

CRUSTACEA AND PYCNOGONIDA COLLECTED DURING THE PRINCETON  
EXPEDITION TO NORTH GREENLAND.

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A preliminary but not quite complete list of the species collected during the Princeton Expedition to North Greenland (Peary Auxiliary Expedition, 1899) has been published in *The Princeton Bulletin*, Vol. 11, No. 3, February, 1900, pp. 38-40; in the same periodical, Vol. 11, No. 2, December, 1899, pp. 25-26, a list of stations has been given. It seems hardly necessary to repeat this list here, since under each species not only the number of the station, but also the location of the latter and the depth is given.

Most of the localities are situated on the coast of North Greenland, between Cape York and Foulke Fjords (ca. 76-79° N. L.); a few are situated on the opposite side of Smith Sound (Ellesmere Land, Payer Harbor); the rest is farther south, on the coast of West Greenland (Upernavik, Waigat Channel, and Godhavn, Disco Island), and the coast of Labrador (Domino Run and Battle Harbor).

Only a few expeditions have previously collected material in these parts (North water of Baffin Bay, Smith Sound and Grinnell Land). The following reports on Crustacea have been published:

*Hayes' Expedition, 1860-61* (see J. J. Hayes, *The Open Polar Sea*, 1867), published by W. Stimpson: "Synopsis of the Marine Invertebrates collected by the Late Arctic Expedition under Dr. J. J. Hayes."<sup>1</sup>

*Nares' Expedition, 1875-76*, published by E. J. Miers, in G. S. Nares, *Narrative of a Voyage to the Polar Sea*, Vol. 2, 1878, Appendix 7.

*Expedition of the Academy of Natural Sciences of Philadelphia, connected with the Peary Expedition of 1891*, published by J. E.

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<sup>1</sup> *Proc. Acad. Nat. Sci. Phila.*, 1863.

Ives: "Echinoderms and Crustaceans collected by the West Greenland Expedition of 1891."<sup>2</sup>

*Peary Auxiliary Expedition of 1894*, published by A. Ohlin: *Bidrag till Kaennedomens om Malakostrakfaunan i Baffin Bay och Smith Sound*, Lund, 1895.

A number of species has been mentioned by Hansen from near Cape York in H. J. Hansen, "Malacostraca marina Groenlandiæ occidentalis."<sup>3</sup>

The collections described here have been made by Prof. William Libbey and the writer, by means of small hand dredges and a larger beam-trawl, surface and dip nets. Since the chief value of the material collected lies on the zoögeographical side, I shall take particular pains to give an account of the previously known facts of distribution in every species.

## CRUSTACEA.

### 1. *Branchinecta paludosa* (Mueller).

Packard, 12th Ann. Rep. U. S. Geol. Surv. Terr. for 1878 part 1, 1883, p. 336, Pl. 9, 10, figs. 1-5.

Station 13. Payer Harbor. Ellesmere Land. Fresh-water ponds (several hundred).

Station 46. Northumberland Island. Fresh-water ponds (many hundred).

*Distribution*.—Finmark, Lapland, North Siberia (Taimyr), Point Barrow (Alaska), Cape Krusenstern (Arctic America), Labrador, Grinnell Land, North and West Greenland.

Grinnell Land: Discovery Bay (Miers); North Greenland: Polaris Bay (Packard).

### 2. *Lepidurus glacialis* (Kroeyer).

Packard, *l. c.*, p. 316, Pl. 16, fig. 1.

Station 46. Northumberland Island. Fresh-water ponds (46).

*Distribution*.—Lapland, Novaja Semlja, Spitzbergen, South and West Greenland, Cape Krusenstern, Point Barrow.

There are *Cladocera* (a fresh water *Daphnia*, possibly *rectispina* Kr., from Stations 13 and 46) and a number of marine *Ostracoda* and *Copepoda* in the collection which have not yet been identified.

<sup>2</sup> *Proc. Acad. Nat. Sci. Phila.*, 1891.

<sup>3</sup> *Vidensk. Meddel. fra den naturh. Foren. i Kjoebenhavn*, 1887.

3. *Balanus poreatus* Costa.

Darwin, Monogr. Cirrip. Balan., 1854, p. 256, Pl. 6, fig. 4; Weltner, Arch. f. Naturg., 1897, p. 267; Weltner, Die Cirripeden der Arktis (Fauna Arctica, Vol. 1), 1900, p. 292.

Station 26. Cape Alexander, 27 fathoms (1).

Station 45. Barden Bay, 10–40 fathoms (8).

Station 51. Robertson Bay, 35–40 fathoms (6).

*Distribution.*—England, Denmark, Norway, Iceland, Maine, Massachusetts, Novaja Semlja, Spitzbergen, Bear Island, East and West Greenland, Grinnell Land, Lancaster Sound, Japan, New Zealand and Campbell Island. Depth: to ca. 200 fathoms.

Grinnell Land: Cape Napoleon, Franklin Pierce Bay, Richardson Bay and Discovery Bay.<sup>4</sup>

4. *Balanus orenatus* Bruguière.

Darwin, *l. c.*, p. 261, Pl. 6, fig. 6; Weltner, *l. c.*, 1897, p. 268; Weltner, *l. c.*, 1900, p. 298.

Station 57. Sarkak (Waigat), 9 fathoms (1).

*Distribution.*—Mediterranean, West Indies, Cape of Good Hope, England, Scandinavia, New England coast, Spitzbergen, Kara Sea, West Greenland, Labrador, Baffin Bay, Lancaster Sound, Grinnell Land, Bering Straits, North Japan. In deeper water.

Grinnell Land: Discovery Bay (Miers, *l. c.*, 1881).

5. *Balanus balanoides* (Linne).

Darwin, *l. c.*, p. 267, Pl. 7, fig. 2; Weltner, *l. c.*, 1897, p. 269; Weltner, *l. c.*, 1900, p. 302.

Station 3. Godhavn, Disco Island. Between tides (4, and several broken).

I have seen also on the rocks of the shores of Foulke Fjord remains of a *Balanus* (bases only) which may belong to this species.

*Distribution.*—Azores, Portugal, England, France, Norway, Atlantic coast of the United States, Novaja Semlja, White Sea, Bear Island, Iceland, West and North Greenland, Labrador. Within tidal limits.

North Greenland: Port Foulke (Stimpson).

6. *Nebalia bipes* (O. Fabricius).

Kroeyer, Naturhist. Tidsskr. (2), Vol. 2, 1849, p. 436; Grube, in Arch. f. Naturg., 1853, p. 162; Buchholz, Zweite deutsche Nordpolfahrt, Vol. 2, 1874, p. 388.

Station 9. Saunders Island, 5–10 fathoms (1).

<sup>4</sup> Miers, *Journ. Linn. Soc. London*, 15, 1881, p. 73.

*Distribution.*—England, Labrador, East and West Greenland, North Greenland. Depth : to 150 fathoms.

North Greenland: Cape Dudley Digges (Ohlin).

7. *Hyperia galba* (Montague).

G. O. Sars, An Account of the Crustacea of Norway, Vol. 1, 1895, p. 7, Pl. 2, 3, fig. 1.

Station 29. Olriks Bay, 7–25 fathoms (1).

*Distribution.*—France, England, Sweden, Norway, Kara Sea, Murman coast, Spitzbergen, West Greenland, Point Barrow. Pelagic.

8. *Ethemisto libellula* (Mandt).

Sars, *l. c.*, 1895, p. 13, Pl. 6. fig. 1.

Station 6. Melville Bay, surface (4).

Station 29. Olriks Bay, 7–25 fathoms (1).

Station 41. Whale Sound, surface (2).

Station 42. Barden Bay, surface (7).

*Distribution.*—Finmark, Novaja Semlja, Spitzbergen, Jan Mayen, East, West and North Greenland, Ellesmere Land, Point Barrow. Pelagic.

North Greenland: Melville Bay (Ives), Inglefield Gulf (Ohlin);  
Ellesmere Land: Cape Faraday (Stimpson).

9. *Socarnes bidenticulatus* (Bate).

*Lysianassa* *bid.* Bate, Ann. Mag. Nat. Hist., Ser. 3, Vol. 1, 1858, p. 362; *Lys. nugax* Bate, Catal. Amphip. Brit. Mus., 1862, p. 65, Pl. 10, fig. 3; *Anonyx* *bid.* Miers, Ann. Mag. Nat. Hist., Ser. 4, Vol. 19, 1877, p. 138; *Socarnes ovalis* Hoek, Nederl. Arch. Zool. Suppl., 1881, p. 42, Pl. 3, fig. 29; *Soc. bid.* Sars, Den Norsk. Nordhavs Exp. Crust., 1, 1885, p. 139, Pl. 12, fig. 1; Hansen, Malac. mar. Groenl. occ., 1887, p. 62.

Station 11. Northumberland Island, 10–15 fathoms (2).

Station 45. Barden Bay, 10–40 fathoms (2).

Station 52. Robertson Bay, 5–15 fathoms (4).

*Distribution.*—Spitzbergen, Jan Mayen, West Greenland, North Greenland, Ellesmere Land; 4–160 fathoms.

North Greenland: Cape Dudley Digges; Ellesmere Land:  
Cape Faraday (Ohlin).

10. *Anonyx nugax* (Phipps).

*Cancer nug.* Phipps, Voy. North Pole., Append., 1774, p. 192, Pl. 12, fig. 2; *Lysianassa lagena* and *appendiculata* Kroeyer, Dansk. Vid. Selsk. Afh., 7, 1838, pp. 237 and 240, Pl. 1, figs 1, 2; *Anonyx ampulla* Kroeyer, Naturh. Tidssk. (2), Vol. 1, 1845, p. 578; *An. lagena* Bate, Catal. Amph. Brit. Mus., 1862, p. 77, Pl. 12, fig. 7; *An. nugax* Miers, Ann. Mag. Nat. Hist., Ser. 4, Vol. 19, 1877, p. 135; Ives, Proc. Acad. Philad. 1891, p. 480; Sars, Crust. Norway, 1895, p. 88, Pl. 31.

Station 45. Barden Bay, 10–40 fathoms (5).

Station 47. Northumberland Island, surface (1).

*Distribution.*—Shetland Islands, Norway, northeast coast of North America, Labrador, Northumberland Sound, Ellesmere Land, Grinnell Land, North, West and East Greenland, Spitzbergen, Franz Joseph Land, Kara Sea, North Siberia (East Taimyr and Tchukchee coast), Bering Straits, Sea of Ochotsk; 2–608 fathoms.

Ellesmere Land: Gale Point (ten miles below Cape Isabella) (Stimpson); Grinnell Land: Floeberg Beach and 83° 19' N. L., Discovery Bay (Miers); North Greenland: Murchison Sound (Ohlin), McCormick Bay (Ives).

11. *Pseudalibrotus littoralis* (Kroeyer).

*Alibrotus litt.* Sars, Crust. Norway, Vol. 1, 1895, p. 102, Pl. 35, fig. 2.

Station 14. Payer Harbor, Ellesmere Land, mouth of small fresh-water stream (1).

Station 42. Barden Bay, surface (2).

Station 44. Barden Bay, sandy beach (17).

Station 47. Northumberland Island, surface (several hundred).

Station 53. Littleton Island, surface (2).

The generic name *Pseudalibrotus* has been proposed by Stebbing,<sup>5</sup>

*Distribution.*—Finmark, Spitzbergen, Jan Mayen, East, West and North Greenland, Baffin Bay, Point Barrow. Surface to 100 fathoms.

North Greenland: Murchison Sound (Ohlin).

12. *Onesimus edwardsi* (Kroeyer).

Sars, *l. c.*, 1895, p. 105, Pl. 36, fig. 1.

Station 39. Granville Bay, 30–40 fathoms (3).

Station 40. Granville Bay, 20–30 fathoms (2).

Station 49. Olriks Bay, 15–20 fathoms (4).

*Distribution.*—Kattegat, Norway, Labrador, West Greenland,

<sup>5</sup> *Ann. Mag. Nat. Hist.*, Ser. 7, Vol. 5, 1900, p. 15.

Grinnell Land, Iceland, Jan Mayen, Spitzbergen, Murman coast, Franz Joseph Land, Kara Sea, eastern part of Siberian Polar Sea; 2-60 fathoms.

Grinnell Land: Discovery Bay and Floeberg Beach (Miers).

13. *Byblis gaimardi* (Kroeyer).

Sars, *l. c.*, 1895, p. 183, Pl. 64.

Station 43. Barden Bay, 20-25 fathoms (11).

*Distribution.*—Kattegat, Norway, Finmark, Labrador, West Greenland (northward to Disco Island), Iceland, Spitzbergen, Murman coast, Kara Sea; 2-280 fathoms.

14. *Stegocephalus inflatus* Kroeyer.

Sars, *l. c.*, 1895, p. 198, Pl. 69.

Station 12. Foulke Fjord, 35 fathoms (2).

Station 29. Olriks Bay, 7-25 fathoms (2).

Station 39. Granville Bay, 30-40 fathoms (11).

Station 40. Granville Bay, 20-30 fathoms (1).

Station 43. Barden Bay, 20-25 fathoms (19).

Station 49. Olriks Bay, 15-20 fathoms (65).

Station 50. Karnah (Inglefield Gulf), 30-40 fathoms (1).

*Distribution.*—Norway, Shetland Islands, Nova Scotia, Northumberland Sound, Berry Island, North, West and East Greenland, Spitzbergen, Murman coast, White Sea, Franz Joseph Land, Kara Sea, eastern part of Siberian Polar Sea; 7-150 fathoms.

North Greenland: Cape Dudley Digges and Murchison Sound (Ohlin).

15. *Parædicærus lynceus* (M. Sars).

G. O. Sars, *l. c.*, 1895, p. 292, Pl. 103, fig. 2, Pl. 104, fig. 1.

Station 37. Saunders Island, 5 fathoms (1).

Station 52. Robertson Bay, 5-15 fathoms (1).

*Distribution.*—Nova Scotia, Labrador, Ellesmere Land, North, West and East Greenland, Iceland, Spitzbergen, Barents Sea, Finmark, Murman coast, Kara Sea; 2-160 fathoms.

Ellesmere Land: Cape Faraday (Ohlin); North Greenland: Murchison Sound and Cape Dudley Digges (Ohlin), Cape York (Hansen).

16. *Monoculodes borealis* Boeck.

Sars, *l. c.*, 1895, p. 298, Pl. 106, fig. 2.

Station 49. Olriks Bay, 15-20 fathoms (1).

*Distribution.*—England, Norway, Finmark, Kara Sea, Spitz-

bergen, East Greenland, West Greenland (northward to the Waigat); 3-100 fathoms.

17. *Pleustes panoplus* (Kroeyer).

Sars, *l. c.*, 1895, p. 344, Pl. 121.

Station 29. Olriks Bay, 7-25 fathoms (3).

*Distribution.*—Norway, Nova Scotia, Labrador, North, West and East Greenland, Iceland, Jan Mayen, Spitzbergen, Novaja Semlja, Murman coast, Kara Sea, Point Barrow; 4-100 fathoms.

North Greenland: Cape Dudley Digges (Ohlin), Cape York (Hansen).

18. *Paramphithoe bicuspis* (Kroeyer).

Sars, *l. c.*, 1895, p. 349, Pl. 123, fig. 1.

Station 4. Upernavik, 8-10 fathoms (3).

Station 29. Olriks Bay, 7-25 fathoms (4).

*Distribution.*—England, France, Kattegat, Norway, Finnmark, Spitzbergen, Bear Island, Iceland, Labrador, West and North Greenland; 3-60 fathoms.

North Greenland: Cape Dudley Digges (Ohlin).

19. *Acanthozone ouspidata* (Lepechin).

Sars, *l. c.*, 1895, p. 370, Pl. 130.

Station 45. Barden Bay, 10-40 fathoms (21).

It has been suggested (Miers, Stebbing) that the species figured by Buchholz<sup>6</sup> is different from this species. But, as Hoek points out,<sup>7</sup> and Koelbel confirms,<sup>8</sup> the differences of Buchholz's figure from this species are due to inaccuracies in the drawing. That the drawing in fig. 1 is incorrect, especially as regards the last three pairs of pereopods, is shown conclusively by the fact that Buchholz gives, in fig. 1*h*, a correct reproduction of the last pereopod.

*Distribution.*—Norway, Finnmark, Labrador, Polar Islands of North America, Grinnell Land, North, West and East Greenland, Jan Mayen, Spitzbergen, Murman coast, White Sea, Kara Sea, Siberian Polar Sea (East Taimyr peninsula); 7-100 fathoms.

Grinnell Land: Franklin Pierce Bay, Discovery Day (Miers); North Greenland: Cape Dudley Digges (Ohlin).

<sup>6</sup> *Zweite deutsche Nordpolfahrt*, Vol. 2, 1874, p. 362, Pl. 11.

<sup>7</sup> *Niederl. Arch. Zool. Suppl.*, 1881, p. 48.

<sup>8</sup> *Österreich. Polarstat. Jan Mayen*, Vol. 3, 1886, p. 45.

20. *Rachotropis aculeata* (Lepechin).

Sars, *l. c.*, 1895, p. 434, Pl. 149.

Station 11. Northumberland Island, 10–15 fathoms (1).

Station 12. Foulke Fjord, 35 fathoms (2).

Station 27. Cape Chalon, 35 fathoms (1).

Station 39. Granville Bay, 30–40 fathoms (8).

Station 40. Granville Bay, 20–30 fathoms (13).

Station 45. Barden Bay, 10–40 fathoms (2).

Station 49. Olriks Bay, 15–20 fathoms (11).

Station 50. Karnah, 30–40 fathoms (4).

Station 51. Robertson Bay, 35–40 fathoms (1).

*Distribution.*—Nova Scotia, Labrador, Polar Islands of North America, Baffin Bay, Grinnell Land, North Greenland, West and East Greenland, Jan Mayen, Spitzbergen, Finmark, Novaja Semlja, White Sea, Franz Joseph Land, Point Barrow; 3–220 fathoms.

Grinnell Land: Dobbin Bay, Cape Frazer, Franklin Pierce Bay, Cape Napoleon, Discovery Bay, Floeberg Beach (Miers); North Greenland: Cape Dudley Digges and Murchison Sound (Ohlin).

21. *Halirages fulvocinctus* (M. Sars).

G. O. Sars, *l. c.*, 1895, p. 436, Pl. 154; *Pherusa tricuspis* Stimpson, Proc. Acad. Phila., 1863, p. 139.

Station 4. Upernavik, 8–10 fathoms (8).

Station 52. Robertson Bay, 5–15 fathoms (5).

Station 54. Foulke Fjord, 5 fathoms (1).

*Distribution.*—Norway, Finmark, Nova Scotia, Labrador, Grinnell Land, North, West and East Greenland, Spitzbergen, Novaja Semlja, Murman coast, Kara Sea, Franz Joseph Land; 2–110 fathoms.

Grinnell Land: Discovery Bay (Miers); North Greenland: Littleton Island (Stimpson).

22. *Pontogeneia inermis* (Kroeyer).

Sars, *l. c.*, 1895, p. 451, Pl. 159.

Station 4. Upernavik, 8–10 fathoms (7).

Station 36. Saunders Island, 6 fathoms (1).

Station 37. Saunders Island, 5 fathoms (2).

Station 54. Foulke Fjord, 5 fathoms (4).

*Distribution.*—Norway, Labrador, East and West Greenland (northward to Upernavik); 0–120 fathoms. ? Siberian Polar Sea (see Sars).



23. *Amphithopsis megalops* (Buchholz).

*Paramphitoë megalops* Buchholz, *Zweite deutsch. Nordpolf.*, Vol. 2, 1874, p. 369, Pl. 12; Hansen, *Malac. mar. Groenl. occ.*, 1887, p. 125; *Amphithopsis megalops* Hansen, *Meddelelser om Groenland*, 19, 1895, p. 129.

Station 29. Olriks Bay, 7–25 fathoms (11).

Station 49. Olriks Bay, 15–20 fathoms (3).

Station 54. Foulke Fjord, 5 fathoms (2).

*Distribution.*—So far only known from East and West Greenland, 2–60 fathoms.

East Greenland: Sabine Island, Germania Harbor, Shannon (Buchholz), Hecla Havn, Tasiusak (Hansen); West Greenland: from Godthaab to Upernavik (Hansen).

24. *Atylus carinatus* (Fabricius).

Sars, *l. c.*, 1895, p. 471, Pl. 166, fig. 1.

Station 9. Saunders Island, 5–10 fathoms (1).

Station 11. Northumberland Island, 10–15 fathoms (58).

Station 12. Foulke Fjord, 35 fathoms (1).

Station 24. Northumberland Island, 10 fathoms (1).

Station 39. Granville Bay, 30–40 fathoms (1).

Station 52. Robertson Bay, 5–15 fathoms (3).

*Distribution.*—Grinnell Land, Ellesmere Land, North, West and East Greenland, Jan Mayen, Spitzbergen, Finmark, Novaja Semlja, Murman coast, Franz Joseph Land, Kara Sea, Siberian Polar Sea (East Taimyr peninsula and Tchukechee coast); 3–250 fathoms.

Grinnell Land: Discovery Bay (Miers); Ellesmere Land: Cape Faraday (Ohlin); North Greenland: McCormick Bay (Ives), Murchison Sound (Ohlin), Cape York (Hansen).

25. *Amathilla pinguis* (Kroeyer).

*Gammarus pinguis* Kroeyer, *Dansk. Vid. Selsk. Afh.*, Vol. 7, 1838, p. 252, Pl. 1, fig. 5; *Amathilla pinguis* Buchholz, *l. c.*, 1874, p. 353, Pl. 9, fig. 2; Boeck, *Scand. and Arct. Amphip.*, Vol. 2, 1876, p. 411.

Station 4. Upernavik, 8–10 fathoms (1).

Station 9. Saunders Island, 5–10 fathoms (2).

Station 17. Payer Harbor, Ellesmere Land, 16 fathoms (4).

Station 49. Olriks Bay, 15–20 fathoms (1).

Sars (1895, p. 490) does not think that this is a true *Amathilla*.

*Distribution.*—Ellesmere Land, Grinnell Land, North, West and East Greenland, Spitzbergen, Kara Sea; 2–90 fathoms.

Ellesmere Land: Cape Faraday (Ohlin); Grinnell Land: 82° 24' N. L. (Miers); North Greenland: Cape York (Hansen).

26. *Gammaracanthus loricatus* (Sabine).

*Gammarus loricatus* Sabine, in Parry's Voy. Append., 1821, p. 231, Pl. 1, fig. 7; *Gammaracanthus loricatus* Bate, Catal. Amphip. Brit. Mus., 1862, p. 202, Pl. 36, fig. 2.

Station 4. Payer Harbor, mouth of fresh-water stream (1).

Our individual has been taken at the mouth of a small stream in perfectly fresh water. This fact is the more interesting, since we have in fresh-water lakes of Sweden, Norway, Finland and Russia a slightly different form (var. *lacustris* Sars = *relictus* Sars, 1895, p. 494, Pl. 174). Our specimen represents the typical form.

*Distribution.*—Kara Sea, Spitzbergen, Greenland (rare), Grinnell Land, Ellesmere Land, Polar islands of North America, Point Barrow; 0–10 fathoms.

Grinnell Land: Floeberg Beach (Miers); Ellesmere Land: Cape Faraday (Ohlin).

27. *Gammarus locusta* (Linne).

Sars, *l. c.*, 1895, p. 499, Pl. 1, 176, fig. 1.

Station 3. Godhavn, Disco Island, beach (34).

Station 14. Payer Harbor, fresh water (24).

Station 44. Barden Bay, beach (3).

Station 55. Foulke Fjord, beach (22).

*Distribution.*—Norway and southward to the Mediterranean Sea, Labrador, Ellesmere Land, Grinnell Land, North, West and East Greenland, Iceland, Spitzbergen, Barents Sea, Franz Joseph Land, Kara Sea, Siberian Polar Sea (eastern part), Point Barrow; 0–5 fathoms, rarely in deeper water; sometimes pelagic.

Ellesmere Land: Cape Faraday (Ohlin); Grinnell Land: Floeberg Beach (Miers); North Greenland: Port Foulke (Stimpson), McCormick Bay (Ives).

28. *Melita dentata* (Kroeyer).

Sars, *l. c.*, 1895, p. 513, Pl. 181, fig. 1.

Station 52. Robertson Bay, 5–15 fathoms (2).

*Distribution.*—England, Kattegat, Norway, New England coast, Labrador, Polar islands of North America, West Greenland (northward to Disco Island), Iceland, Spitzbergen, Novaja Semlja, White Sea, Puget Sound (north Pacific); 2–160 fathoms.

29. *Ischyrocerus anguipes* (Kroeyer).

Sars, *l. c.*, 1895, p. 588, Pl. 209.

Station 29. Olriks Bay, 7–25 fathoms (1).

Station 37. Saunders Island, 5 fathoms (1).

*Distribution.*—Kattegat, Norway, Finnmark, Grand Manan, West Greenland (northward to Upernavik (Hansen) and Duck Islands in Melville Bay (Ohlin)), East Greenland, Iceland, Spitzbergen, Murman coast, White Sea, Kara Sea; 2–110 fathoms.

30. *Unciola leucopis* (Kroeyer).

Sars, *l. c.*, 1895, p. 620, Pl. 222 (= *U. irrorata* Hansen, *l. c.*, 1887, p. 164).

Station 49. Olriks Bay, 15–20 fathoms (1).

Specimens from Labrador have been recorded by Packard as *U. irrorata* Say, which is, according to Sars, a different species, but perhaps the Labrador form belongs to *U. leucopis*.

*Distribution.*—Norway, Finnmark, ? Labrador, West Greenland (northward to Disco Island), East Greenland, Spitzbergen, Barents Sea, Kara Sea; 30–120 fathoms.

31. *Paradulichia typica* Boeck.

Sars, *l. c.*, 1895, p. 642, Pl. 232, fig. 2.

Station 49. Olriks Bay, 15–20 fathoms (1 ♂, 2 ♀).

This species has been recorded hitherto only from Norway, where it seems to be rare. The male sex has not been observed before; our male differs not materially from the female, especially the structure of the posterior gnathopods is essentially the same as in the female, both in shape and size.

Sars describes the eyes as dark red; in our specimens they are white, but this is possibly due to the action of the alcohol. Length of our specimens (without antennæ): ♂ 7 mm., ♀ 6 and 7 mm. (Sars gives 5 mm. for the adult female).

*Distribution.*—Norway: Hardangerfjord, 30 fathoms (Boeck and Sars).

32. *Ægina spinosissima* (Stimpson).

*Ægina spinosissima* Stimpson, *Synops. mar. Invert. Grand Manan*, 1854, p. 44; Miers, *Ann. Mag. Nat. Hist.*, ser. 4, Vol. 20, 1877; *Caprella spinifera* Bell, *Last Arctic Voy. Belcher*, Vol. 2, 1855, p. 407, Pl. 35, fig. 2; *Caprella spinosissima* Bate, *Cat. Amph. Brit. Mus.*, 1862, p. 361, Pl. 57, fig. 3; *Ægina spinifera* Sars, *Den Norske Nordh. Exp. Crust.*, 1, 1885, p. 228, Pl. 18, fig. 5; Ives, *Proc. Acad. Phila.*, 1891, p. 481.

Station 21. Murchison Sound, 25 fathoms (1).

Station 26. Cape Alexander, 27 fathoms (1).

Station 39. Granville Bay, 30-40 fathoms (1).

Station 40. Granville Bay, 20-30 fathoms (3).

Station 43. Barden Bay, 20-25 fathoms (1).

Station 49. Olriks Bay, 15-20 fathoms (7).

The genus *Æginella* is the same as *Ægina*.<sup>9</sup> *Ægina echinata* Boeck seems to be different from this species.

*Distribution*.—Grand Manan, Polar islands of North America, Grinnell Land, North, West and East Greenland, Iceland, Jan Mayen, Spitzbergen, Kara Sea, Siberian Polar Sea (West and East Taimyr peninsula); 3-300 fathoms.

Ginnell Land: Cape Napoleon, Dobbin Bay (Miers); North Greenland: Northumberland Island, Cape Dudley Digges (Ohlin), McCormick Bay (Ives), Cape York (Hansen).

33. *Caprella linearis* (Linné).

Mayer, Flor. and Faun. Golf von Neapol., 6 Monogr., 1882, p. 60, figs. 17-19; Sars, *l. c.*, 1895, p. 657, Pl. 236.

Station 60. Battle Harbor, Labrador, 12-14 fathoms (18).

Among our material are four ovigerous females, in which the 5-7 segments have dorsally only slight indications of tubercles; some of the other individuals are quite smooth. No adult males are present.

This species differs from *C. septentrionalis*, (1) in the lack of tubercles on the anterior part of the body; (2) in the arm of the second pair of legs, which is longer; (3) in the reddish color (they were found in red algæ).

Although there are no males, I believe, we have to deal here with *C. linearis*. *C. septentrionalis* grows much larger, and my females with eggs are small, much smaller than ovigerous females of *C. septentrionalis*. Among the young *C. septentrionalis* from Godhavn (about as large as my individuals of *C. linearis*) are no adult females, and they have all a brownish color (found among brown algæ).

*Distribution*.—Scandinavia, England, France, Iceland, Greenland, Grand Manan (Stimpson's *C. lobata*), St. Johns, Newfoundland (Ohlin).

34. *Caprella septentrionalis* Kroeyer.

Sars, *l. c.*, 1895, p. 659, Pl. 237, fig. 1.

Station 3. Godhavn, Disco Island, 0-1 fathom (63 jun.).

Station 4. Upernavik, 8-10 fathoms (6).

<sup>9</sup> Stebbing, *Challenger Amphip.*, 1888, p. 1,248.

Station 9. Saunders Island, 5-10 fathoms (1).

Station 11. Northumberland Island, 10-15 fathoms (3).

Station 37. Saunders Island, 5 fathoms (14).

Station 52. Robertson Bay, 5-15 fathoms (1).

Station 57. Sarkak, Waigat, 9 fathoms (10).

*Distribution.*—Denmark, Norway, Finmark, Labrador, North, West and East Greenland, Jan Mayen, Spitzbergen; 2-100 fathoms

North Greenland: Cape York (Hansen).

35. *Synidotea marmorata* (Packard).

Benedict, Proc. Acad. Phila., 1897, p. 392, fig. 2.

Station 60. Battle Harbor, Labrador, 12-14 fathoms (2).

*Distribution.*—St. Lawrence Gulf (Whiteaves), Newfoundland Bank, 36-129 fathoms (Benedict); Labrador: Kynetarbuk Bay, 7 fathoms (Packard).

36. *Aroturus baffini* (Sabine).

*A. baffini* and *feildeni* Benedict, Proc. Biol. Soc. Washington, Vol. 12, 1898, p. 43.

Station 26. Cape Alexander, 27 fathoms (62).

Station 27. Cape Chalon, 35 fathoms (13).

Station 39. Granville Bay, 30-40 fathoms (3).

Station 40. Granville Bay, 20-30 fathoms (several hundred).

Station 45. Barden Bay, 10-40 fathoms (1).

Station 49. Olriks Bay, 15-20 fathoms (109).

Station 51. Robertson Bay, 35-40 fathoms (85).

Station 52. Robertson Bay, 5-15 fathoms (1).

The large amount of material at hand enables me to pronounce *A. baffini* and *feildeni* varieties of one and the same species. We possess both forms, and the var. *feildeni* prevails for instance at Station 40, and is represented at Station 49. But, besides, there are many intermediate specimens in the different hauls, especially in Nos. 40, 49 and 51.

Miers found his *feildeni* under the same conditions, associated with the typical form. Benedict's and Sars' material consisted only of a few individuals of each form.

Very young individuals are always without spines, and thus young individuals *always* belong to the var. *feildeni*, although their mother, to whose antennæ they cling, may be a true *baffini*. In larger individuals the spines are developed in a different degree,

and there are all intermediate stages between the strongly spinous *A. baffini* and the almost smooth *A. feildeni*.

Sars<sup>10</sup> claims that his *A. tuberosus* antedates Miers' *A. feildeni*, giving 1876 as the date of publication of the former. But the *Arch. Math. og Naturvid.*, Vol. 2, p. 350, where the diagnosis of *A. tuberosus* is printed, bears the date 1877, not 1876. Miers' *A. feildeni* was published in the *Ann. Mag. Nat. Hist.*, Series 4, Vol. 20, p. 14, Pl. 3, fig. 1, in the year 1877; but since this volume was not issued before the second half of that year, we may grant the priority of Sars' name, although the date of 1876 is not correct.

*Distribution.*—Farøes, Norway, Iceland, Spitzbergen, East Greenland, Davis Straits, West Greenland, North Greenland, Ellesmere Land, Grinnell Land, 5–400 fathoms.

North Greenland: Cape York (Hansen), McCormick Bay (Ives), Murchison Sound (Ohlin); Ellesmere Land: Cape Faraday (Ohlin), Cape Sabine (Benedict); Grinnell Land: Cape Napoleon, Dobbin Bay, Franklin Pierce Bay, Floeberg Beach (Miers).

37. *Tole libbeyi* (Ortmann).

Ortmann, The Princeton University Bulletin, Vol. 11, No. 3, February, 1900, pp. 39, 40.

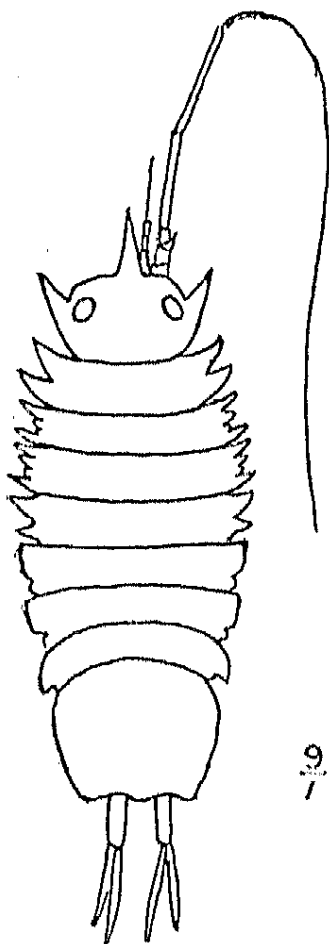
Station 26. Cape Alexander, 27 fathoms (5).

Length of body 8 mm. Rostrum about as long as the head, directed obliquely upward. Head with one lateral angulation, directed forward. Eyes elliptical. Segments of pereion dorsally smooth, without any spines or tubercles. First segment laterally with two angulations, both of them directed obliquely forward. Second and third segments with four short angulations, the anterior and posterior subequal, the third the smallest. Fourth segment with two angulations, the anterior directed forward, the posterior smaller and directed a little backward. Fifth, sixth and seventh segments with a large anterior and a very small posterior angulation. All the angulations of these segments are comparatively short. Pleon with two bluntly triangular angulations on either side of a bluntly triangular central portion. Uropods about as long as pleon, styliform, outer branch a little shorter than inner. Flagellum of first antenna 15 articulate; flagellum of second antenna with more than 150 annulations.

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<sup>10</sup> *Den Norske Nordh. Exp. Crust.*, 1, 1885, p. 109.

In [the wanting tubercles of the dorsal surface and the form of the lateral angulations, this species is related to the two species



of the genus known from the North Pacific, and the form of the pleon recalls that of *J. erostrata* Rich. (Aleutian Islands). But it differs (1) in the presence of a long rostrum, (2) in the stronger development of the lateral angulations of the head, (3) in the slightly different angulations of the second and third segments of the pereon.

The generic name *Tole* has been given to replace *Janthe* Bovallius nom. præoccup. (1865 Mars, 1867 Stål). (Type, *J. speciosa* Bov. = *spinosa* Harg.)

The following key to the species of *Tole* = *Janthe* may serve to express the affinities of our new species:

$\frac{9}{7}$  *a'*. —Pleon produced backward into two large angulations, between which the uropods are inserted (*b*).

*a''*. —Pleon produced into one small median extension, on each side of which there are incisions for the

insertion of the uropods. (Rostrum very short. Two lateral angulations of the head. Segments of pereion each with one median, obtuse tubercle, *J. bovallii* (Studer)).<sup>11</sup>

East Patagonia.

*b'*. —Segments of pereion dorsally with spines or tubercles (*c*).

*b''*. —Segments of pereion dorsally smooth (*d*).

*c'*. —Segments of pereion dorsally each with two submedian, short, spine-like tubercles. First segment with one, second to fourth with two large angulations, fifth to seventh with one large and one (posterior) small angulation,

*J. spinosa* (Harger).<sup>12</sup>

Nova Scotia, Baffin Bay, West Greenland.

<sup>11</sup> *Abh. Akad. Wiss.*, Berlin, 1883, p. 10, Pl. 1, fig. 2.

<sup>12</sup> Harger, *Proc. U. S. Mus.*, Vol. 2, 1879, p. 158, and *Rep. U. S. Fish Comm.*, 1880, p. 323, Pl. 2, fig. 10 (*Janira spinosa*); Hansen, *Mal. mar. Grænl. occ.*, 1887, p. 191; *Janthe speciosa* Bovallius, *Svensk. Vet. Ak. Handl.*, Vol. 6, No. 4, 1881, p. 4.

*e'*.—Segments of pereion dorsally with one median, spine-like tubercle. All segments with two angulations on each side,

*J. laciniata* (Sars).

West coast of Norway.

*d'*.—Head with two lateral angulations, *J. triangulata* (Rich.).<sup>13</sup>

California.

*d''*.—Head with one lateral angulation (*e*).

*e'*.—Rostrum well developed, long, . . . . . *J. libbeyi*.

*e''*.—Rostrum represented only by a small median point,

*J. erostrata* (Rich.).<sup>14</sup>

Aleutian Islands.

38. *Munnopsis typica* M. Sars.<sup>?</sup>

Harger, Rep. U. S. Fish Comm. for 1878, part 6, 1880, p. 330, Pl. 2, fig. 11; Sars, Acc. Crust. Norway, Vol. 2, 1897, p. 133, Pls. 57, 58.

Station 12. Foulke Fjord, 35 fathoms (2).

Station 39. Granville Bay, 30–40 fathoms (18).

Station 40. Granville Bay, 20–30 fathoms (2).

Station 49. Olriks Bay, 15–20 fathoms (1).

*Distribution*.—Norway, Shetland Islands, Bay of Fundy, Gulf of St. Lawrence, Baffin Bay, Grinnell Land, North, West and East Greenland, Iceland, Spitzbergen, Franz Josef Land, Novaja Semlja, Kara Sea, Siberian Polar Sea (East Taimyr); 5–500 fathoms.

Grinnell Land: Cape Napoleon, Cape Frazer (Miers); North Greenland: Murchison Sound (Ohlin).

The *Bopyridæ* in the collection have not yet been identified.

39. *Diastylis rathkei* (Kroeyer).

Sars, Acc. Crust. Norway, Vol. 3, 1900, p. 44, Pls. 33, 34.

Station 43. Barden Bay, 20–25 fathoms (3).

*Distribution*.—Baltic Sea, Kattegat, Norway, England, Atlantic coast of North America, Labrador, Baffin Bay, North and West Greenland, Barents Sea, Franz Josef Land, Kara Sea, Siberian Polar Sea (mouth of Jenesei, East Taimyr, Tchukchee coast); to 400 fathoms.

North Greenland: Murchison Sound (Ohlin).

40. *Diastylis goodsiri* (Bell).

Sars, *l. c.*, 1900, p. 54, Pl. 41.

Station 18. Foulke Fjord, 15–20 fathoms (1).

*Distribution*.—Polar islands of North America, Baffin Bay,

<sup>13</sup> *Janthe triangulata* Richardson, *Proc. U. S. Mus.*, Vol. 21, 1899, p. 857.

<sup>14</sup> *Janthe erostrata* Richardson, *ibid.*, p. 858, fig. 30.



North and West Greenland, Jan Mayen, Spitzbergen, Barents Sea, Kara Sea, Siberian Polar Sea (East Taimyr and Tchukehee coast); to 80 fathoms.

North Greenland: Murchison Sound (Ohlin).

41. *Diastylis scorpioides* (Lepechin).

Sars, *l. c.*, 1900, p. 58, Pl. 44.

Station 40. Granville Bay, 20–30 fathoms (1).

Station 43. Barden Bay, 20–25 fathoms (1).

Station 52. Robertson Bay, 5–15 fathoms (3).

*Distribution.*—Finmark, Lofoten Islands, White Sea, Kara Sea, Jan Mayen, West and North Greenland, West coast of Baffin Bay; to 200 fathoms.

North Greenland: Murchison Sound (Ohlin).

42. *Campylaspis rubiounda* (Liljeborg).

Sars, *l. c.*, 1900, p. 84, Pls. 56, 57.

Station 49. Olriks Bay, 15–20 fathoms (1 ♂, 1 ♀).

*Distribution.*—Kattegat, Norway, Atlantic coast of North America, West Greenland (Holsteinborg and Kekertak); to 70 fathoms.

43. *Mysis oculata* (O. Fabricius).

Sars, *Monogr. Mysider*, Vol. 3, 1879, p. 69, Pl. 31.

Station 2. Godhavn, Disco Island, 8 fathoms (1).

Station 17. Payer Harbor, Ellesmere Land, 16 fathoms (3).

Station 24. Northumberland Island, 10 fathoms (1).

Station 36. Saunders Island, 6 fathoms (3).

Station 37. Saunders Island, 5 fathoms (1).

Station 39. Granville Bay, 30–40 fathoms (2).

Station 40. Granville Bay, 20–30 fathoms (56).

Station 43. Barden Bay, 20–25 fathoms (3).

Station 52. Robertson Bay, 5–15 fathoms (1).

*Distribution.*—Labrador, Grinnell Land, North, West and East Greenland, Iceland, Jan Mayen, Spitzbergen, Finmark, Kara Sea, Siberian Polar Sea (Tchukehee coast); 2–30 fathoms.

Grinnell Land: Cape Napoleon (Miers); North Greenland: Port Foulke (Stimpson), Murchison Sound and Inglefield Gulf (Ohlin).

44. *Pandalus borealis* Kroeyer.

Kroeyer, Naturhist. Tidsskr., Vol. 2, 1839, p. 254; *ibid.* (2), Vol. 1, 1845, p. 116; Smith, Trans. Connect. Ac., Vol. 5, 1879, p. 86; Hoek, Nederl. Arch. Zool. Suppl., 1881, p. 21; Doflein, Dekap. Krebs. arkt. Meere. (Fauna Arctica, Vol. 1, part 2), 1900, p. 321.

Station 59. Kudlisat, Waigat, 15–30 fathoms (8).

*Distribution.*—Massachusetts to Nova Scotia, West Greenland (northward to Umenak), Norway, Barents Sea, White Sea, Spitzbergen, Franz Josef Land, Bering Sea; to 260 fathoms.

45. *Spirontocaris phippi* (Kroeyer).

*Hippolyte phippi* Smith, Trans. Conn. Ac., Vol. 5, 1879, p. 73; Hansen, Malac. Groenl. occ., 1887, p. 43; Doflein, *l. c.*, 1900, p. 332.

Station 4. Upernavik, 8–10 fathoms (15).

Station 12. Foulke Fjord, 35 fathoms (1).

Station 26. Cape Alexander, 27 fathoms (2).

Station 27. Cape Chalon, 35 fathoms (1).

Station 29. Olriks Bay, 7–25 fathoms (3).

Station 39. Granville Bay, 30–40 fathoms (5).

Station 40. Granville Bay, 20–30 fathoms (16).

Station 43. Barden Bay, 20–25 fathoms (1).

Station 49. Olriks Bay, 15–20 fathoms (3).

Station 52. Robertson Bay, 5–15 fathoms (1).

Station 54. Foulke Fjord, 5 fathoms (2).

Station 60. Battle Harbor, Labrador, 12–14 fathoms (1).

*Distribution.*—Norway, Sweden, Massachusetts Bay to Labrador, Grinnell Land, North, West and East Greenland, Spitzbergen, Franz Joseph Land, Siberian Polar Sea (Tchukchee coast), Point Barrow, Bering Sea, Ochotsk Sea, North Japan; 2–125 fathoms.

Grinnell Land: Cape Frazer, Franklin Pierce Bay, Discovery Bay (Miers); North Greenland: Port Foulke (Stimpson), Cape Dudley Digges, Northumberland Island, Inglefield Gulf, Murchison Sound (Ohlin).

46. *Spirontocaris spinus* (Sowerby).

*Hippolyte sowerbyi* Milne-Edwards, Hist. Nat. Crust., Vol. 2, 1837, p. 380; *H. spinus* Smith, *l. c.*, 1879, p. 68; Doflein, *l. c.*, 1900, p. 332.

Station 29. Olriks Bay, 7–25 fathoms (2).

Station 39. Granville Bay, 30–40 fathoms (1).

Station 40. Granville Bay, 20–30 fathoms (2).

Station 49. Olriks Bay, 15–20 fathoms (1).

Station 50. Karnah, 30–40 fathoms (1).

Station 52. Robertson Bay, 5–15 fathoms (1).

*Distribution*.—Scotland, Norway, Massachusetts Bay to Labrador, Grinnell Land, North and West Greenland, Jan Mayen, Spitzbergen, Bering Straits, Point Barrow; 2–240 fathoms.

Grinnell Land: Discovery Bay (Miers); North Greenland: Northumberland Island, Inglefield Gulf, Murchison Sound (Ohlin).

47. *Spirontocaris gaimardi* (Milne-Edwards).

*Hippolyte gaimardi* Milne-Edwards, Hist. Nat. Crust., Vol. 2, 1837, p. 378; Smith, *l. c.*, 1879, p. 67; Doflein, *l. c.*, 1900, p. 330.

Station 4. Upernavik, 8–10 fathoms (18).

Station 11. Northumberland Island, 10–15 fathoms (3).

Station 36. Saunders Island, 6 fathoms (4).

Station 37. Saunders Island, 5 fathoms (1).

Station 43. Barden Bay, 20–25 fathoms (7).

Station 54. Foulke Fjord, 5 fathoms (47).

*Distribution*.—Baltic Sea, Denmark, Sweden, Norway, Scotland, Massachusetts Bay to Labrador, Polar islands of North America, Grinnell Land, North and West Greenland, Iceland, Jan Mayen, Spitzbergen, Novaja Semlja, Kara Sea, Tchukchee coast, Point Barrow, Bering Sea; 2–250 fathoms.

Grinnell Land: Franklin Pierce Bay (Miers); North Greenland: Port Foulke (Stimpson), Inglefield Gulf (Ohlin).

48. *Spirontocaris grænlandica* (Fabricius).

*Hippolyte grænlandica* Smith, *l. c.*, 1879, p. 85, Pl. 10, fig. 2; Doflein, *l. c.*, 1900, p. 336.

Station 4. Upernavik, 8–10 fathoms (11).

Station 9. Saunders Island, 5–10 fathoms (1).

Station 12. Foulke Fjord, 35 fathoms (1).

Station 18. Foulke Fjord, 15–20 fathoms (1).

Station 21. Murchison Sound, 25 fathoms (5).

Station 26. Cape Alexander, 27 fathoms (19).

Station 27. Cape Chalon, 35 fathoms (20).

Station 29. Olriks Bay, 7–25 fathoms (23).

Station 37. Saunders Island, 5 fathoms (3).

Station 39. Granville Bay, 30–40 fathoms (2).

Station 40. Granville Bay, 20–30 fathoms (24).

Station 45. Barden Bay, 10–40 fathoms (1).

Station 49. Olriks Bay, 15–20 fathoms (8).

Station 50. Karnah, 30-40 fathoms (4).

Station 54. Foulke Fjord, 5 fathoms (23).

*Distribution.*—Norway, Massachusetts to Labrador, Polar islands of North America, Grinnell Land, North, West and East Greenland, Tchukchee coast, Bering Sea, Kamchatka, Puget Sound; 2-200 fathoms.

Grinnell Land: Franklin Pierce Bay, Dumbell Bay (Miers); North Greenland: Cape Dudley Digges, Northumberland Island, Murchison Sound, Inglefield Gulf (Ohlin).

49. *Spirontocaris polaris* (Sabine).

*Hippolyte polaris* Smith, *l. c.*, 1879, p. 80, Pl. 11, figs. 1-4; *H. polaris* and *borealis* Doflein, *l. c.*, 1900, pp. 334, 335.

Station 4. Upernavik, 8-10 fathoms (35).

Station 9. Saunders Island, 5-10 fathoms (15).

Station 12. Foulke Fjord, 5 fathoms (4).

Station 21. Murchison Sound, 25 fathoms (3).

Station 26. Cape Alexander, 27 fathoms (10).

Station 27. Cape Chalon, 35 fathoms (9).

Station 29. Olriks Bay, 7-25 fathoms (51).

Station 32. Foulke Fjord, 14 fathoms (1).

Station 37. Saunders Island, 5 fathoms (5).

Station 39. Granville Bay, 30-40 fathoms (21).

Station 40. Granville Bay, 20-30 fathoms (33).

Station 43. Barden Bay, 20-25 fathoms (2).

Station 45. Barden Bay, 10-40 fathoms (4).

Station 51. Robertson Bay, 35-40 fathoms (4).

Station 54. Foulke Fjord, 5 fathoms (37).

*Distribution.*—Sweden, Norway, Cape Cod to Labrador, Polar islands of North America, Grinnell Land, North, West and East Greenland, Jan Mayen, Spitzbergen, Bear Island, Franz Joseph Land, north of Bering Straits; 2-260 fathoms.

Grinnell Land: Dobbin Bay, Franklin Pierce Bay, Cape Napoleon, Discovery Bay (Miers); North Greenland: Littleton Island, Port Foulke (Stimpson), Cape Dudley Digges, Northumberland Island, Murchison Sound, Inglefield Gulf (Ohlin).

50. *Crangon* (*Scleroerangon*) *boreas* (Phipps).

Ortmann, Proc. Acad. Phila., 1895, p. 178; Doflein, *l. c.*, 1900, p. 323.

Station 9. Saunders Island, 5-10 fathoms (7).

Station 21. Murchison Sound, 5 fathoms (1).

- Station 26. Cape Alexander, 27 fathoms (6).  
 Station 27. Cape Chalon, 35 fathoms (6).  
 Station 29. Olriks Bay, 7-25 fathoms (11).  
 Station 39. Granville Bay, 30-40 fathoms (2).  
 Station 40. Granville Bay, 20-30 fathoms (21).  
 Station 45. Barden Bay, 10-40 fathoms (3).  
 Station 49. Olriks Bay, 5-20 fathoms (10).  
 Station 50. Karnah, 30-40 fathoms (6).  
 Station 51. Robertson Bay, 35-40 fathoms (10).  
 Station 52. Robertson Bay, 5-15 fathoms (8).  
 Station 54. Foulke Fjord, 5 fathoms (2).

*Distribution.*—Norway, Massachusetts to Labrador, Polar islands of North America, Grinnell Land, North, West and East Greenland, Iceland, Jan Mayen, Spitzbergen, Novaja Semlja, Franz Joseph Land, Tchukchee coast, Point Barrow, Bering Straits; 4-200 fathoms.

Grinnell Land: Franklin Pierce Bay, Cape Napoleon, Discovery Bay (Miers); North Greenland: Littleton Island, Port Foulke (Stimpson), Cape Dudley Digges, Northumberland Island, Murchison Sound (Ohlin).

51. *Neotocrangon* lar (Owen).

Ortmann, *l. c.*, 1895, p. 181; Doflein, *l. c.*, 1900, p. 327.

- Station 9. Saunders Island, 5-10 fathoms (3).  
 Station 11. Northumberland Island, 10-15 fathoms (2).  
 Station 12. Foulke Fjord, 35 fathoms (4).  
 Station 26. Cape Alexander, 27 fathoms (1).  
 Station 27. Cape Chalon, 35 fathoms (4).  
 Station 39. Granville Bay, 30-40 fathoms (5).  
 Station 40. Granville Bay, 20-30 fathoms (20).  
 Station 43. Barden Bay, 20-25 fathoms (1).  
 Station 45. Barden Bay, 10-40 fathoms (1).  
 Station 50. Karnah, 30-40 fathoms. (2).

*Distribution.*—Nova Scotia, Newfoundland, Labrador, East Greenland (Hecla Havn, 70° 11' N. L., Hansen, 1895, p. 125), West Greenland, North Greenland, Point Barrow, Bering Sea, Tchukchee coast; 4-120 fathoms.

North Greenland: Inglefield Gulf (Ohlin).

52. *Sabinea septemcarinata* (Sabine).

Ortmann, *l. c.*, 1895, p. 188; Doflein, *l. c.*, 1900, p. 328.

Station 12. Foulke Fjord, 35 fathoms (1).

Station 18. Foulke Fjord, 15-20 fathoms (1).

Station 39. Granville Bay, 30-40 fathoms (13).

Station 40. Granville Bay, 20-30 fathoms (65).

Station 43. Barden Bay, 20-25 fathoms (1).

Station 49. Olriks Bay, 15-20 fathoms (18).

Station 50. Karnah, 30-40 fathoms (6).

*Distribution.*—Norway, Massachusetts Bay to Labrador, Grinnell Land, North and West Greenland, Iceland, Spitzbergen, Novaja Semlja, Kara Sea, Siberian Polar Sea (East Taimyr peninsula and Tchukchee coast); 5-160 fathoms.

Grinnell Land: Dobbin Bay, Cape Napoleon, Discovery Bay (Miers); North Greenland: Murchison Sound (Ohlin).

53. *Eupagurus pubescens* (Kroeyer).

Smith, *l. c.*, 1879, p. 47; Doflein, *l. c.*, 1900, p. 341.

Station 61. Battle Harbor, Labrador, 0-1 fathom (1).

*Distribution*—Northeast America: New Jersey to Labrador; Greenland (west coast northward to Umenak, ca. 71° N. L.), North Europe, Spitzbergen, Murman coast, White Sea, Bering Sea, Kamchatka, Puget Sound.

54. *Hyas araneus* (Linné).

Rathbun, Proc. U. S. Mus., Vol. 16, 1893, p. 67; Doflein, *l. c.*, 1900, p. 352.

Station 1. Domino Run, Labrador, 0-1 fathom (1).

Station 60. Battle Harbor, Labrador, 12-14 fathoms (3).

*Distribution.*—Northern Europe to Novaja Semlja and Spitzbergen, Iceland; Northeast America: Cape Cod to Labrador; West Greenland (northward to Godhavn); Tchukchee coast, Ochotsk Sea; 0-100 fathoms.

## PYCNOGONIDA.

1. *Nymphon longitarse* Kroeyer.

Wilson, Trans. Connect. Acad., Vol. 5, 1878, p. 19, Pl. 7, fig. 2; Wilson, Rep. U. S. Fish Comm. for 1878, part 6, 1880, p. 489, Pl. 6, figs. 30, 31; Hoek, Challenger Pycnogon. 3, 1881, p. 20; Hoek, Niederl. Arch. Zool. Suppl., 1881, p. 15, Pl. 1, figs. 22, 23.

Station 39. Granville Bay, 30-40 fathoms (2 ♂).

Station 40. Granville Bay, 20-30 fathoms (2 ♀).

Station 52. Robertson Bay, 5-15 fathoms (1 ♂).

*Distribution.*—Massachusetts, Maine, Nova Scotia, Greenland, Norway, Novaja Semlja, Point Barrow; 2–220 fathoms.

2. *Nymphon grossipes* (Linné).

Wilson, *l. c.*, 1878, p. 20, Pl. 7, fig. 1; Wilson, *l. c.*, 1880, p. 491, Pl. 6, figs. 32–37, Pl. 7, fig. 42; Hoek, Chall., 1881, p. 20, p. 44, Pl. 3, figs. 9–12, Pl. 4, fig. 1; Hoek, *Nied. Arch.*, 1881, p. 12, Pl. 1, figs. 17–21.

Station 26. Cape Alexander, 27 fathoms (1 ♀).

Station 27. Cape Chalon, 35 fathoms (1 jun.).

Station 40. Granville Bay, 20–30 fathoms (2 ♂, 1 jun.).

Station 43. Barden Bay, 20–25 fathoms (1 ♀).

Station 49. Orlriks Bay, 15–20 fathoms (2 jun.).

*Distribution.*—North Sea, Norway, Long Island Sound to St. Lawrence Gulf, Polar islands of North America, North Greenland, East Greenland (North Shannon), Spitzbergen, Barents Sea, Novaja Semlja, Point Barrow; 0–540 fathoms.

North Greenland: Northumberland Island (Ohlin).

3. *Nymphon hirtipes* Bell.

*N. hirtipes* Wilson, *l. c.*, 1878, p. 22, Pl. 5, fig. 2, Pl. 6, fig. 2; Hoek, Chall., 1881, p. 17; Hoek, *Nied. Arch.*, 1881, p. 6, Pl. 1, figs. 1–8; *N. hirtum* Wilson, *l. c.*, 1880, p. 495, Pl. 7, figs. 38, 41.

Station 39. Granville Bay, 30–40 fathoms (2 ♂, 1 ♀, 3 jun.).

*Distribution.*—Massachusetts, Nova Scotia, Polar islands of North America (Northumberland Sound), Grinnell Land, North Greenland, East Greenland, Spitzbergen, Barents Sea; 10–299 fathoms.

Grinnell Land: Franklin Pierce Bay, Discovery Bay, Floeberg Beach (Miers); North Greenland: Inglefield Gulf (Ohlin).

4. *Nymphon serratum* G. O. Sars.

Sars, *Arch. Math. og Naturv.*, Vol. 4, 1879, p. 471; Hoek, *Nied. Arch.*, 1881, p. 10, Pl. 1, figs. 24, 28, Pl. 2, fig. 29.

Station 40. Granville Bay, 20–30 fathoms (2 ♂).

*Distribution.*—Spitzbergen Sea, 146–180 fathoms (Sars); Barents Sea, 160 fathoms (Hoek).

5. *Pallene discoidea* Kroeyer.

*Pseudopallene hispida* and *discoidea* Wilson, *l. c.*, 1878, pp. 10, 12, Pl. 3, figs. 1, 2; Wilson, *l. c.*, 1880, pp. 478, 479, Pl. 2, figs. 9, 10; *Pallene discoidea* and *hispida* Hoek, Chall., 1881, p. 31.

Station 39. Granville Bay, 30–40 fathoms (1 ♂, 1 ♀).

Station 40. Granville Bay, 20–30 fathoms (1 ♀).

The ovigerous male of Station 39 agrees in all essential points with *P. hispida* as figured by Wilson. The two females, however, show the chelæ of the mandibles (antennæ) as figured by Wilson for *P. discoidea* (1880, fig. 10*b*), and the rostrum is more obtuse than in the male, which is another diagnostic character assigned to *discoidea*. In the shape of the end of the abdomen I do not find any difference; all three individuals have it obtuse, and not pointed and slightly bifid.

In my opinion *P. hispida* is not different from *discoidea*, but represents merely the male sex.

*Distribution.*—Maine, Grand Manan (12–55 fathoms), South Greenland, North Norway, Lapland, White Sea.

In conclusion I add here a list of species recorded previously from the northern parts of Baffin Bay and Smith Sound, but not found by our expedition in the same latitudes:

1. *Balanus crenatus* Brug. Grinnell Land: Discovery Bay (Miers, *Journ. Linn. Soc. Zool.*, Vol. 15, 1881, p. 73).
2. *Balanus balanoides* (L.). Port Foulke (Stimpson) (possibly seen by the present writer at Foulke Fjord).
3. *Orchomenella minuta* (Kr.). North Greenland: Cape Dudley Digges, and Ellesmere Land: Cape Faraday (Ohlin).
4. *Anonyx affinis* Ohl. Cape Dudley Digges (Ohlin).
5. *Hoplonyx cicada* (Fabr.) = *Anonyx gulosus* Kr. Grinnell Land: Discovery Bay (Miers).
6. *Ampelisca eschrichti* Kr. North Greenland: Murchison Sound (Ohlin).
7. *Haploops tubicola* Lilj. North Greenland: Cape Dudley Digges (Ohlin).
8. *Acanthostepheia malmgreni* (Goës). Murchison Sound (Ohlin).
9. *Eusirus cuspidatus* Kr. Grinnell Land: Franklin Pierce Bay (Miers).
10. *Apherusa glacialis* (Hans.). North Greenland: Wolstenholme Sound (Ohlin).
11. *Paratylus smitti* (Goës). Murchison Sound (Ohlin).
12. *Amathila homari* (Fabr.). North Greenland Cape Dudley Digges, Northumberland Island; Ellesmere Land: Cape Faraday (Ohlin).
13. *Neohela monstrosa* (Boeck). North Greenland: Murchison Sound (Ohlin).
14. *Caprella monocera* Sars. Cape Dudley Digges (Ohlin).



15. *Glyptonotus sabinei* (Kr.) Cape York (Hansen), Cape Dudley Digges and Cape Faraday (Ohlin).
16. *Diastylis spinulosa* Hell. Murchison Sound (Ohlin).
17. *Nymphon stroemi* Kr. Grinnell Land: Cape Frazer and Floeberg Beach (Miers).
18. *Nymphon robustum* Bell. Grinnell Land: Discovery Bay (Miers, *Journ. Linn. Soc.*, Vol. 15, 1881, p. 72).