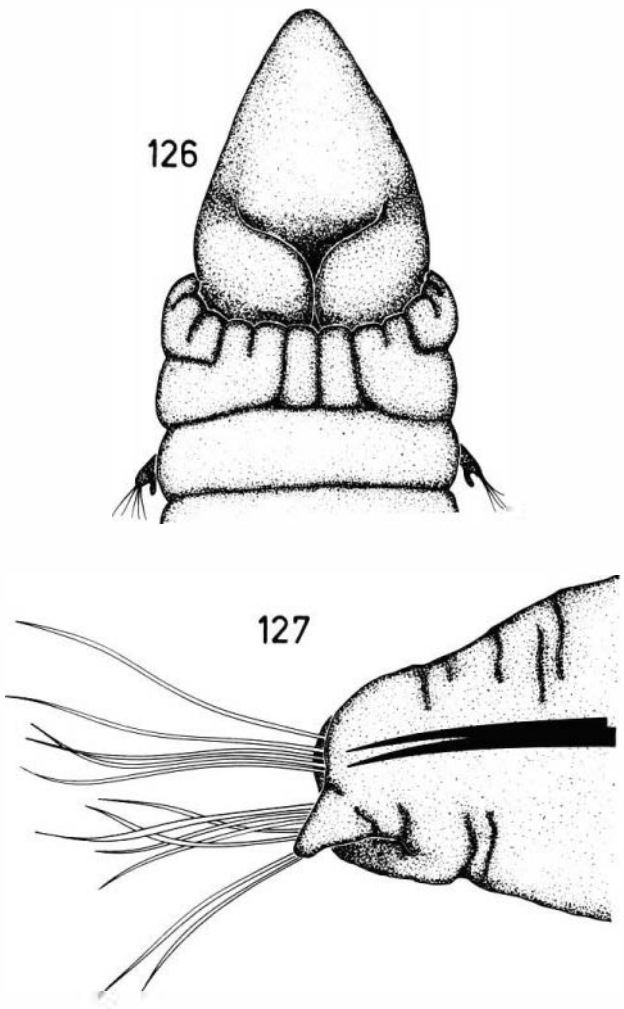
Paraninoe Levenstein, 1877

Paraninoe antarctica (Monro, 1930) (Figs 126–127)

Lumbrinereis antarctica Monro, 1930: 138, figs 51a-h; Hartman 1964: 119, pl. 35ii, figs 3–4; 1967a: 100 (in part); 1978: 115; Orensanz 1976: 38.
Lumbrinereis sp.: Hartman 1967: 101 (in part).
Ninoe sp.: Hartman 1967: 101 (in part).
Augeneria monotentaculata Averincev, 1972: 187, pl. 37, figs 1–10.
Lumbrinereis magalhaensis: Hartman 1978: 155 (in part).
Paraninoe antarctica: Orensanz 1990: 96–98, pl. 25, pl. 37, fig b, chart 3D.

Material: NZOI Stns A448 (1), A460 (1), A537 (1). Previous records from the Ross Sea: Orensanz (1990), Ross Sea: 75°17' S, 168°50' E in 364–366 m; 74°32' S, 168°17' E in 876 m; 77°04' S, 168°19' E in 916 m.

DESCRIPTION:
Size: Specimens incomplete, 34 mm length for up to



Figs 126–127. ***Paraninoe antarctica*** (Monro). **126**. Anterior end, ventral view. **127**. Parapodium.

80 segments; width, including parapodia up to 3.0 mm.

Colour in alcohol: Pale yellow to light brown; slightly iridescent.

Prostomium: (Fig. 126) Longer than broad, conical, sharply pointed in front; eyes absent; nuchal papillae often hidden under peristomium.

Jaw apparatus: Maxilla II with 3 teeth, Maxillae III and IV unidentate.

Parapodia: (Fig. 127) Increasing in size up to the 6th segment, supported by 2 thick black aciculae; presetal lobes broad and rounded; postsetal lobes smaller, pointed and almost triangular; further back the parapodia are reduced to small papillae.

Branchiae: Branchial lobes beginning on first setiger and extending back into middle region.

Setae: First 10 parapodia with only simple, thick, limbate setae; posteriorly simple hooded hooks increase in number until all setae except the 2 or 3 superiormost are hooded hooks.

REMARKS: Orensanz (1990) has established the above synonymy.

DISTRIBUTION: Largely restricted to to the lower shelf and upper slope areas (365–3747 m) around the Antarctic continent and the Scotia Arc.

Augeneria Monro, 1930

Augeneria tentaculata Monro, 1930 (Figs 128–130)

Augeneria tentaculata Monro, 1930: 140, fig. 52a-k; Hartman 1964: 119, pl. 37, figs 1–2; Day 1967: 430, fig. 17.14h-i; Orensanz 1990: 90–91, 94–95, 96, pl. 24, pl. 40, figs a-f, text-fig. 13, chart 3C.

MATERIAL: NZOI Stns A448 (2), A449 (2), A450 (1). A451 (3), A452 (1), A458 (3), A459 (3), A460 (1), A466 (6), A469 (8), A517 (3), A522 (1), A529 (2), A530 (3), A537 (4); McMurdo Sound Stn 61E (1); *Eastwind* Stn EAD2 (1); Trans-Antarctic Expedition Stn TAE78 (1). Previous records from the Ross Sea: Orensanz (1990), wide-spread *Eltanin* Stns in the Ross Sea, 326–2350 m.

DESCRIPTION:

Size: Length of body up to 130 mm; width, including parapodia, up to 4 mm; segments number up to 160.

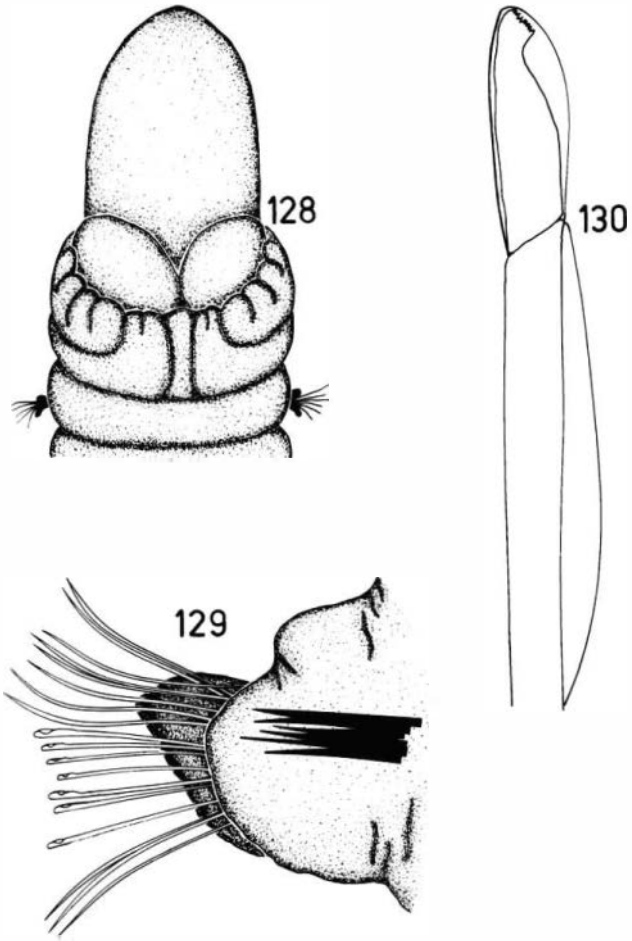
Colour in alcohol: Light pinkish-brown, highly iridescent; in some larger specimens there are irregular patches of purple pigment posterior and dorsal to the parapodia.

Prostomium: (Fig. 128). Twice as long as broad, conical and rounded in front; eyes absent. Evaginable nuchal organs or three small occipital antennae in a groove at posterior margin of prostomium; this groove is often obscured in fixed, contracted specimens.

Peristomium: Peristomial segment forming lower lip of mouth; first 2 segments asetigerous.

Parapodia: (Fig. 129) Short, blunt; postsetal lobe triangular, compressed, becoming shorter and terminating in an upturned conical process towards posterior end of body; presetal lobe very short and rounded; setal lobe supported by many (up to 7 or 8) black aciculae.

Setae: Hooded hooks and limbate seta present from first setiger; the anterior (setiger 1 to about setiger 15) hooded hooks composite, with multidentate end pieces (Fig. 130); in mid-body region they are replaced by simple hooded hooks with multidentate tips. Ventral limbate setae extend to about setiger 20; the transition from dorsal to subdorsal limbate setae takes place between setigers 35 and 40.



Figs 128–130. ***Augeneria tentaculata*** Monro. **128.** Anterior end, ventral view. **129.** Parapodium. **130.** Composite hooded hook.

DISTRIBUTION: South Orkney Islands, Antarctic Peninsula, Scotia Arc, and Ross Sea; lower shelf and upper slope areas, 80–2350 m, plus three records in abyssal depths.

Lumbrineris Blainville, 1828

Lumbrineris kerguelensis (Grube, 1878)

Lumbriconereis magalhaensis: Grube 1877: 531; Gravier 1906: 381–391; 1907: 30; 1911a: 78, pl. 3, figs 35–36; Ehlers 1908: 99 (in part); 1913: 449; Augener 1932: 38; Fauvel 1936: 22.
Lumbriconereis kerguelensis Grube, 1878: 92; McIntosh 1885: 246, pl. 36, figs 16–17, pl. 17a, fig. 18, pl. 18a, figs 2–4.
Lumbriconereis macquariensis Benham, 1921: 71, pl. 8, figs 76–91; Hartman 1964: 121, pl. 37, figs 7–8.
Lumbrineris magalhaensis: Monro 1930: 135; 1939: 121 (in part); Hartman 1952: 232; 1953: 25 (in part); Knox 1962: 345; Averincev 1972: 185, pl 36, figs 3–5, 8–9 (in part); 1974: 220.
Lumbrineris cingulata: Hartman 1967: 101 (in part).
Lumbrineris sp.: Hartman 1967: 101 (in part).
Lumbrineris kerguelensis: Orensanz 1990: 85–86, pl. 22, figs g-l, pl. 40, figs c, e, chart 4C.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m; Orensanz (1990), numerous stations (20) in the Ross Sea, 311–1274 m.

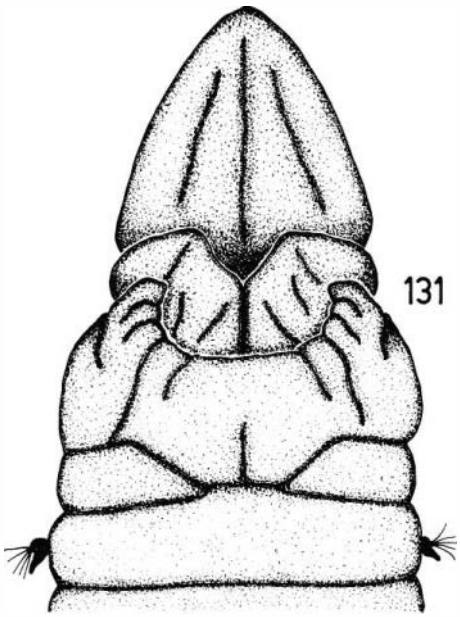
DESCRIPTION:
Size: Length of 80 anterior segments 34 mm; width 2.0 mm.
Prostomium: Longer than broad, somewhat triangular, as long as first 3 or 4 segments.
Peristomium: As long as succeeding segments.
Parapodia: Short, both setal lobes rounded, supported by 2 black embedded aciculae.
Setae: Composite hooded hooks with about 8 apical teeth. Dorsal and subdorsal transitional limbate setae are long capillaries.
Jaw apparatus: Incisive border of Maxilla III does not show a well-defined sinuosity.

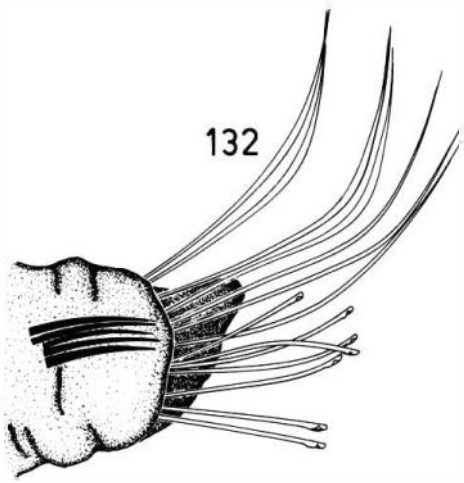
REMARKS: According to Orensanz (1990) there has been much confusion regarding the separation of the Antarctic and subantarctic *Lumbrineris* species, and it has been common practice to report most Antarctic specimens as *L. magalhaensis*. He separates *L. cingulata* sensu stricto from shallow waters and southern South America from the Antarctic species *L. kerguelensis*. Orensanz restricts *L. magalhaensis* to the Subantarctic (Magellanic Province and Kerguelen) but notes that it may be more widespread. In *L. magalhaensis* the body is relatively short (up to 150 setigers) whereas in *L. kerguelensis* it is relatively long (more than 200 setigers). In the former species composite hooded hooks extend back to setigers 10–15, while in the latter species they extend to setigers 15–25. In *L. magalhaensis* Maxilla III is distally bidentate whereas in *L. kerguelensis* it has an arcuate cutting edge.

DISTRIBUTION: Mostly at shelf and upper-slope depths (0–2864 m) south of the Antarctic Convergence, extending northwards through the Kerguelen Plateau, the Macquarie Ridge and the Scotia Arc. Frequent in samples from the South Shetland and South Georgia areas and from the Ross Sea and Weddell Sea shelves.

'Lumbrineris tetraura' (Schmarda, 1861)
(Figs 131–132)

Notocirrus tetraurus Schmarda 1861: 117, 6 figs.
Lumbriconereis oceanica Kinberg, 1865: 570.
Lumbriconereis tetraura: Ehlers 1900: 215; 1901a: 263; 1901b: 137 (in part), pl. 17, figs 105, 8–10.





Figs 131–132. ***Lumbrineris tetraura*** (Schmarda). **131**. Anterior end, ventral view. **132**. Parapodium.

Lumbrineris oceanica: Hartman 1949: 92, pl. 14, figs 4–6; Jeldes, 1962: 107.
Lumbrineris tetraura: Wesenberg-Lund 1962: 112; Hartman 1964: 123 (in part), pl. 38, figs 1–3; Orensanz 1973b: 351, pl. 3; 1976: 39; 1990: 142.

MATERIAL: NZOI Stns A448 (1), A461 (1), A520 (2). No previous records from the Ross Sea.

DESCRIPTION:
Size: Length of body up to 200 mm; width, including parapodia, up to 5.0 mm; segment number up to 200.
Colour in alcohol: Light pink to brown, slightly iridescent.
Prostomium: (Fig. 131) Conical, pointed, flattened on ventral surface, without antennae or nuchal papillae; very much longer than broad; eyes absent.
Peristomium: Longer than first setigerous segment, and ventrally involved with mouth.
Parapodia: (Fig. 132) With well-developed dorsal cirri; anterior parapodia rounded with short presetal and longer, pointed postsetal lobes; median parapodia with increasingly long postsetal lobes. 5 aciculae present in each parapodium.
Setae: Limbate setae and simple hooded hooks present from first setiger; composite hooded hooks may be present in parapodia of anterior 20 segments, and simple hooded hooks from this point onwards.
Jaw apparatus: Maxilla III unidentate.

REMARKS: This is the first record of this species from the Ross Sea. Orensanz (1990) considers that although this species has been referred to *Lumbrineris sensu lato* it may require a new generic status.

DISTRIBUTION: Magellan area, Falkland Island, Ross Sea.

Family **IPHITIMIDAE** Fauchald, 1970

Ophryotrocha notialis (Ehlers, 1908)

Paractius notialis Ehlers, 1908: 101, pl. 14, figs 1–6; Ehlers 1913: 500 (in part).
Ophryotrocha claparedii: Hartman 1953: 9 (in part); 1964: 127, pl. 39, figs 7–9; 1967: 102 (in part); Orensanz 1976: 41 (in part);
Ophryotrocha notialis: Orensanz 1990: 120–122, 124, pl. 36a-k.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Orensanz (1990); Ross Sea, 73°49–50' S, 178°03–14' W in 495–503 m.

DESCRIPTION:
Size: Length up to 4.5 m; segments number up to 28.
Prostomium: Rounded with a pair of globular dorsal antennae; palps absent or at least inconspicuous.
Jaw apparatus: Mandibles in the form of two elongated rods, distally V-shaped and denticulate. Maxillae consisting of 8 elements on each side, plus flat proximal pseudocarriers. Each maxillary set consisting of: (1) 2 proximal pectinate ones with the teeth alternately small and large; (2) 2 narrow, distally dentate ones; and (3) 4 distal, flat, marginally denticulate ones.
Parapodia: Simple, with a conical retractile lobe (ventral to main parapodial acicula) supported by internal aciculae).

Setae: Dorsal simple neurosetae, flat, finely serrated on one side; composite falcigers with short blades; one slender simple seta projecting from the ventral retractile lobe.

DISTRIBUTION: Magellanic region, South Georgia, Kerguelen Islands, Ross Sea, in shallow water (495–503 m).

Family **ORBINIIDAE** Hartman, 1942

KEY TO GENERA:

Thoracic neuropodia with distally pointed capillary setae only ..... *Haploscoloplos*

– Thoracic neuropodia with some acicular or curved setae, no modified spines in posterior thoracic neuropodia ..... *Scoloplos*

Haploscoloplos McIntosh, 1885

Haploscoloplos kerguelensis (McIntosh, 1885)

Scoloplos kerguelensis McIntosh, 1885: 355, pl. 43, figs 6–8, pl. 22A, fig. 19; Willey 1902: 275.
Haploscoloplos kerguelensis: Monro 1936: 160; Hartman 1966: 9–10, pl. II, figs 1–2.
Leitoscoloplos kerguelensis: Cantone & Sanfilippo 1992, 275; Bellan 1974: 789; Hartman 1978: 156; Averincev 1982: 25–26, pl. 3, figs 6–8.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), Cape Adare, in 15–18 m; Lowry (1976), Moubray Bay, Cape Hallett in 140–250 m, Cape Bird, Ross Island in 35–54 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:

Size: Length of body 7.7–40 mm; width 0.5–2.0 mm.
Colour in alcohol: Pale yellow to white; sometimes with a transverse group of brown pigment granules in front of posterior border of first segment.
Prostomium: Pointed but not acute.
Parapodia: Thoracic parapodia short, dorsal cirri increase in size posteriorly and in young specimens they are filiform; in larger specimens the dorsal cirri remain narrowly lanceolate.
Branchiae: First present from setigerous segments 10–16, increasing in size and becoming flattened and leaf-like in posterior region.
Setae: Crenulate capillaries, distally pointed and transversely barred; ventral almost being more slender than dorsal ones; in small specimens dorsal rami also carry a few forked bristles.

DISTRIBUTION: Falkland Islands, Kerguelen Islands, Ross Sea; from shallow depths to 219 m.

Scoloplos Blainville, 1828

Scoloplos (Leodamus) marginatus (Ehlers, 1897) (Figs 133–134)

Aricia marginata Ehlers, 1897: 95–97, pl. 6, figs 150–156; Willey 1902: 275, pl. 45, fig. 4; Ehlers 1912: 23.
Scoloplos marginatus: Monro 1939: 123–124.
Scoloplos (Leodamus) marginatus: Hartman 1952: 232; 1966: 11, pl. 2, figs 6–7; 1971: 1420; Bellan 1974: 789; 1974: 76; Averincev 1982: 26–27, pl. 3, figs 9–13; Hartmann-Schröder, 1986: 82; 1986: 53; Hartmann-Schröder & Rosenfeldt 1988: 53.

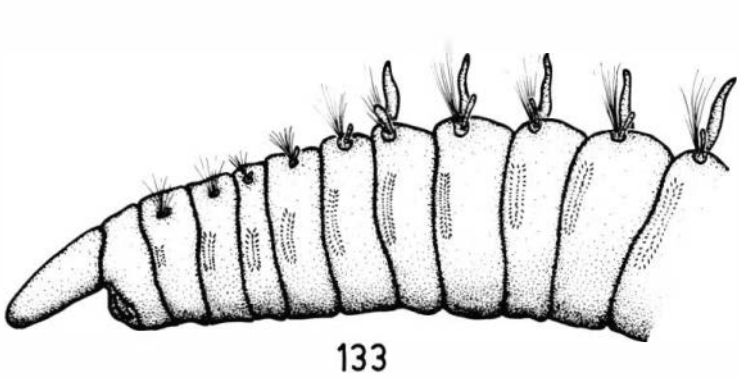
MATERIAL: NZOI Stns A456 (1), A457 (1), A459 (1), A461 (1), A469 (2), A471 (2), A528 (2), A529 (3), A534 (1); McMurdo Sound Stns A (3), G3 (3), M (1), V (2), 61 E (1); Cape Evans Stns CEA (47), CEF (10); Trans-Antarctic Expedition Stn TAE95 (3). Previous Records from the Ross Sea: Willey (1902), Cape Adare; Ehlers (1912), McMurdo Sound, in 470 m; Hartman (1952), Ross Island, McMurdo Sound in 91–106 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:

Size: Length of body up to 100 mm; width up to 4.0 mm; segments number up to 102.
Colour in alcohol: Pale yellow to white.
Prostomium: (Fig. 133) Conical, tapering to a blunt point, no eyes.
Thorax: Consists of 15–19 segments; change from thorax to abdomen abrupt.
Parapodia: Dorsal cirri present from third setiger, situated posterior to the notosetae; ventral cirri absent. Abdominal parapodia (Fig. 134) with slightly projecting acicula.
Branchiae: Present from the sixth setiger, thick, pointed, and somewhat strap-like, standing erect on the dorsal surface of the body.
Setae: Thoracic notosetae fine capillaries; thoracic neurosetae consist of short, thick, acicular hooks. Abdominal parapodia with long fine capillary setae which are easily lost and in some specimens absent.

REMARKS: This species is characterised by having acicular hooks only in the thoracic neuropodia. It is widely distributed at all depths in the Ross Sea.

DISTRIBUTION: Southern South America, Falkland and Kerguelen Islands, Bransfield Strait, South Georgia, South Shetland and South Orkney Islands, Ross Sea; common in shallow water and less abundant down to 2,800 m.



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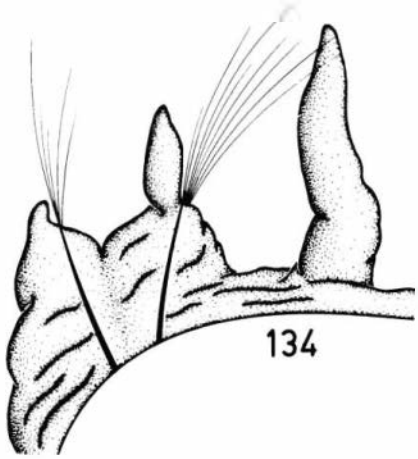

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Figs 133–134. ***Scoloplos (Leodamus) marginatus*** (Ehlers). **133**. Anterior end. **134**. Parapodium.

Family **PARAONIDAE** Cerruti, 1909

Paraonis Grube, 1872

Paraonis gracilis (Tauber, 1879)

Paraonis (Paraonides) gracilis: Monro 1930: 150–152, fig. 58a-d.
Paraonis filiformis Hartman, 1953: 39–40, fig. 12b-c.
Paraonis gracilis: Hartman, 1957: 330-331; 1967: 14, pl. 3, figs 5–6; Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body 15–18 mm; segments number 50 or more; very slender with greatest width in pre-branchial region.
Prostomium: Pointed, lacking a median antenna.
Parapodia: Abdominal parapodia long and pointed.
Branchiae: First present from 6th or 7th setigerous segment, at first small or abruptly large, present through 12 or 14 segments.
Setae: Slender and capillary through anterior and branchial segments. Abdominal notopodia with long pointed setae; neuropodia with 5–6 acicular spines in a fan-shaped fascicle, alternating with an equal number of very slender, distally pointed setae, numbering 2 or 3 in a series.

DISTRIBUTION: South Georgia and Ross Sea; cosmopolitan in shallow to moderate depths.

Family **SPIONIDAE** Grube, 1850

KEY TO GENERA:

1 Prostomium prolonged forward as a slender cone ..... *Nerinopsis*
– Prostomium not prolonged forward as a slender cone 2
2 Prostomium with frontal horns 3
– Prostomium without frontal horns 4
3 Without branchiae ..... *Spiophanes*
– With branchiae ..... *Scoletepis*
4 Branchiae from the first setiger ..... *Spio*
– Branchiae after the first setiger ..... *Laonice*

Laonice Malmgren, 1867

Laonice antarcticae Hartman, 1953

Laonice cirrata antarcticae Hartman, 1953: 40-42.
Laonice antarcticae: Hartman 1965: 147–148; 1978: 62 (in part); Banse & Hobson 1968: 24; Hartman & Fauchald 1971: 104; Blake 1983: 219–222, fig. 8.
?*Laonice cirrata*: Hartman 1967: 112 (in part), 114 (in part).

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Blake (1983,) Ross Sea, 74°39–59'S, 172°18–12'E, in 535 m; off Cape Adare, in 659–714 m.

DESCRIPTION:
Size: Length of body up to 13 mm long; width up to 2.0 mm; segments number up to 60.
Colour in alcohol: Dark brown.
Prostomium: Truncate to weakly rounded on anterior margin, with frontal horns developed to varying degrees; caruncle bordered by nuchal ciliary tracts,

continued posteriorly for 5–12 setigers; occipital tentacle present; eyespots present or absent, if present a single pair, each elongate and reddish in colour.

Parapodia: Setiger 1 with flattened postsetal lamellae. Notopodial lamellae of setiger 2 and subsequent setigers larger, triangular; posterior setigers with smaller, rounded lamellae.

Branchiae: Present from setiger 2, continuing posteriorly to about setiger 30; they are short, triangular and basally free from lamellae.

Notosetae: Capillary notosetae arranged in 2 rows with about 35–40 setae per fascicle in anterior setigers, and about 25–30 in posterior setigers; capillaries with narrow clear sheaths, shaft with fine granulations along internal striae.

Neurosetae: Anterior capillary neurosetae similar to notosetae in arrangement, number and form; neuropodial tridentate hooded hooks from setigers 35–40, numbering 9–12 per fascicle, hooks with a main fang surmounted by paired apical teeth; a single inferior sabre seta from setiger 23–24, strongly curved with fine granulations along internal striae.

DISTRIBUTION: North Atlantic Ocean, slope and abyssal depths to 2864 m off eastern north America, South America off Suriname and Brazil in 520–1500 m; off Argentina and Uruguay in 70–96 m, round the Antarctic continent and the off-lying islands, in 27–3697 m.

Laonice weddellia Hartman, 1978

?Laonice cirrata: Hartman 1967: 112 (in part).
nereid: Hartman 1967: 112.
Prionospio spp.: Hartman 1967: 113 (in part).
Laonice weddellia Hartman, 1978: 161–163, fig. 16; Blake, 1983: 221–223, fig. 9.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Blake (1983), *Eltanin* Stns in the Ross Sea (9 stations ranging from 73°02' to 77°01' S and 163°26' W to 170°10' E), in depths of 311–923 m; Moubray Bay, Cape Hallett, in 135 m; between Cape Royds and Cape Evans, Ross Island, in 400 m.

DESCRIPTION:

Size: Length of body up to 34 mm; width up to 23 mm; segments number 130.

Colour in alcohol: Light tan to brown.

Prostomium: Longer than wide, rounded on anterior margin; narrowing posteriorly and continued to end of setiger 1, then merging indistinctly with a nuchal ridge which continues posteriorly for 12–20 setigers; with a single finger-like occipital tentacle at posterior end and 2–3 pairs of red eyes; anterior pair indistinct, middle pair largest, posterior pair small, oval.

Peristomium: Well developed, with moderately high lateral wings.

Parapodia: Setiger 1 with conical notopodial lamellae and subtriangular neuropodial lamellae. Parapodial lamellae of subsequent setigers longer, triangular, somewhat auriculate; posterior notopodial lamellae more or less elliptical.

Branchiae: Present from setiger 2, thin and short at first, increasing in size and thickness on subsequent setigers, each with a ciliated inner border; continuing posteriorly for 20–30 setigers, absent from the posterior region.

Notosetae: Capillaries numerous (about 100) arranged in 4–5 rows per fascicle in anterior notopodia; shafts of first row bearing fine granulations; setae fewer by about setiger 15, with fewer rows and loss of granulations.

Neurosetae: Capillaries similar to those in the notopodia; posterior neurosetae longer than the notosetae. From about setiger 12, 1–2 heavily granulated inferior sabre setae, and from setigers 20–21 tridentate hooded hooks with the main fang surmounted by 1–2 apical teeth; when present, second apical tooth located in tandem with first.

Genital Pouches: Present between setigers 8–9 or 10-11.

Pygidium: With 7–8 anal cirri, the ventralmost thickest.

REMARKS: *Laonice weddellia* is endemic to the Antarctic and subantarctic seas and differs from other species of the genus in having an elongated, narrow prostomium and 3 pairs of eyes. Although it was not present in the collections under study it is apparently wide-spread in the Ross Sea.

DISTRIBUTION: Off southern South America, Straits of Magellan, Falkland Islands, South Orkney Islands, South Shetland Islands, widespread in Antarctic Seas, 44–3111 m.

'Nerinopsis' Ehlers, 1912

'Nerinopsis hystricosa' Ehlers, 1912

Nerinopsis hystricosa Ehlers, 1912: 512; 1913: 512–513, pl .36, figs 7–13; Benham 1927: 97; Hartman 1966:18, pl. 4, figs 6–8.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound in 37 m.

DESCRIPTION:

Size: Length of body 2.5-3.0 mm; segments number 21-25.

Colour in alcohol: Colourless to pale yellow.

Prostomium: Prolonged forward as a cone; somewhat retractile; four eyes in subquadrate arrangement.

Notosetae: Large and directed far laterally.

Neurosetae: Simple, capillary, or slightly curved; others thicker and serrated along their distal free end.

Pygidium: With a pair of thin lobes, the two forming an encompassing membrane with a small thread-like cirrus within.

REMARKS: Perhaps a larval form. According to Fauchald (1977) the genus *Nerinopsis* is invalid.

DISTRIBUTION: Eastern sector of Antarctica, Ross Sea, in 10–3000 m.

Scolelepis Blainville, 1828

Scolelepis eltaninae Blake, 1983

Scolelepis eltaninae Blake, 1983: 210–213, fig. 3.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Blake (1983); Ross Sea, Robertson Bay, in 143 m; Pennell Bank, in 388–399 m.

DESCRIPTION:

Size: Length of body up to 17 mm for a 38 segment incomplete specimen; width up to 2.6 mm.

Colour in alcohol: Light tan to flesh coloured, no body pigment.

Prostomium: Pointed on anterior margin, flaring subterminally and continuing posteriorly to base of palps; terminating in a large occipital tentacle; 2 pairs of eyes on anterior face of tentacle, posterior pair oval, anterior pair cup-shaped. Palps equal in length to 7–8 setigers, thickened basally with a conspicuous sheath.

Peristomium: With well-developed lateral wings.

Parapodia: First setiger well developed with conical notopodial lamellae, and elliptical neuropodial lamellae. Notopodial lamellae from setigers 2–20 fused to branchiae, free only at their tips; lower portion of notopodial lamellae directed ventrally towards neuropodium from setiger 25, forming an interramal channel. Neuropodial lamellae from setigers 2–17 becoming divided by setigers 18–23 into large triangular and dorsally directed interramal lamellae and smaller elliptical neuropodial lamellae.

Notosetae: All capillaries (at least to setiger 38) arranged in 2 rows in anterior setigers and a single row more posteriorly; 3–4 larger, superior capillaries present at the dorsal end of the posterior row. Anterior capillaries with finely granulated shafts and clear, narrow sheaths; granulations reduced or inconspicuous by about setiger 25.

Neurosetae: Anteriorly similar in arrangement to notosetae except for a lower group of 3–4 long granulated capillaries; these setae gradually thickening over successive setigers; replaced by sabre setae with commencement of neuropodial hooks from setigers 20–24; hooks numbering up to 7–8 per neuropodium, accompanied by 4–6 thin, simple capillaries and 7–8 granulated sabre setae; hooks unidentate, acicular.

REMARKS: The Ross Sea is the type locality for this species.

DISTRIBUTION: Bransfield Strait and the Ross Sea, in 143–399 m.

Spio Fabricius, 1785

Spio obtusa Ehlers, 1913

Spio obtusa Ehlers, 1913: 508–509, pl. 36, figs 1–4: Hartman 1966: 22, pl. 5, figs 11–13.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1913), McMurdo Sound in 704 m.

DESCRIPTION:

Size: Length of body more than 14 mm; width 1.5 mm; segments number more than 60.

Prostomium: Short, subcircular, terminating posteriorly in an antenna; 2 pairs of small black eyespots.

Branchiae: Filiform and completely separated from postsetal lobes.

Parapodia: Notopodial lobes large, medially directed, lancet-shaped and concealing anterior segments. First parapodium smaller than those following.

Notosetae: All simple and capillary.

Neurosetae: Median and posterior neurosetae are slender hooded uncini, distally bifid.

DISTRIBUTION: McMurdo Sound in considerable depths.

Spiophanes Grube, 1860

Spiophanes kroyeri Grube, 1860

Spiophanes kroyeri Grube, 1860: 88–89; Ehlers 1875: 25; Söderström, 1920: 240–243; Pettibone 1962: 85 (synonymy); Hartman 1965: 153; Blake 1983: 232–233.

Spiophanes spp.: Hartman 1967: 114 (in part).
Spiophanes kroyeri: Fauchald 1972: 99, figs 4C-4D.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Blake (1983), Moubray Bay, Cape Hallett, in 143 m.

DESCRIPTION:
Size: Length of body up to 30 mm; width 5.0-6.0 mm; segments vary to 106.
Prostomium: Wide frontal margin; lacking eyes; a long occipital tentacle attached between palpal bases. A nuchal ridge extends back to setiger 14.
Parapodia: Dorsal cirri variable, first 4 pairs cirriform and larger than those posteriorly; they may change abruptly at segments 5–9, where they may be short, but increasing in size to about segment 21; inconspicuous after about segment 21. Notopodial postsetal lamellae of setigers 1–2 long, cirriform, with those of subsequent segments being shorter and broader.
Branchiae: Absent.
Setae: Bacillary setae are feathery and conspicuous. Curved, thick, acicular, geniculate setae present on first neuropodium. Anterior neuropodial capillary setae are broad with narrow sheaths and bear heavy granulations on shaft. Posterior notopodia with enlarged, curved capillary setae without limbations. Neuropodial hooks first present from about setiger 15; each hook terminates distally in a main fang nearly at right angles to shaft, surmounted by 2 smaller teeth in one row; lacking a hood.

DISTRIBUTION: Cosmopolitan in the Northern hemisphere, Australia, off Chile, Falkland Islands, South Georgia, Antarctic sea, Ross Sea.

Spiophanes tcherniai Fauvel, 1951

Spiophanes tcherniai Fauvel, 1951: 762–764, fig. 1a-g; Hartman 1966: 23, pl. 6, figs 4-6; 1978: 163; Bellan 1974: 790; Blake 1983: 233, fig. 4; Hartmann-Schröder 1983: 8; 1986: 8; Hartmann-Schröder & Rosenfeldt 1988: 58; 1990: 113.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea; Lowry (1976), Moubray Bay, Cape Hallett, 104–250 m; Cape Bird, Ross Island, 35–54 m; Oliver and Slattery (1986), McMurdo Station Jetty, 20 m.

DESCRIPTION:
Size: Length of body up to 16 mm; width up to 7.0 mm; segments number over 90; body filiform.
Prostomium: Triangular, narrowing posteriorly, truncate on the anterior margin, with distinct frontal horns, caruncle short, extending to the end of setiger 1; 2 pairs of eyes, anterior pair cup-shaped, larger, widely spaced, posterior pair oval, medial in location.
Peristomium: Well developed, forming thickened ridges lateral to prostomium.
Parapodia: First setiger with a long, cirriform notosetal lobe. Other anterior parapodia with cirriform postsetal lobes.
Setae: Setiger 1 with single, long curved spine bearing granulations in addition to normal capillaries. Notosetal and neurosetal capillaries of anterior setigers long, with narrow nongranulated sheaths. Setigers 15–18 with broadly sheathed notosetae with fine venations in addition to normal capillaries. Neuropodia with tridentate partially hooded hooks from setiger 16; each hook with a main fang surmounted by 2 apical teeth; a single inferior sabre seta in neuropodia from setiger 16. 4–5 posterior-most setigers with 1–2 enlarged, curved granulated notosetae in addition to long capillaries.
Pygidium: With two short conical processes thickened at their base.

DISTRIBUTION: Adelie Coast, Kerguelen Islands, South Orkney and South Shetland Islands, Ross Sea.

Spiophanes sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Cape Bird, Ross Island in 35–54 m.

REMARKS: It is not clear if this record represents a species other than *S. tcherniai*.

Family **CIRRATULIDAE** Carus, 1863

KEY TO GENERA:

1 All setae slender and capillary; dorsum of only one anterior segment with long tentacular cirri ..... *Tharyx*
– Some setae acicular or spinelike 2
2 A pair of long thick palpi inserted in front of the setigerous segments ..... *Chaetozone*
– Without a pair of thick palpi; dorsal series of tentacles inserted on or before the first setigerous segment ..... *Cirratulus*

Chaetozone Malmgren, 1867

Chaetozone sp.

MATERIAL: No specimens in the collection. Previous records in the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m (as *C. spinosa*).

REMARKS: The genus *Chaetozone* is characterised by having a pair of longitudinally grooved palps at the anterior end of the body, lateral branchiae, usually one pair per segment and both capillary and acicula setae, the latter distally entire. Lowry identified his specimens as *C. spinosa* which is known only from Japan and Southern California. *Chaetozone* species recorded from Antarctica include *C. andersenensis*, *C. setosa*, and *C. pinguis*. As Lowry's specimens were not available for examination they cannot be assigned to one of these species.

Cirratulus Lamarck, 1801

Cirratulus cirratus (Müller, 1776) (Fig. 135)

Cirratulus cirratus Müller, 1776: 215; Fauvel 1916: 447, pl. 8, fig. 12; Benham 1921: 81; Hartman 1966: 27, pl. 7, figs 4–5; Bellan 1974: 790; Hartmann-Schröder 1986: 148–149.
Promenia fulgida Ehlers, 1897: 114–116, pl. 7, figs 174–176.

MATERIAL: NZOI Stn A537 (1); *McMurdo Sound* Stn 61B (1); Trans-Antarctic Expedition Stn TAE79 (1). No previous records from the Ross Sea.

DESCRIPTION:
Size: Length of body 10–30 mm; width 3.0–4.0 mm
Colour in alcohol: Light yellow, sometimes purple.
Prostomium: (Fig. 135) Blunt, rounded in front with a row of eyes on each side, variable in number, usually 5–8 in a row.
Branchiae: Long and filamentous, present from first setiger.
Tentacular cirri: A bunch present on either side of first setiger, shorter than branchiae, and very easily lost.
Thorax: No clear demarcation between thorax and abdomen.
Notosetae: Capillary, with a few thicker spines present from about setiger 20.
Neurosetae: Also capillary, and with spines present from setiger 10.
Posterior end: Smooth and tapering, with no anal appendages.

REMARKS: In the present specimens the tentacular cirri are lost, and only one pair of branchiae is retained on one specimen on first setiger (Fig. 128).

DISTRIBUTION: Cosmopolitan in intertidal to moderate depths; it has been recorded from many localities around the Antarctic continent.

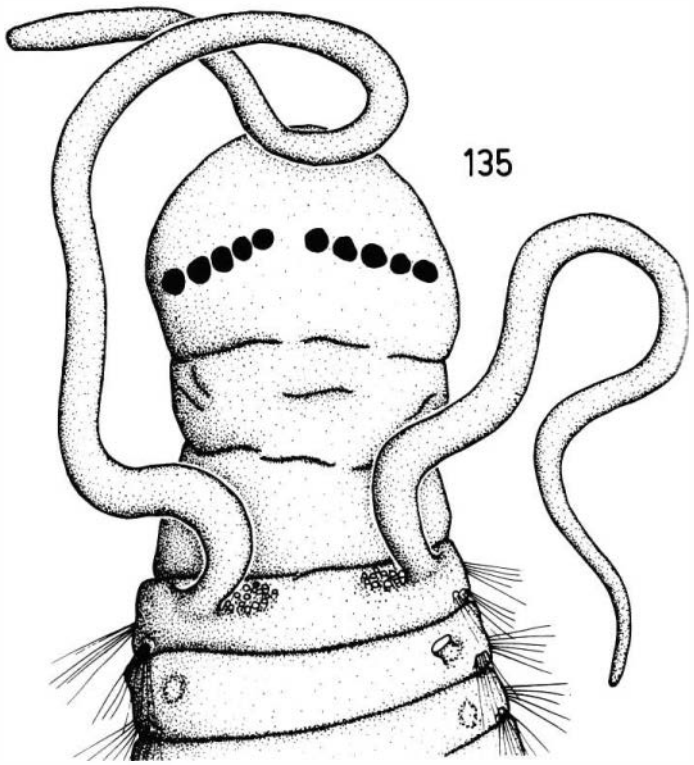


Fig. 135. ***Cirratulus cirratus*** Müller. Anterior end.

Tharyx Webster & Benedict, 1887

Tharyx cincinnatus (Ehlers, 1908) (Fig. 136)

Heterocirrus cincinnatus Ehlers, 1908: 129, pl. 17, fig. 17.
Tharyx cincinnatus: Hartman 1966: 31, pl. 8, fig. 3; 1978: 167; Bellan 1974: 791; Hartmann-Schröder 1983: 83–84; Hartmann-Schröder & Rosenfeldt 1988: 71; 1990: 115; Cantone & Sanfilippo 1992: 375.

MATERIAL: NZOI Stn A461 (1). Previous records from the Ross Sea: Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body up to 20 mm; width 1.5 mm; segments number approximately 110.
Colour in alcohol: Light grey.
Prostomium: (Fig. 136) Conical with a blunt point; separated from first setiger by a bulbous region with irregular annulations; eyes absent. A pair of large grooved palps, typical of this species, are lost from present specimen, but their bases are visible on dorsal surface of first setiger.
Branchiae: Most are lost, but one remains on first setiger attached alongside base of parapodia; usually one pair per segment.

Thorax: Anterior segments much broader than long.
Setae: All are thin, simple, and capillary, notosetae being very much longer than neurosetae.

REMARKS: This is the first record of this species from the Ross Sea region.

DISTRIBUTION: Kerguelen Islands, South Shetland Islands and the Ross Sea.

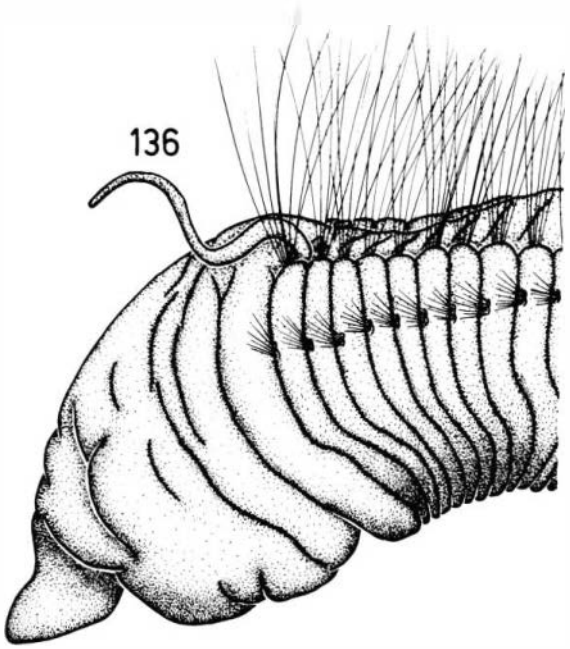


Fig. 136. ***Tharyx cincinnatus*** (Ehlers). Anterior end.

Tharyx sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m.

REMARKS: It is possible that this record belong to *T. cincinnatus* but it is not possible to verify this as Lowry's specimens were not available for examination.

Family **APISTOBRANCHIDAE** Mesnil & Caullery, 1898

Apistobranchus Levinsen, 1883

Apistobranchus sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

REMARKS: The Apistobranchidae are small elongate worms with numerous segments. The prostomium has no appendages but there are well-developed nuchal organs. The peristomium has parapodia and a pair of long grooved palps. Notopodia are reduced to a postsetal cirriform lobe with an internal aciculum. There are no branchiae. Neuropodia have a lamellar postsetal lobe and a fascicle of simple capillaries. The pygidium has anal cirri.

Family **FLABELLIGERIDAE** Saint-Joseph, 1894

KEY TO GENERA:

Neurosetae composite ..... *Flabelligera*
– Neurosetae simple, or accompanied by some composite ones in the anterior segments; some setae acicular; anterior end of the body with a cephalic cage ..... *Pherusa*

Flabelligera Sars, 1829

Flabelligera gourdoni Gravier, 1906

Flabelligera gourdoni Gravier, 1906: 536; 1907: 35–37, pl. 3, fig. 28, pl. 4, figs 29–30; Hartman 1966: 35–36, pl. 10, figs 7–9.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m.

DESCRIPTION:
Size: Length of body up to 21 mm; width up to 3.5 mm; setigerous segments number 19.
Colour in alcohol: Anterior end greyish-yellow. covered with grains of fine sand. Anterior part of body surrounded by a semitransparent sheath.
Parapodia: Parapodial papillae long, slender, distally enlarged.
Notosetae: Notopodia typically with 5 or 6 slender setae, transversely striated.
Neurosetae: Neuropodia usually with a single, large composite falciger, with appendage strongly curved.

REMARKS: Augener (1927: 223) considered this species to be identical with *F. mundata*. However, *F. gourdoni* has a single, large, composite neuropodial falciger, whereas in *F. mundata* the neuropodial falcigers number 5–6.

DISTRIBUTION: Port Charcot in 40 m, Moubray Bay, Cape Hallett in 104–250 m.

Flabelligera mundata Gravier, 1907 (Figs 137–139)

Flabelligera mundata Gravier, 1907: 33–39, pl. 4, figs 31–32, text-figs 22–23; Ehlers 1912: 25; Benham 1927: 129; Monro 1939: 130; Knox 1962: 345; Hartman 1966: 37–39, pl. 11, figs 1–4; 1978: 170; Cantone & Sanfilippo 1992: 375.

MATERIAL: NZOI Stn A533 (2); *Glacier* Stn GLD-8 (2). Previous records from the Ross Sea: Ehlers (1912), Coulman Island in 18 m; Benham (1927), McMurdo Sound in 402–457 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:

Size: Length of body up to 100 mm; width up to 10 mm, not including setae.

Colour in alcohol: Light yellow to transparent; entire body cased in a thick, gelatinous, translucent sheath.

Prostomium: Squared in front with a mass of long curved bristles forming a cephalic cage which surrounds a pair of short, stout palps (Fig. 137); oral tentacles numerous, long, slender and cirriform (retracted and not visible in preserved specimens.

Parapodia: All elongated with a single conical lobe. Papillae with a long stalk medially inflated.

Notosetae: (Fig. 139) Long, thin and capillary, with fine transverse striations; first 3 parapodia with extremely long setae, more than 4 times the width of body.

Neurosetae: (Fig. 138) Short, stout composite falcigers, with curved appendages with striated shafts.

REMARKS: This species is widely distributed around the Antarctic continent.

DISTRIBUTION: Antarctic Seas, circumpolar, in shallow to moderate depths.

Pherusa Oken, 1807

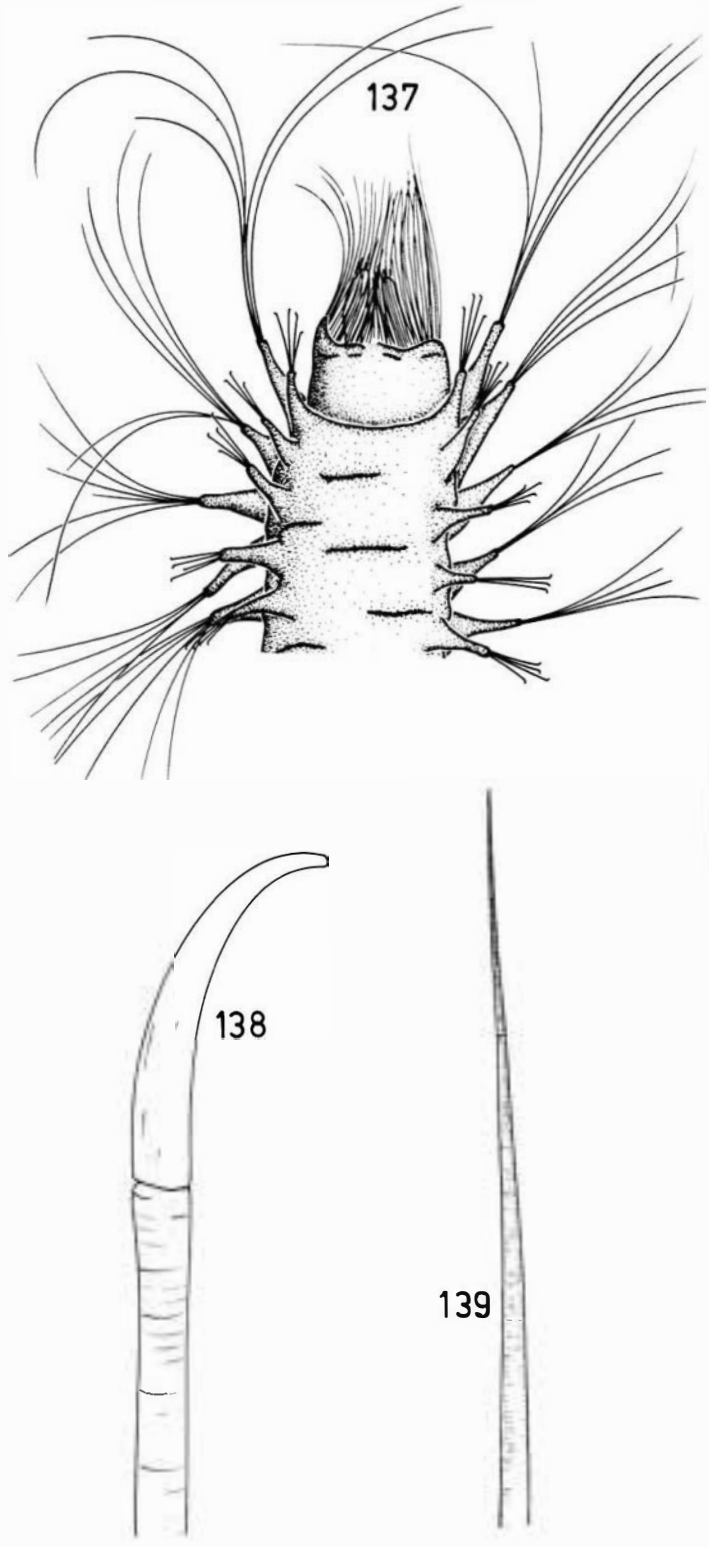
Pherusa kerguelarum (Grube, 1878)

Trophonia kerguelarum Grube: 1878: 539.
Trophonia kerguelarum: McIntosh, 1885: 364, pl. 44, figs 9–10, pl. 32A, figs 4–6.
Pherusa kerguelarum: Hartman 1966: 43, pl. 13, figs 1–2; Bellan 1974: 791.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), McMurdo Sound in 549 m.

DESCRIPTION:

Size: Length 10–30 mm; width 2–4 mm; segments number 25–30.



Figs 137–139. ***Flabelligera mundata*** Gravier. **137.** Anterior end. **138.** Composite neuropodial falciger. **139.** Notopodial capillary seta.

Prostomium: With a cephalic cage formed from setae of first two segments.
Dorsum: Surface epithelium sparsely papillated except between parapodia where papillae are long and digitate.
Notosetae: Long, iridescent, in spreading fascicles, strongly cross-striated; long slender hooks present from third setiger.
Neurosetae: Falcigerous, with transverse striations close together.

REMARKS: This species differs from *P. plumosa* (Müller) in having sparse instead of dense surface papillation, and in having acicular spines present from the third instead of the fourth setiger.

DISTRIBUTION: South Georgia, Kerguelen Islands, Ross Sea, in shallow to moderate depths.

Family **SCALIBREGMATIDAE** Malmgren, 1867

KEY TO GENERA:

1 Branchiae present; first setiger with slender capillary setae ..... *Scalibregma*
- Branchiae absent; first 2 or 3 setigers with acicular spines 2
2 Parapodia without dorsal cirri ..... *Sclerocheilus*
- Parapodia with dorsal cirrii ..... *Oligobregma*

Oligobregma Kudenov & Blake, 1978

Oligobregma collare (Levenstein, 1975)

Pseudoscalibregma collaris Levenstein, 1975: 134, fig. 6a-d.
Pseudoscalibregma aff. *aciculata*: Hartman 1967: 133.
Asclerocheilus nigrocirrus Hartman, 1978: 177–179, fig. 26a-d.
Oligobregma collare: Blake 1981: 1137–1139, fig. 3.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Blake (1981), Ross Sea, between Cape Royds and Cape Evans, Ross Island, in 400 m.

DESCRIPTION:
Size: Length up to 26 mm; width 5.0 mm; body expanded in the anterior segments, tapering to a narrow posterior end.
Colour in alcohol: Light tan to brown.
Prostomium: Cordate, with 2 rounded lobes projecting from anterior margin; no eyes; with paired nuchal organs sometimes apparent lateral to posterior edge of prostomium.
Peristomium: Well-developed, achaetous, sometimes appearing as 2 rings.
Segments: Anterior 2 setigerous segments smooth, becoming rugose from setiger 3; anterior and middle body segments triannulate, becoming quadri-annulate in posterior segments. Branchiae absent.
Parapodia: Anterior parapodia reduced to simple lobes; medial and posterior segments with prolonged conical noto- and neuropodia and short, conical dorsal and ventral cirri; cirri with glandular tips; small sense organs present between noto- and neuropodia.
Setae: Setigers 1–3 with heavy acicular spines in notopodia in addition to capillaries; spines arranged in 2 rows on setigers 1–2 and a single row on setiger 3; spines sickle-shaped, with a dense cloak of bristles on apical ends; furcate setae from setiger 4, each having long tynes and fine denticles. Neurosetae all capillaries.
Pygidium: Terminal, with lobate margin bearing up to 8 anal cirri.

DISTRIBUTION: Drake Passage, Weddell Sea, Bellingshausen Sea, Ross Sea.

Oligobregma notiale Blake, 1981

Oligobregma notiale Blake, 1981: 1141–1143, fig. 5.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Blake (1981), Ross Sea, *Eltanin* Stn 2050, 77°01' S, 168°38' E, 77°03' S, 168°23' E, 909–923 m.

DESCRIPTION:
Size: A moderately large species, up to 13 mm long and 3.0 mm wide for 32 setigers. Body enlarged in the anterior third, tapering posteriorly.
Prostomium: With 2 broadly rounded frontal lobes projecting laterally; 2 elongated eyes, each formed of numerous individual ocelli arranged in a Y-shape; nuchal organs lobate, located on posterior margin and usually concealed.
Peristomium: Smooth, sometimes superficially divided into 2 rings.
Proboscis: Simple, sac-like when everted.
Segments: Most segments quadriannulate. Branchiae absent.
Parapodia: Parapodial rami reduced to low mounds on anterior segments, becoming lobate in posterior segments and bearing inflated cirri; with interramal cirri.
Branchiae: Absent.
Setae: Setigers 1–3 with curved acicular spines and capillaries in the notopodia; spines numbering 8–12

per notopodium, bearing fine bristles on shaft, best developed on apex; subsequent notopodia and most neuropodia with furcate setae with unequal tines, with numerous denticles along inner borders.

Pygidium: With 5 ventrally placed cirri.

DISTRIBUTION: Antarctic Peninsula, Weddell Sea, Budd and Knox Coasts, Ross Sea.

Sclerocheilus Grube, 1863

Sclerocheilus antarcticus Ashworth, 1915 (Fig. 140)

Eumenia oculata: Gravier, 1911: 112, pl. 4, fig. 44 [not Ehlers, 1901b, *fide* Ashworth, 1915].
Sclerocheilus antarcticus Ashworth, 1915: 405–418, text-figs 1–2, pl. 36, figs 1–6; Hartman 1967: 45 (in part); 1978: 181–182; Blake 1981: 1151–1152, fig. 10.
?*Eumenia oculata*: Fauvel 1951: 766 [not Ehlers, 1901b].
Oncoscolex dicranochaetus: Hartman 1952: 133; 1966a: 45, figs 1–5 [in part, not Schmarda, 1861].
?*Sclerocheilus minutus*: Fauvel 1951: 766 [not Grube, 1863].
Sclerocheilus oculatus: Hartman 1967: 135–136 [not Ehlers, 1901b].

MATERIAL: NZOI Stn A460,(1); McMurdo Sound Stn 61B (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Body arenicoloform, up to 30 mm long and 5.0 mm wide; with about 43 segments.
Colour in Alcohol: Muddy pale brown to yellow.
Prostomium: Y-shaped, elongated, with 2 laterally directed lobes (Fig. 140), variable in shape either broad or narrow; eyes or ocular areas forming an inverted Y-shape; nuchal organs present as lobate structures directly posterior to prostomium.
Peristomium: Achaetous, variably convoluted; with flap overhanging prostomium mid-dorsally; first setiger forming lower lip of mouth (Fig. 140).
Proboscis: Lobate, sac-like.
Branchiae: Absent.
Parapodia: Anterior parapodia biramous; both notopodia and neuropodia conical, with very short and squat dorsal and ventral cirri; posterior parapodia more elongated with prominent flattened ventral cirri.
Setae: Setae of 3 types: (1) acicular notopodial spines occurring on setigers 1–3, sharply pointed and bearing a fine cloak of bristles; (2) furcate setae occurring from setigers 3 or 4 in notopodia and neuropodia, with subequal tines, bearing fine denticles along inner margins; and (3) capillaries of various lengths and diameters occurring in both rami throughout body.

REMARKS: The above synonymy has been established by Blake (1981) who examined the specimens referred to *Oncoscolex dicranochaetus* Schmarda by Hartman (1952) and *Sclerocheilus oculatus* (Ehlers) by Hartman (1967) and found that they agreed well with Ashworth's (1915) account of *S. antarcticus*. The present specimens most closely resemble those described by Hartman (1967) as *S. oculatus* in that the prostomium has frontal horns directed obliquely downwards and the posterior parapodia have prominent ventral cirri. There are, however, minor differences such as the absence of paired ocular areas. Accounts of the specimens assigned to *S. antarcticus*, according to the above synonymy, also differ in the arrangement of the acicular notopodial spines and the furcate setae.

DISTRIBUTION: From widespread localities round the Antarctic continent in 45–426 m.

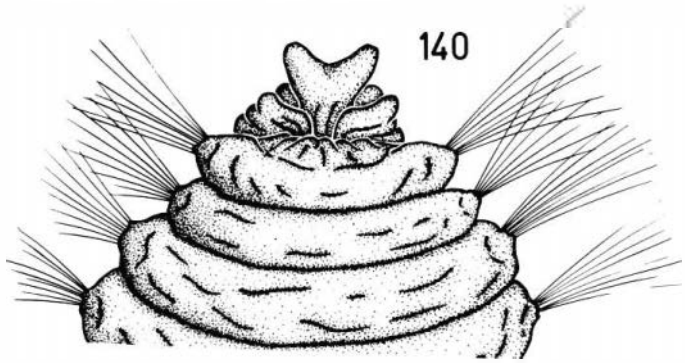


Fig. 140. ***Sclerocheilus antarcticus*** Rathke. **A**nterior end.

Scalibregma Rathke, 1843

Scalibregma inflatum Rathke, 1843 (Figs 141–142)

Scalibregma inflatum Rathke, 1843: 184, pl. 9, figs 15–21; Ashworth 1901: 237, pls 13–15; Fauvel 1927: 123, fig. 44a-f; Monro 1930: 163; Stöp-Bowitz 1945: 67–72, fig. 2; Hartman 1966: 45, pl. 14, figs 6–8; 1969: 313–314, figs 1–4; Blake 1981: 1146–1147, fig. 7a-c; Cantone & Sanfilippo 1992: 375.

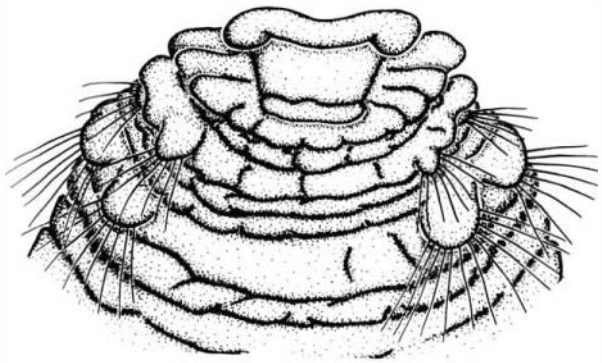
MATERIAL: NZOI Stn A461 (1). Previous records from the Ross Sea: Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:

Size: Length of body up to 56 mm; Width from 3.0 to 10 mm; segments number up to 60.
Colour in alcohol: Muddy grey to brown
Prostomium: (Fig. 141) Broadly T-shaped; no eyes visible; clearly separated from peristomium.

Thorax: Consists of approximately 10–13 segments, all somewhat inflated and swollen; each segment more or less triannulate, parapodia situated on middle annulation.
Thoracic parapodia: (Fig. 142) Small and rounded, dorsal and ventral cirri absent.
Abdominal parapodia: Dorsal and ventral cirri present.
Thoracic setae: Predominantly fine capillaries with a few furcate setae.
Abdominal setae: Similar to those of thorax.

DISTRIBUTION: Cosmopolitan.



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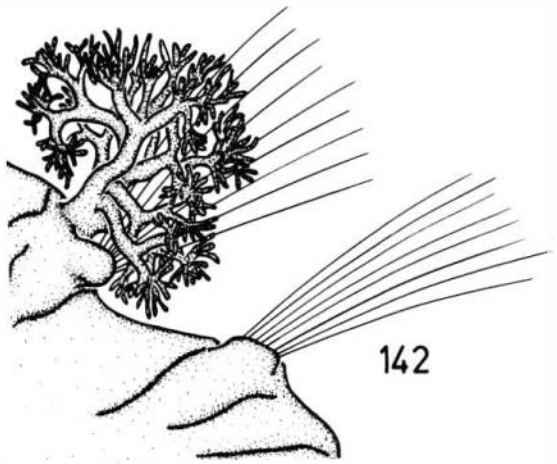

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Figs 141–142. ***Scalibregma inflatum*** Rathke. **141**. Anterior end. **142**. Parapodium.

Family **OPHELIIDAE** Malmgren, 1867

KEY TO GENERA:
1 Body with a deep midventral groove ..... *Ophelina*
– Body without a deep midventral groove ..... *Travisia*

Ophelina Savigny, 1818

Ophelina gymnopyge (Ehlers, 1908)

Ammotrypane gymnopyge Ehlers, 1908: 118, pl. 17, figs 1–4; Hartman 1952: 223; 1954: 48; 1967: 49, pl. 15, figs 4–6.
Ophelia gymnopyge: Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett in 104–250 m, Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body 12 mm; width 1.5 mm; setigerous segments number 26.
Prostomium: Thick, conical, lacking eyes.
Parapodia: Parapodial lobes broadly rounded.
Branchiae: Present on all but first and last 3 or 4 segments.
Posterior end: Lacking an anal tube.

DISTRIBUTION: Kerguelen and Falkland Islands, South Georgia, Ross Sea; in shallow depths.

Travisia Johnston, 1840

Travisia kerguelensis McIntosh, 1885

Travisia kerguelensis McIntosh, 1885: 357–359, pl. 43, fig. 10, pl. 36A, figs 1–2; Willey 1902: 276; Ehlers 1912: 23; Hartman 1966: 54, pl. 17, figs 4–5.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), Cape Adare in 13–18 m; Ehlers (1912), Cape Adare in 31–37 m.

DESCRIPTION:
Size: Length of body 20–40 mm; width 7.0–8.0 mm; segments number 23–27.
Colour in alcohol: Dull, whitish, appearing minutely dotted.
Branchiae: Retractile, inconspicuous; present from fourth to sixth last segment.
Parapodia: Last 10 segments with parapodia, and lateral crenulations, the degree of lacinations increasing posteriorly.
Posterior end: Anal cylinder abrupt after last parapodial segment, and about as long as last 4 segments.

DISTRIBUTION: Straits of Magellan, Falkland Islands, Kerguelen Islands, Scotia Sea, South Orkney Islands, Antarctic areas, including the Ross Sea, in shallow to moderate depths.

Family **MALDANIDAE** Malmgren, 1867

KEY TO GENERA:

1 Anterior end without a distinct cephalic plate; some segments with collars ..... *Rhodine*
– Anterior end with a distinct cephalic plate 2
2 Anal pore dorsal to the anal plaque; cephalic plate conspicuous ..... *Maldane*
– Anal pore within the anal plaque 3
3 Anal cirri numerous though none midventral ..... *Isocirrus*
– Anal cirri with one cirrus clearly midventral 4
4 A deep encircling collar on the fourth setigerous segment ..... *Clymenella*
– Without a collar on the fourth segment 5
5 Posterior end without a funnel-like depression ..... *Praxillella*
– Posterior end with a funnel-like depression ..... *Axiothella*

Axiothella Verrill, 1900

Axiothella quadrimaculata Augener, 1914

Axiothella quadrimaculata Augener, 1914: 70–72, pl. 1, fig. 10; Monro 1939: 135-136; Hartman 1966: 61, pl. 20, fig. 1.
Nichomanche sp. Ehlers, 1913: 544–545, pl. 42, figs 12–15.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, 104–250 m.

DESCRIPTION:
Size: Length of body up to 65 mm; width up to 5.0 mm; body with 17–18 setigers, and one preanal asetigerous segment.
Colour in alcohol: Pale yellow.
Prostomium: Terminating in an elongated cephalic plate with a pair of parallel nuchal grooves and surrounded with a thin marginal flange. 2 groups of ocelli.
Segments: Up to 12 setigerous segments. Each of first 8 setigerous segments with 1 or 2 dark spots on either side; each side of buccal segment with a pair of spots.
Anal plaque: With a bluntly lobed margin, without a midventral cirrus.
Setae: Notosetae all slender capillaries. Neurosetae rostrate uncini without barbules. Some setae subspatulate.

DISTRIBUTION: Southwestern Australia, New Zealand, Kerguelen Islands, Ross Sea, in moderate depths.

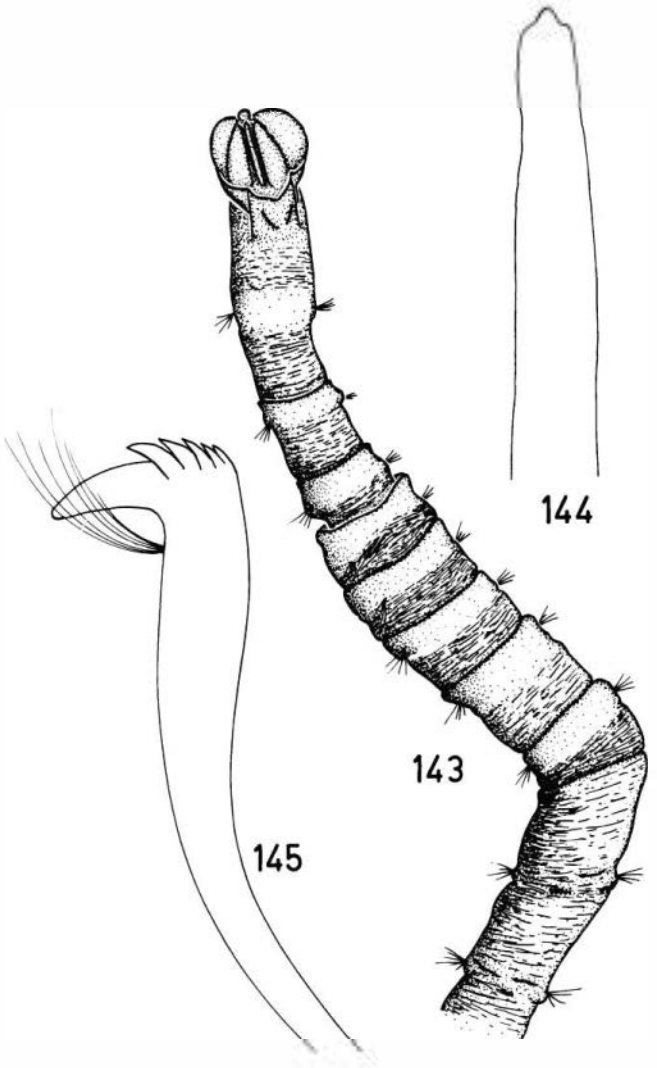
Axiothella sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Oliver and Slattery (1986), McMurdo Station Jetty, Ross Island in 20 m.

REMARKS: The specific identity of this record remains to be determined. It could possibly belong to *A. quadrimaculata*, or more likely to *A. antarctica* which has been recorded from the South Orkney Islands and Peter I Island.

Clymenella Verrill, 1873

Clymenella antarctica n.sp. (Figs 143–145)



Figs 143–145. *Clymenella antarctica* n.sp. **143**. Anterior end. **144**. Spine from segment. **145**. Rostrate neuropodial hook.

MATERIAL: NZOI Stn A456 (1).

DESCRIPTION:

Size: Length of body 85 mm; width up to 6.0 mm; setigerous segments number 18.

Colour in alcohol: Pale yellow.

Tube: Long, cylindrical, closely annulated on surface and covered with grey and white sediment.

Prostomium: Anterior end terminating in elongated cephalic plaque with a pair of parallel nuchal grooves and surrounded with a thin marginal flange, except for a small rounded palpode that interrupts it. Margins smooth; small lateral clefts are present and posterior V-shaped portion overhangs the posterior end of cephalic plate (Fig. 143). Small ocelli are present where marginal flanges join anterior palpode.

Segments: Anterior end of third and fourth segments with short, smooth collars; fifth segment with a well-developed glandular collar; sixth to ninth segments with anterior glandular rings. First 3 segments longer than wide; fourth, fifth and sixth segments wider than long. Thereafter segments increase in length.

Setae: Notosetae all slender capillaries; neurosetal rostrate hooks arranged in rows with a group of curved hairs arising from below main fang (Fig. 145). On segments 1–3 they are replaced by 2 or 3 thick spines terminating in a rough point which may or may not be hooked (Fig. 144).

Anal plaque: Posterior end terminating in a broad plaque with a circlet of about 30 relatively short finger-like papillae and a longer midventral papilla.

TYPE LOCALITY: 74°30' S, 179°40' W, Pennell Bank, Ross Sea in 201–238 m.

HOLOTYPE: In the NZOI, NIWA Wellington collection No. H-679.

REMARKS: *Clymenella* is a small genus with five recorded species, of which one, *C. minor* has been recorded from the Falkland Islands and Enderby Land. The present specimen differs in the shape of the cephalic plaque, the rim being notched mid-dorsally in *C. minor*, in the possession of anterior glandular rings on segments 1–8, and in the shape and arrangement of the setae. The present species could possibly be the same as that recorded by Arwidsson (1911: 24) from the Falkland Islands as *Clymenella* sp.

DISTRIBUTION: Pennell Bank, Ross Sea.

Isocirrus Arwidsson, 1907

Isocirrus yungi Gravier, 1911 (Figs 146–148)

Isocirrus yungi Gravier, 1911: 12 2-125, pl. 9, fig. 109, pl. 10, figs 15–20; Benham 1927: 128; Hartman 1966: 65, pl. 21, figs 1–3; Cantone & Sanfilippo 1992: 375.

MATERIAL: NZOI Stns A448 (2), A450 (1), A451 (2),A455 (1), A458 (9), A459 (3), A460 (fragments), A469 (3), A519 (2), A527 (5), A528 (6), A529 (21), A530 (16), A531 (2), A532 (7), A537 (1); McMurdo Sound Stn N (1). Previous records from the Ross Sea: Benham (1927), McMurdo Sound in 289–457 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:

Size: Length of body up to 170 mm, but some specimens measure only half this length; segments number 22–26.

Tube: Composed of fine sand grains.

Prostomium: Cephalic plaque (Fig. 146) set almost at right angles to axis of body. Posterior half of its lateral margins crenulated; posterior half of plaque with transverse ridges.

Notosetae: Very fine, usually with barbed tips.

Neurosetae: Those on first 3 setigers are thick spines, thereafter neurosetae are rostrate uncini (Fig. 148).

Anal plaque: (Fig. 147) Circular and surrounded by up to 30 very short, thick papillae; anal pore in centre of anal plaque.

REMARKS: This is the second record of this widespread Antarctic species from the Ross Sea where it can be now classed as common.

DISTRIBUTION: Antarctic Peninsula, Scotia Sea, South Georgia, South Shetland Islands, Ross Sea, in intertidal to moderate depths.

Maldane Grube, 1860

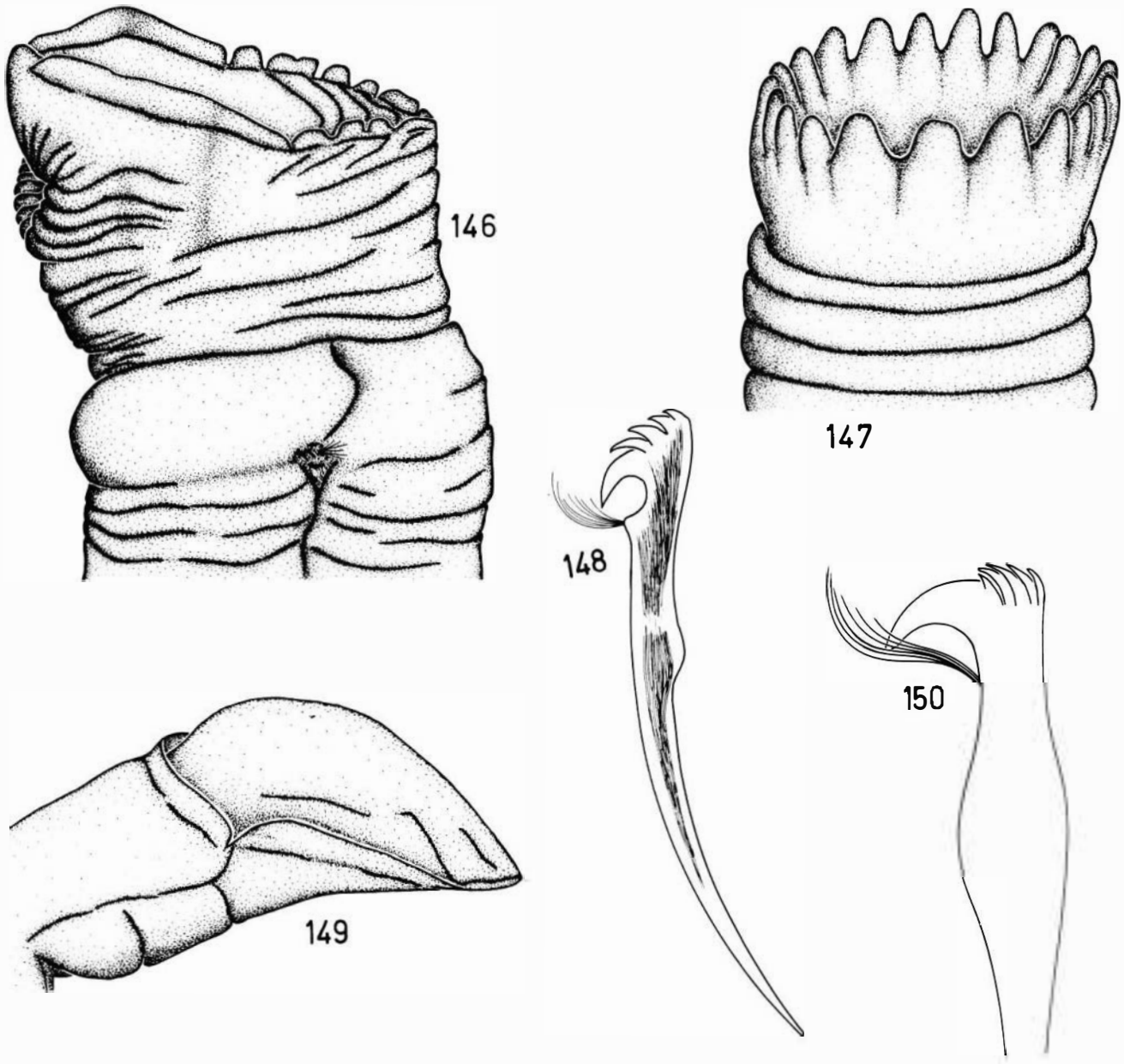
Maldane sarsi antarctica Arwidsson, 1911 (Figs 149–150)

Maldane sarsi antarctica Arwidsson, 1911: 32, pl. 1, figs 23–26; Hartman 1966: 66, pl. 21, figs 10–11; 1978: 187.

MATERIAL: NZOI Stn 532 (2). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 106 mm; width up to 3.0 mm.



Figs 146–148. ***Isocirrus yungi*** Gravier. **146.** Anterior end. **147.** Anal plaque. **148.** Rostrate uncinus.
Figs 149–150. ***Maldane sarsi antarctica*** Ardwisson. **149**. Anterior end. **150.** Uncinus.

Segments: 19 setigerous and 2 preanal asetigerous segments; buccal segment and first three setigers with smooth collars; setigers 4 to 9 with glandular areas.

Colour in alcohol: Dull yellow.

Tube: A thin transparent membrane covered with a thick layer of very fine sand.

Prostomium: Cephalic plaque (Fig. 149) dominated by a very high keel; cephalic margin with a deep lateral incision on each side, the margin being continuous with keel in anterior quarter.

Neurosetae: Absent from first setiger; all other segments with rows of uncini (Fig. 150).

DISTRIBUTION: Bransfield Strait, South Georgia, South Orkney Islands, Graham Coast, Ross Sea.

Maldane sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Oliver and Slattery (1986), McMurdo Sound Station Jetty,, Ross Island in 20 m.

REMARKS: It is possible that this belongs to *M. sarsi antarctica*.

Praxillella Verrill, 1881

Praxillella kerguelensis (McIntosh, 1885)

Praxilla kerguelensis McIntosh, 1885: 405–406, pl. 46, fig. 7, pl. 25A, fig. 6; Ehlers 1900a: 14; Hartman 1966: 71, pl. 23, fig. 1; 1967: 745; Bellan 1974: 792; Hartmann-Schröder 1986: 85–86; Cantone & Sanfillipo 1992: 375.
Clymene kerguelensis: Ehlers 1897: 122; 1901: 457; Monro 1930: 171; 1939: 134.
Clymene assimilis: Ehlers 1897: 123; 1901: 192.
Praxilla assimilis: Ehlers 1901: 15.
Praxillella antarctica Arwidsson, 1911: 19–24, pl. 1, figs 1 2–15, pl. 2, figs 42–43.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Cape Bird Ross Island, in 35–54 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body up to 87 mm; width 2.8–4.0 mm.
Prostomium: Cephalic plate with an expanded margin and lateral notches. Proboscis with large distinct globular papillae.
Segments: 19 setigerous segments and 6 preanal asetigerous segments, in which first 3 have parapodia but no setae, and the last 3 are smooth rings. Anterior margins of fourth and fifth segments with a collar; the next 5 segments with a conspicuously marked white band at anterior margin.
Setae: Each of first 3 neuropodia with simple thick spines. Notosetae with alternating thick and slender setae, thick with modified narrow wings, and slender with tapered tips. Neurosetae rostrate uncini each with 5 teeth above main fang.

DISTRIBUTION: Strait of Magellan, Falkland Islands, South Georgia, Antarctic Peninsula, Ross Sea, in shallow to moderate depths.

Praxillella sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

REMARKS: Lowry (1976) recorded *P. kerguelensis* from off Cape Bird and it is possible that his Moubray Bay specimens belong to the same species.

Rhodine Malmgren, 1865

Rhodine loveni Malmgren, 1865

Rhodine loveni Malmgren, 1865b: 189; Willey 1902: 276; Gravier 1911: 125–128, pl. 9, figs 110–112, pl. 10, fig. 114, pl. 11, fig. 133; Hartman 1966: 72, pl. 23, figs 9–11; Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), off Cape Adare in 15 m; Gravier (1911), off Cape Adare in 15 m; Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body 70–80 mm; segments number at least 24.
Tube: Externally covered with agglutinated particles of black and red sand.
Prostomium: Cephalic end separated from the body segments by dorsal grooves and a low keel.
Segments: Second and third segments each with a collar incised mid-dorsally; segments 17–24 campanulate with collars which increase in depth posteriorly; ventral glandular shields on segments 4–9.
Neurosetae: Uncini in double rows from setigers 5–14 and in a single series thereafter; each with a large beak surmounted by several smaller teeth.

DISTRIBUTION: Cosmopolitan in eurybathic depths.

Family **AMPHARETIDAE** Malmgren, 1867

KEY TO GENERA:

1	Paleae present at the anterior end	2
–	Paleae absent at the anterior end	4
2	Thoracic setigers number 14	*Ampharete*
–	Thoracic segments number 15 or more	3
3	Eleventh notopodium displaced dorsally; thorax with 15 setigers	*Anabothrus*
–	Eleventh notopodium not displaced dorsally; thorax with 17 setigers	*Amphicteis*
4	Branchiae number 2 pairs	*Melinnoides*
–	Branchiae number 3 pairs	6
–	Branchiae number 4 pairs	5
5	Posterior end of body inflated	*Grubianella*
–	Posterior end of body not inflated; branchiae foliose	*Phyllocomus*
6	Thoracic setigers number 17	7
–	Thoracic setigers number 14	*Neosabellides*
7	Oral tentacles replaced by a folded membrane	*Amythis*
–	Oral tentacles slender and numerous	*Samytha*

Ampharete Malmgren, 1866

Ampharete kerguelensis McIntosh, 1885

(Figs 153–155)

Ampharete kerguelensis McIntosh, 1885: 426, pl. 47, fig. 10, pl. 26A, figs 22–24; Augener 1932: 57; Hartman 1966: 77, pl. 25, figs 2–3; Bellan: 1974: 792.

MATERIAL: NZOI Stns A459 (14), A460 (1), A461 (1), A528 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 30 mm; width up to 4.0 mm.

Tube: Thick-walled, composed of fine sand grains and sponge spicules.

Colour in alcohol: From pale yellow to dull reddish-brown.

Prostomium: A triangular band over mouth; no eyespots visible in present specimens (one pair recorded in other accounts).

Oral tentacles: Long and thin, covered with minute hairs, each with a bulbous tip (Fig. 153).

Branchiae: 4 pairs, all approximately the same length, attached in a transverse row.

Thorax: Consists of 14 setigers; paleae very prominent, up to 12 or 13 in each fascicle, golden-brown in colour and terminating in a fine point (Fig. 154).

Thoracic setae: Notosetae are fine-bordered capillaries; neurosetae (Fig. 155) are uncini with 2 vertical rows of up to 7 teeth in each row.

Abdominal uncini: With 3 rows of up to 5 teeth in each.

Posterior end: With a series of papillae of varying length.

REMARKS: This is the first record of this species from the Ross Sea sector.

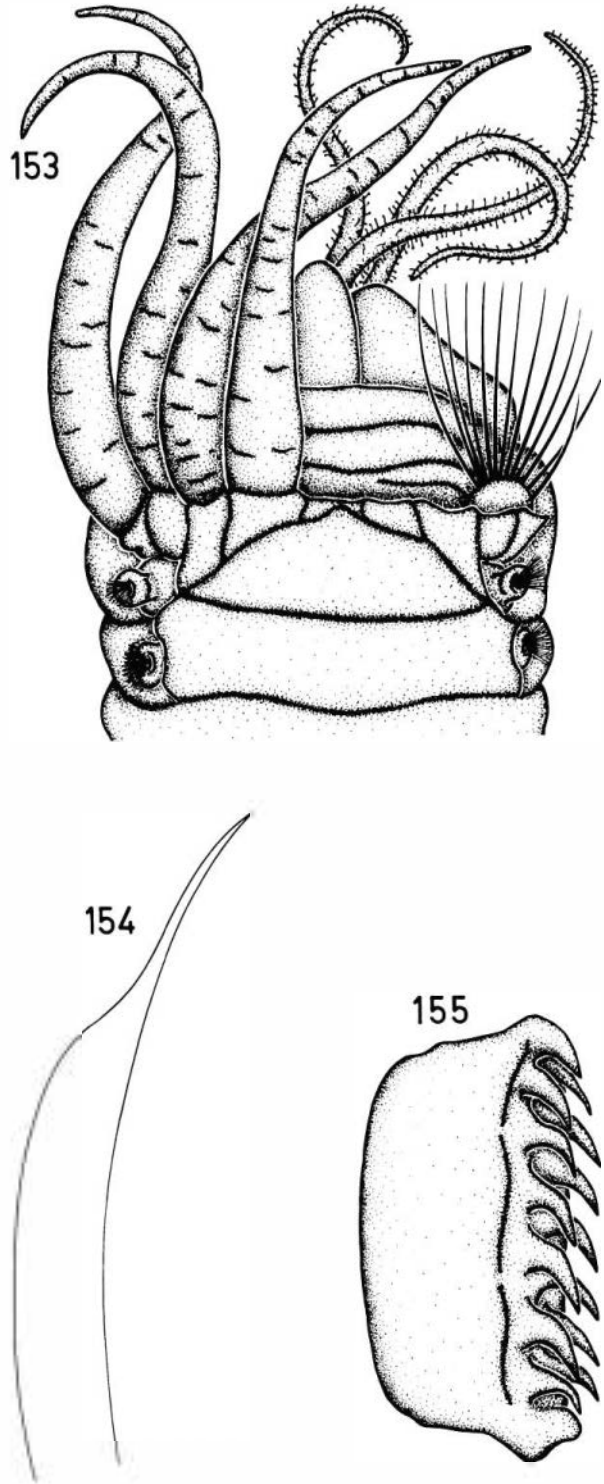
DISTRIBUTION: Bransfield Strait, Antarctic Peninsula, South Georgia, South Shetland Islands. Kerguelen Islands, Ross Sea, in moderate depths to 2700 m.

Amphicteis Grube, 1850

Amphicteis gunneri antarctica Hessle, 1917

Amphicteis gunneri antarctica Hessle, 1917: 116–117, pl. 1, fig. 10, text-fig. 21b; Hartman 1952: 77, pl. 25, figs 5–6; 1967: 155; 1978: 191; Bellan 1974: 792; Orensanz 1974: 56; Levenstein 1978: 83; Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Hartman (1952), Ross Island in 55–91 m; Cantone and Sanfilippo (1992), Terra Nova Bay.



Figs 153–155. ***Ampharete kerguelensis*** McIntosh. **153.** Anterior end. **154.** Thoracic palaea. **155.** Uncinus.

DESCRIPTION:

Size: Body consists of 17 thoracic and 15 abdominal segments.

Tube: Constructed of mud, thick-walled, over a membranous lining.

Branchiae: Arranged in 2 groups of 4 each, the 2 groups clearly separated by a fold.

Thorax: Paleae very much longer than notosetae, each terminating distally in a very slender tip; uncini first present from fourth setiger.

Thoracic parapodia: Notosetae are bordered capillaries; neurosetae are uncini with 5–7 teeth in a single row.

Abdominal parapodia: With a prolonged dorsal cirrus.

DISTRIBUTION: Southern Argentina, South Georgia, South Orkney Islands, South Sandwich Islands, Ross Sea, in 5-400 m.

Amythas Benham, 1921

Amythas membranifera Benham, 1921

(Figs 156-158)

Amythas membranifera Benham, 1921: 102, pl. 10, figs 124–132; Monro 1939: 77–79, fig. 2a-d; Hartman 1966: 77–79, pl. 25, figs 8–10.

MATERIAL: NZOI Stns A459 (2), A460 (1), A461 (4). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 40 mm; width at the widest part up to 10 mm; body thick and slug-like.

Colour in alcohol: Light yellow to dull reddish-orange.

Prostomium: More or less divided into 3 lobes, or may be entire.

Peristomium: Forming a large conspicuous lower lip to mouth. A folded membrane occupies oral cavity (Fig. 156) and is surrounded by very short papilla-like oral tentacles.

Branchiae: Number 3 pairs, attached in a straight line on a raised membrane running transversely across branchial segment, outer pair being slightly shorter than others.

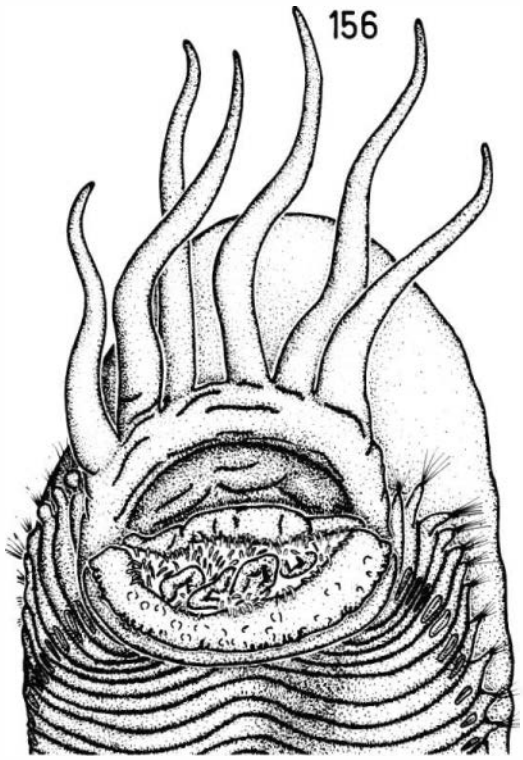
Thorax: Swollen dorsally, consisting of 17 setigerous segments; paleae absent.

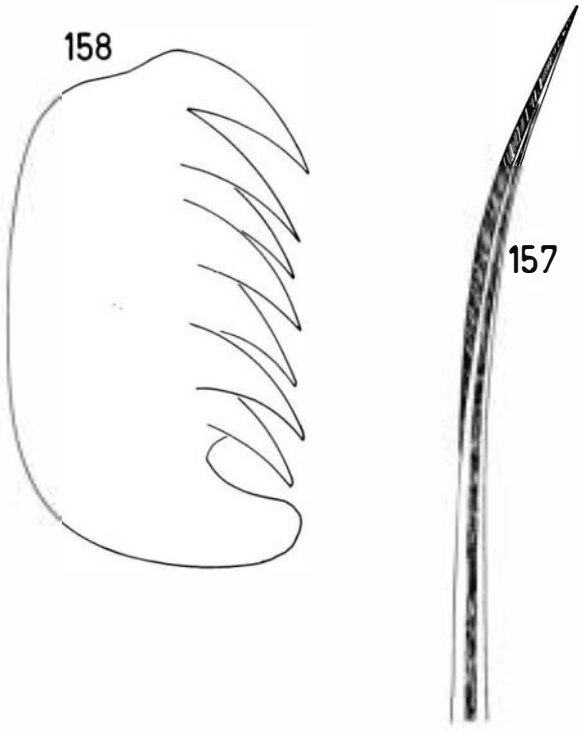
Thoracic uncini: (Fig. 158) With 2 rows of 3 or 4 teeth in each lateral view.

Thoracic notosetae: (Fig. 157) Fine capillaries, each with a slender limbate tip.

Abdominal setae: Very similar to thoracic uncini.

REMARKS: This is the first record of this species from the Ross Sea area.





Figs 156–158. *Amythas membranifera* Benham. **156**. Anterior end. **157**. Thoracic notosetal capillary. **158**. Thoracic uncinus.

DISTRIBUTION: Eastern sector, Ross Sea, in moderate depths.

Anobothrus Levinsen, 1883

Anobothrus patagonicus (Kinberg, 1867)

Ampharete patagonicus Kinberg, 1867: 343; Ehlers 1913: 551.
Anobothrus patagonica: Benham 1927: 119.
Anobothrus patagonicus: Hartman 1966: 79–81, pl. 25, fig. 14; Bellan 1974: 792; Averincev 1982: 34–35.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), Ross Sea in 293 m.

DESCRIPTION:
Size: Length of body 19 mm; width of thorax 2.0 mm; segments include 15 thoracic and 18 abdominal setigers.
Prostomium: Median lobe wide, anterior margin an unbroken arc.
Buccal tentacles: Smooth.
Branchiae: 4 pairs, all equal in size extending back to setiger 8; inserted so that 3 pairs are in a nearly transverse line and fourth pair behind innermost pairs.
Parapodia: The uncini commence below fifth notopodium and continue to end of body.
Posterior End: Anal segment without lobes or processes.

DISTRIBUTION: Southern South America, Antarctic Peninsula, Adelie Coast, Ross Sea, in shallow to moderate depths.

Grubianella McIntosh, 1885

Grubianella antarctica McIntosh, 1885 (Fig. 159)

Grubianella antarctica McIntosh, 1885: 432–434, pl. 48, figs 1–2, pl. 27A, fig. 5; Hartman 1966: 81, pl. 26, figs 1–2; 1978: 195, fig. 35.

MATERIAL: McMurdo Sound Stn 61B (2). No previous records from the Ross Sea.

DESCRIPTION:
Size: Length of body up to 60 mm; width up to 4.5 mm; although the present specimens were smaller than this.
Colour in alcohol: Light yellow.
Prostomium: Entire, lacking eye spots, flatly arched in front.
Buccal tentacles: Very short, numerous and completely filling oral cavity.
Branchiae: 4 pairs all enlarged and elongated (Fig. 159), the 2 groups bunched so that there is a large gap dorsally between them.
Thorax: Consists of 15 setigerous segments, the neuropodial uncini beginning on setiger 4.
Abdomen: Consists of approximately 25 segments; posterior end enlarged as a bulb-like structure with a pair of long thin cirriform appendages directed laterally (Fig. 159).
Setae: Paleae absent.

DISTRIBUTION: Eastern sector of Antarctica, Ross Sea, in 278 m to abyssal depths.

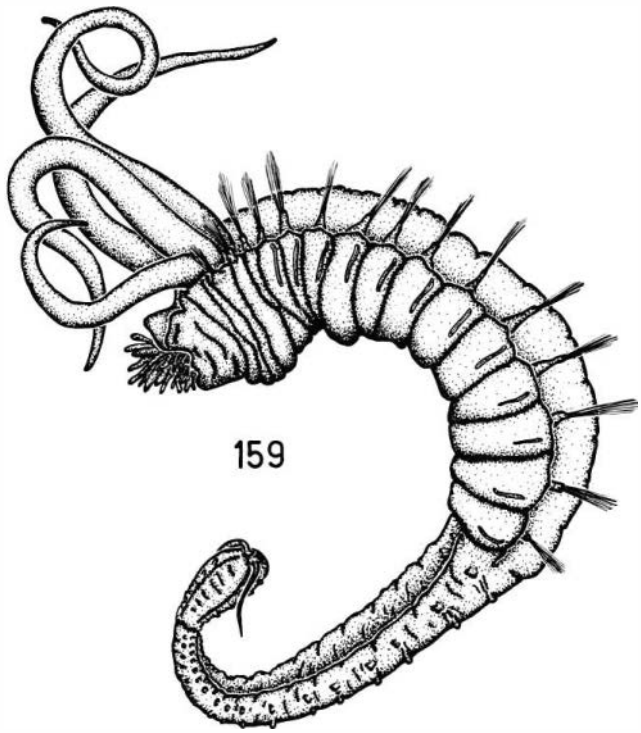


Fig. 159. ***Grubianella antarctica*** McIntosh. Entire animal.

Mellinoides Benham, 1927

Mellinoides nelsoni Benham, 1927

Mellinoides nelsoni Benham, 1927: 115–117, pl. 3, figs 73–78; Hartman 1966: 82, pl. 26, figs 6–8.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound in 549 m.

DESCRIPTION:

Size: Length of body up to 14 mm, and an additional 3.5 mm for the branchiae; width 1.0 mm; segments number 26.

Tube: Measures about 30 mm by 3.0 mm, covered with white sand and with siliceous sponge spicules projecting out from tube.

Prostomium: Subquadrate, no eyes.

Peristomium: Overlapped dorsally and almost covered by the second segment; ventrally forming a transverse grooved lower lip.

Branchiae: 2 pairs, nearly cylindrical.

Thorax: 14 setigers, first one without visible parapodia; neuropodia from notopodial segment 3.

Setae: Thoracic uncini with 3 or 4 teeth above main fang in each of 2 rows. Abdominal uncini with more numerous rows of teeth.

DISTRIBUTION: McMurdo Sound in 366 m.

Neosabellides Hessle, 1917

Neosabellides elongatus (Ehlers, 1912)

(Figs 160–161)

Sabellides elongatus Ehlers, 1912: 27; 1913: 551–553, pl. 42, figs 1–6.

Neosabellides elongatus: Benham 1927: 113, pl. 3, figs 82–86; Hartman 1966: 2, pl. 27, figs 1–3; 1978: 196–197; Cantone & Sanfilippo 1992: 375.

MATERIAL: NZOI Stns A451 (2), A459 (1), A470 (3), A526 (29). Previous records from the Ross Sea: Ehlers (1912), Ross Island, in 914 m; Benham (1927), McMurdo Sound, in 347–549 m: Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:

Size: Length of body up to 30 mm; width up to 2.0 mm.

Colour in Alcohol: Dark reddish-brown.

Tube: Very long and slender, covered with mud.

Prostomium: A single large smooth lobe in dorsal view; oral tentacles finely papillated.

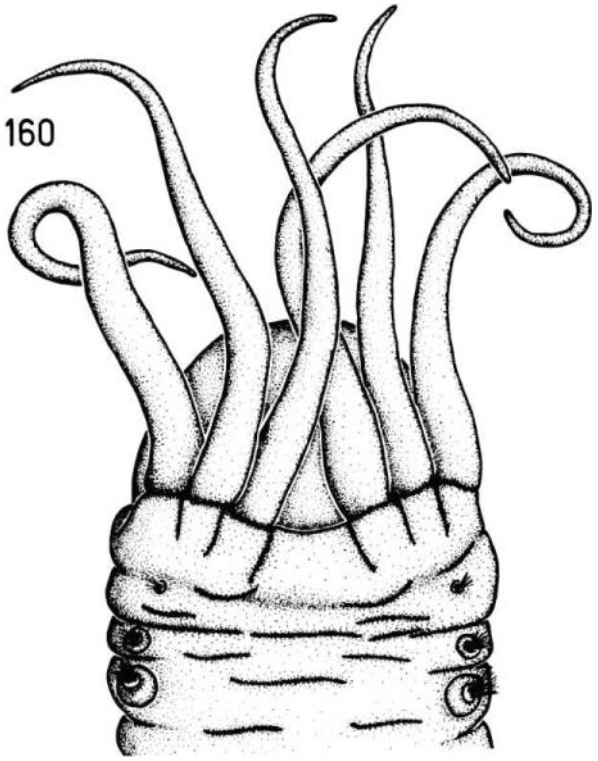
Branchiae: 3 pairs, long and thin, tapering; separated medially (Fig. 160).

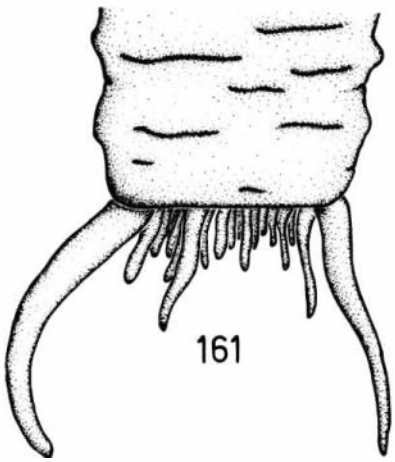
Thorax: Paleae absent; 14 setigerous segments, first with very reduced notopodia.

Abdomen: About 25 setigers.

Setae: Thoracic notosetae fine-bordered capillaries; uncini each with 2 rows of up to 4 teeth each. Abdominal uncini each with 3 vertical rows of up to 5 teeth in each row.

Posterior end: (Fig. 161) Terminating in a pair of large, long, tapering papillae with many smaller papillae situated between them.





Figs 160–161. ***Neosabellides elongatus*** (Ehlers). **160**. Anterior end. **161**. Posterior end.

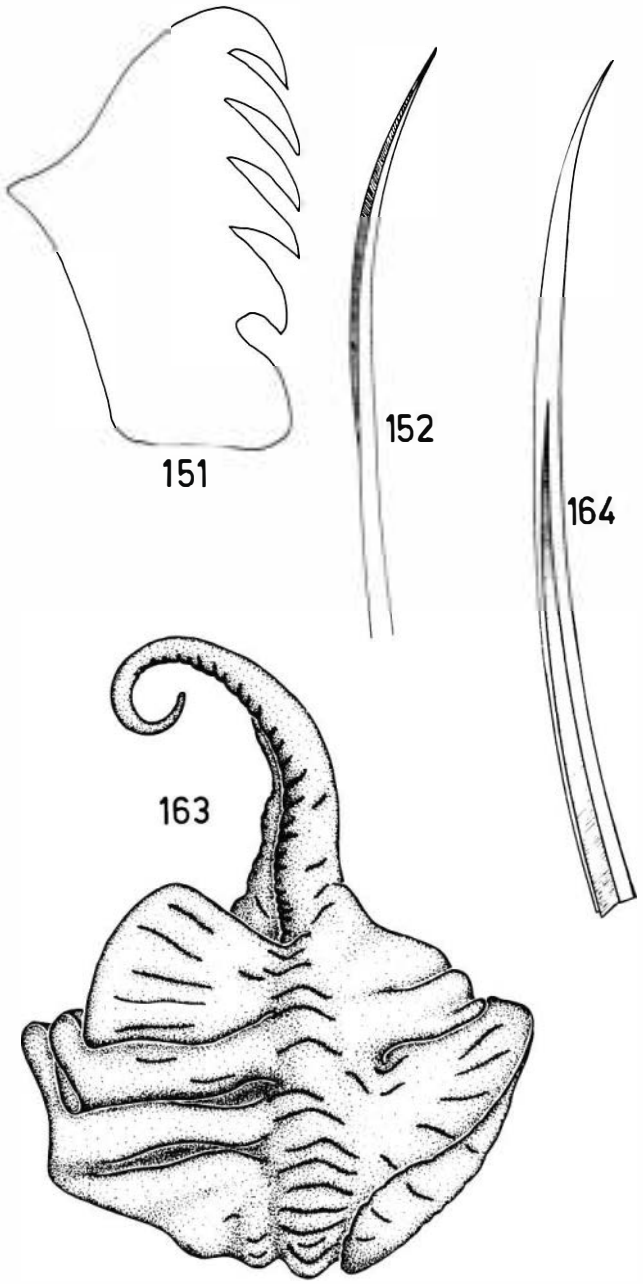
DISTRIBUTION: Circumantarctic, in moderate depths.

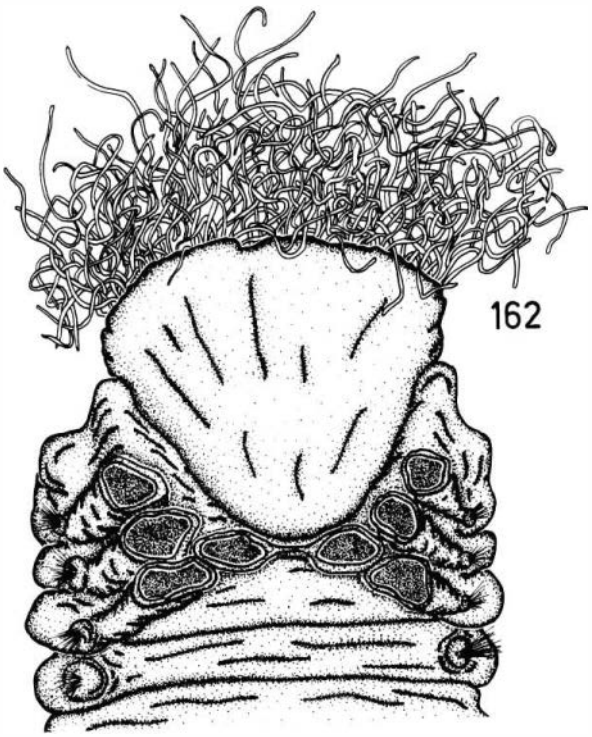
Phyllocomus Grube, 1877

Phyllocomus crocea Grube, 1877

(Figs 151–152, 162–164)

Phyllocomus crocea Grube, 1877: 543; McIntosh, 1885: 427–428, pl. 47, fig. 11, pl. 26A, fig. 25, pl. 37A, fig 6; Monro 1930:





Figs 151–152, 162–164. ***Phyllocomus crocea*** Grube. **151.** Neuroseta. **152.** Capillary notoseta. **162.** Anterior end. **163.** One of the branchiae. **164.** Notoseta.

181–185, fig. 75; Hartman 1966: 82-83, pl. 27, figs 4–5; 1967: 163; Bellan 1971: 77; 1974: 792.

Phyllocomus dibranchiata Benham, 1921: 97.

MATERIAL: NZOI Stns A450 (2), A519 (1), A527 (1), A530 (1), A532 (1); *Glacier* Stns GLD-4 (2), GLD-8 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 85 mm; width up to 11 mm; segments number about 60.

Colour in alcohol: Light cream to yellow.

Tube: Tough and horny; covered with black and grey sand grains and tiny pebbles.

Prostomium: Large, almost fan-shaped in dorsal view (Fig. 162), splashed with red pigment.

Branchiae: 4 pairs, of very characteristic shape; each flat and leaf-like, with prominent wrinkles for about half to three-quarters of their length and terminating in a curved cirriform tip (Fig. 163).

Oral tentacles: Very long and fine, forming a bushy mass anterior to prostomium (Fig. 162).

Thorax: Consisting of 15 setigers.

Abdomen: Consisting of approximately 45 segments.

Notosetae: Of two types, some long, thin bordered capillaries (Fig. 152), others with a lateral flange along basal two-thirds of its length (Fig. 164).
Neurosetae: With 4 or 5 well-defined teeth in a single row (Fig. 151).

REMARKS: This is the first record of this characteristic species from the Ross Sea.

DISTRIBUTION: Tierra del Fuego, Bransfield Strait, Antarctic Peninsula, South Shetland Islands, South Sandwich Islands, Kerguelen Islands, Knox Coast, Heard Island, Ross Sea, in moderate depths.

Samytha Malmgren, 1866

Samytha ? spectulatrix Ehlers, 1913

Samytha ? speculatrix Ehlers, 1913: 554–555, pl. 42, figs 9–11; Hessle 1917: 128; Hartman 1966: 83, pl. 27, figs 6–7.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1913), Ross Sea, in 350 m; Hessle (1917), Ross Sea, in unspecified depth.

DESCRIPTION:
Size: Length of body 11–13.5 mm; width 2.5 mm; segments number 26.
Peristomium: With many eyespots.
Branchiae 3 pairs.
Thorax: No paleal spines.
Notosetae: Capillary setae present from setiger 3 and continued for 17 segments.
Neurosetae: Uncini with 4 teeth in lateral view.

DISTRIBUTION: Wilhelm II Coast, Ross Sea, in 350 m.

Family **TEREBELLIDAE** Malmgren, 1867

KEY TO SUBFAMILIES AND GENERA:

1 Branchiae absent; tentacular lobe often large and frilled ..... POLYCIRRINAE 2
– Branchiae present as simple filaments; tentacular lobe usually small and collar-like ..... THELEPODINAE 4
– Branchiae present and usually branched; tentacular ..... lobe small and collar-like ..... TEREBELLINAE 5
2 Tentacular lobe expanded with a frilly margin 3
– Tentacular lobe small and collar-like; neurosetae start on setiger 2; lateral lobes on setiger 3; united by a dorsal ridge ..... *Leaena*
3 Notosetae present, but absent in abdomen; neurosetae entirely absent ..... *Lysilla*
– Notosetae present; neurosetae present from setiger 7 or later ..... *Polycirrus*
4 Notosetae start on segment 2 (first branchiferous) ..... *Streblosoma*
– Notosetae start on segment 3 (second branchiferous) ..... *Thelepus*
– Notosetae start on segment 4 (segment following the third branchiferous segment) ..... *Thelepides*
5 Notosetae with smooth tips 6
– Notosetae with denticulate tips 10
6 No lateral lobes on segments 2 to 4; two pairs of branchiae ..... *Nicolea*
– Lateral lobes present; uncini of the first row or first 3 rows differ from those of later setigers in having the base produced backwards as a long shaft; not more than 2 pairs of branchiae 9
7 Lateral lobes present on segments 2 and 4 at least; posterior nephridia separate ..... *Pista*
– Lateral lobes present on segment 3 only; posterior nephridia united ..... *Lanicides*
8 Lateral lobes present on segment 2, 3 and often 4 ..... *Amphitrite*
– Lateral lobes absent; notosetae start on segment 4; 2 or 3 pairs of branchiae on segments 2 to 4 ..... *Terebella*

Amphitrite Müller, 1771

Amphitrite cirrata Müller, 1771

Amphitrite cirrata Müller, 1771: 216; Benham 1927: 103; Hartman 1966: 87, pl. 28, fig. 1; Day 1967: 746–747, fig. 36.9m-q.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 406–441 m.

DESCRIPTION:
Size: Length of body 38 mm; width up to 4.0 mm.
Tentacular Lobe: Without eye spots; a prominent shelf-like lower lip.
Branchiae: 3 pairs, each composed of numerous simple filaments arising from a basal stump.
Segments: Small lateral lobes on segments 2–4; 10–12 ventral pads; 7 pairs of nephridial papillae on segments 3, and 6–11.
Notosetae: Capillaries on 17 setigers from segment 4 onwards. Thoracic notosetae are winged with minutely denticulated tips.
Neurosetae: Thoracic uncini from segment 5 and arranged in 2 rows from setiger 7–16; avicular with a cap of denticles above main fang. Abdominal uncini born on projecting pinnules.

DISTRIBUTION: Cosmopolitan.

Amphitrite kerguelensis McIntosh, 1876

(Figs 165-166)

Amphitrite kerguelensis McIntosh, 1885: 443–444, pl. 48, fig. 7, pl. 49, fig. 1; Benham 1927: 104; Monro 1939: 143; Hartman 1966: 87, pl. 28, fig. 2.

MATERIAL: NZOI Stns A448 (1), A458 (1), A459 (1), A530 (2), A536 (tubes only); *Glacier* Stn GLD-13 (1). Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 289–457 m.

DESCRIPTION:

Size: Length of body up to 150 mm; width up to 10 mm; segments number 17 thoracic and numerous abdominal.

Colour in alcohol: Pale yellow to orange-brown.

Tube: Thick walled, composed of fine sand and mud.

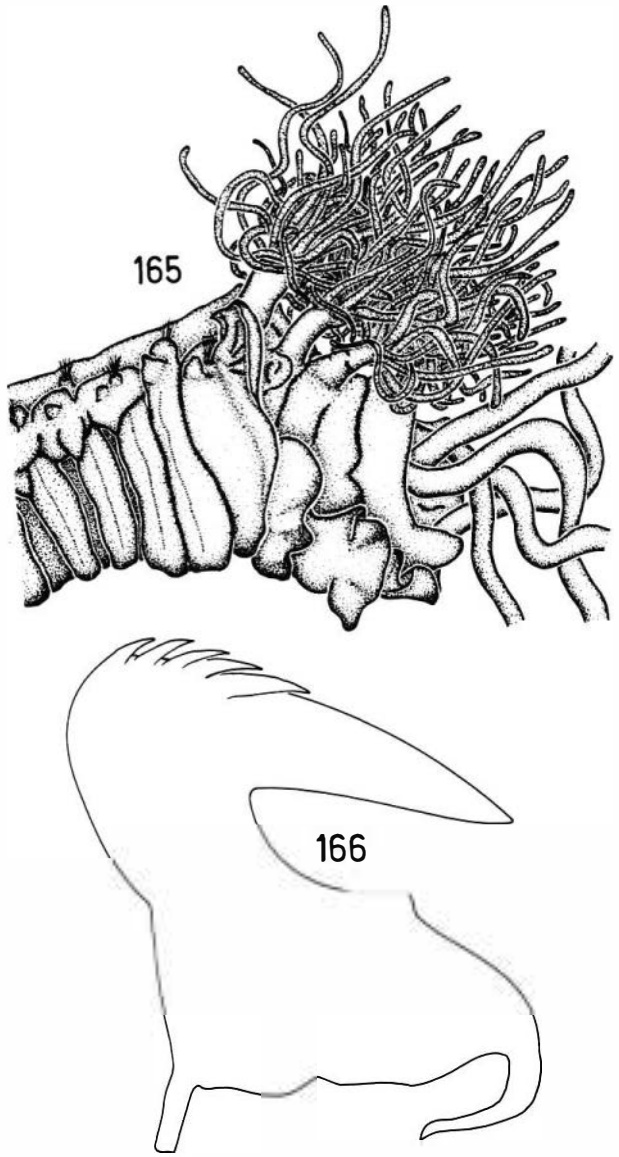
Prostomium: Without eye spots.

Thorax: Consists of 17 segments; anterior end with 4 distinct pairs of lobes placed on segments 1–4 (Fig. 165); ventral scutes number 12 or 13; a pair of nephridial papillae situated below base of second branchiae and below the notopodia of setigers 1–6.

Branchiae: 3 pairs on segments 2–4, third pair attached to a high collar formed by fourth segment; each on a stout base and terminating in a dense tuft of long fine filaments.

Setae: Thoracic uncini (Fig. 166) first present from setiger 2; each with a very elongated uncinal fang surmounted by 5 or more rows of smaller teeth.

DISTRIBUTION: Straits of Magellan, Kerguelen Islands, Antarctic mainland, Ross Sea, in shallow to moderate depths.



Figs 165–166. ***Amphitrite kerguelensis*** McIntosh. **165**. Anterior end. **166**. Thoracic uncinus.

Lanicides Hessle, 1917

Lanicides bilobata (Grube, 1877) (Figs 167–168)

Nicolea bilobata: Ehlers 1912: 27–28.

Lanicides vayssierei: Benham 1927: 102; Monro 1930: 188–189, fig. 68; Martin 1952: 356.

Lanicides bilobata: Hartman, 1966: 91, pl. 31, figs 8–10; 1978: 199; Averincev 1982: 40–42, pl. 7, figs 4–10; Cantone & Sanfilippo 1992: 375.

MATERIAL: NZOI Stns A448 (1), A456 (2), A460 (1), A464 (2), A468 (41), A469 (14), A471 (42), A529 (4), A530 (1), A533 (1); *Glacier* Stn GLD-13 (6); McMurdo Sound Stns A (2), B (9), M3 (1), R (2), S (1), V (11), 61D (8), 61E (fragments); Cape Evans Stns CEA (1), CEH (4); Trans-Antarctic Expedition Stns TAE78 (3), TAE79 (2), TAE81 (3). Previous records from the Ross Sea: Ehlers (1912), Victoria Land, in 18–238 m; Benham (1927), Cape Adare, in 82–640 m; Martin (1952), Cape Royds, in 106 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

Description:

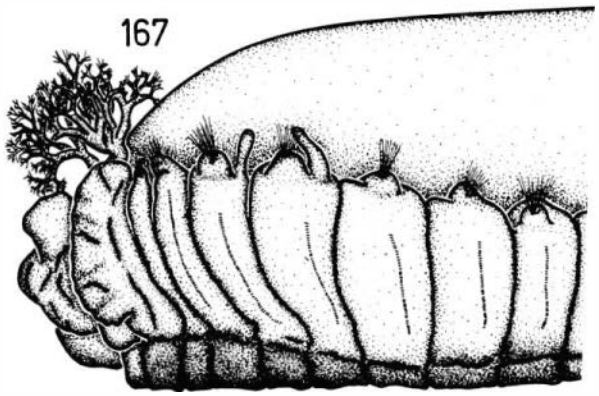
Size: Length of body up to 115 mm; segments usually number just over 100 of which 19 or 20 are thoracic.

Colour in alcohol: Variable, from yellow to dark brown.

Tube: Constructed of thick mud and sand with sponge spicules prominent throughout.

Prostomium: Inconspicuous, without eye spots.

Thorax: Anterior end with a pair of large diagnostic lateral lobes on third segment and a pair of very much smaller ventrolateral lobes on second segment.



Figs 167–168. ***Lanicides bilobata*** Grube. **167**. Anterior end. **168**. Thoracic uncinus.

A pair of prominent nephridial papillae posterior to notopodia on segments 6 and 7 (Fig. 167).

Branchiae: 2 pairs, on segments 2 and 3; each on a single base, richly branched and somewhat tree-like distally (Fig. 167).

Notosetae: Present from segment 4.

Neurosetae: Uncini present from segment 5, in single rows to segment 10 or 11, and then in double rows to the end of the thorax. Thoracic uncini (Fig. 168) long-handled, abdominal uncini short-handled.

REMARKS: This is one of the most abundant species in the collections, being recorded in large numbers at many localities in the Ross Sea.

DISTRIBUTION: Circumantarctic in shallow to moderate depths.

Leaena Malmgren, 1866

Leaena collaris Hessle, 1917 (Figs 169–172)

Leaena collaris Hessle, 1917: 198, pl. 2, figs 9–10, text-fig. 52; Monro 1930: 188; Hartman 1966: 95, pl. 32, figs 1–4.

MATERIAL: *Glacier* Stn GLD-8 (1). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 70 mm; width up to 5.0 mm; segments number 17–20 thoracic and 32–35 abdominal.

Colour in alcohol: Pale yellow.

Prostomium: Without eyes.

Branchiae: Absent.

Thorax: Anterior 10 or 11 thoracic segments with ventral gland shields. Anterior end with lateral lobes on segments 1–3, the second pair largest. Third segment with a high dorsal crenulated collar (Fig. 169).

Notosetae: First present from segment 4; of 2 types, one long, broadly limbate with long slender tips (Fig. 170), the other shorter, limbate with abruptly tapering tips (Fig. 171).

Neurosetae: Uncini (Fig. 172) first present from setiger 2 (segment 5); in long single rows, each with a main fang surmounted by several rows of 4 or 5 smaller teeth.

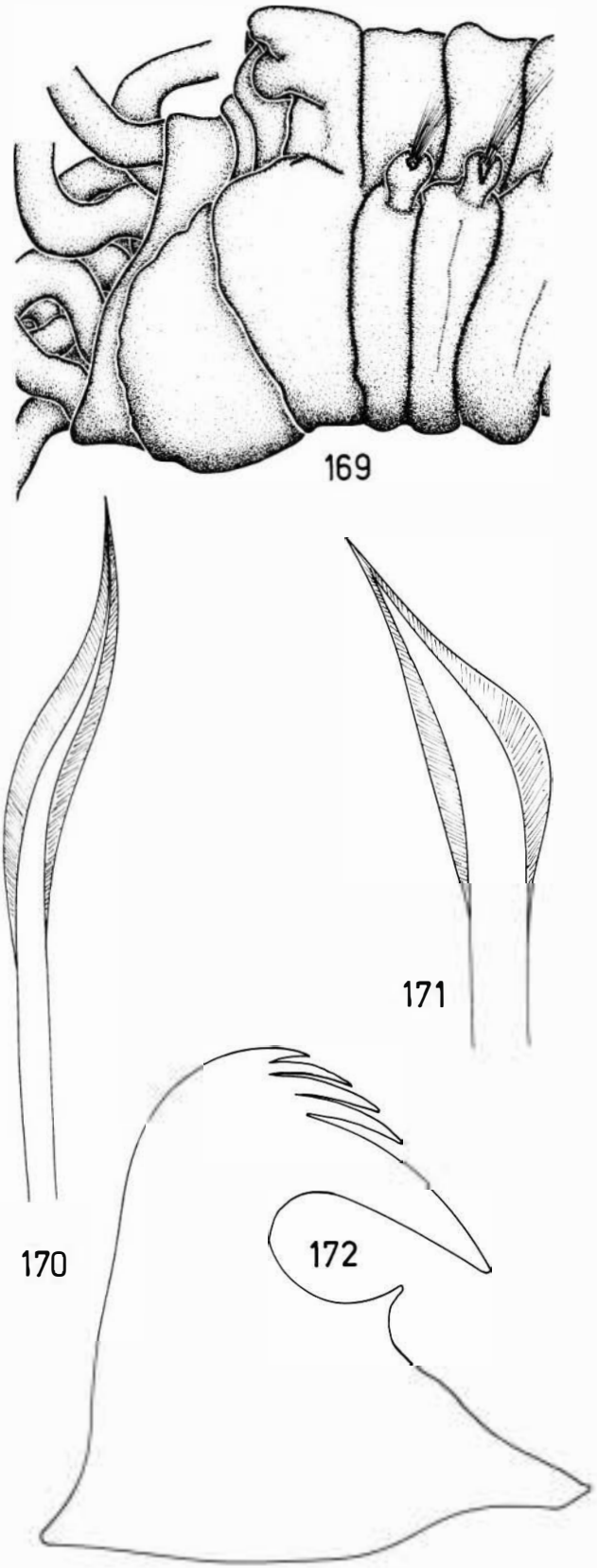
REMARKS: This species previously was only recorded from South Georgia.

DISTRIBUTION: South Georgia and Ross Sea in moderate depths.

Leaena wandelensis Gravier, 1907

Leaena wandelensis Gravier, 1907: 50–52, pl. 5, figs 47–48, text-figs 32–34; Benham 1927: 107–111; Hartman 1952: 236; 1966: 95–96, pl. 32, figs 5–6.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 256–549 m; Hartman (1952), Ross Island, in 106–183 m.



Figs 169–172. ***Leaena collaris*** Hessle. **169**. Anterior end. **170**. Longer limbate notoseta. **171**. Shorter limbate notoseta. **172**. uncinus.

DESCRIPTION:

Size: Length of body 50 mm; width 3.2 mm; segments number about 50 of which 15 are thoracic.

Segments: First segment with a broad collar covering ventrum; 2 pair of lateral lobes on the next 2 segments.

Notosetae: Present from fourth segment.

Neurosetae: Present from the fifth setiger, in single rows on first 4 setigers, then in distinct double rows from setigers 7–15; uncini with a large fang surmounted by several rows of smaller teeth.

REMARKS: Benham (1927: 107) considered this species identical to *L. arenilega*.

DISTRIBUTION: South Shetland Islands. Antarctic shelf, in shallow to moderate depths.

Lysilla Malmgren, 1866

Lysilla loveni macintoshi Gravier, 1907 (Fig. 173)

Lysilla macintoshi Gravier, 1907: 56–58, text-fig. 37.
Lysilla loveni macintoshi: Hessle 1917: 231; Hartman 1966: 105, pl. 32, figs 9–10.

MATERIAL: NZOI Stn A456 (2); McMurdo Sound Stn 61E (1), Cape Evans Stn CEE (12); Trans-Antarctic Expedition Stn TAE78 (8). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 80 mm; width up to 6.0 mm.

Colour in alcohol: Yellow to brown.

Prostomium: Inconspicuous, almost hidden by prostomial tentacles; eyes absent.

Branchiae: Arising as a thick mass of fine thread-like processes from buccal segment which extends back to first setal fascicle on ventral surface of body (Fig. 173).

Segments: Segmental divisions not clearly visible on surface.

Notosetae: Completely enclosed within notopodia, each seta long and thin with broad wings distally.

Neurosetae: Uncini absent throughout body.

REMARKS: This subspecies is recorded for the first time from the Ross Sea.

DISTRIBUTION: South Georgia, Antarctic Peninsula, Wilhelm II Coast, Ross Sea, in moderate depths.

Figs 173. (opposite) ***Lysilla loveni macintoshi*** Gravier. Anterior end.

Nicolea Malmgren, 1866

Nicolea chilensis (Schmarda, 1861)

Phyzelia (Terebella) chilensis Schmarda, 1861: 40, pl. 25, fig. 200.
Nicolea agassizi: Willey 1902: 279.
Nicolea chilensis: Monro 1930: 191; Hartman 1966: 97; Bellan 1974: 793; Hartmann-Schröder, 1983: 269.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), Cape Adare, in 18–44 m.

DESCRIPTION:
Size: Length of body 38-70 mm; width 5.0–6.0 mm; segments number about 70.
Colour in alcohol: Rose-coloured to brown.
Prostomium: Without conspicuous eye spots.
Thorax: Lateral lobes absent; gland shields number 17.
Branchiae: 2 pairs, each with a long stalk and distally branched.
Notosetae: Thoracic notosetae present from first post-branchial segment and uncini from the second setigerous segment. Setae limbate and smooth.
Neurosetae: Uncini with a large fang below a row of 2–5 teeth, the latter surmounted by several rows of small denticles.

DISTRIBUTION: New Zealand, southern South America, Subantarctic islands, Antarctic mainland, in shallow to moderate depths.

Pista Malmgren, 1866

Pista cf. *abyssicola* McIntosh, 1885

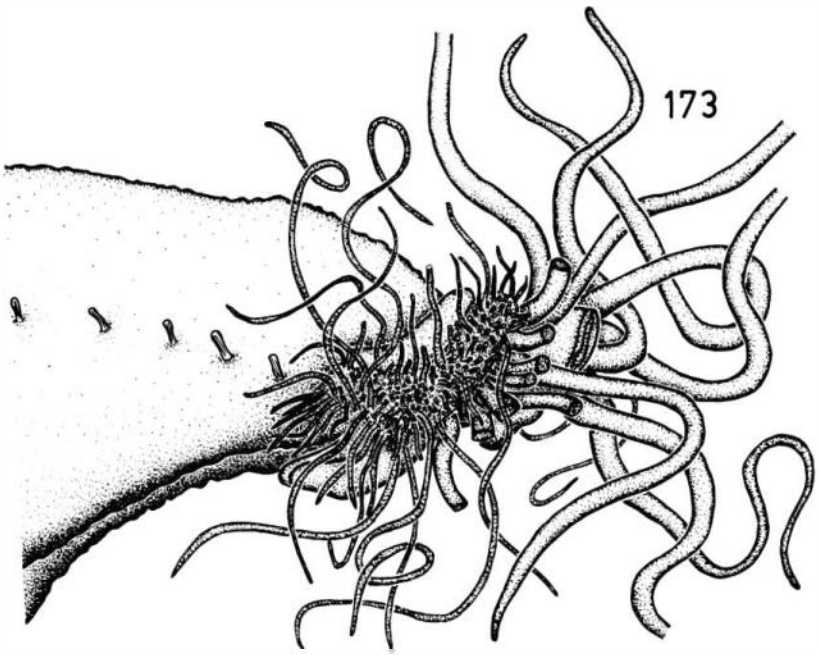
Pista cf. *abyssicola* McIntosh, 1885: 453-454, pl. 27A, fig. 33, pl. 38A, fig. 1: Hartman 1966: 97, pl. 23, fig. 3.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea; Lowry (1976), Cape Bird, Ross Island, in 35–54 m.

DESCRIPTION:
Size: Length of body up to 85 mm; width up to 4.0 mm.
Tube: Tube light grey and somewhat friable, composed of hyaline, brittle, chitinised base, coated with fragments of diatoms and radiolarians.
Branchiae: A single pair with a long transversely barred stalk and a distal loose series of filaments in whorls.
Setae: Long-handled uncini, striated from crown downward; lower part of uncinus massive.

REMARKS: It has not been possible to examine Lowry's specimens and it is possible that they belong to another *Pista* species. *Pista* species recorded from Antarctic waters include *P. corrientis*, *P. cristata*, *P. godroyi*, *P. mirabilis*, and *P. spinifera*.

DISTRIBUTION: Between Australia and the Antarctic continent, Cape Bird, Ross Island.



Pista corrientis McIntosh, 1885 (Figs 174–177)

Pista corrientis McIntosh, 1885: 457–458, pl. 48, fig. 11, pl. 27A, fig. 77; Monro 1930: 187, fig. 77; Hartman 1952: 234; 1966: 97–98, pl. 23, figs 4–5.
Pista symbranchiata: Benham 1927: 98.

MATERIAL: NZOI Stns A448 (10), A449 (numerous), A456 (6), A459 (19), A461 (1), A527 (5), A537 (1); Trans-Antarctic Expedition Stns TAE76 (3), TAE100 (1). Previous records from the Ross Sea: Benham (1927), McMurdo Sound and Cape Adare in 82–549 m; Hartman (1952), Ross Island in 106 m.

DESCRIPTION:
Size: Length of body 30–35 mm; width up to 3.0 mm.
Colour in alcohol: Reddish-brown.
Tube: Sandy and bristling with sponge spicules.
Prostomium: Inconspicuous and completely obscured in lateral view by a pair of large lateral lobes projecting forward from second segment (Fig. 174).
Segments: Third segment also with a pair of lobes, smaller than first pair and projecting laterally. Oral tentacles of two types, the more numerous typically thin and twisted, and 2 or more much thicker ones extending almost straight out in front of anterior end.
Branchiae: 2 pairs, situated on long thick stalks and terminating in dense tuft of filaments.
Notosetae: Broad-winged thoracic notosetae present from fourth segment (Fig. 175).
Neurosetae: Uncini present from fourth segment, long-handled in anterior (Fig. 176) and short-handled in posterior thoracic segments (Fig. 177).

DISTRIBUTION: Southern South America, Falkland Islands, Bransfield Strait, South Shetland Islands, Ross Sea, in shallow to moderate depths.

Pista godfroyi (Gravier, 1911)

Scione godfroyi Gravier, 1911: 135–136, pl. 10, figs 124–126.
Pista godfroyi: Benham 1927: 100–101, pl. 2, figs 59–60, pl. 6, fig. 193; Hartman 1966: 99–100, pl. 29, figs 1–2; Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea; Benham (1927), McMurdo Sound in 256–549 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body 8–50 mm; width 2.0–2.7 mm, tapering posteriorly to a width of 1.2 mm; segments include 17 thoracic setigers of which 14 have ventral shields.
Tube: Characteristic; undulating or twisting, the walls of fine, brown sand mixed with black particles; with thorn-like processes at regular intervals, in spiral arrangement.
Branchiae: A single pair, inserted on second segment, each with a long thick stem and a close tuft of terminal filaments.
Setae: First setigerous fascicle on fourth segment and first uncini on fifth segment. Anterior segments lack long-handled uncini; thoracic uncini with a large fang surmounted by 2 smaller teeth seen in profile.

DISTRIBUTION: Bransfield Strait, Antarctic shelf, in moderate depths.

Pista mirabilis McIntosh, 1885 (Figs 178–179)

Pista mirabilis McIntosh, 1885: 454–457, pl. 51, figs 1–2, pl. 27A, fig. 34, pl. 38A, fig 2; Benham 1927: 99; Monro 1930: 186–187, fig. 76; Hartman 1966: 100, pl. 29, figs 3–4; 1978: 200.
Scione mirabilis: Benham 1921: 85, pl. 9, figs 97–100.

MATERIAL: NZOI Stns A448 (1), A456 (1), A459 (21), A460 (3), A461 (numerous), A464 (4), A466 (6), A468 (1), A520 (fragments), A526 (1), A527 (2); *Glacier* Stn GLD-8 (2); Trans-Antarctic Expedition Stn TAE78 (13).
Previous records from the Ross Sea: Benham (1927), McMurdo Sound and Cape Adare, in 82–457 m.

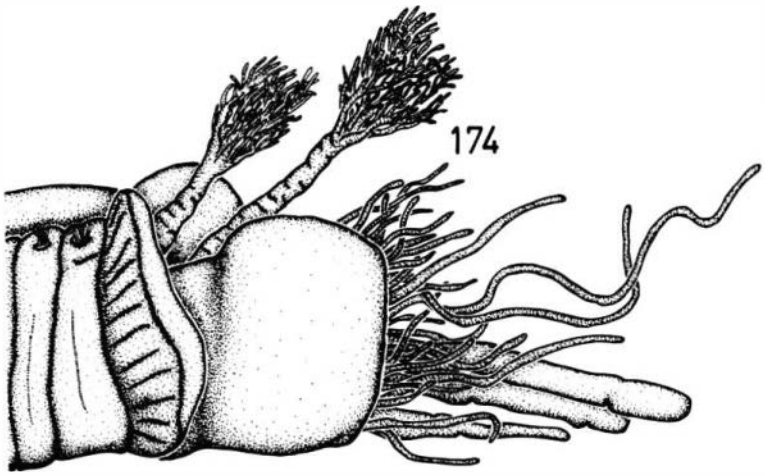
DESCRIPTION:
Size: Length of body up to 76 mm; width up to 6.0 mm.
Colour in alcohol: Reddish-brown.
Prostomium: Dome-shaped and dorsally flattened
Branchiae: (Fig. 178) One pair each with a very stout base, divided into 3 main branches and terminating in a dense mat of short filaments.
Thorax: Consisting of 17 segments, with notosetae beginning on segment 4 and uncini on segment 5. Third segment with a pair of rounded lateral lobes, and fourth segment with a very much smaller pair.
Setae: Anterior thoracic uncini very long-handled (Fig. 179), becoming progressively shorter-handled further back.

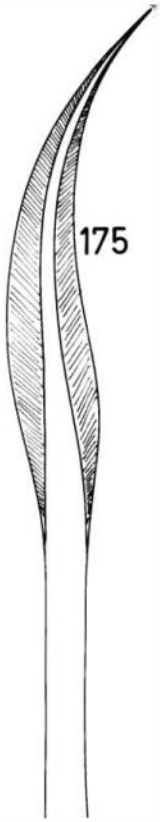
DISTRIBUTION: Off Southeastern Australia, Antarctic mainland and islands, in depths to 2818 m.

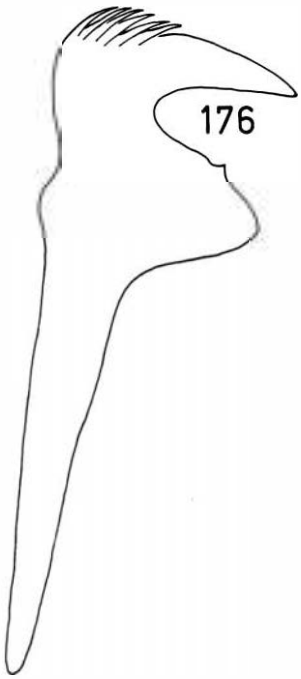
Polycirrus Grube, 1850

Polycirrus antarcticus (Willey, 1902)

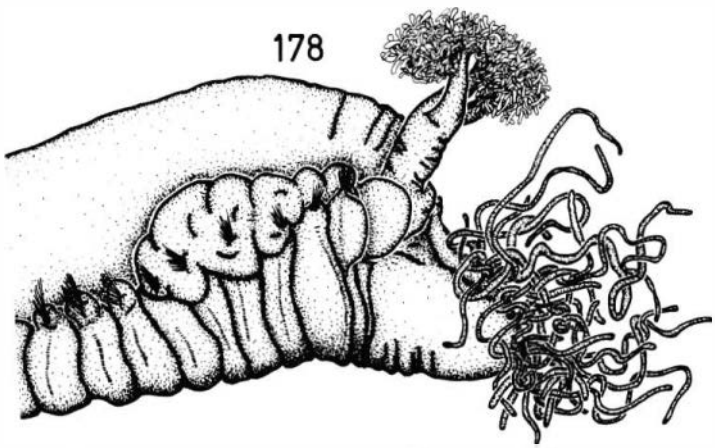
Ereutho antarctica Willey, 1902: 281, pl. 42, fig. 6, pl. 46, fig. 6.
Polycirrus antarcticus: Hartman 1966: 105, pl. 35, figs 2–3.







Figs 174–177. ***Pista corrientis*** McIntosh. **174**. Anterior end. **175**. Thoracic notoseta. **176**. Uncinus from anterior segment. **177**. Uncinus from posterior segment.



Figs 178–179. ***Pista mirabilis*** McIntosh. **178**. Anterior end. **179**. Anterior thoracic uncinus.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Willey (1902), Cape Adare, depth unknown.

DESCRIPTION:
Size: Length of body about 15 mm, but incomplete posteriorly.
Thorax: Consists of 11 setigerous segments followed by 12 segments with uncini, these in a single row.
Setae: Uncini with a long shank and distal teeth.
Posterior end: Posterior three-fifths of body swollen.

REMARKS: This species is known only from the single record from Cape Adare.

DISTRIBUTION: Cape Adare, Ross Sea.

Streblosoma Sars, 1872

Streblosoma bairdi antarctica Monro, 1936

Streblosoma bairdi antarctica Monro, 1936: 182, fig. 32; Monro 1939: 146, fig. 25; Hartman 1966: 107, pl. 30, figs 2 & 4, pl. 36, figs 1–4.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

DESCRIPTION:
Size: Length of body 30–105 mm; width 2.0–5.0 mm.
Tube: Composed of thick mud walls, closely spiralled.
Branchiae: 3 pairs, each of 1 or 2 simple filaments.
Segments: Setigerous segments number 55–75. Notopodial setigers number 25–51. Eyes not visible. Buccal segment forms a swollen lip. Ventral surface glandular for first 20 setigerous segments, with glands best developed on first 10 segments. Nephridial papillae not visible.
Notosetae: Of 2 kinds, the longer smooth with a narrow border, the shorter without wings.
Neurosetae: Uncini first present from fourth setiger; in anterior region each uncinus with a transverse row of 2 or 3 teeth above main fang; abdominal uncici with more numerous teeth.

DISTRIBUTION: South Georgia, Kerguelen Islands, Ross Sea in 20–250 m.

Terebella Linnaeus, 1767

Terebella ehlersi Gravier, 1907 (Figs 180–182)

Terebella ehlersi Gravier, 1907: 47–50, pl. 5, figs 45–46, text-figs 30–31; Benham 1927: 105; Augener, 1932: 58; Levenstein 1964: 117; Hartman 1966: 101, pl. 34, fig. 45; Cantone & Sanfilippo 1993: 375.

MATERIAL: NZOI Stn A534 (1). Previous records from the Ross Sea: Benham (1927), McMurdo Sound and Cape Adare, in 82–457 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body up to 145 mm; width up to 10 mm; segments number about 90.
Colour in alcohol: Light brown.
Tube: Thick-walled, composed of grey mud and sponge spicules.
Prostomium: Completely covered in lateral view by a thick mass of elongated tentacles.
Branchiae: 3 pairs each on a stout base and richly branched distally; first pair on second segment almost obscured in lateral view (Fig. 180).
Thorax: Segments number about 50; no lateral lobes on anterior segments; a diagnostic large conical papilla situated near base of second branchiae (Fig. 181).
Notosetae: First present from segment 4; each seta with a slightly twisted shaft, denticulated along one side.
Neurosetae: Uncini (Fig. 182) first present from segment 5; each uncinus with a main fang and a smaller intermediate one surmounted by many smaller teeth.

DISTRIBUTION: South Georgia, Antarctic mainland, including Ross Sea, in moderate depths.

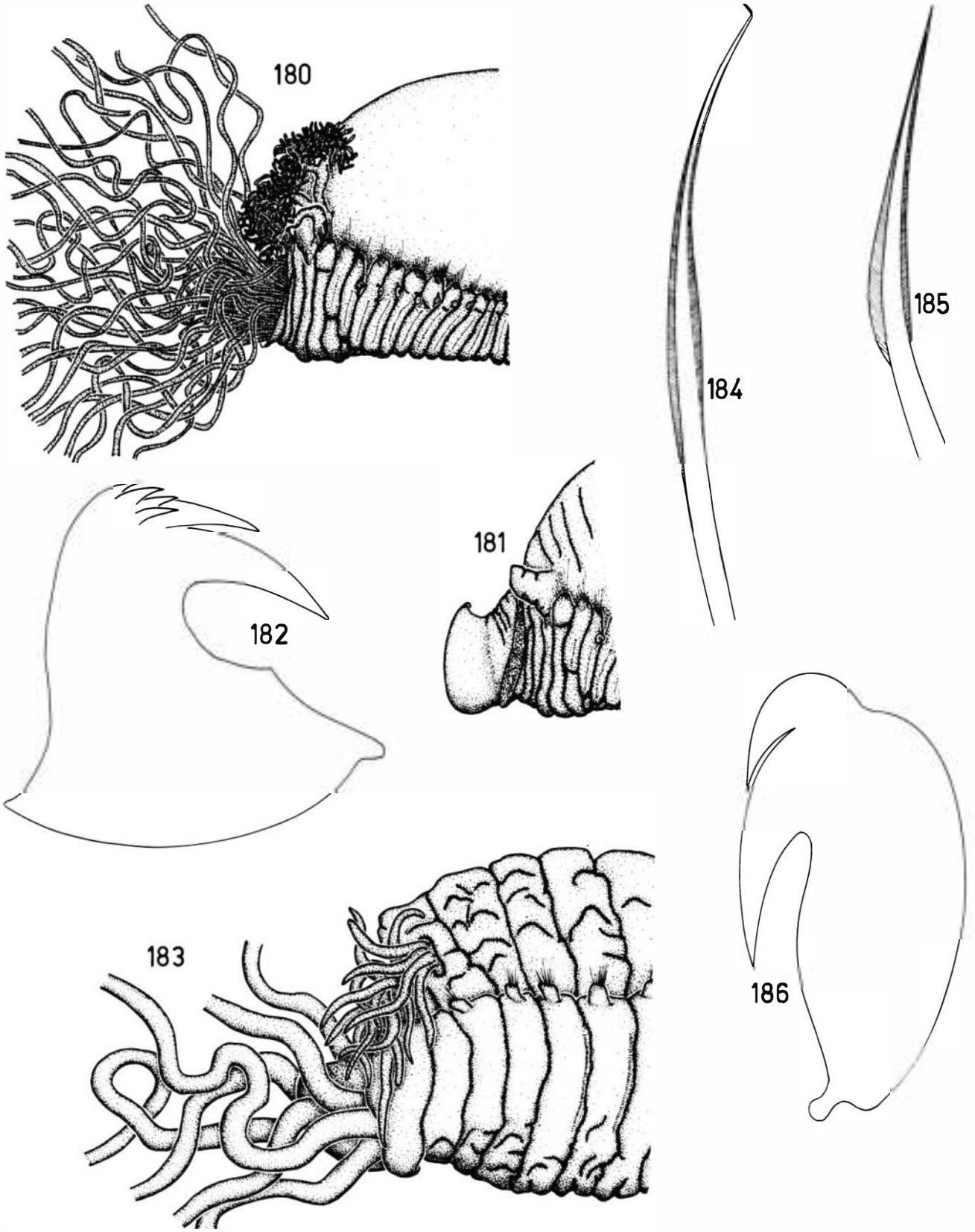
Thelepus Leukart, 1849

Thelepus cincinnatus (Fabricius, 1780) (Figs 183–186)

Thelepus antarcticus: Willey 1902: 278–279, pl. 45, fig. 6.
Thelepus cincinnatus Benham, 1927: 111; Monro, 1939: 145; Hartman 1952: 236; 1966: 107–109, pl. 36, figs 9–12; Averincev 1974: 223; 1982: 45, pl. 8, figs 1–3; Hartmann-Schröder 1983: 271; 1986: 91.

MATERIAL: NZOI Stns A448 (1), A459 (2), A460 (2), A461 (1), A468 (2), A471 (1). Previous records from the Ross Sea: Willey (1902), Cape Adare, in 15 m; Benham (1927), McMurdo Sound and Cape Adare, in 82–457 m; Hartman (1952), Ross Island, in 64–106 m.

DESCRIPTION:
Size: Length of body up to 190 mm; width up to 7.5 mm; segments number 95–105.
Colour in alcohol: Yellow to light brown.
Tube: Light in colour, membranous, covered with fine sand and mud, surface very uneven.



Figs 180–182. ***Terebella ehlersi*** Gravier. **180**. Anterior end. **181**. Anterior end showing large conical papillae at base of 2nd branchiae. **182**. Uncinus. **Figs 183–186.** ***Thelepus cincinnatus*** (Fabricius). **183**. Anterior end. **184 & 185**. Two types of notosetae. **186**. Uncinus.

Peristomium: With many eye spots.
Branchiae: 2 pairs, inserted on segments 2 and 3; each consisting of many finger-like filaments, first pair with more numerous filaments (Fig. 183).
Thorax: With no anterior lateral lobes.
Notosetae: First present from second branchial segment and of two types; one long and thin with fine borders and slightly curved tips (Fig. 184), the other shorter, stouter, with wider borders and more sharply curved tips (Fig. 185).
Neurosetae: Uncini first present from third notopodial segment, each with a large main fang surmounted by smaller secondary teeth (Fig. 186).

DISTRIBUTION: Cosmopolitan.

Thelepides Gravier, 1911

Thelepides koehleri Gravier, 1911 (Figs 187–188)

Thelepides koehleri Gravier, 1911: 138–141, pl. 10, figs 127–132; Hartman 1966: 101, pl. 36, figs 5–8; Cantone & Sanfilippo, 1992: 375.

MATERIAL: NZOI Stn A570 (4). Previous records from the Ross Sea: Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body up to 45 mm; width up to 6.0 mm; segments number up to 50.
Prostomium: Tentacles thick and numerous.
Branchiae: 3 pairs, inserted on segments 2, 3, and 4; each with 4 filaments, those of first pair being longest, decreasing in size posteriorly (Fig. 187).
Thorax: Consists of 17 setigerous segments, the first 3 with small lateral lobes.
Notosetae: First present from segment 4; setae long and limbate with smooth margins.
Neurosetae: Uncini (Fig. 188) first present from segment 5; each with a large fang and many smaller teeth; first six uncinigerous segments with uncini in single rows, thereafter in double rows.

REMARKS: This species has been recorded previously only from the South American sector. The present specimens differ from those previously described in the lesser development of the lateral lobes on the anterior segments and in their larger size, but are identical in all other respects.

DISTRIBUTION: Drake Passage, Bransfield Strait, Antarctic Peninsula, Scotia Sea, South Shetland Islands, South Orkney Islands, Deception Island, Ross Sea, in shallow depths to 3239 m.

Family **TRICHOBRANCHIDAE** Malmgren, 1866

KEY TO GENERA:
1 Branchiae threadlike, not fused; without chitinised stomach region ..... *Trichobranchus*
– Branchiae more or less fused basally 2
2 Branchiae free from each other ..... *Octobranchus*
– Branchiae fused to form a single group ..... *Terebellides*

Octobranchus Marion & Bobretsky, 1875

Octobranchus phyllocomus Hartman, 1952

Octobranchus phyllocomus Hartman, 1952: 233–234, figs 1–12; 1966: 111, pl. 37, figs 5–6.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Hartman (1952), off Cape Royds, Ross Island, in 91 m.

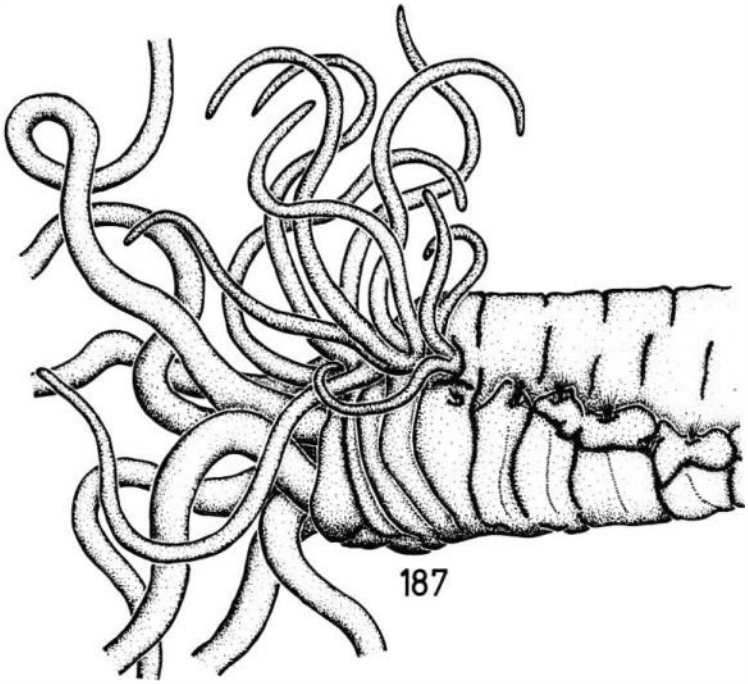
DESCRIPTION:
Size: Length of body about 20 mm; width 3.3 mm; segments number 16 thoracic and 6 abdominal.
Peristomium: With dark eyespots; a large U-shaped membrane about oral aperture to which oral tentacles are attached; a pair of lateral lobes at each side of mouth.
Thorax: Anterior end with 4 pairs of lateral lobes, all continued across ventrum; the first pair smallest and largely concealed by much larger second pair; third and fourth pairs progressively smaller.
Branchiae: 4 pairs; each with a broad base and a distal slender filament, second pair with broadest base.
Notopodia: First pair small, conical; others larger.
Notosetae: Notosetae of 2 kinds, some long and broad, others short and slender.
Neurosetae: Uncini begin on setiger 5 and number 15–20 in a single row; each thoracic uncinus with a long stalk and large distal fang surmounted by a crescent of denticles. Abdominal uncini avicular, terminating distally in a large fang surmounted by 2 transverse rows of denticles.

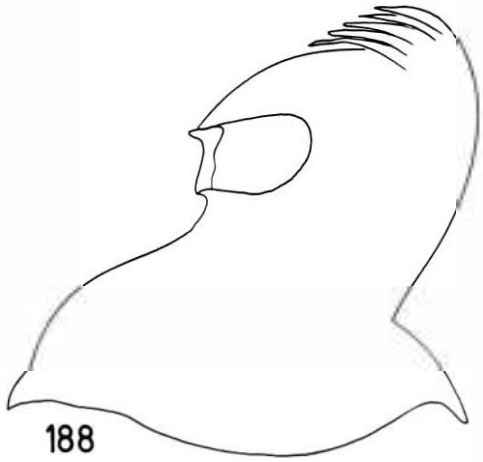
DISTRIBUTION: Ross Island, in 91 m.

Terebellides Sars, 1835

Terebellides stroemi kerguelensis McIntosh, 1885

Terebellides stroemi kerguelensis McIntosh, 1885: 480, pl. 29A,





Figs 187–188. ***Thelepides koehleri*** Gravier. **187**. Anterior end. **180**. Uncinus.

figs 7–8, pl. 38A, fig. 4; Monro 1939: 147; Levenstein 1964: 181; Hartman 1966: pl. 28, figs 4–7.
Terebellides minutus Hessle, 1917: 138; Monro 1930: 198, fig. 83a-d.
Terebellides stroemi: Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Length of body up to 42 mm; segments number up to 50–60.
Thorax: 18 setigerous segments; first pair of notopodia fully developed; first neuropodia with geniculate setae.
Branchiae: A single large branchia arising from segments 2–4 as a stout trunk bearing a few lamellate lobes which are partially fused.
Notosetae: First present from third segment.
Neurosetae: Uncini present from about setiger 5. Thoracic uncini with conspicuously curved necks, and a large distal fang surmounted by a crescent of denticles. Abdominal uncini avicular with 4–6 teeth, with 5 being the most usual number.

DISTRIBUTION: Southern South America, Antarctic Peninsula, South Georgia, Eastern sector of Antarctica, Ross Sea.

Trichobranchus Malmgren, 1866

Trichobranchus glacialis antarcticus Hessle, 1917

Trichobranchus glacialis antarcticus Hessle, 1917: 132; Hartman, 1952: 133; 1966: 113-115.
Trichobranchus glacialis: Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Hartman (1952), Ross Island, in 91 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Thorax: Thorax consists of 15 setigerous segments. Lateral lobes of first segment large and semicircular, fully free from one another. Buccal segment without eyespots, this segment raised and transversely ridged. Lateral lobes on second and third segments smaller than those on first.
Branchiae: 3 pairs, each thread-like, free from one another, but those of third pair approaching mid-dorsally.
Setae: Uncini present from first setiger; thoracic incini long-handled, terminating distally in a hooked tip. Abdominal uncini avicular with dentate margins.

REMARKS: This subspecies differs from the stem species only in lacking eyes.

DISTRIBUTION: Patagonia and Ross Island, in moderate depths.

Family **SABELLIDAE** Malmgren, 1967

KEY TO SUBFAMILIES AND GENERA:

1 Body encased in a thick gelatinous sheath *Myxicola* ..... MYXICOLINAE
– Body not encased in a gelatinous sheath 2
2 Thoracic neuropodia with long-handled uncini ..... FABRICINAE 3
– Thoracic uncini with short avicular uncini ..... SABELLINAE 5
3 Posterior end with an anal vent, radioles united for most of their lengthh ..... *Euchone*
– Posterior end tapering to a narrow pygidium 4
4 Abdomen consists of 3 setigerous segments ..... *Fabricia*
– Abdomen consists of 6 setigerous segments ..... *Oriopsis*
– Abdomen consists of 15, or more, setigerous segments ..... *Jasmeneira*
5 Thoracic uncini avicular with a long handle ..... *Potamethus*
– Thoracic uncini avicular with a short handle 6
6 Thoracic notosetae of 2 abruptly different kinds, slender and spatulate ..... *Potamilla*
– Thoracic notosetae intergrading from slender to spatulate, not abruptly different ..... *Sabella*

Euchone Malmgren, 1866

Euchone pallida Ehlers, 1908 (Figs 189–192)

Euchone pallida Ehlers, 1908: 159, pl. 21, figs 10–15, pl. 22, figs 1–4; Benham 1927: 139, pl. 14, figs 126–130; Monro 1939: 148; Hartman 1952: 236; 1966: 117, pl. 39, figs 11–15; 1967: 172; Averincev 1974: 224; Bellan 1974: 794; Vinogradova *et al.* 1974: 19.

MATERIAL: NZOI Stn A468 (2); McMurdo Sound Stn 61B (1); Trans-Antarctic Expedition Stns TAE74 (1), TAE78 (4). Previous records from the Ross Sea; Benham (1927), McMurdo Sound, in 329–549 m; Hartman (1952), Ross Island, in 91–106 m.

DESCRIPTION:

Size: Length of body up to 53 mm, without tentacular crown; segments number 8 thoracic and 23–28 abdominal.

Colour in alcohol: Light brown to yellow.

Tentacular crown: Radioles lack palmate web, basal region obscured by a very prominent collar.

Thorax: Anterior end has a collar with a deep mid-ventral cleft, the edges of collar overlapping at this point (Fig. 189).

Setae: Thoracic uncini (Fig. 197) very long-handled with a weakly developed main fang and many terminal teeth. Abdominal uncini (Fig. 190) short, stout avicular with a large main fang surmounted by many smaller teeth.

Posterior end: Terminates in a spoon-shaped cavity formed by laterally flanged posterior setigers (Fig. 192) which involves about 13 preanal segments.

REMARKS: This is the third record of this very characteristic species from the Ross Sea.

DISTRIBUTION: South Georgia, South Shetland Islands, Bransfield Strait, Antarctic mainland, Kerguelen Islands, Ross Sea, in moderate depths.

Fabricia Blainville, 1828

Fabricia sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 1004–250 m.

REMARKS: This record may be that of *F. sabella* which has been reported from the Kerguelen islands.

Jasmineira Langerhans, 1880

Jasmineira caeca Ehlers, 1913

Jasmineira caeca Ehlers, 1913: 579; Hartman 1966: 119, pl. 40, figs 1–3.
Jasmineira scotti Benham, 1927: 131, pl. 3, figs 100–107; Cantone & Sanfilippo 1992: 375.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound; Cantone and Sanfilippo (1992) Terra Nova Bay.

DESCRIPTION:

Size: Length of body 9.0 mm, and tentacular crown another 4.0 mm; 8 thoracic and 15 abdominal setigers.

Colour in alcohol: Colourless.

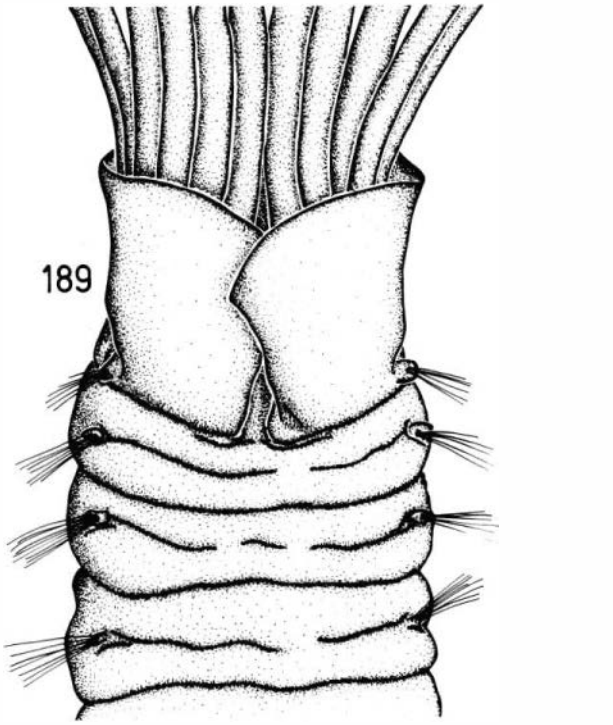
Tube: Encrusted with sand grains and small black pebbles.

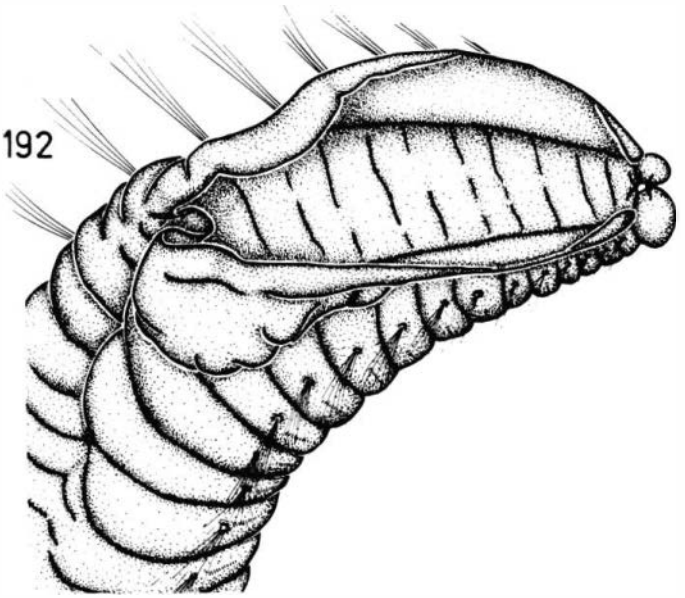
Tentacular crown: Radioles may have a web throughout a third of their basal length.

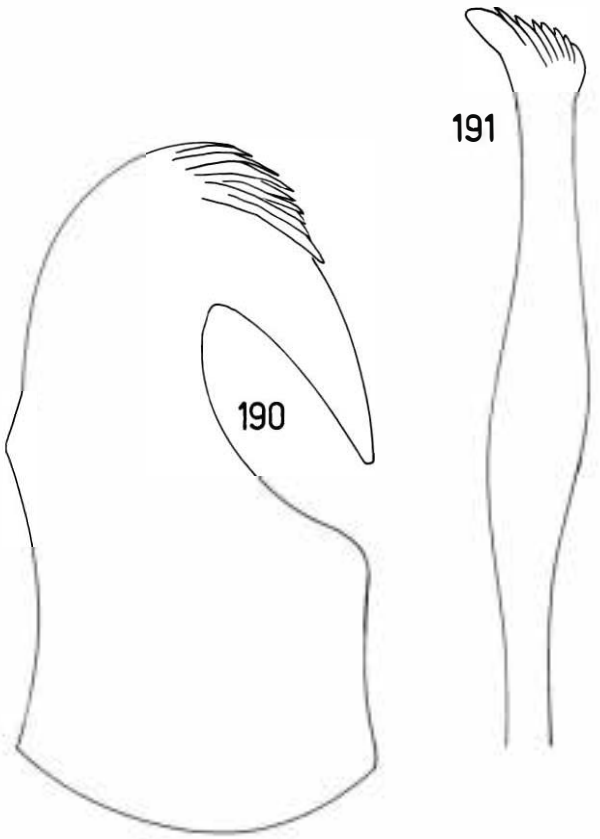
Thorax: Dorsum with a pair of prominent glandular pads extending from third setiger to base of head region.

Notosetae: Thoracic notosetae winged to subspatulate. Abdominal notosetae slender and capillary.

Neurosetae: Thoracic uncini with long handles terminating distally in a large fang and smaller denticles. Abdominal uncini avicular, but with a long stem terminating in a large fang and a crest of 8 rows of denticles.







Figs 189–192. ***Euchone pallida*** Ehlers. **189**. Anterior end. **190.** Abdominal uncinus. **191.** Thoracic uncinus. **192**. Posterior end.

DISTRIBUTION: Kerguelen Islands and the Ross Sea, in depths to 256 m.

Myxicola Koch *in* Renier, 1847

Myxicola sulcata Ehlers, 1912 (Figs 193–195)

Myxicola sulcata Ehlers, 1912: 29–30, pl. 3, figs 5–12; Hartman 1966: 122, pl. 40, figs 4–7.

MATERIAL: McMurdo Sound Stn TOS (1). Previous records from the Ross Sea: Ehlers (1912), Victoria Land in 238 m.

DESCRIPTION:

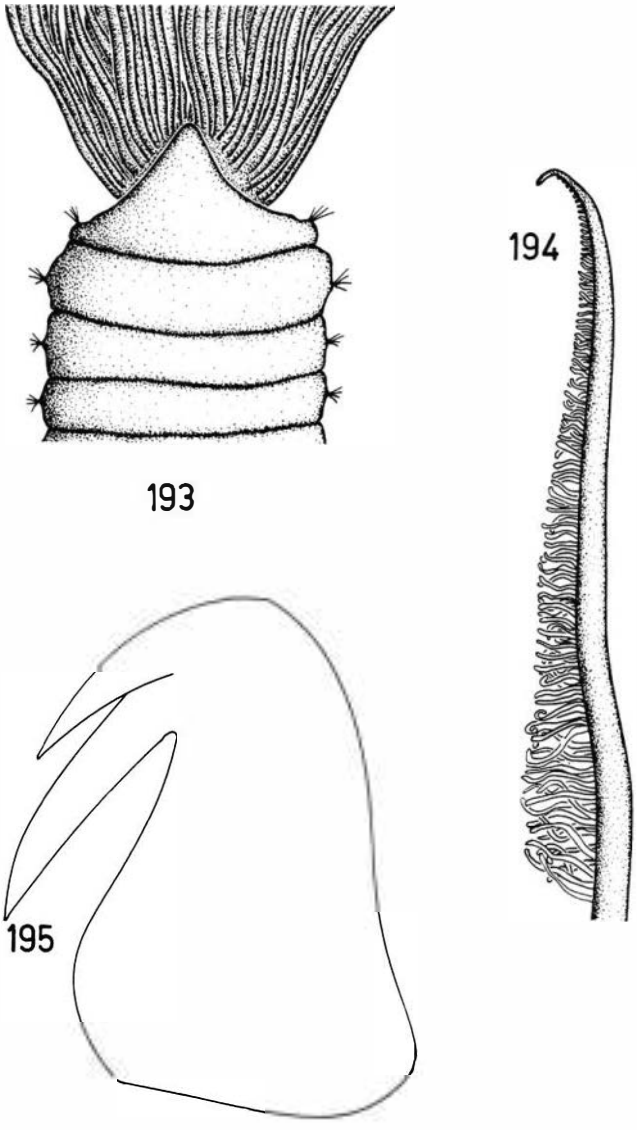
Size: Length of body about 30 mm, about one-third of this being tentacular crown; width up to 4.0 mm; segments number 8 thoracic and 34 abdominal.

Colour in alcohol: Pale yellow to white.

Tentacular crown: Up to 13 pairs of radioles, fused at their basal area with a palmate membrane. Ventral pair of radioles shorter than remainder with lateral pectinations terminating in a curved smooth tip (Fig. 194).

Thorax: With 9 segments; collar absent. First segment extended forward to form a median triangular lobe at base of radioles (Fig. 193).

Setae: Thoracic notosetae present from first segment, uncini absent. Abdominal uncini (Fig. 195) short, avicular, with 2 well-developed fangs in frontal view, upper one smaller.



Figs 193–195. *Myxicola sulcata* Ehlers. **193**. Anterior end. **194**. Ventral radiole. **195**. Abdominal uncinus.

REMARKS: This species is known only from the Ross Sea.

DISTRIBUTION: Ross Sea, in depths up to 585 m.

Myxicola sp.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Lowry (1976), Moubray Bay, Cape Hallett, in 104–250 m.

REMARKS: It is likely that this record will be found to be of *M. sulcata*.

Oriopsis Caullery & Mesnil, 1897

Oriopsis limbata (Ehlers, 1897)

Oria limbata Ehlers, 1897: 137–139, pl. 9, figs 211–216; Benham 1927: 130.
Oriopsis limbata: Banse 1957: 76; Hartman 1966: 121–122, pl. 41, figs 3–6.

MATERIAL: No specimens in the collection: Previous records from the Ross Sea: Benham (1927), Cape Adare.

DESCRIPTION:
Size: Length of body 2.0–5.0 mm, of which radioles comprise one-third of the total length; segments number 8 thoracic and 5 or 6 abdominal.
Tentacular crown: Radioles number 3 pairs, each with a border, pinnules numbering about 7 pairs, and a long free tip.
Thorax: Collar present, longest ventrally, where it forms a pair of small triangular lappets midventrally, lacking dorsal lobes.
Notosetae: Thoracic notosetae limbate. Abdominal notosetae very slender and capillary.
Neurosetae: Thoracic uncini with a long handle terminating in a large fang acute to shaft, with a single large tooth and several smaller teeth. Abdominal uncici with a short base and many denticles in several rows.

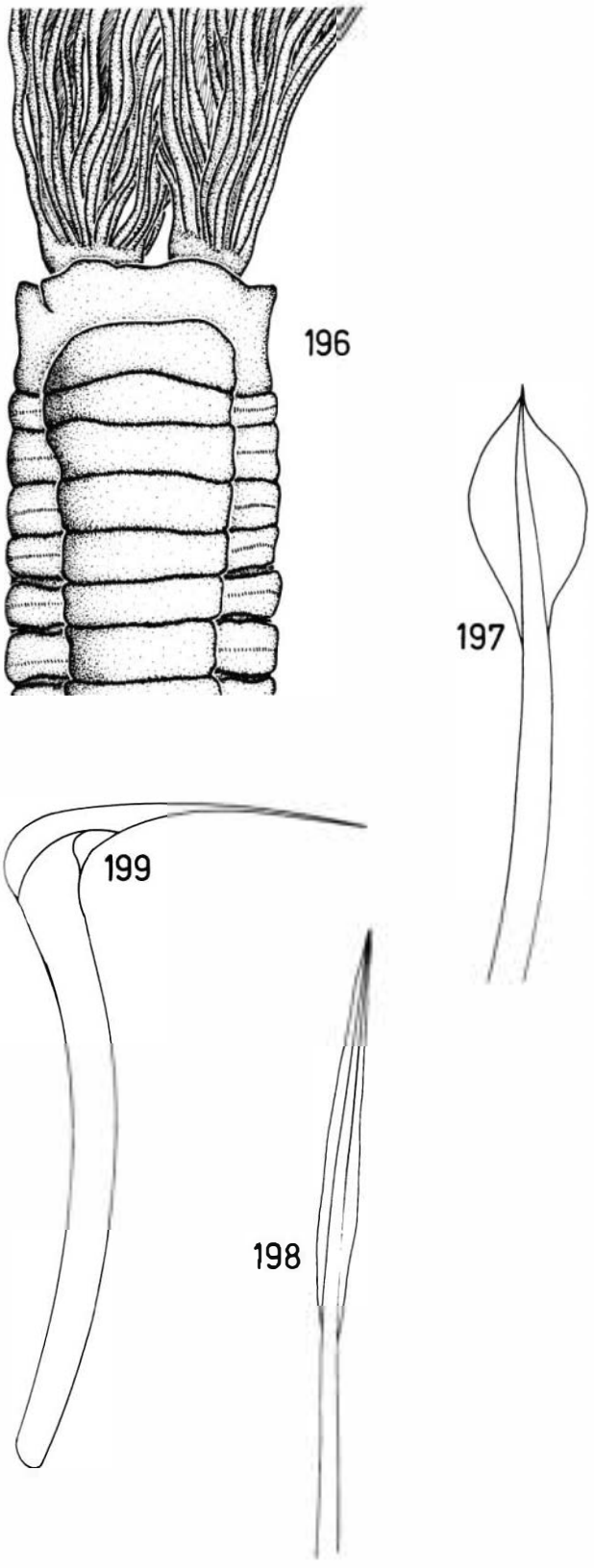
DISTRIBUTION: Southern South America, Falkland Islands, South Georgia, South Orkney Islands, Antarctic mainland, Ross Sea, in intertidal to moderate depths.

Potamilla Malmgren, 1866

Potamilla antarctica (Kinberg, 1867) (Figs 196–199)

Laonome antarctica Kinberg, 1867: 345; Ehlers 1912: 29.
Potamilla antarctica: Gravier 1907: 59–62, figs 38–43; Benham 1927: 143; Monro 1936: 188; Hartman 1952: 236; 1966: 125–126, pl. 41, figs 10–12; 1978: 208; Bellan 1974: 794; Averincev 1982: 46-48, pl. 9, figs 1-8; Hartmann-Schröder 1983: 272–273.

MATERIAL: NZOI Stns A448 (12), A449 (1), A450 (2), A454 (2), A457 (tubes only), A458 (6), A459 (87), A460 (11), A461 (25), A467 (1), A468 (33), A469 (2), A470 (9), A471 (14), A519 (2), A528 (7), A529 (2), A530 (numerous), A533 (numerous), A534 (13), A536 (10), A537 (12), A538 (numerous); *Glacier* Stns GLD-1 (2), GLD-7 (1), GLD-13 (numerous), GLD-8 (1); McMurdo Sound Stns P (5), 61B (7), 61D (3), *Eastwind* Stns EAD-2 (8), EAD-3 (numerous);



Figs 196–199. ***Potamilla antarctica*** Kinberg. **196**. Anterior end. **197 & 198**. Thoracic notosetae. **199**. Thoracic pickaxe notoseta.

Trans-Antarctic Expedition Stns TAE99 (numerous), TAE100 (2). Previous records from the Ross Sea: Ehlers (1912), Cape Armitage, Ross Island, in 189–329 m; Benham (1927), McMurdo Sound and Cape Adare, in 182–329 m; Hartman (1952), Ross Island, in 64–201 m.

DESCRIPTION:

Size: Very variable, often up to 100 mm or more; width up to 8.0 mm; segments number 8–12 thoracic and up to 60 abdominal.

Colour in alcohol: Reddish-brown.

Tube: Horny, yellow to brown in colour; may be twisted, spiraled or straight; encrusted with various growths or possessing horny spines.

Tentacular crown: Radioles with transverse bands of pigment; about 18 pairs, terminating in bare tips; without eyespots.

Thorax: Usually all thoracic segments with conspicuous gland shields (Fig. 196).

Notosetae: Thoracic notosetae of two types, longer limbate setae (Fig. 198) and shorter spatulate setae (Fig. 199). Abdominal notosetae simple limbates.

Neurosetae: Thoracic uncini avicular, short-handled with poorly developed secondary teeth above main fang; associated with these setae are characteristic pickaxe setae (Fig. 197). Abdominal uncini avicular.

REMARKS: A very variable species which is widely distributed around the Antarctic continent. It is the most abundant and widespread sabellid in the Ross Sea collection. There is some confusion in the generic status of this species. Dr Phyllis Knight-Jones, School of Biological Sciences, University of Wales, Swansea has recently informed us that there are specimens in the museums of London and Paris labelled as *Potamilla antarctica* none of which are *Potamilla* but they fall into two genera, *Perkinsiana* and *Demonax*. It is probable that NZOI and related material falls into the genus *Perkinsiana*. However, in the meantime, we are retaining the name *Potamilla antarctica*, pending a revision of the antarctic specimens assigned to this species by Dr Phyllis Knight-Jones.

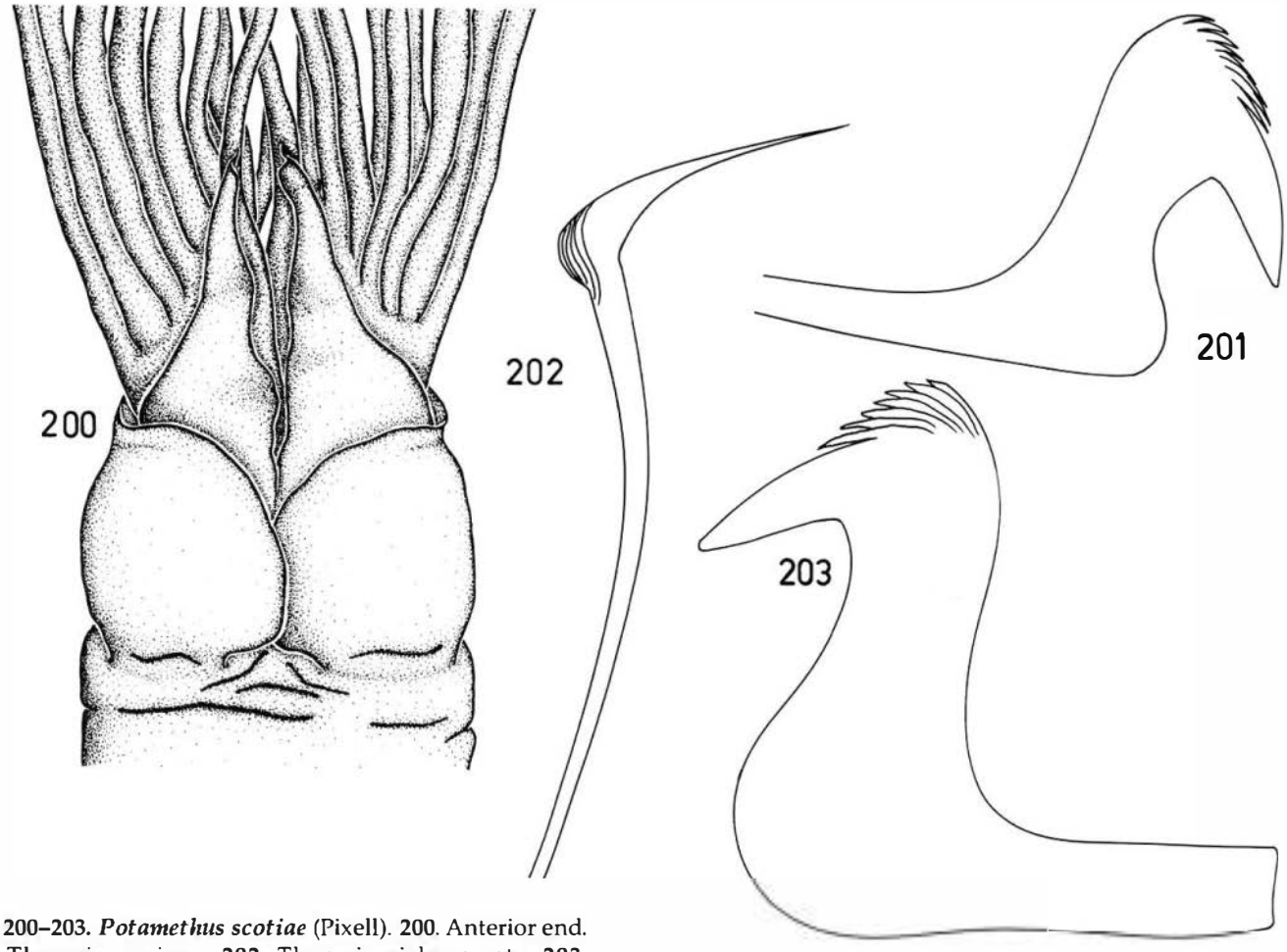
DISTRIBUTION: Southern South America, sub-Antarctic islands, around the Antarctic continent, in moderate depths.

Potamethus Chamberlin, 1919

Potamethus scotiae (Pixell, 1913) (Figs 200–203)

Potamis scotiae Pixell, 1913: 256–357, fig. 7.

Potamethus scotiae: Hartman 1966: 123, pl. 42, figs 1-4; 1978: 208, fig. 42a-c.



Figs 200–203. ***Potamethus scotiae*** (Pixell). **200**. Anterior end. **201**. Thoracic uncinus. **202**. Thoracic pickaxe seta. **203**. Abdominal uncinus.

MATERIAL: NZOI Stns A459 (3), A529 (1); *Glacier* Stns GLD-10 (2), GLD-13 (2); Trans-Antarctic Expedition Stns TAE79 (8), TAE99 (2). No previous records from the Ross Sea.

DESCRIPTION:

Size: Length of body up to 133 mm; width up to 8.0 mm; segments number 8 thoracic and about 52 abdominal.

Colour in alcohol: Variable, from light pink to greenish-brown.

Tube: Orange-brown and horny.

Tentacular crown: In 2 groups of about 15 radioles each; ventralmost pair attached along their length to a membrane which is divided by a cleft ventrally, thus forming a pair of pouches (Fig. 200).

Thorax: Collar present but reduced and divided midventrally where two edges overlap each other (Fig. 200).

Notosetae: Thoracic notosetae of 2 types, limbate and spatulate. Abdominal notosetae simple capillaries.

Neurosetae: Thoracic uncini very long-handled (Fig. 201) with a pickaxe seta (Fig. 202) associated with each. Abdominal uncini relatively short-handled (Fig. 203).

REMARKS: Hartman (1967) has recently recorded this species from many localities in the South American sector. It is probably widespread around the Antarctic continent.

DISTRIBUTION: South Georgia, Scotia Sea, South Shetland Islands, Bransfield Strait, South Orkney Islands, Mid-Pacific Antarctic Basin, off Princess Martha Coast, Ross Sea, from 165 m to abyssal depths.

Family **SERPULIDAE** Savigny, 1818

KEY TO GENERA:

1 Operculum funnel-shaped ..... *Serpula*

– Opercular plate dark, horny and concave ..... *Chitinopomoides*

Chitinopomoides Benham, 1927

Chitinopomoides wilsoni Benham, 1927

Chitinopomoides wilsoni Benham, 1927: 156–158, pl. 5, figs 162–173; Hartman 1966: 129–130, pl. 43, figs 4–7.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound in 366 m.

DESCRIPTION:
Size: Length of body 25 mm, of which the radioles constitute 5.0 mm and the thorax 3.0 mm; width 1.5 mm.
Tube: With a compressed keel along middle, and one or two ill-defined ridges along sides; aperture of tube circular.
Operculum: With a dark horny concave plate and a black line around its edge.
Tentacular crown: Radioles number 14 pairs.
Thorax: Setigers number 7; collar is a continuous membrane except for a deep middorsal incision.
Setae: Collar setae of two kinds, some long, curved, limbate and dentate on their convex margin, others thicker with a blunt knob. Thoracic notosetae distally oblique with a serrated edge; uncini with more than 12 teeth above larger fang.

DISTRIBUTION: Ross Sea in 366 m.

Serpula Linnaeus, 1758

Serpula narconensis Baird, 1865 (Figs 204–206)

Serpula narconensis Baird, 1865: 21; Hartman 1966: 132–133, pl. 30, fig. 10, pl. 45, fig. 1; 1967: 177; Averincev 1974: 225; 1982: 52, pl. 9, figs 9–14; Vinogradova *et al.* 1974: 180; Hartmann-Schröder 1983: 273–274; 1986: 93; Cantone & Sanfilippo 1992: 375.
Serpula vermicularis: Gravier, 1911: 147–148, pl. 12, figs 171–174; Pixell 1913: 348, pl. 49, fig. 1.
Serpula vermicularis narconensis: Ehlers 1912: 31; Benham 1927: 145; Hartman 1952: 237.

MATERIAL: NZOI Stns A448 (tubes), A449 (numerous), A450 (tubes), A451 (tubes), A456 (tubes), A459 (11), A461 (2 plus tubes), A463 (tubes), A466 (1), A467 (tubes), A468 (2 plus numerous tubes), A469 (2 plus tubes), A470 (tubes), A471 (tubes), A519 (5), A520 (2), A522 (1), A525 (1), A526 (2), A527 (tubes), A528 (1), A529 (1), A530 (3), A532 (1), A533 (9), A534 (numer-ous), A537 (12 plus tubes), A538 (9), A625 (numerous); *Glacier* Stns GLD-8 (tubes), GLD-13 (2), GLD-15 (4); McMurdo Sound Stns B (5), M (1), V (1), 61E(1); Trans-Antarctic Expedition Stns TAE1 (1), TAE78 (4), TAE79 (tubes). Previous records from the Ross Sea: Ehlers (1912), in 18–183 m; Benham (1927), McMurdo Sound, in 82–549 m; Hartman (1952), Ross Island, in 64–274 m; Cantone and Sanfilippo (1992), Terra Nova Bay.

DESCRIPTION:
Size: Tube length up to 130 mm; width up to 8.0 mm.
Colour in alcohol: Tube, white or yellow; animal, pale and colourless.
Tube: (Fig. 206) Characteristically smooth, white with prominent collars at regular intervals along its length. Tubes may be tightly spiralled or almost straight, and either solitary or massed.
Operculum: (Fig. 204) On a long stalk extending beyond tip of radioles, distally funnel-shaped with radial ribbing.
Thorax: Collar present, with distinctive setae (Fig. 205) which have a subterminal group of teeth and very fine hairs along one side of shaft.

REMARKS: This is one of the most widespread species in the Ross Sea collection

DISTRIBUTION: Southern South America, sub-Antarctic islands, throughout the Antarctic mainland and off-lying islands, low tide to moderate depths.

Family **SPIRORBIDAE** Chamberlin, 1919

KEY TO GENERA:
Setae of first setiger simple, limbate ..... *Leodora*
Setae of first setiger with a crenulated aileron, distal end of tube somewhat erect ..... *Spirorbis*

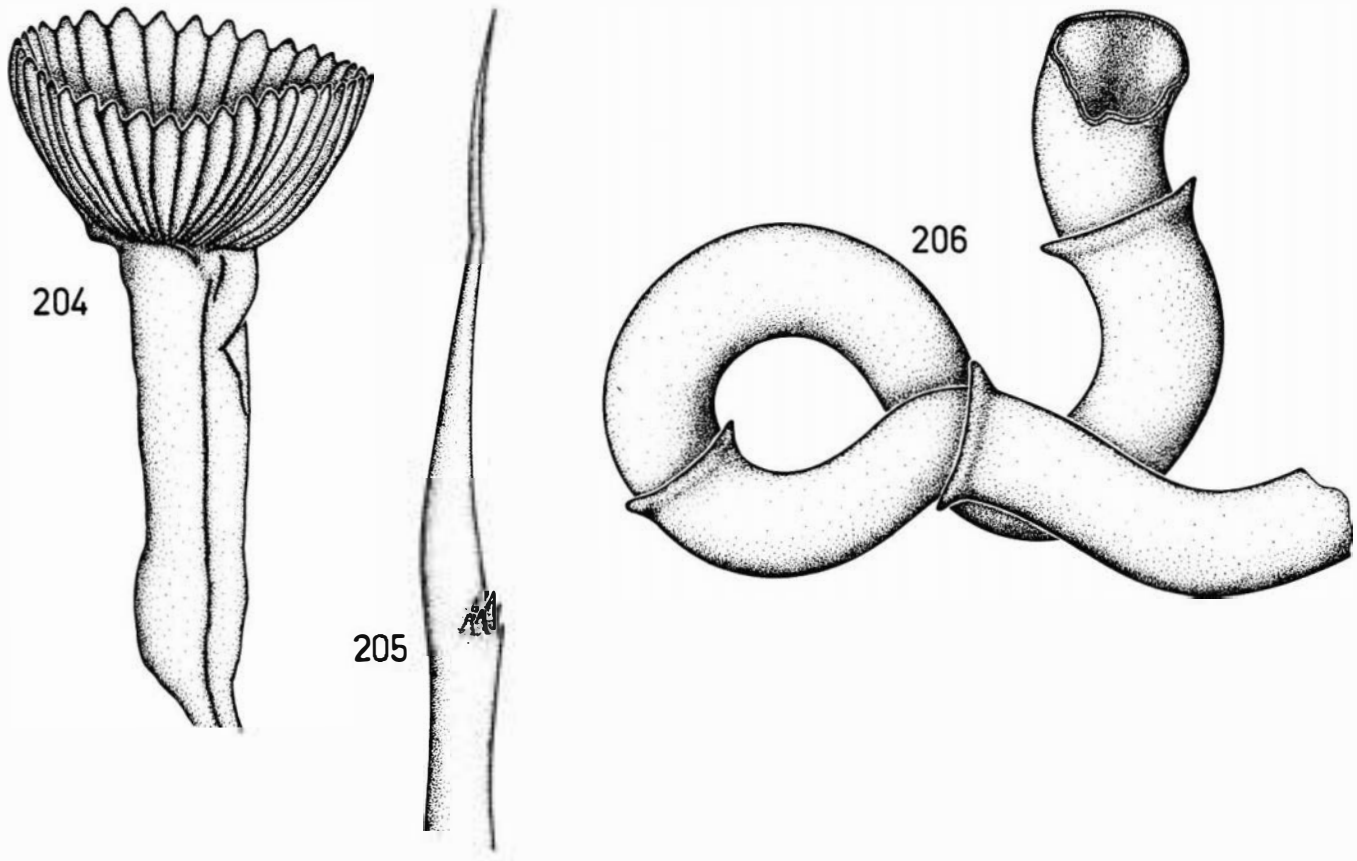
Leodora Saint-Joseph, 1894

Leodora perrieri (Caullery & Mesnil, 1897)

Spirorbis (Romanchella) perrieri: Ehlers 1912: 31.
Spirorbis perrieri: Augener 1932: 72–75, fig. 6.
Leodora perrieri: Hartman 1966: 135–137, pl. 41, figs 12–15.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Ehlers (1912), Cape Adare, in 24–37 m.

DESCRIPTION:
Size: Tube about 2 mm across.
Operculum: With one or several oblique plates and a long trowel-shaped talon; or terminal plates somewhat flaring.
Thorax: With 3 setigers; collar setae smooth and limbate.



Figs 204–206. ***Serpula narconensis*** Baird. **204**. Operculum. **205**. Collar seta. **206**. Tube.

DISTRIBUTION: Southern South America, Kerguelen Islands, Antarctic mainland, Ross Sea, in shallow depths.

Spirorbis Daudin, 1800

Spirorbis spp.

Spirorbis sp. Benham, 1927: 158; Hartman 1952: 237.

MATERIAL: No specimens in the collection. Previous records from the Ross Sea: Benham (1927), McMurdo Sound, in 91 m; Hartman (1952), Ross Island in 106 m.

REMARKS: As yet, none of the species of the genus *Spirorbis* from the Ross Sea have been specifically identified.

DISTRIBUTION: South Georgia, Antarctic mainland in shallow depths.

DISCUSSION

Descriptions are given of 151 species of which 72 are represented in the NZOI collection studied. Of the latter, 38 had not previously been recorded from the Ross Sea. Three new species, *Aphrodita rossi*, *Typosyllis pennelli*, and *Clymenella antarctica* are described. The following 15 species are known only from the Ross Sea region: *Aphrodita rossi*, *Austrolaenilla* sp., *Anaitides adarensis*, *Syllidia inermis*, *Autolytus longstaffi*, *Eurysyllis ehlersi*, *Typosyllis pennelli*, *Myzostomum antarcticum*, *Spio obtusa*, *Clymenella antarctica*, *Mellinoides nelsoni*, *Octobranchus phyllocomus*, *Polycirrus antarcticus*, *Myxicola sulcata*, and *Chitinopomoides wilsoni*.

Table 1 lists the number of species in the various polychaete families. There are 78 errant species and 74 sedentary species. Families with a large number of species are the Polynoidae (21), Syllidae (18), and Terebellidae (17).

Ecology

In his analysis of the Ross Sea benthos Bullivant and Dearborn (1967) distinguished three major faunal assemblages (Fig. 205).

1. *Deep Shelf Mixed Assemblage*
This assemblage was widely distributed in the Ross Sea. It was associated with a fine sediment on which erratic boulders were scattered, providing a substratum for various sessile animals. The common animals found in this assemblage were tubicolous polychaetes, bryozoans, various ophiuroids, occasional gorgonians, crinoids, and other echinoderms and molluscs.

2. *Deep Shelf Mud Bottom Assemblage*
This assemblage was found at the deeper stations on the shelf where the sediment was mud, or sandy mud, and where there were erratic boulders. Tubicolous polychaetes were abundant and a species of sipunculid and an arenaceous foraminiferan (*Rhabdammina* sp.) were common. Also present were various ophiuroids, in particular *Amphiodia joubini*, holothurians, mainly *Umbellula* sp., and occasional crustaceans, molluscs, asteroids, echinoids and crinoids.

3. *Pennell Bank Assemblage*
On Pennell Bank and on a similar bank to the west a substratum of cobbles up to several centimetres in size occurred embedded in a muddy sand. Common animals were calcareous bryozoans, gorgonians, stylasterine corals and tunicates with various echinoderms, notably *Ophiocantha antarctica*, *Ophioceres incipiens*, *Ophiurolepis gelida*, polychaetes, and pycnogonids.

In Table 2 the polychaete species from the present collections that were found in these three assemblages are listed. In addition, two coastal assemblages are listed, the Victoria Land Coastal Assemblage and the McMurdo Sound Shelf Assemblage. Included in the species listed for the latter two assemblages are the species recorded by Lowry (1976) from Moubray Bay, Cape Hallett and Cape Bird, Ross Island.

From Table 2 it can be seen that the number of polychaete species recorded from the different assemblages varies considerably, with a low of 28 for the Deep Shelf Mud Bottom Assemblage and highs of 70 and 82 for the Victoria Land Coastal Assemblage and the McMurdo Sound Shelf Assemblage respectively. The differences in the number of species in the assemblages are a reflection of the diversity of niches available to the polychaetes, the variety of sampling devices used, and the frequency of sampling. On the McMurdo Sound Shelf both the sampling frequency and the variety of sampling devices used was greater than on the other areas. In addition, the McMurdo Sound Shelf has a great diversity of habitats including shallow rock and cobble substrata with a rich epifauna of bryozoans, hydroids, sponges, gorgonians, stylasterine corals, tubicolous polychaetes, and echinoderms (Dayton *et al.* 1970; Knox 1993). Other habitats include coarse sediments (considered by Bullivant to be a minor McMurdo Sound Mixed Assemblage), fine sediments, and areas with considerable quantities of sponge spicules. The latter provide a wide range of niches for sedentary and errant polychaetes. The greater the development of the epifaunal growth at individual stations the greater the diversity of the polychaete fauna.

A number of species are common to all assemblages. They include the polynoids *Harmothoe hartmanae*, *Hermadion ferox*, and *Polynoe antarctica*, the nephtyid *Aglaophamus trissophyllus*, the lumbrinerid *Augeneria tentaculata*, the amphitritids *Neosabellides elongatus* and *Phyllocomus crocea*, the sabellid *Potamilla antarctica*, and the serpulid *Serpula narconensis*. Other species which are also widespread, occurring in four of the five assemblages, include the polynoid *Harmothoe spinosa*, the phyllodocid *Austrophyllum charcoti*, the syllid *Trypanosyllis gigantea*, the glycerid *Glycera*

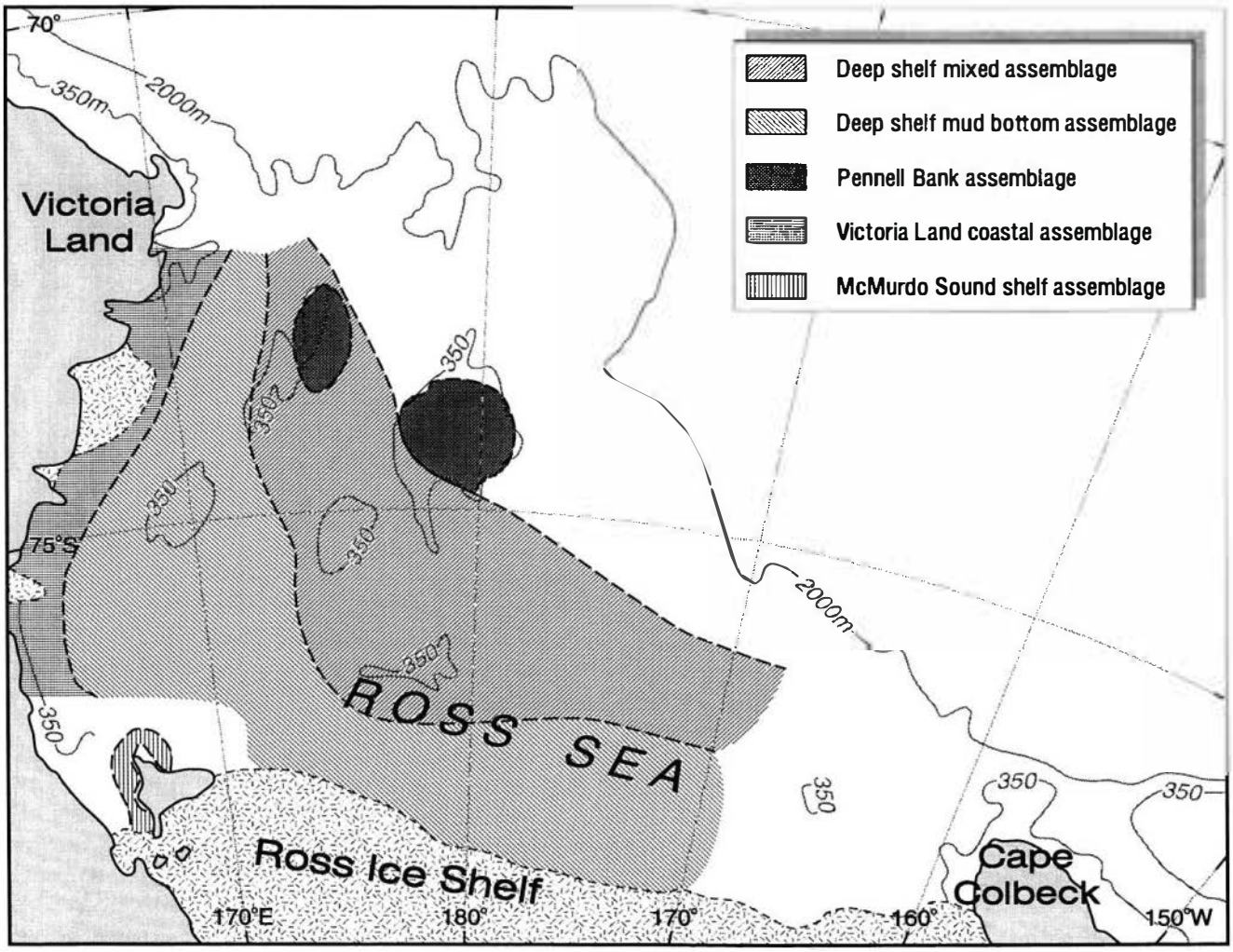


Fig. 207. Ross Sea faunal assemblages according to Bullivant and Dearborn (1967).

capitata, the spionids *Scoloplos (Leodamus) marginatus* and *Laonice weddelli*, the maldinid *Isocirrus yungi*, the ampharetids *Ampharete kerguelensis* and *Potamethus scotiæ*, and the terebellids *Lanicides bilobata* and *Pista corrientis*. The majority of these species are associated either with hard substrata or the epifaunal growths of bryozoans, hydroids, gorgonians, and sponges.

The stations with the greatest number of species were: A448 (20), A459 (20), A460 15), A468 (12), A520 (17) A529 (12), A556 (16) and GLD (13). The majority of these stations were in the Deep Shelf Mud Bottom Assemblage or in the Pennell Bank Assemblage. Lowry (1976) recorded 41 polychaete species in Moubray Bay, Cape Hallett and 14 off Cape Bird, Ross Island.

Species present at a large number of stations were *Harmothoe spinosa* (34), *Polynoe antarctica* (31), *Augeneria tentaculata* (18), *Scoloplos (leodamus) marginatus* (17), *Isocirrus yungi* (17), *Lanicides bilobata* (25), *Potamilla antarctica* (35), and *Serpula narconensis* (34). The commonest species in terms of the number of individuals in the collections were all of the above species. The range of the number of individuals per station and the total number of individuals in the collections are given in Table 3.

Zoogeography

Reviews of the distribution patterns of Antarctic polychaetes have been given by Knox and Lowry (1976), Knox (1977), and Orensanz (1990). A detailed zoogeographical analysis is not attempted here. The increase in the number of species recorded from the Ross Sea as a result of this study indicates that past

zoogeographical analyses have been based on an inadequate data base. Reviews by Blake (1980, 1981), Kudenov (1993), and Orensanz (1990) have described new species and extended the distributional ranges of many other in the families that they considered.

Of those species identified to specific level (excluding the pelagic species) 15 are known only from the Ross Sea, 19 are cosmopolitan, 54 occur in both the Antarctic and Subantarctic regions, and 48 are confined to the Antarctic region.

Table 1. Number of species in each of the polychaete families represented in collections from the Ross Sea.

Family	From studied collections	From all collections
Aphroditidae	2	2
Polynoidae	20	21
Amphinomidae	1	4
Euphrosinidae	1	1
Phyllodocidae	4	9
Alciopidae	0	1
Lopadorrhynchidae	0	3
Typhloscolecidae	0	2
Tomopteridae	0	4
Hesionidae	0	2
Syllidae	8	18
Nereidae	2	3
Nephtyidae	1	2
Glyceridae	1	1
Eunicidae	1	1
Onuphidae	0	1
Lumbrineridae	3	4
Iphitimidae	0	1
Orbiniidae	1	3
Paraonidae	0	2
Spionidae	0	11
Chaetopteridae	0	1
Cirratulidae	2	7
Apistobranchiidae	0	1
Flabelligeridae	1	3
Scalibregmidae	2	6
Opheliidae	1	5
Capitellidae	0	5
Maldanidae	3	14
Oweniidae	0	2
Ampharetidae	4	10
Terebellidae	9	20
Trichobranchidae	0	3
Sabellidae	5	9
Serpulidae	1	2
Spirorbidae	0	4
Total	**72**	**188**

Table 2. Distribution of species in three Ross Sea Assemblages proposed by Bullivant (1967) plus the Victoria Land Coastal Assemblage and McMurdo Sound Shelf Assemblage.

	Pennell Bank Assemblage	Deep Shelf Mixed Assemblage	Deep Shelf Mud Bottom Assemblage	Victoria Land Coastal Assemblage	McMurdo Sound Shelf Assemblage
Aphrodita rossi	+	-	-	-	-
Laetmonice producta	+	+	-	-	-
Austrolaenilla antarctica	-	+	-	+	-
A. hastulifera	-	+	-	-	-
A. sp.	-	-	-	-	+
Barrukia cristata	+	+	-	+	+
B. curviseta	+	+	-	+	-
Eucantra mollis	-	+	+	+	+
Euglasica corrientis	-	+	-	-	-
E. gigantea	-	+	-	-	-
Eunoe abyssorum	-	-	-	+	-
E. opalina	-	+	-	-	-
Gorekia crassicirrus	-	+	-	-	-
Harmothoe crosetensis	+	+	-	-	+
H. ernesti	+	-	-	-	-
H. exanthema bergstromi	-	+	-	-	-
H. hartmanae	+	+	+	+	+
H. magellanica	+	-	+	-	+
H. spinosa	+	-	+	+	+
Hermadion ferox	+	+	+	+	+
H. magalhaensis	-	-	-	-	+
Polyeunoa laevis	-	-	-	+	-
P. antarctica	+	+	+	+	+
Paramphinome australis	-	+	-	-	-
Euphrosine armadilloides	-	-	+	-	-
Anaitides adarensis	-	+	-	+	+
A. bowersi		-	-	-	+
A. longipes	+	+	+	-	-
A. madeirensis	-	-	-	+	-
Austrophyllum charcoti	+	+	-	+	+
Eteone aurantiaca	-	-	-	+	-
Eulalia sp.	-	-	-	+	-
Steggoa hunteri	-	-	-	-	+
S. magalhaensis	-	-	-	-	+
Ophiodromus comatus	-	-	-	-	+
Syllidia inermis	-	-	-	+	+
Autolytus charcoti	-	-	-	+	+
A. longstaffi	-	-	-	-	+
A. maclaeranus	-	-	-	-	+
Eurysyllis ehlersi	-	-	-	-	+
E. kerguelensis	-	-	-	-	+
Exogone heterosetosa	-	-	-	+	+
E. miniscula	-	-	-	+	-
Pionosyllis cosma	-	-	-	+	+
P. maxima	+	-	-	-	-
P. stylifera	-	-	-	-	+
Syllides articulosus	-	-	-	-	+
Syllis amica	-	-	-	+	-

	Pennell Bank Assemblage	Deep Shelf Mixed Assemblage	Deep Shelf Mud Bottom Assemblage	Victoria Land Coastal Assemblage	McMurdo Sound Shelf Assemblage
Trypanosyllis gigantea	+	-	+	+	+
Typosyllis armillaris	-	-	-	+	+
T. brachycola	-	-	-	+	+
T. hyalina	-	-	-	+	-
T. pennelli	+	-	-	-	-
T. prolixa	-	+	-	-	-
Neanthes kerguelensis	+	-	-	-	-
Nicon ehlersi	+	-	+	-	-
Platynereis australis	-	-	-	-	+
Aglaophamus trissophyllus	+	+	+	+	+
Micronephtys sp.	-	-	-	-	+
Glycera capitata	+	-	+	+	+
Eunice pennata	-	-	+	-	+
Nothria anoculata	-	-	+	-	-
Augeneria tentaculata	+	+	+	+	+
Paraninoe antarctica	-	+	-	-	-
Lumbrineris kerguelensis	-	+	+	+	-
L. tetraura	-	+	-	+	-
Ophryotrocha notialis	-	-	+	-	-
Haploscoloplos kerguelensis	-	-	-	+	+
Scoloplos (Leodamus) marginatus	+	+	-	+	+
Laonice antarcticae	-	-	+	+	-
L. weddellia	-	+	+	+	+
Ammotrypane syringopyge	-	-	-	+	-
Paraonis gracilis	-	-	-	+	+
Nereinopsis hystricosa	-	-	-	-	+
Scolelepis eltaninae	+	-	-	+	-
Spio obtusa	-	-	-	-	+
Spiophanes kroyeri	-	-	-	+	-
S. tcherniai	-	-	-	+	+
S. sp.	-	-	-	-	+
Chaetozone sp.	-	-	-	-	+
Cirratulus cirratus	-	-	-	-	+
Tharyx cincinnatus	+	-	-	-	-
T. sp.	-	-	-	+	-
Apistobranchus sp.	-	-	-	+	-
Flabelligera gourdoni	-	-	-	+	-
F. mundata	-	-	-	+	+
Pherusa kerguelarum	-	-	-	-	+
Oligobregma collare	-	-	+	-	-
O. notiale	-	-	+	-	-
Scalibregma inflatum	-	-	-	+	+
Sclerocheilus antarcticus	-	-	-	-	+
S. oculata	+	-	-	+	-
S. sp.	-	-	-	-	+
Travisia kerguelensis	-	-	-	+	-
Axiothella quadrimaculata	-	-	-	+	-
A. sp.	-	-	-	-	+
Clymenella antarctica	+	-	-	-	-

	Pennell Bank Assemblage	Deep Shelf Mixed Assemblage	Deep Shelf Mud Bottom Assemblage	Victoria Land Coastal Assemblage	McMurdo Sound Shelf Assemblage
Isocirrus yungi	+	+	+	-	+
Maldane sarsi antarctica	-	-	-	+	+
M. sp.	-	-	-	-	+
Praxillella kerguelensis	-	-	-	+	-
P. sp.	-	-	-	+	-
Rhodine loveni	-	-	-	+	-
Ampharete kerguelensis	+	+	+	+	-
Amphicteis gunneri antarctica	-	-	-	-	+
Amythas membranifera	-	+	-	-	-
Anobothrus patagonicus	-	-	-	-	+
Grubianella antarctica	-	-	-	-	+
Mellinoides nelsoni	-	-	-	-	+
Neosabellides elongatus	+	+	+	+	+
Phyllocomus crocea	+	+	+	+	+
Samytha ? speculatrix	-	+	-	-	-
Potamethus scotiae	+	+	-	+	+
Amphitrite cirrata	-	-	-	-	+
A. kerguelensis	-	+	+	+	+
Lanicides bilobata	+	+	-	+	+
Leaena collaris	-	-	-	+	-
L. wandelensis	-	-	-	-	+
Lysilla loveni macintoshi	-	-	-	-	+
Nicolea chilensis	-	-	-	+	-
Octobranchus phyllocomus	-	-	-	-	+
Pista cf. *abyssicola*	-	-	-	-	+
P. godfroyi	-	-	-	-	+
P. mirabilis	+	+	-	-	-
P. corrientis	+	+	+	-	+
Polycirrus antarcticus	-	-	-	+	-
Streblosoma bairdi antarctica	-	-	-	+	+
Terebella ehlersi	-	-	-	+	+
Thelepides koehleri	-	-	-	-	+
Thelepus cincinnatus	-	+	-	-	-
Terebellides stroemi antarctica	-	-	-	+	-
T. glacialis antarcticus	-	-	-	-	+
Euchone pallida	-	+	-	-	+
Fabricia sp.	-	-	-	+	-
Jasmineira caeca	-	-	-	-	+
Myxicola sulcata	-	-	-	-	+
M. sp.	-	-	-	+	-
Oriopsis limbata	-	-	-	+	-
Potamethus scotiae	+	-	+	+	+
Potamilla antarctica	+	+	+	+	+
Chitinopomoides wilsoni	-	-	-	-	+
Leodora perrieri	-	-	-	+	-
Serpula narconensis	+	+	+	+	+
S. sp.	-	-	-	-	+
No. of species	37	42	28	70	82

Table 3. Numbers of individuals of most abundant species.

Species	No. individuals per station	Total No. individuals in the collection	Species	No. individuals per station	Total No. individuals in the collection
Polynoe antarctica	1–56	269	*Lanicides bilobata*	1–42	162
Augenaria tentaculata	1–8	47	*Potamilla antarctica*	1–100+	878+
Scoloplos marginatus	1–47	87	*Serpula narconensis*	1–50+	185+
Isocirrus yungi	1–21	82			numerous tubes

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APPENDIX 1
Station Details and Species Numbers

New Zealand Oceanographic Institute (NZOI) 1959–1969 (see Figs 2A and 2B for station positions)

The following abbreviations for equipment are used:

BT - bathythermograph; DC - cone dredge; DD - Devonport dredge (a modified naturalist's dredge); DN - naturalists dredge; GD - Dietz-La Fond grab; GHO - Hayward orange-peel grab; GTHO - two GHO together; GTOS - small orange-peel twin grabs; GTP - toothed Petersen grab; N70 - 70 cm diameter plankton net; NP - phytoplankton net; SS - flat circular net; TAS - small Agassiz trawl; TP - pipe-frame Agassiz trawl; TS - temperature section; UWC - underwater camera.

All depths are uncorrected sonic depths based on a speed of sound in water of 1,500 m sec^{-1}.

A448 77°05' S, 172°22' E, 10 January 1959, 733 m, mud, 5 GTOS, 2 TAS, NP, N70, TS, BT.

Austrolaenilla antarctica (3), *Barrukia curviseta* (6), *Eucantra mollis* (4), *Eunoe opalina* (1), *Hermadion ferox* (2), *Polynoe antarctica* (9), *Anaitides longipes* (2), *Austrophyllum charcoti* (1), *Augeneria tentaculata* (2), *Paraninoe antarctica* (1), *Lumbrineris tetraura* (1), *Isocirrus yungi* (2), *Amphitrite kerguelensis* (1), *Laricides bilobata* (1), *Pista corrientis* (10), *P. mirabilis* (1), *Thelepus cincinnatus* (1), *Potamilla antarctica* (12), *Serpula narconensis* (numerous).

Total species = 19, total individuals 60+.

A449 77°05' S, 172°12' E, 11 January 1959, 362 m, mud, 5 GTOS, TAS, NP, N70, TS, BT.

Harmothoe spinosa (3), *Hermadion ferox* (1), *Polynoe antarctica* (19), *Euphrosine armadilloides* (1), *Trypanosyllis gigantea* (2), *Augeneria tentaculata* (2), *Pista corrientis* (numerous), *Potamilla antarctica* (1), *Serpula narconensis* (numerous).

Total species = 9, total individuals 29+.

A450 76°42' S–76°36' S, 179°44' E–179°53' E, 11 January 1959, 472–318 m, muddy sand, 2 GTOS, 2 GTHO, 2 TAS, NP, N70, TS, BT.

Harmothoe magellanica (1), *H. spinosa* (9), *Nicon ehlersi* (2), *Glycera capitata* (1), *Augeneria tentaculata* (1), *Isocirrus yungi* (1), *Phyllocomus crocea* (2), *Potamilla antarctica* (2), *Serpula narconensis* (tubes).

Total species = 9, total individuals 19+.

A451 76°00' S, 175°25' W to 75°50' S, 175°20' W, 12 January 1959, 523 m, gritty mud, 3 GTHO, TAS, NP, N70, TS, BT.

Eucantra mollis (2), *Harmothoe hartmanae* (1), *Anaitides longipes* (3), *Aglaophamus trissophyllus* (2), *Augeneria tentaculata* (3), *Isocirrus yungi* (2), *Neosabellides elongatus* (2), *Serpula narconensis* (tubes).

Total species = 8, total individuals 15+.

A452 75°35' S, 173°18' W, 12 January 1959, 1280 m, 2 GTHO, TAS, NP, N70, TS, BT.

Augeneria tentaculata (1).

A454 75°56' S, 176°30' W, 14 January 1959, 914–828 m, rocks, GHO, 2 TAS, NP, N70, TS, BT.

Harmothoe crosetensis (2), *Isocirrus yungi* (1), *Potamilla antarctica* (2).

Total species = 3, total individuals 5.

A455 74°22' S, 178°35' W, 15 January 1959, 322–340 m, stones and muddy sand, GTHO, DN, NP, N70, TS, BT.

Laetmonice producta (1), *Harmothoe spinosa* (1), *Hermadion ferox* (3), *Polynoe antarctica* (7), *Steggoa hunteri* (2), *Trypanosyllis gigantea* (2), *Isocirrus yungi* (1), *Pista corrientis* (6), *P. mirabilis* (1).

Total species = 9, total individuals 24.

A456 74°30' S, 179°40' E, 15 January 1959, 201–238 m, stones and gritty mud, GTHO, 2 TAS, NP, N70, Fish line; TS, BT.

Harmothoe hartmanae (1), *H. spinosa* (4), *Polynoe antarctica* (56), *Anaitides longipes* (2), *Austrophyllum charcoti* (1), *Steggoa hunteri* (2), *Trypanosyllis gigantea* (1), *Typosyllis pennelli* (1), *Aglaophamus trissophyllus* (1), *Scoloplos (Leodamus) marginatus* (1), *Clymenella antarctica* (1), *Lanicides bilobata* (2), *Lysilla loveni macintoshi* (1), *Pista corrientis* (6), *P. mirabilis* (1), *Serpula narconensis* (tubes).

Total species = 16, Total individuals 81+

A457 75°02' S, 175°50' E, 16 January 1959, 315–342 m, mud, 3 GTHO, TP, NP, N70, TS, BT, TP.

Euglasica gigantea (1), *Harmothoe exanthema bergstromi* (3), *Polynoe antarctica* (2), *Euphrosine armadilloides* (1), *Scoloplos (Leodamus) marginatus* (1), *Serpula narconensis* (tubes).

Total species = 6, total individuals 8+.

A458 75°10' S, 174°00' E, 16 January 1959, 461–486 m, soft mud, 3 GTHO, TP, NP, N70, GD, TS, BT, TP.

Augeneria tentaculata (3), *Isocirrus yungi* (9), *Ampharete kerguelensis* (1), *Potamilla antarctica* (6), *Amphitrite kerguelensis* (1),

Total species = 5, total individuals 19.

A459 75°17' S, 172°20' E, 16 January 1959, 534–549 m, soft mud, 3 GTHO, TP, NP. N70, TS, BT, Corer.

Laetmonice producta (1), *Austrolaenilla hastulifera (1), Eucantra mollis* (8), *Euglasica corrientis* (1), *Gorekia crassicirrus* (1), *Hermadion ferox* (3), *Polynoe antarctica* (2), *Augeneria tentaculata* (3), *Scoloplos (Leodamus) marginatus* (1), *Isocirrus yungi* (3), *Ampharete kerguelensis* (14), *Amythas membranifera* (2), *Neosabellides elongatus* (1), *Amphitrite kerguelensis* (1), *Pista corrientis* (19), *P. mirabilis* (21), *Thelepus cincinnatus* (2), *Potamethus scotiae* (3), *Potamilla antarctica* (87), *Serpula narconensis* (11).

Total species = 20, total individuals 185.

A460 75°38' S, 168°32' E, 17 January 1959, 415–430 m, gritty mud, 3 GTHO, TP, NP, N70, Corer, TS, BT.

Austrolaenilla hastulifera (2), *Eucantra mollis* (1), *Paramphione australis* (1), *Aglaophamus trissophyllus* (1), *Augeneria tentaculata* (1), *Paraninoe antarctica* (1), *Lumbrineris tetraura* (1), *Sclerocheilus oculatus* (1), *Isocirrus yungi* (1), *Ampharete kerguelensi* (1), *Amythas membranifera* (1), *Lanicides bilobata* (1), *Pista mirabilis (3), Thelepus cincinnatus* (2), *Potamilla antarctica* (11).

Total species = 15, total individuals 29.

A461 73°32' S, 171°22' E, 18 January 1959, 578–567 m, GTHO, NP, N70, TP, TS, BT.

Eucantra mollis (2), *Polynoe antarctica* (14), *Austrophyllum charcoti* (1), *Scoloplos (Leodamus) marginatus* (1), *Tharyx cincinnatus* (1), *Scalibregma inflatum* (1), *Ampharete kerguelensis* (1), *Amythas membranifera* (4), *Pista corrientis* (1), *P. mirabilis* (numerous), *Thelepus cincinnatus* (1), *Potamilla antarctica* (25), *Serpula narconensis* (2 + tubes).

Total species =13, total individuals 54+.

A463 72°20' S, 174°50' E, 21 January 1959, 468–465 m, barnacle plates, 3 GTHO, TP, TAS, NP, N70, TS, BT, GD.

Polynoe antarctica (1), *Serpula narconensis* (tubes).

Total species = 2, total individuals 2+.

A464 73°20' S, 174°00' E, 22 January 1959, 369–384 m, sand and pebbles, 2 GTHO, DN, NP, TS, BT.

Austrolaenilla hastulifera (1), *Hermadion ferox* (2), *Polynoe antarctica* (27), *Typosillis prolixa* (2), *Lanicides bilobata* (2), *Pista mirabilis* (4).

Total species =6 , total individuals 38.

A465 72°55' S, 175°30' E, 22 January 1959, 399 m, barnacle plates, DC, NP. GD, TS, BT.

Polynoe antarctica (4).

A466 78°26' S, 174°50' W, 24 January 1959, 569 m, mud, 3 GTHO, TAS, NP, N70, Corer.

Eucantra mollis (1), *Polynoe antarctica* (1), *Paramphione australis* (1), *Augeneria tentaculata* (6), *Pista mirabilis* (6), *Serpula narconensis* (1).

Total species = 6, total individuals 16.

A467 77°25' S, 169°28' E, 26 January 1959, 88–183 m, rocks, N70, DN, UWC.

Barrukia cristata (3), *Harmothoe hartmanae* (1), *H. spinosa* (3), *Polynoe antarctica* (3), *Anaitides adarensis* (1), *Potamilla antarctica* (1), *Serpula narconensis* (tubes).

Total species = 7, total individuals 12+.

A468 76°59' S, 167°36' E, 26 January 1959, 110 m, TAS, UWC.

Harmothoe hartmanae (7), *H. magellanica* (7), *H. spinosa* (6), *Polynoe antarctica* (9), *Anaitides longipes* (2), *Trypanosyllis gigantea* (5), *Lanicides bilobata* (41), *Pista mirabilis (1), Thelepus cincinnatus* (2), *Euchone pallida* (2), *Potamilla antarctica* (33), *Serpula narconensis* (2 + numerous tubes).

Total species = 12, total individuals 130+.

A469 77°50' S, 166°30' E, 29 January 1959, 64 m, gritty mud, 3 GTHO, TAS, UWC.

Harmothoe spinosa (4), *Polynoe antarctica* (21), *Augeneria tentaculata* (8), *Scoloplos (Leodamus) marginatus (2), Isocirrus yungi* (3), *Lanicides bilobata* (14), *Potamilla antarctica* (2), *Serpula narconensis* (2 + tubes).

Total species = 8, total individuals 56+.

A470 77°50' S, 166°30' E, 4 February 1969, 377 m, muddy sand, 3 GTHO, N70, GD.

Barrukia cristata (1), *Harmothoe hartmanae* (1), *H. spinosa* (1), *Glycera capitata (2), Potamilla antarctica* (9), *Serpula narconensis* (tubes).

Total species = 6, total individuals 14+.

A471 77°27' S, 166°20' E, 6 February 1959, 165–169 m, TAS, UWC.

Harmothoe magellanica (4), *H. spinosa* (11), *Hermadion ferox* (1), *Scoloplos (Leodamus) marginatus* (2), *Neo-*

sabellides elongatus (3), *Lanicides bilobata* (42), *Thelepides koehleri* (4), *Thelepus cincinnatus* (1), *Potamilla antarctica* (14), *Serpula narconensis* (tubes).
Total species = 10, total indiviuals 82+.

A516 67°25' S, 179°57' W, 5 January 1960, 183–457 m, DN.
Polynoe antarctica (3).

A517 Near Ross Ice Barrier, 77°24' S, 175°48' E, 20 January 1960, 640–688 m, TS.
Augeneria tentaculata (3).

A519 77°49'50" S, 166°30'45" E, McMurdo Sound, 29 January 1960, 479 m, muddy, volcanic sand and gravel, 3 GHO.
Harmothoe magellanica (1), *Polynoe antarctica* (1), *Aglaophamus trissophyllus* (1), *Isocirrus yungi* (2), *Potamilla antarctica* (2), *Serpula narconensis* (5).
Total species = 6, total individuals 12.

A520 74°20' S, 179°30' E, Pennell Bank, 3 February 1960, 201–205 m, stones and sandy mud. 3 GHO, DD, DN; abundant bryozoans.
Barrukia curviseta (1), *Harmothoe hartmanae* (1), *H. spinosa* (3), *Aglaophamus trissophyllus* (1), *Glycera capitata* (1), *Augeneria tentaculata (2), Lumbrineris tetraura* (2), *Phyllocomus crocea* (1), *Pista mirabilis* (fragments), *Serpula narconensis* (2).
Total species = 10, total individuals 14+.

A521 73°54' S to 73°52'36" S, 177°44' W to 177°46' W, Pennell Bank, 4 February 1960, 582–558 m, stones with mud, GTP, DD, TS, GHO.
Aphrodita rossi (1), *Pionosyllis maxima* (2).
Total species = 2, total individuals 3.

A522 73°48' S–73°50' S, 176°41' W–176°56' W, Pennell Bank, 4 February 1960, 1335 m, stone and muddy sand, GHO, 2 GTHO, DD, TS, BT.
Polynoe antarctica (3), *Glycera capitata* (1), *Augeneria tentaculata* (1), *Serpula narconensis* (1).
Total species = 4, total individuals 6.

A525 74°09' S–74°07' S, 177°16' W–177°09' W, Pennell Bank, 7 February 1960, 591–583 m, stones, DD.
Harmothoe crosetensis (1), *Serpula narconensis* (1).
Total species = 2, total individuals 2.

A526 74°07' S, 177°41' W, Pennell Bank, 7 February 1960, 461–465 m, stones, GHO, DD, BT.
Polynoe antarctica (1), *Trypanosyllis gigantea* (1), *Pista mirabilis* (1), *Serpula narconensis* (2).
Total species = 4, total individuals 5.

A527 74°10' S, 178°17' W, Pennell Bank, 7 February 1960, 358–337 m, stones, GHO, DD, BT.
Harmothoe crosetensis (1), *Polynoe antarctica* (12), *Anaitides longipes* (1), *Isocirrus yungi* (5), *Phyllocomus crocea* (1), *Pista corrientis* (5), *Pista mirabilis (2), Serpula narconensis* (tubes).
Total species = 8, total individuals 27+.

A528 74°23' S, 179°26' W, Pennell Bank, 7 February 1960, 274–265 m, patches of mud and stones, DD, UWC.
Laetmonice producta (1), Barrukia cristata (1), Harmothoe spinosa (1), H. crosetensis (1), *H. ernesti* (1), *H. spinosa* (1), *Hermadion ferox* (1), *Polynoe antarctica* (14), *Austrophyllum charcoti* (2), *Trypanosyllis gigantea* (2), *Typosillis armillaris* (1), *Nicon ehlersi* (1), *Scoloplos (Leodamus) marginatus* (2), *Isocirrus yungi* (6), *Ampharete kerguelensi (1), Potamilla antarctica* (7), *Serpula narconensis* (1).
Total species = 16, total individuals 43.

A529 74°20' S, 179°55' W, Pennell Bank, 8 February 1960, 205–216 M, stones, DD, BT, UWC.
Harmothoe magellanica (2), *H. spinosa* (1), *Hermadion ferox* (1), *Anaitides longipes* (1), *Austrophyllum charcoti* (2), *Neanthes kerguelensis* (6), *Aglaophamus trissophyllus (1), Isocirrus yungi* (21), *Lanicides bilobata* (4), *Potamethus scotiae* (1), *Potamilla antarctica* (2), *Serpula narconensis* (1).
Total species = 12, total individuals 43.

A530 74°03'30" S–74°05' S, 179°21' E–179°19' E, Pennell Bank, 9 February 1960, 271–267 m, muddy sand, DD.
Harmothoe spinosa (1), *Glycera capitata* (1), *Augeneria tentaculata (2), Scoloplos (Leodamus) marginatus (3), Isocirrus yungi* (16), *Phyllocomus crocea* (1), *Amphitrite kerguelensis* (2), *Lanicides bilobata* (1), *Potamilla antarctica* (numerous), *Serpula narconensis* (3).
Total species = 10, total individuals 30+.

A531a 75°02' S–75°12' S, 178°10' E–178°14' E, Ross Sea, 9 February 1960, 357–358 m, muddy sand, UWC.
A531b 75°02' S–75°12' S, 178°10' E–178°14' E, Ross Sea, 9 February 1960, 348 m, muddy sand, DD.
Augeneria tentaculata (3), Isocirrus yungi (27).
Total species = 2, total individuals 30.

A532 77°44'30" S, 166°20'5" E, McMurdo Sound, 10 February 1960, 488 m, muddy sand and volcanic rock fragments, GHO, BT.
Harmothoe spinosa (2), *Polynoe antarctica* (2), *Flabelligera mundata* (1), *Serpula narconensis* (1).
Total species = 4, total individuals 6.

A533 77°35' S, 166°10' E, Cape Barnes, 16 February 1960, 83–177 m, stones and mud, TS, BT, DD, UWC.
Barrukia cristata (3), *Polynoe antarctica* (4), *Flabelligera mundata* (2), *Lanicides bilobata* (1), *Potamilla antarctica* (numerous), *Serpula narconensis* (9).
Total species = 6, total individuals 19+.

A534 77°36'42" S–77°36' S, 166°08' E–166°12' E, 16 February 1960, Cape Barnes, 366–380 m, DD, UWC.
Terebella ehlersi (1), *Potamilla antarctica* (13), *Serpula narconensis* (numerous).
Total species = 3, total individuals 14+.

A536 77°33'18" S–77°34'36" S, 165°53' E–165°50' E, McMurdo Sound, 790–794 m, stones and mud, TS, BT, DD.
Polynoe antarctica (4), *Potamilla antarctica* (10).
Total species = 2, total individuals 14.

A537 77°30' S–77°34'48" S, 165°12' E–165°19' E, McMurdo Sound, 17 February 1960, 543–574 m, mud and gravel, TS, BT, DD.
Austrolaenilla hastulifera (1), *Hermadion ferox* (4), *Polynoe antarctica* (15), *Aglaophamus trissophyllus* (1), *Augen-*

eria tentaculata (4), *Paraninoe antarctica (1), Cirratulus cirratus* (1), *Isocirrus yungi* (1), *Pista corrientis* (1), *Potamilla antarctica* (12), *Serpula narconensis* (12 + tubes).
Total species = 11, total individuals 53+.

A538
(a) 77°29'12" S–77°30' S, 164°39' E, 164°39' E–164°38' E, 17 February 1960, 256–265 m, sand and stones, TS, BT, GD.
(b) 77°30' S–77°30'12" S, 164°38' E–164°37' E, 17 February 1960, 256–260 m, UWC.
(c) 77°30'36" S–77°31'12" S, 164°37' E–164°38' E, 17 February 1960, 256-269 m, D.D.
Barrukia cristata (1), *Harmothoe spinosa* (3), *Polynoe antarctica* (3), *Nicon ehlersi* (1), *Potamilla antarctica* (numerous), *Serpula narconensis* (9).
Total species = 6, total individuals 17+.

A625 75°00' S, 163°58'72" E, Terra Nova Bay, 5 February 1961, 460–520 m, DD, 2 GHO.
Hermadion ferox (3), *Polynoe antarctica* (3), *Serpula narconensis* (numerous).
Total species = 3, total individuals 6+.

Stanford University, Benthic Invertebrate Programme Stations

(see Fig. 2C for station positions)

The following abbreviations for equipment are used:

AT - Alaska fish trap; BT2 - two-foot Blake (Agassiz) trawl; BT4 - four-foot Blake trawl; DN - dip net; DRN - small draw net; DT - drum trap; EDP - Emery pattern dredge; FG - Foret grab; GN - gill net; HL - hook and line; LPG - large Peterson grab; MPG - modified Peterson grab; NT - net trap; OP - orange-peel grab; PC - Phleger core; PN12 - plankton net diameter 12 inches; PN5 - plankton net diameter 0.5 m, coarse mesh; PN1 - plankton net diameter 1 m, coarse mesh; RN - ring net 28 inches; RT - ring trap; SDD - sand-dollar dredge; ST - small tangle of net or rope; TD - small triangular redge, all metal; UL - underwater light; WT - wire traps, various sizes.

Stations occupied from USS *Glacier* (AGB-4) 1958

GLD-1 West of Tent Island, McMurdo Sound, 77°42' S, 166°12' E, 11–14 November 1958, 384 m, H, RT (9 separate ring trap sets of varying duration).
Anaitides longipes (1), *Potamilla antarctica* (2).
Total species = 2, total individuals 3.

GLD-4 Southwest Ross Sea, 76°31.8' S, 164°55' E, 27 November 1958, 587 m, sponge-coelenterate complex, BT4.
Polynoe antarctica (2), *Polyeunoa laevis* (2), *Glycera capitata* (1).
Total species = 3, total individuals 5.

GLD-7 Southwest Ross Sea, 75°46.4' S, 164°18' E, 29 November, 1958, 860 m, sponge-coelenterate complex, BT4.

GLD-8 Off south Terra Nova Bay, Ross Sea, 75°30' S, 165°44' E, 29 November 1958, 631 m, sponge-gorgonian complex, BT4.
Eucantra mollis (1), *Hermadion ferox* (1), *Austrophyllum charcoti* (1), *Flabelligera mundata* (2), *Pista mirabilis* (2), *Potamilla antarctica* (1), *Serpula narconensis* (tubes).
Total species = 7, total individuals 8+.

GLD-10 Off Terra Nova Bay, Ross Sea, 75°06' S, 165°52' E, 29 November 1958, 832 m, rocky with sponges, BT4.
Harmothoe crosetensis (1), *Hermadion ferox* (1), *Leaena collaris* (1), *Potamethus scotiae* (2).
Total species = 4, total individuals 5.

GLD-13 Off Cape Washington, Ross Sea, 74°39' S, 165°52' E, 30 November 1958, 165 m, sponge-coelenterate complex, BT4.
Austrolaenilla antarctica (1), *Barrukia cristata* (2), *Harmothoe hartmanae* (2), *H. spinosa* (3), *Hermadion ferox* (4), *Polynoe antarctica* (5), *Ampharete kerguelensis* (1), *Lanicides bilobata* (6), *Potamethus scotiae* (2), *Potamilla antarctica* (numerous), *Serpula narconensis* (2).
Total species = 11, total individuals 28+.

GLD-14 North of Cape Washington, Ross Sea, 74°25.1' S, 167°00.3' E, 1 December 1958, 732 m, AT.
Eucantra mollis (1).

GLD-15 Southwest of Coulman Island, Ross Sea, 73°58.5' S, 168°9' E, 1 December 1958, 366 m, gravel and pebbles, some mud, TD.
Serpula narconensis (4).

GLD-16 Off Coulman Island, Ross Sea, 73°46.7' S, 169°09' E, 2 December 1958, 836 m, gravel and pebbles; TD.
Barrukia curviseta (2).

McMurdo Sound Stations, 1958-61

A. Off Hut Point, McMurdo Sound, 77°51'03" S, 166°07'19" E, 19 November 1958 to 5 January 1969, 51 m, sponge-coelenterate complex, MPG, NT, PN5, RN, WT.
Trypanosyllis gigantea (1), *Scoloplos (Leodamus) marginatus (3), Lanicides bilobata* (2).
Total species = 3, total individuals 6.

B. North of Hut Point, McMurdo Sound, 77°50'24.8" S, 166°35'05" E, 19 November 1958 to 5 January 1959, 115 m, sponge-coelenterate complex, MPG., WT.
Harmothoe hartmanae (1), *Lanicides bilobata* (9), *Serpula narconensis* (5).
Total species = 3, total individuals 15.

G1. Near tip of Cape Armitage, McMurdo Sound, 77°51'43.4" S, 166°0'22" E, 11 January 1959 to 22 February 1959, 4.6 m, volcanic gravel and sandy mud, MPG.
Harmothoe spinosa (1), *Scoloplos (Leodamus) marginatus* (3).
Total species = 2, total individuals 4.

G3. Near tip of Cape Armitage, McMurdo Sound, 77°51'44.5" S, 166°40'22" E, 11 January to 22 February

1959, 5 m, volcanic gravel and sandy mud, variety of gear.
Harmothoe spinosa (1).

H. North of Hut Point, McMurdo Sound, 77°50'48.7" S, 166°37' E, 29 January to 1 February 1959, 54 m, HL, WT.
Autolytus longstaffi (20).

M. South of Hut Point, McMurdo Sound, 77°51'14.2" S, 166°39'01" E, 22 April to 24 October, and 18 November 1959, 38 m, greyish-brown gravelly mud with sponge spicules and *Limatula* valves, variety of gear.
Harmothoe spinosa (1), *Scoloplos (Leodamus) marginatus* (1), *Isocirrus yungi* (numerous), *Lanicides bilobata* (1), *Serpula narconensis* (1).
Total species = 5, total individuals 4+.

N. North of Hut Point, McMurdo Sound, 77°51'11.2" S, 166°38'46" E, 22 April to 21 November 1959, 43 m, greyish-brown gravelly mud with sponge debris and *Limatula* valves, variety of gear.
Harmothoe magellanica (1), *H. spinosa* (1).
Total species = 2, total individuals 2.

P. Off Hut Point, McMurdo Sound, 77°51'03" S, 166°37'30' E, 8 September to 17 December 1959, 57 m, sponge complex, AY, FG, PN5, PN1, RN, WT.
Harmothoe spinosa (1), *Potamilla antarctica* (5).
Total species = 2, total individuals 7.

R. Off Arrival Heights, McMurdo Sound, 77°50'06" S, 166°35'55" E, 5–17 December 1959, 71 m, sponge-bivalve complex, with many polychaete tubes, FG., WT.
Lanicides bilobata (2).

S. Off Arrival Heights, McMurdo Sound, 77°50'05.1" S, 166°36'26" E, 25 November to 24 December 1959, 64.5 m, sponge coelenterate complex, FG, OP, PN5, PN1, WT.
Lanicides bilobata (1).

V (series)
V, V1, V2, V3
Off Arrival Heights, McMurdo Sound, 77°49'58.2"S, 166°36'50" E, 16 December 1959 to 3 January 1960.
V4, V5
20 December 1959 to 3 January 1960.
V6, V, 8.5 m; **V1,** 15.5 m; **V2,** 19 m; **V3,** 23 m; **V4,** 29 m; **V5,** 31 m; **V6,** 33 m.
22 December 1959 to 3 January 1960.
Volcanic gravel to sponge complex as depth increased along the ice crack. Variety of gear used.
Eunoe abyssorum (1), *Harmothoe hartmanae* (1), *H. magellanica* (2), *H. spinosa* (25), *Anaitides adarensis* (1), *Eunice pennata* (25), *Scoloplos (Leodamus) marginatus* (2), *Potamethus scotiae* (1), *Serpula narconensis* (1).
Total species = 9, total individuals 59.

60A Southeast of Cape Armitage, McMurdo Sound, 77° 56.8" S, 166°43'05" E, 5 December to 26 February 1961, sponge-coelenterate complex; PN1, WT.
Hermadion ferox (1).

61B Southeast of Cape Armitage, McMurdo Sound, 77°51'59.6" S, 166°43'14" E, 9 April 1961 to 3 January 1962, 278–290 m, sponge-coelenterate complex, variety of gear used.
Harmothoe hartmanae (1), *Hermadion ferox* (3), *Autolytus charcoti* (1), *Glycera capitata* (1), *Cirratulus cirratus* (1), *Sclerocheilus antarctica* (1), *Grubianella antarctica* (2), *Lanicides bilobata* (11), *Euchone pallida* (1), *Potamilla antarctica* (7).
Total species = 10, total individuals 29.

61D South of Cape Armitage, McMurdo Sound, 77°51'–57.3' S, 166°41'17" E, 10 May to 3 November 1961, 128–136 m, sponge-coelenterate complex; variety of gear used.
Harmothoe spinosa (5), *Hermadion ferox* (3), *Autolytus charcoti* (3), *Lanicides bilobata* (8), *Potamilla antarctica* (3).
Total species = 5, total individuals 22.

61E Northwest of Cape Armitage, McMurdo Sound, 77°51"24" S, 166°38'50" E, 3 May to 18 December 1961, 19-22 m, volcanic gravel, mud, sponge and bryozoan debris, FG, HL, WT.
Austrolaenilla sp. (1), *Harmothoe magellanica* (6), *H. spinosa* (6), *Anaitides longipes* (1), *Austrophyllum charcoti* (1), *Autolytus charcoti* (1), *Aglaophamus trissophyllus* (1), *Augeneria tentaculata* (1), *Scoloplos (Leodamus) marginatus* (1), *Lanicides bilobata* (fragments), *Lysilla loveni macintoshi* (1), *Serpula narconensis* (1).
Total species = 12, total individuals 21+.

TOS *Tressler* Oceanographic Station, south of Cape Armitage, McMurdo Sound, 77°53' S, 166°44' E, April 1960 to 10 March 1961, 565–585 m, gravel, small rocks, bryozoan and sponge debris, FG, OP, ST, WT.
Harmothoe crosetensis (1), *H. spinosa* (3), *Eusyllis kerguelensis* (4), *Aglaophamus trissophyllus* (1), *Myxicola sulcata* (1).
Total species = 5, total individuals 10.

Stations from USCGC *Eastwind* (WAGB-279), 1960

EAD-2 Off Inacessible Island, McMurdo Sound, 77°39.4' S, 166°16' E to 77°40.8' S, 166°16.5' E, 19 February 1960, 315 m, sponge-coelenterate complex; BT2.
Barrukia cristata (2), *Harmothoe hartmanae* (2), *H. magellanica* (4), *Hermadion ferox* (2), *Polynoe antarctica* (8), *Augeneria tentaculata* (1), *Potamilla antarctica* (8).
Total species = 7, total individuals 27.

EAD-3 Off Inaccessible Island, McMurdo Sound, 77°42.1' S, 166°19.5' E to 77°43.1' S, 166°19.1' E, 19 February 1960, 351–432 m, sponge complex with some rocks, BT2.
Harmothoe magellanica (3), *H. spinosa* (1), *Polynoe antarctica* (9), *Austrophyllum charcoti* (2), *Trypanosyllis gigantea* (1), *Typosyllis pennelli* (1), *Potamilla antarctica* (numerous).
Total species = 7, total individuals 17+.

Cape Evans, 1960–1961

CEA and **CEA-1** North of Cape Evans, McMurdo Sound, 77°38'21" S, 166°24' E, **CEA** 17–22 January 1960; **CEA-1** 18 January 1960, 4.3 m, volcanic gravel and sand; EDP, WT.

Barrukia cristata (2), *Harmothoe spinosa* (4), *Scoloplos (Leodamus) marginatus* (47), *Lanicides bilobata* (1).
Total species = 4, total individuals 54.

CED Off north shore of Cape Evans, near south edge of Barnes Glacier, McMurdo Sound, 77°37'47" S, 166°24.6' E, 23 January 1960, 3.4 m, volcanic grave, EPD.
Harmothoe spinosa (1), *Autolytus longstaffi* (3), *Eunice pennata* (25).
Total species = 3, total individuals 29.

CEE Off northeast shore of Cape Evans, near south end of Barnes Glacier, McMurdo Sound, 77°37'8" S, 166°24.5' E, 23 January 1960, 3 m, volcanic gravel and sand, EDP, OP.
Lysilla loveni macintoshi (12).

CEF Off northeast shore of Cape Evans, near south edge of Barnes Glacier, McMurdo Sound, 77°37'9" S, 166°24.5' E, 23 January 1960, 4.3 m, volcanic gravel, OP.
Austrolaenilla sp. (1), *Scoloplos (Leodamus) marginatus* (10).
Total species = 2, total individuals 11.

CEG Off beach in front of Scott's Hut, north shore of Cape Evans, McMurdo Sound, 77°38'15" S, 166°24.5' E; 25 January 1960, 13.7 m, black sandy mud, FG.
Aglaophamus trissophyllus (1).

CEH Off beach in front of Scott's Hut, north shore of Cape Evans, McMurdo Sound, 77°38'16' S, 166°24.4' E, 25 January 1960, 15.2 m, rocky with gravel, FG.
Lanicides bilobata (1).

CEI Off beach in front of Scott's Hut, north shore of Cape Evans, McMurdo Sound, 77°38'18' S, 166°24.2' E, 25 January 1960, 10 m, volcanic gravel and mud, FG.
Barrukia cristata (3).

CEK Off north shore of Cape Evans, McMurdo Sound, 77°38'18" S, 166°23.8' E, 29–30 January 1960, 30 m, volcanic gravel and mud, FG, WT.
Aglaophamus trissophyllus (1).

Trans-Antarctic (New Zealand) Expedition 1956–58

(Station details from data supplied by Dr R.W. Balham)

TAE 1 6.5 miles north of Hut Point (ice edge), 77°46.3' S, 166°26' E, 24 January 1957, 260–320 m, mud, Snapper grab, Fish trap.
Polynoe antarctica (2), *Serpula narconensis* (1).
Total species = 2, total individuals 3.

TAE5 Backdoor Bay, Cape Royds, McMurdo Sound, 23 February 1958, 12 fathoms, Beam trawl.
Harmothoe spinosa (1).

TAE 74 Cape Armitage, McMurdo Sound, 19–23 January, 1958, 7 fathoms, under sea ice, Peterson grab.
Harmothoe spinosa (3), *Euchone pallida* (1).
Total species = 2, total individuals 4.

TAE76 Cape Evans, McMurdo Sound, 73°44' S, 179°12' E; 21 January 1958, 23–29 fathoms, Peterson grab.
Barrukia cristata (1), *Harmothoe crosetensis* (2), *Pista corrientis* (3).
Total species = 3, total individuals 6.

TAE 78 Turtle Rock, McMurdo Sound, 2 February 1958, 75–81 fathoms, Peterson grab.
Harmothoe spinosa (1), *Aglaophamus trissophyllis* (2), *Augeneria tentaculata* (1), *Lanicides bilobata* (3), *Lysilla loveni macintoshi* (8), *Pista mirabilis* (13), *Euchone pallida* (4), *Serpula narconensis* (4).
Total species = 8, total individuals 36.

TAE 79 Ice edge McMurdo Sound, 77°51' S, 160°34' E; 5 February 1958, 68–90 fathoms, Beam trawl.
Harmothoe hartmanae (1), *H. magellanica* (1), *H. spinosa* (2), *Polynoe antarctica* (2), *Trypanosyllis gigantea* (1), *Cirratulus cirratus* (1), *Lanicides bilobata* (2), *Potamethus scotiae* (8), *Serpula narconensis* (tubes).
Total species = 9, total individuals 18+.

TAE 81 77°00' S, 167°12' E, 9 February 1958, 1323 m.
Lanicides bilobata (3).

TAE 95 Southwest coast Franklin Island, 11 February 1958, 40–60 m, Beam trawl.
Eucantra mollis (1), *Scoloplos (Leodamus) marginatus* (3).
Total species = 2, total individuals 4.

TAE 99 Botany Bay, Granite Harbour, 77°01' S, 168°32' E, 25 February 1958, 40 m, Beam trawl.
Harmothoe spinosa (2), *Polynoe antarctica* (2), *Potamethus scotiae* (2), *Potamilla antarctica* (numerous).
Total species = 4, total individuals 6+.

TAE 100 Cape Evans, McMurdo Sound, 77° S, 166°20' E; 23 February 1958, 60 fathoms, Beam trawl.
Harmothoe spinosa (1).

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Figures in bold indicate an illustration.