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(Særtryk af Vidensk. Meddel. fra den naturh. Foren. Bd. 64).

Report on the Malacostraca collected
by the "Tjalfe"-Expedition, under the direction
of cand. mag. Ad. S. Jensen, especially at
W. Greenland.

By

K. Stephensen.

During the fisheries-investigations carried out by Mr. Ad. S. Jensen in the Greenland seas, especially at S. W. Greenland, with the "Tjalfe" in the summers 1908 and 1909, a considerable material of Crustaceans was collected. Especially bathypelagic species and larvæ of such species are richly represented in the collection, this expedition standing foremost among those, by which such material has been brought to light. It was, however, by no means the whole material of Crustaceans, which was preserved, particularly of the more common species, the main object of the expedition being fisheries-investigations, not a general survey of the marine fauna.

The material contains in all 84 species and 6 species of larvæ. The following species are new to science.

Cleonardo microdactylus. (No. 57).

Eusirus Tjalfensis. (No. 67).

Munneurycope Tjalfensis. (No. 80).

Holophryxus Acanthephyra. (No. 84).

Besides these the following species are new to Greenland:

Longithorax fuscus H. J. Hansen.

Scina sp.

Cyphocaris anonyx Boeck.

Metacyphocaris Helgæ Tattersall.

Katius obesus Chevreux.
Amphitopsis longicaudata Boeck.
Acanthoniscus typhlops G. O. Sars.
Janthe laciniata G. O. Sars.
Holophryxus Richardi Koehler.

A summary and discussion of the new localities in connection with those previously known I have given recently in the Report on the Malacostraca, Pycnogonida and some Entomostraca collected by the Danmark-Expedition to North-East Greenland, in "Meddelelser om Grønland", vol. 45, 1912.

Some of the stations from the Davis-Strait having great interest, a complete list is given here of all the species brought home from these stations.

St. 322. 60° 07' N, 48° 26' W, 3—5—1909. 2000 m. wire out.
AcanthePHYra purpurea ca. 15 spec. *Boreomysis microps* 7 spec.
Parapasiphae sulcatifrons 2 spec. *Longithorax fuscus* 1 spec.
Gennadas elegans 7 spec. *Hyperia medusarum* 1 spec.
Sergestes arcticus 4 spec. *Euthemisto compressa* 6 spec.
Thysanopoda acutifrons 30 spec. *Cyphocaris anonyx* 5 spec.
Meganyctiphanes norvegicus 7 spec. *Katius obesus* 2 spec.
Thysanoessa longicaudata many spec. *Metacyphocaris Helgø* 6 spec.
 (ca. 15 cm.³) *Munneurycope Tjalfensis* 1 spec.
Eucopia unguiculata 5 spec. *Holophryxus AcanthePHYrae* 1 spec.
Gnathophausia zoea 2 spec.

St. 333. 63° 18' N, 54° 55' W, 7—5—1909. depth 1300 m.,
 1530 m. wire out.
AcanthePHYra purpurea 12 spec. *Boreomysis microps* ca. 20 spec.
Parapasiphae sulcatifrons 4 spec. *Cyphocaris anonyx* 2 spec.
Gennadas elegans ca. 15 spec. *Katius obesus* 2 spec.
Sergestes arcticus 1 spec. *Metacyphocaris Helgø* 5 spec.
Eucopia unguiculata ca. 25 spec. *Lanceola serrata* 1 spec.
Gnathophausia zoea 5 spec.

St. 338. 64° 01' N, 55° 30' W, 8—5—1909. depth 1185 m.,
 1500 m. wire out.
AcanthePHYra purpurea 11 spec. *Scina* sp. 1 spec.
Parapasiphae sulcatifrons 5 spec. *Cyphocaris anonyx* 2 spec.
Gennadas elegans 13 spec. *Katius obesus* 1 spec.
Boreomysis microps ca. 20 spec. *Metacyphocaris Helgø* 2 spec.

St. 336. 64° 06' N, 55° 18' W, 8—5—1909. depth 1040—1100 m.,
 1200 m. wire out.

AcanthePHYra purpurea 10 spec. *Eucopia unguiculata* 6 spec.
Parapasiphae sulcatifrons 6 spec. *Gnathophausia zoea* 7 spec.
Gennadas elegans ca. 25 spec. *Boreomysis microps* ca. 25 spec.
Sergestes arcticus 1 spec. *Cyphocaris anonyx* 2 spec.
Thysanoessa longicaudata 1 spec. *Cleonardo microdactylus* 2 spec.

Decapoda.

1. *Chionoectes Opilio* O. Fabr.

- Cancer Phalangium* O. Fabricius, Fauna Groenlandica, 1780, No. 214,
 p. 234.
 — *Opilio* O. Fabricius, Kgl. Danske Vid. Selsk. Skrifter, Nye Sam-
 ling, vol. 3, 1788, p. 181, 1 Pl.
Chionoectes Opilio Kröyer, Naturh. Tidsskrift, vol. 2, 1838, p. 249.
 * — — Kröyer, Crust., in Gaimard, Voyage en Scand., 1846
 (1849?), Pl. I.
 — — M. Rathbun, Proc. U. S. Nat. Mus., vol. 16, 1893, p.
 74, Pl. 4, fig. 5—7.
 — — A. M. Edwards & Bouvier, Rés. des Camp. Sc. "Hiron-
 delle", Monaco, vol. 7, 1894, p. 16.
 — — H. J. Hansen, "Ingolf" 1908, p. 12.
 — *phalangium* H. J. Hansen, V. Grønland 1887, p. 28.

(St. 109) 66° 44' N, 56° 08' W, ca. 175 fath. 5—7—1908. 3 spec.
 (St. 107) 68° 20' N, 54° 03' W, 220—280 fath. 9—7—1908. 1 spec. (the ca-
 rapace 93 mm. > 93 mm.)

In Disko Bay and in Umanak Fjord considerable numbers of
 this crab were taken in deep water (140—260 fms.), the largest
 specimen measuring 30 inches between the tips of the longest legs.

2. *Hyas coarctatus* Leach.

- Hyas coarctatus* Leach, Transact. Linn. Soc., London, vol. 11, 1815, p. 329.
 — — Cuvier, Règne animal, Edit. acc. de planches grav., Crust.,
 Pl. 32, fig. 3.
 * — — Brandt, Middendorffs Sibirische Reise, vol. 2, 1, 1851, p. 81.
 — — Bell, 1853, p. 35, with fig.
 — — M. Rathbun, Proc. U. S. Nat. Mus., vol. 16, 1893, p. 69.

Hyas coarctatus H. J. Hansen, "Ingolf" 1908, p. 15.
 — — V. Grönland 1877, p. 30.

(St. 465) 62° 58' N, 50° 52' W, ca. 25 fath., 21—6—1909. 7 spec.
 (St. 419) 65° 09' N, 53° 33' W, 29 fath. 6—6—1909. 1 spec.
 (St. 100) 66° 44' N, 56° 08' W, ca. 175 fath., 5—7—1908. ca. 20 spec.

3. *Lithodes Maja* L.

Cancer Maja Linné, Systema Naturæ, edit. X, 1758, vol. 1, p. 629.
Lithodes arctica Cuvier, Règne animal, Edit. acc. de planches grav., Crust.,
 Pl. 37.

* — *Maja* Bell, 1853, p. 165, with fig.
 * — *arctica* Bouvier, Ann. Sc. Nat. Zool., ser. 7, vol. 18, 1891, p. 181,
 Pl. 11, fig. 7, Pl. 12, fig. 5.
 — *Maja* Bouvier, *ibid.*, ser. 8, vol. 1, 1896, p. 24.
 — — H. J. Hansen, "Ingolf", 1908, p. 22.
 — — — V. Grönland, 1887, p. 31.

(St. 100) 66° 44' N, 56° 08' W, ca. 175 fath., 5—7—1908, 1 spec.
 Without locality, 1 sp.

4. *Eupagurus pubescens* Kr.

Pagurus pubescens Krøyer, Kgl. Danske Vid. Selsk. naturvid.-math. Afl.,
 vol. 7, 1838, p. 314.
 * — — Krøyer, Naturhist. Tidsskrift, vol. 2, 1838, p. 251.
 * — — — in Gaimard: Voyage en Scandinav., 1846 (1849?),
 Pl. 2, fig. 1.
Eupagurus — — *E. Krøyeri* S. J. Smith, Transact. Conn. Acad. vol.
 5, 1879, p. 47, 48.
 — — — A. M. Edwards & Bouvier, Résult. d. Camp. Sc. "Hi-
 rondelle", Monaco, vol. 7, 1894, p. 74.
 — — — H. J. Hansen, "Ingolf", 1908, p. 27.
 — — — — V. Grönland, 1887, p. 32.

(St. 177) 70° 42' N, 54° 48' W, 253 fath. 7—8—1908. 2 spec.

5. *Munida tenuimana* G. O. Sars.

Munida tenuimana G. O. Sars, Vid. Selsk. Forh., Christiania 1871 (1872),
 p. 247.
 — — — *ibid.* 1882, No. 18, p. 44, Pl. 1, fig. 6.
 * — — — Appellöf, Die Decap. Crust., Meeresfauna v. Bergen,
 Heft 2—3, 1906, p. 139—49, Pl. 2, fig. 2.
 * — — — H. J. Hansen, "Ingolf", 1908, p. 34, Pl. 2, fig. 4 a, Pl. 3,
 fig. 1 a.

(St. 429) 63° 54' N, 53° 15' W. 988—1400 m. trawl. 8—6—1909. 3 spec.

6. *Munidopsis curvirostra* Whiteaves.

Munidopsis curvirostra Whiteaves, Ann. Journ. Science ser. 3, vol. 8, 1874,
 p. 212.
 — — — S. J. Smith, Bull. Mus. Comp. Zool., vol. 10, 1884,
 p. 21 (no description), Pl. 8, fig. 2, 3, 3 a.
 * — — *longirostris* A. Milne-Edwards & Bouvier, Exp. Sc. "Travail-
 leur" et "Talisman" Crust. Decap. vol. 1, 1900,
 p. 314, Pl. 4, fig. 1, Pl. 30, fig. 6—10.
 * — — *curvirostra* H. J. Hansen, "Ingolf", 1908, p. 36, pl. 3, fig. 2.

(St. 337) 64° 05' N, 55° 20' W, 1100 m. 8—5—1909. 1 spec.
 (St. 408—10) 64° 14' N, 55° 55' W, 839 m. 2—6—1909. 3 spec.
 (St. 302) 64° 40' N, 56° 37' W, 720—775 m. 2—6—1909. 2 spec.

6. *Sclerocrangon boreas* Phipps.

Cancer Boreas Phipps, Voyage towards the North Pole, 1774, p. 190, Pl.
 12, fig. 1.
 * *Crangon* — — Krøyer, Naturhist. Tidsskrift vol. 4, 1842, p. 218, Pl. 4,
 fig. 1—14.

Sclerocrangon Boreas H. J. Hansen, "Ingolf" 1908, p. 47.
 — — — V. Grönland, 1887, p. 33.

(St. 371) 66° 44' N, 56° 16' W, ca. 150 fm. 20—5—1909. 1 spec. (72 mm.)
 (St. 100) 66° 44' N, 56° 08' W, ca. 175 fm. 5—7—1908. 1 spec. (73 mm.)

The great depths have some interest, as H. J. Hansen (In-
 golf, p. 48) writes: "It was taken at all depths from ca. 5 fm. to
 118 fm., but a single occurrence at 200 fm. must... be considered
 as less certain".

8. *Sabinea hystrix* A. Milne-Edwards.

Paracrangon hystrix A. Milne-Edwards, Ann. Sc. Nat., ser. 6, Zool., vol.
 11, 1881, p. 6.
 * *Sabinea princeps* S. J. Smith, Bull. Mus. Comp. Zool., vol. 10, 1882,
 p. 38, Pl. 8, fig. 1.
 — — *hystrix*, H. J. Hansen, "Ingolf", 1908, p. 51.

(St. 337) 64° 05' N, 55° 20' W, 1190 m. 8—5—1909. 1 spec. (110 mm.)

9. *Nectocrangon lar* Owen.

Crangon lar Owen, Zool. of Capt. Beechey's Voyage, 1839, p. 88, Pl. 28, fig. 1.
 * *Argis* — — Krøyer, Naturh. Tidsskrift, vol. 4, 1842, p. 255, Pl. 5, fig. 45—62.
Nectocrangon lar — *N. dentata* M. Rathbun, Harriman Alaska-Exp., 1904,
 p. 137 (with figs.) (teste H. J. Hansen, Ingolf).

- Nectocrangon lar* H. J. Hansen, "Ingolf", 1908, p. 49.
 — — — — — V. Grönland, 1887, p. 37.
 (St. 183) 69° 19' N, 52° 56' W, 78 fm., 10—8—1908, 1 spec.
 (St. 179) 69° 29' N, 55° 26' W, 116 fm., 8—8—1908, 1 spec.

10. *Spirontocaris spinus* Sow.

- Cancer spinus* Sowerby, Brit. Miscellany, 1806, p. 47, Pl. 23.
 * *Hippolyte Sowerbei* Krøyer, Danske Vid. Selsk. math.-naturvid. Afh., vol. 9, 1842, p. 298, Pl. 2, fig. 45—54.
 — *spinus* Hoek, Nederl. Arch. f. Zool., Supplbd. I, Crust., 1832, p. 15, Pl. 1, fig. 4—7.
 * — — — — — Birula, Ann. Mus. Zool. Acad. Imp. St. Pétersbourg, vol. 1, 1899, p. 80, fig. 1.
Spirontocaris spinus H. J. Hansen, "Ingolf", 1908, p. 58.
 — — — — — Kemp, Decap. Ireland, 1908 (1910), p. 103, Pl. 14, fig. 1.
Hippolyte — — — — — H. J. Hansen, V. Grönland, 1887, p. 41.
 (St. 371) 66° 44' N, 56° 16' W, ca. 150 fm. 20—5—1909. 1 spec.

11. *Spirontocaris Gaimardii* H. Milne-Edwards.

- Hippolyte Gaimardii* H. Milne-Edwards, Hist. Nat. Crust., vol. 2, 1837, p. 378.
 * — — — — — + *H. gibba* Krøyer, Kgl. Danske Vid. Selsk. math.-naturv.-Afh., vol. 9, 1842, p. 282, 288, Pl. 1, fig. 21-30, Pl. 2, fig. 31—37.
Euales obses J. Thallwitz, Decapoden-Studien 1891, p. 23.
Hippolyte Gaimardii Appellöf, Decap. Crust., Meeresfauna v. Bergen, Heft 2—3, 1906, p. 122, Pl. 2, fig. 4.
Spirontocaris — — — — — H. J. Hansen, "Ingolf" 1908, p. 56.
Hippolyte — — — — — V. Grönland, 1886, p. 39.
 (St. 183) 69° 19' N, 52° 56' W, 78 fm. 10—8—1908, 7 spec.
 (St. 179) 69° 29' N, 55° 26' W, 116 fm. 8—8—1908, 6 spec.

The largest specimen, from St. 179, is 93 mm. long. On one spec. the rostrum is bent upwards about as in *Pandalus propinquus*. All the specimens have a large curved process on the third abdominal segment, except the smallest specimen (44 mm.), which has but an inconsiderable tooth.

12. *Spirontocaris macilentata* Kr.

- Hippolyte macilentata* Krøyer, Naturh. Tidsskrift vol. 3, 1841, p. 574.
 * — — — — — Kgl. Danske Vid. Selsk. math.-naturvid. Afh., vol. 9, 1842, p. 305, Pl. 2, fig. 55—56.

- Hippolyte macilentata* S. J. Smith, Transact. Conn. Acad. vol. 5, 1879, p. 71.

- Spirontocaris* — — — — — H. J. Hansen, "Ingolf" 1908, p. 60.
Hippolyte — — — — — V. Grönland, p. 43.

- (St. 100) 66° 44' N, 56° 03' W, ca. 175 fm. 5—7—1908. 1 spec.
 (St. 183) 69° 19' N, 52° 56' W, 75 fm. 10—8—1908. 7 spec.
 (St. 179) 69° 29' N, 55° 26' N, 116 fm. 8—8—1908. 5 spec.

The species seems to be very rare at W. Greenland (H. J. Hansen l. c.). 3 of the spec. from St. 179 are infested with *Phryxus abdominalis*, and on one spec. from St. 100 *Bopyroides hippolytes* was found; till now the species was not known as a host for any of these Bopyridæ.

13. *Spirontocaris turgida* Kr.

- Hippolyte turgida* + *H. Phippisii* Krøyer, Naturh. Tidsskrift vol. 3, 1841, p. 575.
 * — — — — — Kgl. Danske Vid. Selsk. math.-naturvid. Afh., vol. 9, 1842, p. 308, 314, Pl. 2, fig. 57—58, Pl. 3, fig. 59—68.
 — — — — — *Phippisii* S. J. Smith, Transact. Conn. Acad., vol. 5, 1879, p. 73.
Spirontocaris turgida H. J. Hansen, "Ingolf" 1908, p. 61.
Hippolyte Phippisii — — — — — V. Grönland 1887, p. 43.

- (St. 165) 62° 58' N, 50° 52' W, ca. 25 fm. 21—6—1909. 3 spec.

On one spec. the Bopyrid *Phryxus abdominalis* was found.

14. *Spirontocaris polaris* Sab.

- Alpheus polaris* Sabine, Suppl. to the App. of Capt. Parry's Voyage, 1824, p. 238, Pl. 2, fig. 5—8.
 * *Hippolyte polaris* + *H. borealis* Krøyer, Kgl. Danske Vid. Selsk. math.-naturvid. Afh., vol. 9, 1842, p. 324, 330, Pl. 3, fig. 74—81, Pl. 4, fig. 82.
 — — — — — S. J. Smith, Transact. Conn. Acad. vol. 5, 1879, p. 80.
 — — — — — Amazo Pfeffer, Jahrb. wiss. Anst. Hamburg, vol. 3, 1866, p. 36, fig. 6.
Spirontocaris polaris H. J. Hansen, "Ingolf" 1908, p. 63.
Hippolyte — — — — — V. Grönland, 1887, p. 45.

- (St. 465) 62° 58' N, 52° 52' W, ca. 25 fm. 21—6—1909. ca. 60 spec.
 (St. 419) 65° 09' N, 53° 33' W, 29 fm. 6—6—1909. 1 spec.
 (St. 371) 66° 44' N, 56° 16' W, ca. 150 fm. 20—5—1909. 1 spec.

One of the specimens from St. 465 is infested with *Bopyroides hippolytes*.

15. *Pandalus borealis* Kr.

- Pandalus borealis* Krøyer, Naturh. Tidsskrift vol. 2, 1838, p. 254.
 — — — Ibid., Ny Række, vol. 1, 1845, p. 461.
 — — — in Gaimard, Voyage en Scand., 1846 (1849?),
 Crust., Pl. 6, fig. 2.
 * — — — G. O. Sars, Report on Norw. Fish- and Marine-Invest.
 vol. 1, 1900, No. 3, p. 31, Pl. 9-10.
 — — — H. J. Hansen, "Ingolf" 1908, p. 70.
 — — — — V. Grønland, 1887, p. 49.

The Channel outside Nanortalik (ca. 60° N), 6-9-1909. 5 spec., from
 stomachs of *Gadus ogak*.
 (St. 341) 64° 34' N, 53° 20' W, 200 m. wire, 9-5-1909. 9 spec.
 (St. 183) 69° 19' N, 52° 56' W, 78 fm. 10-8-1908. 2 spec.

The specimens from St. 341 have very large eyes.

This shrimp was otherwise taken very often, sometimes in great
 numbers, as e. g. W. of "Store Hellefiske" bank, where in a depth
 of 175 fms. many liters were taken in one haul with otter-trawl;
 the largest specimens measured 15.5 cm. in length (30 cm. with
 the antennæ).

16. *Pandalus propinquus* G. O. Sars.

- Pandalus propinquus* G. O. Sars, Forh. Vid. Selsk. Christiania 1869 (1870),
 p. 148.
 — — — S. J. Smith, Rep. U. S. Comm. Fish and Fisheries
 1885 (1886) Pl. 13, fig. 1.
 * — — — Calman, Ann. Mag. Nat. Hist. ser. 7, vol. 3, 1899,
 p. 32, Pl. 1-4, fig. 2.
 — — — H. J. Hansen, "Ingolf" 1908, p. 72.
 — — — Kemp, Decap. Natant, Ireland, 1908 (1910), p. 89,
 Pl. 11, fig. 1-4.
 (St. 429) 63° 54' N, 53° 15' W, 988-1400 m. trawl. 8-6-1909. 1 spec.

17. *Acanthephyra purpurea* A. Milne-Edwards.

- Acanthephyra purpurea* A. Milne-Edwards, Comp. Rend. Ac. Sc. Paris,
 vol. 93, 1881, p. 933.
 * *Miersia Agassizii* S. J. Smith, Bull. Mus. Comp. Zool. vol. 10, 1882, p. 67,
 Pl. 11, fig. 5-7, Pl. 12, fig. 1-4.
 * *Acanthephyra purpurea* Kemp, Fisheries, Ireland, Sci. Invest. 1905 part
 1 (1906), p. 4-16, Pl. 1, Pl. 2, fig. 1-3 (ubi Litt.
 et Syn.).
 — — — H. J. Hansen, "Ingolf" 1908, p. 75.

Acanthephyra purpurea Kemp, Decap. Natant. Ireland, 1908 (1910) part
 1, p. 56.

- (St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909. 15 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1530 m. wire, 7-5-1909. 12 spec.
 (St. 338) 64° 01' N, 55° 30' W, 1185 m. wire, 8-5-1908. 11 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1100 m., 1200 m. wire, 8-5-1909,
 10 spec.

H. J. Hansen (l. c.) mentions the species from 6 stations, but
 he has only 1 spec. from each stat. Kemp (1908, l. c.) mentions
 the species from 32 stations (6 of which are from the Danish in-
 vestigations steamer "Thor"), but he has, as Hansen, from most
 of the stations only 1 specimen; the largest number from a single
 stat. is five, and that is but a single occurrence.

One of the specimens from St. 322 is infested with *Holo-
 phryxus Acanthephyrae* K. St. (fam. Dajidæ) (No. 84).

18. *Pasiphae tarda* Kr.

- Pasiphae tarda* Krøyer, Naturh. Tidsskrift. ser. 2, vol. 1, 1844-45, p. 453.
 — — — in Gaimard, Voyage en Scandinavie, 1846 (1849)
 Crust., Pl. 6, fig. 1.
 * *Pasiphae norregica* M. Sars, Bidrag til Kundskaben om Kristianiafjordens
 Fauna. Nyt Magazin f. Naturvid, vol. 15, 1868, p. 282, Pl. 4,
 Pl. 5, fig. 81, fig. 87-90.
 — — — *tarda* G. O. Sars, Oversigt af Norges Crust., Vid. Selsk. For-
 handl., Kristiania, 1882, No. 18, p. 48.
 — — — H. J. Hansen, "Ingolf" 1908, p. 78.
 — — — — V. Grønland, 1887, p. 51.
 — — — Wollebaek, Decap. Crust. 1-2. Bergens Museums Aar-
 bog 1908, No. 12, p. 72, Pl. 13.
 — — — K. Stephensen, Revideret Fortegn. over Danmarks marine
 Arter af Decap., Vid. Meddel. Naturh. Foren. Køben-
 havn 1909 (1910) p. 289.
 * — — — Kemp, Decap. Natant. Ireland 1908 (1910) p. 39-42, Pl.
 4, fig. 8-11.
 — — — *princeps* S. J. Smith, Rep. Decap. Crust. "Albatross" East coast
 U. S., Rep. U. S. Fish Commission 1882 (1884) p. 381,
 Pl. 5, fig. 2.
 — — — S. J. Smith, Report on the Decap. Crust. "Albatros"
 Eastcoast U. S., Rep. U. S. Fish Commission 1885 (1887),
 p. 609, 612, 613, 617, 619, 682.
 — — — Kemp, Decap. Natant. Ireland, 1908 (1910) p. 42-47,
 Pl. 4, fig. 1-7.

Vidensk. Meddel. fra den naturh. Foren. Bd. 64.

- (St. 15) 58° 08' N, 39° 24' W, 500 m. wire, 26—5—1908. 2 spec.
 (St. 76) 63° 49' N, 53° 27' W, 1300 m., 1300 m. wire, 23—6—1908. 1 spec.
 (St. 429) 63° 54' N, 53° 15' W, 988—1400 m. 8—6—1909. 1 spec.
 (St. 407—08) 64° 14' N, 55° 55' W, 839 m. clay. 2—6—1909. 1 spec.

Kemp (l. c. 1908 (1910) p. 42—43) has given a synopsis of the characteristics of *P. tarda* Krøyer and *P. princeps* S. J. Smith. Krøyer has published his description in Danish, and it seems that owing to this foreigners have not been able to read his description; otherwise Smith would probably not have founded *P. princeps* as a new species. In order to show the great agreement in the descriptions of Krøyer and Smith, I have made the following synopsis of the most important characters.

P. tarda Krøyer.

- (Naturhist. Tidsskrift, ser. 2, vol. 1, 1844—45, p. 453 seq.)
1. "The carapace, which is about $\frac{1}{3}$ of total length or half as long as the pleon including telson, is very much compressed". (From Krøyer's fig. in Gaimard: Voyage en Scandinavie, the carapace is seen to be 39 mm., abdomen excluding telson 59 mm.).
 2. "On the dorsum of the carapace is seen a sharp, but smooth carina, which goes about to the hinder edge of the carapace, terminating anteriorly in a little, mucronate and very much compressed rostrum, that . . . projects a little the anterior edge of the carapace".

P. princeps S. J. Smith.

- (Report U. S. Fish Commission for 1882 (1884), p. 381 seq.)
1. The pleon exclusive of the telson is about one half longer than the carapace". (Carapace 75 mm., pleon excluding the telson 112 mm.).
 2. "The dorsum of the carapax is rounded except for about a third of the length anteriorly, where it rises into a carina terminating in a short, mucronate and obliquely upturned rostrum overhanging, but projecting scarcely as far forwards as the front itself, which is prominent though rounded in outline as seen from above".

3. "The antennal scale is large . . . , lengthened ovate (more than 3 times as long as the breadth), apically rounded, without spines¹⁾" (the length is (in the fig. in Gaimard: Voyage) 17 mm., the breadth 4 mm.).
4. "The abdomen is provided along the whole middle line of the dorsum with a very conspicuous carina."
5. (Telson) "The tip is strongly cut into a sharp angle".
6. (Second pair of pereopods). "The second joint has on the lower edge towards the end 3 spines" (about the third joint Krøyer says nothing).
3. Antennal scale is . . . scarcely a third as broad as long, and the outer edge arcuate and terminating in an acutely triangular lamellar tooth" (scale: length 29 mm.) breadth 8.8 mm.).
4. "The second, third, fourth and fifth somites are dorsally carinate, the fourth and fifth most conspicuously. The sixth somite is . . . compressed, but scarcely carinated dorsally".
5. (Telson) "The tip (is) divided by a narrow sinus".
6. "The second pair (of pereopods) are armed with a few small spines along the lower edge of the propodus, and the lower distal angle of the carpus is produced into a sharp spine, but are otherwise nearly like the first pair . . . (smooth, naked and unarmed)".

¹⁾ About this G. O. Sars writes (Christiania Vid. Selsk. Forh. 1882, No. 18, Oversigt af Norges Crustaceer, p. 48) (in translation from Norwegian): "I have had opportunity myself to examine the type-specimen of Krøyer in the Copenhagen-Museum and have convinced myself that the spine in the antennal plate originally has been present, but has accidentally been broken in the present specimen". — At the present moment (1912) we have in the Zoological Museum in København (Copenhagen) only the mentioned specimen from the time of Krøyer, provided with the following note (in the hand writing of J. C. Schiödte), "*Pasiphae tarda* Kr. Sydl. Grønland: Jørgensen Kr." Unquestionably it is this specimen, about which Krøyer writes (l. c. 1844—45: the foot-note p. 455: "in one of the specimens the carina anteriorly had an incision, that made, so to speak, two humps; but this seems to be caused by an accidental damage".

As it may be seen the agreement is very close. The differences are not greater, than that they may be ascribed to individual variations (we must remember, that Krøyer had but two specimens, Smith even but one specimen).

The Zoological Museum in Copenhagen has a very large material, towards 1000 specimens of *P. tarda* Kr., of which the greater part has been captured in the Skagerak. To convince myself, that there were no specimens of *P. princeps* Smith in the material, that hitherto (by H. J. Hansen in "Ingolf" 1908 and by myself in "Vid. Meddel. Naturh. Foren." Kbhvn. 1909) has been determined as *P. tarda* Kr., I have examined each of the specimens, but the result has been quite different from what might be expected, as will be seen from the following.

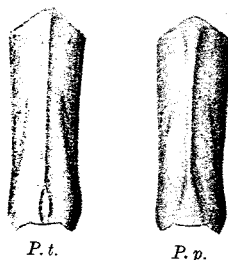


Fig. 1. Dorsal view of the 6th abdominal segment of *Pasiphae tarda* and *Pasiphae princeps*.

Rostrum varies so much, that it can not be used as a distinguishing character. The best characters are, according to my investigations, the sixth abdominal segment, the antennal plate and the spines of the basis of the second pereopod; but these spines are not to be found in specimens smaller than 25—40 mm., and even in larger specimens their number is varying. G. O. Sars says (l. c. 1882, p. 48) "the number of spines in the two first pairs of pereopods is a characteristic too inconstant to be considered as a real specific characteristic". Nevertheless we may in most cases use the characteristic of Kemp (l. c. 1908 (1910) p. 42—43) to separate the two "species" (specimens more than 30—40 mm. long).

Besides I have found a characteristic, that I have not seen

Kemp is right, that a great part of the specimens may be referred to one of the two principal forms; but as my investigations have shown, they are combined with numerous intermediate links.

described anywhere in the literature, viz. the carina in the sixth abdominal segment. This carina goes in the specimens, that from the antennal plate and the second pereopod are to be ascribed to *P. tarda*, just to the hind edge of the segment (fig. 1), but is in the hinder part divided into two almost parallel carines; in *P. princeps* the hinder part of the segment is simply compressed without any carina (fig. 1).

That the proportion in the length of antennal plate, carapace and abdomen cannot be used, appears from the following measurements; the specimens are determined from the shape of antennal plate, carapace and sixth abdominal segment) (the measurement are in mm.)

P. tarda

Locality	Total length	Antennal plate	Carapace	Abdomen excl. telson
Skagerak	83	12	25	46
—	70	10	21	40
—	79	12	24	44
—	68	9.5	20	30
—	101	14	33	65
62° 49' N, 18° 46' W.	73	11	23	42

P. princeps

Locality	Total length	Antennal plate	Carapace	Abdomen excl. telson
S. Greenland (Krøyer's type—specimen of <i>P. tarda</i> !)	108	imperfect	38	58
67° 19' N, 15° 52' W.	60	10	19	33
65° 28' N, 27° 29' W.	90	13	25	48

Even the form of the antennal plate may cause some difficulty. Thus I have seen one, otherwise somewhat typical *P. tarda* from the Skagerak, whose right antennal plate is as in *P. princeps*, whilst the left has the same form as in *P. tarda* (Kemp l. c., 1908 (1910), pl. 4, fig. 9); but from the measurements (antennal plate 10.5, carapace 23, abdomen excl. telson 38) it might be determined as *P. princeps*.

Of *P. norvegica* M. Sars, that in all essentials is like Kemp's description of *P. tarda*, G. O. Sars writes: (l. c. 1882, p. 49) "there is no doubt that the species *P. norvegica* described by my father... is identical with the species of Krøyer". That upon the whole the single specimens determined by Krøyer as *P. tarda* suit the description of *P. princeps*, is evident from the agreement of the descriptions of Krøyer and Smith, and as the two "species" are combined with intermediate links, we must unquestionably obliterate *P. princeps* Smith as species and take the name but as syn. of *P. tarda* Krøyer.

19. *Parapasiphae sulcatifrons* S. J. Smidt.

Parapasiphae sulcatifrons S. J. Smith, Rep. Comm. Fish and Fishery for 1882, (1884) p. 384 Pl. 5, fig. 4, Pl. 6, fig. 1-7
 — — — H. J. Hansen, "Ingolf" 1908, p. 79.
 * — — — Kemp, 1908 (1910), p. 47, Pl. 5.

(St. 322) 60° 07' N, 48° 26' W, 2000 m., wire, 3-5-1909, 2 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1300 m., 1530 m. wire, 7-5-1909, 5 spec.
 (St. 338) 64° 01' N, 55° 30' W, 1185 m., 1400-1500 m. wire, 8-5-1909, 5 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1100 m., 1200 m. wire, 8-5-1909, 6 spec.
 (St. 348) 64° 35' N, 56° 18' W, 900 m. wire, 11-5-1909, 4 spec.

New to W. Greenland. The largest specimen is from St. 333 and is 71 mm. long.

20. *Gennadas elegans* S. J. Smith.

Amalopenæus elegans S. J. Smith, Bull. Mus. Comp. Zool. vol. 10, 1882, No. 1, p. 87, Pl. 14, fig. 8-14, Pl. 15, fig. 1-15.
 **Gennadas* — — — Bouvier, Rés. Comp. Sc., Monaco, fasc. 33, (Pénéides), 1908, p. 25 (distrib.), p. 28 (key to the species of the genus), p. 35 (Syn. and litt.).
 — — — Bouvier, Bull. Mus. Océan. Monaco, No. 80, 1906.
Amalopenæus — — — Calman, Ann. Mag. Nat. Hist. ser. 7, vol. 11, 1903, p. 416.
Gennadas — — — H. J. Hansen, "Ingolf" 1908, p. 81.
 **Amalopenæus* — — — Kemp, 1908 (1910), p. 14, Pl. 1.
 — — — H. J. Hansen, V. Grønland 1887, p. 52.

(St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909, 7 spec.
 (St. 434) 62° 53' N, 54° 15' W, 1660 m., 1500-1200 m. wire, 9-6-1909, 7 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1300 m., 1530 m. wire, 7-5-1909, 15 spec.
 (St. 76) 63° 49' N, 53° 27' W, 1300 m., 1000 m. wire, 23-6-1908, 1 spec.
 (St. 338) 64° 01' N, 55° 30' W, 1185 m., 1400-1500 m. wire, 8-5-1909, 13 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1200 m. wire, 8-5-1909, ca. 25 spec.
 (St. 408) 64° 14' N, 55° 55' W, 839 m. (trawl), 2-6-1909, 1 spec.
 (St. 348) 64° 35' N, 56° 18' W, 900 m. wire, 11-5-1909, 6 spec.

It is very interesting, that the "Tjalfe" has taken so many specimens at each station; in "Ingolf" H. J. Hansen mentions but one specimen from each station; only at 2 stations were taken 2 specimens. The material from the "Tjalfe" thus fully confirms, what Bouvier says (Bull. Inst. Océanogr., Monaco, No. 97, 1907, p. 47-46): "le Gennadas élégans est l'espèce la plus commune du genre: il fut considéré comme une espèce rarissime aussi longtemps qu'on se borna aux pêches sur le fond; mais, depuis l'emploi du filet vertical, surtout de celui à grande ouverture, il apparaît très commun et doit être considéré comme un des éléments les plus caractéristiques de la faune bathypélagique dans nos régions. En Méditerranée, près des îles Baléares, et au centre de l'Atlantique, dans les régions des Sargasses, certains coups de filet nous donnèrent jusqu'à trente spécimens de ce joli Pénéide. Au-dessus de 1000 mètres, on ne rencontre guère que les larves de l'espèce; au dessous apparaissent les adultes qui, d'ailleurs, ne semblent jamais se tenir sur le fond".

21. *Sergestes arcticus* Kr.

Sergestes arcticus Krøyer, Kgl. Danske Vid. Selsk. Skrifter, 5. Række, naturvid.-math. Afd., vol. 4, 1859, p. 240, Pl. 3, fig. 7, Pl. 5, fig. 16.
 — — — H. J. Hansen, "Ingolf" 1908, p. 82 (ubi litt. et syn.).
 * — — — Wasserloos, Zur Kenntnis d. Metamorphose von Serg. arct., Zool. Anzeiger, vol. 33, 1908, p. 327, with figs.
 * — — — Kemp, 1908 (1910), p. 30, Pl. 3, fig. 13-19.
 — — — H. J. Hansen, V. Grønland 1887, p. 52.

1. the stage *Sergestes Rinkii*.
 (St. 1 a) 59° 25' N, 22° 56' W, 175 m. wire, 12-5-1908, many spec. (1 cm.²)
 (St. 1 b) — — surface — — (3 cm.²)
2. adults.
 (St. 15) 58° 08' N, 39° 24' W, 500 m. wire, 26-5-1908, 15 spec.
 (St. 1 a) 59° 25' N, 22° 56' W, 175 m. wire, 12-5-1908, 1 spec.
 (St. 321) 60° 07' N, 48° 26' W, 600 m. wire, 3-5-1909, 10 spec.
 (St. 322) — — 2000 m. wire, — 4 spec.
 (St. 434) 62° 53' N, 54° 15' W, 1660 m., 1500-1200 m. wire, 9-6-1909,
 1 spec.
 (St. 30 a) 63° 04' N, 56° 32' W, 500 m. wire, 7-6-1908, 15 spec.
 (St. 30 b) — — 70 m. wire, — 2 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1300 m., 1530 m. wire, 7-5-1909, 1 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1100 m., 1200 m. wire, 8-5-1909,
 1 spec.
 (St. 346) 64° 22' N, 56° 00' W. 800-400 wire, 10-5-1909, 1 spec.

The material states, that the species lives at W. Greenland; hitherto its occurrence there was doubtful (Krøyer).

The specimen from st. 346 is infested with *Holophryxus Richardi* Koehler (fam. Dajidae) (No. 83).

Euphausiacea.

22. *Thysanopoda acutifrons* Holt & Tatt.

- Thysanopoda pectinata* H. J. Hansen, Bull. Mus. Océanogr., Monaco No. 30, 1905, p. 16, fig. 12.
 — *acutifrons* Holt & Tattersall, Rep. Sea and Inland Fisheries, Ireland, 1902-03 (1905), pt. 2, app. No. IV, p. 102, 134.
 — — H. J. Hansen, Bull. Mus. Océanogr. Monaco, No. 42, 1905, p. 22.
 * — — Holt & Tattersall, Fisheries, Ireland, Sc. Invest. 1904, pt. 5 (1906), p. 8, Pl. I.
 — — H. J. Hansen, "Ingolf" 1908, p. 84.
 — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 6, fig. 4-5.
 ? — *microphthalmalma* Ortmann, Plankton-Exp., vol. 2, G. b. 1893, p. 9.
 non — *pectinata* Ortmann, *ibid.*, p. 10.

- (St. 15) 58° 08' N, 39° 24' W, 500 m. wire, 26-5-1908, ca. 40 spec.
 (St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909, ca. 30 spec.
 (St. 76) 63° 49' N, 53° 27' W, 1300 m., 1000 m. wire, 23-6-1908, 1 spec.

New to W. Greenland.

23. *Meganyctiphanes norvegica* M. Sars.

- Thysanopoda norvegica* M. Sars, Forh. Skand. Naturforskermøde 1856 (1857), p. 169.
Nyctiphanes — G. O. Sars, Forh. Vid. Selsk. Christiania 1833, p. 24.
 **Meganyctiphanes norvegica* Holt & Tattersall, Rep. Sea and Inland Fisheries, Ireland, 1902-03, pt. 2, No. IV, (1905), p. 105, 135, Pl. 16.
 — — H. J. Hansen, "Ingolf" 1908, p. 85.
 — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 8, fig. 8-9.
Nyctiphanes — Zimmer, Fauna arctica, vol. 3, 1904, p. 419.
- (St. 15) 58° 08' N, 39° 24' W, 500 m. wire, 26-5-1908, ca. 35 spec.
 (St. 9) 58° 33' N, 35° 55' W, 600 m. wire, 17-5-1908, ca. 15 spec.
 (St. 3) 58° 39' N, 30° 50' W, surface, 14-5-1908, 3 spec.
 (St. 303) 59° 28' N, 33° 05' W, surface, 26-4-1909, 1 spec.
 (St. 1 a) 59° 25' N, 22° 56' W, 175 m. wire, 12-5-1908, 2 spec.
 (St. 321) 60° 07' N, 48° 26' W, 600 m. wire, 3-5-1909, 10 spec.
 (St. 322) — — 2000 m. wire, — 7 spec.
 (St. 302) 60° 10' N, 28° 13' W, surface, 25-4-1909, ca. 20 spec.

24. *Thysanoessa inermis* Kr.

= *Rhoda inermis* Kr. + *Thysanoessa neglecta* Kr.

(See H. J. Hansen, The genera and species of the order Euphausiacea, with account of remarkable variation. Bull. Inst. Océanogr., Monaco, No. 210, 1911, p. 8-13, 38).

A. Forma *Rhoda inermis*.

- Thysanopoda inermis* Krøyer in Gaimard, Voyage en Scand., Crust. 1846 (1849?). Pl. 7, fig. 2.
 **Euphausia* — G. O. Sars, Forh. Vid. Selsk. Christiania 1882, No. 18, p. 9, 51, Pl. I, fig. 15.
Boreophausia — G. O. Sars, Norske Nordhavs-Exp., Crust., 1886, p. 13.
Rhoda — Stebbing, Ann. Mag. Nat. Hist., ser. 7, vol. 5, 1900, p. 10.
 — — Zimmer, Fauna arctica, vol. 3, 1904, p. 420.
 — — H. J. Hansen, "Ingolf" 1908, p. 86.
 — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 11, fig. 11-12.
Boreophausia — H. J. Hansen, V. Grönland 1887, p. 53.
 (St. 423) 65° 03' N, 54° 16' W, 120, 100 and 80 m. wire, 7-6-1909, 1 spec.

B. Forma *Thysanoessa neglecta* Kr.

- Thysanopoda neglecta* Krøyer, in Gaimard: Voyage en Scand., Crust., 1846 (1849?) Pl. 7, fig. 3.
 **Thysanoessa borealis* G. O. Sars, Forh. Vid. Selsk., Christiania 1882, No. 18, p. 9, 52 Pl. 1, fig. 16-18.
 — *neglecta* Zimmer, Fauna arctica, vol. 3, 1904, p. 423.
 — — H. J. Hansen, "Ingolf" 1908, p. 89.
 — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 19, fig. 28-29.
 — — H. J. Hansen, V. Grønland 1887, p. 54.
 (St. 9) 58° 33' N, 35° 55' W, 600 m. wire, 17-5-1908, 1 spec.

25. *Thysanoessa longicaudata* Kr.

- Thysanopoda longicaudata* Krøyer, in Gaimard: Voyage en Scandinavie, Crust., 1846 (1849?), Pl. 8, fig. 1.
 **Thysanoessa tenera* G. O. Sars, Forh. Vid. Selsk. Christiania 1882, No. 18, p. 9, 53, Pl. 1, fig. 19-20.
 — *longicaudata* Zimmer, Fauna arctica, vol. 3, 1904, p. 424.
 * — — Holt & Tattersall, Rep. Sea and Inland Fisheries, Ireland, 1902-03 (1905), pt. 2, App. No. 2, p. 107, 138, Pl. 15.
 — — H. J. Hansen, "Ingolf" 1908, p. 88.
 — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 20, fig. 30-31.
 — — H. J. Hansen, V. Grønland 1887, p. 54.
 (St. 11) 57° 41' N, 35° 28' W, surface, 20-5-1908, 2 spec.
 (St. 281) 57° 51' N, 43° 57' W, 500 m. wire, 29-9-1908, 15 spec.
 (St. 285) 57° 51' N, 43° 48' W, 1000 m. wire, 29-9-1908, 15 spec.
 (St. 286) 57° 59' N, 41° 21' W, 80-200 m. wire, 30-9-1908, ca. 35 spec.
 (St. 23) 58° 01' N, 51° 36' W, surface, 1-6-1908, 3 spec.
 (St. 13) 58° 08' N, 39° 10' W, 40 m. wire, 26-5-1908, many spec. (ca. 30 cm.³).
 (St. 15) 53° 08' N, 39° 24' W, 500 m. wire, 26-5-1908, many spec. (ca. 150 cm.³).
 (St. 278) 58° 16' N, 47° 12' W, 200-80 m. wire, 28-9-1908, 20 spec.
 (St. 308) 58° 20' N, 41° 12' W, 1000 m. wire, 28-4-1909, 20 spec.
 (St. 5) 58° 23' N, 34° 41' W, surface, 16-5-1908, 2 spec.
 (St. 6) 58° 24' N, 34° 53' W, surface, 16-5-1908, 10 spec.
 (St. 292) 58° 24' N, 30° 35' W, 500 m. wire, 8-10-1908, many spec. (ca. 4 cm.³).
 (St. 7) 58° 33' N, 35° 49' W, 150 m. wire, 17-5-1908, ca. 100 cm.³.
 (St. 9) 58° 33' N, 35° 55' W, 600 m. wire, 17-5-1908, ca. 100 cm.³.
 (St. 313) 58° 38' N, 46° 13' W, surface, 29-4-1909, ca. 35 spec.

- (St. 2) 58° 40' N, 30° 40' W, surface, 14-5-1908, ca. 35 spec.
 (St. 19a) 58° 41' N, 49° 44' W, 100 m. wire, 31-5-1908, 15 spec.
 (St. 19b) — — 200 m. wire, — 15 spec.
 (St. 316) 58° 59' N, 50° 28' W, 500 m. wire, 1-5-1909, 35 spec.
 (St. 276) 59° 18' N, 51° 00' W, 80 m. wire, 27-9-1908, 15 spec.
 (St. 1 a) 59° 25' N, 22° 56' W, 175 m. wire, 12-5-1908, many sp. (30 cm.³).
 (St. 1 b) — — surface, — many sp. (5 cm.³).
 (St. 298) 59° 41' N, 25° 02' W, 500 m. wire, 6-10-1908, 1 spec.
 (St. 321) 60° 07' N, 48° 26' W, 600 m. wire, 3-5-1909, many sp. (50 cm.³).
 (St. 322) — — 2000 m. wire, — many sp. (15 cm.³).
 (St. 326) 62° 05' N, 53° 41' W, 100 m. wire, 6-5-1909, many sp. (15 cm.³).
 (St. 270) 62° 21' N, 51° 31' W, 84 fath., 80 m. wire, 24-9-1908, 10 spec.
 (St. 329) 62° 36' N, 54° 12' W, pelagic townet, 6-5-1909, 3 spec.
 (St. 330) — — surface, 6-5-1909, many spec. (30 cm.³).
 (St. 30 a) 63° 04' N, 56° 32' W, 500 m. wire, 7-6-1908, many sp. (10 cm.³).
 (St. 30 b) — — 70 m. wire, — many sp. (100 cm.³).
 (St. 433) 63° 05' N, 54° 21' W, 80-120 m. wire, 9-6-1909, 20 spec.
 (St. 31 a & c) 63° 11' N, 56° 23' W, pelagic townet, 7-6-1908, 40 spec.
 (St. 33 b) 63° 25' N, 54° 34' W, 200 m. wire, 8-6-1908, many (3 cm.³).
 (St. 76) 63° 49' N, 53° 27' W, 1300 m. wire, 23-6-1908, 3 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1100 m., 1200 m. wire, 8-5-1909, 1 spec.
 (St. 405) 64° 25' N, 56° 12' W, 100 m. wire, 2-6-1909, many (3 cm.³).
 (St. 42) 65° 03' N, 54° 16' W, 80, 100, 120 m. wire, 7-6-1909, many (4 cm.³).
 (St. 196 d) 68° 40' N, 53° 12' W, 350 m. wire, 17-8-1908 many spec. (4 cm.³).

26. *Rhoda Raschii* M. Sars.

- Thysanopoda Raschii* M. Sars, Forh. Vid. Selsk. Christiania, 1863, p. 83.
 **Euphausia* — G. O. Sars, ibid. 1882, No. 18, p. 9, 51.
Boreophausia — Norman, Rep. Fish. Board Scotl., vol. 4, 1886, p. 156.
Rhoda — Zimmer, Fauna arctica vol. 3, 1904, p. 421.
 — — H. J. Hansen, "Ingolf" 1908, p. 87.
 **Boreophausia* — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 11 (fig.).
Thysanopoda — Vanhöffen, 1897, vol. 2, Pl. 1, fig. 1, p. 381 (nomen nudum) (coloured fig.)
Boreophausia — H. J. Hansen, V. Grønland 1887, p. 53.
 (St. 11) 57° 41' N, 35° 28' W, surface 29-5-1908, 1 spec.
 (St. 297) 59° 19' N, 27° 44' W, pelagic townet, 4-10-1908, 3 spec.
 (St. 329) 62° 36' N, 54° 12' W, pelagic townet, 6-5-1909, 1 spec.
 (St. 30 a) 63° 04' N, 56° 32' W, 500 m. wire, 7-6-1908, 1 spec.
 (St. 341) 64° 34' N, 53° 20' W, 200 m. wire, 9-5-1909, ca. 50 spec.
 (St. 196 d) 68° 40' N, 53° 12' W, 350 m. wire, 17-8-1908, 4 spec.
 Tassiusak at Egedesminde, from the stomach of *Gadus ogac*, 12-8-1908, many spec. (40 cm.³).
 (St. 171) 70° 41' N, 52° 07' W, 386 fath., 800 m. wire, 6-8-1908, 1 spec.
 (St. 172) 70° 42' N, 52° 14' W, 450 m. wire, 6-8-1908, 8 spec.

27. *Nematoscelis megalops* G. O. Sars.

- Nematoscelis megalops* G. O. Sars, Forh. Vid. Selsk. Christiania for 1888, No. 7, p. 27.
 * — — — Challenger Report, vol. 13, pt. 37, p. 127, Pl. 23, fig. 5-10, Pl. 24.
 — — — H. J. Hansen, Bull. Mus. Océanogr., Monaco, No. 30, 1905, p. 27.
 — — — Zimmer, Fauna arctica, vol. 3, 1904, p. 425.
 — — — H. J. Hansen, "Ingolf" 1908, p. 90.
 — — — Siboga-Schizop., 1910, p. 106.

- (St. 15) 58° 08' N, 39° 24' W, 500 m. wire, 26-5-1908, 3 spec.
 (St. 9) 58° 33' N, 35° 55' W, 600 m. wire, 17-5-1908, 1 spec.
 (St. 1a) 59° 25' N, 22° 56' W, 175 m. wire, 12-5-1908, 9 spec. (2 ♀♀ with ova).

As recorded above 2 of the specimens from St. 1 a carry their ova. In "On propagation and early development of Euphausiidae" in "Archiv for Mathematik og Naturvidenskab", vol. 20, 1898, No. 11, p. 9, G. O. Sars mentions but 4 species carrying their ovisacs, viz. *Nyctiphanes Couchii* (see also Holt & Tattersall, Schizop. from the N. E. Atlantic Slope, Ann. Rep. Fish. Ireland, 1902-03, No. 4 (1905) p. 104, Pl. 17, fig. 2), *N. australis*, *Nematoscelis microps* and *Stylecheiron carinatum*. Sars says "it is.... very probable, that these cases are quite exceptional, and that in the far greater number of Euphausiidae the ova are at once ejected into the water". I have from the literature not been able to find later additions to Sars' list.

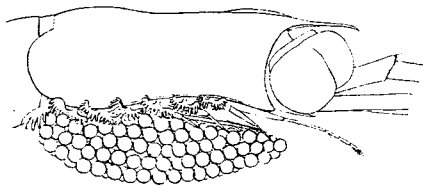


Fig. 2. *Nematoscelis megalops* with ovisac.

Nematoscelis megalops carries, as is shown by the figure (fig. 2), its ova in an ovisac pointed in front; seen from below it seems to be

composed of two parallel ovisacs and has about the same form as from the side, and it has about the same length as the carapace. The ova are (in alcohol) yellow, the diameter is 0.45 mm.

Mysidacea

28. *Gnathophausia zoea* Will.-Suhm.

- Gnathophausia zoea* Willemoes-Suhm, Nature, vol. 8, 1873, p. 401 fig. 1.
 — — — Transact. Linn. Soc., ser. 2, vol. 1, 1875, p. 32, Pl. 9, fig. 2-15.
 * — — — G. O. Sars, Challenger Report, Zool., vol. 13, pt. 37, 1885, p. 44, Pl. 6, fig. 6-10.
 * — — — *Willemoesii* G. O. Sars, ibid., p. 38, Pl. 5, fig. 1-6.
 — — — *zoea* Zimmer, Nordisches Plankton, vol. 6, 1909, p. 34 (with figs).
 — — — H. J. Hansen, "Ingolf" 1908, p. 93.
 — — — Siboga-Schizop., 1910, p. 17.

- (St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909, 2 spec.
 (St. 434) 62° 53' N, 54° 15' W, 1690 m. 1500-1200 m. wire, 9-6-1909, 12 spec.
 (St. 32) 63° 16' N, 55° 52' W, surface, (at night) 8-6-1908, 1 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1530 m. wire, 7-5-1909, 5 spec.
 (St. 76) 63° 49' N, 53° 27' W, 1300 m. 1000 m. wire, 23-6-1908, 9 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1100 m., 1200 m. wire, 8-5-1909, 7 spec.
 (St. 344) 64° 22' N, 55° 48' W, 1040 m. 1200 m. wire, 10-5-1909, 4 spec.

The largest specimen is from St. 322 and is 70 mm. exclusive of the rostrum (which is broken). In "Ingolf" H. J. Hansen mentions the species from 9 localities; but he has from no station more than 1 specimen.

29. *Eucopia unguiculata* Will.-Suhm.

- Charalaspis unguiculata* Willemoes-Suhm. Transact. Linn. Soc., ser. 2, vol. 1, 1875, p. 37, Pl. 8.
 (partim) *Eucopia australis* G. O. Sars. Challenger Report, Zool., vol. 13, pt. 37, 1885, p. 55, Pl. 9-10.
 * — — — *unguiculata* H. J. Hansen, Bull. Mus. Monaco, No. 42, 1905, p. 3.
 — — — "Ingolf" 1908, p. 95.
 — — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 37, fig. 59-60.
 — — — H. J. Hansen, Siboga-Schizop., 1910, p. 20.

- non *Eucopia australis* Dana, U. S. Expl. Exp., Crust., vol. 1, 1852, p. 609, p. 40, fig. 10 (teste Zimmer, l. c.)
- (St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909, 5 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1300 m., 1530 m. wire, 7-5-1909, ca. 25 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1000 m., 1200 m. wire, 8-5-1909, 6 spec.

In "Ingolf" H. J. Hansen mentions but a single specimen from the Davis-Straits (61° 50' N, 56° 21' W, 1435 fm.).

30. *Boreomysis tridens* G. O. Sars.

- Boreomysis tridens* G. O. Sars, Vid. Selsk. Forh., Christiania, 1869 (1870), p. 153.
 * — — — Monografi Norges Mysider, III, 1879, p. 17, Pl. 14.
 — — — H. J. Hansen, "Ingolf" 1908, p. 100.
 — — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 59, fig. 91-94.
 (St. 402) 64° 40' N, 56° 37' W, 720-775 m., trawl, 2-6-1909, 10 spec.

32. *Boreomysis nobilis* G. O. Sars.

- Boreomysis nobilis* G. O. Sars, Archiv f. Math. og Naturv., vol. 4, 1879, p. 428.
 * *Boreomysis nobilis* G. O. Sars, Norske Nordhavs-Exp., Crust., 1885, p. 54, Pl. 5, fig. 22-28.
 — — — Ohlin, 1901, p. 70, fig. 3.
 — — — Zimmer, Fauna arctica, vol. 9, 1904, p. 432.
 — — — H. J. Hansen, Ingolf 1908, p. 101.
 — — — Zimmer, Nordisches Plankton, vol. 6, 1909, p. 56, fig. 83-86.
 — — — H. J. Hansen, V. Grønland 1887, p. 214.
 (St. 431) 63° 24' N, 53° 10' W, 892 m. trawl, 9-6-1909, 2 spec.
 (St. 337) 64° 05' N, 52° 20' W, 1100 m., trawl, 8-5-1909, 1 spec.
 (St. 407-08) 64° 14' N, 55° 55' W, 839 m. clay, trawl, 2-6-1909, 10 spec.
 (St. 125) 69° 17' N, 52° 14' W, 550 m wire, 16-7-1908, many spec. (100 cm²).
 (St. 171) 70° 41' N, 52° 07' W, 386 fath., 800 m wire, 6-8-1908, many spec. (100 cm²).

32. *Boreomysis microps* G. O. Sars.

- Boreomysis microps* G. O. Sars, Forh. Vid. Selsk. Christiania for 1883, No. 7, p. 35.

- * *Boreomysis nobilis* G. O. Sars, Challenger-Report. Zool., vol. 13, pt. 37, 1885, p. 185, Pl. 33, fig. 7-10.
 — *subpellucida* H. J. Hansen, Bull. Mus. Océanogr., Monaco, No. 30, 1905, p. 8, fig. 5-8.
 — *microps*, Zimmer, Fauna arctica, vol. 3, 1904, p. 431.
 — — — Nordisches Plankton, vol. 6, 1909, p. 55, fig. 79-82.
 — — — H. J. Hansen, Ingolf 1908, p. 103.

- (St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909, 7 spec.
 (St. 434) 62° 53' N, 54° 15' W, 1660 m., 1500-1200 m. wire, 9-6-1909, 10 spec.
 (St. 333) 63° 18' N, 54° 55' W, 1300 m., 1530 m. wire, 7-5-1909, 20 spec.
 (St. 338) 64° 01' N, 55° 30' W, 1185 m., 1400-1500 m. wire, 8-5-1909, 20 spec.
 (St. 336) 64° 06' N, 55° 18' W, 1040-1100 m., 1200 m. wire, 8-5-1909, 25 spec.
 (St. 346) 64° 22' N, 56° 00' W, 800-400 m. wire, 10-5-1909, 25 spec.
 (St. 348) 64° 35' N, 56° 18' W, 900 m. wire, 11-5-1909, ca. 20 spec.
 New to W. Greenland.

33. *Longithorax fuscus* H. J. Hansen.

- * *Longithorax fuscus* H. J. Hansen, Ingolf 1908, p. 103, Pl. 5, fig. 1.
 — — — Zimmer, Nordisches Plankton vol. 6, 1909, p. 125, fig. 240-43.
 (St. 322) 60° 07' N, 48° 26' W, 2000 m. wire, 3-5-1909, 1 spec. (2,17 mm., very imperfect).

New to Greenland. — Only 4 specimens of this species are known, viz, besides the specimen from the "Tjalfe", 3 from the following localities: 61° 30' N, 17° 08' W, 1800 m. wire (S. of Iceland) (H. J. Hansen "Ingolf"), 49° 27' N, 13° 33' W, 2600 m., 2800 m. wire (H. J. Hansen, *ibid.*), and 50° 59' W, 11° 52' W, 900-1064 fms., temp. 15,4° C. (W. of Ireland) (Tattersall, Fisheries, Ireland, Sci. Invest., 1911 p. 52).

34. *Meterythrope robusta* S. I. Smith.

- Meterythrope robusta* S. I. Smith, Transact. Conn. Acad., vol. 5, 1879, p. 93, Pl. 12, fig. 1-2.
 * *Parethyrops* — G. O. Sars, Monografi Norges Mysider, III, 1879, p. 98, Pl. 39.
 — — — Zimmer, Fauna arctica, vol. 3, 1904, p. 445.

- Meterythroptis robusta* Zimmer, Nordisches Plankton. vol. 6, 1909, p. 85, fig. 168-72.
 — — H. J. Hansen, Ingolf 1908, p. 106.
 non — — Holt & Tattersall, Rep. Sea and Inland Fisheries, 1902-03 (1903), pt. 2, App. No. 4 (is *Parerythroptis obesa*, see H. J. Hansen l. c., p. 107, *Meterythroptis robusta*).
 (St. 196 d) 68° 40' N, 53° 12' W, 410 m., 350 m. wire, 17-8-1908, 1 spec.

35. *Mysis oculata* O. Fabr.

- Cancer oculatus* O. Fabricius, Fauna Groenlandica, 1780, p. 245.
 — — — Kgl. Danske Vid. Selsk. Skrifter, Ny Samling, vol. 1, 1781, p. 565, fig. 2.
Mysis oculata Krøyer in Gaimard, Voyage en Scandinavie, Crust., 1846 (1849?) Pl. 8, fig. 2-3.
 — — — Naturhist., Tidsskrift, 3. Række, vol. 1, 1861, p. 13.
 * — — G. O. Sars, Monografi Norges Mysider, III, 1879, p. 69, Pl. 31.
 — — — Zimmer, Fauna arctica, vol. 3, 1904, p. 461.
 — — — Nordisches Plankton, vol. 6, 1909, p. 160, fig. 348-54.
 — — — H. J. Hansen, Ingolf, 1908, p. 114.
 — — — V. Grønland 1887, p. 214.

Vaskebugten close by Ritenbenk, from the stomach of *Gadus callarias*, 29-7-1908, many spec. (ca. 15 cm.?).

Cumacea.

36. *Diastylis Goodsirii* Bell.

- Alauna Goodsirii* Bell, in Belcher, Last of the arctic voyages, vol. 2, 1855, p. 403, Pl. 34, fig. 2.
 * *Diastylis* — H. J. Hansen, Dijnphna—Togtets zool.-botan. Udbytte, 1887, p. 241, Pl. 22, fig. 5, Pl. 23, fig. 1.
 — — — Zimmer, Fauna arctica, vol. 1, 1900, p. 422.
 * — — — G. O. Sars, Account, vol. 3, Cumac., 1900, p. 54, Pl. 41.
 — — — H. J. Hansen, V. Grønland 1887, p. 206.
 (St. 369) 66° 45' N, 56° 30' W, ca. 200 fath., trawl, 20-5-1909, ca. 20 spec.

37. *Diastylis spinulosa* Heller.

- Diastylis spinulosa* Heller, Denkschr. d. K. Akad. d. Wiss., Wien, Math. naturwiss. Cl., vol. 35, 1878, p. 28, Pl. 1, fig. 5.
 — — — Hoeck, Niederl. Arch. f. Zool., Supplbd. 1, 1882, p. 25.
 — *nodosa* G. O. Sars, Norske Nordhavs-Exp., Crust. 1885, p. 61, Pl. 7, fig. 1-4.

- * *Diastylis spinulosa* G. O. Sars, Account vol. 3, Cumac., 1900, p. 55, Pl. 42.
 — — — Zimmer, Fauna arctica vol. 1, 1900, p. 225.
 — — — H. J. Hansen, V. Grønland 1887, p. 205.

(St. 369) 66° 45' N, 56° 30' W, ca. 200 fath., trawl, 20-5-1909, 4 spec.

Amphipoda.

38. *Scina* sp.

(St. 338) 64° 01' N, 55° 30' W, 1185 m., 1400-1500 m. wire, 8-5-1909, 1 spec., very imperfect.

The genus is new to Greenland.

Genus *Lanceola*.

Key to the species: Stebbing in Biscayan Plankton, part 2, Amphip. & Cladocera, Transact. Linn. Soc., London, 1904, ser. 2, Zool., vol. 10, part. 2, p. 29.

39. *Lanceola serrata* Bovallius.

- Lanceola serrata* Bovallius. On some forgotten genera among Amphip. Crust., Bihang Kgl. Svenska Vet. Akad. Handl. vol. 10, 1885, No. 14, p. 7.
 — — — Arctic and Antarctic Hyperids, Vega-Expeditionens vet. Iaktt., vol. 4, 1887, p. 554.
 * — — — Amphip. Hyper. part I. 1. Kgl. Svenska Vet. Akad. Handl. vol. 21, 1887, No. 5, p. 34, Pl. 5, fig. 2-13.

(St. 333) 68° 18' N, 54° 55' W, 1300 m., 1530 m. wire, 7-5-1909, 1 spec.
 (St. 344) 64° 22' N, 55° 18' W, 1040 m., 1200 m. wire, 10-5-1909, 1 spec.

? 40. *Lanceola Sayana* Bovallius.

- Lanceola Sayana* Bovallius. On some forgotten genera among the Amphip. Crust., Bihang Kgl. Svenska Vet. Akad. Handl., vol. 10, 1885, No. 14, p. 7, Pl. 1, fig. 1.
 * — — — Bovallius, Kgl. Svenska Vet. Akad. Handl., vol. 21, No. 5, 1887, p. 30, Pl. 4, Pl. 5, fig. 1.
 — — — Chevreux, Amphip. de l'Hirondelle. Rés. Camp. Sci. fasc. 16, Monaco, 1900, p. 134, Pl. 14, fig. 10 (Coloured fig.).
 — — — Vosseler, Amphip. d. Plankton-Exp. I, Hyperiidien I. Mitt. Konigl. Natur-Kabinet, Stuttgart, No. 17, 1901, p. 127.

Vidensk. Meddel. fra den naturh. Foren. B. 64.

