

MEDDELELSER OM GRØNLAND

UDGIVNE AF

KOMMISSIONEN FOR VIDENSKABELIGE UNDERSØGELSER I GRØNLAND

Bd. 104 · Nr. 14

THE SCORESBY SOUND COMMITTEE'S 2ND EAST GREENLAND
EXPEDITION IN 1932 TO KING CHRISTIAN IX'S LAND

LEADER: EJNAR MIKKELSEN

GEPHYREANS AND ANNELIDS

BY

ELISE WESENBERG-LUND

WITH 9 FIGURES IN THE TEXT

KØBENHAVN

C. A. REITZELS FORLAG

BIANCO LUNOS BOGTRYKKERI A/S

1934

INTRODUCTION

The material of Gephyreans and Annelids here dealt with dates from one of the Danish expeditions to East Greenland in the summer 1932. It was collected by the 2nd East Greenland Expedition 1932 of the Scoresbysund Committee under the direction of Captain E. MIKKELSEN. The region examined is the coast of Christian IX's Land from Cape Dalton in the North to Angmagsalik in the South. The object of the expedition was to make zoological explorations and collections in the fjords, especially at Kangerdlugssuak. The zoologist of the expedition, Mr. M. DEGERBØL, has kindly forwarded the collections of Gephyreans and Annelids to me and I therefore beg to express my sincerest thanks to him.

The Gephyreans of the present material comprise both Priapulids, Sipunculids and Echiurids. An interesting feature is that *Priapulius bicaudatus* is represented, as the finding place in Mikisfjord is considerably more southern than the finding places hitherto known in East Greenland, viz. the districts of Franz Joseph's Fjord and Scoresbysund. The only Echiurid at hand is *Hamingia arctica* Kor. & Dan. which on account of its rarity has been submitted to a closer examination. In connection with this Echiurid I want to make some remarks concerning *Bonellia suhmii* Sel. This insufficiently known very rare species was taken by the Danish "Ingolf" Expedition in the waters south of Iceland and east of Greenland, and may thus be supposed to be found also in the fjords in which Mr. DEGERBØL has dredged.

As to the Annelids 36 species were found. None of them are new to science; the following three are not hitherto known from Greenland: *Pseudoscalibregma longisetosum* (Théel) *Lysilla lovéni* Mlmgr. and *Chone dunére* Mlmgr. A rather great number are hitherto not recorded from East Greenland, viz.

1. *Lumbriconereis fragilis* (O. F. Müll.).
2. *Syllis fasciata* Mlmgr.

3. *Ephesia gracilis* Rathke.
 4. *Laonice cirrata* (M. Sars).
 5. *Chætozone setosa* Mlmgr.
 6. *Ammotrypane aulogaster* Rathke.
 7. *Brada villosa* (Rathke).
 8. *Euphrosyne borealis* Ørst.
 9. *Asychis biceps* (M. Sars).
 10. *Amphicteis gunneri* (M. Sars).
 11. *Scione flexuosa* (Grube).
 12. *Nicolea venustula* (Mont.).
 13. *Euchone papillosa* M. Sars.
 14. *Protula tubularia* (Mont.).
-

I. GEPHYREANS

A. *Priapulidæ*.

1. *Priapulus caudatus* Lam.

1758. *Priapus humanus* Linné. Syst. Nat. ed. X p. 656.
1816. *Priapulus caudatus* Lamarck. Hist. nat. des anim. sans vert. p. 77.
1845. *Pr. hibernicus* M'Coy. Ann. and Mag. Nat. Hist. 1. Ser. 15 p. 272.
1862. *Pr. glandifer* Ehlers. Zeitschr. f. wiss. Zool. 11 p. 209.
1862. *Pr. brevicaudatus* Ehlers. ibid.
1868. *Pr. tuberculato spinosus* Baird. Proc. Zool. Soc. London, p. 106.
1871. *Pr. multidentatus* Möbius. Jahresber. d. Komm. zur wiss. Unters. d. deutsch. Meere.
1899. *Pr. caudatus* var. *antarcticus* Michaelsen. Jahrb. d. Hamburgischen wiss. Anst. 6 p. 18.

Locality: Cap Dalton, clay with stones, 30 m; 1 specimen. — Mikisfjord, 170 m; 1 specimen. — Kangerdlugssuak, St. 19. 1 specimen.

All three specimens are small. The largest of them (from Mikisfjord) measures 45 mm and is of an earth-brown colour; the others are 19 mm and 25 mm long; the colour is yellow and brown respectively.

Occurrence at East Greenland: Danmark's Harbour, Sabine Island, Hekla's Harbour, Turner Sound and Tasiusak.

Distribution: The species is bipolar. In the northern hemisphere the main distribution is the arctic, subarctic and boreal zone of the Atlantic Ocean. It may be considered a circumpolar species.

2. *Priapulus bicaudatus* Dan.

1868. *Priapulus bicaudatus* Danielssen. Forhandl. v. de Skandinaviske Naturforskerers Møde. p. 542.
1875. *Priapulopsis typica* Koren & Danielssen. Nyt Mag. f. Naturvidensk. 21.
1877. *Priapuloides typicus* Koren & Danielssen. Fauna littoralis Norvegiæ 3.

Locality: Mikisfjord, mud, 130 m; 1 specimen.

The single specimen at hand is strongly contracted and molested. A great coil of the intestine has penetrated through a rupture in the

body-wall. The colour of the animal is red; the two appendages are well developed with sausage-shaped vesicles. The trunk and the proboscis of the specimen measure 30 mm, the appendages about 10 mm.

Occurrence at East-Greenland: Several localities in the Scoresby Sound and Franz Joseph Fjord districts, (between 70°—75° Lat. N.). The finding place in Mikisfjord (ca. 68° Lat. N.) thus considerably increases its area of distribution in East Greenland.

Distribution: *Pr. bicaudatus* is a cold-water form with a much more limited distribution than *Pr. caudatus*. Its area of distribution ranges from the Finmarken to the Davis Strait; it is thus mainly found in the arctic part of the Atlantic Ocean.

B. *Sipunculidæ*.

3. *Phascolosoma eremita* (Sars).

1851. *Sipunculus eremita* Sars. Nyt Mag. f. Naturv. 6 p. 197.

1865. *Phascolosoma boreale* Keferstein. Zeitschr. f. wiss. Zool. 15 p. 404.

Locality: Kangerdlugssuak St. 11, muddy clay, 20—25 m; 1 specimen.

The specimen measures 23 mm. It is of a rusty red colour; the skin is thick and tough with fine transversal wrinkles. The segmental organs are small, and orange coloured with a remarkable warty aspect. They open to the exterior nearly in the same height as anus. The genital festoons are well developed, and the body cavity is full of mature eggs.

Occurrence at East Greenland: 72°25' N., 17°56' V. — Tasiusak.

Distribution: The species is bipolar. In the northern hemisphere it is mostly arctic. Its main distribution in arctic regions is in the northern part of the Atlantic Ocean. It is known both from the northern coast of Canada and of Eurasia. The species extends as far southwards as to the bay of Massachusetts along the eastern coast of North America. It is unknown in Danish waters.

4. *Phascolion strombi* (Mont.).

1865. *Phascolion cæmentarium* Quatrefages. Hist. natur. des Annélés marins etc. 2.

1874. *Ph. tubicola* Verrill. Amer. Journ. of Sci. and Arts ser. 3. 5.

1875. *Ph. spitzbergense* Théel. Kungl. Svenska Vetensk. Akad. Handl. 14 Nr. 2.

Locality: Mikisfjord, 175 m; 1 specimen.

The single specimen which is quite straight and must have lived in a shell of *Dentalium* or in the tube of a worm etc. measures 22 mm. It is extremely slender; the greater part of the proboscis is retracted. The colour is sandy-grey with exception of the foremost tip of the trunk

and the basis of the proboscis which are dark brown. The distal tip of the trunk is yellow. A closer examination of the holdfasts and the glands of the skin revealed the following facts: The chitinous papillæ are all very small; their form is always U-shaped. The glands with which they are associated are small and circular as are the glands outside the belt of the holdfasts. I had not expected this. In all northern specimens of this species examined by me I found the glands to be oval, longest in the transversal direction. The small circular glands were found in specimens dating from the Danish waters (Kattegat and the North-Sea) and the waters round the Faroes (WESENBERG-LUND 1929). I have until now been inclined to think that we had to deal with two geographical races of the species, one arctic with large, oval glands, and one boreal with smaller circular glands. The specimen from Mikisfjord shows that this does not hold good. The two forms are found inside the same area of distribution, and it is more probable that we have to deal with two varieties characterised by the different forms of their glandular bodies of the skin.

Occurrence at East Greenland: *Phascolion strombi* is known from several scattered localities between the ca. 75° N. Lat. and 60° N. Lat. Most probably it will prove to be common in all East Greenland waters.

Distribution: This very plastic species has a wide geographical range. It is found in both hemispheres. In the northern hemisphere it is circumpolar, arctic, subarctic, boreal and lusitanian. It is mainly a littoral species.

C. *Echiuridæ*.

5. *Hamingia arctica* Kor. & Dan.

(Fig. 1—4).

1881. *Hamingia arctica* Koren & Danielssen. Den norske Nordhavsexp. 1876—78 4 Christiania.

1881—82. *H. glacialis* Horst. Niederl. Arch. f. Zool. Supplem. 1.

1901. *H. arctica* Skorikow. Zool. Anz. 24 p. 158.

1906. *H. arctica* Théel. Kungl. Svenska Vetensk. Akad. Förhandl. N. F. 40 Nr. 4.

Locality: Kangerdlugsuak St. 1 a, muddy clay, 65 m; 3 specimens — St. 19, 10—20 m; one proboscis — Mikisfjord, mud, 130 m; 1 specimen.

Of this rather rare and little known species 4 well preserved specimens are at hand. Evidently this species is rarely found in complete condition i.e: with intact proboscis; nevertheless we find one here; in the others the proboscis has been lost, being broken off more or less close to the base. All specimens are of a lively green colour. Under influence of the alcohol the animals get discoloured and little by little the liquid

becomes green. — The measures of the best preserved and biggest specimen are as follows: trunk 58 mm, total length of proboscis 68 mm, the bifurcated part of the latter 25 mm, diameter of the trunk 15 mm. The trunk of the smallest specimen is 34 mm.

The condition of preservation allows a more closely morphological

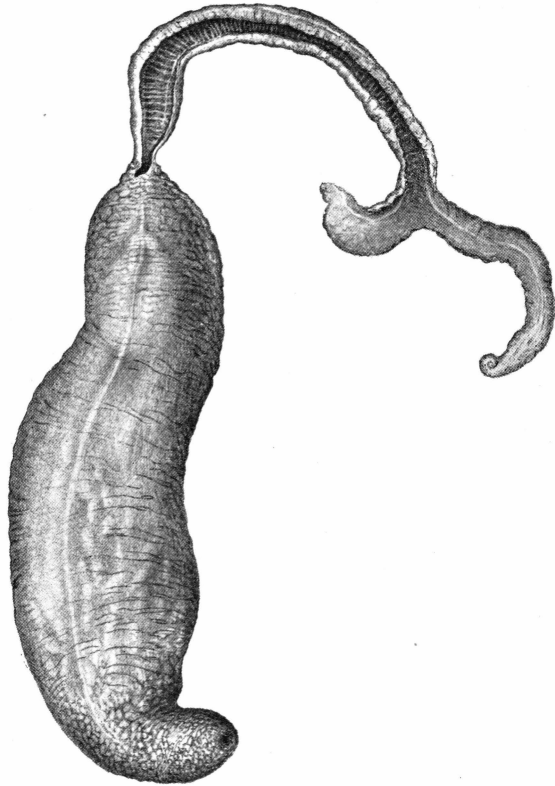


Fig. 1. *Hamingia arctica* Kor. & Dan. — POUL H. WINTHER del.

and anatomical study, the results of which are given in the following.

The proboscis is longer than the trunk; and of a lighter colour. It has the shape of a closed tube, i.e. the two margins of the long about 10 mm broad tape curve towards the ventral side from the very base. The two margins lie close to each other, the furrow between them therefore being very narrow. The ventral side of the proboscis is concave, the dorsal convex. The mouth is situated at the ventral base of the proboscis and enclosed by its curved margins. If we unroll the proboscis we see the two marginal nerves accompanying the two vessels, and their numerous connectives. At the tip the proboscis is deeply bifurcated, one of the

branches has been broken off near the base, the other one is intact and the tip of it is coiled like a spiral. The marginal nerves continue into the branches, one in each of them.

For the purpose of describing the trunk, it will be practical to divide the dermal cover into three parts, namely the anterior and the posterior portion and the middle region. The two former parts are densely set with yellowish wartlike protrusions which are much less discernable in

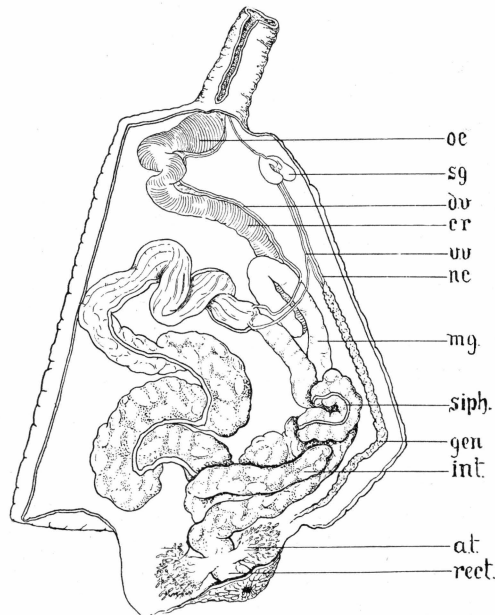


Fig. 2. *Hamingia arctica* Kor. & Dan. oe: oesophagus; sg: segmental organ; d.v: dorsal vessel; cr: crop; v.v: ventral vessel; n.c: nerve-cord; m.g: midgut; siph: siphon; gen: genital organ; int: intestine; a.t: "anal trees"; rect: rectum.

POUL H. WINTHER del.

the central part. The body-wall in the terminal parts are much thicker than in the middle one. The two ventral cylindrical arcuate papillae which are mentioned and figured by KOREN & DANIELSSEN are not found in any of the specimens.

As in other Echiurids the body-wall is made up of three layers, the 1) corium, the 2) muscular layer and the 3) endothelium. They have not been submitted to a microscopical investigation, so I must confine myself to a short description of what is revealed by the binocular microscope. 1 a) The cuticle is very thin and transparent, 1 b) the hypodermis is of a whitish, gelatinous consistency and 1 c) the dermis just beneath the hypodermis varies considerably in thickness in the different regions of the trunk; it forms the greater part of the interior of the wartlike protrusions; it is whitish, opaque, and plainly distinguished from the

adjoining layers. These three strata — cuticle, hypodermis and dermis — together form the corium. As a substratum to it is found 2) the thick muscular layer. It consists of 2 a) an exterior circular muscle layer in which the annular muscles form a continuous coat and 2 b) an interior longitudinal muscle layer, the strands of which is likewise forming a continuous coat. No trace of separate longitudinal muscle bands is found anywhere. Inside the muscle layers a thin and delicate 3) endothelium forms the cover of the entire inner surface.

As to the internal anatomy the following remarks are made:

The alimentary canal may naturally be divided into three parts 1. the part from the mouth to the beginning of the intestine proper, 2. the intestine and 3. the rectum. In the foremost part of the canal we find three regions which may be compared with the three portions found by WHARTON (1913 p. 255) in *Thalassema griffine*, namely the oesophagus, the crop, and the midgut. In the two specimens opened by me, the oesophagus forms a great bulb with annular striation. In the third specimen it is more tube-like and thinner. The oesophagus continues into the crop which forms a loop at the end of the latter; the walls of the crop are whitish, with an annular striation too, and furnished with a muscle layer a little thicker than that of the oesophagus. It passes into the midgut which forms a U-shaped loop; the backwards protending part of this reaches as far as to the hind end of the second third of the trunk; the walls are thin and almost transparent. The beginning of the intestine is marked by the commencement of the collateral intestine or siphon ("Darmgefäß" or "Nebendarm"). This organ passes along the intestine in its whole length, just to the beginning of rectum. The walls of the intestine are extremely thin and easily molested so that the innumerable sausage-shaped, about 2 mm long, excrement lumps fall into the body-cavity. Only in the foremost part of the intestine these lumps are missing; they are not yet formed. The contents are here a green, muddy mass. The intestine is forming a great number of irregular coils. As far as I can see, they lie differently in the three specimens examined. The rectum is short and swollen, with muscular walls. The two anal-trees open into the rectum.

The alimentary canal is fastened to the body-wall by a great number of more or less delicate fibres and mesenteric bands. In three specimens examined the midgut is attached by a long, rather narrow mesenterium; this is especially pointed out as WHARTON states that in the *Thalassema*-species examined by him the midgut is not attached to the body-wall.

The anal-trees are rather small. In a specimen the trunk of which measures 50 mm the anal-trees were only 5 mm long. The thinwalled, transparent and sacklike stem is as broad as it is long; from the edge a number (6—10) finger-shaped protrusions arise. They are densely set

with oblong appendages, which as far as I can see, are unbranched, each of them ending in a great ciliated funnel. They are attached to the bodywall by numerous mesenteric fibres.

The vascular system is closed. It is composed of a dorsal and a ventral vessel. The dorsal vessel covers the dorsal surface of the midgut and crop (the "heart"). At the place where the midgut passes into the intestine it surrounds the latter and then passing away from the intestine it proceeds towards the ventral nerve-cord where it forms the ventral vessel, which protends along this both backwards in a long unbranched stem ending blindly close before the hindmost tip of the nerve and forwards where it separates from the nerve and passes to the ventral

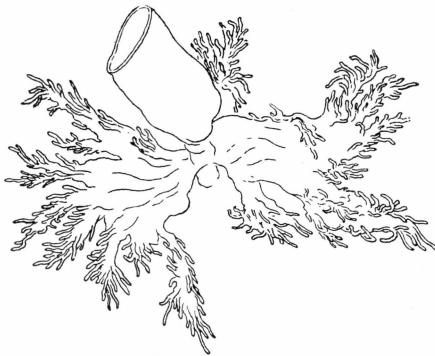


Fig. 3. *Hamingia arctica* Kor. & Dan. The two "anal trees" opening into the intestine.
POUL H. WINTHER del.

side of the oesophagus; here it bifurcates, and the two branches pass out into the proboscis as two lateral vessels. At the tip of this they unite and protend backwards as a single vessel in the dorsal midline of the proboscis. It then passes along the dorsal side of oesophagus and continues as the long dorsal vessel accompanying the mid-gut (the "heart").

There are two segmental organs. They are equally large and open to the exterior close behind the base of the proboscis. There is no trace however of whitish papillæ to mark their pores. They are suspended so that the ends are free to float in the body-cavity, they are sausage-shaped, a little curved, turning the concavity to each other. They consist of a slender neck with the external opening, the nephridiopore, a slender lateral tube at the concave side, ending in the internal opening, the nephrostome, the rim of which is forming a curled and curved collar; the greatest part is the sack-like distal end, the uterus, which in one of the specimens is distended with ripe ova.

The genital festoon is found alongside the ventral nerve-cord, almost from the hindmost tip of the trunk to the base of the first third of

the same. It contains both small and great ova, the greater ones being found especially in the proximal part of the organ.

In spite of a thorough investigation no males were found in the oesophagus.

Occurrence at East Greenland: previously unknown.

Distribution: *Hamingia arctica* is hitherto only recorded from the waters round Spitzbergen and the Murman Sea (KOREN & DANIELSEN, SKORIKOW). Further RAY LANKESTER has investigated two specimens from the West Coast of Norway (Hardanger Fjord) and LEVINSEN records it from Iceland. The new finding places considerably increases the area of distribution and may indicate that the species is distributed

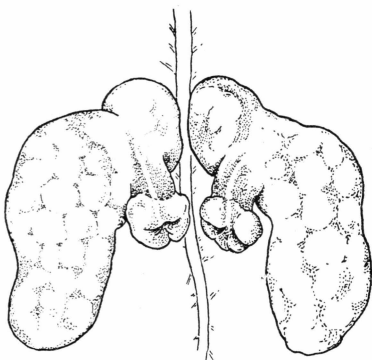


Fig. 4. *Hamingia arctica* Kor. & Dan. The two segmental organs filled with eggs, and part of the nerve cord. — POUL H. WINTHER del.

all over the northern part of the Atlantic. Its eastern boundary is the Barents Sea. However *Hamingia arctica* must be called a rare form; the findings are scarce and only contain a single or few specimens.

6. *Bonellia suhmii* Sel.

(Fig. 5—6).

1885. *Bonellia Suhmii* Selenka. Challenger Report, Zool. part 36 p. 9.

In order to find out whether the collections of the Zoological Museum contained further specimens of *Hamingia arctica* all the arctic Echiurids of the Museum were closely examined. No specimens of *Hamingia* but 5 specimens of *Bonellia suhmii* were found. As one of them was taken in the Danmark Strait and the species thus proves to be an inhabitant of the East Greenland waters, a description and a few anatomical facts of this rare and little known species shall be given here. I regret that all 5 specimens are in an extremely bad state of preservation, 4 of them having been opened previously and the greater portion of the entrails

are missing. The species is hitherto only known in one damaged specimen described by SELENKA in the Challenger Report (1885). The five specimens at hand are all dredged by the Danish "Ingolf" Expedition; one of them, as mentioned above in the Danmark Strait, the other 4 dated from two stations south of Iceland.

Locality: "Ingolf" St. 11. 64°34' N., 31°12' W. 2450 m; 2 specimens. — St. 40. 62°00' N., 21°36' W. 1591 m; 2 specimens. — St. 68. 62°06' N., 22°30' W. 1587 m; 1 specimen.

As none of the specimens has the proboscis intact, no account of it can be given here. Only in one specimen the basal part of it remains, about 6 mm and no trace of the bifurcation is of course found. The basal

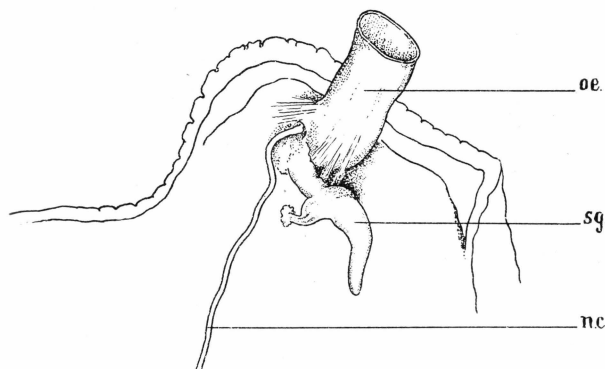


Fig. 5. *Bonellia suhmii*, Sel. oe: oesophagus; sg: segmental organ; n.c: nerve-cord
POUL H. WINTHER del.

part is 1,5 mm broad; the rims of it enclose the mouth which is formed as a longitudinal furrow. The rims of the tapeformed remnants of the proboscis are slightly thickened and rolled up towards the ventral side. None of the 5 specimens had ventral hooks. The measures of the trunk of the specimens from St. 11 are 31 mm and 35 mm; of those from St. 40 41 mm and 53 mm.

The specimen from St. 68, by far the greatest one, (it measures 110 mm) had not been opened before. The following remarks all refer to this individual. The outer aspect of the animal bears no small resemblance to the drawing of WILLEMOES-SUHM published by SELENKA in the Challenger Report. This resemblance and the few anatomical features still visible despite the miserable condition of the internal organs make it possible to determine this species which hitherto was only known in a specimen in a similarly bad condition.

The area round the mouth and the distal third of the trunk is highly contracted whereas the intervening part is swollen and distended. The skin is thick and tough in the contracted parts and densely set with

scaleglike warts of a bright white colour, the skin itself being yellow. (Most probably this is not the natural colour but a colour caused by the preservative liquids). In the swollen part of the trunk the skin is thin and transparent, iridescent and smooth, entirely devoid of warts. No ventral hooks were to be seen; they must have fallen out as is the case in the specimen described by SELENKA. The muscle layer is thick in the contracted parts; in the hindmost tip the longitudinal muscles do not

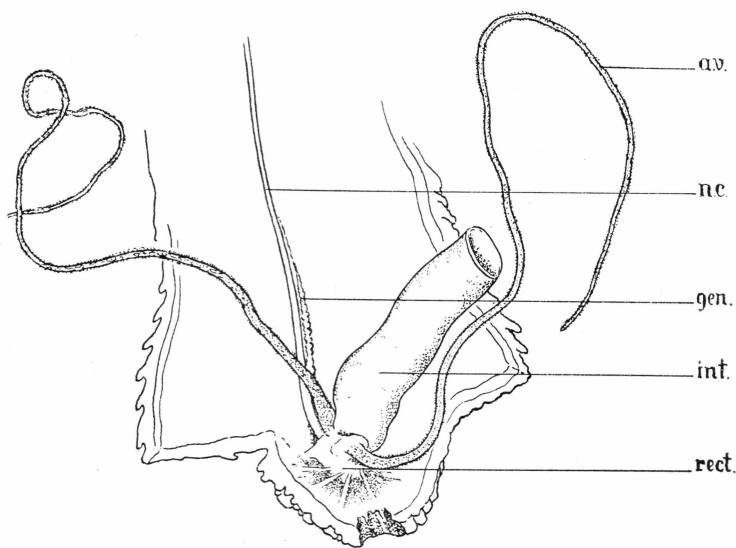


Fig. 6. *Bonellia suhmi* Sel. a.v.: anal vessel; n.c.: nerve-cord; gen.: genital organ; int.: intestine; rect.: rectum. — POUL H. WINTHER del.

form a continuous stratum but are separated in numerous strong strands. In the swollen part the muscle layer is exceedingly thin.

I had hoped to get some information as to the internal anatomy but on opening the specimen it was seen that the internal organs were completely macerated. The intestinal canal was filled with mud and the wall of it thin and ruptured in several places; the body-cavity was therefore partly filled with a muddy fluid. It was necessary to remove the intestine; only rectum and oesophagus were retained. In the foremost part the single segmental organ ("uterus") is well preserved (fig. 5). It opens to the exterior about 1 cm behind the foremost tip of the trunk, close behind the mouth and almost in the ventral median line just beside the nerve-cord. It measures 12 mm, and is a little curved in its distal part. In the centre of the organ the internal opening is situated on a spoutlike protrusion; the rim of the orifice widens to a dentated collar. The organ is hanging freely, only attached to the body-wall at the external opening.

The oesophageal nerve-ring and the ventral nerve-cord are present, the latter distinctly fastened by a delicate peritoneal band; several fine side nerves branch off from the cord.

In the hindmost part of the body cavity alongside the nerve-cord the gonad is situated. It is a small glandular body only 4 mm long; no mature eggs were seen. The egg-producing organ is part of the peritoneum itself; the eggs are produced in the latter at the walls of the ventral blood vessel. No eggs were found in the body-cavity which conforms with the fact that uterus is empty and small.

Rectum is fastened to the body-wall with numerous strong muscle-fibres.

The anal vessels form long, slender tubes which are 64 mm long and unbranched (fig. 6). They are closely set with ciliated funnels just discernible to the naked eye. The distal part of each vessel is swollen into an ampulla opening into rectum close to anus. The long vessel itself is free to float in the body-cavity.

The description of the scarce remnants of the internal organs shows that the specimen at hand is a *Bonellia*, and a comparison between the shape and the arrangement of the anal vessels and the segmental organ on one side, and the drawings and description of these organs in the Challenger Report on the other side, seem to me to justify a reference of the specimen to *Bonellia suhmii* Selenka.

As mentioned above, the specimens at hand dates from the Danmark Strait and the waters south of Iceland from a depth of 1587 m. The specimen described by SELENKA originates from the coast of Nova Scotia (41°14' N., 65°45' W.) depth 1540 m. Neither hydrographical nor geographical conditions prevent from supposing that the specimens before us dating from the two different localities belong to the very same species.

Table.

Species	Distribution in waters east of Greenland		Further distribution
	Lat. N.	Depth m	
<i>Priapulus caudatus</i> Lam. . .	abt. 75°—abt. 60°	0—170	bipolar; circumpolar on the northern hemisphere, boreal, subarctic; mainly littoral.
<i>Priapulus bicaudatus</i> Dan. . .	abt. 75°—abt. 68°	75—206	mainly arctic; low abyssal.
<i>Phascolosoma eremita</i> (M. Sars.)	abt. 68°—abt. 65°	20—25	bipolar; arctic, boreal; littoral and abyssal.
<i>Phascolion strombi</i> (Mont.).	abt. 72°—abt. 60°	95—170	circumpolar; arctic, boreal, lusitanian; littoral and abyssal.
<i>Hamingia arctica</i> (Kor. & Dan.)	abt. 68°	10—130	arctic, boreal, subarctic; littoral, low abyssal.
<i>Bonellia suhmii</i> Sel.	abt. 65°	1587—2400	arctic; subarctic; abyssal.

II. POLYCHÆTA

Fam. *Polynoidæ*.

1. *Harmothoe villosa* (Mgrn.).

1865. *Eucranta villosa* Malmgren. Nordiska Hafs-Annul. p. 80.
 1874. *Eupolynoe occidentalis* M'Intosh. Ann. Nat. Hist. (4). 13 p. 264.
 1883. *Harmothoe villosa* Levinsen. Nordiske Annulata etc. p. 193.
 1914. *Eupolynoe occidentalis* Ditlevsen. Medd. om Grønland 23 p. 677.
 1917. *Harmothoe villosa* Ditlevsen. The Danish "Ingolf" Expedition 4 Nr. 4. p. 36.

Locality: Kangerdlugssuak St. 12. 100 m. 1 specimen.

Only one specimen of this species is present; it is 39 mm long, much damaged, torn into two pieces; all scales have fallen off and the hind end is in regeneration.

On comparing the figure of MALMGREN l. c. and the description of HJ. DITLEVSEN (1917 p. 36) with the present specimen I find that the eyes of the latter are rather large, as mentioned by SMALL (1913 p. 181), by far not so small as those of the specimens which DITLEVSEN described in the "Ingolf" Expedition. The dorsal setæ are curved as in MALMGREN's figure, but none of them so strongly that "the two halves of the bristle which are bent towards each other form a right angle" (DITLEVSEN p. 37). In the specimen from East Greenland the form of the dorsal bristles does not by far bring the bristles of the genus *Gattyana* in so strong recollection as does that of the specimens examined by DITLEVSEN. Evidently, the species varies rather much in the two characters, i.e. the size of the eyes and the form of the dorsal bristles. As to the ventral setæ they show a distinct bifurcation at the point, viz. the figure of MALMGREN.

Occurrence at East Greenland: S. E. of Sabine Island. 1 specimen. "Ingolf".

Distribution: *H. villosa* is found at both coasts of Greenland. It seems to be particularly common in the deeper regions of the Greenland fjords. Furthermore, it is widely distributed over the Norwegian Sea and it enters the Atlantic (DITLEVSEN). It is furthermore recorded from the coasts of Norway and Sweden. THÉEL (1879) records it from the Kara Sea.

2. *Harmothoe badia* (Théel).

1878. *Polynoe badia* Théel. Kungl. Svenska Vetensk. Akad. Handl. 16 p. 18.
 1883. *Harmothoe badia* Levinsen. Nordiske Annulata etc. p. 192.
 1914. — — Ditlevsen. Medd. om Grønland 23 p. 277.
 1917. — — Ditlevsen. "Ingolf" Exped. 4 Nr. 4. p. 22.
 1928. *Harmothoe (Antinoëlla) badia* Augener. Fauna arctica 5 p. 689.

Locality: Kangerdlugssuak St. 2. 100 m. Stone. 1 specimen.

The only specimen at hand is very large and comparatively well

preserved. The body measures 63 mm; the breadth of it being 24.5 mm. When fully protruded the proboscis measures 20 mm. According to THÉEL and AUGENER the number of bristle-carrying segments may increase to 37 in large specimens; the specimen in question which is 2 mm longer than the specimen described by THÉEL has 36 feet only. The dorsal cirrus is 8 mm long and tapers to a rather pointed apex. In the buccal segment there are 3 bristles in the notopodial branch; in the neuropodial branch only the aciculum is present; of the 3 dorsal bristles the two are much longer than the third. The dentition of the dorsal bristles nearly reaches the apex. The neuropodial setæ are very characteristic: they are rather long, the longest of them about 6 mm, exceedingly thin, almost hairlike. The scales are very large, the transversal diameter being 15.5 mm, the longitudinal one 11 mm. On the free edge there are a few and short threadlike papillæ, whereas the surface of the elytron is densely covered with very small conical papillæ.

Occurrence at East Greenland: Turner Sound and Forsblad Fjord.

Distribution: *H. badia* is mainly an arctic species. The "Ingolf" Expedition found it in the Davis Strait, at Jan Mayn, round Iceland and North of the Farøes. It is known from West Greenland. THÉEL and AUGENER records it from several places at Spitzbergen. The species also enters the boreal region; the Danish research steamer »Dana« has found it North of Hirtshals, 570 m, and North of Hanstholm, 526 m. In the arctic it is found in shallow waters, in the boreal area it is hitherto only recorded from greater depths (DITLEVSEN 1917).

3. *Harmothoe rarispina* (Sars).

1860. *Polynoe rarispina* Sars. Vidensk. Selsk. Forhandl. Christiania p. 60.

1865. *Lagisca rarispina* Malmgren. Nord. Hafs-Annulater p. 65.

1883. *Harmothoe rarispina* Levinsen. Nordiske Annulata etc. p. 192.

1914. — — Ditlevsen. Medd. fra Grønland.

1917. — — Ditlevsen. "Ingolf" Exped. 4 Nr. 4. p. 13.

Locality: Kangerdlugssuak. St. 4. 50 m. 2 specimens. — St. 13. 10—25 m. Stones. 2 specimens. — St. vac. 20—25 m. Muddy clay. 1 specimen.

The largest of the 5 specimens measures 57 mm, the smallest 19 mm only. The number of segments amounts to 44, the number of scales is 15. The last 13 segments are uncovered by the elytra.

Occurrence at East Greenland: Sabine Island.

Distribution: West coast of Greenland, Davis Strait, South of Iceland, Spitzbergen, Nova Zembla, the Kara Sea; at the coasts of Europe it reaches along the Norwegian coast southwards to the North

Sea (DITLEVSEN). Generally it is dredged from deep waters; but it is also recorded, from shallow waters.

4. *Harmothoe imbricata* (L.).

1766. *Aphrodite imbricata* Linné. Syst. nat. 12, 1, p. 1084.
 1865. *Harmothoe imbricata* Malmgren. Nordiska Hafs-Annul. p. 66.
 1882. *Polynoe imbricata* Hansen. Norske Nordhavs-Exped. Annelider. p. 11.
 1914. *Harmothoe imbricata* Ditlevsen. Medd. fra Grønland. 23 p. 678.
 1917. — — Ditlevsen. "Ingolf" Exped. 4 Nr. 4. p. 10.
 1923. — — Fauvel. Faune de France I. p. 53.

Locality: Kangerdlugssuak St. 2. 100 m. W. Gravel. 2 specimens. — St. 3. 70 m. Stony bottom. 3 specimens. — St. 13. 10—25 m. Stony bottom. 2 specimens. — St. 19. 10—20 m. 1 specimen. — St. 21. 40—50 m. 3 specimens. — St. 22. 5 m. 3 specimens. — St. 26. 11—15 m. 1 specimen. — Angmagsalik. 20 m. Sand. 14 specimens.

The largest of the specimens measures 48.5 mm. They all vary much in size and colour. The species is one of the most common polychætes in the material at hand.

Occurrence at East Greenland: Several stations. Sabine Island. "Hekla's" Harbour, Turner Sound. Angmagsalik etc.

Distribution: *H. imbricata* is known from all arctic seas, where it is circumpolarly distributed. In the Atlantic it is found as far southwards as to the Mediterranean, in the Pacific it is found both at the eastern and western coasts of Japan. The species has a very great power of adaptation; it is most often living in shallow waters but may be found in great depths. Thus the "Ingolf" Expedition found it at a depth of 3420 m S—W of Greenland (DITLEVSEN). It also seems able to stand rather fresh water as it is found in the inner part of the Gulf of Finland.

5. *Harmothoe nodosa* (Sars).

1843. *Lepidonote scabra* Ørsted. Grønlands Annulata Dorsibranchiata p. 164.
 1860. *Polynoe nodosa* Sars. Vidensk. Selsk. Forhandl. Christiania. p. 58.
 1865. *Eunoe nodosa* Malmgren. Nordiska Hafs-Annul. p. 61.
 1879. *Polynoe scabra* Théel. Kungl. Svenska Vetensk. Akad. Handl. 16 p. 7.
 1883. *Harmothoe nodosa* Levinsen. Nordiske Annulata etc. p. 193.
 1914. — — Ditlevsen. Medd. fra Grønland 23 p. 680.
 1917. — — Ditlevsen. "Ingolf" Exped. 4. Nr. 4. p. 6.
 1923. — — Fauvel. Faune de France I p. 50.

Locality: Kangerdlugssuak. St. 23. 15 m. 1 specimen.

The single specimen at hand measures 58 mm; the breadth of it is 27 mm. The number of bristle-carrying feet is 39. The dorsal cirrus is about 15 mm long, densely set with long thread-like papillæ and ter-

minating in a long thin flagellum. The large scales (11×8 mm) are densely covered with great conical papillæ, often bifurcated at apex, at the free edge of the scale the papillæ reach a length of some 3 or 4 mm. The bristles are golden, the dorsal ones with spines, and a little thinner than those of the ventral bristles. The tips of the latter are smooth. A great number of *Loxosoma* is found among the setæ.

Occurrence at East Greenland: Several localities, f.i. Off Hurry Inlet. — Turner Sound.

Distribution: *H. nodosa* is mainly an arctic species. It is found at West Greenland, furthermore at Iceland, the Farøes, and the Shetlands and it is not uncommon at the west coast of Norway. It is common all round the Spitzbergen. It reaches as far southwards as in the Channel.

Fam. *Phyllodoce*dæ.

6. *Phyllodoce groenlandica* Ørst.

1842. *Phyllodoce groenlandica* Ørsted. Grønlands Annulata dorsibranchiata p. 121.
 1882. *Phyllodoce arctica* Hansen. Den norske Nordhavs-Exped. Annelida 3 p. 31.
 1914. *Phyllodoce groenlandica* Ditlevsen. Medd. fra Grønland. 23 p. 682.
 1914. *Anaitides groenlandica* Bergström. Zool. Bidr. från Uppsala. 3 p. 141.
 1914. *Phyllodoce groenlandica* Ditlevsen. "Ingolf" Exped. 4 Nr. 4. p. 56.
 1923. *Phyllodoce groenlandica* Fauvel. Faune de France I p. 153.

Locality: Kap Dalton. 30 m. Stony clay. 2 specimens. The longest of the two specimens measures 71.5 mm.

Occurrence at East Greenland: Angmagsalik — "Hekla's" Harbour — Turner Sound.

Distribution: The species is common in all arctic seas. (West Greenland, Spitzbergen, Franz Joseph Land, Nova Zembla, the Kara Sea). Iceland, The Farøes, the west coast of Norway and in Danish waters. It is furthermore recorded from the Channel and the northern Pacific.

Fam. *Nephtydidæ*.

7. *Nephtys malmgreni* Théel.

1865. *Nephtys longosetosa* Malmgren Öfvers. af K. Vetensk. Akad. Förh. p. 106.
 1879. *N. malmgreni* Théel: Les Annélides Polychètes des Mers de la Nouvelle-Zemble. p. 26.
 1923. *N. malmgreni* Fauvel. Faune de France I p. 373.

Locality: Ravnsfjord. 2 specimens.

The specimens at hand are highly incomplete; they are torn into 5 pieces, but the two parts with prostomium are left.

Occurrence at East Greenland: 79° N.—28½° W.

Distribution: West Greenland, Spitzbergen, Nova Zembla, the Kara-Sea, Norway, England, the North Sea.

Fam. *Eunicidæ*.8. *Lumbriconereis fragilis* (O. F. Müll.).

1766. *Lumbricus fragilis* Müller. Prodrum Zool. Dan. p. 216.
 1867. *Lumbrinereis fragilis* Malmgren. Annulata polychæta p. 177.
 1910. *Lumbriconereis fragilis* M'Intosh. Monogr. Brit. Annel. 2 p. 2.
 1914. *Lumbrinereis fragilis* Ditlevsen. Medd. fra Grønland. 23 p. 694.
 1923. *Lumbriconereis fragilis* Fauvel. Faune de France I p. 430.

Locality: Kap Dalton. 30 m. Stony clay. 1 specimen. — Mikisfjord. 150 m. Mud. 1 fragment.

The complete specimen which measures 145 mm is of a bright grey colour; the fragment is rusty-red. The muddy tube in which the animals have lived are partly preserved.

Occurrence at East Greenland: Previously unknown.

Distribution: Common in all arctic seas (Greenland, Spitzbergen, Nova Zembla, the Kara Sea). Northern part of the Atlantic, the west coast of Norway, the Danish and British waters. In the Atlantic it reaches as far southwards as to Madeira. The Mediterranean.

Fam. *Nereidæ*.9. *Nereis zonata* Malmgr.

1867. *Nereis zonata* Malmgren. Annulata polychæta p. 46.
 1898. *Nereis arctica* Michaelsen. Bibl. zool. Nr. 20. p. 124.
 1914. *Nereis zonata* Ditlevsen. Medd. fra Grønland 23 p. 697.

Locality: Kangerdlugssuak. St. 12. 80—100 m. Stones. 1 specimen. — St. vac. 20—25 m. Muddy clay. 2 specimens. — Mikisfjord. 175 m. Mud. 3 specimens.

The largest of the specimens measures 145 mm; the dorsal sides of all the specimens are of a reddish or violet colour. Each segment has a broad, violet transversal band alternating with a narrower white one.

Occurrence at East Greenland: "Danmark's Harbour 6—15 m — Stormbugten 10—30 m — Off Cape Bismarck 15—20 m.

Distribution: The arctic seas (Greenland, Spitzbergen, the Kara Sea); the west coast of Norway, the Channel; the Mediterranean.

Fam. *Syllidæ*.10. *Syllis (Typosyllis) fasciata* Malmgr.

1867. *Syllis fasciata* Malmgren. Annulata polychæta. p. 43.
 1891. *Typosyllis fasciata* Marenzeller. Die Polychæten der Bremer-Expedition nach Ostspitzbergen. p. 401.
 1914. *Syllis fasciata* Ditlevsen. Medd. fra Grønland 23 p. 699.

Locality: Kangerdlugssuak St. 8. 10 m. 1 specimen. — St. 21. 40—50 m. Gravel. 3 specimens.

Of the 3 specimens at hand the largest measures 48 mm, the two others are a little smaller. In all the specimens the colour differs at either end of the body, the foremost part being white and yellowish, the hindmost part rusty-red; the line between the two parts is sharp and distinct. All the specimens are atok.

Occurrence at East Greenland: Most probably hitherto unknown. LEVINSSEN (1883) records the species from Greenland without further information, but most likely the locality referred to by him is in West Greenland.

Distribution: The species is mainly arctic; it is known from Nova Zembla, Siberia; AUGENER (1928) records it as being common at all coasts of Spitzbergen, both in shallow and deep waters. It is also recorded from the Faröes.

Fam. *Sphæroderidæ*.

11. *Ephesia gracilis* H. Rathke.

1843. *Ephesia gracilis* Rathke. Nova acta acad. Leop. Carol. Nat. cur. 20 p. 176.

1914. *Ephesia gracilis* Ditlevsen. Medd. fra Grønland. 23 p. 702.

1923. — — Fauvel. Faune de France I p. 377.

Locality: Mikisfjord. 175 m. Mud. 1 specimen.

The single specimen at hand only measures 12 mm. The number of segments is about 85. In his diagnosis AUGENER (1928) writes: "Segmentzahl bis ca. 30".

Occurrence at East Greenland: Hitherto unknown.

Distribution: West Greenland, North America; the Westcoast of Norway, Spitzbergen, North of Asia, Danish waters; Great Britain.

Fam. *Spionidæ*.

12. *Laonice cirrata* (M. Sars).

1850. *Nerine cirrata* M. Sars. Nyt Mag. f. Naturv. 6 p. 207.

1867. *Laonice cirrata* Malmgren. Annul. Polych. p. 19.

1883. *Spio cirrata* Levinsen. Nord. Annulata etc. p. 103.

1914. *Spio cirrata* Ditlevsen. Medd. fra Grønland. 23 p. 704.

1927. *Laonice cirrata* Fauvel. Faune de France II p. 38.

Locality: Mikisfjord 130 m. 1 specimen.

The single specimen measures 136 mm. It is mature, the genital pockets being filled with eggs. The colour is reddish.

Occurrence at East Greenland: Hitherto unknown.

Distribution: The species is widely distributed in the arctic; it

is found everywhere at the coasts of Spitzbergen, besides it is recorded from the Kara Sea, Nova Zembla, West Greenland, North America; the Irish Coast, the Channel; furthermore it is found in the Mediterranean where it is recorded from Algeria.

Fam. Cirratulidæ.

13. *Chætozone setosa* Malmgr.

1867. *Chætozone setosa* Malmgren. Annulata polych. p. 206.
 1914. — — Ditlevsen. Medd. fra Grønland 23 p. 704.
 1927. — — Fauvel. Faune de France II p. 101.

Locality: Mikisfjord. 175 m. Mud.

Only one fragment of this species is at hand. It measures 16 mm.

Occurrence at East Greenland: Hitherto unknown.

Distribution: The species has a wide distribution in the arctic seas (West Greenland, Spitzbergen, the Behring Sea, North of Eurasia and of North America); Iceland, the Farøes; the west coast of Norway, the Danish Seas, the British coasts, the coast of France; furthermore it is recorded from the Mediterranean.

Fam. Opheliidæ.

14. *Ammotrypane aulogaster* Rathke.

1843. *Ammotrypane aulogaster* Rathke. Nova acta 20 p. 188.
 1843. *Ophelina acuminata* Ørsted. Annul. Danic. Conspectus p. 46.
 1914. *Ammotrypane anlogaster* Ditlevsen. Medd. fra Grønland 23 p. 707.
 1927. — — Fauvel. Faune de France II p. 133.

Locality: Kangerdlugssuak St. 9. 15—20 m. 1 specimen.

The single specimen at hand measures 54 mm.

Occurrence at East Greenland: Hitherto unknown.

Distribution: Widely distributed in the arctic waters; circum-polar; the species is furthermore recorded from Iceland, the Farøes, the coast of Norway, the northern part of the Danish waters (only once recorded from the Baltic). Coasts of Belgium, Great Britain and France.

Fam. Chloræmidæ.

15. *Flabelligera affinis* M. Sars.

1829. *Flabelligera affinis* M. Sars. Bidrag til Sedyrenes Naturhistorie I p. 31.
 1867. — — Malmgren. Annulata polychæta p. 193.
 1914. — — Ditlevsen. Medd. fra Grønland 23 p. 708.
 1927. — — Fauvel. Faune de France II p. 113.

Locality: Kangerdlugssuak. St. 2. 100 m. Gravel. 1 specimen. — St. 3. 70 m. Stones. 1 specimen. — St. 11. 20—25 m muddy clay. 2 spe-

cimens. — St. 12. 80—100 m. 1 specimen. — St. 21. 40—50 m. 1 specimen. — St. 24. 20 m. Shells and stones. 1 specimen. — St. 26 10—15 m. Stone with algæ. 1 specimen. — St. 27. 25 m. 1 specimen.

All 9 specimens are rather large; the smallest measuring 49 mm, the largest 91 and 103 mm.

Occurrence at East Greenland: "Danmark's" Harbour 8—10 m; Off Cape Bismarck 15—20 m.

Distribution: *Flabelligera affinis* is one of the most common arctic polychætes. It is recorded from West Greenland, Spitzbergen, North of Eurasia; Iceland, the Farøes, West coast of Norway, Danish waters. The coast of Great Britain and France. According to FAUVEL it is also known from the Southern Hemisphere (Antarctic).

16. *Brada villosa* (H. Rathke).

1843. *Siphonostoma villosum* Rathke. Nova acta. 20, 1, p. 215.

1867. *Brada villosa* Malmgren. Annul. polychæta p. 193.

1882. *Trophonia rugosa* et *Tr. arctica* Hansen. Den norske Nordhavs-Exped. Annelida 7 p. 38.

1914. *Brada villosa* Haase. Boreale u. arktische Chloræmidien. p. 203 (35).

1914. *Brada villosa* Ditlevsen. Medd. fra Grønland. 23 p. 709.

1927. — — Fauvel. Faune de France II p. 121.

Locality: Kangerdlugssuak. 5 m. 2 specimens. — St. 11. 20—25 m. Muddy clay. 1 specimen.

The largest of the specimens measures 29 mm.

Occurrence at East Greenland: Hitherto unknown.

Distribution: Particularly known from arctic waters (Greenland, Spitzbergen, North of Eurasia); Iceland, the Farøes, the West coast of Norway, Danish waters. It is furthermore recorded from the Channel, the Mediterranean and the northern Pacific.

17. *Brada granulata* Malmgr.

1867. *Brada granulata* Malmgren. Annulata polychæta p. 194.

1914. — — Ditlevsen. Medd. fra Grønland. 23 p. 710.

Locality: Mikisfjord. 175 m. Mud. 2 specimens. — Mikisfjord. 130 m. Mud. 1 specimen. — Kangerdlugssuak. St. 24. 20 m. Shells and stones. 2 specimens.

The largest of the 5 specimens measures 46 mm.

Occurrence at East Greenland: 77° N., 18½° W. 300 m.

Distribution: The species is more restricted to cold waters than *Brada villosa*. It is known from West Greenland, the East coast of North America, Iceland, The Farøes, the West coast of Norway, Danish waters and North of Eurasia.

Fam. *Amphinomidæ*.18. *Euphrosyne borealis* Ørst.

1843. *Euphrosyne borealis* Ørsted. Grønlands Annulata Dorsibranchiata p. 18.
 1867. — — Malmgren. Annul. polychæta. p. 128.
 1914. — — Ditlevsen. Medd. fra Grønland 23 p. 710.

Locality: Kangerdlugssuak. St. 3. 70 m. Stones. 3 specimens. —
 St. 21. 40—50 m. 1 specimen.

Of the four well preserved and intact specimens the largest measures
 27 mm; the smallest 14 mm.

Occurrence at East-Greenland: Hitherto unknown.

Distribution: Widely distributed in arctic waters (Greenland,
 Spitzbergen). Furthermore it is recorded from Iceland, the Faröes, the
 West coast of Norway, and Danish waters.

Fam. *Scalibregmidæ*.19. *Pseudoscalibregma longisetosum* (Théel).

1879. *Eumenia longisetosa* Théel. Kungl. Svenska Vetensk. Akad. Handl. 16 Nr. 3.
 p. 49.
 1891. *Scalibregma longisetosa* Marenzeller. Die Polychæten der Bremer Exped. nach
 Ostspitzbergen. p. 401 u. 426.
 1902. *Pseudoscalibregma longisetosum* Ashworth. Quart. Journ. Micr. Sc. n. s. 45
 p. 296.
 1911. *Pseudoscalibregma longisetosum* Fauvel. Duc d'Orleans Camp. Arct. Annélides
 Polychèt. p. 31.
 1928. *Pseudoscalibregma longisetosum* Augener. Fauna arctica 5 p. 755.

Locality: Mikisfjord. 175 m. Mud. 8 specimens.

The largest of the specimens measures 19 mm, the smallest 11. The
 number of segments amounts to 30—35. Practically the species differs
 from *Scalibregma inflatum* Rathke in one point only, viz. in lacking
 gills; I have examined a great number of the latter species both from
 arctic and Danish waters and even in specimens smaller than those at
 hand I found gills; it may therefore be considered highly improbable
 that *Pseudoscalibregma longisetosum* should be a juvenile form of *Scali-*
bregma inflatum. On the other hand *Pseudoscalibregma parvum* Hansen
 is most probably a juvenile form of *P. longisetosum*.

Occurrence at East Greenland: Hitherto unknown; alto-
 gether unknown in Greenland waters.

Distribution: Hitherto *Pseudoscalibregma longisetosum* was only
 known from the waters round Spitzbergen. The finding place at East
 Greenland may indicate that the species is to be found in the arctic part
 of the Atlantic ocean as is the case of the closely allied species *Scali-*
bregma inflatum; but the species in question certainly is much
 scarcer.

Fam. *Maldanidæ*.**20. *Asychis biceps* (M. Sars).**

1861. *Clymene biceps* Sars. Nyt Magasin f. Naturv. 11 p. 257.
1865. *Maldane biceps* Malmgren. Nord. Hafs-Annul. p. 188.
1906. *Asychis biceps* Arwidsson. Zool. Jahrb. 25 Abt. f. Syst. p. 263.
1914. *Maldane biceps* Ditlevsen. Medd. fra Grønland. 23 p. 718.
1927. *Asychis biceps* Fauvel. Faune de France II p. 200.

Locality: Mikisfjord. 175 m. Mud. 1 specimen.

Only the foremost part of this species is at hand; the oral disk is preserved.

Occurrence at East Greenland: Hitherto unknown.

Distribution: The species is widely distributed in the northern seas. It is known from Spitzbergen, Scandinavia, Scotland, Iceland and West Greenland. In the Danish waters it seems to be rare inside the Scaw.

21. *Praxillella gracilis* (M. Sars).

1861. *Clymene gracilis* Sars. Nyt Magasin f. Naturv. 11 p. 256.
1865. *Praxilla gracilis* Malmgren. Nord. Hafs-Annul. p. 192.
1906. *Praxillella gracilis* Arwidsson. Zool. Jahrb. 25. Abt. f. System. p. 183.
1914. *Praxillella gracilis* Ditlevsen. Medd. fra Grønland. 23 p. 715.
1927. *Clymene* (*Praxillella*) *gracilis* Fauvel. Faune de France II p. 178.

Locality: Kangerdlugssuak St. 10. 5—10 m. Clay. 1 specimen.

The single specimen which is complete, was living in a tube made of rusty-red clay fixed to a fine tough membrane. The worm is grey with lighter rings. It measures 116 mm.

Occurrence at East Greenland: The inner part of the Franz Joseph's Fjord. 73°6' N., 27°17' W.; 70 m. — 72°45' N., 22°58' W. — West of the Scott Kelties Islands. 35—60 m. Mud with stones.

Distribution: The species is mainly arctic; it is known from Spitzbergen, North of Siberia, West Greenland and North America.

Fam. *Amphictenidæ*.**22. *Pectinaria hyperborea* Malmgr.**

1865. *Cistenides hyperborea* Malmgren. Nord. Hafs-Annul. p. 360.
1870. *Pectinaria hyperborea* Grube. Arch. f. Naturges. 1.
1914. *Pectinaria hyperborea* Ditlevsen. Medd. fra Grønland. 23 p. 720.

Locality: Angmagsalik. 20 m. Sand. 23 specimens.

A great deal of the tubes measure more than 60 mm in length. The largest one is 67 mm long. The worm living in this tube is 48 mm. The long thin tip of the golden paleæ is broken off in by far the greatest number of the specimens; when it is present it is always to be found in the outer paleæ. None of the tubes were inhabited by *Phascolion strombi*.

Occurrence at East Greenland: The Stormbugt. 10—20 m.
— Danmark's Harbour. 20—30 m.

Distribution: The species is arctic and circumpolar. (Finmarken, Nova Zembla, Spitzbergen, Siberia, North America).

Fam. *Ampharetidæ*.

23. *Amphicteis gunneri* (M. Sars).

1835. *Amphitrite gunneri* Sars. Beskrivelse og Iagttagelser etc. p. 50.
1860. *Amphicteis groenlandica* Sars. Arch. f. Naturges. 26 p. 103.
1865. *Amphicteis gunneri* Malmgren. Nord. Hafs-Annul. p. 365.
1914. — — Ditlevsen. Medd. fra Grønland 23 p. 721.
1927. — — Fauvel. Faune de France II p. 231.

Locality: Mikisfjord. 175 m. Mud. 1 specimen.

The single complete specimen which was found in a tube made of grey, muddy clay measures 35 mm.

Occurrence at East Greenland: Hitherto unknown.

Distribution: West Greenland, Spitzbergen, Siberia, the Norwegian Sea, Iceland, the Faroes, Norway, Danish waters, Great Britain, France, Spain, the Mediterranean; the Pacific. Furthermore Antarctic.

Fam. *Terebellidæ*.

24. *Lysilla lovéni* Malmgr.

(Fig. 7—8).

1865. *Lysilla lovéni* Malmgren Nord. Hafs-Annul. p. 293.
1883. — — Levinsen. Vidensk. Medd. p. 177.
1912. — — Wollebæk. Vidsk. Selsk. Skr. 1 Mat.-Naturv. Kl. Nr. 18. Christiania.
1917. — — var. *Mcintoshii* Hessle. Zool. Bidrag från Uppsala 5 p. 231.
1917. — — Hessle. ibid. p. 230.
1920. — — Mc'Intosh. Monogr. of the British marine Annelids IV p. 203. Ray society.
1927. — — Fauvel. Faune de France II p. 286.
1927. — — Ditlevsen, Hj. Zool. of the Farøes. Nr. 16 p. 49.

Locality: Kangerdlugssuak. St. 19. 10—20 m. 1 specimen.

The single specimen measures 95 mm; it is incomplete, the hind end lacking. The colour is yellowish-white. As shown in fig. 7 the foremost part of the body is puffed up especially at the dorsal side, and here the skin is thin and transparent. The segments are indistinctly defined, each of them being ringed by several secondary sulci. In the median line of the ventral side a broad furrow protends to the last of the segments present; whether the furrow continues to the hindmost tip of the trunk it is impossible to state as this latter is broken off. It is

curious enough that in all figures existing of this species the hind end is always lacking (viz. MALMGREN, WOLLEBÆK, Mc'INTOSH) as is also the case in the few specimens from Danish waters which I had the opportunity of examining. Along each side of the body a furrow much narrower than the above mentioned protends. In the thoracal part of the body the skin is densely covered with small tubercles which are largest on the

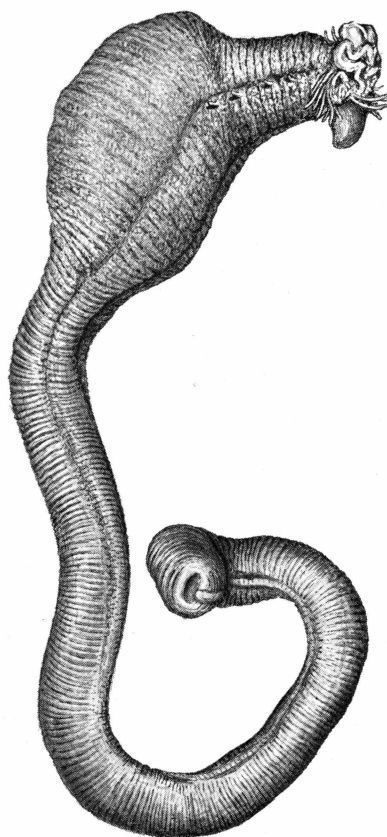


Fig. 7. *Lysilla lovénii* Mlmgr. — POUL H. WINTHER del.

ventral side. In the abdominal part these tubercles have disappeared but here we find the secondary sulci particularly well developed.

The cephalic lobe has a frilled margin and its surface is covered with numerous clavate and grooved tentacles of different lengths (fig. 8). Ventrally the first and the second segments form a large tongue-shaped process which is fixed anteriorly and free posteriorly. Seen laterally, as shown in fig. 7, it forms a spout-like protrusion. The central part of this organ is thicker than the margins on account of an accumulation of

glandular bodies. Close to each of the lateral furrows 4 small conical processes are seen, in the interior of them a fascicle of long thin translucent bristles is hidden, the apices of which are pointed and not spatulate. They do not penetrate the skin of the setigerous papillæ, their only function being to support the latter. Both FAUVEL and Mc'INTOSH and other authors state that the number of setigerous papillæ is 6 pairs. In spite of a careful examination I have not succeeded in finding more than 4 pairs, but I am inclined to think that this is due to the extremely bad state of preservation of exactly this part of the body.

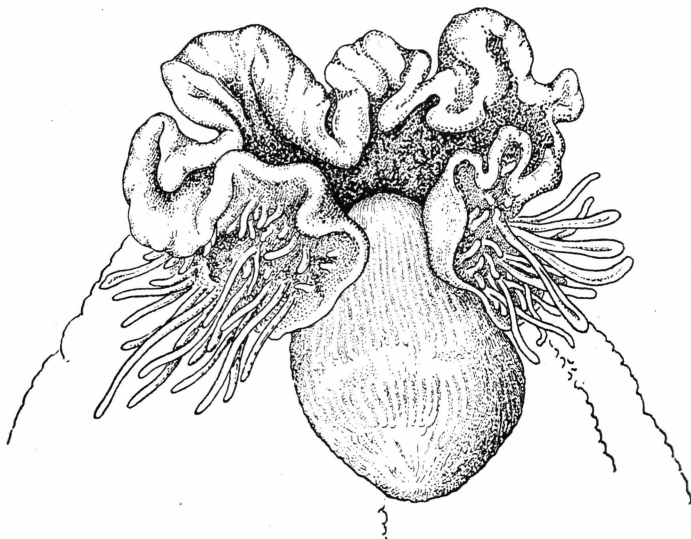


Fig. 8. *Lysilla lovénii* Mlmgr. The cephalic lobe. — POUL H. WINTHER del.

Occurrence at East Greenland: Hitherto unknown as also entirely unknown from Greenland.

Distribution: Previously the species has only been recorded once from arctic waters, from Vardø (Finmarken) WOLLEBÆK 1912 p. 75. It seems to be more commonly met with in boreal and boreoarctic waters as it is reported from the west coast of Norway, the Danish waters, the North Sea, the Farøes and the Shetlands.

25. *Scione lobata* Malmgr.

1865. *Scione lobata* Malmgren. Nordiska Hafs-Annul. p. 383.

1889. *Nicolea lobata* Meyer. Beitr. zur Fauna Spitzbergens. p. 133.

1914. *Scione lobata* Ditlevsen. Medd. fra Grønland. 23 p. 724.

Locality: Kangerdlugssuak. St. 1. 100 m from the glacier. 2 specimens. — St. 2. 100 m. W. Gravel. 1 specimen. — St. 3. 70 m. Stony

bottom. 2 specimens. — St. 5. 50 m. 3 specimens. — St. 18. 10 m. Sand. 5 specimens. — St. 21. 40—50 m. 3 specimens.

This species seems to be common in the Kangerdlugssuak district. Several very large tubes are at hand; they are made up of coarse sand grains and gravel, richly overgrown with algæ, bryozoans, hydroids etc. On some of the tubes a number of empty serpulid tubes is found. In some of the specimens the colour of the worm is rusty-red, in others white or grey; the gills are pressed tightly to the trunk, and always much darker than the latter.

Occurrence at East Greenland: The Stormbugt, 10—20 m. — Off Maroussia 160—178 m.

Distribution: The species is arctic, circumpolar; it is abundant at the coast of Spitzbergen, Nova Zembla, the Kara Sea. West Greenland. It is reported both from shallow water and from the deep sea.

26. *Scione flexuosa* (Gr.).

1860. *Terebella flexuosa* Grube. Arch. f. Naturges. 26 p. 102.

1865. *Axionice flexuosa* Malmgren. Nord. Hafs-Annul. p. 384.

1899. *Nicolea flexuosa* Ssolowiew. Die Terebelliden des Weissen Meeres p. 213.

1912. *Scione flexuosa* Wollebæk. Vidensk. Selsk. Skr. Kristiania. 2

1914. *Axionice flexuosa* Ditlevsen. Medd. fra Grønland 23 p. 723.

1917. *Pista flexuosa* Hessle. Zool. Bidr. från Uppsala 5 p. 162.

Locality: Kangerdlugssuak. St. 14. 50 m. 1 specimen. One characteristic tube of this Terebellid is present. When leaving the windings of the tube out of consideration it measures 33 mm in length; the windings are 17.5 mm broad; the tube 5.5 mm broad. In a transversal section the tube is oval; the windings are flattened; they lie close together consisting of 2½ S-formed figures. The tube is made of sand grains and grey clay.

Occurrence at East Greenland: Hitherto unknown.

Distribution: The species is exclusively arctic. It is recorded from West Greenland, Spitzbergen and Nova Zembla.

27. *Amphitrite cirrata* O. F. Müller.

1771. *Amphitrite cirrata* O. F. Müller. Prodr. Zool. Dan. n. 2617.

1865. — — Malmgren. Nordiska Hafs-Annul. p. 375.

1914. — — Ditlevsen. Medd. fra Grønland. 23 p. 725.

1927. — — Fauvel. Faune de France II. p. 251.

Locality: Kangerdlugssuak. St. 2. 100 m. W. Gravel. 1 specimen. — St. 4. 8 m. Stony bottom. 3 specimens. — St. 21. 40—50 m. 1 specimen. — St. vac. 20—25 m. Muddy clay. 1 spec.

The colour of the specimens at hand has a rusty-reddish tinge or is yellowish-grey. The tentacular crown is dark brown much lighter at the base than at the distal ends. The tubes are formed of fine grey mud,

much like that from the tubes of *Terebellides strómi*. The length of the largest specimen is 73 mm.

Occurrence at East Greenland: "Danmark's" Harbour. 5—20 m.

Distribution: The arctic seas: West Greenland, Spitzbergen, North of Eurasia; Iceland, The Faröes, West coast of Norway; Danish waters, but it does not enter the Baltic; the Mediterranean.

28. *Nicolea venustula* (Mont.).

1819. *Terebella venustula* Montagu. Trans. Linn. Soc. London. 12 p. 344.
 1865. *Nicolea arctica* Malmgren. Nord. Hafs-Annul. p. 381.
 1883. *Nicolea zostericola* Levinsen. Vid. Medd. fra Dansk Naturhistorisk Foren. p. 179.
 1884. *Nicolea venustula* Marenzeller. Zur Kenntnis der Adriatischen Anneliden. 3 p. 45.
 1914. *Nicolea venustula* Ditlevsen. Medd. fra Grønland 23 p. 724.
 1927. *Nicolea zostericola* Fauvel. Faune de France II p. 261.
 1928. *Nicolea venustula* Augener. Fauna arctica 5 p. 788.
 1929. — — Ditlevsen. The Zool. of the Faröes Nr. 16 p. 46.

Locality: Kangerdlugssuak. St. 21. 40—50 m. 1 specimen.

The only specimen at hand is badly preserved; it is 39 mm long. It is of interest that it serves as a host to a parasitic Copepod, probably the *Crypsidomus terebellæ* Lev. the one ovisac of which penetrates the skin. *Nicolea venustula* is previously known serving as host to this parasite (H. J. HANSEN: Rep. of the "Ingolf" Exped. 1923. 3 pt. 7. p. 83).

Occurrence at East Greenland: Hitherto unknown.

Distribution: Arctic seas (West Greenland, Spitzbergen, the Kara Sea; subarctic and boreal (Iceland, the Faröes, West coast of Norway). From Denmark it is known both outside and inside the Scaw. Furthermore: the coast of Great Britain, the Mediterranean and the South coast of Africa.

29. *Terebellides strómi* Sars.

1835. *Terebellides strómi* Sars. Beskrivelser og Iagttagelser etc. p. 48.
 1836. *Corephorus elegans* Grube. Arch. f. Naturges. 1 p. 161.
 1863. *Terebella pecten* Dalyell. Powers of the Creator 2 p. 208.
 1865. *Terebellides strómi* Malmgren. Nordiska Hafs-Annul. p. 396.
 1914. — — Ditlevsen. Medd. fra Grønland 23 p. 728.
 1927. — — Fauvel. Faune de France II p. 291.

Locality: Kangerdlugssuak. St. 40. 18 m. Clay. 1 specimen.

The single specimen of this otherwise very common annelid is 41 mm long. The tube is made of fine grey muddy clay.

Occurrence at East Greenland: "Danmark's" Harbour. 0—10 m.

Distribution: The species is widely distributed in the arctic seas; it is however not hitherto known as circumpolar. In the boreal zone it is known from Iceland, the Farøes and the coast of Norway; further it is most common in the Danish waters and is reported from Great Britain, France, the Mediterranean, the Black Sea, the West Indies, South Africa, Japan etc. The species will certainly prove to be cosmopolitan.

Fam. Sabellidæ.

30. *Potamilla neglecta* (M. Sars).

1850. *Sabella neglecta* Sars, M. Nyt Mag. f. Naturvid. 6 p. 83.

1865. *Potamilla neglecta* Malmgren. Nord. Hafs-Annul. p. 401.

1927. — — Johansson. Zool. Bidr. från Uppsala 11 p. 143.

Locality: Kangerdlugssuak. Behind the second dead glacier. 450 m. W. 2 specimens.

Only one of the specimens is intact; its total length is 44 mm, the length of the gill-crown is 13 mm. The colour is yellowish white. The tube consists of sandgrains incrusting the parchment-like inside layer of the tube. This latter is open at either end and has the shape of a long, slender cone, the distal end being the narrower one. It is furthermore quite hard and stiff.

Occurrence at East Greenland: Off Franz Joseph's Fjord 200—300 m. — East of Greenland: 73°55' N., 19°20' W. — (JOHANSSON).

Distribution: *Potamilla neglecta* is on the northern hemisphere mainly an arctic species. The bottom temperature at its findingplaces is very often below zero. Its vertical distribution ranges far into the deep-sea. It will certainly prove to be a circumpolar species. Now it is reported from the coast of West Greenland, North of Eurasia, Korea; Great Britain, and from several localities in the Antarctic by the Swedish Antarctic Expedition 1901—03.

31. *Branchiomma infarcta* Kr.

1856. *Sabella infarcta* Krøyer. Danske Vidensk. Selsk. Forh. p. 21.

1861. *Dasychone decora* Sars. Vidensk. Selsk. Forhandl. Christiania p. 124.

1865. *Dasychone infarcta* Malmgren. Nord. Hafs-Annul. p. 403.

1914. — — Ditlevsen. Medd. fra Grønland. 23 p. 730.

1927. *Branchiomma infarcta* Johansson. Zool. Bidr. från Uppsala 11 p. 159.

Locality: Kangerdlugssuak. St. 1. 200 m from the glacier. 80 m. W. 3 specimens. — St. 1 a. 65 m. Muddy clay. 6 specimens. — St. 2. 100 m. W. Gravel. 1 specimen. — St. 3. 70. Stony bottom. 3 specimens. — St. 5. 50 m. Stony bottom. 1 specimen.

Several of the specimens at hand are very large; the tubes are parchment like, thickly covered with fine grey mud or clay, always a

little longer than the worm itself. This empty distal part is always strongly curved and the walls of it squeezed together; this may probably be due to the influence of alcohol; when the worm is alive we must suppose the tube to be soft and the distal part wide open so that the inhabitant may move to and fro inside the tube in its whole length. The tube is never closed distally. The colour of the gill-crown is yellow or rusty-red; at the base of each of the dorsal appendages of the gills a distinct red spot is found. In one of the largest specimens the ratio between trunk and gill-crown is 75 : 43 mm.

Occurrence at East Greenland: "Danmark's" Harbour. 0—10 m. — Mackenzie Bay 12—35 m.

Distribution: The species is arctic circumpolar, common at the coasts of Spitzbergen (AUGENER 1928); Nova Zembla. It is previously known from West Greenland, Iceland and northern Norway.

32. *Euchone papillosa* M. Sars.

1850. *Euchone papillosa* Sars, M. Nyt Mag. f. Naturvidsk. 6 p. 83.

1856. — — Krøyer. Danske Vidensk. Selsk. Forhandl. 18.

1883. — — Levinsen. Vid. Medd. fra Dansk naturh. Foren. p. 189.

1914. — — Ditlevsen. Medd. fra Grønland. 23 p. 730.

Locality: Kangerdlugssuak. St. 1 a. 65 m. Muddy clay. Ca. 15 specimens.

A number of very long thin tubes of this annelid is present, several of them are inhabited by the worm. The average length of the tubes is about 180 mm. The worm itself is only about 50 mm long, the gills are about 8 mm. The hind ends of the tubes are not incrustated with clay and a piece of the inner parchment-like layer about 10 mm long is seen here. The animals are all retracted in their tubes, many of them so far backwards that their anal ends are close to the part not covered with mud. The abdominal ventral shields are divided by the anal groove.

Occurrence at East Greenland: Hitherto unknown.

Distribution: The species is known from Spitzbergen, the Finnmarken, the West coast of Scandinavia, West Greenland, and the Danish waters. The distribution is thus arctic-boreal; the species enters the deep-sea.

33. *Chone dunéri* Malmgr.

1867. *Chone dunéri* Malmgren. Annul. polychæta p. 116.

1871. *Chone longocirrata* Sars. Vidensk. Selsk. Forhandl. Christiania p. 415.

1927. *Chone duneri* Fauvel. Faune des France II p. 336.

Locality: Kangerdlugssuak. St. 21. 40—50 m. 1 specimen.

In the great collection of *Chone infundibuliformis* one fragmentary specimen of this species was found. Only the gill-crown and the thoracal

segments are at hand. The species is however easily identified by the whip-like elongation of the gills which does not carry any gill-filaments.

Occurrence at East Greenland: Hitherto unknown and entirely unknown from Greenland.

Distribution: The species is widely distributed in the Arctic. It is known from Spitzbergen in some few specimens (AUGENER), the Kara Sea, the West coast of Norway; Iceland; the Danish Waters (DITLEVSEN 1926) Ireland; Madeira; the Mediterranean.

34. *Chone infundibuliformis* Kr.

1856. *Chone infundibuliformis* Krøyer. Danske Vidensk. Selsk. Forhandl. p. 33.

1861. *Chone Krøyeri* Sars, M. Vidensk. Selsk. Forhandl. Kristiania p. 61.

1914. *Chone infundibuliformis* Ditlevsen. Medd. om Grønland 23 p. 731.

1927. *Chone infundibuliformis* Fauvel. Faune de France II p. 335.

Locality: Kangerdlugssuak. St. 2. 100 m. W. Gravel. 1 specimen.
— St. 21. 40—50 m. ∞ specimens.

From St. 21 a great lot of specimens have been collected. The tubes are entangled into a great heap and it is almost impossible to disentangle them without molestation. The greater part of the tubes are covered with a thin layer of grey muddy clay, the rest only consists of the inner parchment-like transparent secretion. Many of them are empty; the worms may leave the tubes and live freely.

Occurrence at East Greenland: The Stormbugt. 10—30 m.
— The Strait between Renskær and Maroussia. 50—100 m. — Sabine Island 3 m.

Distribution: Arctic circumpolar. West Greenland. The species is the most common Sabellid from the waters round Spitzbergen. It is also found in the Danish waters, at the coast of Ireland, the Farøes and the West coast of Norway.

Fam. *Serpulidæ*.

35. *Protula tubularia* (Mont.).

1803. *Serpula tubularia* Montagu. Trans. Linn. Soc. London 7 p. 513.

1883. *Protula media* Stimpsson in Levinsen's Vid. Medd. fra Dansk Naturh. Foren. p. 205.

1894. *Protula tubularia* Saint-Joseph. Ann. Sci. nat. (8. S.) 17 p. 362.

1908. *Protula media* Stimpson in Ehlers: Die bodensässigen Anneliden d. deutschen Tiefsee-Exped. p. 160.

1927. *Protula tubularia* Fauvel. Faune de France II p. 382.

1928. — — Augener. Fauna arctica 5 p. 811.

1929. — — Ditlevsen?. Zool. of the Farøes. 16. p. 55.

Locality: Mikisfjord. 175 m. Mud. 3 preserved specimens; several empty tubes.

The serpulid is characteristic in lacking the operculum. In none of the specimens the corkscrew-like curving of the gills was seen as described by DITLEVSEN (loc. cit.) in his problematic *Protula tubularia* from the Faröes. The colour is yellowish-white. Of the red transversal bands of the gills only faint traces are left. The length of the greatest specimen is 45 mm exclusive of the gill-crown. This latter is 18 mm. One of the specimens carries a great mass of eggs closely pressed to the outside of the posterior part of the body. The eggs are ventrally placed. The uncini carry a great number of rows of exceedingly fine spines of equal size. The edge therefore much resembles a file. EHLERS uses the term "feilkerbig", SAINT-JOSEPH "feilenzähnig". — The tubes are white, calcareous, with numerous rings, some more distinct than others.

Occurrence at East Greenland: Hitherto unknown.

Distribution: The sea between Norway and Spitzbergen, and here and there in other arctic seas. West Greenland. Furthermore the Channel, Great Britain, France, the Atlantic; the Mediterranean and the Indian Ocean.

36. *Apomatus globifer* Théel.

1879. *Apomatus globifer* Théel. Kungl. Svenska Vetensk. Akad. Handl. 16 Nr. 3. p. 66.

1914. *Apomatus globifer* Ditlevsen. Medd. om Grønland 23 p. 733.

Locality: Mikisfjord 175 m. Mud. 2 specimens.

The two specimens measure 42 mm and 30 mm the gill-crown included. Colour white; the largest specimen has a rusty-red girdle 8 mm broad just behind the thoracal region. The utmost points of the gills are rolled inwards so as to form small balls. The operculum is globular with a white delicate membrane-wall. The calcareous, white tube is nearly twice as long as the worm, very slightly curved; built up of distinctly separated parts ending in free collar-like rings inside which the next part arises like cornets put into each other.

Occurrence at East Greenland: 76°35' N., 18°26' W. 150 m. — 76°47' N., 18°45' W. — Off Maroussia. 160—178 m. — 77°8' N., 16° W. 220—280 m.

Distribution: The species is widely distributed in the arctic. It is found both in shallow waters and it also enters the deep-sea. It is reported from Spitzbergen, from the sea between Norway and the Bear Island, and from the Norwegian coast. — It is not known from West Greenland.

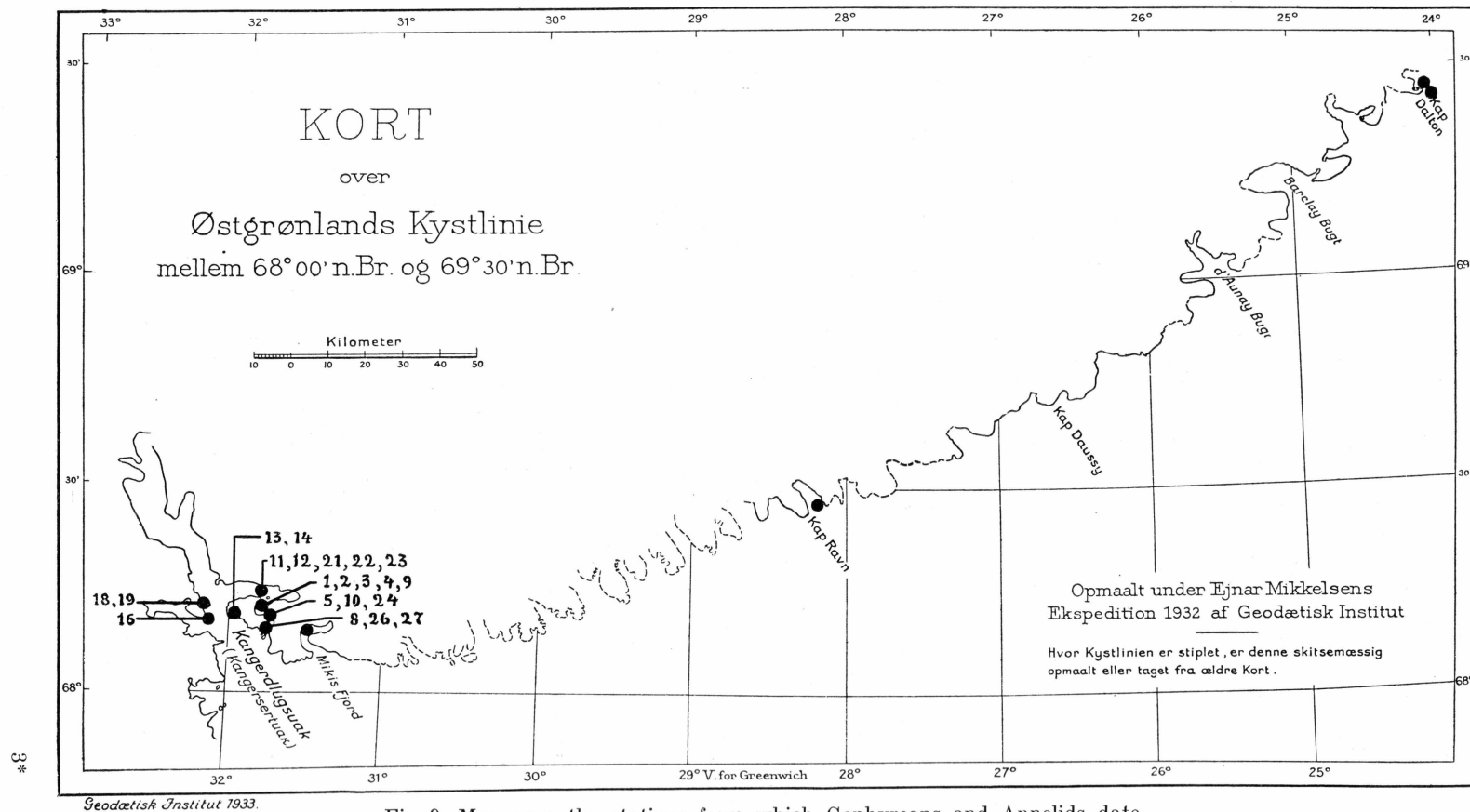


Fig. 9. Map over the stations from which Gephyreans and Annelids date.

Table.

Species	Distribution in waters east of Greenland		Further distribution.
	Lat. N.	Depth m	
<i>Harmothoe villosa</i> (Mlmgr.).....	76°—68°	100—200	mainly arctic and boreal; littoral and abyssal.
— <i>badia</i> (Théel).....	72°—68°	0—228	mainly arctic; boreal; littoral and low abyssal.
— <i>rarispina</i> (M. Sars).....	76°—68°	10—230	arctic, boreal; mainly abyssal.
— <i>imbricata</i> (L.).....	76°—65°	5—100	circumpolar. arctic, boreal, atlantic, lusitanian; littoral and abyssal.
— <i>nodosa</i> (M. Sars.)	76°— 68°	10—226	mainly arctic; boreal, littoral.
<i>Phyllodoce groenlandica</i> Ørst.....	70°—65°	30—500	arctic, boreal, lusitanian; littoral, low abyssal.
<i>Nephtys malmgreni</i> Theel.....	79°—68'	?	boreal, lusitanian; littoral, abyssal.
<i>Lumbriconereis fragilis</i> (O. F. Müll)	69°30'—68°	30—150	arctic, boreal, atlantic; littoral, abyssal.
<i>Nereis zonata</i> Mlmgr.	76°—68°	6—175	arctic, boreal, lusitanian; mainly littoral.
<i>Syllis</i> (<i>Typosyllis</i>) <i>fasciata</i> Mlmgr.....	abt. 68°	10—50	arctic, boreal; littoral. low abyssal.
<i>Ephesia gracilis</i> Rathke.....	abt. 68°	175	arctic, boreal; littoral.
<i>Laonice cirrata</i> (M. Sars).....	abt. 68°	130	arctic, boreal; littoral, low abyssal.
<i>Chætozone setosa</i> (Mlmgr.)	abt. 68°	175	arctic, boreal, lusitanian; littoral.
<i>Ammotrypane aulogaster</i> Rathke.....	abt. 68°	15	arctic, boreal, lusitanian, antarctic; littoral, low abyssal.
<i>Flabelligera affinis</i> M. Sars	76°—abt. 68°	8—100	arctic, boreal, lusitanian, antarctic; littoral, low abyssal.
<i>Brada villosa</i> (Rathke).....	abt. 68°	5—25	arctic, boreal, lusitanian; mainly littoral.

— granulata Mlmgr.....	abt. 77°—abt. 68°	30—300	arctic, boreal; littoral.
Euphrosyne borealis Ørst.....	abt. 68°	40—70	arctic, boreal; littoral.
Pseudoscalibregma longisetosum (Théel) ..	abt. 68°	175	arctic; littoral.
Asychis biceps (M. Sars).....	abt. 68°	175	arctic, boreal; littoral, low abyssal.
Praxillella gracilis (M. Sars).....	abt. 73°—abt. 68°	5—70	arctic; littoral, low abyssal.
Pectinaria hyperborea Mlmgr.....	76°—65°	10—30	arctic, circumpolar; littoral, low abyssal.
Amphicteis gunneri (M. Sars).....	abt. 68°	175	arctic, boreal, lusitanian, antarctic; littoral, abyssal.
Lysilla lovéni Mlmgr.....	abt. 68°	10—20	arctic, boreal.
Scione lobata Mlmgr.....	abt. 76°—abt. 68°	10—178	arctic, circumpolar; littoral, abyssal.
— flexuosa (Grube).....	abt. 68°	50	arctic; littoral.
Amphitrite cirrata O. F. Müll.	abt. 70°—abt. 68°	5—100	arctic, boreal; littoral.
Nicolea venustula (Mont.).....	abt. 68°	40—50	arctic, boreal, lusitanian; mainly littoral, low abyssal.
Terebellides strømi (M. Sars).....	abt. 70°—abt. 68°	0—18	arctic, boreal, lusitanian; cosmopolite (?) littoral: abyssal.
Potamilla neglecta (M. Sars).....	abt. 73°—abt. 68°	100—300	arctic, circumpolar, boreal, antarctic; littoral, abyssal.
Branchiomma infarcta Kr.....	abt. 73°—abt. 68°	0—200	arctic, boreal; mainly littoral, abyssal.
Euchone papillosa M. Sars.....	abt. 68°	65	arctic, boreal; littoral, abyssal.
Chone dunéri Mlmgr.....	abt. 68°	40—50	arctic, boreal, lusitanian; littoral.
— infundibuliformis Kr.	76°—abt. 68°	3—100	arctic, circumpolar, boreal; littoral, abyssal.
Protula tubularia (Mont.).....	abt. 68°	175	arctic, boreal, lusitanian, atlantic; littoral.
Apomatus globifer Théel.	iabt. 77°—abt. 68°	42—280	arctic, boreal; littoral, abyssal.

LIST OF LITERATURE

1928. AUGENER, H.: Die Polychæten von Spitzbergen. *Fauna arctica* 5 p. 649.
1914. DITLEVSEN, HJ.: Polychæte Annelider. *Conspectus Groenlandicæ*. Medd. om Grønland. 23 Supplem. p. 661.
1917. — Annelids I. The Danish "Ingolf Expedition. 4 Nr. 4.
1926. — Polychæta from the cruises of the Danish research-steamer "Dana" 1922 and 1923.
— Vid. Medd. fra Dansk Naturh. Foren. 80 p. 325.
1929. — Polychæta. Zool. of the Faroes. Nr. 16.
1923. FAUVEL, P.: Polychètes errantes. *Faune de France*. 5.
1927. — Polychètes sédentaires. *Faune de France*. 16.
1883. LEVINSSEN, G. M. R.: Systematisk-geografisk Oversigt over de nordiske Annulata, Gephyrea, etc. Vid. Medd. fra Dansk naturh. Foren.
1865. MALMGREN, A.: Nordiska Hafs-Annulata. Öfvers. af K. Vetensk. Akad. Förhandl. Stockholm. Nr. 1, p. 51, p. 181, p. 355.
1867. — Annulata Polychæta etc. Helsingfors.
1912. SMALL: Report on the Annulate polychæta collected in the North Sea and adjacent parts by the Scotch Fishery Board Vessel "Goldseeker". Part. 1. p. 181.
1879. THÉEL, HJ.: Les Annélides Polychètes des mers de la Nouvelle-Zemble. Kungl. Svenska Vetensk. Akad. Handl. 16 Nr. 3.
1925. WESENBERG-LUND, E.: Gephyreer. *Conspectus Groenlandicæ*. Medd. om Grønland. 23 Supplem. p. 81.
1928. — Gephyrea and Sternaspidae. Zool. of the Faroes. Nr. 20.
1929. — Some anatomical features subject to variation in *Phascolion strombi* (Mont.) Vid. Medd. fra Dansk Naturh. Foren. 88 p. 155.
1930. — Priapulidae and Sipunculidae. The Danish "Ingolf" Exped. 4 p. 7.
1932. — The Godthaab Expedition 1928. Gephyrea. Medd. om Grønland. 79 Nr. 3.
1913. WHARTON, L.: A. description of some Philippine *Thalassema* with a revision of the genus. *Philippine Journ. of Sci.* 8 p. 243.
1912. WOLLEBÆK: Nordeuropæiske Annulata Polychæta I. Skrift. Vid.-selsk. Kristiania. Nr. 18.
-