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UDGIVNE AF

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THE ZOOLOGY OF EAST GREENLAND

LEPTOSTRACA, MYSIDACEA,
CUMACEA, TANAIIDACEA, ISOPODA AND
EUPHAUSIACEA

BY

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WITH 11 FIGURES IN THE TEXT

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The present paper contains a list of all localities of Leptostraca, Mysidacea, Cumacea, Tanaidacea, Isopoda and Euphausiacea known from the waters of East Greenland in depths down to about 400 meters.

It is based partly on literature (see below) and partly on the collections in the Zoological Museum of Copenhagen, mainly originating from the various Danish expeditions to East Greenland during the last decennium. Especially the great fjord complexes in the Franz Joseph Fjord area and the Scoresbysund area (between 70° and 75° N) and the Lindenowfjord (61° N) are thoroughly explored, whereas the open coast stretches from 70° to 62° N are rather deficiently known (see the table).

	East Greenland, number of species					
	I ¹⁾	II	III	IV	V	I—V
Leptostraca	1	1	1	1	1	1
Mysidacea.....	10	9	3	2	2	12
Cumacea.....	5	12	14	2	1	17
Tanaidacea.....	4	7	8	—	4	13
Isopoda.....	8	12	16	8	15	27
Euphausiacea.....	4	3	2	3	3	4
Total number of species...	32	44	44	16	26	74

¹⁾ I: Nordøstkyst. II: Franz Josephs Fjord area. III: Scoresbysund area. IV: Kangerdlugssuaq area. V: Sydøstkyst.

It is hardly probable that future investigations will add particularly to the number of species of these Crustacea, for about the same number is known from East Greenland (viz., 74 species) as from the extremely well investigated waters of West Greenland, viz., 75 species.

Remarks on the Literature.

BUCHHOLZ 1874 (2nd German North Polar expedition 1869—1871) is the first paper to record Crustacea from East Greenland. It lists from NE. Greenland the following 6 species (besides 8 Decapoda and 23 Amphipoda):

Nebaliacea:

Nebalia bipes (O. FABRICIUS).

Mysidacea:

Mysis oculata (O. FABRICIUS).

Cumacea and Tanaidacea: no species.

Isopoda:

Gyge hippolytes KRØYER (= *Bopyroides hippolytes* (KRØYER)).

Phryxus abdominalis (KRØYER).

Leptophryxus mysidis n. sp. (= *Dajus mysidis* KRØYER).

Euphausiacea:

Thysanopoda norvegica M. SARS (= *Meganyctiphanes norvegica* (M. SARS)).

The next paper is H. J. HANSEN 1895 (the Danish Ryder-Expedition, mainly to Scoresby Sund and Angmagssalik). It lists (besides 6 Decapoda and 45 Amphipoda) from depths < 400 m the following 14 species, 11 of which are new to East Greenland:

Mysidacea:

Mysis oculata (O. FABRICIUS).

Cumacea: 3 spp., all new to E. Greenland; they are:

Leucon nasicus (KRØYER).

Diastylis edwardsii (KRØYER).

— *resima* (KRØYER) (= *Brachydiastylis r.*).

Tanaidacea:

Sphyrapus anomalus G. O. SARS, new.

Isopoda: 9 spp., 7 of them new to E. Greenland.

CLEVE 1900 (Plankton from the Swedish arctic expedition 1899) records *Boreophausia inermis* (KR.) (= *Thysanoëssa i.*), new to E. Greenland.

OHLIN's two papers of 1901 (on Crustacea collected by the Swedish arctic expeditions 1898—1900) comprise (besides a number of Decapoda) from East Greenland waters < 400 m the following 22 species, 15 of which are new to East Greenland:

Nebaliacea:

Nebalia bipes (O. FABRICIUS).

Mysidacea:

Boreomysis nobilis G. O. SARS, new.

Pseudomma theeli n. sp. (= *Michthyops theeli* (OHLIN)), new.

Erythrops abyssorum G. O. SARS, new.

— *glacialis* G. O. SARS, new.

Parerythrops robusta (SMITH) (= *Meterythrops rob.*), new.

- Parerythropters spectabilis* G. O. Sars, new.
Mysideis grandis (Goës) (= *Stilomysis grandis*), new.
Mysis oculata (O. Fabricius).
 — *mixta* Lilljeborg, new.

Cumacea:

- Leucon nasicus* (Krøyer).
 — *nasicoides* Lilljeborg, new.
Diastylis goodsiri (Bell), new.
 — *rathkei* (Krøyer) (is *D. oxyrhyncha* Zimmer, according to Zimmer 1926, p. 57), new.
 — *spinulosa* Heller, new.
 — *edwardsi* (Krøyer) (is *D. edwardsi* (Kr.) + *D. lepechini* Zimmer, according to Zimmer 1926, pp. 52—53), new.

Tanaidacea:

- Sphyrapus serratus* G. O. Sars, new.
Leptognathia longiremis (Lilljeborg) (is *L. sarsi* Ohlin 1901), new.

Isopoda:

- Calathura brachiata* (Stimpson).
Arcturus hystrix G. O. Sars (is in reality *Pleuropriion frigidum* H. J. Hansen, fide H. J. Hansen 1916, p. 196), new.
Munnopsis typica M. Sars.
Ilyarachna bergendahl Ohlin.

H. J. Hansen 1908, 1913, 1916 and 1920 (Danish Ingolf-Expedition 1895—96) records from East Greenland 1 Leptostraca, 10 Mysidacea, 9 Cumacea, 11 Tanaidacea, 21 Isopoda and 4 Euphausiacea. The following 21 species are new to East Greenland:

Cumacea:	<i>Leptognathia amdrupi</i> n. sp.
<i>Cumella carinata</i> (H. J. Hansen).	— <i>glacialis</i> n. sp.
<i>Brachydiastylis nimia</i> n. sp.	Isopoda:
Tanaidacea:	<i>Janira tricornis</i> (Krøyer).
<i>Pseudotanaeis forcipatus</i> Lilljeborg.	<i>Munna groenlandica</i> n. sp.
— <i>lilljeborgi</i> G. O. Sars.	<i>Nannoniscus arcticus</i> n. sp.
— <i>oculatus</i> n. sp.	<i>Desmosoma tenuimanum</i> G. O. Sars
— <i>affinis</i> H. J. Hansen.	(= <i>D. globiceps</i> (G. O. Sars)).
<i>Typhlotanaeis finmarchicus</i> G. O. Sars.	— <i>armatum</i> G. O. Sars.
<i>Leptognathia hanseni</i> Vanhöffen.	<i>Eurycope producta</i> G. O. Sars.
— <i>inermis</i> n. sp.	<i>Æga psora</i> (Linné).
	— <i>arctica</i> Lütken.
	<i>Gnathia robusta</i> (G. O. Sars).
	— <i>abyssorum</i> G. O. Sars.

H. J. HANSEN 1909 (the Danish Amdrup-Expedition) mentions 3 species of Mysidacea from East Greenland.

GRIEG 1909 (Belgica-Expedition 1905) records 7 Isopoda, two of which (*Eurycope gigantea* G. O. SARS (= *Munnopsis* g.) and *E. cornuta* G. O. SARS) are new to East Greenland.

BROCH & KOEFOED 1909 (Belgica-Expedition 1905) list 2 Euphausiacea and 4 Mysidacea, two of which (*Boreomysis arctica* (KRØYER) and *Erythrops erythrophthalma* G. O. SARS) are new.

K. STEPHENSEN 1912 (Danmark-Expedition 1906—1908 to NE. Greenland) has but one species new to East Greenland, viz., the Tanaid *Cryptocope arctica* H. J. HANSEN.

K. STEPHENSEN 1913 is based on literature only and contains a list of all Crustacea known from East and West Greenland up to 1913.

ZIMMER 1926 is a revision of some northern and arctic Cumacea; two species are recorded as new to East Greenland, viz., *Diastylis oxyrhyncha* ZIMMER and *D. lepechini* ZIMMER.

REMY 1928 ("Pourquoi-Pas?"-Expedition 1926) has a few species from East Greenland, but none of them are new to these waters.

NORDENSTAM 1934, SIVERTSEN 1935 and ZIMMER 1934 record material from the Norwegian expeditions to the Franz Josephs fjord area 1929—1932. The following two Cumacea are listed as new to East Greenland: *Eudorella emarginata* (KRØYER) and *Campylaspis intermedia* H. J. HANSEN, but there are no new Mysidacea, Isopoda or Euphausiacea.

K. STEPHENSEN 1933₁, THORSON 1933 and 1934, MADSEN 1936 and BERTELSEN 1937 record investigations from the Danish expeditions to East Greenland since 1931.

The present paper comprises 74 species; the following species are new to East Greenland:

No. 15: *Leucon pallidus* G. O. SARS.

no No.: *Diastylis* sp.

no No.: *Ilyarachna* sp.

No. 58: *Æga ventrosa* M. SARS.

No. 60: *Mesidotea sabini* (KRØYER).

No. 70: *Gnathia stygia* (G. O. SARS).

Synopsis of the Species.

Leptostraca.

1. *Nebalia bipes* O. FABRICIUS (Fig. 1).

Nebalia bipes G. O. SARS 1896, p. 9, figs.

East Greenland records:

Nebalia bipes BUCHHOLZ 1874, p. 388.

— — OHLIN 1901₁, p. 13.

— — K. STEPHENSEN 1912, p. 548.

— — K. STEPHENSEN 1913₁, p. 282.

— — H. J. HANSEN 1920, p. 77.

— sp. THORSON 1933, pp. 12, 20.

Occurrence at East Greenland: *Nordøstkyst*: Danmarks Havn, 10—16 m, Delesseria, hard and soft bottom (K. STEPHENSEN 1912). Shannon bank, 300 m, but this depth is “most probably erroneous” (*vide* H. J. HANSEN 1920); Jackson Ø, shallow water; Sabine Ø; Germania Havn (BUCHHOLZ 1874). 74°35' N, 18°23' W, S. of Lille Pendulum Ø, 18—21 m, sandy mud, algæ (OHLIN 1901₁).

Franz Joseph Fjord area: 73°26' N, 21°13' W, Kap Bennett, 9—11 m, sand mud, algæ; 73°06' N, 27°17' W, 3—9 m, sandy mud, algæ (OHLIN 1901₁). Carl Jacobsens Bugt, Ymers Ø, 21 m, clay, 1 specimen; Solitærbugt, Ella Ø, 3—7 m, Fucus and Desmarestia, 1 specimen; *ibid.*, 4—16 m, clay, 1 specimen, and 30—35 m, clay, Fucus, 4 specimens.

Scoresbysund area: Hurry Inlet, the eastern side, near the mouth, 25 m, sand, many algæ, about 20 specimens; Rosenvinges Bugt, 1 specimen.

Kangerdlugssuaq area: Mikis Fjord, 3.5—4 m, clay, 2 specimens; Kangerdlugssuaq, 4—5 m, mud, Fucus, 7 specimens, and 20—25 m, clay, Bryozoa, 1 specimen.

Sydøstkyst: Angmagssalik: Tasiusak (H. J. HANSEN 1920). Naparsarsuak, 36 m, muddish sand, 1 specimen; Lindenowfjord, 4 m, 30—36 m, and 52 m, gravel, sand, and mud, 1—13 specimens per haul; Nanusek, 8 m, sand, 1 specimen.

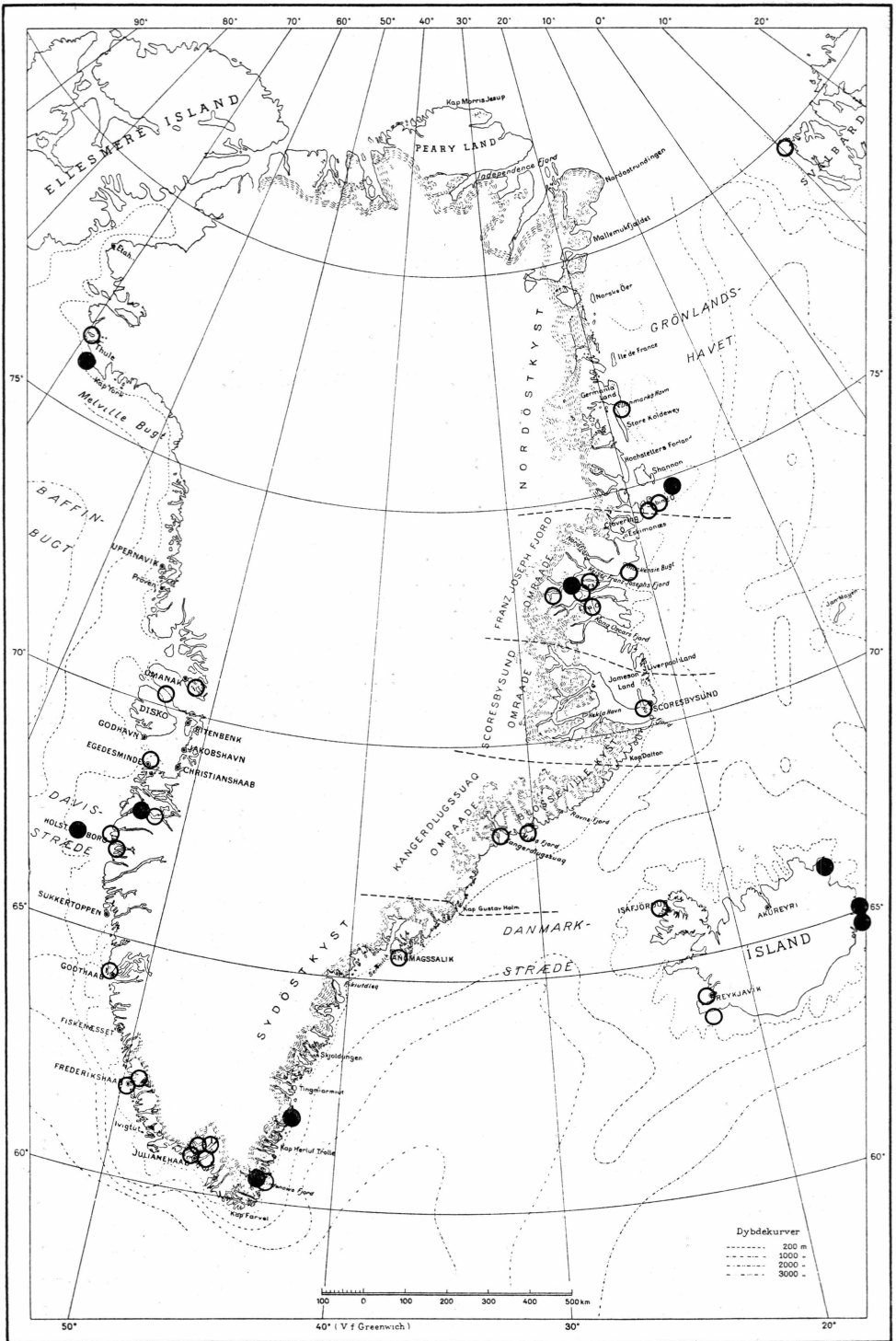


Fig. 1. *Nebalia bipes*. ○ = 0—25 m, ● > 25 m (after H. J. Hansen 1920, K. Stephensen 1938, and the present paper).

Distribution. Baffinland, W. and E. Greenland, Iceland, NW. Spitsbergen, the Faroes, from N. Norway (Vadsø) to Denmark (Kattegat and the Sound) and Great Britain. Also Unalaska. Depths usually from a few meters down to about 25—30 m. Further see H. J. HANSEN 1920.

Mysidacea.

2. *Boreomysis nobilis* G. O. SARS.

Boreomysis nobilis G. O. SARS 1885, p. 54, pl. 5 figs. 22—28.

East Greenland records:

- Boreomysis nobilis* OHLIN 1901₂, p. 70.
 — — H. J. HANSEN 1908, p. 101, and 1909₂, p. 418.
 — — K. STEPHENSEN 1912, p. 607.
 — — — 1913₁, p. 66 (no new records).
 — — SIVERTSEN 1935, p. 45.

Occurrence at East Greenland: *Nordøstkyst*: 77° N, 17¹/₂° W, 300 m, mud with gravel (K. STEPHENSEN 1912).

Franz Joseph Fjord area: NE. of Jackson Ø, 320 m, mud and clay, temp. 1.38°, salinity 34.87‰; Clavering fjord, near Kap Stosch, 400—338 m, clay, temp. (at 338 m) ÷ 1.19°, salinity 34.20‰, two occurrences (SIVERTSEN 1935); off the mouth of Franz Josephs Fjord, 200—300 m, mud; off the mouth of the fjord between Bontekoe Ø and Mackenzie Bugt, 250 m, mud (OHLIN 1901); Franz Josephs Fjord, between Kap Franklin and Broch Øer, 700 m wire out, 25 specimens; SW. of Franklin Øer, 302 m, stones, 1 specimen; between Kap Weber and Ymerø, 400 m, clay with very large stones, 1 specimen; near the mouth of Antarctic Sund, 800 m wire out, a few specimens; Antarctic Sund, near Skildvagten, 800 m wire out, 1 specimen; S. of Kap Bennett, 290 m, clay (Sivertsen 1935); Isfjord, between two glaciers, 700 m wire out, 2 specimens; 2 miles off Nordenskiöldbræen (c. 73¹/₆° N, 28° W), 670—657 m, clay with sand, temp. (at 650 m) ÷ 0.21°, salinity 34.53‰? (Sivertsen 1935); Dicksons Fjord, near the glacier, 700 m wire out, a few specimens; NE. of Kap Hedlund, Kempes Fjord, 700 m wire, 2 specimens.

Scoresbysund area: Kap Brewster, 500 m (H. J. HANSEN 1908); Nordvestfjord, Solvigen, 325 m, clay, 1 specimen; 70°9' N, 22°2' W (H. J. HANSEN 1909₂).

Distribution: The deep Arctic Basin and Baffin Bay.

3. *Boreomysis arctica* (KRØYER).

Boreomysis arctica G. O. SARS 1879, p. 10, pls. 11—13.

East Greenland records:

- Boreomysis arctica* BROCH & KOEFOED 1909, pp. 120, 138, 144.
 — — K. STEPHENSEN 1913₁, p. 67 (no new records).
 — — — 1933, p. 9.

Occurrence at East Greenland: *Nordøstkyst*: 78°13' N, 16°31' W, 490 m, vertical-haul 475—300 m; 77°31' N, 18°24' W, depth?; 76°37' N, 18°22' W, 314 m, vertical-haul 300—5 m (BROCH & KOEFOED 1909).

Kangerdlugssuaq area: Kangerdlugssuaq, behind the second dead glacier, 450 m wire out.

Distribution: A mainly boreal species, found in the northern Atlantic with adjacent waters.

4. *Erythrops abyssorum* G. O. SARS.

Erythrops abyssorum G. O. SARS 1870, p. 36, pl. 5 figs. 1—12.

East Greenland records:

- Erythrops abyssorum* OHLIN 1901₂, p. 81.
 — — H. J. HANSEN 1908, p. 105 (no new records).
 — — BROCH & KOEFOED 1909, p. 111.
 — — K. STEPHENSEN 1912, p. 524.
 — — — 1913₁, p. 69 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: 76°08' N, 10°49' W, 300 m, mud (K. STEPHENSEN 1912); 75°58' (—59') N, 14°08' (—12') W, c. 300 m (BROCH & KOEFOED 1919).

Franz Joseph Fjord area: Dusénfjord, the westside of the broad part, 240 m, clay, 1 specimen; 72°28' N, 21°48' W, 180 m; 72°25' N, 17°56' W, 300 m, stones and sand (OHLIN 1901₂).

Distribution: Probably mainly arctic: W. Greenland (Karajakfjord) c. 70°20' N, 200 m; N. Norway and Oslofjord, 200—600 m; Kara Sea, 100—120 m; Jan Mayen, c. 365 m.

5. *Erythrops glacialis* G. O. SARS.

Erythrops glacialis G. O. SARS 1885, p. 45, pl. 5 figs. 1—4.

East Greenland records:

- Erythrops glacialis* OHLIN 1901₂, p. 82.
 — — H. J. HANSEN 1908, p. 106 (no new record).
 — — K. STEPHENSEN 1913₁, p. 70 (no new record).
 — — SIVERTSEN 1935, p. 45.

Occurrence at East Greenland: *Franz Joseph Fjord area*: between Bontekoe Ø and Mackenzie Bugt, 250 m, mud (OHLIN 1901₂); Vegasund, 30 m, clay (SIVERTSEN 1935).

Distribution: The Arctic Basin 64°2' N, 5°35' E, 911 m, ÷ 1.1°, clay, and 66°41' N, 6°59' E, 640 m, ÷ 0.9°, coarse clay (type-localities; G. O. SARS l. c.).

6. *Erythropros microps* (G. O. SARS).

Erythropros microphthalma G. O. SARS 1870, p. 30, pl. figs. 13—19.

East Greenland records:

Erythropros microphthalma BROCH & KOEFOED 1909, p. 111.

— *microps* K. STEPHENSEN 1913₁, p. 70 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: 75°58' (—59') N, 14°08' (—12') W, c. 300 m (BROCH & KOEFOED 1909).

Distribution: W. Norway and SW. of Ireland, 75—1000 m.

7. *Meterythropros robusta* S. I. SMITH.

Parerythropros robusta G. O. SARS 1879, p. 98, pl. 39.

East Greenland records:

Parerythropros robusta OHLIN 1901₂, p. 83.

Meterythropros — H. J. HANSEN 1908, p. 107 (no new records).

— — K. STEPHENSEN 1913₁, p. 71 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: SE. of Pendulum Ø 74°35' N, 18°15' W, 150 m, mud and stones (OHLIN 1901).

Distribution: Massachusetts Bay, W. Greenland c. 65¹/₂°—68³/₄° N. 130—400 m, Spitsbergen, N. Norway, Kara Sea; 65—400 m.

8. *Parerythropros spectabilis* G. O. SARS.

Parerythropros spectabilis G. O. SARS 1885, p. 47, pl. 5 figs. 5—12.

East Greenland records:

Parerythropros spectabilis OHLIN 1901₂, p. 84.

— — H. J. HANSEN 1908, p. 108 (no new records).

— — K. STEPHENSEN 1913₁, p. 72 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: 74°52' N, 17°16' W, 350 m, mud, sand and pebbles (OHLIN 1901).

Franz Joseph Fjord area: between Bontekoe Ø and Mackenzie Bugt, 250 m, mud (OHLIN 1901).

Distribution: Lille Karajok fjord, W. Greenland, and the Arctic deep Basin, several localities, 250—763 m.

(*Pseudomma roseum* G. O. SARS, see *P. frigidum* H. J. HANSEN).

9. *Pseudomma frigidum* H. J. HANSEN.

Pseudomma frigidum H. J. HANSEN 1908, p. 109, pl. 5 figs. 3a—3b.

East Greenland records:

Pseudomma roseum OHLIN 1901₂, p. 77.

— *frigidum* H. J. HANSEN 1908, p. 109 (no new records).

? — *roseum* BROCH & KOEFOED 1909, p. 111.

— *frigidum* K. STEPHENSEN 1913₁, p. 74.

Remarks: H. J. HANSEN writes (l. c.) regarding OHLIN's record "as the localities are distinctly arctic and his specimens agree with *P. frigidum* in size, it is undoubtedly this species and not *P. roseum* which he has had in his hands".

Occurrence at East Greenland: *Nordøstkyst*: 75°58' (—59') N, 14°08' (—12') W, c. 300 m (BROCH & KOEFOED 1909).

Franz Joseph Fjord area: SE. of Hvalros Ø 74°30' N, 18°40' W, 80—100 m, mud and stones; off Franz Joseph Fjord and Mackenzie Bugt, 250 m, mud; Moskusoksefjord, 220 m, clay (OHLIN 1901).

Distribution: The Arctic deep Basin 900—1150 m; possibly also Matotschin Shar, 115—125 m.

10. *Michthyops thééli* (OHLIN).

Pseudomma thééli OHLIN 1901₂, p. 78, fig. 5.

East Greenland records:

Pseudomma thééli OHLIN 1901₂, p. 79.

— — H. J. HANSEN 1908, p. 111 (no new records).

— — BROCH & KOEFOED 1909, p. 111.

Michthyops — K. STEPHENSEN 1913₁, p. 76 (no new records).

— — SIVERTSEN 1935, p. 46.

Occurrence at East Greenland: *Nordøstkyst*: 75°58' (—59') N, 14°08' (—12') W, c. 300 m (BROCH & KOEFOED 1909).

Franz Joseph Fjord area: Clavering Fjord, near Kap Stosch 400—338 m, clay, temp. (at 350 m) ÷ 1.19°, salinity 34.20‰ (SIVERTSEN 1935); Franz Joseph Fjord, entrance of Moskusoksefjord, 220 m, mud (OHLIN 1901; type-locality); Forsblads Fjord, 300 m, clay (SIVERTSEN 1935).

Distribution: Kara Sea, 5 occurrences, 0—220 m (STAPPERS 1911).

11. *Stilomysis grandis* G. O. SARS.

Stilomysis grandis G. O. Sars 1879, p. 106, pls. 41—42.

East Greenland records:

Mysideis grandis OHLIN 1901₂, p. 84.

Stilomysis — H. J. HANSEN 1908, p. 113 (no new records).

— — K. STEPHENSEN 1913₁, p. 77 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: SE. of Pendulum Ø 74°35' N, 18°15' W, 150 m, mud and stones (OHLIN 1901).

Franz Joseph Fjord area: the innermost part of Moskusoksefjord, 100 m, clay (OHLIN 1901); Solitærbugt, Ellaö, 25—30 m, clay, stones, 1 specimen.

Distribution: W. Greenland c. 67°—69° N, c. 60—70 m; W. and E. Finmark, 60—200 m; Spitsbergen to 80° N; 70°51' N, 53° E, 50 m.

12. *Mysis oculata* (O. FABRICIUS) (Fig. 2).

Mysis oculata G. O. Sars 1879, p. 69, pl. 31.

East Greenland records:

Mysis oculata BUCHHOLZ 1874, p. 284.

— — H. J. HANSEN 1895, p. 132.

— — OHLIN 1901₂, p. 88.

— — H. J. HANSEN 1908, p. 114, and 1909₂, p. 418.

— — BROCH & KOEFOED 1909, p. 121.

— — K. STEPHENSEN 1912, p. 525.

— — — 1913₁, p. 77 (no new records).

— — — 1933₁, p. 9.

— — SIVERTSEN 1935, p. 45.

— — MADSEN 1936, pp. 11, 17.

— — BERTELSEN 1937, pp. 15, 18, 21, 22, 49.

Occurrence at East Greenland: *Nordøstkyst*: Danmarks Havn and Hvalrosodden, 17 occurrences, 0—20 m (K. STEPHENSEN 1912); 76°49' (—58') N, 18°13' (—0') W, 100 m (BROCH & KOEFOED 1909); Sabine Ø, 8—20 m; Kap Philip Brooke, 6 m (OHLIN 1901).

Franz Joseph Fjord area: Kap Mary (near Herschelhus), in stomach contents of char; Tyrolerfjord, near the head, 125 m, clay and sand, temp. ÷ 1.40°, salinity 33.30‰; the reef in Clavering Fjord, 15—11 m, clay and sand (SIVERTSEN 1935); Eskimonæs, inner harbour, 29—28 m, coarse gravel with small stones and fragments of algæ, 1 specimen, and eastern harbour, 6—10 m, clayish sand with algæ, 4 specimens: Carl Jacobsens Bugt, Ymers Ø, 9 m, clay, 1 specimen, and 16 m, clay, 2 specimens; Dicksons Fjord, 300 m wire out, c. 10 specimens; Åkerbloms Ø, Kong Oscars Fjord, 20 m, stones, 2 specimens; Mackenzie Bugt, 1—35 m, mud etc., 3 occurrences (OHLIN 1901).

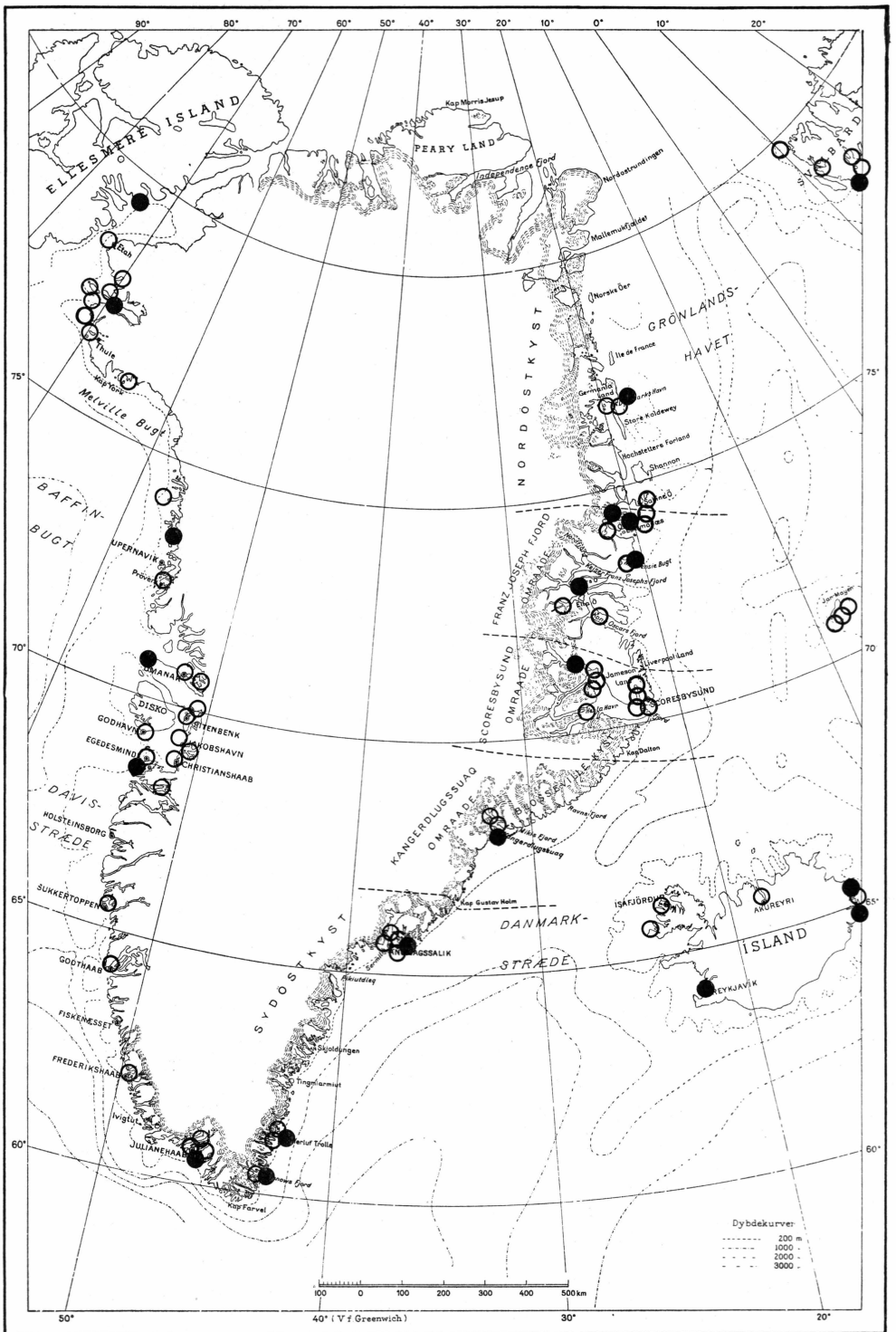


Fig. 2. *Mysis oculata*. ○ = 0–25 m, ● > 25 m (after Björck 1916, Ohlin 1901, K. Stephensen 1913, 1916, 1933, 1938, Vibe 1936 and the present paper).

Scoresbysund area: Kap Stewart 70°27' N, 22°35' W, 13—18 m, mud, stones, algæ (OHLIN 1901); 70°50' N, 22°31' W, 0—14 m (H. J. HANSEN 1908); Kap Hope, 7 m, sand, 2 specimens; off the mouth of Hurry Inlet, 12—13 m, sand with many stones, 2 specimens, and 30 m, stones with *Laminariæ*, sand and red algæ, 1 specimen; Hurry Inlet, western side, near Konstabelpynten, 7—10 m, sand, 1 specimen; western coast of Jameson Land, off Bjørneøerne, 10 m, sandy clay, 1 specimen; Noavig, Milne Land, clayish beach, 2 specimens; Nordvestfjord, Solvigen, 37—30 m, clay, 1 specimen; Nordvestfjord, Nordbugt, 10—18 m, clay, numerous specimens. Hekla Havn (= Danmarks Ø) (H. J. HANSEN 1895).

Kangerdlugssuaq area: in this area it “occurs on rock facies in the tidal zone” (BERTELSEN 1937, p. 21); together with other species it “occurs pelagically in large swarms at the surface of the fresh fjord water layer often far out among the pack-ice above larger depths” (BERTELSEN 1937, p. 22). “At smaller depths and in the tidal zone *Cottus* spawn and *Mysis oculata* alone are of common occurrence” (BERTELSEN 1937, p. 49). Mikis Fjord, in shoals near the shore (K. STEPHENSEN 1933), and 7—8 m, clay, 4 specimens; Kangerdlugssuaq, 14 occurrences; the depths are: 5—8 m, 6—8 m, 8—10 m (2 hauls), 15—0 m, 10—14 m, 10—15 m, 14—15 m, 15 m, 20—25 m (2 hauls), 30—40 m, 41 m and 50 m; usually the bottom is clay, sometimes algæ or stones.

Sydøstkyst: near the shore 66°15' N (H. J. HANSEN 1908); Ødesund c. 66°10' N, 30—10 m, stony bottom with algæ, 1 specimen; Kap Dan, Angmagssalik, 20—30 m, rocks with algæ, a few specimens; Tasiusak near Angmagssalik (H. J. HANSEN 1908); ibidem, 10—0 m, *Fucus*, *Laminariæ*, 1 specimen, 10—38 m, stony bottom with algæ, several specimens, and 40—60 m, stony bottom with algæ, 3 specimens; Sermilik, second Østfjord, 4 m, sandy clay, 2 specimens, 12 m, sandy clay, numerous specimens, and 25 m, clay, 6 specimens; Kungmiut (near Angmagssalik), 7—10 m, mud, numerous specimens, and 10—15 m, clay, *Fucus*, c. 25 specimens; Ikerasausak (near Angmagssalik), 10—0 m, *Fucus*, *Laminariæ*, numerous specimens; Sermilik near Angmagssalik, in a bay with a river mouth in the interior of the fjord, 2 m below the low-water mark on sandy clay without vegetation, 2 specimens (BERTELSEN 1937, p. 18). Naparsarsuaq, 5—8 m, *Laminariæ* and rocks, 2 hauls, c. 8 specimens; ibid. 35—36 m, glittering sand, algæ, etc., 2 hauls, 2 specimens. Kap Tordenskjold, 11—32 m, *Laminaria*, clay and rocks, 8 samples, a few specimens, and numerous very small specimens taken at the very surface 13.-VII, depth of the sea not noted. Lindenow Fjord, 40 samples, viz., 4—30 m 33 samples, 36—48 m 4 samples, 50—60 m, 60—70 m, and? 200—350 m; the bottom is

varying according to the depth, Laminariæ, sand, clay, etc., and usually only very few specimens (1—5) were taken per haul.

Distribution. A sub-arctic, circumpolar littoral species (see K. STEPHENSEN 1932₂, p. 13, with map). "The southern boundary of the subarctic region should in my opinion most naturally be drawn at the southern limits of two specially Arctic littoral animals, *Mysis oculata* and *Pseudalibrotus littoralis*. These animals are of great importance in the Arctic littoral region" (H. MADSEN 1936, p. 65, with map p. 67).

13. *Mysis mixta* LILLJEBORG.

Mysis mixta G. O. SARS 1879, p. 76, pl. 33.

East Greenland records:

Mysis mixta OHLIN 1901₂, p. 89.

— — H. J. HANSEN 1908, p. 115, and 1909, p. 419.

— — K. STEPHENSEN 1913₁, p. 79 (no new records).

Occurrence at East Greenland: *Franz Joseph Fjord area*: Eskimonæs, Østhavn, clayish sand with brown and green algæ, about 15 specimens; Mackenzie Bugt, 6—20 m, mud and sand with Laminariæ (OHLIN 1901); 72°28' N, 25°23' W, 6—25 (H. J. HANSEN 1908 and 1909).

Scoresbysund area: 70°50' N (H. J. HANSEN 1909); 70°30' N, 22°31' W, 14—0 m (H. J. HANSEN 1908).

Sydøstkyst: Lindenows Fjord, 10—25 m, 25—35 m, 50—75 m, 54 m and 60—70 m, the bottom varying according to the depth: Laminariæ, mud, sand, gravel, a few specimens per sample.

Distribution: An arctic-boreal littoral species, from W. Greenland and Massachusetts Bay to Spitsbergen (Icefjord), the White Sea and the Baltic.

Cumacea.

14. *Leucon nasica* (KRØYER).

Leucon nasicus G. O. SARS 1900, p. 30. pls. 21—22.

— *nasica* STEBBING 1913, p. 66.

East Greenland records:

Leucon nasicus H. J. HANSEN 1895, p. 132.

— — OHLIN 1901₁, p. 40.

— — K. STEPHENSEN 1913₁, p. 82 (no new records).

— *nasica* H. J. HANSEN 1920, p. 13 (no new records).

— — ZIMMER 1926, p. 6.

— — — 1934, pp. 34, 35.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Dusénfjord, 185—75 m, clay, ÷ 1.2° (ZIMMER 1934). Dusénfjord, near

the anchoring-place, 57 m, clay, 1 specimen; Solitærbugt, Ella Ø, 23 m, clay, 1 specimen; Sofia Sund, close E. of Botanikerbugt, 210 m, clay with large stones, 2 specimens; 2 miles E. of Robertson Ø, 310 m, clay, 1 specimen; Forsblads Fjord, 175—100 m, 1 small specimen, the determination not certain.

Scoresbysund area: Hurry Inlet 70°43' N, 22°29' W, 70 m, mud (OHLIN 1901₁ and ZIMMER 1926). Hekla Havn, mud (H. J. HANSEN 1895 and 1920). Scoresby Sund, off Hurry Inlet, 245 m, sandy clay, 1 specimen; Hurry Inlet, off Konstabelpynten, 33 m, clay.

Distribution: Widely distributed in the arctic and boreal areas.

15. *Leucon pallidus* G. O. SARS.

Leucon pallidus G. O. SARS 1900, p. 33, pl. 25.

— — STEBBING 1913, p. 71.

— — H. J. HANSEN 1920, p. 17.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Forsblads Fjord, 175—100 m, SØREN JENSEN leg. 30-VII-1900, 1 ♀ juv. c. 3 mm, 1 ♂ juv. c. 3 mm. The species is new to E. Greenland.

Though the specimens are small and young (adult specimens are 4 mm (♀)—4.5 mm (♂)), there is no doubt regarding the correctness of the determination, for i. a. the dorsal crest is as shown in SARS's fig. and as described by H. J. HANSEN l. c., and the inner ramus of the uropods terminates in the characteristic mucroniform point.

Distribution: Northern Atlantic, with a few finds in adjacent arctic waters, from a few meters down to about 2600 m (S. of Spitsbergen).

16. *Leucon nathorsti* OHLIN.

Leucon nathorsti OHLIN 1901₁, p. 41, fig. 9.

— — STEBBING 1913, p. 68.

— — H. J. HANSEN 1920, p. 14, pl. 1 fig. 5.

— — ZIMMER 1926, p. 7, fig.

East Greenland record:

Leucon nathorsti H. J. HANSEN 1920, p. 15.

Occurrence at East Greenland: *Scoresbysund area*: North of Stewart Land, about 70°30' N, 300 m, clay with stones (H. J. HANSEN 1920).

Distribution: Baffin Bay 68°08' N, 58°47' W, 287 m, mud and stones (ZIMMER 1926). Davis Strait 66°35' N, 56°38' W, c. 600 m, 3.9°; several occurrences from E. Greenland and N. of Iceland c. 575 m to

Spitsbergen and Novaya Zemlya, 20—c. 200 m (or even c. 1000 m, N. of Spitsbergen) (H. J. HANSEN 1920, ZIMMER 1926).

17. *Leucon nasicooides* LILLJEBORG

Leucon nasicooides G. O. SARS 1900, p. 31, pl. 23.

— — STEBBING 1913, p. 65.

East Greenland records:

Leucon nasicooides OHLIN 1901₁, p. 41.

— — H. J. HANSEN 1920, p. 15.

— — ZIMMER 1926, p. 7.

Occurrence at East Greenland: *Nordøstkyst*: S. of Lille Pendulum Ø 74°35' N, 18°23' W, 18—21 m, sandy mud, algæ (OHLIN 1901₁ = ZIMMER 1926).

Scoresbysund area: Hekla Havn (= Danmarks Ø) 70°27' N, 20 m; Kap Dalton c. 69°30' N, 18—22 m (H. J. HANSEN 1920).

Distribution: From W. Greenland and eastern N. America to Novaya Zemlya and the Sound, depths 14—235 (970) m.

18. *Campylaspis intermedia* H. J. HANSEN

Campylaspis intermedia H. J. HANSEN 1920, p. 43, pl. 3 fig. 6.

— — ZIMMER 1934, p. 35.

East Greenland record:

Campylaspis intermedia ZIMMER 1934, pp. 34, 35.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Dusénfjord, 185—75 m, clay, ÷ 1.2°, 2 specimens (ZIMMER 1934).

Distribution: Davis Strait 66°35' N, 56°38' W, about 600 m, 3.9°, and South of Jan Mayen 70°05' N, 8°26' W, about 700 m, ÷ 0.4° (type-localities; H. J. HANSEN l. c.)

19. *Campylaspis* sp.

Occurrence at East Greenland: *Scoresbysund area*: Hurry Inlet, the mouth, 55 m, clayish sand, bottom-sampler, 1 ♂; near this locality, 57 m, sandy clay, bottom-sampler, 1 ♀ with the marsupium large, but empty.

These specimens could not be determined; they represent a species close to *C. verrucosa* G. O. SARS and *C. horrida* G. O. SARS.

20. *Eudorella emarginata* (KRØYER).

Eudorella emarginata G. O. SARS 1900, p. 36, pls. 27—28.

— — STEBBING 1913, p. 75.

East Greenland record:

Eudorella emarginata ZIMMER 1934, pp. 34, 35.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Tyroler Fjord, 122—128 m, clay and sand, $\div 1.40^\circ$, salinity 33.30‰; Kap Stosch, Clavinger Fjord, 12 m, grey-brown clay (ZIMMER 1934). Eskimonæs, Østhavn, clayish coarse gravel with a few algæ, 1 specimen. Eleonora Bugt, the anchoring-place, 23 m, clay with some stones, 1 specimen.

Scoresbysund area: Between Kap Tobin and Kap Brewster, 340 m, clay, 1 specimen; Hurry Inlet, off Konstabelpynten, 23 m, clay, 1 specimen, and off Fame-Øerne, 25 m, clay, 1 specimen. Kap Hooker, 60 m, 65 m, and 67 m, sand or clayish sand, 4 specimens. NE. side of Danmarks Ø, 20 m, soft clay, 1 specimen.

Distribution: N. Atlantic with adjacent arctic waters; also Pacific (Vancouver); usually from a few meters down to about 100 m.

21. *Eudorella arctica* H. J. HANSEN.

Eudorella arctica H. J. HANSEN 1920, p. 24, pl. 1 fig. 9.

East Greenland record:

Eudorella arctica H. J. HANSEN 1920, p. 25.

Occurrence at East Greenland: *Scoresbysund area*: Kap Dalton c. $69^\circ 30' N$, 18—22 m (type-locality; H. J. HANSEN 1920).

Not found outside this locality.

22. *Cumella carinata* (H. J. HANSEN).

Campylaspis carinata H. J. HANSEN 1887, p. 207, pl. 7 fig. 4.

Cumella — STEBBING 1913, p. 184.

— — H. J. HANSEN 1920, p. 31.

East Greenland record:

Cumella carinata H. J. HANSEN 1920, p. 32.

Occurrence at East Greenland: *Scoresbysund area*: Hurry Inlet c. $70^\circ 50' N$, 20 m (H. J. HANSEN 1920).

Sydøstkyst: Naparsarsuak (about $61^\circ 50' N$), 38 m, muddy sand, 26.-VI.-1935, 1 specimen; Kekertaksiak (about $60^\circ 15' N$), 60 m, sand, dead Bryozoa, gravel, bottom-sampler, 13.-VII.-1935, 2 specimens.

Distribution: Ellesmere Land 79°30' N, 106° W, 4—40 m; Greenland: Disco, in Nordfjord 69°57' N, 50 m, clay (type-locality; H. J. HANSEN 1887; is probably the same specimen as that recorded by ZIMMER 1926, p. 18, from "Omenak, 45 m, feiner Schlamm."); Labrador; 46°48½' N, 52°34' W, 160 m, and 45°29' N, 55°24' W, 120 m.

23. *Diastylis goodsiri* (BELL) (Fig. 3).

Diastylis goodsiri G. O. SARS 1900, p. 54, pl. 41.

— — STEBBING 1913, p. 99.

— — ZIMMER 1926, p. 79.

East Greenland records:

Diastylis goodsiri OHLIN 1901₁, p. 45.

— — H. J. HANSEN 1920, p. 58.

— — ZIMMER 1926, p. 81.

— — — 1934, pp. 35, 36.

Occurrence at East Greenland: *Nordøstkyst*: 74°28' N, 15°36' W, about 200 m (H. J. HANSEN 1920).

Franz Joseph Fjord area: Tyrolerfjord, 122—128 m, clay and sand, ÷ 1.04°, salinity 33.30‰; Herschelhus, 53—43 m, clay with sand and brown algæ, and 80—78 m, clay with red algæ (ZIMMER 1934). S. of Clavering Ø 74°10' N, 20°08' W, 25—40 m, mud etc. (OHLIN 1901₁ and ZIMMER 1926). Alpefjord, near the mouth, 70 m, clay and stones (ZIMMER 1934). Scott Keltie Øerne 72°45' N, 22°56' W, 35—60 m, mud, stones (OHLIN 1901₁ and ZIMMER 1926). W. of Scott Keltie Øerne, Vega Sund, 40—50 m, clay etc.; Vega Sund, 30 m, grey clay; Holm Bugt, 40 m, sand (ZIMMER 1934). Murray Ø, 71°33' N, 21°30' W, 200 m, mud, sand (OHLIN 1901₁ and ZIMMER 1926). Nathorst Fjord, 23 m, red clay, ÷ 1.04°, salinity 31°10‰ (ZIMMER 1934).—Eskimonæs, Østhavn, 55—50 m, clayish gravel, 1 specimen, and 55—53 m, stones, red algæ, 1 specimen; Dusénfjord, near the anchoring-place, 47 m, clay, 1 specimen, and 57 m, clay, 1 specimen; Dusénfjord, the western end of the broad part, 240 m, clay, 1 specimen. Solitærbugt, Ella Ø, 20—85 m, 54 samples (viz., 20—25 m 6 hauls, 26—34 m 11 hauls, 35—50 m 27 hauls, 51—55 m 7 hauls, 60—70 m 2 hauls, 75—85 m 1 haul); the bottom was clay, without or (in a few cases) with stones or Laminariæ; usually only one specimen per haul. Off Vimmelskaftdalen, Fleming Fjord, 27 m, clay, a few stones, 1 specimen.

Scoresbysund area: Hurry Inlet 70°43' N, 22°29' W, 70 m, clay (OHLIN 1901₁ and ZIMMER 1926). Hurry Inlet 70°50' N, 14—0 m (H. J. HANSEN 1920). Amdrups Havn, 22—28 m, Laminariæ and red algæ, 1 specimen, and 33—35 m, Laminariæ and red algæ, 19 specimens.

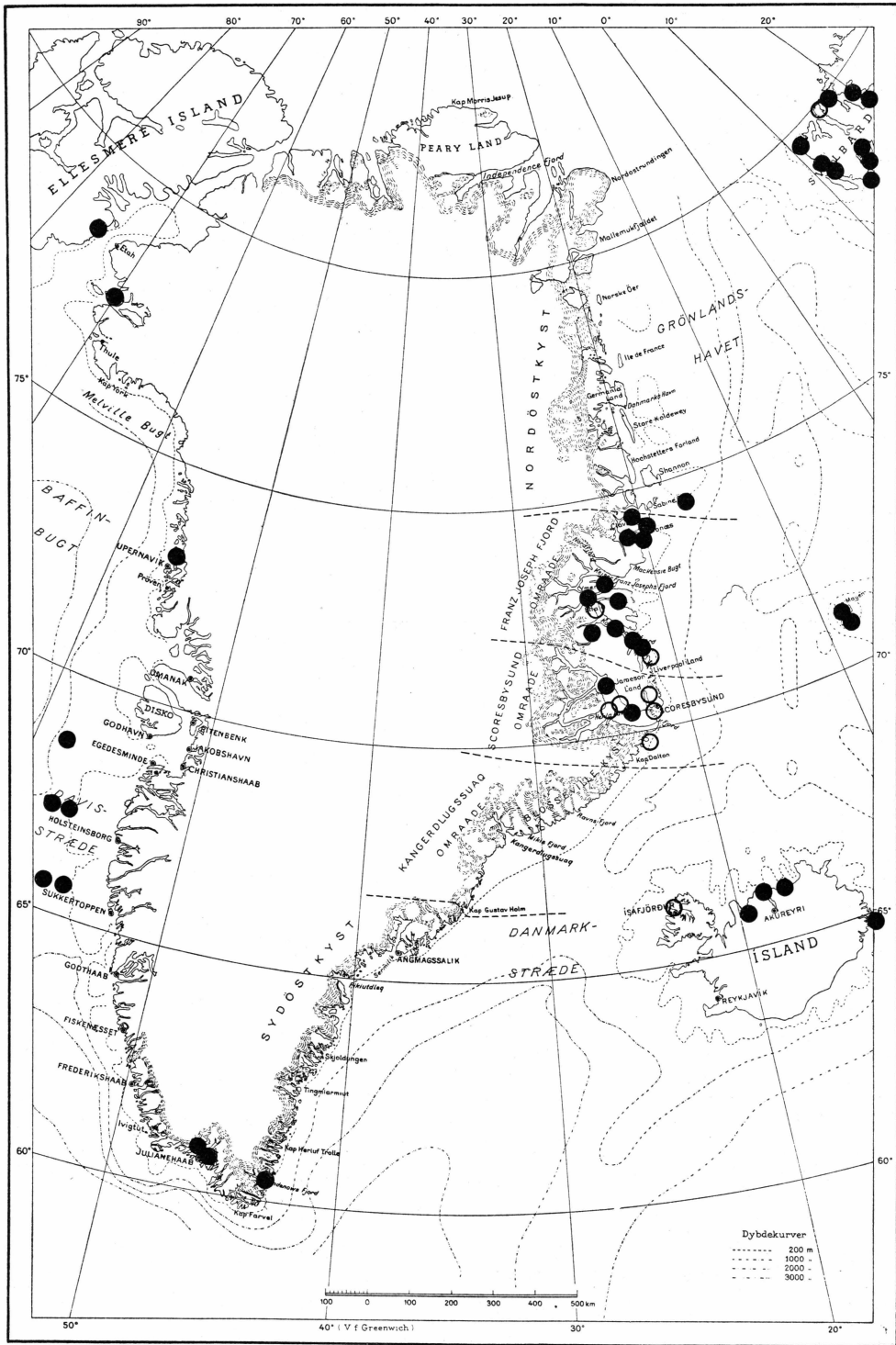


Fig. 3. *Diastylis goodsiri*. ○ = 0—25 m, ● > 25 m (after H. J. Hansen 1920, K. Stephensen 1913, 1916, 1933, 1938, Zimmer 1926 and the present paper).

Hurry Inlet, the mouth, 57 m, sandy clay with decaying algæ, 1 specimen. Hurry Inlet, off Konstabelpynten, 7—91 m, clay, 12 samples (viz., 7—10 m, 18—22 m, 23—24 m (4 samples), 33 m (2 samples), 44—45 m (3 samples), 91 m); Hurry Inlet, off Fame Øerne, 15—25 m, clay, red algæ, Laminariæ, gravel, 6 samples, several specimens. Kap Hooker, 6—1 m, clayish sand, 2 specimens, and 57—72 m, clayish sand, 7 samples, a few specimens. 8 miles inside Kap Hooker, clayish sand, 1 specimen. Off Jameson Land, opposite Kap Leslie, 22—23 m, sandy glittering clay, 2 samples, 3 specimens. Off Jameson Land, opposite Bjørne Øerne, 30—31 m, clay, 5 samples, 7 specimens. Ryders Sund, 6 m, 2 specimens.

Sydøstkyst: Lindenowfjord, 45 m, clay, 1 specimen.

According to the above it is found from about $74\frac{1}{2}^{\circ}$ N to about $69\frac{3}{4}^{\circ}$ N, in 103 samples, and about 61° N, in 1 sample. Usually there are only very few specimens (1, 2 or 3, only in very few cases as many as 8—12) per sample.

The depths were as follows.

Depths in meters	Number of samples				Total number of samples
	Nordøstkyst	Fr. Jos. Fj. area	Scoresbysund area	Sydøstkyst	
1—25 .....	..	16	17	—	23
> 25—50 .....	..	46	2	1	59
> 50—75 .....	..	6	9	—	15
> 75—100 .....	..	1	1	..	2
105—150 .....	..	1	—	..	1
155—200	1	2	..	..	3
210—250	—	1	..	..	1
> 250 .....	—	—	..	..	—
	1	63	39	1	104

Remarks regarding the size etc.: There are no adult ♂ in the material from the Danish expeditions. ♂ juv. (with small pleopoda without natatory setæ) are 24—28 mm in length and were taken at the following dates: 1.-VII. 3.-VII, 26.-VII, 15.-VIII, and 22.-IX. ♀ with the marsupium small are 26—31 mm in length and were taken: 4.-VII, 14.-IX, 24.-IX (2 specimens), and 27.-IX. Eggbearing ♀ are 25—34 mm and were taken the following dates: 3.-VII (27 mm), 10.-VII (25 mm), 14.-VII (30 mm), 26.-VII (25 mm, 2 specimens), 28.-VII (34 mm), 2.-VIII (25 mm, 2 specimens), 16.-VIII (30 mm), 14.-IX (28 mm), 20.-IX (28 mm), and 25.-IX (28 mm). ♀ with the marsupium empty are 25—28 mm and were taken 19.—26.-IX.

According to the above the spawning season seems to be July to September, and the embryos leave the marsupium medio September.

Distribution: A mainly arctic species, 0—100 (700) m; see K. STEPHENSEN 1936, p. 5, with map.

24. *Diastylis oxyrhyncha* ZIMMER.

Diastylis oxyrhyncha ZIMMER 1926, p. 55, figs., etc.
— — — 1930, p. 625, with map etc.

East Greenland records:

Diastylis oxyrhyncha ZIMMER 1926, p. 57.
— — — 1930, p. 627.
— — — 1934, pp. 35, 36.

Occurrence at East Greenland: *Nordøstkyst*: S. of Shannon 74°52' N, 17°16' W, 350 m, mud, sand (ZIMMER 1926).

Franz Joseph Fjord area: 74°28' N, 15°36' W, 20 m (ZIMMER 1930). S. of Kap Hold with Hope, 310—260 m, clay with stones, 0,21°; Dusénfjord, 185—75 m, clay, ÷ 1.2° (ZIMMER 1934). Kap Parry 72°28' N, 21°48' W, 180 m, mud (ZIMMER 1926). Solitærbugt, Ella Ø, 20—22 m, stones, shells, *Desmarestia*, *Laminaria*, 1 ♂, determination not certain.

Scoresbysund area: Hurry Inlet 70°50' N, 91 m (ZIMMER 1930), and Hurry Inlet 70°43' N, 22°29' W, 70 m, mud (ZIMMER 1926).

Sydøstkyst: Naparsarsuak (about 61°50' N), 26—38 m (5 occurrences), muddy sand, gravel, etc., 47 specimens; Kutdlek, 30 m, sand with a little mud, 6 specimens; Lindenowfjord, 9—37 m, 7 samples (viz., 9 m, 15—20 m, 15—30 m (2 samples), 20 m, 25 m, and 37 m), gravel, sand, clay, etc., 11 specimens; *ibid.*, 500—700 m, bottom?, 1 specimen.

Distribution: NE. America, W. Greenland, E. Greenland, Iceland, the Faroes, from Norway about 62° N to Kara Sea; depths 20—1024 m. For further details see ZIMMER loc. cit., with map in ZIMMER 1930, p. 629.

25. *Diastylis edwardsi* (KRØYER) (non *D. scorpioides* (LEPECHIN)). (Fig. 4).

Diastylis edwardsi ZIMMER 1926, pp. 26—38, figs.

East Greenland records:

Diastylis edwardsi H. J. HANSEN 1895, p. 132.
— — (partim) OHLIN 1901, p. 52.
— *scorpioides* K. STEPHENSEN 1912, p. 548.
— — (partim) K. STEPHENSEN, 1913, p. 88.

Diastylis scorpioides (partim) H. J. HANSEN 1920, p. 61.

— *edwardsi* ZIMMER 1926, p. 35.

— — — 1934, pp. 34, 36.

Occurrence at East Greenland: (The material from East Greenland recorded in OHLIN 1901₁ is revised in ZIMMER 1926; the specimens listed by H. J. HANSEN l. c. and K. STEPHENSEN l. c. were revised by ZIMMER 1931).

Nordøstkyst: Danmarks Havn, 6—20 m, *Laminaria* etc., 5 occurrences (K. STEPHENSEN 1912; *D. scorpioides*). S. of Lille Pendulum Ø 74°35' N, 18°23' W, 18—21 m, sandy clay, algæ (OHLIN 1901, = ZIMMER 1926).

Franz Joseph Fjord area: Kap Borlase Warren, 20 m (H. J. HANSEN 1920; *D. scorpioides*). 2 miles N. of Herschelhus, 7 m, clay with brown and green algæ; Herschelhus, 8—6 m, mud with brown algæ (ZIMMER 1934). SE. of Clavering Ø 74°10' N, 20°8' W, 25—40 m, mud with many stones and shells (OHLIN 1901₁ = ZIMMER 1926). Kap Stosch, Claveringfjord, 12 m, greybrown clay; mouth of Loch Fine, 15 m, Lithothamnion and stones; Clavering Fjord, off Dødemands Øerne, 34 m, clay; Mackenzie Bugt, 15 m, mud with brown algæ, and ibidem, depth? (ZIMMER 1934). Kap Bennett 73°26' N, 21°13' W, 9—11 m, mud, algæ (OHLIN 1901₁ = ZIMMER 1926). Moskusokse Fjord, 30 km from the mouth, 25 m, reddish clay (ZIMMER 1934). 73°06' N, 27°17' W, 3—9 m, mud and sand with algæ (OHLIN 1901₁ = ZIMMER 1926). Eskimonæs, SE. of Knolden, 14—10 m, sandy black clay, 1 specimen; ibid. Inderhavnen, 29—28 m, sand with small stones and fragments of brown algæ, 8 specimens; ibid., off Knolden, 41—38 m, gravel, clay with brown algæ, 6 specimens; ibid., Østhavn, 45 m, clayish coarse gravel with very few algæ, 1 specimen. Eleonora Bay, 27—15 m, clay with *Laminaria* and a few red algæ, 1 specimen; Dusénfjord, anchoring-place, 10 m, 20—25 m, and 57 m, clay with and without *Desmarestia*, 3 occurrences, 4 specimens. Carl Jacobsens Bugt, Ymers Ø, 13—30 m, 8 occurrences (viz., 13 m, 14 m, 20 m (3 occurrences), 24 m, 25 m, and 30 m), clay, 15 specimens. Solitærbugt, Ella Ø, 11—37 m, 28 occurrences (viz., 11—20 m, 15 m, 18—11 m, 19 m, 20 m (2 occur.), 21 m (3 occur.), 22 m (2 occur.), 23 m (2 occur.), 24 m, 25 m, 26 m, 30 m (2 occur.), 31 m (6 occur.), 34 m, 36 m, 37 m), clay with algæ (11—20 m) or clay without algæ (19—37 m), 36 specimens. Kap Hedlund, Kempes Fjord, 7—14 m, clay and *Fucus*, 1 specimen, and 12—15 m, clay, *Desmarestia*, 1 specimen.

Scoresbysund area: Hurry Inlet, Fame-Øerne, 70°50' N, 22°33' W, 9 m, mud, algæ; Kap Stewart 70°27' N, 22°35' W, 13—18 m, mud, stones, algæ (OHLIN 1901₁ = ZIMMER 1926). Hurry Inlet, 14—0 and 20 m (H. J. HANSEN 1920, "*D. scorpioides*", revised by ZIMMER). Dan-

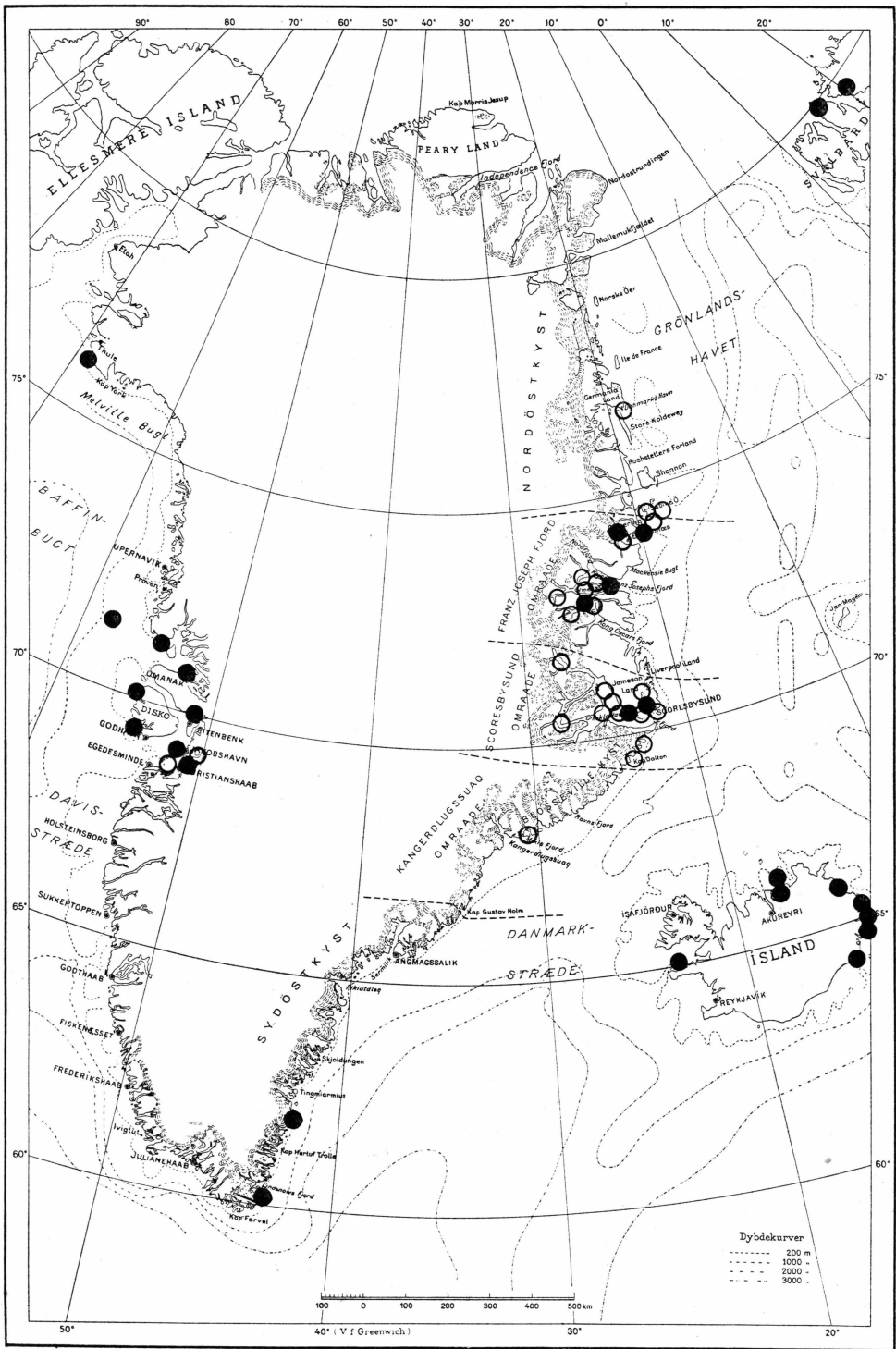


Fig. 4. *Diastylis edwardsi*. ○ = 0—25 m, ● > 25 m (after Zimmer 1926, and the present paper).

marks Ø (= Hekla Havn), 2—20 m, 2 occurrences (*D. edwardsi* H. J. HANSEN 1895, *D. scorpioides* H. J. HANSEN 1920, revised by ZIMMER). Turner Sund, 6 km (H. J. HANSEN 1920, *D. scorpioides*, revised by ZIMMER). Kap Tobin, 128 m, gravel, stones, clay, 1 specimen; Kap Hope, 10—11 m and 10—13 m (2 occurrences), sand, algæ, 5 specimens. Hurry Inlet, in and near the mouth, 13—72 m, 11 occurrences (viz., 13 m, 14 m (2 occurrences), 16 m, 20—28 m, 21 m, 25 m, 28 m, 55 m, 57 m, 72 m), sand and algæ (14—28 m), or sand and clay (13—72 m), 12 specimens. Hurry Inlet, off Konstabelpynten, 21—92 m, 6 occurrences (viz., 21 m, 23 m, 31 m, 45 m, and 92 m (2 occur.)), clay, 7 specimens. Hurry Inlet, off Fame-Øerne. 15—18 m, clay, red algæ, Laminariæ, 2 specimens. Kap Hooker, 67 m, sand, clay, 3 occurrences, 3 specimens. 8 miles inside Kap Hooker, 13 m, clayish sand, 1 specimen, and 14 m, clayish sand, 2 occur., 3 specimens. Nordbugt near Nordvestfjord, 25 m, clay, 1 specimen, and 28 m, clay, 1 specimen. Westside of Jameson Land, off Kap Leslie, 22 m, sandy glittering clay, 2 occurrences, 2 specimens; westside of Jameson Land, off Bjerne Øerne, 10 m, sandy clay, 1 specimen, and 21 m, sandy glittering clay, 1 specimen. The bay off Røde Ø, Røde Fjord, 13—18 m, clay with gravel, 2 specimens. Kap Dalton, 18—22 m.

Kangerdlugssuaq area: Mikis Fjord, 7—8 m, clay, 1 specimen.

Sydøstkyst: Naparsarsuak (about 61°50' N), 38 m, muddy sand, 2 specimens; Kekertaksuak (about 60°15' N), 50 m, sand, dead Bryozoa, 1 specimen.

According to the above it is found from about 77½° N to 68° N, and from 62° N to 60° N, in 107 samples. Usually there were but very few specimens (1 or 2) per sample.

The depths were as follows:

Depths in meters	Number of samples					Total number of samples
	Nordøst- kyst	Franz Joseph Fjord area	Scoresby- sund area	Kanger- dlugssuaq area	Sydøst- kyst	
0—25 ...	6	36	31	1	—	74
> 25—50 ...	—	18	3	—	2	23
> 50—75 ...	—	1	6	—	—	7
92	—	—	2	—	—	2
128	—	—	1	—	—	1
	6	55	43	1	2	107

Remarks on the size: The lengths of the specimens agree well with those noted by ZIMMER 1926, usually 10—11 mm.

Distribution: Baffinland, Baffin Bay and W. Greenland, E. Greenland, Spitsbergen, Russian waters; depths usually 0—90 m, rarely deeper (107—500 m) (ZIMMER 1926). Iceland (by K. STEPHENSEN 1938, p. 13 erroneously called *D. scorpioides*).

26. *Diastylis scorpioides* (LEPECHIN) (non *D. edwardsi* (KRØYER)) (Fig. 5).

Diastylis scorpioides ZIMMER 1926, pp. 26—35, with figs.

non: *Diastylis scorpioides* G. O. SARS 1900, p. 58, pl. 44 (= *D. lepechini* ZIMMER 1926).

East Greenland records:

Diastylis scorpioides (partim) K. STEPHENSEN 1913₁, p. 88.

— — — H. J. HANSEN 1920, p. 61.

— — — ZIMMER 1926, p. 33.

— — — 1934, pp. 34, 36.

non: *Diastylis scorpioides* K. STEPHENSEN 1912, p. 548 (= *D. edwardsi* (KR.))

Occurrence at East Greenland: (The material from East Greenland recorded by K. STEPHENSEN 1912 and 1913, and by H. J. HANSEN 1920 was revised by ZIMMER 1931 and belongs partly to *D. scorpioides*):

Nordøstkyst: 74°35' N, 18°23' W, S. of Lille Pendulum Ø, 18—21 m, sandy clay, algæ (ZIMMER 1926).

Franz Joseph Fjord area: Herschelhus, 53—43 m, clay with sand and brown algæ; Clavering Fjord, off Kap Stosch, 30 m, clay; Clavering Fjord, off Dødemands Øerne, 34 m, clay; Mackenzie Bugt, depth?; Franz Joseph Fjord, near the mouth, 35 m, red brown clay; Moskusokse Fjord, 30 km from the mouth, 25 m, reddish clay; Dusénfjord, 185—75 m, clay, ÷ 1.2°; W. of Scott Keltie-Øerne, Vega Sund, 40—50 m, clay etc. (ZIMMER 1934). Eskimonæs, Østhavn, 55—50 m, clayish gravel, 4 specimens. Dusénfjord, the southern side near the anchoring-place, 10 m, clay, Desmarestia, 1 specimen; *ibid.*, 20—25 m, clay, Desmarestia, 2 specimens, and 26 m, clay, 1 specimen. Carl Jacobsens Bugt, Ymers Ø, 24 m, clay, 1 specimen. Solitærbugt, Ella Ø, 20—55 m, 11 occurrences (*viz.*, 20 m, 20—21 m, 22 m, 23 m, 25 m, 30 m, 31 m, 32 m, 38 m, and 55 m), shells and Desmarestia (20—21 m), clay (20—33 m), or clay and stones (38—55 m), 12 specimens.

Scoresbysund area: Kap Stewart, 70°27' N, 22°35' W, 13—18 m, mud, stones, algæ (ZIMMER 1926). Kap Dalton 18—22 m (H. J. HANSEN 1920; the determination approved by ZIMMER). Hurry Inlet, the mouth, 21 m, sand, detritus of algæ, 1 specimen; Hurry Inlet, off Konstabelpynten, 7—44 m, 6 occurrences (*viz.*, 7—10 m, 18—22 m, 21 m, 23 m, 31 m, 44 m), clay, 6 specimens; Hurry Inlet, off Fame-Øerne,

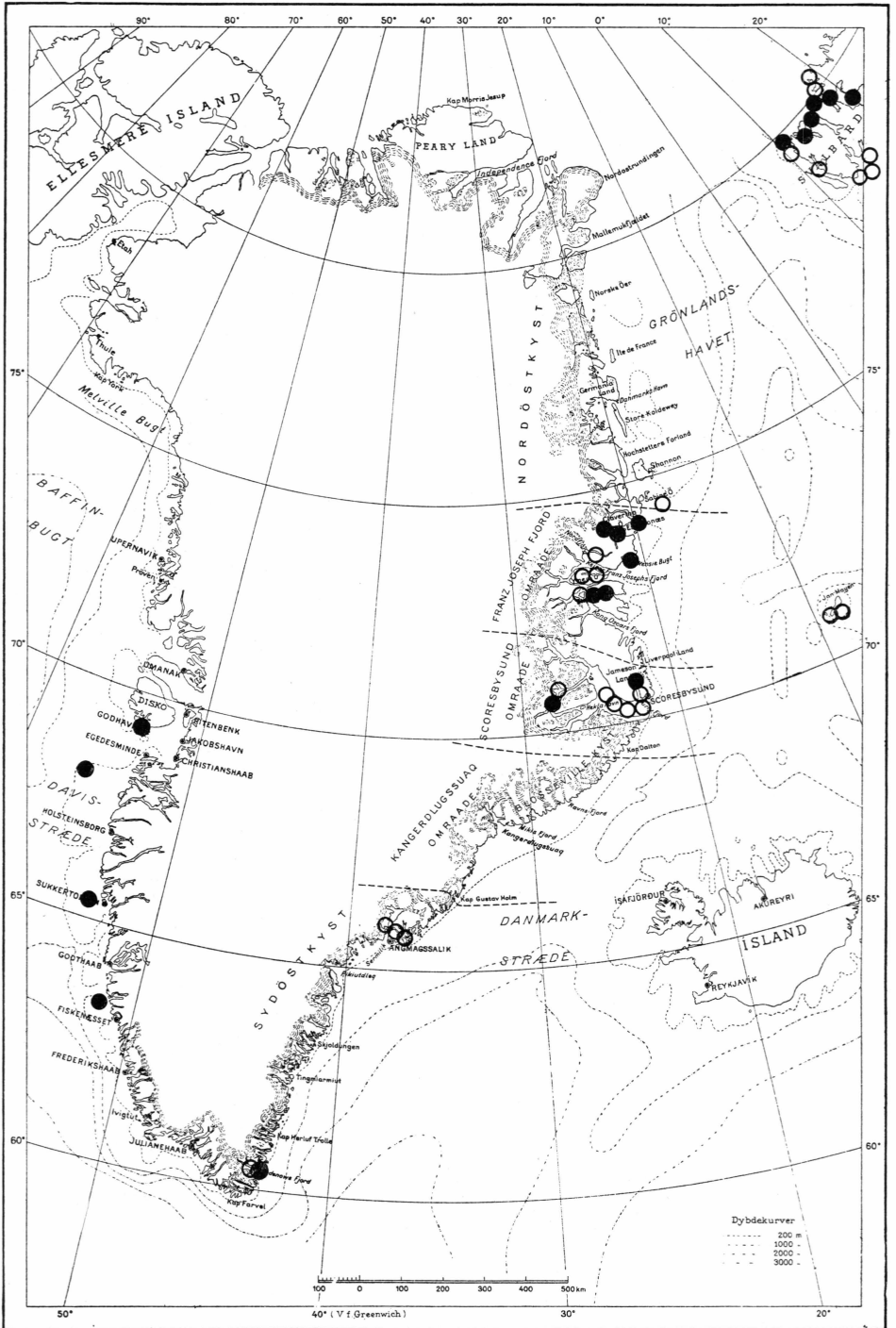


Fig. 5. *Diastylis scorpioides*. ○ = 0—25 m, ● > 25 m. (after Zimmer 1926, and the present paper).

25 m, clay, 2 specimens. W. coast of Jameson Land, off Kap Leslie, 22 m, sandy glittering clay, 4 samples, 8 specimens, and 23 m, same bottom, 2 specimens. Kap Hooker, 60 m, sandy clay, 1 specimen. 8 miles inside Kap Hooker, 13 m and 14 m, sandy clay, 3 specimens. W. side of Jameson Land, off Bjørne Øerne, 10—29 m, 3 occurrences (viz., 10 m, sandy clay; 21 m, sandy glittering clay; and 29 m, clay), 3 specimens. Røde Fjord, in the bay off Røde Ø, 13—18 m, clay with gravel, 8 specimens, and 30—35 m, clay with many big stones, 1 specimen.

Sydøstkyst: Tasiusak, Angmagssalik, 45—71 m, clay with small stones and shells (ZIMMER 1926). Angmagssalik: Tasiusak, 10—12 m, clay, sand, 1 specimen, and Sermilik, second Østfjord, 25 m, clay, 2 specimens. Nanusek (mouth of the Lindenowfjord), 58 m, gravel and clay, 1 specimen. Lindenowfjord, 13 samples, 18—275 m (viz., 18 m, 27 m, 30—50 m, 37 m, 40—50 m, 45 m (2 samples), 48 m, 51 m, 52 m, 73 m, 90 m, and 275 m), the bottom varying according to the depth from gravel and Laminariæ to sand or clay, 1(—3) specimen per sample.

According to the above it is found from about $74\frac{1}{2}^{\circ}$ N to about 61° N (but is missing in the Kangerdlugssuaq area), in 62 samples¹⁾ Usually there is but one specimen per sample.

The depths were as follows

Depths in meter	Number of samples ¹⁾					Total number of samples
	Nordøst- kyst	Franz Joseph Fjord area	Seoresby- sund area	Kanger- dlugssuaq area	Sydøst- kyst	
10—25 ..	1	7	14	—	3	25
> 25—50 ..	—	13	5	—	7	25
> 50—75 ..	—	2	1	—	5	8
> 75—100 ..	—	—	—	—	1	1
“185—75” .	—	1	—	—	—	1
275	—	—	—	—	1	1
	1	23	20	—	17	61

¹⁾ in 1 sample the depth was not noted.

Remarks on the size: The majority of the specimens from the Danish expeditions are about 16—18 mm in length (ZIMMER 1926, p. 31 writes: ♀ 15—20 mm), very few are essentially smaller (c. 10 mm).

Distribution: Baffinland, W. and E. Greenland, Jan Mayen, Spitsbergen, Russian waters to 81° E; depths usually 5—100 m, only 5 samples are deeper, viz., 105—198 m (ZIMMER 1926). It is not known from Iceland (see under No. 25, *D. edwardsi*).

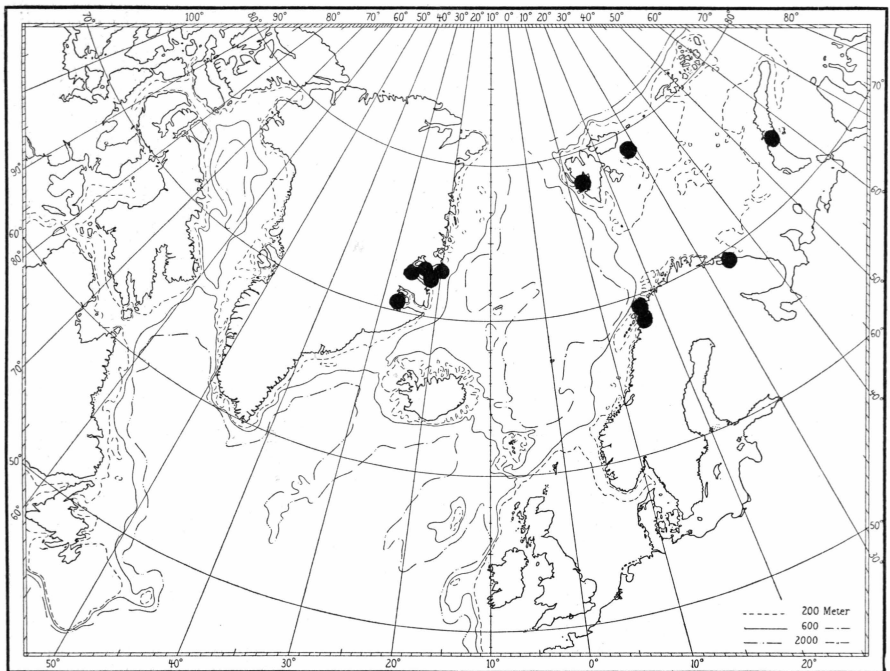


Fig. 6. *Diastylis lepechini* (after ZIMMER 1926 and the present paper).

27. *Diastylis lepechini* ZIMMER (Fig. 6).

Diastylis lepechini ZIMMER 1926, pp. 26 seq., figs.

— *scorpioides* G. O. SARS 1900, p. 58, pl. 44 (fide ZIMMER 1926).

East Greenland records:

Diastylis edwardsi (partim) OHLIN 1901₁, p. 53 (fide ZIMMER 1926).

— *lepechini* ZIMMER 1926, p. 36.

— — — 1934, pp. 34, 36.

Occurrence at East Greenland: *Franz Joseph Fjord* area: S. of Kap Hold with Hope, 310—260 m, clay with stones, 0.21°; Dusénfjord, 185—75 m, clay, ÷ 1.2° (ZIMMER 1934). Scott Keltie Øerne, Vega Sund, 72°45' N, 22°56' W, 35—60 m, mud, and Kempes Fjord, mouth of Røhss Fjord, 72°43' N, 26°38' W, 35—60 m, mud (OHLIN 1901₁ (*D. edwardsi*) = ZIMMER 1926).

Distribution (Fig. 6): E. Greenland, Spitsbergen, Norway N. of Tromsø, Kola Fjord and Novaja Zemlya; depths 9—214 m (ZIMMER 1926) or to 310—260 m (ZIMMER 1934).

28. *Diastylis spinulosa* HELLER.

Diastylis spinulosa G. O. SARS 1900, p. 55, pl. 42.

— *spinulosus* STEBBING 1913, p. 94.

East Greenland records:

- Diastylis spinulosa* OHLIN 1901₁, p. 48.
 — — K. STEPHENSEN 1913₁, p. 88 (no new records).
 — — H. J. HANSEN 1920, p. 62.
 — — ZIMMER 1926, p. 38 (no new records).
 — — — 1934, pp. 35, 36.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Tyroler Fjord, 122—128 m, clay and sand, $\div 1.40^\circ$, salinity 33.30‰₀₀, and 320 m, clay and sand, $\div 1.73^\circ$, salinity 33.54‰₀₀; Mackenzie Bugt, 83—63 m, mud; Dusén Fjord, 185—75 m, clay, $\div 1.2^\circ$ (ZIMMER 1934). 74°28' N, 15°36' W, 200 m (H. J. HANSEN 1920). Franz Joseph Fjord, NE. of Kap Graah, 460 m, clay, a few stones, 1 specimen. Dusén Fjord, head of the fjord, near the anchoring-place, 36 m, clay, 1 specimen, and 57 m, clay, 1 specimen. In the middle of Antarctic Sund, 540 m, clay with very big stones, 1 specimen. Solitærbugt, Ella Ø, clay with a little gravel, 1 specimen, and 41 m, stony bottom with a little *Desmarestia*, 1 specimen.

Scoresbysund area: Hurry Inlet, 70°43' N, 22°29' W, 70 m, mud (OHLIN 1901₁ = ZIMMER 1926). N. of Stewart Land 70°30' N, 300 m (H. J. HANSEN 1920). Hurry Inlet, off Fame Øerne, 6—7 m, clay, 1 specimen, and off Konstabelpynten, 46 m, clay, 1 specimen. Kap Hooker, 63—220 m, 7 occurrences (viz., 60 m, 67 m, 140 m (2 occur.), 150 m, and 220 m (2 occur.)), clay with stones or gravel, 10 specimens. Jameson Land, off Bjørne Øerne, 10 m, 30 m, and 31 m, clay, 3 specimens.

Kangerdlugssuaq area: Kangerdlugssuaq, 12—15 m, 30—40 m, and 50 m, clay, 3 specimens.

Distribution: Baffinland, W. and E. Greenland, Spitsbergen, N. Norway, from Barents Sea to about 83° E and between Novaja Zemlya and Franz Joseph Land; also Arctic Canada: Dolphin and Union Strait 115° W. Depths most varying, from 6 m to 540 m (H. J. HANSEN 1920, ZIMMER 1926 and the present paper).

Diastylis sp.

East Greenland record:

Diastylis sp. ZIMMER 1934, p. 35, 36.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Dusén Fjord, 185—75 m, clay, $\div 1.2^\circ$ (ZIMMER 1934).

29. *Brachydiastylis resima* (KRØYER).

Diastylopsis resima G. O. SARS 1900, p. 65, pl. 47.

Brachydiastylis — STEBBING 1913, p. 69.

- Brachydiastylis resima* H. J. HANSEN 1920, p. 69.
 — — ZIMMER 1926, p. 26.

East Greenlands records:

- Diastylis resima* H. J. HANSEN 1895, p. 132.
Diastylopsis — K. STEPHENSEN 1913₁, p. 91 (no new records).
Brachydiastylis — H. J. HANSEN 1920, p. 69.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Carl Jacobsens Bugt, Ymers Ø, 20 m and 24 m, clay, 2 specimens, Solitærbugt, Ella Ø, 21—37 m, clay, 10 samples, usually only a few specimens per sample.

Scoresbysund area: Danmarks Ø (= Hekla Havn) (H. J. HANSEN 1895 and 1920). Hurry Inlet, 40 m; Kap Dalton, 18—22 m (H. J. HANSEN 1920).

Distribution: N. Atlantic with adjacent arctic waters; 5—220 m.

30. *Brachydiastylis nimia* H. J. HANSEN.

- Brachydiastylis nimia* H. J. HANSEN 1920, p. 69, pl. 4, fig. 8.

East Greenland record:

- Brachydiastylis nimia* H. J. HANSEN 1920, p. 70.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Forsblads Fjord, 175—100 m, SØREN JENSEN leg. 30.-VII.-1900, 7 specimens (H. J. HANSEN).

Scoresbysund area: N. of Stewart Land about 70°30' N, 300 m (type-locality; H. J. HANSEN 1920). Not found outside these two localities.

Tanaidacea.

31. *Sphyrapus anomalus* G. O. SARS.

- Sphyrapus anomalus* G. O. SARS 1899, p. 9, pls. 3—4.
 — — H. J. HANSEN 1913, p. 16.

East Greenland records:

- Sphyrapus anomalus* H. J. HANSEN 1895, p. 131.
 — — — 1913, p. 17.
 — — K. STEPHENSEN 1913₁, p. 261 (no new records).

Occurrence at East Greenland: *Franz Joseph Fjord area*: 72°40' N, 20°10' W, 200 m (H. J. HANSEN 1895).

Scoresbysund area: Hurry Inlet 70°50' N, 22°31' W, 20 m; 69°25' N, 20°01' W, 300 m, large stones and clay; Kap Dalton 69°24.6' N, 23°30' W, 18—20 m (H. J. HANSEN 1895 and 1913).

Sydøstkyst: Lindenowfjord, 100—150 m, clay, 3 specimens.

Distribution: From Davis Strait and E. Greenland round Iceland to the Kara Sea and Skagerrak, depths from a few meters down to about 1000 m, but especially in positive temperatures.

32. *Sphyrapus serratus* G. O. SARS.

Sphyrapus serratus G. O. SARS 1885, p. 66, pl. 21.

East Greenland records:

Sphyrapus serratus OHLIN 1901₁, p. 15.

— — K. STEPHENSEN 1913₁, p. 262 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: 74°52' N, 17°16' W, 350 m, muddy clay with sand and pebbles (OHLIN 1901₁).

Franz Joseph Fjord area: Eskimonæs, off Knolden, 41—38 m, gravelly clay with brown algæ, 1 specimen; Eskimonæs, Østhavn, 55—50 m, clayish gravel, 1 specimen, and 55—53 m, stones, red algæ, 2 specimens.

Scoresbysund area: Danmarks Ø, 19 m, soft clay, 3 specimens.

Distribution: The Arctic deep Basin, several localities, from E. Greenland to Spitsbergen, Norway and Iceland, depths usually about 1000—>2000 m, and probably always in temp. below zero (see H. J. HANSEN 1913, p. 17).

33. *Pseudotanais forcipatus* LILLJEBORG.

Pseudotanais forcipatus G. O. SARS 1899, p. 40, pl. 17 fig. 1.

— — H. J. HANSEN 1913, p. 23, pl. 2 fig. 3.

East Greenland records:

Pseudotanais forcipatus H. J. HANSEN 1913, p. 23.

— — K. STEPHENSEN 1913₁, p. 265 (no new records).

Occurrence at East Greenland: *Scoresbysund area*: Danmarks Ø, two occurrences, 20 m, clay; Turner Sund 69°44' N, 6 m; Kap Dalton 69°24' N, 18—22 m (H. J. HANSEN 1913).

Distribution: From W. Greenland c. 70° N and E. Greenland to Franz Josephs Land, Kattegat and Scotland; depths 10—c. 400 m; boreal and arctic.

34. *Pseudotanais lilljeborgi* G. O. SARS.

Pseudotanais lilljeborgi G. O. SARS 1899, p. 40, pl. 17 fig. 2.

— — H. J. HANSEN 1913, p. 27, pl. 2 fig. 5.

East Greenland records:

Pseudotanaïs lilljeborgi H. J. HANSEN 1913, p. 27.

— — K. STEPHENSEN 1913₁, p. 266 (no new records).

Occurrence at East Greenland: *Scoresbysund area*: Danmarks Ø, two occurrences, 8—10 m, muddy bottom; Cape Dalton 69°24' N, 18—22 m (H. J. HANSEN 1913).

Sydøstkyst: Angmagssivik 65°51' N (H. J. HANSEN 1913).

Distribution: From W. Greenland c. 71° N and E. Greenland, NW. and E. Iceland to the Barents Sea, depths from a few meters to about 600 m; probably arctic.

35. *Pseudotanaïs oculatus* H. J. HANSEN.

Pseudotanaïs oculatus H. J. HANSEN 1913, p. 29, pl. 2 fig. 6, pl. 3 fig. 1.

East Greenland record:

Pseudotanaïs oculatus H. J. HANSEN 1913, p. 30.

Occurrence at East Greenland: *Sydøstkyst*: Angmagssalik, depth? (H. J. HANSEN 1913).

Distribution: W. Greenland c. 65°—73' N, 100—120 m, 3 occurrences, temp. 1.1° (H. J. HANSEN 1913).

36. *Pseudotanaïs affinis* H. J. HANSEN.

Pseudotanaïs affinis H. J. HANSEN 1886, p. 207, pl. 21 fig. 2.

— *crassicornis* — p. 208, pl. 21 fig. 3.

— *affinis* — 1913, p. 30, pl. 3 fig. 2, and ? fig. 3.

East Greenland records:

Pseudotanaïs affinis H. J. HANSEN 1913, p. 32.

— — K. STEPHENSEN 1913₁, p. 267 (no new record).

Occurrence at East Greenland: *Franz Joseph Fjord area*: Forsblads Fjord 72°27' N, 25°28' W, 100—175 m (H. J. HANSEN 1913).

Distribution: From E. Greenland to the Kara Sea, the Faroes and Iceland, c. 700—2000 m, ÷ 0.4°—÷ 1.0°, but also 4 occurrences south of the ridge in Davis Strait and SW. of Iceland c. 600—2200 m, 2.4°—4.5° (see H. J. HANSEN 1913).

37. *Typhlotanaïs finmarchicus* G. O. SARS.

Typhlotanaïs finmarchicus G. O. SARS 1899, p. 20, pl. 9.

— — H. J. HANSEN 1913, p. 58, pl. 6 fig. 2.

East Greenland records:

Typhlotanais finmarchicus H. J. HANSEN 1913, p. 59.

— — K. STEPHENSEN 1913₁, p. 269 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: Sabine Ø 74°30' N, 19°45' W, 6—10 m (H. J. HANSEN 1913).

Scoresbysund area: Turner Sund 69°44' N, 6 m; Kap Dalton 69°24.6' N, 18—22 m (H. J. HANSEN 1913).

Distribution: W. Greenland c. 64° N, 10—130 m, E. Greenland, Jan Mayen c. 100 m, NW. and E. Iceland 16—100 m, N. Norway (Vangerfjord) 60 m; Franz Joseph Land.

38 *Leptognathia sarsi* OHLIN (and H. J. HANSEN).

Leptognathia longiremis G. O. SARS (not LILLJEBORG) 1899, p. 27 pl. 12.

— *sarsi* OHLIN 1901₁, p. 16, foot-note.

— — H. J. HANSEN 1909, p. 229.

— — — 1913, p. 68, pl. 6 fig. 7.

East Greenland record:

Leptognathia longiremis, *L. sarsi* OHLIN 1901₁, p. 16.

— *sarsi* H. J. HANSEN 1913₁, p. 69.

— — K. STEPHENSEN 1913₁, p. 271 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: S. of Lille Pendulum Ø, 74°35' N, 18°23' W, 18—21 m, sandy mud, algæ (OHLIN 1901₁); Sabine Ø, 6—10 m (H. J. HANSEN 1913).

Scoresbysund area: N. of Stewart Land about 70¹/₂° N, 300 m; Turner Sund, 6 m; Kap Dalton, 18—22 m (H. J. HANSEN 1913).

Sydøstkyst: Angmagssalik (H. J. HANSEN 1913).

Distribution: W. Greenland c. 69° N; E. Greenland, 6—22 (300) m; E. Iceland 12—20 m; N. of Iceland c. 375—950 m, 0.6°—÷0.6°; Faroes 20—30 m; W. Spitsbergen 77° N, 90 m; N. Norway.

39. *Leptognathia hansenii* VANHÖFFEN.

Leptognathia hansenii VANHÖFFEN, Zool. Jahrb., Syst., vol. 25, 1907, p. 513, pl. 20 figs. 13—15.

— — H. J. HANSEN 1913, p. 71, pl. 7 fig. 2.

East Greenland records:

Leptognathia hansenii H. J. HANSEN 1913, p. 74.

Occurrence at East Greenland: *Scoresbysund area*: Danmarks Ø; Kap Dalton, 18—11 m (H. J. HANSEN 1913).

Sydøstkyst: Angmagssalik, two occurrences, 8—22 m; Tasiusak 65°37' N, 40—60 m, stones with algæ (H. J. HANSEN 1913).

Distribution: W. Greenland c. 64°—70° N, 3 occurrences, 10—130 m.

40. *Leptognathia inermis* H. J. HANSEN.

Leptognathia inermis H. J. HANSEN 1913, p. 76, pl. 7 fig. 4.

East Greenland records:

Leptognathia inermis H. J. HANSEN 1913, p. 77.

— — K. STEPHENSEN 1913₁, p. 273 (no new record).

Occurrence at East Greenland: *Scoresbysund area*: Kap Dalton 69°24' N, 18—22 m (H. J. HANSEN 1913).

Distribution: Jan Mayen 160 m, 0.1°; N. and E. of Iceland, c. 400—1000 m, 0.8°—÷0.7°.

41. *Leptognathia amdrupi* H. J. HANSEN.

Leptognathia amdrupi H. J. HANSEN 1913, p. 81, pl. 8 fig. 2.

East Greenland record:

Leptognathia amdrupi H. J. HANSEN 1913, p. 82.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Forsblad Fjord 72°27' N, 170—75 m (type-locality; H. J. HANSEN 1913).

Distribution: Not found outside the locality listed above.

42. *Leptognathia glacialis* H. J. HANSEN.

Leptognathia glacialis H. J. HANSEN 1913, p. 102, pl. 10 fig. 3.

East Greenland record:

Leptognathia glacialis H. J. HANSEN 1913, p. 102.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Fleming Fjord 71°51' N, 22°27' W, c. 225 m, red clay (type-locality; H. J. HANSEN 1913).

Distribution: Not found outside the locality listed above.

43. *Cryptocope arctica* H. J. HANSEN.

Cryptocope arctica H. J. HANSEN 1886, p. 209, pl. 11 fig. 4.

— — — 1913, p. 106, pl. 11 fig. 1.

East Greenland records:

Cryptocope arctica K. STEPHENSEN 1912, p. 548.

— — H. J. HANSEN 1913, p. 108.

— — K. STEPHENSEN 1913₁, p. 279 (no new records).

Occurrence at East Greenland: *Nordøstkyst*: Stormbugt, between Baadskær and Store Koldewey Ø, 30—40 m (K. STEPHENSEN 1912).

Franz Joseph Fjord area: Forsblads Fjord, 175—75 m (H. J. HANSEN 1913).

Scoresbysund area: Hurry Inlet, 20 m and 100 m; Henry Land 69°34' N, 23°35' W, 40 m (H. J. HANSEN 1913).

Distribution: Arctic America, 60 m; W. Greenland c. 62°—72° N, c. 300—2700 m; Jan Mayen, c. 100 m; NE. and SW. of Iceland, c. 900—1500 m, ÷ 0.7°—+6.1°; Novaja Zemlya or Spitsbergen, 190 m; Kara Sea, 120 m.

Isopoda.

44. *Janira maculosa* LEACH.

- Janira maculosa* G. O. SARS 1899, p. 99, pl. 40.
 — — H. J. HANSEN 1916, p. 14, pl. 1 fig. 1.
 — — HULT 1941, p. 40, with maps.

East Greenland records:

- Janira maculosa* H. J. HANSEN 1895, p. 131.
 — — K. STEPHENSEN 1913₁, p. 240 (no new records).
 — — H. J. HANSEN 1916, p. 15.

Occurrence at East Greenland: *Kangerdlugssuaq area*: 69°25' N, 20°01' W, about 310 m, stones and clay (H. J. HANSEN 1895).

Sydøstkyst: off Angmagssalik 64°56' N, 36°19' W, about 375 m, 4.1° (H. J. HANSEN 1916). Lindenowfjord, 400—600 m, clay, Foraminifera, 2 specimens.

Distribution: A mainly boreal species, found from W. Greenland to the Barents Sea and to W. France. Usually it is found in depths of about 50—200 m, but it has been found as deep as > 2000 m (S. of Iceland). Further see HULT l. c., with maps; regarding the distribution HULT (p. 185) uses the term: Amphiboreal (discontinuous), pan boreal.

45. *Janira tricornis* (KRØYER) (Fig. 7).

- Henepomus tricornis* KRØYER 1846, pl. 30 fig. 2, and 1847, p. 372.
Janthe libbeyi K. STEPHENSEN 1913₂, p. 70, pl. 3.
Janira tricornis H. J. HANSEN 1916, p. 17, pl. 1 fig. 3.

East Greenland records:

- Janira tricornis* H. J. HANSEN 1916, p. 18.
 — — K. STEPHENSEN 1933₁, p. 9.

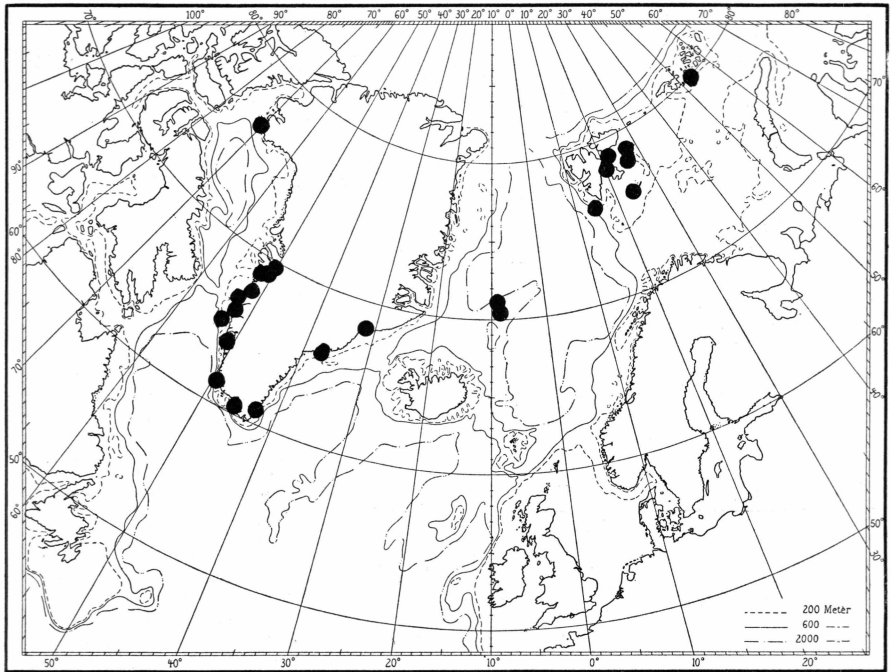


Fig. 7. *Janira tricornis* (after Gurjanova 1933, H. J. Hansen 1916, and the present paper).

Occurrence at East Greenland: *Kangerdlugssuaq area*: Kangerdlugssuaq, 70 m, stones (K. STEPHENSEN 1933₁) and 50–60 m, clay, 2 specimens.

Sydøstkyst: Tasiusak 65°37' N, 30–40 m and 40–60 m, among algæ (H. J. HANSEN 1916); Lindenowfjord, 5 occurrences, 4–50 m (viz., 4 m, 7 m, 20 m, 33 m, and 30–50 m), clay, gravel, etc., 1 specimen per haul, but in 20 m 16 specimens ($1/_{10}$ m²); Kekertaksiak, 60 m, sand, dead Bryozoa, gravel, 4 specimens, and 75–90 m, gravel and sand, 1 specimen.

Distribution (Map fig. 7): From W. Greenland about 61°–76° N to Spitsbergen and Franz Joseph Land, c. 10–130 m, temp. + 0.2°– ÷ 1.42°; an arctic species.

46. *Munna groenlandica* H. J. HANSEN.

Munna fabricii KRØYER 1846, pl. 31 fig. 1 (partim), and 1847, p. 380 (partim).

— *groenlandica* H. J. HANSEN 1916, p. 35, pl. 3 fig. 3.

East Greenland record:

Munna groenlandica H. J. HANSEN 1916, p. 35.

Occurrence at East Greenland: *Scoresbysund area*: Danmarks Ø 70°27' N, depth? (H. J. HANSEN 1916).

Kangerdlugssuaq area: 67°4' N, at the beach (H. J. HANSEN 1916).

Sydøstkyst: Angmagssalik, depth?, and Tasiusak 65°37' N, 6—10 m (H. J. HANSEN 1916).

Distribution: W. Greenland, three occurrences about 64°—73° N, down to 100 m (H. J. HANSEN 1916).

47. *Munna minuta* H. J. HANSEN.

Munna fabricii G. O. SARS (non KRØYER) 1899, p. 108, pl. 45 fig. 1.

— *minuta* H. J. HANSEN 1909, p. 213, p. 3 fig. 2.

— — — 1916, p. 39, pl. 3 fig. 6.

— — HULT 1941, p. 45, with maps.

East Greenland records:

Munna minuta H. J. HANSEN 1909, p. 213.

— — K. STEPHENSEN 1913₁, p. 245 (no new record).

— — H. J. HANSEN 1916, p. 39.

Occurrence at East Greenland: *Sydøstkyst*: 66°15' N, shallow water; Tasiusak 65°37' N (H. J. HANSEN 1916); Angmagssalik (H. J. HANSEN 1909).

Distribution: From W. and E. Greenland to Spitsbergen, Franz Joseph Land and south coast of England; depths down to about 100 m. Further see HULT 1941, with maps; according to HULT (p. 186) it is amphiatlantic boreal: Atlantic-panarctic, panboreal.

48. *Nannoniscus arcticus* H. J. HANSEN.

Nannoniscus arcticus H. J. HANSEN 1916, p. 94, pl. 8 fig. 5.

East Greenland record:

Nannoniscus arcticus H. J. HANSEN 1916, p. 94.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Forsblads Fjord 72°17' N, 175—75 m, 1 specimen (H. J. HANSEN 1916).

Distribution: S. of Jan Mayen 70°05' N, 8°26' W, about 700 m, ÷ 0.4°.

49. *Desmosoma tenuimanum* G. O. SARS.

Eugerda globiceps G. O. SARS 1899, p. 252, suppl.-pl. 10 III fig. 1.

Desmosoma — H. J. HANSEN 1916, p. 109, pl. 10 fig. 4.

— *tenuimanum* HULT 1936, p. 7, with lit., syn., etc., and 1937, p. 21.

— — — 1941, p. 76, with maps.

East Greenland record:

Desmosoma globiceps H. J. HANSEN 1916, p. 109.

Occurrence at East Greenland: *Scoresbysund area*: Kap Dalton 69°30' N, 18—22 m (H. J. HANSEN 1916).

Distribution: From NE. America(?), E. Greenland and E. Iceland to Norway and Kattegat with the Sound; depths 11—271 m. Further see HULT 1941, with maps; according to HULT (1941, p. 186) it is Atlantic low-arctic, pan-boreal.

50. *Desmosoma armatum* G. O. SARS.

- Desmosoma armatum* G. O. SARS 1899, p. 126, pl. 54 fig. 2.
 — — H. J. HANSEN 1916, p. 118, pl. 11 fig. 4.
 — — HULT 1937, p. 28, and 1941, p. 93, with maps.

East Greenland record:

Desmosoma armatum H. J. HANSEN 1916, p. 118.

Occurrence at East Greenland: *Scoresbysund area*: Danmarks Ø 70°27' N, 1 ♀ (H. J. HANSEN 1916).

Distribution: W. Norway and Oslofjord, 60—350 m; Skagerrak, down to 478 m; W. Sweden: Gullmarfjord, extremely abundant 50—120 m, and Kosterrännan 193—230 m. Further see HULT 1941, with maps; according to HULT (1941, p. 186) its distribution is East-atlantic boreal: East Greenland Arctic; constant boreal.

51. *Ilyarachna bergendahli* OHLIN

- Ilyarachna bergendahli* OHLIN 1901₁, p. 37, pl. 5 fig. 8.
 — — H. J. HANSEN 1916, p. 126.

East Greenland records:

- Ilyarachna bergendahli* OHLIN 1901₁, p. 37.
 — — K. STEPHENSEN 1913₁, p. 247 (no new record).
 — — H. J. HANSEN 1916, p. 126 (no new record).

Occurrence at East Greenland: *Scoresbysund area*: 71°33' N, 21°30' W, 200 m, mud with sand (one of the two type-localities; OHLIN l. c.)

Distribution: East Spitsbergen: Kong Karls Land 78°50' N, 27°39' E, 22 m.

Ilyarachna sp.

Occurrence at East Greenland: *Scoresbysund area*: West coast of Jameson Land off Bjørneøerne, 31 m, clay, 1 small specimen, very defective; ibidem, 91 m, clay, 1 specimen, 8 mm in length, very defective (all the appendages are lost); the sound between Kap Leslie and Kap Stevenson, 153 m, clay and stones, 1 specimen, 6 mm in length, extremely defective.

Sydøstkyst: Kekertaksiak, 80 m, dead Byozoa, 1 specimen, 5 mm in length, defective.

52. *Munnopsurus giganteus* (G. O. SARS).

Eurycope gigantea G. O. SARS 1885, p. 130, pl. 11 figs. 1—25.

Munnopsurus giganteus H. J. HANSEN 1916, p. 135, pl. 12 fig. 5.

East Greenland records:

Eurycope gigantea GRIEG 1909, p. 553.

— — K. STEPHENSEN 1913¹, p. 248 (no new records).

Munnopsurus giganteus NORDENSTAM 1934, p. 3.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Herschelhus, 80—78 m, clay with some red algæ (NORDENSTAM 1934).

Off Sydøstkyst: 66°42' N, 26°40' W, 550 m, 0.11° (GRIEG 1909).

Distribution: The Arctic deep Basin, from E. Greenland to the Kara Sea and Sibiria, and the deep Basin W. of Greenland N. of the ridge c. 65° N (see K. STEPHENSEN 1936, p. 11, with maps); depths 40 m (Kara Sea) to about 1500 m (N. of the Faroes).

53. *Eurycope (cornuta)* G. O. SARS? (*E. inermis* H. J. HANSEN?)

Eurycope cornuta G. O. SARS 1899, p. 145, pl. 64.

— — H. J. HANSEN 1916, p. 141, pl. 12 fig. 8.

— — HULT 1941, p. 102, with maps.

East Greenland record:

Eurycope cornuta GRIEG 1909, p. 552.

Occurrence at East Greenland: *Nordøstkyst*: 75°58¹/₂' N, 14°08' W, 300 m, 0.4° (GRIEG 1909).

Off Sydøstkyst: 66°42' N, 26°40' W, 550 m, 0.11° (GRIEG 1909).

H. J. HANSEN (1916, p. 142) considers "these statements as possible but not certain, because I do not feel convinced that in the one or in both cases the animals in question have not belonged to *E. inermis* (n. sp.¹), formerly mixed up with *E. cornuta* by SARS".

Distribution: Baffin Bay about 400 m, and Gulf of St. Lawrence about 400 m; Norway from Vadsø to Skagerrak, 250—650 m. Further see HULT l. c., with maps; according to HULT (p. 186) it is amphiatlantic boreal: Atlantic panarctic, constant-boreal (or possibly Atlantic low-arctic, panboreal).

54. *Eurycope producta* G. O. SARS.

Eurycope producta G. O. SARS 1899, p. 147, pl. 65.

— — H. J. HANSEN 1916, p. 147, pl. 13 fig. 6.

— — HULT 1941, p. 107, with maps.

¹) *Eurycope inermis* H. J. HANSEN 1916, p. 142, pl. 13 fig. 2.

East Greenland record:

Eurycope producta H. J. HANSEN 1916, p. 148.

Occurrence at East Greenland: *Scoresbysund area*: 69°28' N, 20°01' W, 300 m (H. J. HANSEN 1916).

Distribution: Davis Strait and W. Greenland about 61°—66° N, S. and SW. of Iceland, NW. and N. of the Faroes, Norway from Vadsø to Oslofjord, Skagerrak, and W. of Ireland; depths 72—2055 m. Further see HULT l. c., with maps; according to HULT (l. c., p. 186) it is East-atlantic boreal (or possibly Amphiatlantic boreal); northwest sub-arctic or abyssal, constant-boreal.

55. *Munnopsis typica* M. SARS.

Munnopsis typica G. O. SARS 1899, p. 133, pls. 57—58.

— — H. J. HANSEN 1916, p. 157.

— — HULT 1941, p. 116, with maps.

East Greenland records:

Munnopsis typica H. J. HANSEN 1895, p. 132.

— — OHLIN 1901₁, p. 31.

— — GRIEG 1909, p. 552.

— — K. STEPHENSEN 1913₁, p. 246 (no new records).

— — H. J. HANSEN 1916, p. 156.

— — SPÄRCK, Meddel. om Grønland, vol. 100, no. 1, 1933, p. 31.

— — NORDENSTAM 1934, p. 3.

— — THORSON 1934, p. 40.

— — BERTELSEN 1937, p. 42.

Occurrence at East Greenland: *Nordøstkyst*: 77°31' N, 18°24' W, 275 m (GRIEG 1909).

Franz Joseph Fjord area: Herschelhus 53—43 m, clay with sand and brown algæ; ibidem 78—72 m, mud with algæ, and 80—78 m, clay with red algæ; Tyrolerfjord, near the head, 125 m, clay and sand, ÷ 1.40°, salinity 33.30‰; Clavering Fjord, off Grantfjord, 115 m, clay, ÷ 1.46°, salinity 34.01‰; Moskusoksefjord, 235 m, clay; W. of Bontekoe Ø, 275 m, clay, ÷ 0.06°, salinity 34.54‰; Dusénfjord, 300 m, reddish brown clay with mud, ÷ 1.59°, salinity 33.79‰ (NORDENSTAM 1934). Dusénfjord, the western end of the broad part, 240 m, clay, numerous specimens. Antarctic Havn, 100 m, clay with stones; Sofia Sund, 200 m, clay; Vega Sund, 120 m, clay, 250 m, clay, and 250—190 m, clay (NORDENSTAM 1934). 73°32' N, 24°38' W, Kap Weber, 100—110 m, mud with pebbles and stones; 72°28' N, 21°48' W, 180 m, clay with some stones; 72°45' N, 22°56' W, 35—60 m, mud, some stones; 72°00' N, 23°03' W, 32—40 m, mud (OHLIN 1901₁). In

the Franz Joseph Fjord area it is an "accompanying animal" on the *Gorgonocephalus* epifauna (SPÄRCK 1933, p. 3).

Scoresbysund area: Scoresby Sund, 10—15 m (H. J. HANSEN 1895); 70°50' N, 22°33' W, Fame Øerne, 23—25 m, mud; 70°43' N, 22°29' W, 70 m, mud (OHLIN 1901₁); Hurry Inlet 70°50' N, 14—0 m (H. J. HANSEN 1916). Kap Hooker, 67 m, sand, soft clay, 1 specimen (THORSON 1934). West side of Jameson Land off Bjørneøerne, 20—30 m, sandy clay, 3 specimens, and 30—40 m, sandy clay, 1 specimen. Turner Sund 69°44' N, 6 m (H. J. HANSEN 1916).

Kangerdlugssuaq area: 69°25' N, 20°01' W, about 300 m, stones with clay (H. J. HANSEN 1895); Mikis Fjord, 17—20 m, clay, 1 specimen; Kangerdlugssuaq: 30—40 m, 41 m, 60—70 m, and 75—100 m, clay, 1—about 10 specimens per haul. In the Kangerdlugssuaq area it "was found in the material of from 20 down to about 100 m", but it was not found in the Angmagssalik area (BERTELSEN 1937).

Sydøstkyst: Lindenowfjord, 200—350 m, clay, 12 specimens.

Distribution: A very eurybathic and probably circumpolar species, see K. STEPHENSEN 1936, p. 12, and HULT l. c., with maps. HULT (p. 110) regards it as "panarctic-boreal, and in its bathymetrical distribution it shows a distinct boreal submergence".

56. *Æga psora* (LINNÉ).

Æga psora G. O. SARS 1899, p. 59, pl. 24.

East Greenland record:

Æga psora H. J. HANSEN 1916, p. 169.

Occurrence at East Greenland: *Sydøstkyst*: Angmagssalik, two occurrences, one of them recorded by H. J. HANSEN 1916; Tasiusak 65°35' N, 1 specimen; Kungmiut near Angmagssalik, 400 m, 1 specimen (in the Leiden Mus.),

Distribution: Widely distributed in the northern part of the Atlantic with a few finds in adjacent arctic waters, depths down to about 1000 m.

57. *Æga arctica* LÜTKEN.

Æga arctica G. O. SARS 1899, p. 63, pl. 26 fig. 2.

East Greenland record:

Æga arctica H. J. HANSEN 1916, p. 171.

Occurrence at East Greenland: *Sydøstkyst*: Angmagssalik (H. J. HANSEN 1916). Kungmiut near Angmagssalik, 400 m, 1 specimen (in the Leiden Mus.).

Distribution: From W. Greenland about $70\frac{1}{2}^{\circ}$ N to the Finmark and Ireland, depths down to about 1500 m.

58. *Æga ventrosa* M. SARS.

Æga ventrosa G. O. SARS 1899, p. 64, pl. 24 fig. 3.

Occurrence at East Greenland: *Sydøstkyst*: Lindenowfjord, 400—600 m, clay, Foraminifera, 28.—VII.—1935, 2 specimens, 18—19 mm. It is new to East Greenland.

Distribution: West Greenland to $66\frac{3}{4}^{\circ}$ N, 250 m; the northern Atlantic with a few finds in adjacent waters between Greenland and northern Norway, but usually in positive temperature; depths down to about 1500 m.

59. *Calathura brachiata* STIMPSON (Fig. 8).

Calathura brachiata + *C. norvegica* G. O. SARS 1899, pp. 45—46, pl. 19.

— — HULT 1941, p. 23, with maps.

East Greenland records:

Calathura brachiata H. J. HANSEN 1895, p. 131.

— — OHLIN 1901₁, p. 18.

— — GEOFFR. SMITH, Monogr. 29, Fauna & Flora Golf. Neapel, 1906, p. 60.

— — GRIEG 1909, p. 552.

— — K. STEPHENSEN 1913₁, p. 229 (no new record).

— — H. J. HANSEN 1916, p. 183.

— — P. REMY 1928, p. 233.

— — NORDENSTAM 1934, pp. 3—4.

— — BERTELSEN 1937, p. 42.

Occurrence at East Greenland: *Nordøstkyst*: $75^{\circ}58'$ ($-59'$) N, $14^{\circ}18'$ ($-12'$) W, 300 m (GRIEG 1909). $74^{\circ}52'$ N, $17^{\circ}16'$ W, 350 m, clay mixed with sand and pebbles (OHLIN 1901₁).

Franz Joseph Fjord area: $74^{\circ}20'$ N, 17° W, 200 m (H. J. HANSEN 1916). Tyroler Fjord, near Young Sund, 320 m, clay with sand, $\div 1.73^{\circ}$, salinity 33.54‰ ; Herschelhus, 80—78 m, clay with some red algæ; S. of Kap Mary (SW. of Herschelhus), 250—230 m, clay, $\div 1.16^{\circ}$, salinity 34.28‰ ; Clavering Fjord, near Kap Stosch, 400—338 m, clay, $\div 1.19^{\circ}$, salinity 34.20‰ ; S. of Hold with Hope, 310—260 m, clay with stone, 0.21° , salinity 34.58‰ ; Mackenzie Bugt, 40 m, mud with red algæ; Dusénfjord, 185—75 m, clay, temp. (at 60 m) $\div 1.2^{\circ}$, salinity 33.32‰ ; E. of Bontekoe Ø, 168 m, greyish blue clay with stone, $\div 1.40^{\circ}$, salinity 34.14‰ ; W. of Kap Franklin 170 m, clay with stone,

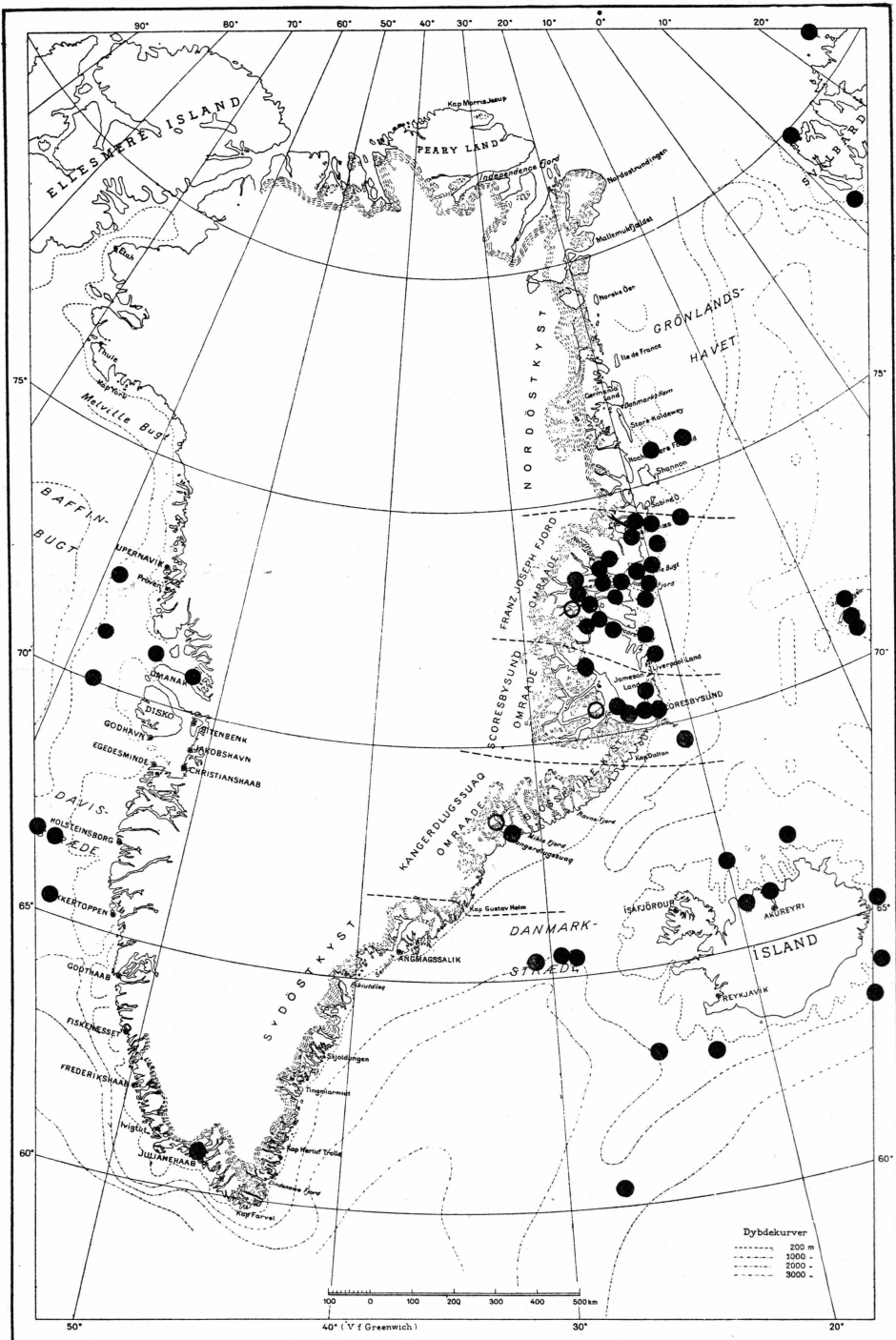


Fig. 8. *Calathura brachiata*. ○ = 0—25 m, ● > 25 m (after H. J. Hansen 1916, Ohlin 1901, G. O. Sars 1886, K. Stephensen 1913, 1916, 1938, and the present paper).

÷ 1.16°, salinity 34.18‰; Kap Humboldt, on the gills of a fish; Antarctic Havn, 100 m, clay with stone; Vega Sund, 250—190 m, clay, and 250 m, clay; Vega Sund, Husbugt, 30 m, clay; Holms Bugt (c. 72½° N, 24° W), 40 m, sand (NORDENSTAM 1934). 73°20' N, 21°20' W, 70 m, clay with pebbles and shells; 72°28' N, 21°48' W, 180 m, clay with some stones; 71°33' N, 21°30' W, 1 km from Murrays Ø, 200 m, clay with sand (OHLIN 1901₁). Forsblads Fjord, 90 m (SMITH 1906) and 100 m (H. J. HANSEN 1916). 73°58' N, 18°23' W, SE. of Jacksons Ø, 400 m, clay with pebbles, 1 specimen; 5 miles S. of Bontekoe Ø, 245 m, clay, a few stones, 1 specimen; Moskusoksefjord, off Mt. Ancher, 95 m, clay and stones, 2 specimens; between Eleonora Bugt og Ymers Ø, 460 m, grey and red clay, 1 specimen; Franz Joseph Fjord, a little E. of Zoologdalen, 180 m, clay mit stones, 1 specimen; off Zoologdalen, Ymers Ø, 55 m, gravelly clay, 1 specimen; off the first valley in Antarctic Sund, 410 m, clay with large stones, 1 specimen; in the central part of Antarctic Sund, 540 m, 1 specimen; Kap Hedlund, Kempes Fjord, 12 hauls, 24—90 m (viz., 24—26 m, 25—29 m, 30 m, 31—35 m, 48—49 m, 50—50 m, 55—59 m, 60—63 m, 71—80 m, 83—85 m, 85—85 m, 85—90 m), clay etc., 1—3 specimens per haul; Kempes Fjord, off Kap Oswald, grey brown clay, 410 m, 2 specimens; Kong Oscars Fjord, SE. of Kap Dufva, 575 m, clay, gravel, 1 specimen; 2 miles N. of Kap Wardlaw, 250 m, clay with stones, 1 specimen; Solitærbugt, Ellaø, 55 m, clay, stones, 1 specimen.

Scoresbysund area: Rosenvinges Bugt, 70 m (P. REMY 1928). Hurry Inlet, 100 m; Stewart Land 70°30' N, 300 m (H. J. HANSEN 1916). Scoresby Sund, 10—50 m; 69°25' N, 20°01' W, about 300 m, large stones (H. J. HANSEN 1895). Rosenvinges Bugt, the mouth, 300 m, stones, 1 specimen; Hurry Inlet, 3 occurrences from the mouth to Konstabelpynten, 33 m, 142 m and 148 m, clay, 4 specimens; between the mouth of Hurry Inlet and the south coast of Scoresby Sund, 245 m, sandy clay, 2 specimens; between Kap Leslie and Jameson Land, 179 m, clay, 1 specimen, and 342 m, clay, 1 specimen; Kap Hooker, 67 m, clayish sand, 1 specimen; NE. coast of Danmarks Ø, 22 m, soft clay, 1 specimen; Nordbugten, Nordvestfjord, 156 m, 163 m, and 325 m, clay, 3 specimens.

Kangerdlugssuaq area: Kangerdlugssuaq, 5 hauls (10—14 m, 25—30 m, 30—40 m, 40—45 m, 50 m), clay or red algæ and clay, 16 specimens.

According to the above the species was taken in 67 hauls from about 68° N to 76° N, in depths from 10 m to 575 m (in one case the depth was not noted). The depths of the 66 hauls were as follows.

Depths in meters	Nordøst- kyst	Fr. Joseph Fjord area	Scoresby- sund area	Kangerd- lugssuaq area	Numbers of hauls
10—22 .....	..	..	2 ¹⁾	1 ²⁾	3
24—50 .....	..	9	1	3	13
55—75 .....	..	6	1	..	7
78—100 .....	..	8	1	..	9
105—150 .....	..	1	2	..	3
156—200 .....	..	6	3	..	9
210—250 .....	..	5	1	..	6
260—300	1	1	3	..	5
310—400	1	2	2	..	5
> 400—460 .....	..	4	..	..	4
540—575 .....	..	2	..	..	2
No. of hauls...	2	43	17	4	66

¹⁾ 1 haul "10-50 m", 1 haul 22 m.

²⁾ 10—14 m.

Usually the bottom was clay, with or without gravel and stones, and in most cases there is only one specimen per haul.

Remarks regarding the size. The majority of the specimens are 25—30 mm in length, but a few are longer. In the East Greenland material there are the following large ♂ specimens: 33 mm (Kap Hedlund, Kempes Fjord, 24—26 m); 38 mm (ibidem, 30 m); 40 mm (Scoresby Sund, off Rosenvinges Bugt, 300 m), and 45 mm (Moskusoksefjord, 95 m). H. J. HANSEN (1916) mentions a ♂, 45.5 mm in length (from Scoresby Sund, 10—50 m) (and another ♂, of 39 mm, from N. of Iceland 67°19' N, 15°52' W, 552 m), and OHLIN (1901₁) gives 43 mm as maximal length of ♂ (where from?) and 31 mm of ♀. NORDENSTAM (1934) gives no measurements. In the East Greenland material examined by the present author there are but four ♀, all with the marsupium empty, but well developed; the lengths etc. were as follows: 23 mm (Kap Hedlund, Kempes Fjord, 31—35 m; 12.-VII-1932); 25 mm (69°25' N, 20°1' W, 300 m, 17.-VIII-1892); c. 28 mm (Danmarks Ø, 22 m, 21.-VIII-1933); and c. 30 mm (Hurry Inlet, 33 m, 7.-VII-1933).

Distribution: Widely distributed, mainly in the Arctic area, from Baffin Bay to Franz Joseph Land and the Kara Sea, and from N. America about 41° N to Bay of Biscay, depths from a few meters (in the Arctic area) to about 2500 m (NE. Atlantic). Also in the northern Pacific. For further details, see K. STEPHENSEN 1936, NIERSTRASZ 1941, p. 243, and HULT l. c., with maps. HULT p. 120 writes: "*Calathura brachiata* — — may be regarded as panarctic-boreal, and in its bathymetrical distribution it shows a distinct boreal submergence".

60. *Mesidotea sabini* (KRØYER).

- Mesidotea sabini* GURJANOVA, Zool. Anz., vol. 81, 1929, p. 309, fig.
 — — — Explor. des mers de l'USSR., fasc. 15, Inst. Hydrol., 1932, p. 173, p. 173, with figs. and map (Polar Sea).
 — — — 1933, p. 442, with map (p. 459, fig. 2; Barents Sea, western Kara Sea).
 — — K. STEPHENSEN 1937₂, p. 3, with lit., figs., etc.

Occurrence at East Greenland: *Sydøstkyst*: Kap Tordenskjold (about 61°30' N), 9 samples, 8—36 m (viz., 8 m (2 occurrences), 11 m, 12 m, 17 m, 26 m, 28 m, 32 m, and 36 m), clay with or without sand and fragments of algæ, 30.-VI and 1.-VII-1935, 34 specimens. Lindenowfjord, 25—35 m, 2 specimens, and 50—75 m, 43 specimens, 28.-VII-1935. The species is new to East Greenland.

Remarks. In the material there is but one large specimen (♂, 90 mm; Kap Tordenskjold, 12 m); the majority of the specimens from Kap Tordenskjold are about 40—50 mm, a few 9—10 mm. The specimens from Lindenowfjord are 14—33 mm.

GURJANOVA (loc. cit. 1929, 1932, and 1933), has subdivided *M. sabini* into two forms, f. *robusta* with telson rather broad (eastern Kara Sea and N. of Siberia), and f. *sabini* with telson rather narrow (widely distributed in the arctic seas). The present author (l. c. 1937) has examined specimens from Arctic America and West Greenland (and Kara Sea) and has shown that they are more close to f. *sabini* than to f. *robusta*.

Unfortunately there is in the East Greenland material but one large specimen (♂). The measures of this specimen are as follows (measured as in GURJANOVA l. c. 1932, fig. 3 p. 174): total length 90 mm; maximal breadth (in 4th segment) 26.5 mm; telson, length 31 mm; telson, breadth 15 mm; telson, length of end 12.5 mm; telson, breadth of end 9 mm. Telson, breadth of end to total length: 29% (K. STEPHENSEN 1937: W. Greenland 31.0%; GURJANOVA 1933, pp. 442 and 443: f. *sabini* 29.6%, f. *robusta* 34.1%). Telson end, breadth to length: 72% (K. STEPHENSEN 1937: W. Greenland 73.7%; GURJANOVA 1933, pp. 442 and 443: f. *sabini* 67.7%, f. *robusta* 84.3%). Thus the specimen from East Greenland seems to be rather close to the West Greenland specimens and belongs to f. *sabini* GURJANOVA.

Distribution: Almost circumpolar arctic, but not found between SW. Spitsbergen and SE. Greenland, see maps in GURJANOVA l. c. 1932 and 1933 and EKMAN 1935, p. 249. Littoral-sublittoral.

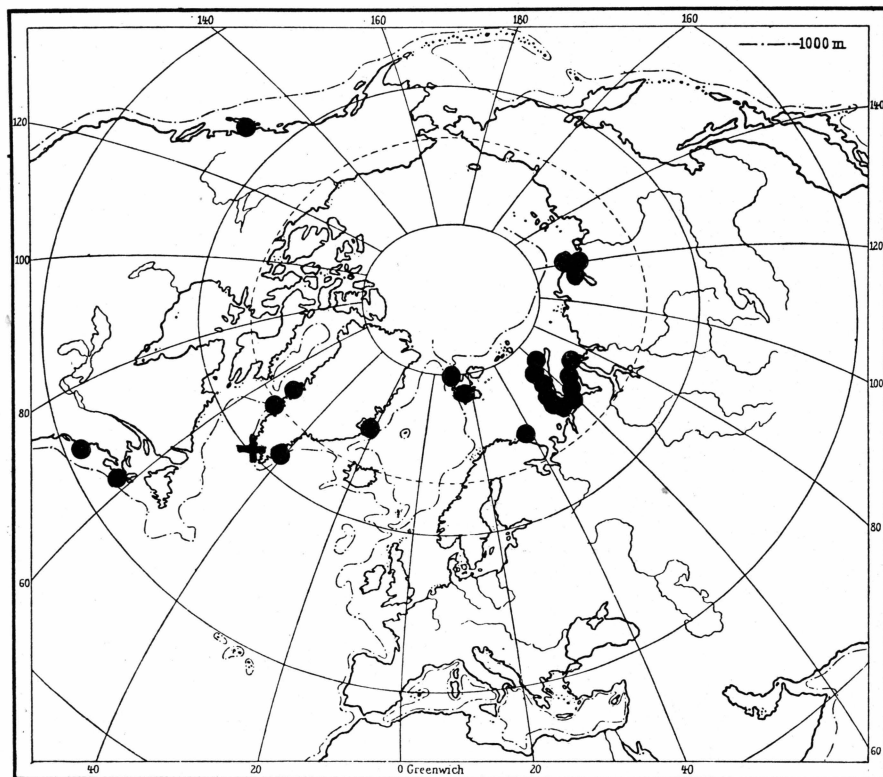


Fig. 9. *Synidotea nodulosa* (after Boone 1920, Gurjanova 1933, H. J. Hansen 1916, Richardson 1905, and present paper). + is Krøyer's type-locality ("southern Greenland, 24—30 m", could not be noted exactly).

61. *Synidotea nodulosa* (KRØYER) (Fig. 9).

Idothea nodulosa KRØYER 1846, pl. 26 fig. 2.

— — — 1846, p. 100.

Synidothea — H. J. HANSEN 1916, p. 191.

— — GURJANOVA 1933, p. 446.

Occurrence at East Greenland: *Scoresbysund* area: Mouth of Hurry Inlet 57 m, sandy clay, Petersen-grab. 1 specimen.

Sydøstkyst: Naparsarsuak (about 61°50' N), 26 m, glittering sand and gravel with a few stones, Petersen-grab, 1 specimen; *ibid.* 35 m, muddish glittering sand with a few red algæ and *Laminariæ*, dredge, 4 specimens; *ibid.* 38 m, muddish clay, Petersen-grab, 16 specimens. The length is from about 5 to 20 mm.

The species is new to East Greenland.

Distribution (Fig. 9): A high-arctic (?), circumpolar species. For special localities, see GURJANOVA 1933, p. 446, with map p. 459. Us-

ally in small depths, 5—20 (40) m; but two occurrences in deeper water, viz., 112 m, $\div 2.1^\circ$ (NW. Spitsbergen, G. O. SARS 1886, p. 30), and 200 m (British Columbia; S. I. SMITH, *vide* H. J. HANSEN).

62. *Arcturus baffini* (SABINE) (Fig. 10).

Arcturus baffini + *A. tuberosus* G. O. SARS 1885, pp. 97, 102, pl. 9 figs. 1—22.

East Greenland records:

Arcturus baffini H. J. HANSEN 1895, p. 131.

Arcturus baffini GRIEG 1909, p. 552.

— — K. STEPHENSEN 1912, p. 544.

— — — 1913₁, p. 238 (no new records).

— — H. J. HANSEN 1916, p. 193.

— — NORDENSTAM 1934, p. 4.

— — BERTELSEN 1937, p. 42.

Occurrence at East Greenland: *Nordøstkyst*: $77^\circ 35' N$, $18^\circ 12' W$, 75 m (GRIEG 1909). Danmarks Havn and the waters nearby, 8 occurrences, 15—50 (300) m, Hydroid- and Delesseriaregion, hard bottom (K. STEPHENSEN 1913₁).

Franz Joseph Fjord area: Herschelhus, 53—43 m, clay with sand and brown algæ; *ibidem*, 78—72 m, mud with algæ; *ibidem*, 80—78 m, clay with red algæ, and 83—35 m, clay with stones; Clavering Fjord, the reef, 25 m, viscous clay (NORDENSTAM 1934). $72^\circ 53' N$, $20^\circ 36' W$, 180 m; $72^\circ 26' N$, $19^\circ 35' W$, 200 m (H. J. HANSEN 1895 = H. J. HANSEN 1916). Kong Oscars Fjord, outside Kempes Fjord, 100—55 m; Vega Sund, Husbugt, 30 m, clay, and Vega Sund, 250—190 m, clay (NORDENSTAM 1934). Between Kap Weber and Ymers Ø, 400 m, clay with very large stones, 1 specimen; inside the western mouth of Antarctic Sund, 230 m, large stones, clay, 1 specimen; between Maria Ø and Ella Ø, 250 m, clay with gravel and stones, 4 specimens.

Scoresbysund area: Scoresby Sund 70° — $71^\circ 30' N$, 10—15 m; Hurry Inlet, 100 m; Henry Land $69^\circ 34' N$, 40 m (H. J. HANSEN 1895 and 1916). Hurry Inlet, the mouth, 140 m, clay, 1 specimen; Hurry Inlet, $\frac{1}{4}$ mile inside the mouth, 35—38 m, sand with a few stones, Laminariæ, Fucus, red algæ, 3 specimens. Hurry Inlet, near Fame Øerne, 18—22 m, soft muddy clay, 2 specimens, and 22—24 m, soft clay with algæ, 1 specimen. Off the mouth of Rosenvinges Bugt, 300 m, stones, fragment of a big specimen; Hvalrosbugt (Scoresby Sund), 20—35 m, 2 specimens.

Sydøstkyst: Tasiusak (Angmagssalik), 30—40 m and 40—60 m (H. J. HANSEN 1916). *Ibidem*, 100 m, stones, 1 specimen. Angmagssalik, two occurrences, depths not noted, several specimens. Kungmiut near Angmagssalik, 400 m, 1 specimen (in the Leiden Mus). Nanusek, N. of Lindenowfjord, 150 m, $\div 1.18^\circ$, 2 specimens.

Remarks on the size: all the largest East Greenland specimens (45—54 mm) seen by the present author are ♀ with marsupium. The lengths are: 54 mm (Øresund (c. 77° N), 40—60 m, 2.-IX, and Scoresby Sund, 10—50 m, 3.-VIII), 53 mm (NE. Greenland, exact locality etc. not noted), 52 mm (Hurry Inlet, 22—24 m, 16.-VIII), 50 mm (Stormbugt (c. 77° N), 40 m, 28.-VIII (has embryos, length 5 mm, in the marsupium), and Angmagssalik, depth and date not noted), and 45 mm (72°53' N, 180 m, 24.-VII; no doubt this specimen is the same which H. J. HANSEN (1916, p. 192) says to be 56.5 mm in length). NORDENSTAM 1934 has no measurements.

Distribution: The slopes of the Arctic Polar Basin, W. Greenland and Arctic America N. of 55° N, see K. STEPHENSEN 1936, p. 14, with map. Depths down to 1100 m, but in truly arctic waters also in rather small depths, up to 10—20 m.

63. *Pleuroprion frigidum* H. J. HANSEN.

Arcturus hystrix OHLIN 1901₁, p. 30 fig. 6 (not *A. hystrix* G. O. SARS).

Pleuroprion frigidum H. J. HANSEN 1916, p. 196, pl. 15 fig. 7.

East Greenland records:

Arcturus hystrix OHLIN 1901₁, p. 30.

Pleuroprion frigidum H. J. HANSEN 1916, p. 196.

— — NORDENSTAM 1934, p. 4.

Occurrence at East Greenland: *Nordøstkyst*: 74°72' N, 17°16' W, 350 m (OHLIN 1901₁).

Frazz Joseph Fjord area: Herschelhus, 80—78 m, clay with some red algæ (NORDENSTAM 1934). 72°53' N, 20°36' W, 180 m; 72°27' N, 19°56' W, 200 m; 72°26' N, 19°35' W, 200 m (H. J. HANSEN 1916). W. of Scott Keltie Øerne (Vega Sund), 40—50 m, clay, sand and mud; Kong Oscars Fjord, outside Kempes Fjord, 100—55 m, clay with stones (NORDENSTAM 1934). Between Maria Ø and Ella Ø, 250 m, clay with gravel and large stones, 1 specimen.

Scoresbysund area: Hurry Inlet, 100 m (H. J. HANSEN 1916). Hurry Inlet, near Fame Øerne, 22 m, clay, 1 specimen, and off Konstabelpynten, 45 m, clay, 1 specimen. Kap Hooker, 60 m, clayish sand, 1 specimen, and 67 m, sand, soft clay, 1 specimen.

Distribution: Not found outside E. Greenland.

64. *Bopyroides hippolytes* (KRØYER).

Bopyroides hippolytes G. O. SARS 1899, p. 199, pl. 84 fig. 2.

— — H. J. HANSEN 1916, p. 203, pl. 15 fig. 11.

East Greenland records:

- Gyge hippolytes* BUCHHOLZ 1874, pp. 269, 286.
 — — H. J. HANSEN 1895, p. 132.
Bopyroides hippolytes GRIEG 1909, p. 553.
 — — K. STEPHENSEN 1912, p. 546.
 — — — 1913₁, p. 252 (no new records).
 — — H. J. HANSEN 1916, p. 203.
 — — K. STEPHENSEN 1933₁, p. 9.
 — — NORDENSTAM 1934, p. 4.

Occurrence at East Greenland: *Nordøstkyst*: 77°31'N, 18°24'W, 275 m (GRIEG 1909). Round Danmarks Havn, 10 occurrences, 0—40 (175) m, varying bottom (K. STEPHENSEN 1912). Sabine Ø (H. J. HANSEN 1916).

Franz Joseph Fjord area: about 74° N.? (BUCHHOLZ 1874; exact locality not noted). Dusénfjord, 185—75 m, clay, temp. (at 60 m) ÷ 1.2°, salinity 33.32⁰/₀₀ (NORDENSTAM 1934).

Scoresbysund area: Hekla Havn (H. J. HANSEN 1916).

Kangerdlugssuaq area: Kangerdlugssuaq, 15 m (K. STEPHENSEN 1933₁).

Sydøstkyst: Angmagssalik, depth? (H. J. HANSEN 1916), and 20 m (K. STEPHENSEN 1933₁).

All the East Greenland specimens were fixed on *Spirontocaris polaris*.

Distribution: Widely distributed in the Arctic area and in northern Atlantic, see GURJANOVA 1933, p. 451. Depths 5—315 m.

65. *Phryxus abdominalis* (KRØYER).

- Phryxus abdominalis* G. O. SARS 1899, p. 215, pls. 90—91.
 — — H. J. HANSEN 1916, p. 206, p. 15 fig. 13.

East Greenland records:

- Phryxus abdominalis* BUCHHOLZ 1874, pp. 269, 287.
 — — H. J. HANSEN 1895, p. 132.
 — — GRIEG 1909, p. 553.
 — — K. STEPHENSEN 1912, p. 545.
 — — — 1913₁, p. 250 (no new records).
 — — H. J. HANSEN 1916, p. 206.
 — — NOUVEL, Bull. Mus. d'Hist. Nat., Paris, sér. 2, vol. 4, no. 7, 1932, p. 888.
 — — NORDENSTAM 1934, p. 5.

Occurrence at East Greenland: *Nordøstkyst*: 77°31'N, 18°24'W, 275 m (GRIEG 1909). Round Danmarks Havn, 8 occurrences, 6—60 m, algæ, etc. (K. STEPHENSEN 1912).

Franz Joseph Fjord area: c. 74° N.? (exact locality not noted; BUCHHOLZ 1874). S. of Hold with Hope, 310—260 m, clay with stones, 0.21°, salinity, 34.58 ‰; W. of Kap Franklin, 170 m, clay with stones ÷ 1.16°, salinity 34°18′ ‰; S. of Kap Bennett, 290 m, clay (NORDENSTAM 1934).

Scoresbysund area: Rosenvinges Bugt (NOUVEL 1932). Hekla Havn (= Danmarks Ø); 69°40′ N, 23°30′ W, 220 m (H. J. HANSEN 1916).

Sydøstkyst: Angmagssalik, 2 occurrences, 18—0 m (H. J. HANSEN 1916).

A few were attached to *Spirontocaris turgida* and *S. gaimardi*, all the other specimens to *S. polaris*.

Distribution: Probably circumpolar arctic, with adjacent waters in the northern Atlantic and northern Pacific (see map in K. STEPHENSEN 1936, p. 15).

66. *Dajus mysidis* KRØYER.

Dajus mysidis G. O. SARS 1899, p. 223, pls. 93—94.

— — H. J. HANSEN 1916, p. 208, pl. 15 fig. 14.

East Greenland records:

Leptophryxus mysidis BUCHHOLZ 1874, p. 288.

Dajus mysidis K. STEPHENSEN 1912, p. 547.

— — — 1913₁, p. 253.

— — H. J. HANSEN 1916, p. 208.

Occurrence at East Greenland: Nordøstkyst: Danmarks Havn, 9 occurrences, 0—20 m (K. STEPHENSEN 1912). 74°30′ N (BUCHHOLZ 1874). Sabine Ø (H. J. HANSEN 1916).

Franz Joseph Fjord area: Eskimonæs, Østhavn, 6—10 m, clayish sand with different algæ, 2 specimens; Kap Hope, 2 m, stones, algæ, 1 specimen.

Scoresbysund area: Hurry Inlet, 14—0 m (H. J. HANSEN 1916). Am-drups Havn, 22—26 m, Laminariæ and red algæ, 2 specimens.

Sydøstkyst: Angmagssalik, 0—30 m, several occurrences (H. J. HANSEN 1916). Lindenows Fjord, 10—12 m, Laminariæ, 1 specimen; ibidem 15—20 m, mud, Laminariæ, sand, 2 occurrences, 2 specimens; 20—30 m, Laminariæ, gravel, 2 occurrences, 4 specimens, and 30—36 m, mud, Laminariæ, sand, 1 specimen.

All the E. Greenland specimens were found on *Mysis oculata*.

Distribution: A mainly arctic species, found from Baffin Land and Labrador to Novaja Zemlya (and New Siberian Islands) and Norway 66° N, but not at Iceland.

67. *Gnathia elongata* (KRØYER).

- Gnathia elongata* H. J. HANSEN 1916, p. 224.
 — — MONOD 1926, p. 347, figs., lit.

East Greenland records:

- Anceus elongatus* H. J. HANSEN 1895, p. 131.
Gnathia elongata — 1916, p. 224.
 — — NORDENSTAM 1934, p. 4.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Tyrolerfjord, near the head, 125 m, clay and sand, $\div 1.40^\circ$, salinity 33.30‰; Dusénfjord, 185—75 m, clay, temperature (at 60 m) $\div 1.2^\circ$, salinity 33.32‰ (NORDENSTAM 1934). Forsblads Fjord, 175—75 m (H. J. HANSEN 1916).

Scoresbysund area: 69°25'N, 20°01'W, 300 m (H. J. HANSEN 1916).

Kangerdlugssuaq area: Kangerdlugssuaq, 30—40 m, clay, 22-VIII-1933, ♀ ovig., 1 ♀ with empty marsupium.

Sydøstkyst: Angmagssalik, Tasiusak (H. J. HANSEN 1895 and 1916).

Distribution: From W. Greenland, Jan Mayen and the Kara Sea to New York and SW. of the Faroes, down to about 1000 m, usually(?) in positive temperatures. Also found in the northern Pacific.

68. *Gnathia robusta* (G. O. SARS).

- Gnathia robusta* H. J. HANSEN 1916, p. 225, pl. 16 fig. 6.
 — — MONOD 1926, p. 385, figs., lit.

East Greenland records:

- Gnathia robusta* H. J. HANSEN 1916, p. 225.
 — — NORDENSTAM 1934, p. 4.

Occurrence at East Greenland: *Franz Joseph Fjord area*: E. of Bontekoe Ø, 168 m, greyish blue clay with stone, $\div 1.40^\circ$, salinity 34.14‰, 1 ♂, defective; the determination not certain, is possibly *G. hirsuta* G. O. SARS (NORDENSTAM 1934, p. 4).

Kangerdlugssuaq area: 69°25'N, 20°01'N, 300 m (H. J. HANSEN 1916).

Distribution: Baffin Bay and the Arctic deep Basin between E. Greenland, Spitsbergen and N. Norway, 168—846 m; but in addition there is a find W. of Iceland 64°18'N, 27°00'W, 575 m, temp. 5.8° (H. J. HANSEN l. c.)

69. *Gnathia abyssorum* G. O. SARS.

- Gnathia abyssorum* H. J. HANSEN 1916, p. 227, pl. 16 fig. 8.
 — — MONOD 1926, p. 455, figs., lit.

East Greenland records:

Gnathia abyssorum H. J. HANSEN 1916, p. 227.

Occurrence at East Greenland: *Scoresbysund area*: Rathbone Ø 70°40' N, 21°30' W, 175 or 300 m (H. J. HANSEN 1916).

Distribution: SW. Iceland, W. and N. Norway and W. of Ireland, depths (when noted) 130—887 m, temp. (when noted) 5.8°—6.1°.

70. *Gnathia stygia* (G. O. SARS).

Anceus stygius G. O. SARS 1885, p. 85, pl. 8 figs. 1—22.

Gnathia stygia H. J. HANSEN 1916, p. 230.

— — MONOD 1926, p. 398, figs., lit.

Occurrence at East Greenland: *Franz Joseph Fjord area*: Between Blomsterbugt and the mouth of the inner Franz Joseph Fjord, 680 m, fine grey clay, Petersen-grab, 1 ♂; between Kap Franklin and Broch Øerne, 420 m, brown clay, Petersen-grab, 1 ♂; Kong Oscars Fjord, SE. of Kap Dufva, 575 m, brown clay with a few small stones, Petersen-grab, 1 ♂.

Scoresbysund area: between Kap Leslie and Jameson Land, 397 m, soft clay with gravel, Petersen-grab, 1 ♂.

The length of the specimens is c. 7 mm.

The species is new to E. Greenland.

Distribution: Arctic deep Basin between E. Greenland, Spitsbergen and Iceland, depths c. 400—2400 m, temp. ÷ 0.5°—÷ 1.4°.

Euphausiacea.71. *Meganyctiphanes norvegica* (M. SARS).

Meganyctiphanes norvegica ZIMMER 1909, p. 8, figs.

— — RUUD 1936, pp. 7 (figs.), 21, etc.

East Greenland records:

Thysanopoda norvegica BUCHHOLZ 1874, p. 285.

— — OHLIN 1901₂, p. 65.

Meganyctiphanes — H. J. HANSEN 1908, p. 85 (no new records).

— — K. STEPHENSEN 1913₁, p. 55 (no new records).

— — — 1933₁, p. 5.

— — SIVERTSEN 1935, p. 45.

Occurrence at East Greenland: *Nordøstkyst*: Kap Wynn 74°30' N, 19° W, 10 m (BUCHHOLZ 1874).

Franz Joseph Fjord area: off Franz Joseph Fjord, between Mackenzie Bugt and Bontekoe Ø, 250 m, mud (OHLIN 1901); outside Moskus-

oksefjord, 150 m, clay, $\div 1.3^\circ$, and collected on the beach at Waltershausenbræen (SIVERTSEN 1935); Franz Joseph Fjord, off Kjerulf's Fjord, 600 m wire out, 4 specimens; Isfjord, between two glaciers, 700 m wire out, 2 specimens; Antarctic Sund, near Skildvagten, 800 m wire out, 2 specimens; between Kap Weber and Ymerø, 700 m wire out, 2 specimens; Kong Oscars Fjord, SE. of Kap Dufva, 800 m wire out, 1 specimen; Dicksons Fjord, near the elbow, 300 m wire out, 1 specimen, and 700 m wire out, 2 specimens; inner end of the same fjord, ? m wire out, 1 specimen.

Kangerdlugssuaq area: Kangerdlugssuaq, 1 most damaged specimen (and the determination not certain) found in the stomach of a *Phoca groenlandica* (K. STEPHENSEN 1933₁).

Sydøstkyst: $65^\circ 04' N$, $35^\circ 50' W$, 195 m, 65 m wire out, 1 specimen, 150 m wire out, some specimens, and 300 m wire out, some specimens.

Distribution: An Atlantic boreal species, widely distributed (see RUUD l. c.), but rarely found in arctic waters. For map of the distribution in the northern Atlantic, see LEGENDRE 1940, pp. 208—211.

72. *Thysanoëssa raschi* (M. Sars).

Rhoda raschi ZIMMER 1909, p. 11, figs.

East Greenland records:

Thysanopoda raschi BUCHHOLZ 1874, p. 285.

Rhoda — H. J. HANSEN 1908, p. 87 (no new record).

— — K. STEPHENSEN 1913₁, p. 59 (no new record).

Occurrence at East Greenland: *Off Nordøstkyst* c. $74^\circ 20' N$, $15^\circ W$, in the pack-ice (depth 325 m), 1 specimen (BUCHHOLZ 1874).

Distribution: Especially in the waters between Greenland, Norway and Great Britain, but also found in the Bering Sea and in the northern Pacific Ocean (see map in K. STEPHENSEN 1933₂, p. 7). For map of the distribution in the northern Atlantic, see LEGENDRE 1940, pp. 212—215.

73. *Thysanoëssa inermis* (KRØYER).

Rhoda inermis + *Thysanoëssa neglecta* ZIMMER 1909, pp. 11, 19, figs.

— — H. J. HANSEN, Bull. Inst. Océanogr. Monaco, no. 210, 1911, pp. 8—13, 38.

East Greenland records:

Boreophausia inermis CLEVE 1900, p. 7.

Rhoda — OHLIN 1901₂, p. 67

— — H. J. HANSEN 1908, p. 86 (no new records).

- Boreophausia inermis* BROCH & KOEFOED 1909, pp. 107, 111, 116, 120, 121, 129, 154.
Thysanoessa — K. STEPHENSEN 1913₁, p. 56 (no new records).
Rhoda — P. REMY 1928, p. 236.
 — — K. STEPHENSEN 1933₁, p. 6.
Thysanoessa — SIVERTSEN 1935, p. 45.

Occurrence at East Greenland: *Off Nordøstkyst*: 78°13¹/₂' N, 14°18' W, depth 100 m; 76°49' (—58') N, 18°31' (—00') W, 100 m below surface; 76°47' N, 15°21' W, depth 180 m, vertical-net 170—60 m; 76°46' N, 14°33' W, depth of the sea 270 m, vertical-net 200—5 m; 76°37' N, 18°22' W, depth 314 m, vertical-net 300—5 m; 75°58' (—59') N, 14°08' (—12') W, 300 m; 75°48' N, 13°04' W, c. 200 m below surface, depth 350 m (BROCH & KOEFOED 1909).

Franz Joseph Fjord area: Clavering Fjord near Kap Stosch, 400—338 m, clay, temp. (at 350 m) ÷ 1.19°, salinity 34.20‰, 2 occurrences; collected on the beach at Waltershausenbræen; Sofia Sund, 200 m, clay; Vega Sund, 120 m, clay; Kong Oscars Fjord, near Kap Pettersen, vertical-net 70—0 m (SIVERTSEN 1935); 72°28' N, 21°48' W, 180 m, and 71°30' N, 21° W, 225 m (CLEVE 1900; the specimens determined by G. O. SARS). 72°26' N, 21°48' W, vertical-net 180—0 m; 72°25' N, 17°56' W, 300 m, stones and sand; 71°35' N, 21°10' W, vertical-net 200—0 m (OHLIN 1901₂). 5 miles S. of Bontekoe Ø, 150 m wire out and 400 m wire out, numerous specimens; between Kap Franklin and Broch Øerne, 300 m wire out, 1 specimen, and 700 m wire out, numerous specimens; Nordfjord, 3 miles inside the Danish house, 205 m, fine gray clay, about 10 specimens; between Kap Weber and Ymer Ø, 300 m wire out, 1 specimen, and 700 m wire out, 2 specimens; E. of Zoologdalen, Ymer Ø, 400 m wire out, 2 specimens; Franz Joseph Fjord, off Antarctic Sund, 800 m wire out, 2 hauls, 5 specimens; Antarctic Sund, near Skildvagten, 800 m wire out, about 10 specimens; Isfjord, 3 miles from the glacier, 430 m, clay, a little sand, 1 specimen; Isfjord, between two glaciers, 700 m wire out, about 10 specimens, and off Kjerulfs Fjord, 600 m wire out, 1 specimen; Narhvalsund, off Polhems Dal, 300 m wire out, 2 specimens, and ibidem, depth?, 3 specimens; Kap Hedlund, Kempes Fjord, 300 m wire, 5 specimens, and 700 m wire out, 4 specimens; Dicksons Fjord, near the elbow, 300 m wire out, 3 specimens, and 700 m wire out, 4 specimens; Dicksons Fjord, 300 m wire out, 2 hauls, about 10 specimens; Dicksons Fjord, near the glacier, in the surface, 50 m wire out, about 10 specimens; ibidem, vertical-net 100—0 m, about 10 specimens, and 700 m wire out, about 10 specimens; between Kap Stimpson and Kap Wardlaw, 360 m, 300 m wire out, 3 specimens, and 600 m wire out, 10 specimens; 2 miles N. of Kap Wardlaw, 100 m wire out, 5 specimens; ibidem, 300 m wire out, about 10

specimens, and 400 m wire out, 2 specimens; Kong Oscars Fjord, off Holms Vig, 300 m wire out, about 10 specimens; Kong Oscars Fjord, SE. of Kap Dufva, 300 m wire out, 2 specimens, and 800 m wire out, 3 specimens.

Scoresbysund area: near Scoresby Sund, 45 m, 68°56' N, 21°09' W, 45 m (P. REMY 1928; determined by K. STEPHENSEN).

Kangerdlugssuaq area: Ravns Fjord, 200 m wire out; 3 miles off Kap Stephensen, vertical-net; Kangerdlugssuaq, stramin-net in the surface (K. STEPHENSEN 1933₁). Uttenthalsund, Kangerdlugssuaq, 41 m, soft clay, 1 specimen.

Sydøstkyst: Lindenows Fjord, 25—30 m, 50 m, 100—150 m, and 425 m, clay, a few specimens per haul; 60°21' N, 42°09' W, 15 m wire out, about 10 specimens.

Distribution: Widely distributed in the northern part of the Atlantic with adjacent arctic waters and in the northern Pacific Ocean (see RUUD 1936, pp. 10, 37, etc).

74. *Thysanoëssa longicaudata* (KRØYER).

Thysanoëssa longicaudata ZIMMER 1909, p. 20, figs.

East Greenland records:

Thysanoëssa longicaudata H. J. HANSEN 1908, p. 88.

— — BROCH & KOEFOED 1909, pp. 105, 107, 111, 121.

— — K. STEPHENSEN 1913₁, p. 58 (no new records).

— — — 1933₁, p. 6.

Occurrence at East Greenland: *Off Nordøstkyst*: 78°13½' N, 14°18' W, depth 100 m, near the bottom; 76°49' (—58') N, 18°13' (—00') W, depth?, about 100 m below the surface; 75°58' (—59') N, 14°08' (—12') W, depth?, about 300 m below the surface; 75°48' N, 13°04' W, depth?, about 200 m below the surface; 75°47½' N, 12°59' W, depth 350 m, vertical-net 300—230 m (BROCH & KOEFOED 1909).

Franz Joseph Fjord area: Between Kap Weber and Ymer Ø, 300 m wire out, 1 specimen, and 700 m wire out, 7 specimens; Kempes Fjord off Kap Oswald, 410 m, 200 m wire out, 3 specimens, and 650 m wire out, 2 specimens; Dicksons Fjord, vertical-net 10—0 m, 2 specimens; Narhvalsund, Polhems Dal, 700 m wire out, 6 specimens; Kap Oswald; NE. of Kap Elisabeth, Ella Ø, 50 m wire out; Kong Oscars Fjord off Kap Elisabeth, 200 m wire out, 1 specimen, and 300 m wire out, 2 specimens; between Kap Stimpson and Kap Wardlaw, vertical-net 100—0 m, 2 specimens, and 300 m wire out, 7 specimens; 2 miles NE. of Kap Wardlaw, 400 m wire out, 6 specimens; Kong Oscars Fjord,

SE. of Ancher Øerne, 500 m wire out, 4 specimens; Kong Oscars Fjord, SE. of Kap Dufva, 300 m wire out, 2 specimens, and 800 m wire out, about 10 specimens.

Scoresbysund area: 70°22' N, near the shore (H. J. HANSEN 1908); off Kap Tobin, 300 m wire out, 6 specimens; S. of Kap Tobin, 700 m, 700 m wire out, about 10 specimens; Kap Leslie, 54 m, glittering clay, 1 specimen, and 88 m, 1 specimen, and 92 m, 1 specimen.

Kangerdlugssuaq area: Ravns Fjord, 100 m wire; 3 nautical miles off Kap Stephensen, Hensen-net (K. STEPHENSEN 1933₁).

Sydøstkyst: 65°58' N, 31°00' W, 460 m, 15 m wire out, 2 specimens; 65°04' N, 35°50' W, 196 m, 15 m wire out, 65 m wire out, 150 m wire out, and 300 m wire out, numerous specimens; 63°36' N, 40°10' W, 230 m, 15 m wire out, several specimens, and 65 m wire out, about 10 specimens; 63°30' N, 39°52' W, 530 m, 65 m wire out, a few specimens; 60°21' N, 42°09' W, 15 m wire out, numerous specimens.

Distribution: A widely distributed species, especially in arctic waters (and to W. of Iceland).

General Remarks.

74 species of the present groups are known from East Greenland waters in depths down to about 400 m, and the greater part of the material has been brought together by Danish investigations. The Danish expeditions in the later years have collected material from about 75° N to the Lindenowfjord (c. 60° N) (se map fig. 11).

From the table I (p. 68) it is evident that the majority of species are known from but rather few occurrences, 1 or 2 up to 7—9. Only 18 species are taken 10 times or more, viz., 9 species 10—25 times, 4 species > 25—50 times, 3 species > 50—100 times (*Diastylis scorpioides*, *Calathura brachiata*, *Thysanoëssa inermis*), and 3 species > 100 times (*Mysis oculata*, *Diastylis goodsiri*, *D. edwardsi*).

Comparison of the fauna of Leptostraca, Mysidacea, Cumacea, Tanaidacea, Isopoda and Euphausiacea of East and West Greenland (depths down to about 400 m).

74 species belonging to these groups are known from East Greenland, 75 from W. Greenland (see table II, p. 70); 42 out of these are found on both sides of Greenland.

But if we compare the southernmost part of the two coasts, we find the difference being greater. According to table III (p. 78) 20 or 21

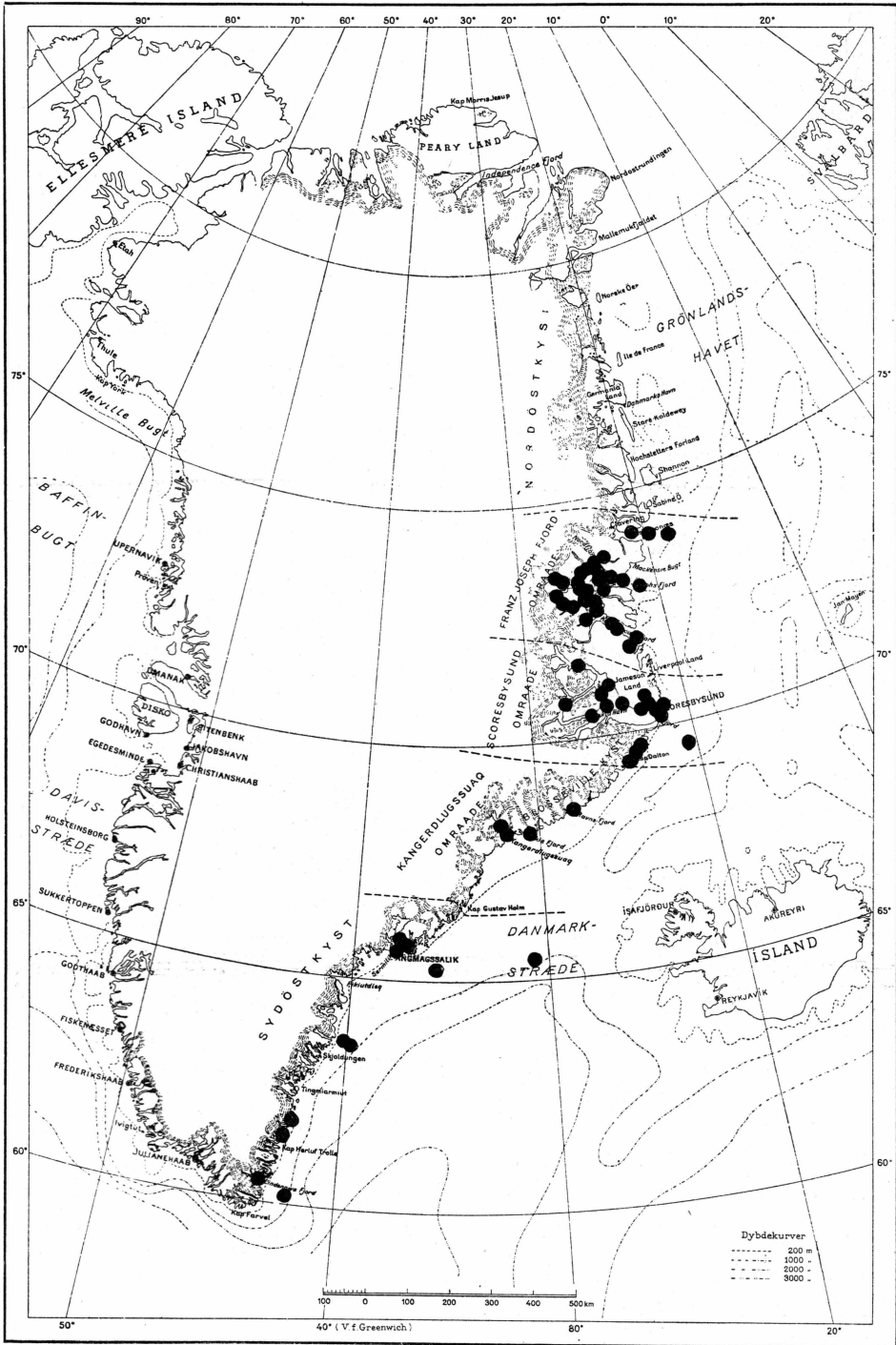


Fig. 11. Localities at East Greenland, where Leptostraca, Mysidacea, Tanaidacea, Isopoda, and Euphausiacea were taken by Danish Expeditions during the last decennium.

species are found at the southernmost part of West Greenland (South of about 61° N); no more than 10 or 11 out of this number are known from corresponding latitudes at East Greenland, and 6 are not known from South of Angmagssalik (about 66° N) or still farther to the north. Two are not at all known from East Greenland.

That so few species are known from the southernmost East Greenland is at any rate partly due to the fact, that there are rather few investigations in these waters; more extensive collecting activities will no doubt procure the majority of them also from SE. Greenland.

Regarding the two species which are not at all known from East Greenland, the following is to remark:

Diastylis rathkei f. *sarsi* is distributed in depths down to about 100 m from Nova Scotia and Labrador along the two sides of Davis Strait and Baffin Bay, and also from W. Spitsbergen, Barents Sea, White Sea, and along Norway to Bergen, but is quite missing at East Greenland, Jan Mayen and Iceland (ZIMMER 1930, p. 603, with map p. 628).

Æga crenulata is a boreo-atlantic species, probably not known from negative temperatures.

The Zoogeographical Position of the Species.

Regarding the zoogeographical position of the individual species I have tried to arrange them according to the terms used by HOFSTEN (1915, pp. 202 seq.), EKMAN (1935), HULT (1941) and LEMCHE (1941).

The East Greenland waters are to be divided into two different regions of depth, viz., 0—25 m, and > 25 m. The upper water layers, 0—25 m, comprise the region of water which during the summer reaches positive temperatures; the deeper water layers, from 25 m and downwards, comprise the region comprising constant negative temperatures (North of the ridge; from the Nordøstkyst to and inclusive the Scoresbysund area), or temperatures slightly above zero (South of the ridge; off the Sydøstkyst); the Kangerdlugssuaq area, off the ridge between Iceland and Greenland, takes an intermediate position. According to the above the water layer 0—25 m along the whole coast is to be regarded as being from the same region as that from > 25 m off the Sydøstkyst.

A. Bottom Forms.

For each species are noted its areas¹⁾ in East Greenland, the depths and the number of occurrences.

¹⁾ I = Nordøstkyst; II = Franz Joseph Fjord area; III = Scoresbysund area; IV = Kangerdlugssuaq area; V = Sydøstkyst.

The arctic area comprises according to HOFSTEN (1915, p. 203) the following waters N. of and adjacent to the Atlantic: the North American Polar Sea, West and East Greenland (but not the deep Basin S. of the ridge c. 66°—67° N), Jan Mayen, the deep Polar Basin > 600 m, Spitsbergen, Barents Sea exclusive of the south-western part with Finmarken and Murman Coast, Kara Sea.

The arctic area is divided into the high-arctic and the low-arctic areas

I. The high-arctic area

N. of the Atlantic comprises according to HOFSTEN (1915, p. 203): N. American Polar Sea, NW. Greenland, E. Greenland N. of c. 69½° N, Jan Mayen, the deep Polar Basin, E. and N. Spitsbergen (but the Storjford and the northern coast of W. Iceland are not purely high-arctic), northern part of the Barents Sea, Kara Sea.

High-arctic species are stenotherm cold-water species which are able only to exist in temperatures < 0°—+4°; at East Greenland the depths are usually > 25 m.

Probably all the following species belong to this group.

- no. 10. *Michthyops theeli* (areas I—II, 200—400 m, 4 occurrences) (distrib.: Kara Sea).
- ?no. 18. *Campylaspis intermedia* (area II, 185—75 m, 1 occur.) (distrib.: northern Davis Str. 600 m, 3.9°, and S. of Jan Mayen 700 m, ÷ 0.4°).
- ?no. 30. *Brachydiastylis nimia* (areas II—III, 100—300 m, 2 occur.) (and not found elsewhere).
- no. 40. *Leptognathia inermis* (area III, 18—22 m, 1 occur.) (distrib.: Jan Mayen 160 m; N. and E. of Iceland 400—1000 m).
- ?no. 41. *Leptognathia amdrupei* (area II, 170—75 m, 1 occur.; not found elsewhere).
- no. 42. *Leptognathia glacialis* (area II, 225 m, 1 occur.; not elsewhere).
- no. 48. *Nannoniscus arcticus* (area II, 170—75 m, 1 occur.) (distrib.: Jan Mayen 700 m).
- no. 51. *Ilyarachna bergendahli* (area III, 200 m, 1 occur.) (distrib.: E. Spitsbergen 20 m).
- no. 63. *Pleuroprion frigidum* (areas I—II, (22) 40—350 m, 13 occur.; not elsewhere).

They are all found at East Greenland in three northernmost areas (N. of about 69° N), in depths from (40) 57 m down to 450 m; but unfortunately they are all except one at hand from but very few (1—4) occurrences. One species, *Pleuroprion frigidum* has once been taken in only 22 m (but 12 times from 40 to 350 m). One species, *Leptognathia*

inermis is found only in depths < 25 m (viz., 18—22 m, 1 haul); but nevertheless it is referred to this group on account of its distribution outside East Greenland. 4 out of the species are not found outside East Greenland.

II. Low-(Sub-)arctic species

prefer summer temperatures of 0°—7°, at East Greenland usually in depths of 0—25 m.

According to HOFSTEN (1915, p. 203) the low-arctic area comprises the regions of the arctic area which are not high-arctic; and the species which inhabit the low-arctic area and the adjacent boreo-arctic transition zone are called low-arctic (HOFSTEN 1915, p. 207). Sometimes it is very difficult to decide whether a species is low-arctic or panarctic (-boreal) (group III).

To this group I refer the following species:

- no. 12. *Mysis oculata* (areas I—V, 0—30 (100) m, > 100 samples).
- ?no. 21. *Eudorella arctica* (area III, 18—22 m, 1 haul; not elsewhere).
- no. 22. *Cumella carinata* (areas III, V, 20—60 m, 3 hauls).
- ?no. 35. *Pseudotanaeis oculatus* (area V, depth?, 1 haul).
- no. 39. *Leptognathia hansenii* (areas III, V, 8—22 (60) m, 5 hauls).
- ?no. 45. *Janira tricornis* (areas IV—V, 4—90 m, 11 hauls).
- no. 46. *Munna groenlandica* (areas III—V, 0—10 m, 4 hauls).
- no. 60. *Mesidotea sabini* (area V, 8—75 m, 11 hauls).
- ?no. 61. *Synidotea nodulosa* (areas III, V, 26—57 m, 4 hauls).
- no. 66. *Dajus mysidis* (areas I—V, 0—36 m, > 20 hauls).

Only two of these species are taken in > 20 hauls and are found in all five areas.

The other species are taken in but 1—5 (11) hauls each. One is found only in depths > 25 m (viz., *Synidotea nodulosa*) but is with some doubt referred to this group on account of its distribution outside East Greenland.

III. Panarctic (= panarctic-boreal) species

(including the arctic-boreosubmergent species) cannot endure temperatures exceeding about 7° C, but are able to develop in water with negative temperature all the year round (LEMICHE 1941, p. 42). According to HOFSTEN (1915, p. 207) they are distributed in the arctic area and in the northernmost part of the boreal area; some of them occur on both sides of the Wyville-Thomson ridge.

To this group I refer the following species:

- ?no. 6. *Erythrops microps* (area I,¹ 300 m,¹ 1 haul) (distrib. to W. Ireland 75—1000 m).

- ?no. 7. *Meterythrops robusta* (area I, 150 m, 1 haul) (to N. Norway 67 $\frac{1}{2}$ ° N).
- no. 11. *Stilomysis grandis* (areas I—II, 25—150 m, 3 hauls) (W. and E. Finmark).
- no. 23. *Diastylis goodsiri* (areas I—III, V, 1—250 m, > 100 hauls) (to N. Norway).
- no. 25. *Diastylis edwardsi* (areas I—V, 0—128 m, > 100 hauls) (to Iceland, but not Norway or the Faroes).
- no. 26. *Diastylis scorpioides* (areas I—III, V, 10—275 m, 61 hauls) (Spitsbergen, but not Iceland or Norway).
- no. 27. *Diastylis lepechini* (area IV, 35—310 m, 4 hauls) (to Norway N. of Tromsø).
- no. 28. *Diastylis spinulosa* (areas II—IV, 6—> 500 m, c. 30 hauls) (N. Norway).
- no. 34. *Pseudotanaïs lilljeborgi* (areas III—V, 8—22 m, 3 hauls) (N. Norway).
- no. 36. *Pseudotanaïs affinis* (area II, 100—175 m, 1 haul) (Faroes, Iceland, SW. of Iceland).
- no. 37. *Typhlotanaïs finmarchicus* (areas I, III, 6—22 m, 3 hauls) (Va-rangerfjord, Iceland).
- no. 38. *Leptognathia sarsi* (areas I, III, V, 6—300 m, 6 hauls) (Ice-land, the Faroes, N. Norway).
- no. 43. *Cryptocope arctica* (areas I—III, 20—100(175) m, 4 hauls) (also S. of the ridge, SW. of Iceland).
- no. 55. *Munnopsis typica* (areas I—V, 10—350 m, > 30 hauls) (to Skagerrak).
- no. 59. *Calathura brachiata* (areas I—IV, 10—575 m, c. 65 hauls) (to Bay of Biscay).
- ?no. 62. *Arcturus baffini* (areas I—III, V, 10—400 m, 37 hauls) (to NW. Iceland and the Faroes).
- no. 67. *Gnathia elongata* (areas II—V, 30—300 m, 6 hauls) (to SW. of the Faroes).

IV. Arctic-boreal (boreo-littoral) species.

are propagatively cold-stenotherm and vegetatively eurytherm. In boreal waters such species are forced to live in the littoral zone, but in the Arctic they are able to descend to greater depths (LEMICHE 1941, p. 421). They are distributed both in the arctic and the boreal areas (HOFSTEN 1915, p. 207); some of them extend to Skagerrak or still farther to the south.

To this group I refer the following species:

- ?no. 3. *Boreomysis arctica* (areas I—IV, (5) 300—475 m, 3 hauls) (to N. Norway and the Mediterranean).

- ?no. 4. *Erythrops abyssorum* (areas I—II, 180—300 m, 5 hauls) (to Oslofjord).
- no. 13. *Mysis mixta* (areas II—V, 6—75 m, 10 hauls) (to the Baltic).
- no. 14. *Leucon nasica* (areas II—III, 23—310 m, 10 hauls) (to Denmark and Scotland; also N. Pacific).
- no. 17. *Leucon nasicooides* (areas I—III, 18—22 m, 3 hauls) (to Denmark etc.).
- no. 24. *Diastylis oxyrhyncha* (areas I—III, V, 9—700 m, 21 hauls) (to the Faroes and Norway 62° N).
- no. 29. *Brachydiastylis resima* (areas II—III, 20—40 m, 15 hauls) (to Kattegat and Scotland).
- no. 31. *Sphyrapus anomalus* (areas II—III, 18—300 m, 4 hauls) (to Skagerrak).
- no. 33. *Pseudotanais forcipatus* (area III, 6—22 m, 4 hauls) (to Skagerrak and Scotland).
- no. 47. *Munna minuta* (area V, shallow water, 3 hauls) (to Denmark and Wales).
- no. 49. *Desmosoma tenuimana* (area III, 18—22 m, 1 haul) (to Iceland, the Faroes and Denmark).
- no. 53. *Eurycope cornuta* (areas I, V, 300—550 m, 2 hauls) (to the deep Skagerrak).
- no. 64. *Bopyroides hippolytes* (areas I—V, 0—40 (275) m, 16 hauls) (to Iceland, Great Britain and Kattegat).
- no. 65. *Phryxus abdominalis* (areas I—V, 0—310 m, 18 hauls) (to Iceland, Great Britain and Kattegat).
- ?no. 69. *Gnathia abyssorum* (area III, 175 or 300 m, 1 haul) (to W. Norway and S. of Iceland).

V. Boreal-arctolittoral (= panboreal (HULT)) species

are vegetatively eurytherm and propagatively warm stenotherm. Such species have their main distribution in the boreal waters, but penetrate to some extent into the Arctic (LEMCHÉ 1941, p. 43). They extend to Great Britain, France, or the Mediterranean.

To this group belong:

- no. 1. *Nebalia bipes* (areas I—V, 3—35(300?) m, > 20 hauls) (to Gr. Britain).
- no. 20. *Eudorella emarginata* (areas II—III, 12—67(340) m, 11 hauls).
- no. 44. *Janira maculosa* (areas IV—V, 310—600 m, 3 hauls) (to Morocco).
- no. 50. *Desmosoma armatum* (area III, depth?, 1 haul) (distributed from Trondheimsfjord to Bohuslän).

VI. Bathy-arctic species

are stenotherm cold-water species that occur only in the sublittoral or at still greater depths to the north of the Wyville-Thomsen ridge (LEM-CHE 1941, p. 43).

Under this head I list the following species, though a few of them are found off East Greenland not only in great depths, but also in rather shallow water, 30 or even 19 m. Some of them are found also in the deep basin in the Baffin Bay W. of Greenland. They belong to the three northernmost areas; only one (*Munnopsurus giganteus*) is known from SE. Greenland.

- no. 2. *Boreomysis nobilis* (areas I—III (200) 300—670 m, 17 hauls; B. B.¹⁾ 300—1500 (3000) m. wire out, depth of the sea 410—1880 m (K. STEPHENSEN 1933₂, p. 9)).
- no. 5. *Erythrops glacialis* (area II, 30—250 m, 2 hauls; but in A. B.¹⁾ 640—911 m).
- no. 8. *Parerythrops spectabilis* (areas I—II, 250—350 m, 2 hauls; A. B. 250—763 m; B. B., depth?).
- no. 9. *Pseudomma frigidum* (areas I—II, 80—300 m, 4 hauls; A. B. 900—1150 m;? Matotschin Skar 115—125 m).
- no. 16. *Leucon nathorsti* (area III, 300 m, 1 haul; A. B., B. B., etc.)
- no. 32. *Sphyrapus serratus* (areas I—III, 19—350 m, 4 hauls; A. B. 1000—> 2000 m).
- no. 52. *Munnopsurus giganteus* (E. Greenland: 78—500 m, 2 hauls, viz., in II 80—78 m, and in northern part of V 550 m, temp. 0.11°; A. B. c. 550—> 1400 m; but as it extends to Siberia, it belongs possibly to group I. In B. B. 3 hauls 580—930 and 1 haul 75—200 m (K. STEPHENSEN 1936, p. 11). Also A. B.).
- ?no. 68. *Gnathia robusta* (areas I, IV, 168—300 m, 2 hauls; A. B. 375—846 m; B. B. 225; but an occurrence W. of Iceland, c. 550 m, has a temperature of +5.8°).
- no. 70. *Gnathia stygia* (areas II—III, 400—680 m, 4 hauls; A. B. 400—2400 m).

VII. Sublittoral-boreal atlantic species

have a southern distribution, but extend more or less rarely to East Greenland. They prefer temperatures of 5°—8°.

To this group belong the following species:

- ?no. 15. *Leucon pallidus* (area IV, 175—100 m, 1 haul).
- ?no. 54. *Eurycope producta* (area III, 300 m, 1 haul) (to Davis Str. and N. Norway).

¹⁾ A. B. = the deep arctic Basin E. of Greenland. — B. B. = the deep Basin in the Baffin Bay.

- no. 56. *Æga psora* (area V, down to 400 m, 4 hauls).
 no. 57. *Æga arctica* (area V, down to 400 m, 2 hauls).
 no. 58. *Æga ventrosa* (area V, 400—600 m, 1 haul).

B. Plankton Forms.

There are but four truly pelagic forms, viz., the Euphausiacea:

- no. 71. *Meganyctiphanes norvegica*.
 no. 72. *Thysanoëssa raschi*.
 no. 73. *Thysanoëssa inermis*.
 no. 74. *Thysanoëssa longicaudata*.

The three firstnamed species are atlantic forms, the last is probably arctic.

Table I. The species of East Greenland, depth 0—400 m.

Number of hauls (hauls with depth not noted are omitted)	0—25 m				> 25—200 m				> 200 m				Total no. of hauls
	I-III 1)	IV	V	I-V	I-III	IV	V	I-V	I-III	IV	V	I-V	
LEPTOSTRACA													
1. <i>Nebalia bipes</i>	9	3	2	14	1	—	3	4	1	—	—	1	19
MYSIDACEA													
2. <i>Boreomysis nobilis</i> .....	..	..	..	..	..	..	..	..	17	—	—	17	17
3. — <i>arctica</i> .....	..	..	..	..	..	..	..	..	2	1	—	3	3
4. <i>Erythrops abyssorum</i> .....	..	..	..	..	1	—	—	1	3	—	—	3	4
5. — <i>glacialis</i> .....	..	..	..	..	1	—	—	1	1	—	—	1	2
6. — <i>microps</i> .....	..	..	..	..	..	..	..	..	1	—	—	1	1
7. <i>Meterythrops robusta</i> .....	..	..	..	..	1	—	—	1	..	..	..	..	1
8. <i>Parerythrops spectabilis</i> .....	..	..	..	..	..	..	..	..	2	—	—	2	2
9. <i>Pseudomma frigidum</i> .....	..	..	..	..	1	—	—	1	3	—	—	3	4
10. <i>Michthyops theeli</i> .....	..	..	..	..	..	..	..	..	4	—	—	4	4
11. <i>Stilomysis grandis</i> .....	..	..	..	..	3	—	—	3	..	..	..	..	3
12. <i>Mysis oculata</i>	33	cc ²⁾	cc	cc	4	3	14	21	—	—	1	1	ccc
13. — <i>mixta</i>	3	—	1	4	—	—	4	4	..	..	..	..	8
CUMACEA													
14. <i>Leucon nasica</i>	1	—	—	1	5	—	—	5	3	—	—	3	9
15. — <i>pallidus</i> .....	..	..	..	..	1	—	—	1	..	..	..	..	1
16. — <i>nathorsti</i> .....	..	..	..	..	..	..	..	..	1	—	—	1	1
17. — <i>nasicoides</i>	3	—	—	3	..	..	..	..	..	..	..	..	3
18. <i>Campylaspis intermedia</i> .....	..	..	..	..	2	—	—	2	..	..	..	..	2
19. — sp. .....	..	..	..	..	2	—	—	2	..	..	..	..	2
20. <i>Eudorella emarginata</i>	5	—	—	5	3	—	—	3	1	—	—	1	9

¹⁾ I: Nordøstkyst; 2: Franz Joseph Fjord area; III: Scoresbysund area; IV: Kangerdlugssuaq area; V: Sydøstkyst.

²⁾ cc = > 40—50 hauls; ccc = > 100 hauls.

Table I (continued).

Number of hauls (hauls with depth not noted are omitted)	0—25 m				> 25—200 m				> 200 m				Total no. of hauls
	I-III	IV	V	I-V	I-III	IV	V	I-V	I-III	IV	V	I-V	
21. <i>Eudorella arctica</i>	1	—	—	1	..	..	..	..	..	..	..	..	1
22. <i>Cumella carinata</i>	1	—	—	1	—	—	2	2	..	..	..	..	3
23. <i>Diastylis goodsiri</i>	23	—	—	23	78	—	1	79	1	—	—	1	103
24. — <i>oxyrhyncha</i>	2	—	—	2	3	—	—	3	2	—	1	3	8
25. — <i>edwardsi</i>	73	1	—	74	31	—	2	33	—	—	—	—	107
26. — <i>scorpioides</i>	22	—	3	24	21	—	12	33	—	—	1	1	58
27. — <i>lepechini</i> .....	..	..	..	..	3	—	—	3	1	—	—	1	4
28. — <i>spinulosa</i>	2	1	—	3	18	2	—	20	6	—	—	6	29
29. <i>Brachydiastylis resima</i>	5	—	—	5	9	—	—	9	..	..	..	..	14
30. — <i>nimia</i> .....	..	..	..	..	1	—	—	1	1	—	—	1	2
TANAIDACEA													
31. <i>Sphyrapus anomalus</i>	2	—	—	2	1	—	1	2	1	—	—	1	5
32. — <i>serratus</i>	1	—	—	1	2	—	—	2	1	—	—	1	4
33. <i>Pseudotanaïs forcipatus</i>	4	—	—	4	..	..	..	..	..	..	..	..	4
34. — <i>lilljeborgi</i>	3	—	× ^{a)}	3	..	..	..	..	..	..	..	..	3
35. — <i>oculatus</i> .....	—	—	×	—	..	..	..	..	..	..	..	..	×
36. — <i>affinis</i> .....	..	..	..	..	1	—	—	1	..	..	..	..	1
37. <i>Typhlotanaïs finmarchicus</i>	3	—	—	3	..	..	..	..	..	..	..	..	3
38. <i>Leptognathia sarsi</i>	4	—	×	4	—	—	—	—	1	—	—	1	5
39. — <i>hanseni</i>	2	—	—	2	—	—	2	2	..	..	..	..	4
40. — <i>inermis</i>	1	—	—	1	..	..	..	..	..	..	..	..	1
41. — <i>amdrupi</i> .....	..	..	..	..	1	—	—	1	..	..	..	..	1
42. — <i>glacialis</i> .....	..	..	..	..	..	..	..	..	1	—	—	1	1
43. <i>Cryptocope arctica</i>	1	—	—	1	4	—	—	4	..	..	..	..	5
ISOPODA													
44. <i>Janira maculosa</i> .....	..	..	..	..	..	..	..	..	—	1	2	3	3
45. — <i>tricornis</i> .....	..	..	3	3	—	2	6	8	..	..	..	..	11
46. <i>Munna groenlandica</i>	×	1	1	2	..	..	..	..	..	..	..	..	2
47. — <i>minuta</i> .....	..	..	1	1	..	..	..	..	..	..	..	..	1
48. <i>Nannoniscus arcticus</i> .....	..	..	..	..	1	—	—	1	..	..	..	..	1
49. <i>Desmosoma tenuimanum</i>	1	—	—	1	..	..	..	..	..	..	..	..	1
50. — <i>armatum</i> .....	×	—	—	—	..	..	..	..	..	..	..	..	×
51. <i>Ilyarachna bergendahl</i> .....	..	..	..	..	..	..	..	..	1	—	—	1	1
52. <i>Munnopsurus giganteus</i> .....	..	..	..	..	1	—	—	1	—	—	1	1	2
53. <i>Eurycope cornuta?</i> .....	..	..	..	..	..	..	..	..	1	—	1	2	2
54. — <i>producta</i> .....	..	..	..	..	..	..	..	..	1	—	—	1	1
55. <i>Munnopsis typica</i>	5	1	—	6	15	4	—	19	6	1	2	9	34
56. <i>Æga psora</i> .....	..	..	..	..	..	..	..	..	—	—	1	1	1
57. — <i>arctica</i> .....	..	..	..	..	..	..	..	..	—	—	1	1	1
58. — <i>ventrosa</i>	—	—	—	—	—	—	—	—	—	—	1	1	1
59. <i>Calathura brachiata</i>	3	2	—	5	37	2	—	39	22	—	—	22	66
60. <i>Mesidotea sabini</i>	—	—	5	5	—	—	6	6	—	—	—	—	11

^{a)} × indicates that the species is found in the area in question; but the depth is not noted.

Table I (continued).

Number of hauls (hauls with depth not noted are omitted)	0—25 m				> 25—200 m				> 200 m				Total no. of hauls
	I-III	IV	V	I-V	I-III	IV	V	I-V	I-III	IV	V	I-V	
61. <i>Synidotea nodulosa</i>	—	—	—	—	1	—	3	4	—	—	—	—	4
62. <i>Arcturus baffini</i>	4	—	—	4	21	—	4	25	6	—	1	7	36
63. <i>Pleuropriion frigidum</i>	1	—	—	1	10	—	—	10	1	—	—	1	12
64. <i>Bopyroides hippolytes</i>	8	1	1	10	—	—	—	—	1	—	—	1	11
65. <i>Phryxus abdominalis</i>	6	—	2	8	3	—	—	3	4	—	—	4	15
66. <i>Dajus mysidis</i>	13	—	6	19	—	—	3	3	..	..	..	..	22
67. <i>Gnathia elongata</i> .....	..	..	..	..	1	1	×	2	1	—	—	1	3
68. — <i>robusta</i> .....	..	..	..	..	1	—	—	1	—	1	—	1	2
69. — <i>abyssorum</i> .....	..	..	..	..	1	—	—	1	..	..	..	..	1
70. — <i>stygia</i> .....	..	..	..	..	..	..	..	..	4	—	—	4	4
EUPHAUSIACEA													
71. <i>Meganyctiphanes norvegica</i> ...	1	—	—	1	1	—	—	1	8	×	1	9	11
72. <i>Thysanoëssa raschi</i> .....	..	..	..	..	..	..	..	..	1	—	—	1	1
73. — <i>inermis</i>	1	1	1	3	17	1	4	22	30	—	1	31	56
74. — <i>longicaudata</i>	1	—	3	4	10	1	4	15	13	—	1	14	33

Table II. The Leptostraca, Mysidacea, Cumacea, Tanaidacea, Isopoda and Euphausiacea of the northern Atlantic with adjacent arctic waters, depths 0—400 m.

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
LEPTOSTRACA										
<i>Nebalia bipes</i> O. FABRICIUS	×	×	×	—	×	×	×	×	—	—
MYSIDACEA										
<i>Hansenomysis fjyllæ</i> H. J. HANSEN	—	×	—	—	—	(×) ¹⁾	—	—	—	—
<i>Boreomysis nobilis</i> G. O. SARS	—	×	×	—	—	—	—	—	—	—
— <i>arctica</i> KRØYER	—	×	×	—	—	(SW.)	(×)	×	—	—
<i>Erythrotops abyssorum</i> G. O. SARS	—	×	×	×	—	—	×	—	—	—
— <i>serrata</i> G. O. SARS	—	—	—	—	×	—	×	—	—	—
— <i>erythroptthalma</i> (GOËS)	×	×	—	×	—	—	×	×	—	×
— <i>glacialis</i> G. O. SARS	—	—	×	—	—	—	—	—	—	—
— <i>microps</i> (G. O. SARS)	—	—	×	—	—	—	×	—	—	—
<i>Meterythrops robusta</i> S. I. SMITH	×	×	×	—	—	—	×	×	—	—
<i>Parerythrotops abyssicola</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>obesa</i> G. O. SARS	—	—	—	—	(×)	—	×	—	—	—
— <i>spectabilis</i> G. O. SARS	—	×	×	—	—	—	—	—	—	—

¹⁾ (×) indicates that the species is found in the area, but only in depths > 400 m.

Table II (continued).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
<i>Amblyops abbreviata</i> M. SARS	—	(X)	—	—	×	—	×	—	—	—
— <i>sarsi</i> OHLIN	—	—	—	—	—	—	—	×	—	—
<i>Pseudomma roseum</i> G. O. SARS	×	×	—	—	—	—	×	—	—	—
— <i>frigidum</i> H. J. HANSEN	—	—	×	—	—	—	—	—	—	?
— <i>affine</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>truncatum</i> SMITH	×	×	—	—	×	—	×	×	—	—
— <i>parvum</i> VANHÖFFEN	—	×	—	—	—	—	—	—	—	—
<i>Michthyops théeli</i> (OHLIN)	—	—	×	—	—	—	—	—	—	—
<i>Mysidopsis didelphys</i> NORMAN	—	—	—	—	×	—	×	—	—	—
<i>Mysideis insignis</i> (G. O. SARS)	—	—	—	—	×	—	×	—	—	—
<i>Stilomysis grandis</i> (G. O. SARS)	×	×	×	—	—	—	×	×	—	—
<i>Mysis inermis</i> RATHKE	—	—	—	—	—	×	×	×	—	×
— <i>ornata</i> G. O. SARS	—	—	—	—	×	×	×	×	—	×
— <i>oculata</i> (O. FABRICIUS)	×	×	×	×	×	?	×	×	×	×
— <i>mixta</i> LILLJEBORG	×	×	×	—	×	—	×	×	—	×
— <i>vulgaris</i> THOMPSON	—	—	—	—	—	—	×	—	—	×
— <i>neglecta</i> (G. O. SARS)	—	—	—	—	—	—	×	—	—	—
<i>Hemimysis lamornæ</i> (COUCH)	—	—	—	—	—	—	×	—	—	—
— <i>abyssicola</i> (G. O. SARS)	—	—	—	—	—	—	×	—	—	—
<i>Heteromysis formosa</i> SMITH	×	—	—	—	—	—	—	—	—	—
CUMACEA										
<i>Cyclaspis longicaudata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Leucon siphonatus</i> CALMAN	—	—	—	—	×	—	—	—	—	—
— <i>nasica</i> (KRØYER)	×	×	×	—	×	—	×	×	—	×
— <i>nasicoides</i> LILLJEBORG	×	×	×	—	×	—	×	—	—	×
— <i>nathorsti</i> OHLIN	—	(X)	×	×	—	—	—	×	—	×
— <i>fulvus</i> G. O. SARS	—	×	—	—	×	—	×	×	—	×
— <i>pallidus</i> G. O. SARS	—	(X)	×	—	×	—	×	—	—	×
— <i>acutirostris</i> G. O. SARS	(X)	(X)	—	—	—	—	×	—	—	×
<i>Campylaspis intermedia</i> H. J. HANSEN	—	(X)	×	(X)	—	—	—	—	—	—
— <i>costata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>rubicunda</i> LILLJEBORG	×	×	—	—	×	—	—	—	—	×
— <i>horrida</i> G. O. SARS	—	—	—	—	×	—	(X)	—	—	—
— <i>sulcata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>verrucosa</i> G. O. SARS	—	—	—	—	×	—	×	—	—	—
— <i>globosa</i> H. J. HANSEN	—	(X)	—	—	—	—	?	—	—	—
— <i>affinis</i> G. O. SARS	?	—	—	—	—	—	×	—	—	—
— <i>undata</i> G. O. SARS	—	—	—	—	—	×	×	—	—	—
— sp.	—	—	×	—	—	—	—	—	—	—
<i>Eudorella groenlandica</i> ZIMMER	—	×	—	—	—	—	—	—	—	—
— <i>spitzbergensis</i> ZIMMER	—	—	—	—	—	—	—	×	—	—

1) Zimmer 1926.

Table II (continued).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
<i>Eudorella emarginata</i> (KRØYER)	×	×	×	—	×	×	×	×	—	×
— <i>arctica</i> H. J. HANSEN	—	—	×	—	—	—	—	—	—	—
— <i>truncatula</i> BATE	×	—	—	—	—	—	×	—	—	—
— <i>hispida</i> G. O. SARS	×	×	—	—	—	—	—	—	—	—
— <i>hirsuta</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>pusilla</i> G. O. SARS	×	—	—	—	—	—	—	—	—	—
<i>Eudorellopsis deformis</i> (KRØYER)	×	×	—	—	×	×	—	—	—	—
— <i>integra</i> SMITH	×	×	—	—	—	—	—	—	—	—
— <i>biplicata</i> CALMAN	×	—	—	—	—	—	—	—	—	—
<i>Cumella carinata</i> H. J. HANSEN	×	×	×	—	—	—	—	—	—	—
— <i>pygmæa</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Cumellopsis helgæ</i> CALMAN	—	—	—	—	×	—	—	—	—	—
<i>Petalosarsia declivis</i> G. O. SARS	×	×	—	—	×	—	×	×	×	×
<i>Lamprops fasciata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>fuscata</i> G. O. SARS	×	×	—	—	—	—	×	×	—	—
— <i>quadriplicata</i> SMITH	×	—	—	—	—	—	—	—	—	—
<i>Hemilamprops cristata</i> (G. O. SARS)	—	(×)	—	—	×	(×)	×	—	—	—
— <i>assimilis</i> G. O. SARS	—	—	—	—	—	(×)	×	—	—	—
— <i>uniplicata</i> G. O. SARS	—	—	—	—	—	(×)	×	—	—	—
— <i>rosea</i> (NORMAN)	—	—	—	—	—	—	×	—	—	—
<i>Pseudocuma longicorne</i> BATE (= <i>P. cercaria</i> (VAN BENEDEN))	—	—	—	—	—	—	×	—	—	—
<i>Platysympus tricarinatus</i> H. J. HANSEN	—	—	—	—	(×)	—	× ¹⁾	× ¹⁾	—	—
<i>Diastylis rathkei</i> KR. f. <i>sarsi</i> (NORMAN)	×	×	—	—	—	—	×	×	—	×
— <i>sulcata</i> CALMAN	—	—	—	—	—	—	—	—	—	×
— <i>glabra</i> ZIMMER	×	×	—	—	—	—	—	—	×	×
— <i>oxyrhyncha</i> ZIMMER	×	×	×	×	×	—	×	×	—	×
— <i>goodsiri</i> (BELL)	×	×	×	×	×	—	×	×	—	×
— <i>edwardsi</i> (KRØYER)	×	×	×	—	×	—	—	×	—	—
— <i>scorpioides</i> LEPECHINI	×	×	×	×	—	—	—	×	—	×
— <i>lepechini</i> ZIMMER	—	—	×	—	—	—	×	×	—	×
— <i>spinulosa</i> HELLER	×	×	×	×	—	—	×	×	×	×
— <i>echinata</i> BATE	—	(×)	—	—	×	—	(×)	(×)	—	—
— <i>cornuta</i> (BOECK)	—	—	—	—	—	—	×	—	—	—
— <i>lucifera</i> (KRØYER)	×	×	—	—	—	—	×	—	—	—
— <i>tumida</i> LILLJEBORG	—	—	—	—	—	—	×	—	—	—
— <i>sculpta</i> G. O. SARS	×	—	—	—	—	—	—	—	—	—
— <i>polita</i> SMITH	×	—	—	—	—	—	—	—	—	—
— <i>quadrispinosa</i> G. O. SARS	×	—	—	—	—	—	—	—	—	—
<i>Diastylodes serrata</i> G. O. SARS	—	—	—	—	—	—	(×)	—	—	—
— <i>biplicata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Brachydiastylis resima</i> (KRØYER)	×	×	×	—	×	—	×	×	—	×
— <i>nimia</i> H. J. HANSEN	—	—	×	—	—	—	—	—	—	—

¹⁾ Zimmer 1926.

Table II (continued).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
<i>Leptostylis longimana</i> G. O. SARS	—	(X)	—	—	(X)	—	×	—	—	—
— <i>ampullacea</i> (LILLJEBORG)	—	—	—	—	×	×	×	—	—	—
— <i>villosa</i> G. O. SARS	—	(X)	—	—	×	—	×	—	—	—
— <i>macrura</i> G. O. SARS	—	—	—	—	—	—	×	(X)	—	—
TANAIDACEA										
<i>Apseudes spinosus</i> M. SARS	—	—	—	—	×	×	×	—	—	—
<i>Sphyrapus anomalus</i> (G. O. SARS)	—	(X)	×	—	×	—	×	—	—	×
— <i>serratus</i> G. O. SARS	—	—	×	—	—	—	—	—	—	—
<i>Tanais cavolinii</i> H. MILNE-EDWARDS	×	—	—	—	—	×	—	—	—	—
<i>Pseudotanaeis forcipatus</i> LILLJEBORG	—	×	×	—	×	—	×	—	—	×
— <i>macrocheles</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>lilljeborgi</i> G. O. SARS	—	×	×	×	×	—	×	—	—	×
— <i>affinis</i> H. J. HANSEN	—	(X)	×	(X)	(X)	(X)	—	—	—	—
— <i>oculatus</i> H. J. HANSEN	—	×	×	—	—	—	—	—	—	—
<i>Paratanaeis batei</i> G. O. SARS	—	—	—	—	×	×	—	—	—	—
<i>Leptognathia amdrupei</i> H. J. HANSEN	—	—	×	—	—	—	—	—	—	—
— <i>brevimana</i> (LILLJEBORG)	—	—	—	—	—	—	×	—	—	—
— <i>cæca</i> (HARGER)	×	—	—	—	—	—	—	—	—	—
— <i>filicornis</i> LILLJEBORG	—	—	—	—	—	—	×	—	—	—
— <i>flum</i> (STIMPSON)	×	—	—	—	—	—	—	—	—	—
— <i>glacialis</i> H. J. HANSEN	—	—	×	—	—	—	—	—	—	—
— <i>gracilis</i> (KRØYER)	—	×	—	—	×	—	×	×	—	—
— <i>hanseni</i> VANHÖFFEN	—	×	×	—	—	—	—	—	—	—
— <i>inermis</i> H. J. HANSEN	—	—	×	×	(X)	—	—	—	—	—
— <i>longiremis</i> (LILLJEBORG)	—	(X)	—	×	(X)	—	—	—	—	—
— <i>manca</i> G. O. SARS	—	(X)	—	—	×	—	—	—	—	—
— <i>rapax</i> HARGER	×	—	—	—	—	—	—	—	—	—
— <i>sarsi</i> H. J. HANSEN	—	×	×	—	×	×	×	?	—	—
— <i>savignyi</i> (KRØYER)	×	—	—	—	—	—	—	—	—	—
— <i>subæqualis</i> H. J. HANSEN	—	×	—	×	×	(X)	—	—	—	—
— <i>ventralis</i> H. J. HANSEN	—	(X)	—	×	(X)	—	—	—	—	—
<i>Cryptocope arctica</i> H. J. HANSEN	×	×	×	×	(X)	—	—	?	—	—
<i>Typhlotanaeis æquiremis</i> (LILLJEBORG)	—	—	—	—	—	—	×	—	—	—
— <i>cornutus</i> (G. O. SARS)	—	—	—	—	—	—	×	—	—	—
— <i>finmarchicus</i> G. O. SARS	—	×	×	—	×	—	×	—	?	×
— <i>tenuicornis</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>tenuimanus</i> LILLJEBORG	—	—	—	—	—	—	×	—	—	—
<i>Heterotanaeis limicola</i> HARGER	×	—	—	—	—	—	—	—	—	—
— <i>groenlandicus</i> H. J. HANSEN	—	×	—	—	—	—	—	—	—	—
<i>Anarthrura simplex</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
ISOPODA										
<i>Iæra albifrons</i> LEACH	×	×	—	—	×	×	×	—	—	×
<i>Janira maculosa</i> LEACH	×	×	×	—	×	×	×	—	—	×

Table II (continued).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
<i>Janira laciniata</i> (G. O. SARS)	—	—	—	—	—	—	×	—	—	×
— <i>spinosa</i> HARGER	×	×	—	—	—	—	—	—	—	—
— <i>vilhelminæ</i> K. STEPHENSEN	—	×	—	—	—	—	—	—	—	—
— <i>tricornis</i> KRØYER	×	×	×	×	—	—	—	×	—	×
— <i>alta</i> STIMPSON	×	—	—	—	—	—	—	—	—	—
— <i>spinossissima</i> K. STEPHENSEN	×	—	—	—	—	—	—	—	—	—
<i>Katianira biloba</i> GURJANOVA	—	—	—	—	—	—	—	×	—	—
<i>Munna boeckii</i> KRØYER	—	—	—	—	×	×	—	—	—	—
— <i>groenlandica</i> H. J. HANSEN	—	×	×	—	—	—	—	—	—	—
— <i>krøyeri</i> GOODSIR	—	—	—	—	×	—	—	—	—	×
— <i>fabricii</i> KRØYER (non G. O. SARS)	×	×	—	—	×	—	—	×	×	×
— <i>minuta</i> H. J. H. (= <i>M. fabricii</i> G. O. S.) ..	—	×	×	—	×	×	×	×	×	×
— <i>nanseni</i> STAPPERS	—	—	—	—	—	—	—	—	—	×
— <i>spitzbergensis</i> GURJANOVA	—	—	—	—	—	—	—	×	—	×
— <i>acanthifera</i> H. J. HANSEN	—	—	—	—	(X)	—	—	×	—	×
— <i>rømeri</i> GURJ. 1934 (= <i>M. coeca</i> GURJ. 1930)	—	—	—	—	—	—	—	×	—	×
— <i>pellucida</i> GURJANOVA	—	—	—	—	—	—	—	—	—	×
<i>Pleurogonium inerme</i> G. O. SARS	—	—	—	×	×	—	—	×	×	×
— <i>latimanum</i> H. J. HANSEN	—	×	—	—	—	—	—	—	—	—
— <i>intermedium</i> H. J. HANSEN	—	—	—	—	×	—	—	—	—	—
— <i>rubicundum</i> (G. O. SARS)	—	—	—	—	—	×	—	—	—	—
— <i>spinossissimum</i> (G. O. SARS)	—	—	—	—	×	×	×	—	×	×
— <i>pulchrum</i> H. J. HANSEN	—	—	—	—	×	—	—	—	—	—
<i>Macrostylis spinifera</i> G. O. SARS	—	(X)	—	—	×	—	×	—	—	—
— <i>longiremis</i> (MEINERT)	—	—	—	—	×	—	—	—	—	—
<i>Nannoniscus arcticus</i> H. J. HANSEN	—	—	×	(X)	—	—	—	—	—	—
— <i>oblongus</i> G. O. SARS	—	—	—	—	×	—	×	—	—	—
<i>Nannoniscella groenlandica</i> H. J. HANSEN	—	×	—	—	—	—	—	—	—	—
<i>Desmosoma tenuimanum</i> G. O. SARS (= <i>D. globiceps</i> (MEINERT))	?	—	×	—	×	×	—	—	—	—
— <i>lineare</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
— <i>armatum</i> G. O. SARS	—	—	×	—	—	—	—	—	—	—
<i>Echinopleura aculeata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Ilyarachna longicornis</i> (G. O. SARS) (= <i>I. hirticeps</i> G. O. SARS)	—	×	—	×	×	—	×	×	—	×
— <i>bergendahli</i> OHLIN	—	—	×	—	—	—	×	—	—	×
<i>Echinozone coronata</i> G. O. SARS	—	(X)	—	—	×	—	×	—	—	—
— <i>arctica</i> H. J. HANSEN	—	—	—	×	—	—	—	—	—	—
<i>Aspidarachna clypeata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	×
<i>Munnopsurus giganteus</i> (G. O. SARS)	—	—	×	(X)	—	—	—	×	×	×
<i>Eurycope cornuta</i> G. O. SARS	×	×	?	—	—	—	×	×	—	—
— <i>producta</i> G. O. SARS	—	×	×	—	—	—	×	—	—	—
— <i>phallangium</i> G. O. SARS	—	(X)	—	—	—	—	×	—	—	—
— <i>furcata</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—

Table II (continued).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
<i>Eurycope mutica</i> G. O. SARS	—	×	—	—	×	×	×	—	—	×
<i>Munnopsis typica</i> M. SARS	×	×	×	—	×	—	×	×	×	×
<i>Cirolana borealis</i> LILLJEBORG	—	—	—	—	—	×	—	—	—	—
— <i>microphthalma</i> HOEK	—	—	—	—	—	—	×	—	—	—
<i>Eurydice grimaldii</i> DOLFUSS	—	—	—	—	×	×	—	—	—	—
<i>Æga psora</i> (L.)	×	×	×	—	×	×	×	×	—	×
— <i>strømi</i> LÜTKEN	—	—	—	—	×	—	×	—	—	—
— <i>crenulata</i> LÜTKEN	—	×	—	—	×	×	×	—	—	—
— <i>arctica</i> LÜTKEN	—	×	×	—	×	—	×	—	—	—
— <i>ventrosa</i> M. SARS	—	×	(X)	—	×	×	—	—	—	×
— <i>monophthalma</i> JOHNSON	—	—	—	—	×	—	—	—	—	—
— <i>tridens</i> LÜTKEN	—	—	—	—	×	×	—	—	—	—
<i>Rocinela danmoniensis</i> LEACH	—	—	—	—	×	×	—	—	—	—
<i>Calathura brachiata</i> STIMPSON	×	×	×	×	×	—	×	×	×	×
<i>Limnoria lignorum</i> (RATHKE)	×	—	—	—	×	×	×	—	—	×
<i>Idotea baltica</i> (PALLAS)	×	—	—	—	×	×	×	—	—	×
— <i>granulosa</i> RATHKE	—	—	—	—	×	×	×	—	—	×
— <i>neglecta</i> G. O. SARS	—	—	—	—	×	—	×	—	—	—
— <i>emarginata</i> (J. C. FABRICIUS)	—	—	—	—	×	×	—	—	—	×
— <i>pelagica</i> LEACH	—	—	—	—	×	×	—	—	—	×
— <i>viridis</i> SLABBER	—	—	—	—	—	×	—	—	—	×
<i>Mesidotea sibirica</i> (BIRULA)	—	—	—	—	—	—	—	—	—	×
— <i>sabini</i> (KRØYER)	×	×	×	—	—	—	—	×	×	×
— <i>entomon</i> (L.) <i>entomon</i>	—	—	—	—	—	—	—	—	—	×
<i>Synidotea bicuspidata</i> (OWEN)	—	—	—	—	—	—	—	×	—	×
— <i>nodulosa</i> (KRØYER)	×	×	×	—	—	—	—	×	—	×
<i>Arcturus baffini</i> (SAB.) (incl. var. <i>tuberosa</i> G. O. S.)	×	×	×	—	×	×	—	—	—	—
<i>Pleuropriion murdochi</i> BENEDICT	—	—	—	—	?	?	—	—	—	—
— <i>frigidum</i> H. J. HANSEN	—	—	×	—	—	—	—	—	—	—
<i>Astacilla longicornis</i> (SOWERBY)	—	—	—	—	—	×	×	—	—	—
— <i>granulata</i> G. O. SARS	×	×	—	—	—	—	(X)	—	—	—
— <i>intermedia</i> (GOODSIR) (= <i>affinis</i> G. O. S.)	—	—	—	—	×	—	×	—	—	—
— <i>pusilla</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Ligia oceanica</i> (L.)	×	—	—	—	×	×	—	—	—	—
<i>Bopyroides hippolytes</i> (KRØYER)	×	×	×	—	×	×	×	—	—	×
<i>Pseudione hyndmanni</i> (BATE & WESTWOOD)	—	—	—	—	×	×	—	—	—	—
<i>Phryxus abdominalis</i> (KRØYER)	×	×	×	×	×	—	×	×	—	×
<i>Athelges tenuicaudis</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Dajus mysidis</i> KRØYER	×	×	×	×	—	—	×	×	—	×
<i>Aspidophryxus peltatus</i> G. O. SARS	—	—	—	—	×	—	×	—	—	—
<i>Clypeoniscus meinerti</i> GIARD & BONNIER	—	—	—	—	?	?	—	—	—	—
<i>Parapodascon stebbingi</i> GIARD & BONNIER	—	×	—	—	?	—	×	—	×	×
<i>Munmoniscus marsupialis</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—
<i>Cyproniscus cypridineæ</i> G. O. SARS	—	—	—	—	—	—	×	—	—	—

Table II (continued).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
<i>Gnathia elongata</i> KRØYER	×	×	×	×	×	—	×	×	—	×
— <i>stygia</i> (G. O. SARS)	—	—	×	—	—	—	—	—	—	—
— <i>robusta</i> (G. O. SARS)	—	×	×	(×)	(×)	—	—	—	—	×
— <i>abyssorum</i> G. O. SARS	—	—	×	—	×	—	×	—	—	—
— <i>oxyurea</i> (LILLJEBORG) (= <i>G. maxillaris</i> G. O. SARS, non MONTAGU)	—	—	—	—	—	—	×	—	—	—
— <i>arctica</i> GURJANOVA	—	—	—	—	—	—	—	—	—	×

To these Isopoda are to be added the following 14 species, which (according to RICHARDSON 1905) are found in NE. American waters, but not in the other areas in the table. They are: *Cirolana concharum* (STIMPSON), *C. polita* (STIMPSON), *Rocinela americana* SCHIØDTE & MEINERT, *Cymothoa excisa* PERTY, *Livoneca ovalis* (SAY), *Sphæroma quadridentatum* SAY, *Ptilanthura tenuis* HARGER, *Idotea phosphorea* HARGER, *Synidotea marmorata* (PACKARD), *Chiridotea cæca* (SAY), *C. tuftsii* (STIMPSON), *Edotia acuta* RICHARDSON, *E. triloba* (SAY), and *E. montosa* (STIMPSON).

	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea + White Sea
EUPHAUSIACEA										
<i>Meganyctiphanes norvegica</i> (M. SARS)	×	—	×	×	×	×	×	—	—	×
<i>Thysanoëssa inermis</i> (KR.) (= <i>neglecta</i> (KR.)) ..	×	×	×	×	×	(×)	×	×	×	—
— <i>longicaudata</i> (KRØYER)	—	×	×	—	×	(×)	×	×	×	—
— <i>raschi</i> (M. SARS)	—	×	×	—	×	—	—	—	—	—

Table II (continued).

Numbers of species	All 10 areas	NE. America	W. Greenland	E. Greenland	Jan Mayen	Iceland	The Faroes	N. Norway	Spitsbergen	Franz Joseph Land	Barents Sea White Sea
Leptostraca	1	1	1	1	—	1	1	1	1	—	—
Mysidacea	32	8	13 (+1)	12	3	8 (+1)	2 (+2) +1?	22 (+1)	10	1	6 +1?
Cumacea	65	26 (+1) +1?	22 (+8)	17	5 (+1)	20 (+2)	4 (+3)	39 (+2) +1?	16 (+2)	3	19
Tanaidacea	35	7	10 (+5)	13	6 (+1)	10 (+5)	4 (+2)	15	1 +2?	1?	4
Isopoda	106 +2?	38 +1?	29 (+3)	26 (+1)	8 (+3)	42 (+2) +3?	26 +2?	43 (+1) +1?	20	10	40
Euphausiacea	4	3	3	4	3	4	1 (+2)	3	2	2	1
Total number.....	243 +2?	103 (+1) +2?	75 (+17)	73 (+1)	25 (+5)	85 (+10) +3?	38 (+9) +3?	123 (+4) +2?	50 (+2) +2?	16 +1?	70 +1?

Table III. Comparison of all species from the southernmost West Greenland (S. of c. 61°N) and southern East Greenland (S. of c. 67°N).

	Southernmost occurrence	
	W. Greenland	E. Greenland
1. <i>Nebalia bipes</i>	c. 60° N ¹⁾	c. 60° N
12. <i>Mysis oculata</i>	ditto ²⁾	ditto
13. — <i>mixta</i>	ditto	ditto
20. <i>Eudorella emarginata</i>	ditto	c. 70° N
22. <i>Cumella carinata</i>	c. 70° N	c. 60° N
<i>Diastylis rathkei</i> f. <i>sarsi</i>	c. 60° N ³⁾	not E. Greenland
23. — <i>goodsiri</i>	ditto	c. 60° N
24. — <i>oxyrhyncha</i>	c. 68° N (60° N?)	c. 61° N
25. — <i>edwardsi</i>	c. 69° N ⁴⁾	c. 60° N
26. — <i>scorpioides</i>	c. 60° N	ditto
34. <i>Pseudotanais lilljeborgi</i>	c. 70° N ⁴⁾	c. 66° N
35. — <i>oculatus</i>	c. 65° N ⁵⁾	ditto
38. <i>Leptognathia sarsi</i>	c. 69° N ⁶⁾	ditto
39. — <i>hanseni</i>	c. 64° N ⁷⁾	ditto
44. <i>Janira maculosa</i>	c. 60° N	c. 61° N
45. — <i>tricornis</i>	ditto	c. 60° N
46. <i>Munna groenlandica</i>	c. 64° N	c. 66° N
47. — <i>minuta</i>	c. 60° N	ditto
52. <i>Munnopsurus giganteus</i> ..	{ 66° N (Arctic America) or 73° N (W. Greenl.) ⁸⁾ }	{ c. 67° N
53. <i>Eurycope cornuta</i> ?	c. 70½° N	ditto
54. — <i>producta</i>	c. 60° N	c. 69½° N
55. <i>Munnopsis typica</i>	c. 65° N (c. 550 m)	c. 60° N
56. <i>Æga psora</i>	c. 60° N	c. 66° N
— <i>crenulata</i>	ditto	not E. Greenland
57. — <i>arctica</i>	ditto	c. 66° N
58. — <i>ventrosa</i>	ditto	only c. 60° N
59. <i>Calathura brachiata</i>	ditto	c. 68° N
60. <i>Mesidotea sabini</i>	ditto	not N. of c. 61½° N
61. <i>Syridotea nodulosa</i>	{ "Southern Greenland" (type-loc. !; exact loc. not known) }	{ c. 62° N
62. <i>Arcturus baffini</i>	c. 65° N	c. 61° N
64. <i>Bopyroides hippolytes</i>	ditto	c. 66° N
65. <i>Phryxus abdominalis</i>	ditto	ditto
66. <i>Dajus mysidis</i>	ditto ⁹⁾	c. 60° N

¹⁾ K. STEPHENSEN 1916, p. 291. ²⁾ *ibid.*, p. 274. ³⁾ ZIMMER 1926, p. 51. ⁴⁾ H. J. HANSEN 1913, p. 28.
⁵⁾ *ibid.*, p. 30. ⁶⁾ *ibid.*, p. 69. ⁷⁾ *ibid.*, p. 71. ⁸⁾ K. STEPHENSEN 1936, p. 9. ⁹⁾ *ibid.*, p. 6.

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