MEDDELELSER OM GRØNLAND
UDGIVNE AF
KOMMISSIONEN FOR VIDENSKABELIGE UNDERSØGELSER I GRØNLAND
Bd. 159 · Nr. 3

ON A SMALL COLLECTION OF FREELIVING MARINE NEMATODES FROM GREENLAND AND SOME OTHER ARCTIC REGIONS

WITH REVIEWS AND ANALYSES OF THE COMPOSITIONS OF ALL HITHERTO KNOWN ARCTIC NEMATODE FAUNAS

BY

C. A. ALLGÉN

WITH 12 FIGURES IN THE TEXT

KØBENHAVN
C. A. REITZELS FORLAG
BIANCO LUNOS BOGTRYKKERI A/S
1957

About 10 years ago besides the rich Nematode material, collected by the Swedish Antarctic Expedition (1901—1903) (in Press since June 1955), also were sent to the author for examination from the Zoological State Museum, Stockholm, numerous tubes, containing a large number of alcohol-preserved scandinavian, espec. swedish freeliving marine Nematodes from the Gullmarfjord (Bohuslän, Westcoast of Sweden)[1]).

In this material also were found some tubes, containing arctic marine Nematodes, which will be described in this paper.

In the collections were found in all 29 species, belonging to 25 genera. 2 genera and 11 species are new to science. These 29 species are dating from the following localities: Greenland: 5, Iceland: 1, Labrador: 12, Spitzbergen: 8, Aleutic Islands: 4, Hackluyts Headed: 1, Giskö: 1 and from unknown locality in the arctis: 1.

To the named 29 species may be added an occasionally found, undetermined species of the genus *Mermis* DUJARDIN.

Short historical review of the investigations of the arctic freeliving marine Nematode Fauna.

As far as I know the first find of arctic freeliving marine Nematodes is dating from Iceland, from which island LEUCKART (1849) has described the *Hemipsilus* (syn. *Thoracostoma* MARION 1870) *trichodes* LEUCKART.

BÜTSCHLI (1874) has refound *Pontonema vulgare* (Bastian) in a sponge from Greenland, and LEVINSEN (1881) has described a new species of *Claparédiellids*, *Cl. grönlandica* also from Greenland.

LINSTOW (1900) has in "Die Fauna arctica" mentioned 5 species from the seas in the environs of Spitzbergen and 2 species from the Bear Island.

SAVELJEV (1912) has published finds of 44 species from the Kola-fiord and 15 species from the Relictsea Mogilnoje on the island Kildin.

FILIPJEV (1927) has described numerous further species from the first named locality and also in the same paper from many arctic loca-

[1]) I should wish to thank very much Prof. N. ODHNER, Stockholm, who has sent me the small but rather interesting collection of arctic freeliving marine Nematodes.

lities off the coast of Europe and Siberia (from the Kolafiord until the Bering's Sea).

Already in 1916 the russian Helminthologe, indeed, also has mentioned some species from the last named sea and the coast of Mourman, and STEINER has in the same year described 52 species from the Barent's Sea, the total number species of which together with the further species described by FILIPJEV (1927) makes 60.

MENZEL (1920) has published some finds of marine Nematodes from Greenland and the coast of Mourman.

DITLEVSEN has firstly made known a new species of the freshwater- and terrestrial genus *Dorylaimus*, *D. maritimus*, from Greenland. The same author has in his working out the Nematodes of the Ingolf Expedition (1926) described many species from Greenland, Iceland and Jan Mayen and later on (1928) numerous other species from Greenland.

The author (1935) has published some finds from different arctic localities (among them New Foundland) and has later on (1954) described numerous species from East Greenland and Jan Mayen (Swedish Expedit. 1899).

Finally it must be pointed out, that according to MEYL (Nematologische Nachrichten 2/55, 15. IV, 1955) a new paper of the excellent Nematologist I. N. FILIPJEV on arctic marine Nematodes occasionally has been found in the library G. STEINER's in Beltsville. In this important paper—hitherto probably unknown to the Nematologists—FILIPJEV (1946) has created 2 new genera: *Nummocephalus* for *Cyatholaimus cotylophorus* STEINER and *Tridentella* and has described besides 2 varieties 30 species, 25 of which being new to science. All species are dating from the New Siberian Islands.

Localities.

191. Greenland. Vaigat, fine clay. 350 fath.
194. Greenland. Egedesminde, stony bottom, 80—100 fath. 16.7.1870. ÖBERG coll.
195. Greenland. Qeqertaq. Torssukâtak, Icefiord, clay, 35—40 fath. 31.8. 1870. ÖBERG coll.
196. Greenland. Godhavn. Mud, 5—10 fath. "Ingegerds and Gladans Exped." 30.6.1871.
198. Hackluyts Headed. Locality? O. TORELL coll. 1858.
199. Spitzbergen. Whatvisb. A. MILLGREN coll. 1864.
203. Spitzbergen. Lat. 80°N.—Long. 4°33′ East. 950 fath.
209. Giskö. Locality? Sand, 40 fath. von YHLEN coll.
272. Spitzbergen. Lat. 76°36′ N.—Long. 12°10′ East. 50′ west from Hornsund. Transient clay, 1750 m. Spitzbergen-Exped. 1898.

319. Locality? G. C. CEDERSTRÖM coll. 3.11.1895.
347. Iceland. Bemfiord, Coral-bank. 15 fath. TORELL coll.
568—569. Labrador. Windy Island. 17 Seamiles S.E. Davis Inlet. 4—5 fath. 16.8. 1939. C. G. WENNER coll.
572. Labrador. Fermey Nain.
605. Spitzbergen. Wangats Islands. 30 fath. Spitzbergen-Exped. 1861.
606. Greenland. Ritenbenk. Stony bottom, 15—20 fath. coll. 1870.
653. Aleutic Islands. Unalaska. Pool at ebb-tide. 2.7.1932. E. HULTHÉN coll.

List of Species.

Anticoma limalis BASTIAN.
Stenolaimus marioni SOUTHERN.
Leptosomatum elongatum BASTIAN.
— *microlaimum n. sp.*
Thoracostoma trichodes (LEUCKART).
— (*Pseudocella*) *elegans* DITL.
— *multipapillosum n. sp.*
— *macrochaetum n. sp.*
Synonchus fasciculatus COBB.
Ritenbenkia macropapillata n.g. n.sp.
Phanoderma campbelli ALLGÉN.
Enoplus communis BASTIAN.
Enoplolaimus (*Oxyonchus*) *dentatus* DITLEVSEN.
Oncholaimus curvicauda n. sp.
Oncholaimellus arcticus n. sp.
Pelagonema papillatum n. sp.
Catalaimus max-weberi DE MAN.
Eurystomatina ornatum (EBERTH).
Paracanthonchus coccus (BASTIAN).
Cyatholaimus unalaskensis n. sp.
Monoposthia costata (BASTIAN).
Draconema cephalatum COBB.
Neochromadora poecilosoma (DE MAN).
Chromadorina macrolaima (DE MAN).
Chromadora crassicauda n. sp.
Sabatieria longicaudata FILIPJEV.
Microlaimus labradorensis n. sp.
Odontophora longisetosa ALLGÉN.
Aponcholaimus linhomoeoides n. g. n. sp.
Mermis spec.

THE SPECIES

Anticoma Bastian.

Anticoma limalis Bastian.

Locality: 569. Labrador. Windy Island, 17 Seamiles S. E. Davis Inlet. 16. 9. 1939. C. G. Wenner coll.

1 ♀ L. = 2,536 mm, $\alpha = 50{,}72$, $\beta = 5{,}07$, $\gamma = 18{,}65$
1 Juv. L. = 2,255 mm, $\alpha = 53{,}125$, $\beta = 5{,}67$, $\gamma = 18{,}68$[2])

In the sample 569 were found one female and an adult specimen of the short-tailed species *A. pellucida*, almost being regarded as synonymous with the cosmopolitan *A. limalis* Bast. described in the literature under different species names espec. under the name *Anticoma acuminata* (Eberth) from the southern hemisphere.[3])

Stenolaimus Marion.

Stenolaimus marioni Southern.

Localities: 194. Greenland, Egedesminde, stony bottom, 80–100 fath. 10. 9. 1870. Öberg coll. 1♀ with 2 eggs. — 195. Greenland. Qeqertaq, Torssukátak. Icefjord. 35—40 m. clay. 3. 8. 1870. Öberg coll. 1 ♂ and one ♀ with 10 eggs.

L. = 4,700 mm, $\alpha = 26{,}11$, $\beta = 2{,}85$, $\gamma = 10{,}44$, V = 77,66 %

Already Ditlevsen (1926) has mentioned this species from Greenland, of which only one single ♂ and 2 females were secured from the above named localities. The oesophagus is surrounded by the nervering in a distance of 0,6 mm from the frontend. The posterior thinned part of the tail measures a length of 0,25 mm i. e. a little more than the anterior part, the length of which makes 0,200 mm.

---

[2]) L = total length of the body, α = Body length: max. thickness, β = Body length: length of oesophagus and γ = Body length: length of tail. V = position of the Vulva in % of L. from the anterior end.

[3]) In view of the shape of the uniformly slender body the named specimens can purhaps in their external shape seem to be nearest similar to *Anticoma tenuis* Allgén (Zool. Anz. 1930, p. 249—250) from the Fuegian-Archipelago.

Leptosomatum BASTIAN.

Leptosomatum elongatum BASTIAN.

Localities: 203. Spitzbergen. Lat. 80°, Long. 4°32′. 950 fath., 1 ♂, 1 ♀. — 272. Spitzbergen. W. from Hornsund, Transient clay, 1750 m. — 605. Spitzbergen. Wangats Islands. 30 fath.

Of this large species, already known from the arctis, were secured some, as far as can be seen, rather typical specimens.

The female from 203 contained in the uteri 2 large shelleggs immediately in front of the vulva.

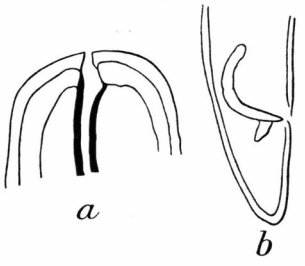

Fig. 1. *Leptosomatum microlaimum* n. sp. *a*. Head × 325. *b*. Tail × 45.

Leptosomatum microlaimum n. sp.

Locality: 272. Spitzbergen. W. from Hornsund. Transient clay. 1750 m.

$$L = 10{,}450 \text{ mm}, \quad \alpha = 43{,}5, \quad \beta = 5{,}5, \quad \gamma = 38{,}7$$

In its external shape this species is rather similar to the old *Leptosomatum elongatum* BAST., from which species it differs in some important directions.

The body is in its whole length absolutely of even thickness. Cuticle thick. The head is weakly demarcated from the body, truncate to rounded, at the frontend strongly chitinized.

Contrary to *L. elongatum* a very small, short, zylindrical buccal cavity, bordered by strongly chitinized walls, seems to be developed.

At the level of the constriction of the head there are 4 short, submedian bristles, not drawn in fig. 1a.

The oesophagus increases gradually posteriorly.

The wall of the intestine is thick.

The tail is short, conical, measuring 1.39 × the anal body diameter.

Spicules strongly curved, short, thickwalled, at the proximal end dilated, Arch-length = 0,240 mm. i.e. 0,92 of the anal body diameter.

Präanal papillae are lacking.

Thoracostoma MARION.

Thoracostoma trichodes (LEUCKART).

Localities: 191. Greenland. Vaigat. 6 ♀♀ and adult specimens. — 605. Spitzbergen. Wangats Islands. 30 fath. 1861 1 ♀.

L = 8,800 mm, $\alpha = 48{,}59$, $\beta = 4{,}19$, $\gamma = 44{,}0$, V = 71,59 %

This species—the oldest known species of the genus *Thoracostoma*, described under the name *Hemipsilus trichodes* from Iceland by LEUCKART in 1949 and also known from other arctic localities, is represented in the collections from Greenland and Spitzbergen by some typical female specimens.

Thoracostoma (Pseudocella) *elegans* DITLEVSEN.

DITLEVSEN 1921, p. 29.
DITLEVSEN 1926, p. 25—26, pl. V, fig. 3, 5, pl. VI, fig. 3, pl. VII, fig. 3.
SCHUURM. STEKH. 1935, p. 14, fig. 76 A—B.

In a sample from unknown locality in Spitzbergen another specimen—one male—of a *Thoracostoma* was recorded, which in all respects seems to agree so well with *Thoracostoma elegans* DITLEVSEN, that I must refer it to that species.

This species was discovered already 1921 in an adult specimen from the Campbell Island, but described firstly and even on basis of new finds from Skagerack (off Hanstholm) and from the waters north of Iceland in the danish author's investigation of the Nematodes of the Ingolf-Expedition (1926).

The refound male in Spitzbergen is, as said above, a typical representative of this northern (and southern) species, being closely related to *Th. trichodes* (LEUCKART), from which cosmopolitan species it differs especially by the rudimental Ocelles, instead of which the oesophagus is provided with pigment-accumulations.

Compar nearer the description of *Schuurm. Stekh.* 1935.

Thoracostoma multipapillosum n. sp.

Locality: Iceland. Bemfjord. Coral-bottom, 15 fath. 1 ♂, 1 ♀

♂ L = 24,0 mm, $\alpha = 80{,}0$, $\beta = 6{,}58$, $\gamma = 17{,}78$
♀ L = 30,0 mm, $\alpha = 100{,}0$, $\beta = 9{,}375$, $\gamma = 19{,}61$

A rather large and slender species, the body of which is on the whole of even thickness and tapers only in the oesophageal region gradually. Cuticle thick. The head is truncate to rounded. Head-armour with broad lobes and bordered by strongly developed supporting plates.

The oesophagus is of mediate length, surrounded by the nervering in a distance from the frontend of the body, which makes 24,66 % in the male and 28,13 % in the female of the length of the oesophagus.

The tail is very short, conical, clumsy, posteriorly rounded, ventrally weakly concaved. Its length makes 0,136 mm i.e. 0,697 of the anal body diameter.

Vulva and female organs only weakly developed.

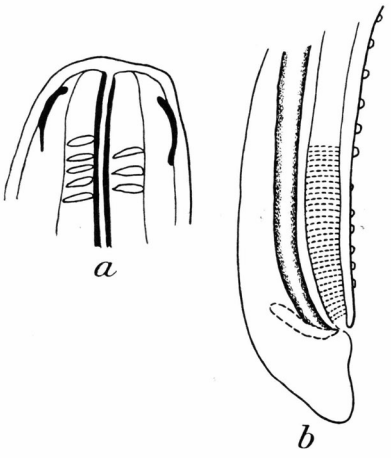

Fig. 2. *Thoracostoma multipapillosum* n. sp. *a*. Head × 325. *b*. Posterior part of body ♂ × 45.

Also the spicules could not be studied nearer. They are probably short and curved.

In the male there is a row of about 15 small papillae, making a total length of 1 mm. The anteriormost papillae are very small, the 5 following contrary rather large, while the remaining papillae are more or less weakly developed.

All papillae are provided with a small central hair.

Thoracostoma macrochaetum n. sp.

Locality: 198. Hackluyts Headed. 1 ♀ with 2 elongated eggs.

L. = 18,550 mm, $\alpha = 104{,}21$, $\beta = 11{,}25$, $\gamma = 92{,}75$

Large Nematode. Body on the whole evenly thick and only tapering a little in the anterior half of the oesophageal region.

Cuticle thick. Head demarcated from the body and very strongly chitinized. The subcuticular strengthenings of the head weakly developed.

Head provided with 4 pairs of submedian bristles, the posterior bristle of each pair being more strongly developed than the anterior bristle.

Tail conical. It contains 3 glands, of which 2 are situated immediately before the anus.

There are 2 elongated eggs behind the vulva.

Dimensions: 450 × 153 μ.



Fig. 3. *Thoracostoma macrochaetum* n. sp. *a*. Head × 490. *b*. Posterior part of body × 45. *c*. Posterior end of tail × 325.

Synonchus COBB.

Synonchus fasciculatus COBB.

Locality: 209. Giskö. Sand. 40 fath. 1 ♀, v. YHLEN coll.

A single female was found, the tail of which seems to be a little more slender than in the type-species, but which agrees rather well in all other directions with this species, described already by COBB (1893) from the Bay of Naples.

This species contained 3 elongated shelleggs, namely 2 behind and one before the vulva.

Ritenbenkia nov. gen.

Ritenbenkia macropapillata n. sp.

Locality: 606. Greenland. Ritenbenk, Stony bottom. 5—20 fath. 1870 1 ♀.

L. = 29,240 mm, $\alpha = 149{,}7$, $\beta = 4{,}78$, $\gamma = 100{,}92$

A large, posteriorly strongly winded, darkly coloured Nematode, probably belonging to the *Leptosomatids*, was secured in the named sample from Greenland.

Body on the whole of even thickness, and only gradually thinned in the anterior part of the oesophageal region.

Cuticle smooth. Head truncate, provided at the frontend with 3 short, large, conical spines and at the middle of the buccal cavity with 4 large submedian bristles, not drawn in fig. 4 a.

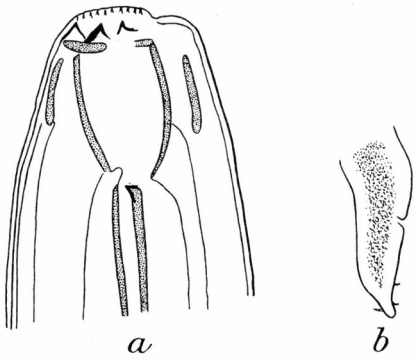

Fig. 4. *Ritenbenkia macropapillata* n. g. n. sp. *a*. Head × 490. *b*. Tail × 45.

Buccal cavity length-striated in the anteriormost part, surrounded by plates, bordered by very thickened, strongly chitinized walls, large and broad, armed with a tooth of Enchelidiid type, tapering posteriorly.

The oesophagus, the lumen of which is bordered by thin walls, is elongated, in its whole length evenly thick.

Tail short, conical, posteriorly at the ventral side weakly curved.

The position of the vulva could not be stated, and also the female organs were not to be analysed nearer.

Phanoderma Bastian.

Phanoderma campbelli Allgén.

Locality: 605. Spitzbergen. Wangats Islands. 30 fath. Spitzbergen Expedition 1861.

$$\varphi \, L = 4{,}600 \text{ mm}, \quad \alpha = 46{,}0, \quad \beta = 9{,}2, \quad \gamma = 38{,}33$$

Only 2 adult specimens recorded, probably being synonymous with this southern species, already known from Norway.

Enoplus BASTIAN.

Enoplus communis BASTIAN.

Localities: 196. Greenland. Godhavn, Mud. 5—10 fath. 30. 6. 1871. "Ingegerds and Gladans Expedit." 2 ♀♀ — 569. Labrador. Windy Island. S.E. Davis Inlet, 5 fath. 16. 9. 1939 C. G. WENNER coll. 1 juv.

Juv. L = 3,0 mm, $\alpha = 23{,}44$, $\beta = 5{,}0$, $\gamma = 10{,}0$

Only 2 females and an adult specimen—typical in all respects—were secured in the samples from the named localities.

In one of the two females were found 7 eggs in the anterior and 5 eggs in the posterior branch of the uteri; in the second female there were evenly many eggs in the branchs of the uteri.

Enoplolaimus DE MAN.

Enoplolaimus (*Oxyonchus*) *dentatus* DITLEVSEN.

Localities: 195: 3 ♀♀, 572. Labrador. 2 ♀♀.

572 ♀ L = 2,858 mm, $\alpha = 42{,}03$, $\beta = 5{,}20$, $\gamma = 11{,}21$, V = 54,23 %
572 ♀ L = 2,700 mm, $\alpha = 39{,}71$, $\beta = 4{,}5$, $\gamma = 13{,}23$

Body slender. Buccal cavity large. Median jaws with strongly developed conical teeth. Lateral jaw cylindroconical. Cephalic bristles submedian, very slender and only a little shorter than the corresponding head diameter.

Tail slender, behind the anus ventrally swollen, tapering gradually in the 3 anterior fifths, more strongly thinned in the 2 posterior fifths.

Oncholaimus DUJARDIN.

Oncholaimus curvicauda n. sp.

Localities: 194. Greenland. Egedesminde, stony bottom, 80—100 fath. 10. 9. 1870: 12 ♀♀, 5 juv. — 195. Greenland. Qeqertaq, Torssukâtak, Icefjord, 35—40 fath. clay, 31. 8. 1870 ÖBERG coll. 1 ♀ — 199. Spitzbergen. Whatvisberg, 1864. A. MILLGREN coll. 1 ♀.

199. ♀ L = 10,071 mm, $\alpha = 49{,}36$, $\beta = 9{,}59$, $\gamma = 45{,}57$,
194. ♀ L = 8,954 mm, $\alpha = 40{,}7$, $\beta = 9{,}95$, $\gamma = 43{,}89$, V = 71,48 %

From the above named localities some specimens of an *Oncholaimid* (unfortunately no ♂) were secured, which in their general shape and in the structure of the buccal cavity are very similar to *Viscosia langrunensis* DE MAN, from which they differ, however, by the position of the vulva, being situated rather far posteriorly. Therefore this species must belong to the old genus *Oncholaimus Duj.*

The head is provided with 2 crowns of cephalic bristles, one at the anterior and the other at the posterior end of the buccal cavity.

The buccal cavity, bordered by strongly thickened walls, is large and broad.

The *right* subventral tooth is evidently more strongly elongated and pointed but on the whole not more strongly developed than the *left* one, being larger than the dorsal tooth.

The tail is firstly conical, then curved, thin, about evenly thick. The conical part of the tail is shorter (102 μ) than the posterior thinned cylindrical part, measuring 119 μ.

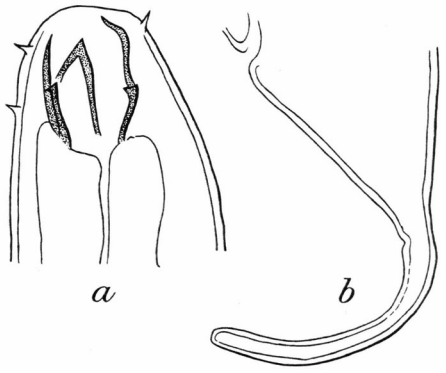

Fig. 5. *Oncholaimus curvicauda* n. sp. *a*. Head × 325. *b*. Tail × 325.

Only the anterior branch of the uteri is more strongly developed and provided with a reflexed ovary. It contains in a row from the vulva anteriorly 4—11 shelleggs. In the female from the uncertain locality 199 there was in the uterus one egg at the level of the vulva and 2 eggs before the vulva.

Oncholaimellus DE MAN.

Oncholaimellus arcticus n. sp.

Locality: 572. Labrador. An adult female.

L = 1,960 mm, $\alpha = 39{,}2$, $\beta = 4{,}9$, $\gamma = 17{,}82$

Although the single specimen from Labrador agrees on one side—in the position of the dorsal tooth of the buccal cavity—with *Viscosia langrunensis* DE MAN, on the other side—by the shape of the tail—with *Viscosia viscosa* (BASTIAN), it seems, indeed, not only in its external shape but also by the structure and armature of the buccal cavity espec. by the strongly developed left subventral tooth, nearest filling out the buccal cavity, to be closely related to *Oncholaimellus* DE MAN (1890), to wich genus I therefore must refer this species.

The body is elongated, rather slender and evenly thick.

Cephalic bristles were not found.

The buccal cavity, bordered by moderately thickened walls, is $2\,^1/_2$ times deeper than broad. It measures namely a length of 25 μ and a broadness of 10 μ. The *left* subventral tooth is very large. It fills out the greatest part of the buccal cavity and its point is situated immediately behind the frontend. The right subventral tooth is much smaller,

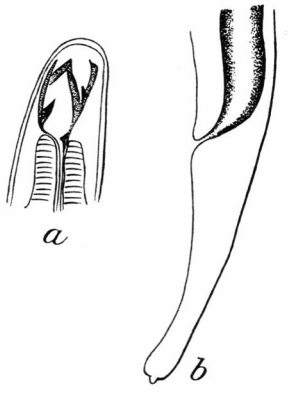

Fig. 6. *Oncholaimellus arcticus* n. sp. *a*. Head × 490. *b*. Tail × 325.

and the dorsal tooth is placed rather far anteriorly, about at the level of the last named tooth, i.e. 10 μ behind the frontend.

The tail is rather similar to that of *V. viscosa*. It is immediately behind the anus swollen, gradually tapering, but contrary to *V. viscosa* posteriorly strongly swollen.

The vulva was not to be stated. Female organs were only weakly developed.

Pelagonema COBB.

Pelagonema papillatum n. sp.

Locality unknown: 319? 3. XI. 1895. G. E. Cederström coll. 2 ♀♀.

L = 33,670 mm, α = 84,175, β = 8,27, γ = 11,225

From unknown locality in the arctis there are 2 females of another *Oncholaimid*, the buccal cavity of which is so similar to *Pelagonema* COBB, that I must preliminary, although with some hesitation, refer them to that genus.[4])

[4]) Owing to the buccal cavity, being rather different in shape and structure from the type-species, this species must probably be referred to a new Subgenus or purhaps Genus, after the locality (arctis) called *Arctopelagonema*.

Large Nematode, the body of which is evenly thick in its whole length.

The head is truncate to rounded, provided at the frontend with 10 strongly developed, at the end rounded papillae.

Buccal cavity large, deep, cylindrical, bordered by irregularly thickened walls and totally unarmed.

Tail short, conical.

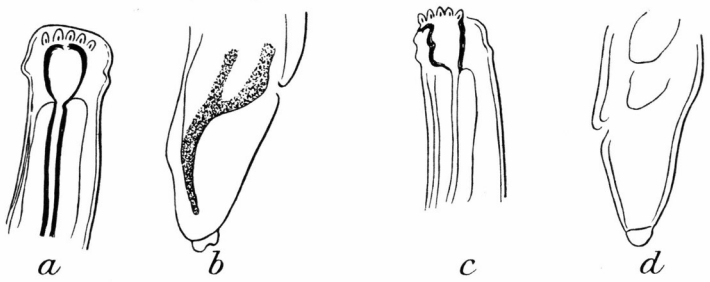

Fig. 7. *Pelagonema papillosum* n. sp. *a, c.* Head × 45. *b, d.* Tail × 45.

Catalaimus Cobb.

Catalaimus max weberi de Man.

Locality: 653. Unalaska; Aleutic Islands, in a pool at ebb-tide 1 ♀. E. Hulthén coll.

$L = 4{,}870$ mm, $\alpha = 47{,}75$, $\beta = 4{,}43$, $\gamma = 22{,}14$

A single specimen of the genus *Catalaimus* Cobb, found in the named sample, seems to be a typical representative of this species, described by de Man in 1922 from the island Walcheren.

The uteri contained 3 shelleggs, namely one in front of the vulva and 2 behind the female opening. The eggs are elongated with the lengths: 204, 177 and 153 μ, while they are of even thickness: 85 μ.

Eurystomatina Schuurm. Stekhoven.

Eurystomatina ornatum (Eberth).

Locality: 653. Unalaska, Aleutic Islands. in a pool at ebb-tide.

1 ♂, 1 ♀, 1 juv. E. Hulthén coll. 1932

From the above named locality 3 rather elongated and slender specimens (one of them a male) are dating, which seem to be identical to this worldwidely distributed species of *Enchelidiids*.

Paracanthonchus MICOLETZKY.

Paracanthonchus coecus (BASTIAN).

Locality: 653. Unalaska, Aleutic Islands. In a pool at ebb-tide. 2 adult specimens. E. HULTHÉN coll. 1932.

Cyatholaimus BASTIAN.

Cyatholaimus unalaskensis n. sp.

Locality: 653. Unalaska, Aleutic Islands. In a pool at ebb-tide. 1 ♀. E. HULTHÉN coll. 1932.

L = 1,450 mm, $\alpha = 26{,}36$, $\beta = 8{,}53$, $\gamma = 14{,}22$

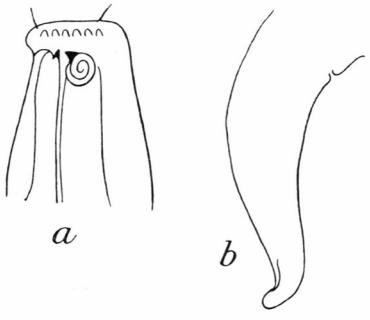

Fig. 8. *Cyatholaimus unalaskensis* n. sp. *a*. Head × 490. *b*. Tail × 325.

Body slender, on the whole of even thickness.

Cuticle annulated and structured in usual manner.

Head truncate, provided with spines and bristles.

Buccal cavity broad, but shallow, armed with an anteriorly directed, acute dorsal tooth, opposite to which a smaller ventral tooth is situated.

At the level of the teeth there is a circular, spiral-shaped organ, probably representing the lateral organ, being small and measuring only $^1/_4$ of the corresponding head-diameter.

Oesophagus evenly thick. There is no bulb.

The tail is plump, conical.

Vulva and female organs were not to be stated.

Monoposthia DE MAN.

Monoposthia costata (BASTIAN).

Locality: 572. Labrador.

♂ L. = 1,430 mm, $\alpha = 23{,}83$, $\beta = 7{,}33$, $\gamma = 11{,}0$
Juv. L = 1,650 mm,. $\alpha = 27{,}5$, $\beta = 8{,}46$, $\gamma = 12{,}14$

The 2 specimens, secured from the sample 572, seem in every respect to be rather typical representatives of this old North-Sea species.

The body is short and clumsy. The cuticle is strongly annulated and structured by 8 lengthrows of spines.

The head is rounded, strongly chitinized, provided with 4 submedian bristles, about as long as the corresponding head diameter.

The dorsal tooth of the buccal cavity is strongly developed.

Oesophagus on the whole thin, but with a large, strongly muscular bulb, measuring 60 × 34 μ.

Lateral organs situated far anteriorly.

Tail short, conical. Spicular-apparatus typical.

Draconema Cobb.

Draconema cephalatum Cobb.

Locality: 605. Spitzbergen. Wangats Islands. Spitzbergen-Exped. 1861.

δ L = 1,207 mm, α = 17,65, β = 8,87, γ = 10,06

A typical male specimen of this worldwidely distributed species, described by Cobb (1913) and already known from arctic regions (Steiner 1916, Menzel 1920), was secured in the sample 605 from Spitzbergen.

Neochromadora Micoletzky.

Neochromadora poecilosoma (de Man).

Locality: 572. Labrador. Fermy Nain. C. G. Wenner coll. 31. 7. 1939. 1 δ, 3 $\varphi\varphi$.

δ L = 1,587 mm, α = 27,36, β = 8,35, γ = 8,49
φ L = 1,680 mm, α = 24,1, β = 8,4, γ = 8,98, V = 50,60 %
φ L = 1,070 mm, α = ?, β = 5,57, γ = 5,25

Not only in their external shape but also in the internal organization the named specimens are so similar to *Neochromadora poecilosoma*, that I must refer them to this Northsea-species, with which they agree rather well.

Body moderately slender, tapering towards both extremities, espec. in the anterior part.

Cuticle annulated and structured on the whole uniformly by evenly small granules.

Head truncate to rounded, provided with 4 submedian pairs of bristles, the posterior of which being more elongated and slender that the anterior ones.

Buccal cavity small, armed with an also small acute dorsal tooth.

Oesophagus short, with a moderately large bulb, the dimensions of which are 37,4 × 30,6 μ.

Tail cylindroconical, tapering gradually in the anterior half and evenly more strongly thinned in the posterior half, provided with endtip.

Vulva situated rather exactly in the middle of the body. Female organs paired symmetrical, with shortly extended gonads and dorsally reflexed ovaries. In each branch of the uteri a rounded to oval egg.

Spicules short, plump, anteriorly rounded, posteriorly pointed. Accessory piece situated immediately behind the spicules, measuring half their length.

Chromadorina FILIPJEV.

Chromadorina macrolaima (DE MAN).

Locality. 272. Labrador. 1 ♂.

$$L = 0{,}942 \text{ mm}, \quad \alpha = 31{,}4, \quad \beta = 6{,}73, \quad \gamma = 8{,}56$$

From Labrador also a rather small animal is dating, measuring only a length of 0,940 mm., being not only in its whole general shape but also in its internal organization so similar to *Chr. macrolaima* (de Man), that it must be referred to that old species.

From the oesophagus until the anus the body is of absolutely even thickness and tapers only in the oesophageal region gradually.

The cuticle is finely annulated and structured by granules, of which 4 lengthrows in the lateral fields are larger than the other granules of the cuticle.

The head is weakly demarcated from the body, rounded, provided with small submedian bristles, measuring about $^1/_3$—$^1/_4$ of the corresponding head diameter.

Lateral organs situated near the frontend, typical, spiral-shaped.

Buccal cavity small, armed with a dorsal, conical, clumsy tooth.

Oesophagus short, slender, with a rather large, strongly muscular bulb.

Tail slender, tapering strongly posteriorly, provided with an elongated, conical endtip. It measures 5 × the anal body diameter.

Spicules curved and rather short, measuring 1,36 × the anal body diameter.

There is a row of 13 large praeanal papillae, measuring a length of 120 μ. The distance between the papillae is 8 μ.

Chromadora BASTIAN.

Chromadora crassicauda n. sp.

Locality: 568. Labrador. Windy Island. 17 seamiles S.D. Davis Inlet. 4 fath. C. G. WENNER coll. 16. 8. 1939. 1 ♀.

L = 1,650 mm, $\alpha = 24{,}26$, $\beta = 9{,}17$, $\gamma = 10{,}78$, V = 43,03 %

Body elongated, on the whole absolutely of even thickness, tapering only in the oesophageal region scarcely noticeably.

Cuticle thin and finely annulated. Head weakly demarcated from the body, truncate to rounded, provided with 4 short, small, submedian bristles.

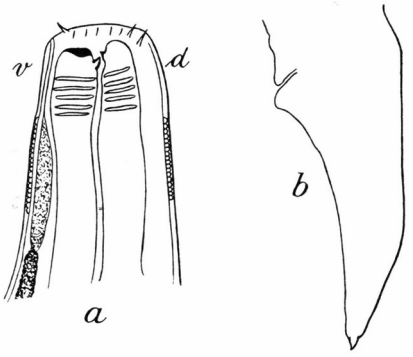

Fig. 9. *Chromadora crassicauda* n. sp. *a*. Head × 490. *b*. Tail × 325.

Buccal cavity in its anterior part broad and shallow, supported by ribs, in the posterior part funnel-shaped, at the limit of both parts armed with a rather large, curiously enough, *ventral tooth*, opposite to which a smaller dorsal tooth is placed.

The oesophagus is evenly thick. There is no bulb.

The ventral gland, the position of which was not to be stated, opens far anteriorly.

17 μ in front of the anus there is ventrally a small elevation of the cuticle. Tail immediately behind the anus bent outwards also ventrally, cylindroconical, with conical endtip, containing 3 glands.

Vulva situated before the middle of the body as an inconspicuous fissure, surrounded by a large gland.

Female organs strongly developed, but only shortly extended, with reflexed ovaries.

Sabatieria DE ROUVILLE.

Sabatieria longicaudata FILIPJEV.

Locality: 568. Labrador. Windy Island. S.E. Davis Inlet. 16.9.1939.

This easily recognizable species of *Comesomids*, described already

by FILIPJEV (1922) from the Black Sea, was represented in the collections from Labrador by a single specimen.

Microlaimus DE MAN.

Microlaimus labradorensis n. sp.

Locality: 572. Labrador. Fermey Nain. 1 juv ♀.

L = 1,060 mm, $\alpha = 24{,}09$, $\beta = 6{,}93$, $\gamma = 8{,}83$, V = 51,89 %

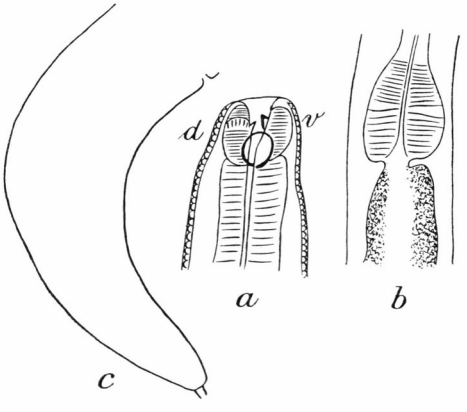

Fig. 10. *Microlaimus labradorensis* n. sp. *a*. Head × 490. *b*. Region of the oesophageal bulb × 490. *c*. Tail × 490.

Body absolutely of even thickness throughout.

Cuticle thin, finely annulated. Head demarcated from the body, truncate to rounded. Cephalic bristles were not to be found.

Buccal cavity very small, armed with teeth, opposite to each other, the ventral of which being larger than the dorsal placed.

Lateral organs situated near the frontend, immediately behind the teeth, rounded, probably posteriorly interrupted, measuring 0,26 of the corresponding head diameter.

Oesophagus very thin, surrounded by a thick nervering behind its middle and provided with a moderately large pyriform bulb (dimensions: 34 × 27 μ), the muscles of which are weakly interrupted 2 times. This bulb is for the reste not quite symmetrical, the ventral side of which being a little larger than the dorsal side.

Posterior wall of the anus swollen. Tail curved, short, clumsy, cylindroconical, posteriorly rounded, with conical endtip.

Vulva situated only a little caudad to the middle of the body.

Female organs paired symmetrical, strongly developed, but only shortly extended and with dorsally reflexed ovaries.

Odontophora Bütschli.

Odontophora longisetosa Allgén.

Locality: 572. Labrador. Fermey Nain. C. G. Wenner coll. 31. 7. 1939.

♂ L = 2,753 mm, $\alpha = 64{,}02$, $\beta = 16{,}19$, $\gamma = 18{,}0$

The single male specimen, dating from the above named locality, is in every respect a rather typical representative of this easily recognizable species, described firstly from the West coast of Sweden.

Aponcholaimus nov. gen.

Locality: 569. Labrador. Windy Island. 5 fath. C. G. Wenner coll. 16. 9. 1939.

In the sample from Labrador (569) a single male specimen, being very strongly winded in its larger posterior part, was secured, which in its external shape on one side is very similar in its anterior part to the genus *Aponchium* Cobb (1920, p. 298, fig. 79), described from Larat, East Indies, on the other side agrees rather well in the shape of the tail, the tail-glands and the spicules with the old *Eulinhomoeus elongatus* (Bast). From both these genera the species under consideration differs, indeed, so evidently, that it must be regarded as belonging to a new genus.

Aponcholaimus linhomoeoides n. sp.

L = about 4,428 mm, $\alpha = 88{,}56$, $\beta = 13{,}02$, $\gamma = 17{,}36$

Cuticle smooth. Head demarcated from the body, rounded, strongly chitinized, at the frontend with some smaller bristles and behind them with 4 submedian pairs of bristles, the posterior of each pair being much more elongated than the anterior ones.

Buccal cavity very small, armed with 2 small teeth, situated opposite to each other.

The oesophagus increases somewhat posteriorly and is surrounded by the nervering before its middle. There is no bulb.

Lateral organs dubious, perhaps situated in a distance of 10 μ behind the frontend, circular, thinwalled, small, in section 10 μ, i. e. about $^1/_5$ of the corresponding head diameter.

The ventral gland, situated immediately behind the oesophagus, is small, egg-shaped, with the nucleus in its posterior part.

The tail is elongated, strongly ventrally curved, about evenly thick,

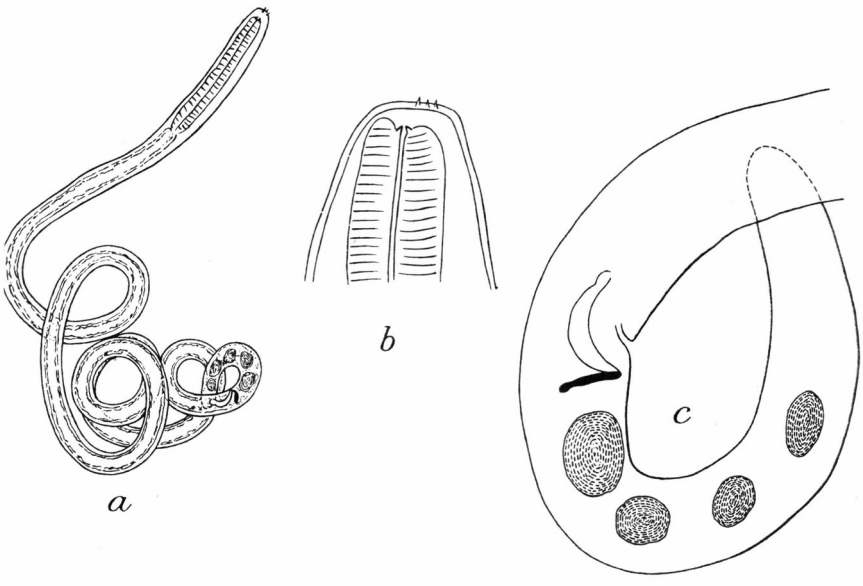

Fig. 11. *Aponcholaimus linhomoeoides* n. g. n. sp. *a*. Total Figure × 45. *b*. Head × 490. *c*. Tailend and spicular apparatus × 325.

cylindrical, on the whole, as above named, very similar to that of *Eulinhomoeus elongatus*, containing 4 rounded glands.

Spicules short, strongly curved, slender, with a thin dorsally directed apophysis.

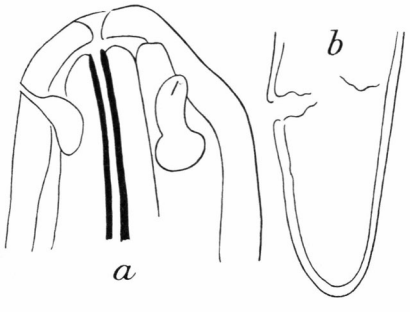

Fig. 12. *Mermis* spec. *a*. Head × 325. *b*. Tail × 45.

Mermis DUJARDIN.

Mermis spec.

Locality: 272. Spitzbergen. W. from Hornsund. Transient clay, 1750 m.

L = 40 mm, $\alpha = 114{,}29$, $\beta = ?$, $\gamma = 72{,}73$

An adult, very large and exceedingly slender, darkly coloured animal, the cuticle of which is very thick.

Exactly at the middle of the head, being evidently rounded, the external limit of the cuticle is bent inwards, making a very small, broadly funnel-shaped buccal cavity, which by a subtil fissure ducts directly into the lumen of the oesophagus, being bordered by thick walls.

Amphids curved, provided with a single terminal. Amphidial gland large, rounded.

Intestine rather darkly coloured.

Tail cylindroconical, posteriorly evidently rounded.

Tabular review of the distribution of the Nematode species, found in the collections, on the different localities in the Arctis.

	1. Greenland	2. Labrador	3. Iceland	4. Spitzbergen	5. Aleutic Islands	6—8
Anticoma limalis Bastian		×				
Stenolaimus marioni Southern	×					
Leptosomatum elongatum Bastian				×		
— microlaimum n. sp.				×		
Thoracostoma trichodes (Leuckart)	×			×		
— elegans Ditlevsen				×		
— multipapillosum n. sp.			×			
— macrochaetum n. sp.						6:×
Synonchus fasciculatus Cobb						7:×
Ritenbenkia macropapillata n. g. n. sp.	×					
Phanoderma campbelli Allgén				×		
Enoplus communis Bastian	×	×				
Enoplolaimus dentatus Ditlevsen		×				
Oncholaimus curvicauda n. sp.	×			×		
Oncholaimellus arcticus n. sp.		×				
Pelagonema papillosum n. sp.						8:×
Catalaimus max-weberi de Man					×	
Eurystomatina ornatum (Eberth)					×	
Paracanthonchus coecus (Bastian)					×	
Cyatholaimus unalaskensis n. sp.					×	
Monoposthia costata (Bastian)		×				
Draconema cephalatum Cobb				×		
Neochromadora poecilosoma (de Man)		×				
Chromadorina macrolaima (de Man)		×				
Chromadora crassicaudata n. sp.		×				
Sabatieria longicaudata Filipjev		×				
Microlaimus labradorensis n. sp.		×				
Odontophora longisetosa Allgén		×				
Aponcholaimus linhomoeoides n. g. n. sp.		×				
Mermis spec.				×		
Number of species: 30	5	12	1	8	4	3

From each of the not nearer defined localities Hackluyts Headed and Giskö and from unknown locality in the arctis only a single specimen is present in the collections (6—8). The not nearer determined species of the genus Mermis is dating from Spitzbergen.

Reviews of the compositions of hitherto known arctic Nematode- faunal localities.[5])

I A. West Greenland.

(Bütschli 1874, Levinsen 1881, Ditlevsen 1913, 1926, 1928, Menzel 1920).

Species	1	2
Leptosomatum gracile Bastian		×
Thoracostoma trichodes (Leuckart)		×
Cylicolaimus obtusidens Ditlevsen	×	
— filicaudatus Ditlevsen	×	
Phanodermopsis grönlandicum Ditlevsen	×	
Klugea pigmentata (Ditlevsen)	×	
Enoplus communis Bastian		×
— grönlandicus Ditlevsen	×	
Enoplolaimus halophilus Ditlevsen	×	
— angustilaimus Ditlevsen	×	
Pontonema vulgare (Bastian)		×
— ditlevseni Schuurm. Stekh.		×
— brevicaudatum (Menzel)	×	
Oncholaimus grönlandicus Ditlevsen	×	
— steinböcki Ditlevsen	×	
— steineri Ditlevsen	×	
— onchouris Ditlevsen	×	
Steineriella megalaima (Ditlevsen)	×	
Filipjevia arctica (Ditlevsen)	×	
Enchelidium dubium (Ditlevsen)	×	
— Reisingeri (Ditlevsen)	×	
Dorylaimus maritimus Ditlevsen	×	
Desmodora pilosa Ditlevsen	×	
Claparèdiella grönlandica (Levinsen)	×	
Chromadora ambigua Ditlevsen	×	
— exigua Ditlevsen	×	
Diplopeltis ovalis Ditlevsen	×	
Monhystera horrida Steiner	×	
— arctica (Steiner)	×	
— grönlandica Ditlevsen	×	
— pachyuris Ditlevsen	×	
Number of species: 31	26	5

The first to mention freeliving Nematodes from Greenland is Bütschli (1874), who has found *Pontonema vulgare* in a sponge. Levinsen (1881) has made known a new species of *Claparèdiellids*, *Claparèdiella grönlandica* (Levinsen) syn. *Chaetosoma grönlandicum* Levinsen.

[5]) In the tabular reviews (I—XV) of arctic Nematodes 1 signifies species endemic to the arctis and 2 species also occurring at the atlantic coast of Europe.

According to MENZEL (1920, p. 12) VANHÖFFEN (1897) shall have described from the Little Qarajaqfjord 2 *Oncholaimids*, one of which being identical to *Pontonema vulgare* BAST. while the second species could not be determined nearer even by MENZEL, who has studied the species VANHÖFFEN's.

MENZEL himself has in the same paper also stated *P. vulgare* BAST. and described a new species of this genus, *P. brevicaudatum* from that island.

I B. East Greenland.

(ALLGÉN 1954)

Species	1	2
Anticoma limalis Bastian		×
— strandi Allgén		×
Stenolaimus marioni Southern		×
Leptosomatum grönlandicum Allgén	×	
Thoracostoma trichodes (Leuckart)		×
— elegans Ditlevsen		×
— penduli Allgén	×	
— brachylobatum Allgén	×	
Phanoderma parasiticum Ditlevsen	×	
Micoletzkyia parelegans Allgén	×	
Enoplus pellucidus Ditlevsen	×	
Enoplolaimus dentatus Ditlevsen		×
Pontonema vulgare (Bastian)		×
— brevicaudatum (Menzel)	×	
Oncholaimus skawensis Ditlevsen		×
— steineri Ditlevsen	×	
Rhabdodemania laticauda Ditlevsen	×	
Enchelidium Reisingeri (Ditlevsen)	×	
Pendulumia obtusicauda Allgén	×	
Monoposthia arctica Allgén	×	
Chromadora Kingo-Jacobseni Allgén	×	
Enchelidiella pellucida Allgén	×	
Bathylaimus jacobseni Allgén	×	
Filipjeviella arctica Allgén	×	
Parasphaerolaimus paradoxus Ditlevsen		×
Parasabatieria arctica Allgén	×	
Contracoecum spec. Allgén	×	
Number of species: 27	18	9

The most important finds are, indeed, dating from DITLEVSEN (1913, 1926, 1928), who has described 30 species from Greenland.

To these species must be added *Pontonema ditlevseni*, a new species, created by SCHUURM. STEKHOVEN (1935) for the specimens of *Pontonema*

vulgare BAST., described by DITLEVSEN (1928) from Greenland and by ALLGÉN from the West coast of Norway.

According to the investigations of the above named scientists until the last years (1954) 31 species have been described from Greenland, of which 26 are endemic to the arctis (21 of them only known from Greenland).

In the lastnamed year (1954) the author has in his working out the Nematodes of the Swedish East-Greenlandian Expedition (1899) refound 6 of the hitherto known species and has described 21 other species, 15 of which being endemic to the fauna of Greenland.

In all the total number of freeliving marine Nematodes, described hitherto from Greenland, makes 52, of which no less than 40 are endemic to the fauna of the arctis and the remaining 12 also are inhabitants of the fauna of the atlantic coast of Europe.

II. Iceland.

(LEUCKART 1849, DITLEVSEN 1926, ALLGÉN 1935).

Species	1	2
Anticoma limalis Bastian		×
Thoracostoma trichodes (Leuck.)		×
— elegans Ditlevsen		(×)[6]
— elongatum Ditl.	×	
Cylicolaimus obtusidens Ditl.	×	
Rhabdodemania laticauda Ditl.	×	
Stenolaimus marioni Southern	×	
Phanoderma islandicum Ditl.	×	
Enoplus communis Bastian		×
— constrictus Ditlevsen	×	
— serratus Ditlevsen	×	
Enoplolaimus dentatus Ditl.		×
— crassus Ditl.	×	
— oxycephalus Ditl.	×	
Sphaerolaimus islandicus Ditl.	×	
Number of species: 15	10	4(5)

For the first find of freeliving marine Nematodes from Iceland we owe thanks to LEUCKART, who has already more than 100 years ago (1849) described *Hemipsilus* (syn.: *Thoracostoma* MARION) *trichodes* LEUCKART from that island.

About 80 years later on DITLEVSEN (1926) has in his working out the Nematodes of the Ingolf Expedition described besides *Th. trichodes* 13 further species from the sea north of Iceland, and finally ALLGÉN (1935) has except the named species mentioned the easily recognizable,

worldwidely distributed *Enoplus communis* BAST. from Reykjavik, Havnefjord.

In all the number of freeliving marine Nematodes, known from Iceland makes 15, 10 of which being endemic to the arctis and 4 also occuring at the atlantic coast of Europe.[6])

III. Jan Mayen.

(DITLEVSEN 1926, ALLGÉN 1954).

Species	1	2
Anticoma limalis Bastian		×
Stenolaimus marioni Southern		×
Leptosomatum gracile Bastian		×
Thoracostoma trichodes (Leuck.)		×
Platycomopsis cobbii Ditl.	×	
Rhabdodemania laticauda Ditl.	×	
Enoplolaimus crassus Ditl.	×	
Mesacanthion angustignathus (Ditl.)	×	
Paramesacanthion oxycephalus (Ditl.)	×	
Pontonema brevicaudatum (Menzel)	×	
Enchelidiella pellucida Allgén	×	
Sphaerolaimus islandicus Ditl.	×	
Number of species: 12	8	4

The first to describe freeliving marine Nematodes from Jan Mayen is DITLEVSEN, who in his paper on the Nematodes of the Ingolf Expedition (1926) has described the following 5 species from that island: *Anticoma limalis* BAST., *Platycomopsis cobbii* DITL., *Enoplolaimus crassus* DITL. *P. oxycephalus* Ditlevsen and *Sphaerolaimus islandicus* DITL., of which only the firstly named, worldwidely distributed species also occurs at the atlantic coast of Europe.

From the material, collected by the Swedish Expedition to East Greenland and Jan Mayen (1899) the author (1954) has described 7 other species, so that the total number of species, dating from Jan Mayen makes 12, exactly $^1/_3$ of which also are occuring at the atlantic coast of Europe.

---

[6]) It may be remarked, that *Thoracostoma elegans*, firstly described by DITLEVSEN (1926), has been named already in 1921 from the Campbell Island.

IV. The Bear Island.

(von Linstow 1900).

From this arctic island only the two species are known, which Linstow (1900) has described in "die Fauna arctica". Of these species *Spilophora punctata* (Linstow) is endemic to the island, while *Thoracostoma trichodes* (Leuckart) is a worldwidely distributed species, rather common at the atlantic coast of Europe.

V. Spitzbergen and Environs.

(v. Linstow 1900, Menzel 1920, Allgén 1935).

As named above already v. Linstow has firstly described in the same publication (1900) from the "Eismeer nördl. von Spetsbergen" 4 species, of which one, *Synonchus edentatus* (Linstow) is endemic to the questionable faunal region, while another species, *Stenolaimus gracilis* (Linstow) has a worldwide distribution in the arctic and 2 species, namely *Thoracostoma trichodes* and *Enoplus communis* also are common inhabitants of the atlantic coast of Europe.

Later on Menzel (1920) has mentioned from this part of Sea a further evenly cosmopolitan species, *Draconema cephalatum* Cobb, the only species, which the questionable part of Sea has common with the southern hemisphere.

Finally Allgén (1935) has made known *Rhabditis marina* Bast. from that archipelago.

VI. Franz Joseph's Land.

(Allgén 1935).

From this archipelago only the two species: *Viscosia strandi* Allgén and *Paracanthonchus macrodon* (Ditl.) are known, which the author (1935) has described from the collections of the Hamburg Zoological Museum.

Viscosia strandi is endemic to the archipelago, *Paracanthonchus macrodon*, contrary, a typical representative of the Nematode-fauna of the coast of Scandinavia.

VII. King Karls Land, The Mourman coast and the western mouth of the Kildin Sound.

(MENZEL 1920, KREIS 1928, ALLGÉN 1935).

Species	1	2
Anticoma longicaudata Kreis	×	
Leptosomatum gracile Bastian		×
Thoracostoma trichodes (Leuckart)		×
— conicaudatum Kreis	×	
— filipjevi Kreis	×	
Phanodermopsis cylindricaudatum Kreis	×	
Phanodermella longicauda Kreis	×	
Oxystomatina spec. Kreis	×	
Nemanema recto-resectum Kreis	×	
Enoplus communis Bastian		×
— medius Kreis	×	
— sphaericus Kreis	×	
Enoplolaimus abnormis Kreis	×	
— spec. Kreis	×	
Pontonema vulgare (Bastian)		×
— arcticum Kreis	×	
— spec. 1	×	
— spec. 2	×	
Oncholaimus dujardini de Man		×
— medius Kreis	×	
Viscosia strandi Allgén		×
Pelagonema tenue Kreis	×	
— angusticavatum Kreis	×	
Vasculonema conicaudatum Kreis	×	
Filipjevia macrolabiata Kreis	×	
Convexolaimus filicaudatus Kreis	×	
Pseudodilaimus pilosus Kreis	×	
Paracanthonchus bipapillatus Kreis	×	
Paracyatholaimus major Kreis	×	
Halichoanolaimus robustus (Bastian)		×
Dentatonema crassum Kreis	×	
Desmodora gracilis Kreis	×	
Rhabdogaster cygnoides (Metschn.)		×
Draconema cephalatum Cobb		×
Chromadora abnormis Kreis	×	
Fusonema multilabiatum Kreis	×	
Araeolaimus macrocirculus Kreis	×	
Diplopeltis longisetosus Allgén		×
Monhystera spec. Kreis	×	
Number of species: 39	29	10

As far as I know MENZEL (1920) has firstly mentioned *Prochaetosoma cygnoides* (METSCHN.) and *Draconema cephalatum* COBB from these parts of the arctis.

Later on KREIS (1928) has described from about the same localities 34 species. Surprising is the great number of species, namely 29, being endemic to the arctis and the small number of species—only 5, also occurring at the atlantic coast of Europe.

Finally the author (1935) has made known the following 5 species: *Thoracostoma trichodes*, *Enoplus communis*, *Pontonema vulgare*, *Viscosia strandi* and *Halichoanolaimus robustus*, the 3 last named of which being new to this part of the arctic Sea.

The total number of species, known from the named localities, makes to day 39, of which 10 also are occuring at the atlantic coast of Europe.

VIII. The Kolafiord.

(SAVELJEV 1912, FILIPJEV 1927).

Species	1	2
Anticoma limalis Bastian		×
— arctica Steiner		×
— minor Filipjev	×	
— murmanica Filipjev	×	
Leptosomatum tetrophthalmum Saveljev	×	
— arcticum Filipjev	×	
Leptosomella acrocerca Filipjev	×	
Barbonema setiferum Filipjev	×	
Thoracostoma trichodes (Leuckart)		×
— coecum Saveljev	×	
— saveljevi Filipjev	×	
Thoracostomopsis ditlevseni (Fil.)	×	
— galeata (Filipjev)	×	
— longissima (Filipjev)	×	
Deontostoma arcticum (Saveljev)		×
Synonchus murmanicus Filipjev	×	
Rhabdodemania minor (Southern)		×
— gracilis (Ditlevsen)		×
Stenolaimus gracilis (Linstow)	×	
Phanoderma conicaudatum Steiner	×	
Phanodermopsis grönlandicum Ditl.	×	
— reductum (Filipjev)	×	
Klugea trilabea Filipjev	×	
Oxystomatina elongatum (Bütschli)		×
Thalassoalaimus septentrionalis Fil.		×
— oxycauda Filipjev	×	
— rotundicauda Filipjev	×	
Acoma nuda Filipjev	×	
Halalaimus diplocephalus Filipjev	×	
— zenkewitzi Filipjev	×	
— pachydermatus Filipjev	×	
— isaitshikovi Filipjev		×
— longicaudatus Filipjev		×

(continued)

The Kolafjord (cont.)

Species	1	2
Enoplus communis Bastian		×
— brevis Bastian		×
— alatus Saveljev		×
— auriculatus Saveljev	×	
Enoploides murmanicus Saveljev	×	
— pellucidus Saveljev	×	
— typicus Saveljev	×	
— tridentatus Saveljev	×	
— saveljevi Filipjev	×	
Enoplolaimus vulgaris de Man		×
— tenuicaudatus Saveljev	×	
— acantholaimus Saveljev	×	
— dentatus Ditlevsen		×
— klugei Filipjev	×	
— banalis Filipjev	×	
— major Filipjev	×	
— polaris Filipjev	×	
Saveljevia kolaensis Filipjev	×	
— curvidens Filipjev		×
— clavicauda Filipjev	×	
— xiphonchus Filipjev	×	
Pontonema vulgare (Bastian)		×
Oncholaimus brachycercus de Man		×
— antophorus Filipjev	×	
Adoncholaimus derjugini Filipjev	×	
Viscosia stenolaima Filipjev	×	
Pelagonema obtusicaudatum Filipjev		×
Anoplostoma viviparum (Bastian)		×
Ditlevsenella murmanica Filipjev	×	
Enchelidium murmanicum Filipjev		×
— medium (Filipjev)	×	
— majus (Filipjev)	×	
Eurystomatina lithothamnii Filipjev	×	
— tenuissimum Filipjev	×	
Ledovitia hirsuta Filipjev	×	
Fenestrolaimus murmanicus Filipjev	×	
— profundi Filipjev	×	
Dolicholaimus marioni de Man		×
Paracanthonchus elongatus (de Man)		×
— tenuicaudatus Filipjev	×	
Halichoanolaimus robustus (Bastian)		×
— minor Saveljev	×	
— dolichurus Saveljev	×	
— rapax Saveljev	×	
Desmodora serpentulus de Man		×
Spirina parasitifera (Bastian)		×
Monoposthia costata (Bastian)		×
Metachromadora vivipara (de Man)		×

(continued)

The Kolafjord (cont.)

Species	1	2
Parasabatieria kolaensis Saveljev		×
Araeolaimus dolichoposthius Saveljev	×	
Camacolaimus tardus de Man		×
Tripyloides marinus (Bütschli)		×
Bathylaimus inermis (Ditlevsen)		×
— profundi Filipjev	×	
Sphaerolaimus brevicollis Saveljev	×	
Eulinhomoeus elongatus (Bastian)		×
Metalinhomoeus typicus (de Man)		×
Paralinhomoeus lepturus de Man		×
— linurus Saveljev	×	
Number of species: 92	57	35

VIII A. The Westcoast of Mourman, "Mourman occ."

(Filipjev 1927).

Species	1	2
Anticoma limalis Bastian		×
Leptosomatum arcticum Filipjev	×	
Deontostoma arcticum (Sav.) Fil.		×
Thoracostoma trichodes (Leuckart)		×
Stenolaimus gracilis (Linstow)	×	
Enoplus crassus Filipjev	×	
Enoplolaimus vulgaris de Man		×
Pontonema vulgare (Bastian)		×
Number of species: 8	3	5

From this part of the Mourman region only the above named 8 species are known, which Filipjev (1927) has described. Only 3 of them are endemic to the arctis, the remaining 5, contrary, also are occuring at the atlantic coast of Europe.

The Kolafiord.

Saveljev (1912) has firstly described from the Kolafiord 44 species, and later on Filipjev (1927) has published descriptions of so numerous species, that the total number of species, known from that locality, makes 92.

Of these 92 species 57 are endemic to the arctis, while 35 are common with the atlantic coast of Europe and 4 of the last named species, namely *A. limalis*, *Oncholaimus brachycercus*, *Dolicholaimus marioni* and *Eulinhomoeus elongatus* also are occuring in the southern hemisphere.

IX. The Relict-Sea Mogilnoje on the Island Kildin.

(SAVELJEV 1912).

Species	1	2
Anticoma limalis Bastian		×
Leptosomatum tetrophthalmum Sav.	×	
Enoplus communis Bastian		×
Enoplolaimus vulgaris de Man		×
Oncholaimes derjugini Sav.	×	
Anoplostoma viviparum (Bast.)		×
Paracanthonchus coecus (Bast.)		×
Desmodora serpentulus de Man		×
— scaldensis de Man		×
Spirina parasitifera (Bast.)		×
Monoposthia costata (Bast.)		×
Araeolaimus dolichoposthius Sav.	×	
Axonolaimus spinosus (Bütschli)		×
Tripyloides vulgaris de Man		×
Metalinhomoeus typicus de Man		×
Number of species: 15	3	12

Contrary to the Kolafiord the fauna of the Relict Sea Mogilnoje agrees rather strongly with the atlantic coast of Europe. From this Relict-Sea are namely, as seen above, 15 species described, of which no less than 12 are known from the atlantic coast of Europe, and only 3 species are exclusively distributed in arctic waters, no one of these being endemic to Mogilnoje.

X. The White Sea.

(FILIPJEV 1927)

From this part of Sea only the 3 species are known, which FILIPJEV (1927) has mentioned. Of these species *Thoracostoma coecum* (SAVELJEV) is endemic to the arctis, *Thoracostoma trichodes* is a common inhabitant of the atlantic coast of Europe, while *Enoplus alatus* SAVELJEV only is known from the High Northern and even from the Lofoten-Archipelago. (Allgén 1933).

XI. The Barent's Sea, Opening to the White Sea.

(Steiner 1916, Filipjev 1927).

Species	1	2
Anticoma limalis Bastian		×
— pellucida Bast.		×
— arctica Steiner		×
Leptosomatides steineri Filipjev		×
Thoracostoma trichodes (Leuckart)		×
— coecum Saveljev	×	
Deontostoma arcticum (Saveljev)		×
Stenolaimus gracilis (Linstow)	×	
Phanoderma conicaudatum Steiner	×	
Nasinema polare Filipjev	×	
Thalassoalaimus egregius Steiner		×
Acoma borealis Steiner	×	
Enoplus communis Bastian		×
— crassus Filipjev	×	
Enoplolaimus acantholaimus Filipjev	×	
— hamatus Steiner	×	
Pontonema vulgare (Bastian)		×
Oncholaimus brachycercus de Man		×
Enchelidium tenuicolle Eberth		×
Eurystomatina ornatum (Eberth)		×
— lithothamnii Filipjev	×	
Chaetonema longisetum Filipjev		×
Dolicholaimus marioni de Man		×
Paracanthonchus coecus (Bastian)		×
Paracyatholaimus cotylophorus (Steiner)		×
Desmodora serpentulus de Man		×
— scaldensis de Man		×
— poseidoni Steiner	×	
— bullata Steiner	×	
Spirina parasitifera (Bastian)		×
Monoposthia costata (Bastian)		×
— mielcki Steiner	×	
Richtersia collaris Steiner		×
Claparèdiella primitiva (Steiner)	×	
Draconema cephalatum Cobb		×
Rhabdogaster cygnoides (Metschn.)		×
Euchromadora loricata (Steiner)	×	
Neochromadora craspedota (Steiner)		×
Dichromadora cephalata (Steiner)		×
Chromadorina microlaima (de Man)		×
— macrolaima (de Man)		×
Chromadora mucrodonta Steiner		×
— heterophya Steiner		×
— hyalocephala Steiner	×	
Parasabatieria longiseta (Steiner)		×

(continued)

The Barent's Sea (cont.)

Species	1	2
Microlaimus borealis Steiner	×	
Chromagaster stenolaima Steiner	×	
Araeolaimus elegans de Man		×
— cobbi Steiner		×
Camacolaimus tardus de Man		×
Dermatolaimus ditlevseni Steiner		×
Diplopeltis longisetosus Allgén		×
Eudesmoscolex oligochaetus Steiner	×	
Theristus acer Bastian		×
Monhystera megacephala Steiner	×	
— lata Cobb var. arctica Steiner		×
— barentsi Steiner	×	
— horrida Steiner	×	
Eulinhomoeus elongatus (Bastian)		×
Rhabditis marina Bastian		×
Number of species: 60	21	39

In a large paper, illustrated with excellent figures, STEINER (1916) firstly has described 52 species. Later on FILIPJEV (1927) has mentioned from the same locality (coast of Mourman, espec. "Mourman orient.") 8 further species, so that the total number of species, known from this arctic locality makes 60, of which 21 are endemic to the arctis, while no less than 39 species also occur at the atlantic coast of Europe.

XI A. The Eastcoast of Mourman, Mourman "Orient".

(FILIPJEV 1927).

Species	1	2
Anticoma limalis Bastian		×
— arctica Steiner		×
Leptosomatides steineri Fil.	×	
Deontostoma arcticum (Sav.)		×
Thoracostoma trichodes (Leuckart)		×
Thalassoalaimus egregius Steiner		×
Acoma borealis Steiner	×	
Nasinema polare Steiner	×	
Phanoderma conicaudatum Steiner	×	
Enoplus communis Bastian		×
— crassus Filipjev	×	
Enoplolaimus hamatus Steiner	×	
Pontonema vulgare (Bastian)		×
Oncholaimus brachycercus de Man		×

(continued)

The East coast of Mourman (cont.)

Species	1	2
Eurystomatina assimile de Man		×
— lithothamnii Fil.	×	
Chaetonema longisetum Steiner		×
Symplocostoma longicolle Bastian		×
Dolicholaimus marioni de Man		×
Number of species: 19	7	12

As far as the faunal composition indicates, this locality is identical to the Barent's Sea. Of the 19 species, described by FILIPJEV from the East Coast of Mourman evenly therefore no less than 11 species already have been known by STEINER (1916) from that part of the Sea.

Together with the 52 species, described by STEINER, the total number of species, known from the Barent's Sea, makes 60.

Together with the Nematodes from the Kolafiord and the Barent's Sea FILIPJEV has in his above named papers (1916, 1927) described from the row of localities from the Kola until the Bering's Sea 110 species—all *Enoploidea.*

Except the above named these species are distributed on the following localities: White Sea (3), Mourman (12), Nowaja Semlja(26), Kara Sea (also 26), and Bering's Sea (6).

According to a recently in Washington, hitherto unknown paper the russian nematologist I. N. FILIPJEV (1946) has described 30 mostly new species from the *New Siberian Islands.*[7])

XII. Nowaja Semlja.

(FILIPJEV 1927).

Species	1	2
Anticoma limalis Bastian		×
— murmanica Filipjev	×	
— minor Filipjev	×	
Leptosomatum arcticum Saveljev	×	
Dactylonema mejzekovi Filipjev	×	
Thoracostoma coecnm Filipjev	×	
Rhabdodemania gracilis (Ditl.)		×
Stenolaimus gracilis Filipjev	×	
Phanoderma conicaudatum Steiner	×	
Galeonema caudatum Filipjev	×	

(continued)

[7]) Unfortunately this, no doubt, important paper has not been accessible to the author.

Nowaja Semlja (cont.)

Species	1	2
Oxystomatina elongatnm (Bütschli)		×
Nemanemella novozemelica Filipjev	×	
Halalaimus isaitshikovi Filipjev		×
Parenoplus edentatus Filipjev	×	
Enoploides saveljevi Filipjev	×	
Enoplolaimus hamatus Steiner	×	
— ditlevseni Filipjev	×	
— lucifer Filipjev	×	
— breviseta Filipjev	×	
Pontonema brevicaudatnm (Menzel)	×	
Oncholaimus brachycercus de Man		×
— septentrionalis Filipjev	×	
— ushakovi Filipjev	×	
Prooncholaimus saveljevi Filipjev	×	
Pelagonema obtusicaudatnm Filipjev		×
Enchelidium medinm v. karense Fil.	×	
Nnmber of species: 26	20	6

The 26 species, hitherto known from this doubble island FILIPJEV (1927) has described.

20 species are endemic to the arctis, while the remaining 6 species also are more or less common inhabitants of the atlantic coast of Europe.

XIII. The Kara Sea.

(FILIPJEV 1927).

Species	1	2
Anticoma insulae-albae Filipjev		×
Rhabdodemania gracilis (Ditl.)		×
Stenolaimus gracilis (Linstow)	×	
Oxystomatina elongatum (Bütschli)		×
— insulae-albae Fil.	×	
Nemanemella cobbi Filipjev	×	
— alpatovi Filipjev	×	
Halalaimus zienkowitzi Filipjev		×
— longicaudatus (Fil.)		×
Enoplolaimus hamatus Steiner	×	
— lucifer Filipjev	×	
— major Filipjev	×	
— karensis Filipjev	×	
— polaris Filipjev	×	
Oncholaimus plavmornini Fil.	×	
— opistonchus Fil.	×	

(continued)

Kara Sea (cont.)

Species	1	2
Prooncholaimus saveljevi Fil.	×	
Viscosia stenolaima Filipjev	×	
— brachylaima Filipjev	×	
Enchelidium leptolaimum Fil.	×	
— medium v. karense Fil.	×	
Ledovitzia hirsuta Filipjev	×	
Chaetonema longisetum (Steiner)		×
— steineri Filipjev	×	
Fenestrolaimus insulae-albae Fil.	×	
Bathylaimus septentrionalis Fil.	×	
Number of species: 26	20	6

Also from the Kara Sea 26 species have been described, of which 20 exclusively are inhabitants of the arctis, and only the remaining 6 species are already known from the atlantic coast of Europe.

XIV. The New Siberian Islands.

(Filipjev 1946).

Anticoma tenuicaudata Fil.
Leptosomatides steineri typ. Fil.
— *steineri v. filiform.* Fil.
Pseudocella elegans Ditl.[8])
— *tenuis* Fil.
Phanodermopsis conicauda Fil.
— *obtusicaudata* Fil.
Oxystomatina tenuicaudatum Fil.
Nemanema rotundicaudatum (Ditl.)
Trefusia magna Fil.
Halalaimus tenuicapitatus Fil.
Enoplus polaris Fil.
Oxyonchus problematicus Fil.
Oncholaimus ceterus Fil.
Viscosia longissima Fil.
— *fatigans* Fil.
Viscosia nana Fil.
Pareurystomatina micoletzkyi Fil.
Symplocostoma paramajor Fil.
— *leptocephala* Fil.
— *dubia* (Ditl.)
Longicyatholaimus dubius Fil.
— *continus* Fil.
Nummocephalus cotylophorus (Steiner)
Tridentella crenopharynx Fil.
Desmodora gorbunovi Fil.
— *gorbunovi v. perforata* v. v.
— *irregularis* Fil.
Euchromadora arctica Fil.
Sabatieria paravulgaris Fil.
Bathylaimus longicaudatus Fil.
Paraspaerolaimus polaris Fil.

Of the 30 species, described from the New Siberian Islands in a recently discovered paper Filipjev's (1946)—probably unknown to most of the nematologists—no less than 25 are endemic to these parts of the Sea.

[8]) *Pseudocella elegans* (Ditlevsen) also is in an adult specimen dating from the South Sea: Campbell Island (Ditl. 1921).

4 of the remaining 5 species also are known from other parts of the arctis, namely *Leptosomatides steineri* and *Nummocephalus cotylophorus* (STEINER) from the Barent's Sea, *Pseudocella elegans* DITL. (North of Iceland) and *Symplocostoma dubia* DITL. (the Davis Strait).

The 3 last named species also are occurring in the Atlantic Ocean and at the atlantic coast of Europe, i. e. *Symplocostoma dubia* (North of the Faroe Islands), *Pseudocella elegans*[8]) and *Nemanema rotundicaudatum* (Skagerack, Westcoast of Jutland, N.W. of Hanstholm).

To these "atlantic" species also belongs *Nummocephalus cotylophorus* (STEINER) from the coast of Norway.

XV. Bering's Sea.

(v. LINSTOW 1903, FILIPJEV 1916, 1927).

Species	1	2
Leptosomatum grebnickii Filipjev	×	—
— behringianum Filipjev	×	—
Thoracostoma coecum Saveljev	×	—
Deontostoma papillatum Filipjev	×	—
Enoplus behringicus Filipjev	×	—
Pontonema papilliferum Filipjev	×	—
Number of species: 6	6	0

From Bering's Sea only the named 6 species have been described, of which no less than 5 are endemic to that part of the Sea, while a single species, *Thoracostoma coecum* also is known from the coast of Mourman. No species is inhabitant of the coast of Europe.

XVI. New Foundland.

(ALLGÉN 1935).

Finally it shall be pointed out, that to the named localities (I—XV) also New Foundland, situated near and even east of Labrador must be added, from which locality only the following 10 species are known, which the author has recorded from the collections of the Hamburg Zoological Museum.

Anticoma limalis BASTIAN
Thoracostoma trichodes (LEUCKART)
Enoplus communis BASTIAN
Pontonema vulgare (BASTIAN)
Paracanthonchus macrodon (DITLEVSEN)
Desmodora serpentulus DE MAN

Neochromadora poecilosoma (DE MAN)
Chromadorina macrolaima (DE MAN)
Chromodora mucrodonta STEINER and
Theristus acer BASTIAN

All these species—dating from shells of *Buccinum*—are common inhabitants of the atlantic coast of Europe.

Tabular review of hitherto known compositions of arctic localities.

Localities	1	2	3
I. Greenland	52	40	12
II. Iceland	15	10	4(5)
III. Jan Mayen	12	8	4
IV. Bear Island	2	1	1
V. Spitzbergen	4	2	2
VI. Franz Josephs Land	2	1	1
VII. King Karls Land and other parts of the Sea	39	29	10
VIII. Kolafiord and Kola Peninsula	92	57	35
VIIIa. Mourman 'Occ." Filipjev	8	3	5
IX. Relict Sea Mogilnoje	15	3	12
X. White Sea	3	1	2
XI. Barent's Sea	60	21	39
XIa. Mourman "Orient" Filipjev	19	7	12
XII. Nowaja Semlja	26	20	6
XIII. Kara Sea	26	20	6
XIV. New Siberian Islands	30	25	5
XV. Bering's Sea	6	6	0
XVI. New Foundland	10	—	10

1. Total number of species known.
2. Number of species endemic to the arctis.
3. Number of species also occuring at the atlantic coast of Europe.

BIBLIOGRAPHY

Publications, containing descriptions of arctic marine Nematodes.

ALLGÉN, C., Freilebende marine Nematoden aus den Sammlungen des Hamburger Zoologischen Museums. Folia Zool. et Hydrobiol. Vol. VIII, 1935.

— Freeliving marine Nematodes from East Greenland and Jan Mayen. The Swedish Greenland Expedition 1899. Medd. om Grönland, Bd. 107, Nr. 6, 1954.

BÜTSCHLI, O., Zur Kenntnis der freilebenden marinen Nematoden, insb. der des Kielerhafens. Abh. d. Senckenb. naturf. Gesellsch. Frankf. a. M. 9, 1874.

DITLEVSEN, HJ., A marine *Dorylaimus* from Greenland waters, *Dorylaimus marinus* n. sp. Danm. Expedit. til Grönlands Nordostköst. 1906—1908. Bd. 3, Nr. 15. Medd. om Grönland XVIII, 1913.

— Freeliving Nematodes. The Danish Ingolf Exped. Vol. IV, 6. 1926.

— Freeliving Nematodes from Greenland waters. Medd. om Grønland. Suppl. XXII, 1928.

FILIPJEV, I. N., Les Nématodes libres contenus dans les collections du Musée Zool. de l'acad. Imp. des Sciences de Petrograd. Ann. du Musée Zool. de l'acad. Imp. des Sciences. T. 21, 1916.

— Les Nématodes libres des Mers septentrionales, appertenant à la famille des *Enoplidae*. Arch. f. Naturg 91 Jahrg. (1925) 1927.

— Nématodes libres du Bassin polaire. Reports of the Expedition of the Chief Administration of the Northern Sea Route on the Seabreaker G. SEDOW in 1937—1940, vol. 3, pp. 158—184. 1946.

KREIS, H. A., Die freilebenden marinen Nematoden der Spetsbergen. — Exp. von F. Roemer und F. Schaudinn im Jahre 1898. Mitt. Zool. Mus. Berlin Bd. 14, 1928.

LEUCKART, R., Zur Kenntnis der Fauna von Island. Erster Beitrag. (Würmer). Arch. f. Naturg. XV, 1, 1849.

LEVINSEN, J., Smaa bidrag til den grønländske Fauna. Vid. Medd. fra Dansk naturh. Foren. 33, 1881.

LINSTOW, O. VON, Die Nematoden. Fauna arctica. 1900.

MENZEL, R., Über freilebende Nematoden aus der Arktis. Festschr. f. Zschokke, 1920.

SAVELJEV, S., Zur Kenntnis der freilebenden Nematoden des Kolafiords und des Reliktenses Mogilnoje. Trav. Soc. Imp. Nat. Petersburg. C. R. vol. 43, 1912.

STEINER, G., Freilebende Nematoden aus der Barentssee. Zool. Jahrb. Syst. Bd. 39, 1916.

Færdig fra trykkeriet den 31. december 1957.