

# Decapoda Natantia (Crustacea) in the Faroe Area

Decapoda Nantantia (Crustacea) í føroyskum øki

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## Úrtak

Tá ið farið varð undir norðurlensku verkætlanina BIOFAR í 1987, vórðu kanningar gjørðar av havbotnfaununi á leiðunum við Føroyar á størri dýpi enn 100 m. Hesar kanningar vórðu av í 1993, og í 1995 varð farið undir nýggja verkætlan BIOFAR 2, har royndir vórðu tiknar av havbotnfaununi frá fjøruni og niður á 100 m dýpi.

Undan BIOFAR vóru skrásett 25 sløg av rækjum á fiskileiðunum við Føroyar. Aftan á BIOFAR-royndirnar øktist talið á sløgum upp í 35.

Hesar upplýsingar verða givnar um hvørt slagið: galdandi navn saman við høvundi og útgávuári, samheiti, tilvísing til góðar lýsingar og greiningar av slagnum, eldri føroyskar uppskriftir, BIOFAR-støðin, har slagið varð funnið, økislýsing, dýpdarøki, mált temperaturoki ella mett temperaturoki í sjónum næst botninum, nøring ella upplýsingar um kvenndýr við rognum, vatnslagið, har tey einstøku dýrini vórðu tikin, og stuttar upplýsingar um útbreiðsluna av og dýpdarøkið hjá sløgnum í Atlantshavinum.

25 sløg hava hyperbentiskan ella epibentiskan lívshátt, fimm eru bentopelagisk, og fimm eru meso- ella batypelagisk. Sjey sløg eru bert, og 8-9 onnur sløg fyri tað mesta, skrásett á landgrunninum ella á bankatoppunum (0-299 m), 3-4 sløg eru eins ofta skrásett á landgrunninum og hellingini (0-999 m), 10-11 sløg eru fyri tað mesta skrásett á hellingini (300-999 m), og 5-6 sløg eru fyri tað mesta ella bert tikin á djúpum havi (>1000 m). 24 sløg eru fyri tað mesta avmarkað til »heitan« atlantssjógv (> 7°C), fyra sløg eru fyri tað mesta úr køldum botnsjógv í Nørskahavinum, og tvey sløg eru skrásett í tveimum ella trimum sløgum av sjógv.

## Abstract

Investigations on the marine benthic fauna of the Faroe Fishery Territory started in 1987 as a Nordic programme called BIOFAR with sampling efforts concentrated on depths deeper than 100 m. After the BIOFAR sampling was concluded in 1993, a new programme called BIOFAR 2 started in 1995 to sample the marine benthic fauna from the intertidal to 100 m depth.

Before BIOFAR 25 species of shrimps and prawns had been reported from the Faroese Fishery Territory. The BIOFAR sampling increased the number of species to 35.

For each species the following information is given: the valid name with author and publication year, synonyms, reference to a good description or diagnosis of the species, previous Faroese records, the BIOFAR stations where it was found, area descriptions, depth range, measured temperature range or estimated temperature range of the near-bottom water, breeding or notes on ovigerous females, the type of water mass in which the specimens were caught, and short notes on the distribution and the depth range of the species in the Atlantic Ocean.

Twenty-five species have a hyperbenthic or epibenthic life style, five are bentopelagic, and five are meso- or bathypelagic. Seven species are exclusively, and 8-9 additional species are most often recorded from the Faroe plateau or the tops of the banks (0-299 m), 3-4 species are equally often reported from the plateau and the slope (0-999 m), 10-11 species are most often recorded from the slope (300-999 m), and 5-6 species are mostly or only caught in deep water (> 1000 m). Twenty-four species are mostly confined to »warm« Atlantic Water (> 7°C), 5 species are mostly from cool Arctic Intermediate

Water (1.5-3.5 °C), 4 species are mostly from cold bottom water of the Norwegian Sea, and 2 species are recorded from two or three different water masses.

### Previous investigations

In 1895-96 the Danish »Ingolf« Expedition sampled 22 deep-water stations off the Faroes, in the area which today is defined as the Faroese Fishery Territory. The research vessel »Thor«, used by the Danish Committee for the Exploration of the Sea, made fishery investigations around the Faroes under the leadership of J. Schmidt in 1903-05. The Decapoda Natantia collected by »Ingolf«, »Thor«, Th. Mortensen and F. Jørgensen, and a part of the material collected by the Norwegian fishery research vessel »Michael Sars« was studied by H. J. Hansen (1908). The following 23 species were recorded from the Faroe area: *Acanthephyra purpurea*, *Bythocaris leucopis*, *B. payeri*, *B. simplicirostris*, *Crangon allmanni*, *Eualus gaimardii*, *Eualus pusiolus*, *Hippolyte varians*, *Hymenodora glacialis*, *Lebbeus polaris*, *Pandalina brevisrostris*, *Pandalus borealis*, *P. montagui*, *P. propinquus*, *Pasiphaea tarda*, *Philocheras bispinosus*, *Pontophilus norvegicus*, *Sabineia sarsii*, *Sclerocrangon boreas*, *S. ferox*, *Sergestes arcticus*, *Sergia robustus*, and *Spirontocaris spinus*.

The »Michael Sars« sampled some stations in the area in the years 1900, 1902, 1904, 1905 and 1910. Wollebæk (1909) gave some records of *Pontophilus norvegicus* and *Sabineia sarsii* based on that material. Later, the small vessel »Armauer Hansen« of Bergen Museum sampled some stations in 1914. Sund (1913) revised *Pasiphaea* and added *Pasiphaea multiden-*

*tata* to the Faroese fauna and published new records of *P. tarda* (as *P. principalis*).

Sund (1920) reported records of *Sergestes arcticus* and *Sergia robustus*. Grieg (1927) studied and reviewed part of the material collected by »Michael Sars« and »Armauer Hansen« and reported new records of the species *Bythocaris leucopis*, *Hymenodora glacialis*, *Lebbeus polaris*, *Pandalus montagui*, *Pasiphaea multidentata*, *P. tarda*, *Pontophilus norvegicus*, *Sabineia sarsii*, and *Sergestes arcticus*.

Stephensen (1928) contains information on the distribution of marine Decapoda in water shallower than 200 m. Eleven species of the suborder Natantia are reported adding *Philocheras echinulatus* to those listed above.

T. Brattegard sampled five stations in the Faroe area in 1983 using a modified Rothlisberg and Percy epibenthic sampler described in Brattegard and Fosså (1991). T. Brattegard and J.-A. Sneli sampled 12 stations in 1986 and one station in 1987 in the Faroe area using the epibenthic sampler and a detritus sledge (Sneli-sledge) (Sneli, 1998). These stations are included in the BIOFAR station list (Nørrevang *et al.*, 1994).

Rømer (1991) found additional, unreported material from the Faroe area in the collections of the Zoological Museum, University of Copenhagen. The material had been collected by the vessels »Thor« in 1913, »Amy« (replacement vessel for »Dana« (II) which was lost in 1935: Dr Ole S. Tendal, pers. commn) in 1937, »Dana« in 1938-39, 1946 and 1954, and »Hvidbjørnen« in January 1979.

Matz Berggren made collections and observations on shallow water shrimps in the phytal zone among the Faroe islands in August 1987, June 1988 and August 1991 to study habitat choice of the species (Berggren, 1994).

### **The BIOFAR and BIOFAR 2 investigations**

The intention with the BIOFAR programme »Investigations on the marine fauna of the Faroe Islands« was to study the invertebrate fauna at depths deeper than 100 m to supplement and update information in »The Zoology of the Faroes« (Spärck *et al.*, 1928-37; 1928-42; 1935-42; Spärck † and Tuxen, 1928-71).

During the BIOFAR programme in the years 1987-90 (some samples also taken in 1991-93) (Nørrevang *et al.*, 1994) roughly 600 localities were sampled, at depths from 20 to 2420 m, with 790 deployments of sampling gear. The stations sampled at depths shallower than 100 m were taken when foul weather made sampling in open water impossible. Information on the BIOFAR stations (date, position, depth, sampling gear, mean bottom temperature and its standard deviation, water mass or mixture of water masses, maximum amplitude of the total tidal current, and bottom type) is given in Nørrevang *et al.* (1994). The oceanographic data were originally calculated by H. Westerberg (see Westerberg, 1990).

Sorting and preliminary analyses of material from stations shallower than 100 m revealed a number of species never reported from the Faroes. To sample the marine

fauna from all habitats from the upper splash zone down to 100 m depth a successor to the BIOFAR programme was needed. The Faroese government and the Carlsberg Foundation, Denmark, generously funded a new 3-year programme called BIOFAR 2, which started in 1995. Information on stations sampled during BIOFAR 2 can be obtained from Kaldbak Marine Laboratory, FO-180 Kaldbak, the Faroe Islands.

### **Material and results**

The BIOFAR material was collected using benthic sampling gear (Nørrevang *et al.*, 1994). The epibenthic sampler collects material only at the water/sediment interface and is especially suited for hyperbenthic organisms (species often swimming in the benthic boundary layer) like shrimps, while the other (bottom trawl, detritus sledge, dredges) may have caught specimens in the water column. The BIOFAR 2 material so far has been collected by intertidal hand-sampling, diving and use of a light triangular dredge and a modified Ockelmann detritus-sledge (Brattegard, 1973).

Decapoda Natantia from BIOFAR were found in 59 samples taken by the epibenthic sampler (78 % of the epibenthic sampler deployments), 22 (67 %) bottom trawl samples, 90 (55 %) detritus sledge samples, and 125 (49 %) dredge samples (triangular-, rectangular-, scallop-, and anchor-dredge).

Fosså *et al.* (1992) concluded that in an area of complex hydrography benthic species can be grouped and classified according to their distribution in the water masses. Knowledge about the water masses

in the Faroe area may be important for zoogeographical analyses. In the area there are, according to Westerberg (1990), three main categories of water mass which differ with respect to formation area and general flow direction: Atlantic Water (AW), bottom water of the Norwegian Sea (NW), and Arctic Intermediate Water (AI).

The Atlantic Water (AW) forms the inflow of water in the upper layers to the Norwegian Sea. The salinity is  $> 35.1$ . The temperature is above  $7\text{ }^{\circ}\text{C}$ , except in depressions on the Faroe plateau where winter-cooled water might be trapped.

The bottom water of the Norwegian Sea (NW) forms the coldest component of the water overflowing the thresholds around the Faroes to the Atlantic. The temperature is below  $0\text{ }^{\circ}\text{C}$ .

The Arctic Intermediate Water (AI) is present between the warmer AW and the colder NW. AI, of which several types can be distinguished, is formed north of the Arctic (or Polar) front in the Iceland and Greenland Seas. From the areas of generation AI sinks and spreads to the northern slope of the Faroe-Iceland Ridge which it follows towards the Faroe plateau and into the Faroe-Shetland Channel. In the Faroe area this water usually has a temperature between  $1.5$  and  $3.5\text{ }^{\circ}\text{C}$ .

Water with temperatures between  $3.5$  and  $7.0\text{ }^{\circ}\text{C}$  is a mixture of AW and AI. Colder water with temperatures between  $0$  and  $1.5\text{ }^{\circ}\text{C}$  found north of both the Faroe-Iceland Ridge and of the Faroe plateau, and in the Faroe-Shetland Channel is a mixture of AI and NW. Water of the same temperature range south of the Faroe-Iceland Ridge

is a mixture of AW, AI and NW.

Parts of the material of Decapoda Natantia collected during BIOFAR was used by Erik Ibsen Rømer in his cand. scient. thesis (Rømer, 1991) (Zoological Museum, University of Copenhagen). The theme for the thesis was geographical distribution and depth distribution of bottom-related shrimps and prawns of the Faroe area in relation to hydrography, especially temperature. The sorting of the material collected in the years 1987-90 was not completed at the time Rømer wrote his thesis. Additional specimens from unsorted and incompletely sorted BIOFAR material have been added in this paper as well as material from some BIOFAR 2 stations. Under each species specimens from deployments indicated with normal letters were studied by both authors, boldface indicate specimens studied by E.I.R., and italics indicate specimens studied by T.B.

For each species in the systematic list below the following information is given: the valid name with author and publication year; synonyms when relevant; reference to a good description of the species; previous Faroese records; the BIOFAR and BIOFAR 2 stations where it was found; area descriptions (Fig. 1); the depth range; measured temperature range or estimated temperature range of the near-bottom water (based on data from a database created by H. Westerberg, in Nørrevang *et al.*, 1994); breeding or notes on ovigerous females; the type of water mass in which the specimens were caught (identified by H. Westerberg, in Nørrevang *et al.*, 1994); and short notes on the distribution and the depth range of the

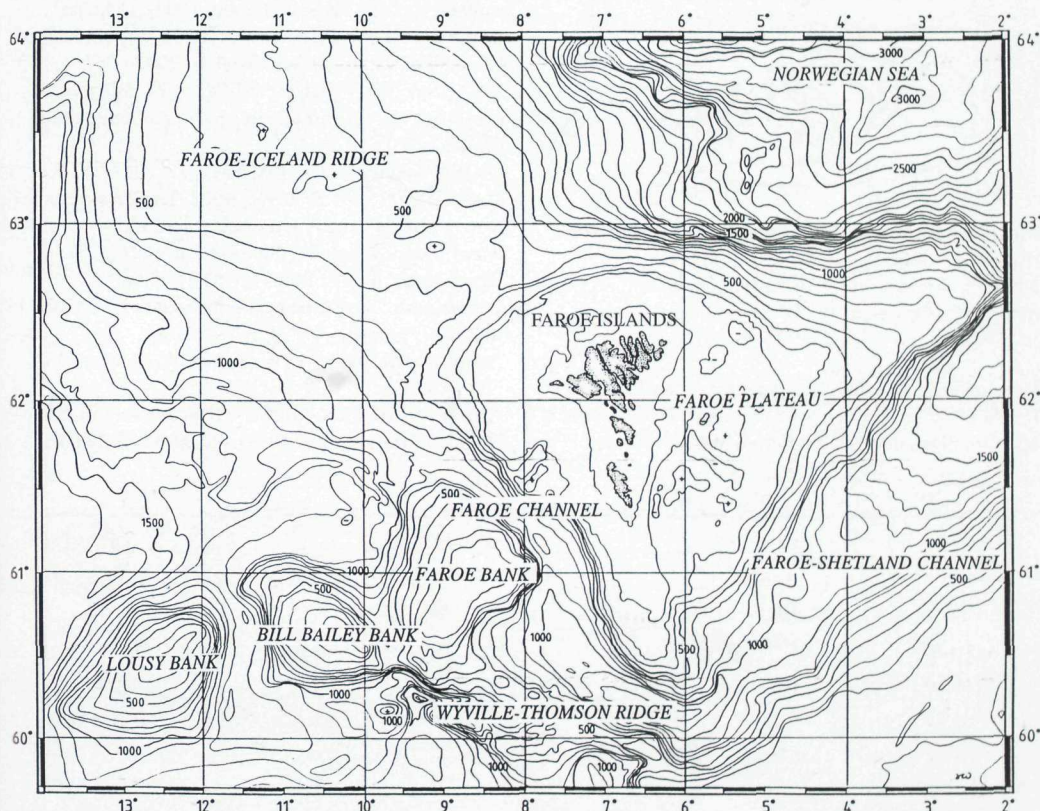


Fig. 1. Map of the Faroe area with names of sub-areas.

Mynd 1. Kort av føroyska økinum við nøvnum á undirøkjum.

species in the Atlantic Ocean. Data on the distribution and the depth range in the Atlantic Ocean are in most cases cited from Smaldon *et al.* (1993). In cases where greater details are needed other sources are used. Newer results adding to or changing the concepts of geographical distribution and depth range are also referred to. The habitus drawings presented are from Sars (1885: Figs 5, 8, 42; 1912: Fig. 15), Kemp (1910: Fig. 4), Sivertsen and Holthuis (1956: Fig. 10), Christiansen (1972: Figs 2,

7, 11, 13, 16, 17, 18, 21, 28, 30, 38, 40) and Smaldon (1995: Figs 20, 23, 24, 26, 31, 33, 34, 35).

#### Order DECAPODA

#### Suborder NATANTIA

#### Infraorder PENAEIDEA

#### Family SERGESTIDAE

Genus *Sergestes* H. Milne Edwards, 1830

*Sergestes arcticus* Krøyer, 1855 (Fig. 2)

Good description: Kemp (1910: 30, pl. III, figs. 13-19).

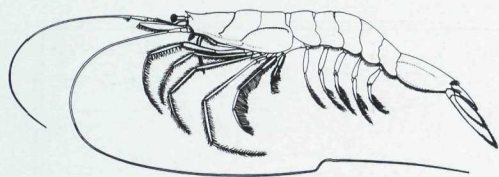


Fig. 2. *Sergestes arcticus* Krøyer, length up to 65 mm. (From Christiansen, 1972).

Mynd 2. *Sergestes arcticus* Krøyer, longd upp í 65 mm (Úr Christiansen, 1972).

Previous records: »Ingolf«-Expedition: Stn 140, 63° 29' N, 6° 57' W, 1468 m, -0.9 °C, and "Thor" caught it at two stations north of the Faroes and two stations

southwest of the Faroes (Hansen, 1908). »Michael Sars«: Stn 82 (1902), 61° 09' N, 9° 54' W, vertical haul at 200-150 m, bottom depth >1000 m (Grieg, 1927); Stn 102 (1910), 60° 57' N, 4° 38' W, pelagic haul from 750 m, 3 immature specimens and 1 male (Sund, 1920).

BIOFAR stations: 493, 498, 564, 742, 744, 751, 803, 804, 805, 806, 807, 809, 810, 9002. The specimens were probably caught in the water column.

Areas: Deep water all around the Faroes (Fig. 3).

Depth range: over bottoms at 360-1500 m.

Temperature: measured near bottom at two stns, -0.9 to -0.8 °C.

Bottom water masses: AW (2 stns), AI (9 stns), and NW (4 stns).

Atlantic distribution: From c. 71°N, Norway to 29° S, Namibia (Macpherson, 1991) and 33-35° S, South

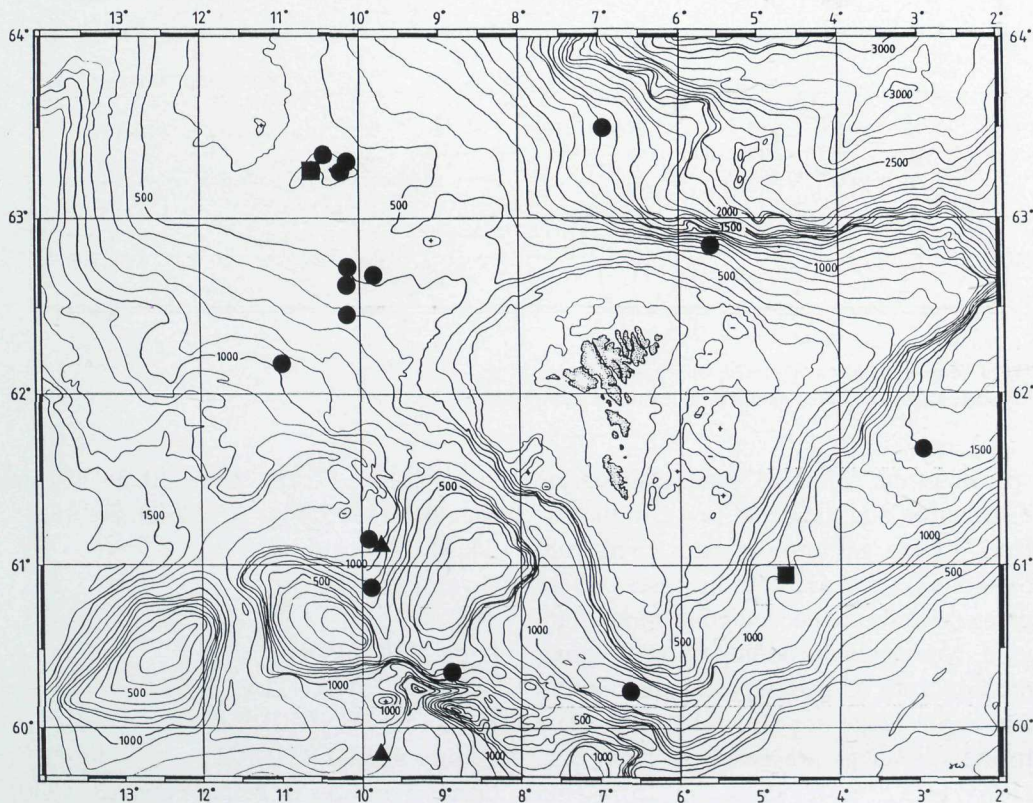


Fig. 3. Records of *Sergestes arcticus* Krøyer (●), *Sergia robustus* (S.I. Smith) (▲), and both species (■) in the Faroe area.

Mynd 3. Skrásetingar av *Sergestes arcticus* Krøyer (●), *Sergia robustus* (S.I. Smith) (▲), og bæði sløg (■) í fðroyskum øki.

Africa (Kensley, 1981); western Mediterranean (Casanova, 1976); the Faroes; south and west off Iceland; Irminger Sea; off West Greenland from ca. 64° 30' N (once at 70° N) to off the U.S.A. east coast between 41° 35' N and 33° 42' N (Stephensen, 1935); and off Montevideo, Uruguay.

Atlantic depth range: (10-) 100-900 (-1200) m, upper mesopelagic (Omori, 1974; Hargreaves, 1985), strong vertical migrant (Hargreaves, 1985: table 1, fig. 6).

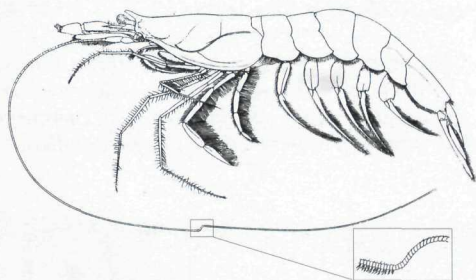


Fig. 4. *Sergia robustus* (S.I. Smith), length up to 90 mm (From Kemp, 1910).

Mynd 4. *Sergia robustus* (S.I. Smith), longd upp í 90 mm (Úr Kemp, 1910).

### Genus *Sergia* Stimpson, 1860

*Sergia robustus* (S. I. Smith, 1882) (Fig. 4)

Synonym: *Sergestes robusta* S. I. Smith (1882).

Good description: Kemp (1910: 25, pl. III, figs. 1-12, as *Sergestes robustus*).

Previous record: »Michael Sars«: Stn 102 (14 August 1902), 61° 08' N, 9° 46' W, 847 m, 3 specimens; Stn 102 (1910), 60° 57' N, 4° 38' W, pelagic haul from 750 m, 2 immature specimens (Sund, 1920). »Thor« at 59° 49' N, 9° 46' W (Hansen, 1908).

BIOFAR stations: 810. The specimens were probably caught in the water column.

Area: Faroe-Iceland Ridge (Fig. 3).

Depth: bottom at 421-847 m.

Temperature: Unknown.

Bottom water mass: probably AW (2 stns) and AI (1 stn).

Atlantic distribution: In addition to the localities mentioned it has been recorded from Bay of Biscay (Casanova, 1976) to 29° S, Namibia (Macpherson, 1991); western Mediterranean (Casanova, 1976); off the east coast of U.S.A from 41° 20' N to 34° 28' N

(Hansen, 1908), and the eastern Gulf of Mexico (Flock and Hopkins, 1992).

Atlantic depth range: It has been caught in the water column in 100 - 900 (-1150) m over bottoms at depths of 680 to 4707 m (Hansen, 1908; Kemp, 1910), lower mesopelagic, short-distance migrant (Omori, 1974).

### Infraorder CARIDEA

#### Family OPLOPHORIDAE

Genus *Acanthephyra* A. Milne Edwards, 1881

*Acanthephyra purpurea* A. Milne Edwards, 1881

Good description: Kemp (1906: pl. I and II, figs 1-3); Murray and Hjort (1912: pl. 3, fig. 2); Kemp (1939: 569).

Previous records: 59° 28' N, 8° 01' W, 1293 m (Hansen, 1908). The specimens were probably caught in the water column.

BIOFAR stations: None.

Area: Southern slope of Wyville-Thomson Ridge.

Depth: bottom at 1293 m.

Atlantic distribution: Atlantic species, roughly between 20° N and 59° N (Sivertsen and Holthuis, 1956); Gulf of Mexico (Flock and Hopkins, 1992).

Atlantic depth range: 25 - >1500 (-3400) m, most common between 200 and 900 m (Sivertsen and Holthuis, 1956; Omori, 1974), lower mesopelagic, strong vertical migrant (Omori, 1974; Flock and Hopkins, 1992).

### Genus *Hymenodora* G. O. Sars, 1877

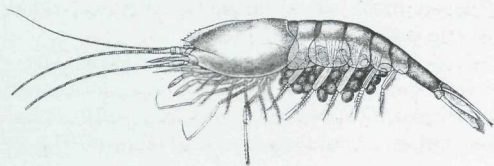
*Hymenodora glacialis* (Buchholz, 1874)

(Fig. 5)

Synonym: *Pasiphaë glacialis* Buchholz (1874).

Good descriptions: Buchholz (1874: 279, pl. 1, fig. 2, as *Pasiphaë glacialis*); Sars (1885: 37, pl. IV, figs 1-29); Sivertsen and Holthuis (1956: 15, figs. 11-12).

Previous records: »Ingolf«-Expedition: Stn 139, 63° 36' N, 7° 30' W, 1322 m, -0.6 °C; Stn 140, 63° 29' N, 6° 57' W, 1468 m, -0.9 °C; 60° 03' N, 5° 51' W, 988 m, -1.4 °C (by Norman) (Hansen, 1908). »Michael Sars«: Stn 102 (1902), 63° 13' N, 6° 32' W, 1783 m, -0.41 °C; Stn 10 (1905), 63° 44' N, 2° 33' W,



**Fig. 5.** *Hymenodora glacialis* (Buchholz), length up to 83 mm (From Sars, 1885).

**Mynd 5.** *Hymenodora glacialis* (Buchholz), longd upp í 83 mm (Úr Sars, 1885).

horizontal haul, 1000 m wire; Stn 11 (1905), 64° 01' N, 3° 23' W, horizontal haul, 1000 m wire. »Armauer Hansen«: Stn 2 (1914), 63° 02' N, 2° 41' W, 900 m wire (Grieg, 1927).

BIOFAR stations: 67, 563, 564, 732. The specimens

were probably caught in the water column.

Areas: Deep water north of the Faroes and in the Faroe-Shetland Channel. One record from deep water northwest of Faroe Bank (Fig. 6).

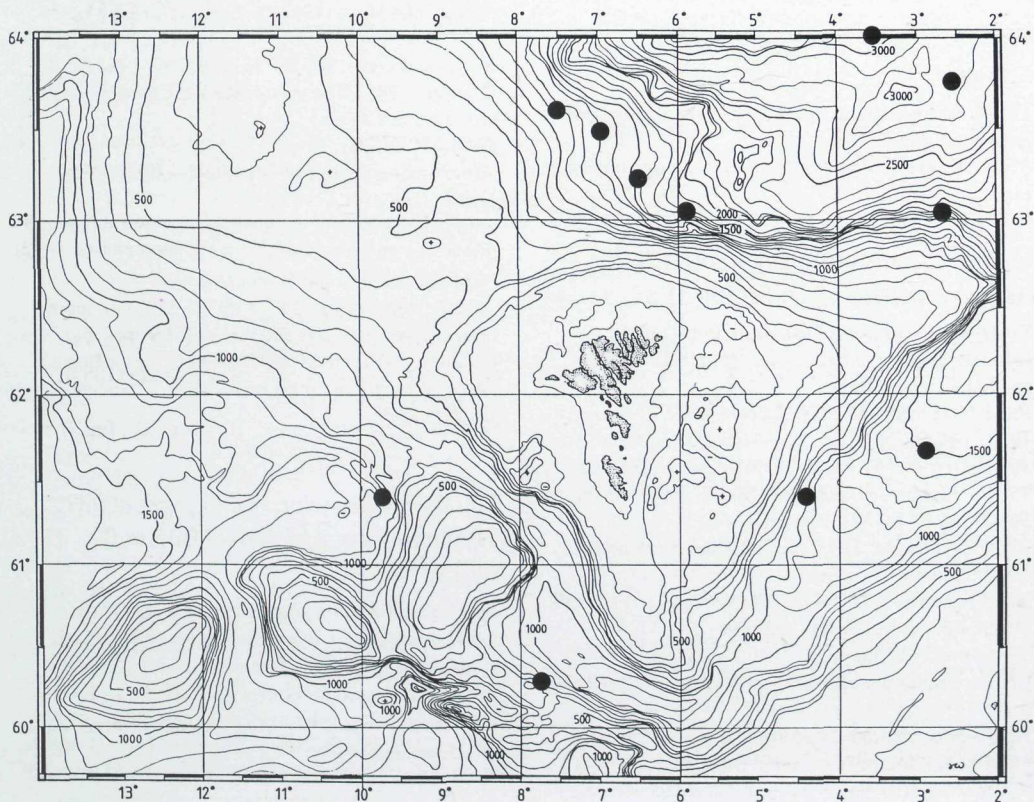
Depth range: bottom depth 742-1783 m.

Temperature: measured near bottom at 4 stns, -1.4 to -0.41 °C.

Bottom water masses: AW/AI (1 stn), AI (1 stn), and NW (10 stns).

Atlantic distribution: The Norwegian Sea; Svalbard; Norway north of Lofoten; the Faroes; Iceland; East Greenland; West Greenland, from 75° 35' N to 67° 48' N.

Atlantic depth range: Surface layer to 3900 m, usually below 700 m, main part of the population living lower than 1400 m (Sivertsen and Holthuis, 1956; Omori, 1974), mainly bathypelagic (Sivertsen and Holthuis, 1956).



**Fig. 6.** Records of *Hymenodora glacialis* (Buchholz) in the Faroe area.

**Mynd 6.** Skrásetingar av *Hymenodora glacialis* (Buchholz) í føroyskum øki.

Genus *Systellaspis* Bate, 1888

*Systellaspis debilis* (A. Milne Edwards, 1881)

Synonym: *Acanthephyra debilis* A. Milne Edwards (1881).

Good description: A. Milne Edwards (1881: 13, as *Acanthephyra debilis*); Murray and Hjort (1912: 668, pl. 3, fig. 3).

Previous records: None.

BIOFAR station: 704. The single, juvenile specimen was probably caught in the water column because the closing mechanism failed to close.

Area: Southwestern part of Faroe-Shetland Channel.

Depth: bottom depth at 1028 m.

Temperature: measured near bottom, -0.5 °C.

Bottom water mass: NW (1 stn).

Atlantic distribution: From south of Iceland and the south-western part of the Faroe-Shetland Channel (Stn 704) to 20° S, Namibia (Macpherson, 1991) and c. 33-35° S, South Africa (Kensley, 1981); eastern Gulf of Mexico (Flock and Hopkins, 1992).

Atlantic depth range: (10) 25-3000 m (Sivertsen and Holthuis, 1956), usually 150-700 m (Omori, 1974), meso- to bathypelagic, strong vertical migrant (Hargreaves, 1985).

## Family PASIPHAEIDAE

Genus *Pasiphaea* Savigny, 1816

*Pasiphaea multidentata* Esmark, 1866

Synonym: *Pasiphaëa tarda* Kemp (1910: 39, pl. V, figs. 8-11).

Good descriptions: Kemp (1910: 39, pl. V, figs. 8-11, as *Pasiphaëa tarda*); Sivertsen and Holthuis (1956: 27, figs 19-21).

Previous records: »Thor«: »...twice south-west of the Færoes, young-fish trawl, 820 and 900 meters wire out...« (Hansen, 1908: as *Pasiphaëa tarda*). One record south of the Faroes (Sund, 1913: fig. 1). »Michael Sars«: Stn 79b (1902), 61° 07' N, 7° 50' W, 1100 m, 8.07 °C (Grieg, 1927). Six localities south-west of the Faroes (Sivertsen and Holthuis, 1956: fig. 21).

BIOFAR stations: 68, 69, 124, 806. The specimens were probably caught in the water column.

Areas: Northwest and east of Faroe Bank, the top and southern slope of Faroe-Iceland Ridge.

Depth range: bottom depths at 300-1100 m.

Temperature: measured near bottom at one stn, 8.1 °C;

estimated range 1 - 9 °C.

Bottom water masses: AW (3 stns), AW/AI (1 stn), and AI (1 stn).

Atlantic distribution: From c. 69 °N, Norway southwards to Morocco; Mediterranean (Sivertsen and Holthuis, 1956; Casanova, 1976); the Faroes; south off Iceland; southeast off Cape Farewell, Greenland; from the Gulf of St. Lawrence to off Cape Cod, Massachusetts (Smaldon *et al.*, 1993).

Atlantic depth range: 10-2000 m, most frequent in 100-500 m (Sivertsen and Holthuis, 1956), benthopelagic and performs vertical feeding migrations (Lagardère, 1976).

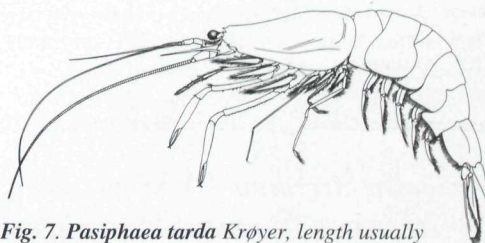


Fig. 7. *Pasiphaea tarda* Krøyer, length usually up to 150 mm, max. 215 mm (From Christiansen, 1972).

Mynd 7. *Pasiphaea tarda* Krøyer, longd vanliga upp í 150 mm, í mesta lagi 215 mm (Úr Christiansen, 1972).

*Pasiphaea tarda* Krøyer, 1845 (Fig. 7)

Synonyms: *Pasiphaë princeps* S. I. Smith (1884); *Pasiphaea principalis* Sund (1913).

Good description: Kemp (1910: 42, pl. IV, figs. 1-7, as *Pasiphaë princeps*).

Previous records: »Thor«: 61° 16' N, 9° 35' W, 350-850 m (22 May 1904); 59° 49' N, 8° 58' W, 600 m (30 May 1905) (Hansen, 1908; Sund, 1913, as *P. principalis*).

»Michael Sars«: 61° 07' N, 9° 33' W, 800-866 m (14 August 1902); 59° 23' N, 7° 50' W, 1100 m, 8.07 °C (12 August 1902) (Sund, 1913, as *P. principalis*; Grieg, 1927, as *P. principalis*).

BIOFAR stations: 317, 758.

Areas: South of Wyville-Thomson Ridge, east of Bill Baily Bank, northwest of Faroe Bank, northern slope of the Faroe plateau.

Depth range: bottom depths at 455-1100 m.

Temperature: measured at one stn, 8.1 °C, estimated range -1 to 9 °C.

Water masses: AW (2 stns) and AI/NW (1 stn).

Atlantic distribution: From c. 70° N off Norway to c. 47° N off Bretagne and Bay of Biscay (Casanova, 1976), and 17-23° S, Namibia (Macpherson, 1991); the Faroes; south of Jan Mayen; SW, W and N of Iceland; from c. 66° N off West Greenland and 59° N SE off Cape Farewell, Greenland to off South Carolina (Sivertsen and Holthuis, 1956).  
Atlantic depth range: 250-2400 m (Sivertsen and Holthuis, 1956), benthopelagic (Dr. John Mauchline, Oban, pers. commn).

### Family HIPPOLYTIDAE

#### Genus *Bythocaris* G. O. Sars, 1870

Note: "A revision of the present genus based on a large material from numerous different localities is urgently needed. Without such a material the task of ascertaining the size and status of the various species seems to be hopeless." (Sivertsen and Holthuis, 1956).

#### *Bythocaris cf. gracilis* S. I. Smith, 1885

Good description: S. I. Smith (1886: 658, pl. 12, figs 3-4); Sivertsen and Holthuis (1956: 32, fig. 22).

Previous records: None.

BIOFAR stations: 232, 416, 490.

Areas: West of Faroe Bank, southern slope of Faroe-Iceland Ridge, southeastern slope of the Faroe plateau.  
Depth range: 502-1083 m.

Temperature: measured at 2 stns, 2.3-2.4 °C, estimated range -1 to 7.3 °C.

Water masses: AI (2 stns) and AW (1 stn).

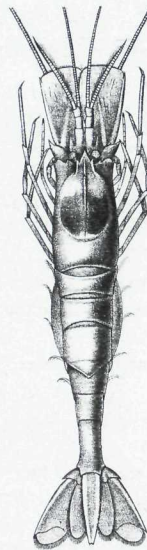
Atlantic distribution: Off the Faroe Islands; off SW Island; off West Greenland at ca. 65° N (Stephensen, 1935); south to North Carolina (Abele and Martin, 1989).

Atlantic depth range: 550-1906 m (Sivertsen and Holthuis, 1956), ? benthopelagic.

#### *Bythocaris leucopsis* G. O. Sars, 1879 (Fig. 8)

Good description: Sars (1885: 27, pl. III, figs. 1-26).  
Previous records: »Ingolf«-Expedition: Stn 140, 63° 29' N, 6° 57' W, 1468 m, -0.9 °C, 2 specimens; »Michael Sars«: Stn ?, 63° 03' N, 6° 32' W, 1835 m, -0.51 °C, 2 specimens (Hansen, 1908). »Michael Sars«: Stn 9 (1900), 63° 55' N, 6° 22' W, 1960 m, -1.0 °C; Stn 102 (1902), 63° 13' N, 6° 32' W, 1783 m, -0.41 °C (Grieg, 1927).

BIOFAR stations: 564, 9007.



**Fig. 8. *Bythocaris leucopsis* G.O. Sars, length up to 95 mm (From Sars, 1885).**

**Mynd 8. *Bythocaris leucopsis* G.O. Sars, longd upp í 95 mm (Úr Sars, 1885).**

Area: In deep water north and east of the Faroes (Fig. 9).

Depth range: 1468-2199 m.

Temperature: measured at 6 stns, range -1.0 to -0.41 °C; estimated range -1 to -0.8 °C.

Water mass: Only in Norwegian Sea Deep Water (NW).

Atlantic distribution: Norwegian Sea, East Greenland (Grieg, 1927); off West Greenland between 74° 41' N and 67° 48' N (Stephensen, 1935).

Atlantic depth range: 670-2857 m, benthopelagic.

#### *Bythocaris payeri* (Heller, 1875) (Fig. 10)

Good descriptions: Sars (1885: 33, pl. III, fig. 27); Sivertsen and Holthuis (1956: 34, figs. 23-24).

Previous records: »Ingolf«-Expedition: Stn 138, 63° 26' N, 7° 56' W, 887 m, -0.6 °C; Stn 139 63° 36' N, 7° 30' W, 1338 m, -0.6 °C, 2 specimens; 61° 23' N, 4° 21' W, 951 m, -0.4 °C, 5 specimens, caught by Wandel; 60° 03' N, 5° 51' W, 986 m, caught by Norman (Hansen, 1908). »Michael Sars«: Stn 102 (9-10 August 1910), 60° 57' N, 4° 38' W, 750 m, 14 specimens (Sivertsen and Holthuis, 1956). »Dana«: Stn 6001, 63° 33' N, 11° 25' W, 322 m, 2 specimens; Stn 6229, 63° 00' N, 9° 30' W, 495-500 m, 2 specimens (Rømer, 1991).

BIOFAR stations: 15, 41, 82, 88, 95, 169, 170, 171,

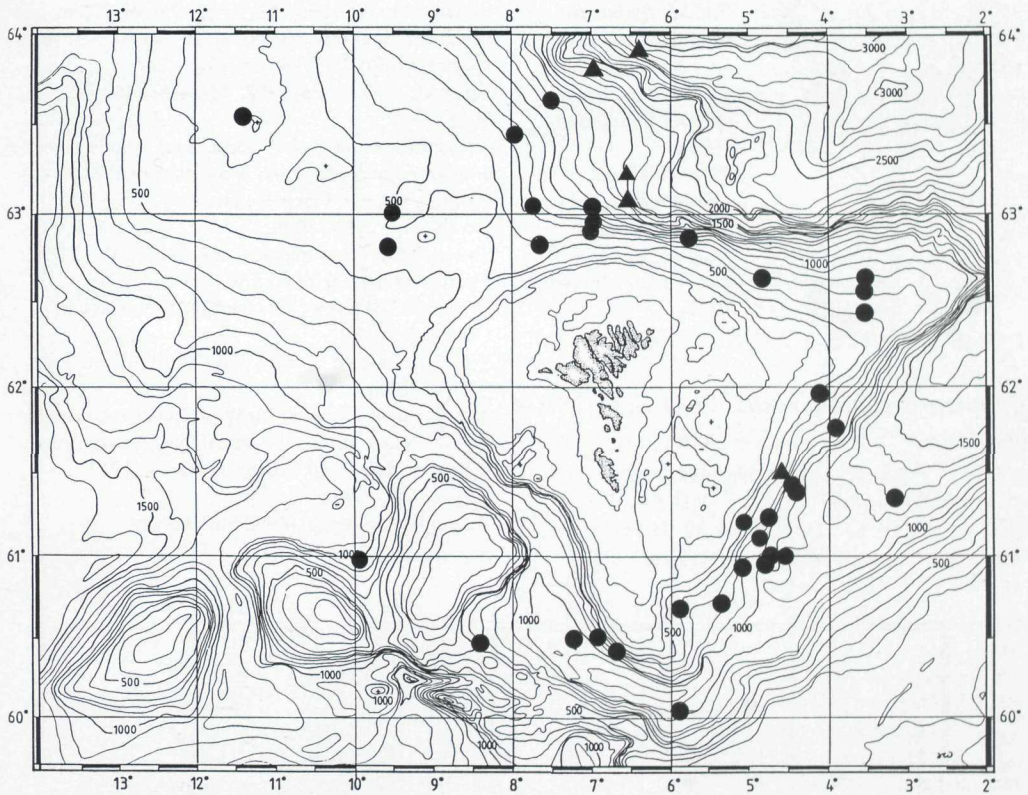


Fig. 9. Records of *Bythocaris leucopis* G.O. Sars (▲) and *B. payeri* (Heller) (●) in the Faroe area.

Mynd 9. Skrásætingar av *Bythocaris leucopis* G.O. Sars (▲) og *B. payeri* (Heller) (●) í fðroyriskum øki.

227, 228, 275, 291, 424, 447, 458, 478, 480, 490, 500, 563, 713, 714, 715, 750, 9001, 9002, 9012, 9014.

Areas: Mainly deep water north of the Faroe plateau and Faroe-Shetland Channel, also on the top and northern slope of Faroe-Iceland Ridge (Fig. 9).

Depth range: 322-1338 m.

Temperature: measured at 20 stns, range -1.4 to 0.3 °C; estimated range -1 to 1 °C.

Breeding: Ovigerous females have been taken in March, May, July and August.

Water masses: AI (2 stns), AI/NW (1 stn), and NW (31 stns).

Atlantic distribution: Arctic Ocean; from the Barents Sea to the Shetlands; the Faroes; Iceland; East Greenland (Sivertsen and Holthuis, 1956); off West Greenland between 77° N and 71° N (Stephensen, 1935). Sivertsen and Holthuis (1956) wrote that »It

will be interesting to study a large material of this species from various localities throughout its range in order to ascertain the variability of several of its characters.«

Atlantic depth range: 180-1977 m, benthopelagic (Sivertsen and Holthuis 1956; own obs).

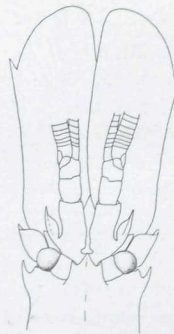
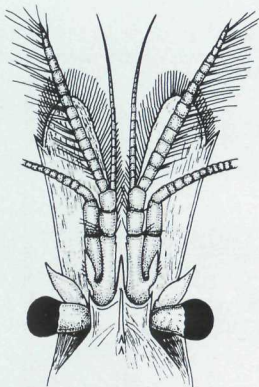


Fig. 10. *Bythocaris payeri* (Heller), forebody. Body length up to 65 mm (From Sivertsen and Holthuis, 1956).

Mynd 10. *Bythocaris payeri* (Heller), framkroppur.

Kropslongd upp í 65 mm (Úr Sivertsen og Holthuis, 1956).



**Fig. 11.** *Bythocaris simplicirostris* G.O. Sars, forebody. Body length up to 30 mm (From Christiansen, 1972).

**Mynd 11.** *Bythocaris simplicirostris* G.O. Sars, framkroppur. Kropslongd upp í 30 mm (Úr Christiansen, 1972).

***Bythocaris simplicirostris* G. O. Sars, 1870**  
(Fig. 11)

Synonym: *Hippolyte panschii* Buchholz (1874).

Good description: Sars (1912: 13, pl. II, figs. 1-21).

Previous records: 61° 23' N, 5° 04' W, 480 m, 0.0 °C, one specimen, caught by Wandel (Hansen, 1908).

»Dana«: Stn 6001, 63° 33' N, 11° 25' W, 322 m, one specimen; Stn 6004, 63° 06' N, 10° 40' W, 437 m, 3 specimens (Rømer, 1991).

BIOFAR stations: 264, **292**, 483, 499, 698, 742, 749, 9018.

Areas: Slope southeast of Faroe Bank, southern, eastern and northern slopes of the Faroe plateau, the top and southern slope of Faroe-Iceland Ridge (Fig. 12).

Depth range: 322-780 m.

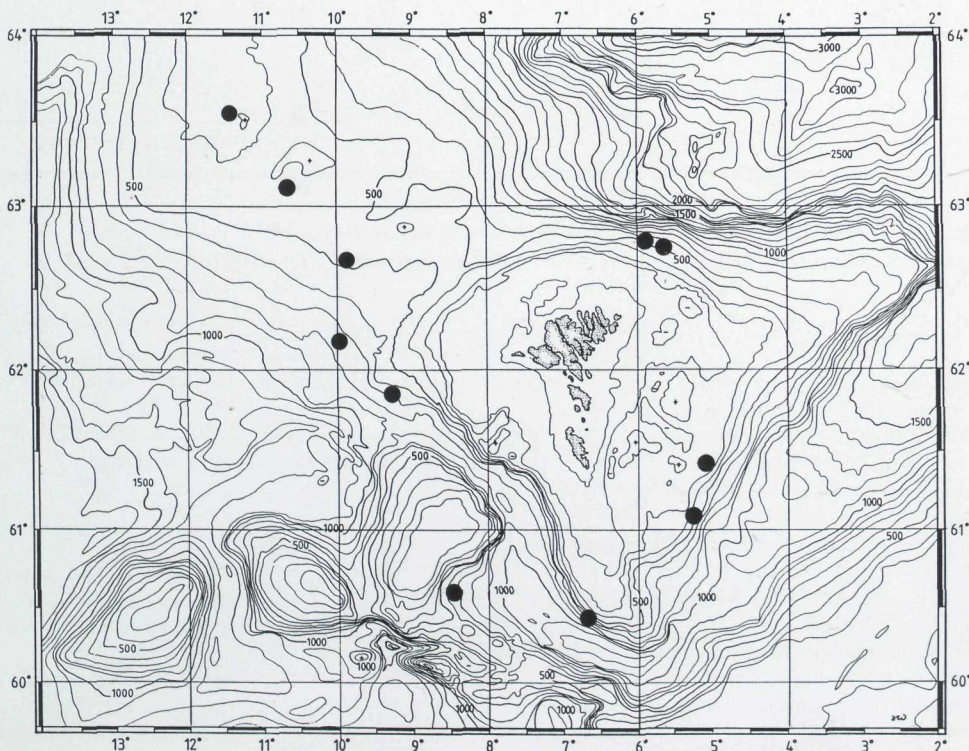
Temperature: measured at 4 stns, range 0.0 – 2.2 °C; estimated range -0.9 to 5.3 °C.

Breeding: Ovipigerous females have been taken in October.

Water masses: AI (8 stns), AW/AI/NW (2 stns) and AI/NW (1 stn.).

Atlantic distribution: From W of Spitsbergen and the Barents Sea south to off Mandal, Norway; the Faroes; off SW Iceland; east Greenland (Grieg, 1927; Stephensen, 1939).

Atlantic depth range: 60-780 m, probably hyperbenthic.



**Fig. 12.** Records of *Bythocaris simplicirostris* G.O. Sars in the Faroe area.

**Mynd 12.** Skrásetingar av *Bythocaris simplicirostris* G.O. Sars í føroyskum øki.

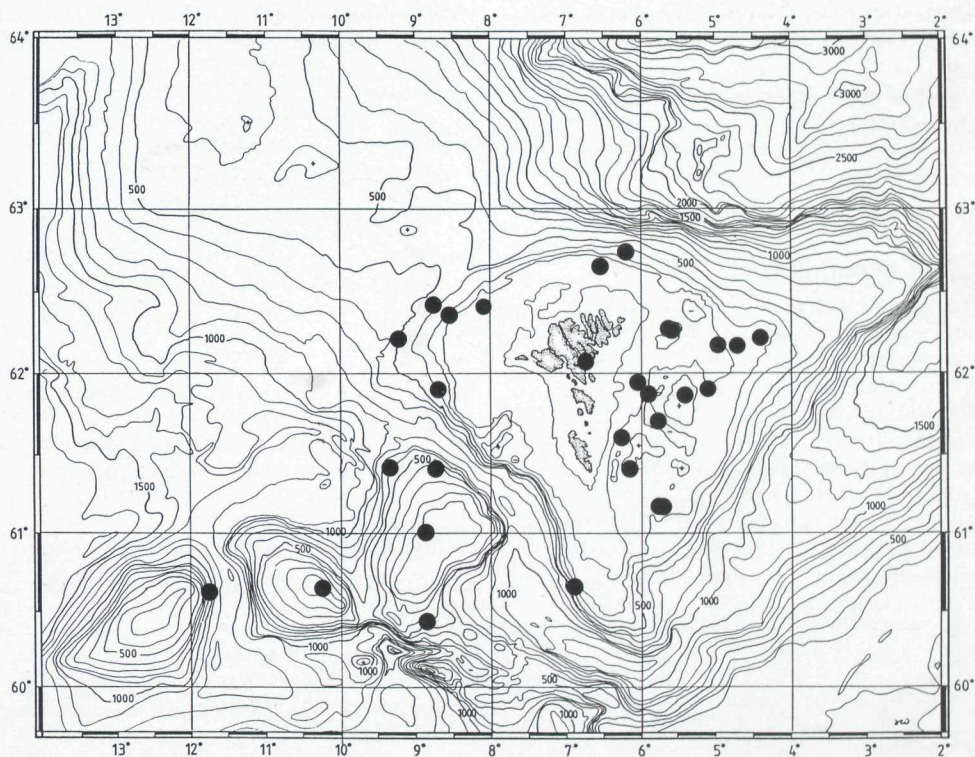


Fig. 14. Records of *Caridion gordonii* (Bate) in the Faroe area.

Mynd 14. Skrásetingar av *Caridion gordonii* (Bate) í føroyskum øki.

## Genus *Caridion* Goës, 1863

### *Caridion gordonii* (Bate, 1858) (Fig. 13)

Synonyms: *Hippolyte Gordoniana* Bate (1858);

*Dyrophorus gordonii* Norman (1861).

Good descriptions: Kemp (1910: 109, pl. XVI, figs 1-12); Lebour (1930: 184, pl. IV, fig. 1).

Previous records: »Hvidbjørnen«: Stn 16, 62° 39.0' N,

6° 36.2' W, 155 m, 2 specimens; Stn 24, 61° 00.3' N,

8° 48.9' W, 105-100 m, one specimen (Rømer, 1991).

BIOFAR stations: 6, 7, 19, 27, 29, 32, 51, 60, 68, 70, 100, 115, 120, 165, 348, 354, 410, 411, 474, 475, 476 (identified by Klitgaard, 1992), 497, 514, 602, 604, 688, 726, 764.

Areas: Bill Baily Bank, Faroe Bank, the Faroe plateau and its western slope (Fig. 14).

Depth range: 68-600 m.

Temperature: measured at 2 stns, range 6.6 – 7.9 °C;

estimated range 1.5 – 9.4 °C.

Breeding: Oviparous females have been taken in April and May.

Water masses: AW (25 stns) and AW/AI (5 stns).

Atlantic distribution: From Varangerfjorden, northeastern Norway to Bay of Biscay; the Faroes; off

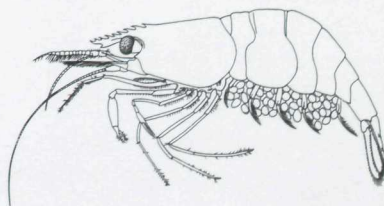


Fig. 13. *Caridion gordonii* (Bate), length up to 30 mm (Norheim, 1996). (From Christiansen, 1972).

Mynd 13. *Caridion gordonii* (Bate), longd upp í 30 mm (Norheim, 1996). (Úr Christiansen, 1972).

western (rare off southern) Iceland (Stephensen, 1939); from Newfoundland to Chesapeake Bay (Smaldon *et al.*, 1993).

Atlantic depth range: Hyperbenthic; 10-1000 m, usually 20-500 m.

Note: Norheim (1996) has written an unpublished thesis on its morphology, biology and ecology.

### *Caridion steveni* Lebour, 1930

Good description: Lebour (1930: 185, pls I, V, fig. 2).

Previous records: Recorded for the first time from Kaldbaksfjørður by Berggren (1994).

BIOFAR stations: None.

Area: Kaldbaksfjørður.

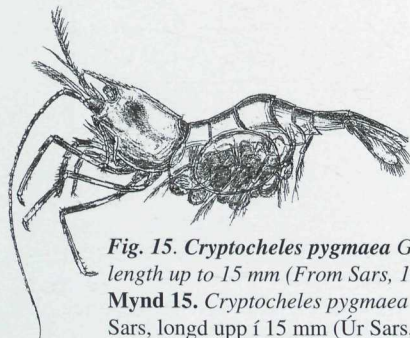
Depth range: 40 m.

Temperature: estimated range 5.2 – 10.5 °C.

Water mass: AW (1 stn.).

Atlantic distribution: From the Faroes to southwestern England (Smaldon *et al.*, 1993; Berggren, 1994).

Atlantic depth range: 0-40 m, hyperbenthic.



**Fig. 15.** *Cryptocheles pygmaea* G.O. Sars, length up to 15 mm (From Sars, 1912).

**Mynd 15.** *Cryptocheles pygmaea* G.O. Sars, longd upp í 15 mm (Úr Sars, 1912).

### Genus *Cryptocheles* G. O. Sars, 1870

#### *Cryptocheles pygmaea* G. O. Sars, 1870

(Fig. 15)

Good description: Sars (1912: 5, pl. I, figs 1-26).

Previous records: None.

BIOFAR stations: 51, 68.

Areas: Northeastern slope of Faroe Bank, east of Suðuroy.

Depth range: 235-600 m.

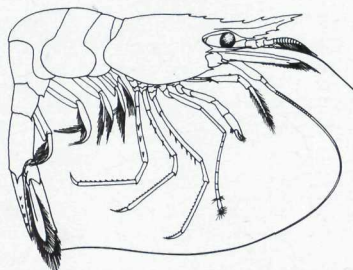
Temperature: estimated range 5.1 – 9.1 °C.

Water mass: AW (2 stns).

Atlantic distribution: From Lofoten, Norway to Oslofjorden and Danish Skagerrak; the Faroes (Grieg,

1927; Christiansen, 1972).

Atlantic depth range: 190-660 m, epibenthic.



**Fig. 16.** *Eualus gaimardii* (H. Milne Edwards), length up to 100 mm (From Christiansen, 1972).

**Mynd 16.** *Eualus gaimardii* (H. Milne Edwards), longd upp í 100 mm (Úr Christiansen, 1972).

### Genus *Eualus* Thallwitz, 1892

#### *Eualus gaimardii* (H. Milne Edwards, 1837) (Fig. 16)

Synonyms: *Hippolyte gaimardii* H. Milne Edwards (1837); *Hippolyte gibba* Krøyer (1842); *Hippolyte recurvirostris* Rathke (1843); *Spirontocaris Gaimardii* Hansen (1908).

Good description: Krøyer (1842: 282, pl. 1, figs 21-29 as *Hippolyte Gaimardii*, and p. 288, pl. 1, fig. 30 and pl. 2, figs 31-37 as *Hippolyte gibba*); Dons (1915: 39, fig. 5).

Previous records: According to Hansen (1908) and Stephensen (1928) this species (as *Spirontocaris gaimardi*) has been taken about ten times at the Faroes at depths from 0 m to 18 m, often between algae. The localities mentioned are Trongisvágur off Punnhavn (c. 8-10 m), Trongisvágur (2-6 m and 15-18 m), Tvøroyri (0-7 m), Skálafjørður (c. 5 m), N of Krossur (c. 5 m), Kollafjørður (4 m), Hvannasund (on Laminariae, 8-12 m), Tjørnuvík (?) north in Sundini (c. 5 m) and Vágsfjørður. »Thor«: Stn 124 (30 May 1913), Trongisvágur, ? m, one specimen; Stn 25 – 10.0 (4 June 1913), Trongisvágur, ? m, one specimen; Stn 133 (4 June 1913), Trongisvágur, ? m, one specimen; Stn 83 – 10.0 (7 June 1913), Trongisvágur, ? m, one specimen (Rømer, 1991). Berggren (1994) found it in 0-20 m depth in the phytal zone at six localities (Vestmanna, Kollafjørður, Kaldbaksbotnur, Kaldbaksfjørður (central north), Øravík and Akratangi).  
BIOFAR stations: None.

Area: Inshore waters of the Faroes.

Depth range: 0-20 m.

Temperature: Range unknown, probably > 6.5 °C.

Breeding: A few ovigerous females were taken in June by Berggren (1994).

Water mass: Only in coastally influenced Atlantic Water.

Atlantic distribution: Circumpolar, in the east Atlantic south to the Faroes and the Clyde Sea area; around Iceland (Stephensen, 1939); and in the west Atlantic from West Greenland at 79° N south to Cape Cod (Stephensen, 1935; Smaldon *et al.*, 1993).

Atlantic depth range: 0 – ca 300 (930) m, hyperbenthic.

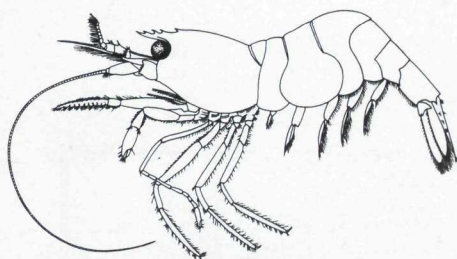


Fig. 17. *Eualus pusiolus* (Krøyer), length up to 28 mm (From Christiansen, 1972).

Mynd 17. *Eualus pusiolus* (Krøyer), longd upp í 28 mm (Úr Christiansen, 1972).

### *Eualus pusiolus* (Krøyer, 1842) (Fig. 17)

Synonyms: *Hippolyte pusiola* Krøyer (1842);

*Spirontocaris pusiola* Norman (1894).

Good description: Kemp (1910: 107, pl. XV, figs. 6-8, as *Spirontocaris pusiola*).

Previous records: According to Hansen (1908) and Stephensen (1928) the species (as *Spirontocaris pusiola*) is very numerous and widely distributed round the Faroes. About 25 finds were made in 6 to c. 200 m depth. Further finds are: Vestmanna Harbour (September 1904), ? m, one specimen, leg. ?; »Thor«: Stn 123 (30 May 1913), Trongisvágur, ? m, one specimen; Stn 124 (30 May 1913), Trongisvágur, ? m, one specimen; Stn 96 A – 10.0 (7 June 1913), Trongisvágur, ? m, one specimen; Klaksvík (September 1948), 2 specimens, leg. Samuel Petersen (Rømer, 1991). Berggren (1994) found it regularly between 0 and 20 m depth in the phytal zone at 17 localities (Gjógv, Oyndarfjørður, Grønskríðdrangur,

Vestmanna, Leynar, Kollafjørður, Kaldbaksbotnur, Kaldbaksfjørður (central north), Kaldbaksfjørður (Mógvanes), Stórafles, Hoyvík, Kirkjubøur, Hvannahólmur, Stigagjógv, Øravík, Akkratangi and Sumba, and also at Høgnaboði and on soft bottom (40 m depth) in Kaldbaksfjørður.

BIOFAR stations: 6, 28, 51, 56, 60, 76, 77, 98, 100, 110, 116, 174, 192, 203, 349, 350, 368, 408, 410, 605, 607, 608.

BIOFAR 2 stations: 1021, 1132, 1135, 1176, 1194, 1197, 1221, 1232, 1235, 1246, 1341, 1342, 1385, 1389, 1413, 1431, 1496, 1447, 1452, 1462, 1484, 1485, 1517, 1521, 1554, 1585, 1591, 1592.

Area: Mainly the Faroe plateau, Faroe Bank.

Depth range: 0–300 m.

Temperature: estimated range 5.0 – 10.9 °C.

Water masses: AW (55 stns) and AW/AI (1 stn.).

Breeding: Ovigerous females have been taken in January and April–August.

Atlantic distribution: From Svalbard (T. Brattegard, own obs.); coast of Murman (Doflein, 1900), Varangerfjorden, northeastern Norway to Bay of Biscay; western Mediterranean; the Faroes; around Iceland (Stephensen, 1939); from the Gulf of St. Lawrence to Virginia (Smaldon *et al.*, 1993).

Atlantic depth range: 0 – 810 m, hyperbenthic (own obs.), common in the phytal zone (Smaldon *et al.*, 1993; Berggren, 1994).

### Genus *Hippolyte* Leach, 1815

#### *Hippolyte varians* Leach, 1815 (Fig. 18)

Synonyms: *Hippolyte fascigera* Gosse (1853); *Virbius varians* Heller (1863); *Virbius fasciger* Sars (1868).

Good description: Kemp (1910: 100, pl. XIII, figs 1-7).

Previous records: According to Hansen (1908) and Stephensen (1928) it has been taken about 10 times between the islands at Vágsvjørður (2-6 m),

Trongisvágur (2-6 m), off Høddatangi

(= ?) (15 m), Tórshavn, Tvøroyri, Vestmanna,

Oyndarfjørður (3-40 m), SE corner of Kunoy (10-15

m), east side of Haraldssund (c. 20 m), Skálafjørður off

Sjógv (8-10 m), and Borðoyarvík (c. 6 m). Also

»Thor«: Stn 67 (5 June 1913), Trongisvágur, ? m, one

specimen; Stn 116 (O.P) (5 June 1913), Trongisvágur,

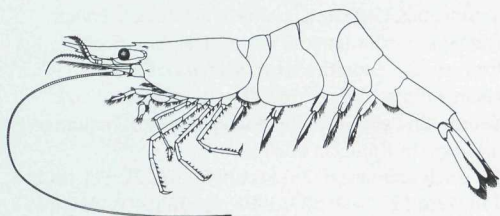
? m, one specimen; Stn 118 (O.P) (5 July 1913),

Trongisvágur, ? m, 4 specimens (Rømer, 1991).

Berggren (1994) found it regularly between 0 and 20 m

depth in the phytal zone at 16 localities (Gjógv,

Oyndarfjørður, Grønskríðdrangur, Vestmanna,



**Fig. 18.** *Hippolyte varians* Leach, length up to 32 mm (From Christiansen, 1972).

**Mynd 18.** *Hippolyte varians* Leach, longd upp í 32 mm (Úr Christiansen, 1972).

Leynar, Kollafjørður, Kaldbaksbotnur, Kaldbaksfjørður (central north), Kaldbaksfjørður (Mógvanes), Stórafles, Hoyvík, Hvannahólmur, Stigagjógv, Øravík, Akkratangi and Sumba.

BIOFAR stations: 76, 77, 203, 350, 408, 605, 607, 677.

BIOFAR 2 stations: 1132, 1245, 1385, 1414, 1430, 1431, 1452, 1462, 1485, 1551, 1554, 1580, 1591, 1619, 1641.

Areas: Mainly inshore on the Faroe plateau, also Faroe Bank (Fig. 19).

Depth range: 0-129 m.

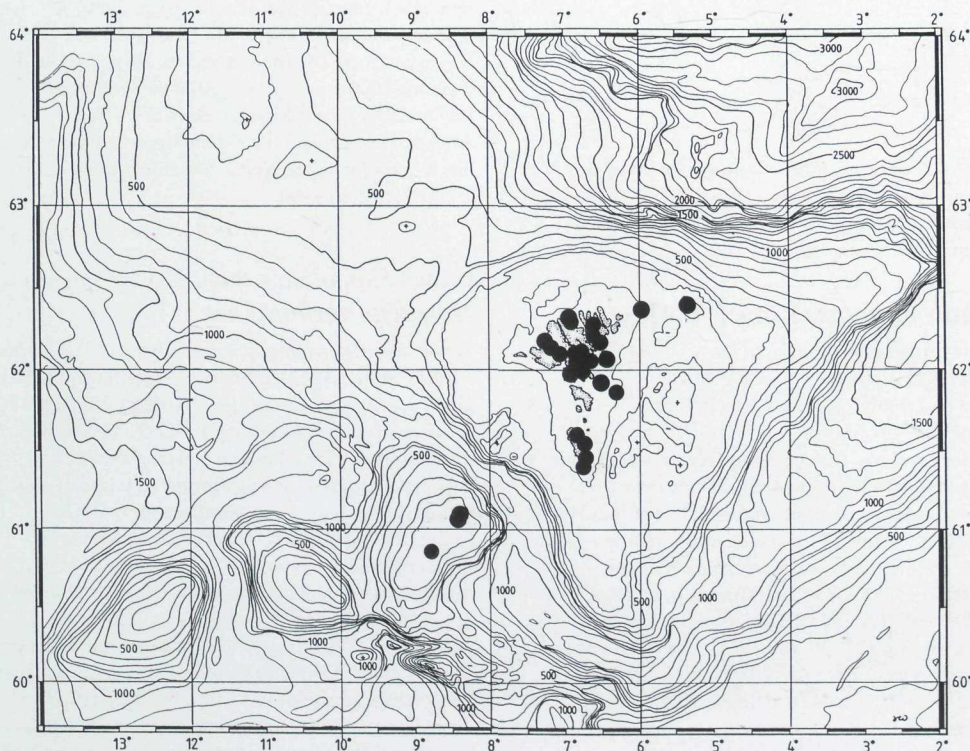
Temperature: estimated range 6.5 – 10.9 °C.

Breeding: Ovigerous females have been taken in April-July.

Water mass: AW (27 stns).

Atlantic distribution: From c. 68 °N, Norway and the Faroes southwards and into the Mediterranean (Smaldon *et al.*, 1993; Berggren, 1994).

Atlantic depth range: Usually in the phytal zone, but has been taken down to 240 m, hyperbenthic.



**Fig. 19.** Records of *Hippolyte varians* Leach in the Faroe area.

**Mynd 19.** Skrásetingar av *Hippolyte varians* Leach í færoyskum øki.

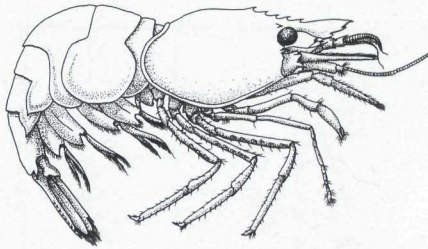


Fig. 20. *Lebbeus polaris* (Sabine), length usually up to 70 mm, max. 90 mm (From Smaldon, 1995).

Mynd 20. *Lebbeus polaris* (Sabine), longd vanliga upp í 70 mm, í mesta lagi 90 mm (Úr Smaldon, 1995).

### Genus *Lebbeus* White, 1847

#### *Lebbeus polaris* (Sabine, 1824) (Fig. 20)

Synonyms: *Hippolyte polaris* Krøyer (1842); *Hippolyte borealis* Krøyer (1842); *Spirontocaris polaris* Hansen (1908).

Good descriptions: Dons (1915: 35, fig. 4); Greve (1963: 35, fig. 1E).

Previous records: »Ingolf«-Expedition: Stn 1, 62° 30' N, 8° 21' W, 248 m, 7.2 °C, 4 specimens; Stn 138, 63° 26' N, 7° 56' W, 887 m, -0.6 °C, one specimen; Tórshavn; Sandavágur (Hansen, 1908). »Michael Sars«: Stn 284 (1904), 58° 21' N, 4° 30' W, 292 m, 5.9 °C (Grieg, 1927). »Dana«: Stn 6001 (24 July 1938), 63° 33' N, 11° 25' E, 322 m, 14 specimens. 62° 04.4' N, 6° 13' W, 104 m, 3 specimens, leg. E. Ursin (27 September 1946); 62° 05' N, 6° 15' W, 105 m, 12 specimens, leg. E. Ursin (9 October 1946). Klaksvik, ? m, one specimen, leg. Samuel Petersen (September 1948). »Hvidbjørnen«: Stn 6 (10 January 1979), 61° 25.3' N, 5° 29.8' W, 195 m, 6 specimens; Stn 24 (21 January 1979), 61° 00.3' N, 8° 48.9' W, 105-100 m, one specimen (Rømer, 1991). Berggren (1994) found it between 0 and 20 m depth in the phytal zone at 11 localities (Gjógv, Oyndarfjørður, Grønskriðudrangur, Vestmanna, Leynar, Stórafles, Hoyvík, Hvannahólmur, Stigagjógv, Øravík and Akratangi).

BIOFAR stations: 1388, 1452, 1517, 1551.

Areas: Lousy Bank, Bill Bailly Bank, Faroe Bank, the Faroe plateau, Faroe-Iceland Ridge.

Depth range: 0-894 m, juveniles in shallow water, adults in deep water.

Temperature: measured at 6 stns, range -0.6 to 7.9 °C; estimated range -1 to 9.6 °C.

Breeding: Ovigerous females have been taken in January.

Water masses: AW (40 stns), AW/AI (12 stns), AI (4 stns), AI/NW (2 stns), and NW (2 stns).

Atlantic distribution: Circumpolar; southwards to Skagerrak, Shetland and the Faroes; Jan Mayen (Hansen, 1908); around Iceland (Stephensen, 1939); East Greenland (Stephensen, 1939); West Greenland from 82° N (Stephensen, 1935) to Chesapeake Bay (Smaldon *et al.*, 1993).

Atlantic depth range: 0-930 m, juveniles in shallow water, adults in deep water, hyperbenthic.

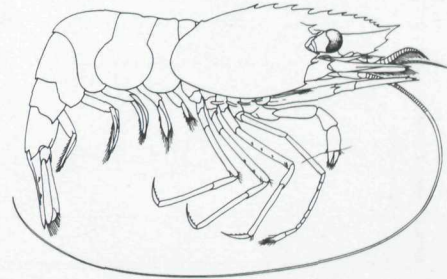


Fig. 21. *Spirontocaris lilljeborgi* (Danielssen), length up to 74 mm (From Christiansen, 1972).

Mynd 21. *Spirontocaris lilljeborgi* (Danielssen), longd upp í 74 mm (Úr Christiansen, 1972).

### Genus *Spirontocaris* Bate, 1888

#### *Spirontocaris lilljeborgi* (Danielssen, 1859) (Fig. 21)

Synonyms: *Hippolyte Lilljeborgi* Danielssen (1859); *Hippolyte securifrons* Norman (1862a, 1862b); *Spirontocaris securifrons* Norman (1894); *Spirontocaris spinus* var. *Lilljeborgi* Kemp (1910). Good description: Kemp (1910: 103, pl. XIV, figs 2-10 as *Spirontocaris spinus* var. *Lilljeborgi*).

Previous records: »Dana«: Stn 6001 (24 July 1938), 63° 33' N, 11° 25' W, 322 m, one specimen; Stn 6017 (30 July 1938), 62° 02' N, 5° 13' W, 220 m, one specimen. 62° 05' N, 6° 15' W, 102 m, 5 specimens, leg. E. Ursin (9 October 1946). »Hvidbjørnen«: Stn 6 (10 January 1979), 62° 25.3' N, 5° 29.8' W, 195 m, 2

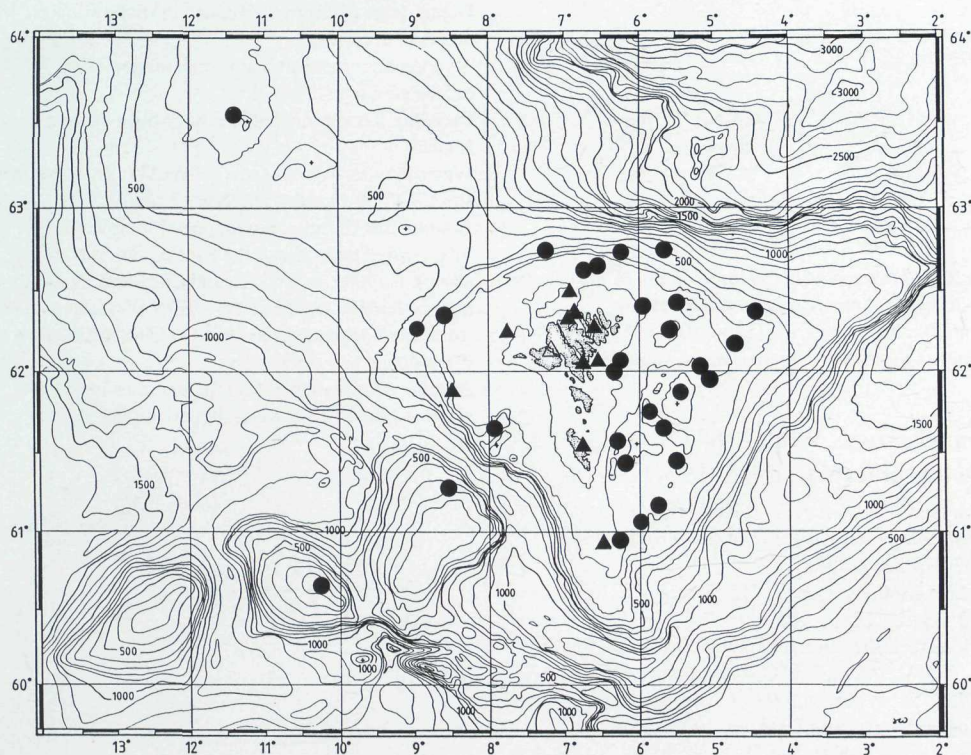


Fig. 22. Records of *Spirontocaris lilljeborgi* (Danielssen) (●) and *S. spinus* (Sowerby) (▲) in the Faroe area.  
 Mynd 22. Skrásetingar av *Spirontocaris lilljeborgi* (Danielssen) (●) og *S. spinus* (Sowerby) (▲) í fýroyrskum øki.

specimens; Stn 16 (18 January 1979), 62° 39.0' N, 6° 36.1' W, 155 m, 2 specimens; Stn 17 (18 January 1979), 62° 37.3' N, 6° 45.5' W, 143-135 m, one specimen (Rømer, 1991).

BIOFAR stations: 6, 7, 19, 27, 28, 29, 32, 33, 51, 72, 98, 100, 119, 158, 203, 321, 354, 408, 410, 452, 474, 486, 688, 726, 764, 9018.

Areas: Bill Baily Bank, Faroe Bank, the Faroe plateau, and Faroe-Iceland Ridge (Fig. 22).

Depth range: 96-503 m.

Temperature: measured at 2 stns, range 2.0 to 7.9 °C; estimated range 2.0 – 10.9 °C.

Water masses: AW (27 stns), AW/AI (3 stns) and AI (2 stns).

Breeding: Ovigerous females have been taken in January.

Atlantic distribution: From Spitsbergen to the Faroes

and the British Isles; rare on the E, S, W and NW coasts of Iceland (Stephensen, 1939); from 66° 30' N off West Greenland (Stephensen, 1935) to Delaware Bay (Smaldon *et al.*, 1993).

Atlantic depth range: 20-500 (1200) m, epi- or hyperbenthic.

### *Spirontocaris spinus* (Sowerby, 1805)

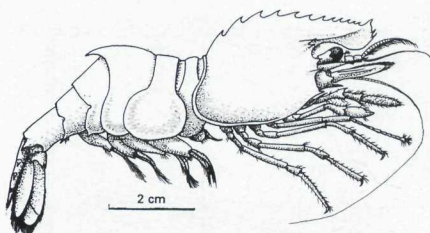
(Fig. 23)

Synonym: *Hippolyte Sowerbei* Krøyer (1842);

*Hippolyte spinus* Hoek (1882).

Good description: Kemp (1910: 103, pl. XIV, fig. 1).

Previous records: First finds by Th. Mortensen (Hansen, 1908). According to Stephensen (1928) it has been taken five times: at Tórshavn; the deep between



**Fig. 23.** *Spirontocaris spinus* (Sowerby), length up to 60 mm (From Smaldon, 1995).

**Mynd 23.** *Spirontocaris spinus* (Sowerby), longd upp í 60 mm (Úr Smaldon, 1995)

Nólsoy and Eysturoy, c. 200 m; 6 n.m. off Kalsoy, c. 110 m; »Prøvenæs in N 75 W, 13 miles, abt. 60 m«; the east side of Hvannasund, 20 m. »Thor« Stn ? (30 May 1913), Trongisvágur, 20-30 m, one specimen (Rømer, 1991). Berggren (1994) recorded it three times between 0 and 20 m depth in the phytal zone in Gjógv, Vestmanna (Nesið) and from Høgnaboði. BIOFAR stations: 56, 102, 106, **116**, 192, **351**, 370. BIOFAR 2 stations: 1132, 1235, 1341.

Area: Faroe plateau, mainly inshore (Fig. 22).

Depth range: 5-208 m.

Temperature: estimated range 5.2-10.6 °C.

Breeding: Ovigerous females have been taken in January.

Water mass: AW (11 stns).

Atlantic distribution: Circumpolar; southwards to western Sweden, the British Isles, and the Faroes; Jan Mayen (Heegaard, 1941); common on the W, NW, N and E coasts of Iceland (Stephensen, 1939); East Greenland; from 82° N off West Greenland (Stephensen, 1935) southwards to Massachusetts (Smaldon *et al.*, 1993).

Atlantic depth range: 5-400 (930 m), epi- or hyperbenthic.

## Family PANDALIDAE

Genus *Dichelopandalus* Caullery, 1896

*Dichelopandalus bonnieri* Caullery, 1896

(Fig. 24)

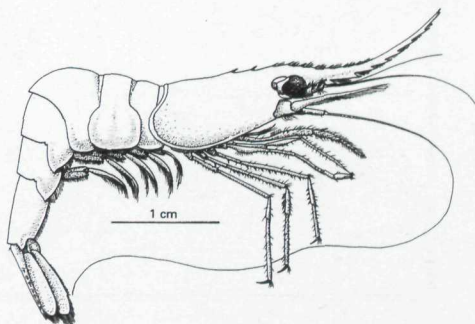
Synonyms: *Pandalus leptorhyncus* Kinahan (see Sars, 1883); *Pandalus* (*Dichelopandalus*) *Bonnieri* Caullery (1896); *Pandalus Bonnieri* Calman (1899); *Pandalus leptoceros* var. *Bonnieri* Wollebæk (1909).

Good descriptions: Calman (1899: 34, pls I-IV, fig. 3a,

b, d, g, h); Kemp (1910: 92).

Previous records: »Dana«: Stn 5840 (14 May 1938), 62° 44' N, 6° 06' W, 320 m, 5 specimens; Stn 6007 (25 July 1938), 62° 07' N, 8° 35' W, 375 m, 7 specimens; Stn 6008 (26 July 1938), 61° 39' N, 7° 55' W, 352 m, 18 specimens; Stn 6017 (30 July 1938), 62° 02' N, 5° 13' W, 220 m, 13 specimens. »Hvidbjørnen« Stn 6 (10 January 1979), 61° 25.3' N, 5° 29.8' W, 195 m, one specimen (Rømer, 1991).

BIOFAR stations: 6, 7, 19, 27, 28, 29, 32, **43**, **44**, 47, **48**, **49**, 51, 62, 65, 70, 71, 73, **90**, **97**, 100, **119**, 122, **131**, 158, 174, 235, 266, **281**, **283**, **289**, **301**, 308, 319, 324, **328**, **331**, 333, 353, 354, 357, 411, 452, 453, 474, 475, **488**, 495, 496, 497, 499, 518, 519, 534, 594, 598, 604, 621, 690, 746, 747, 755, 764, 765, 776, 779, 9004, 9006.



**Fig. 24.** *Dichelopandalus bonnieri* Caullery, length usually up to 100 mm, max. 160 mm (From Smaldon, 1995).

**Mynd 24.** *Dichelopandalus bonnieri* Caullery, longd vanliga upp í 100 mm, í mesta lagi 160 mm (Úr Smaldon, 1995).

Areas: Upper slopes of Lousy Bank, Bill Baily Bank, Faroe Bank, and the Faroe plateau (Fig. 25).

Depth range: 170-725 m.

Temperature: measured at 4 stns, 0.9 to 7.9 °C; estimated range 1.5-9.6 °C.

Breeding: Ovigerous females have been taken in May and July.

Water masses: AW (60 stns), AW/AI (9 stns), AW/AI/NW (2 stns) and AI (2 stns).

Atlantic distribution: East Atlantic species; range from c. 70° N, Norway to Bay of Biscay; the Faroes (Smaldon *et al.*, 1993); rare off the southern and western coasts of Iceland (Stephensen, 1939).

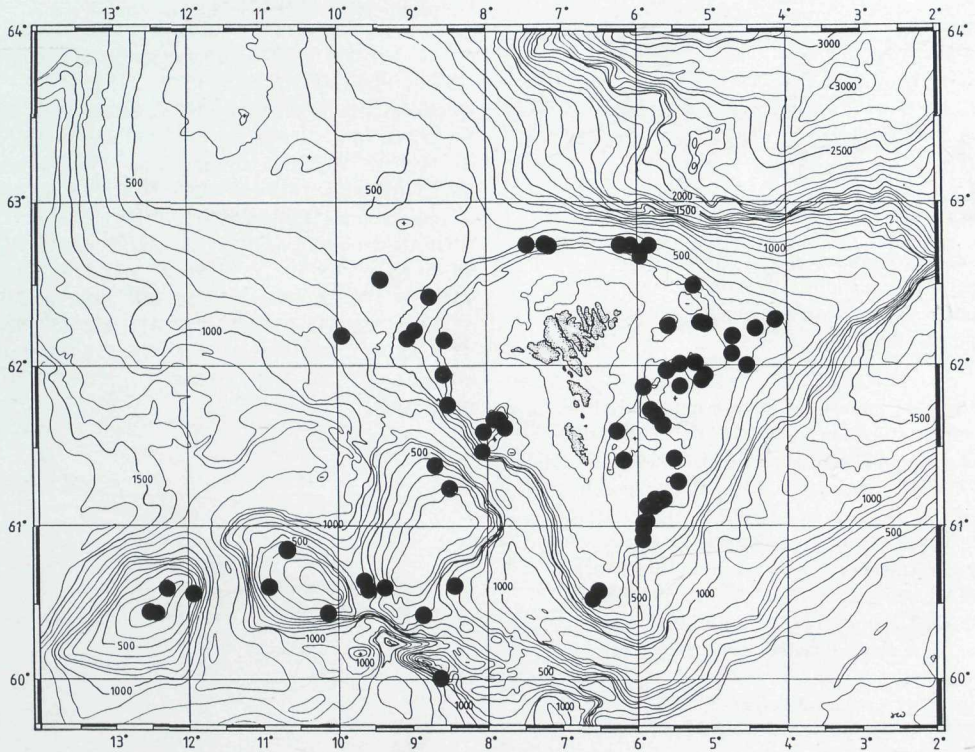


Fig. 25. Records of *Dichelopandalus bonnieri* Caullery in the Faroe area.

Mynd 25. Skrásetingar av *Dichelopandalus bonnieri* Caullery í færoyskum øki.

Atlantic depth range: 20-725 (1220) m, becoming deeper towards southern extremes of range, hyperbenthic, swim off the bottom at night and in the morning, probably to avoid bottom-feeding fish (Al-Adhub and Naylor, 1977).

Trongisvágur (15-18 m), by Dr. F. Jørgensen. Berggren (1994) recorded it between 0 and 20 m depth in the phytal zone at 3 localities (Kaldbakstotnur,

### Genus *Pandalina* Calman, 1899

#### *Pandalina brevirostris* (Rathke, 1843)

(Fig. 26)

Good descriptions: Calman (1899: 37, pls I-IV, fig. 4); Kemp (1910: 97); Holthuis (1946: 284, fig. 1 d-e). Specimens identified as *P. brevirostris* prior to 1946 from deep water (> 100 m depth) may be *P. profunda* Holthuis (1946).

Previous records: According to Hansen (1908) and Stephensen (1928) only found once at the Faroes, in

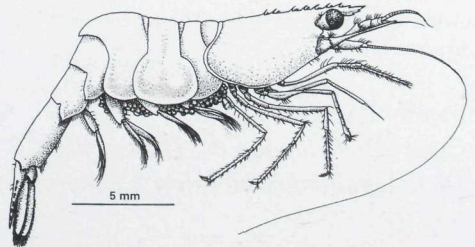


Fig. 26. *Pandalina brevirostris* (Rathke), length up to 33 mm (From Smaldon, 1995).

Mynd 26. *Pandalina brevirostris* (Rathke), longd upp í 33 mm (Úr Smaldon, 1995).

Kaldbaksfjørður (central north), Kaldbaksfjørður (Mógvanes)) and once from a soft bottom (40 m), also in Kaldbaksfjørður.

BIOFAR stations: 60, 76, 77, 408, 677, 678, 680, 681. BIOFAR 2 stations: 1150, 1194, 1552.

Areas: Faroe Bank and inshore on the Faroe plateau (Fig. 27).

Depth range: 0-134 m.

Temperature: measured at 4 stns, range 7.9 to 8.0 °C; estimated range 5.2 – 10.9 °C.

Breeding: Ovigerous females have been taken May-August.

Water mass: AW (12 stns).

Atlantic distribution: From c. 68° N, Norway and the Faroes to the Atlantic coast of Morocco, also (?) off Cape Point, South Africa (Barnard, 1950); the Mediterranean and the Adriatic Sea (Smaldon *et al.*, 1993).

Atlantic depth range: 0-180 m, hyperbenthic.

### *Pandalina profunda* Holthuis, 1946

Synonyms: *Pandalina brevirostris* auctores, see under *P. brevirostris*.

Good description: Holthuis (1946: 281, fig. 1 a-c);

Greve (1967: 3-5, fig. 2).

Previous records: None.

BIOFAR stations: 6, 73, 100, 690, 9004.

Areas: Faroe Bank and eastern Faroe plateau (Fig. 27).

Depth range: 185-357 m.

Temperature: measured at 2 stns, 7.9 °C; estimated range 5.0 – 9.6 °C.

Breeding: Ovigerous females have been taken in May.

Water mass: AW (5 stns).

Atlantic distribution: From the Barents Sea to Portugal; western Mediterranean (Cartes *et al.*, 1994); the Faroes.

Atlantic depth range: (54-) 90-1068 m, most common at 100-300 m depth, hyperbenthic (Støve, 1985).

Note: Støve (1985) has written an unpublished thesis on its biology and ecology in fjords of western Norway.

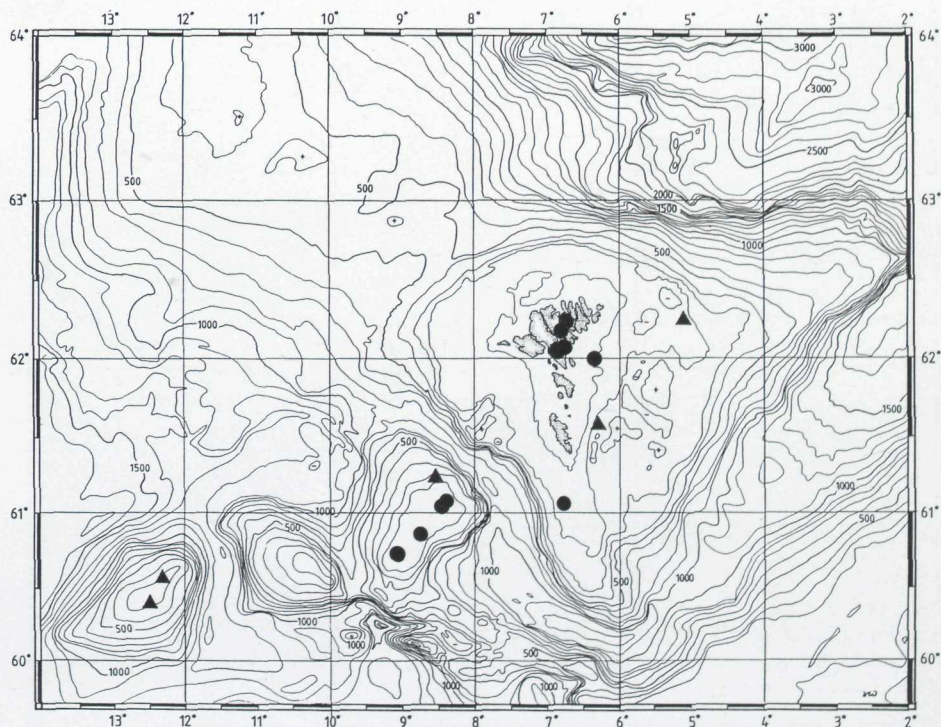


Fig. 27. Records of *Pandalina brevirostris* (Rathke) (●) and *P. profunda* Holthuis (▲) in the Faroe area.

Mynd 27. Skrásetingar av *Pandalina brevirostris* (Rathke) (●) og *P. profunda* Holthuis (▲) í føroyskum øki.

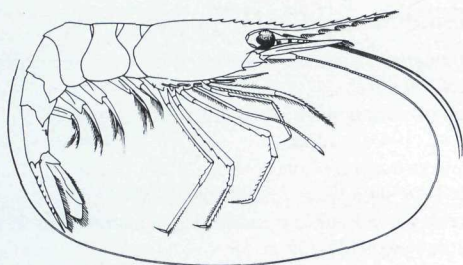


Fig. 28. *Pandalus borealis* Krøyer, length up to 165 mm (From Christiansen, 1972).

Mynd 28. *Pandalus borealis* Krøyer, longd upp í 165 mm (Úr Christiansen, 1972).

### Genus *Pandalus* Leach, 1814

#### *Pandalus borealis* Krøyer, 1838 (Fig. 28)

Good description: Sars (1900: 31, pls IX-X);

Christiansen (1972: 29, fig. 25).

Previous records: »Ingolf«-Expedition: Stn 2, 63° 04' N, 9° 22' W, 493 m, 5.3 °C, one specimen; Stn 46, 61° 32' N, 11° 36' W, 1355 m, 2.4 °C (Hansen, 1908).

»Dana«: Stn 6001 (24 July 1938), 63° 33' N, 11° 25' W, 322 m, 3 specimens; Stn 6004 (24 July 1938), 63° 06' N, 10° 40' W, 437 m, 9 specimens; Stn 6229 (18 August 1939), 63° 00' N, 9° 30' W, 495-500 m, 3 specimens (Rømer, 1991).

BIOFAR stations: 189, 424, 427, 804, 805, 806, 807, 808, 809, 810, 811.

Areas: Mainly Faroe-Iceland Ridge, also northern slope of the Faroe plateau (Fig. 29).

Depth range: 322-546 (1355) m.

Temperature: measured at 3 stns, -0.1 to 5.3 °C; estimated range from -1 to 6 °C.

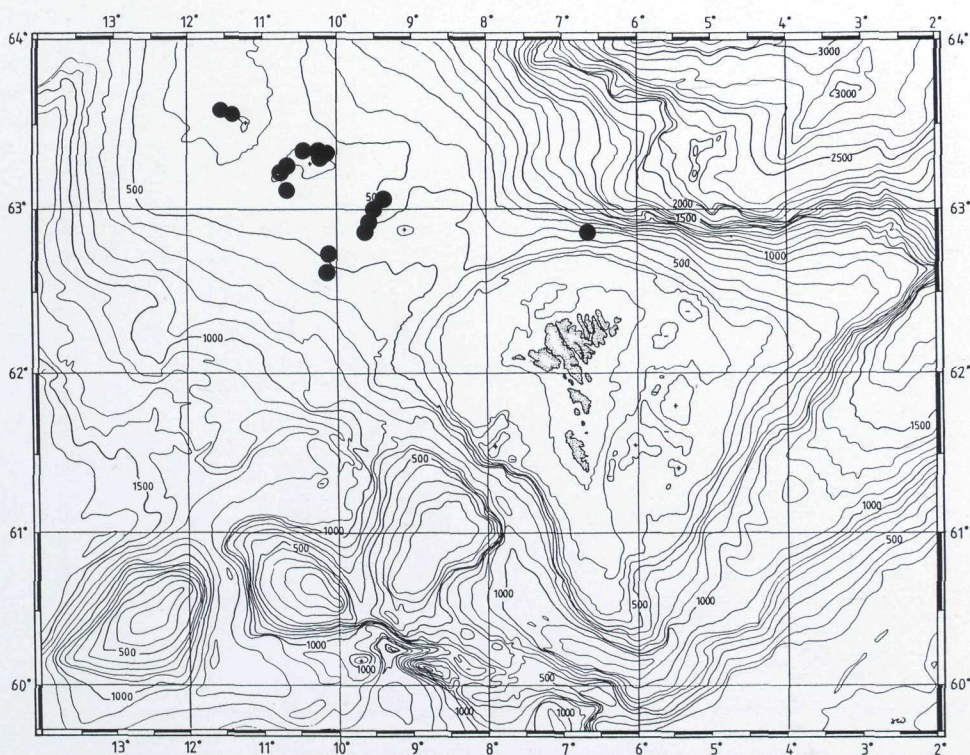


Fig. 29. Records of *Pandalus borealis* Krøyer in the Faroe area.

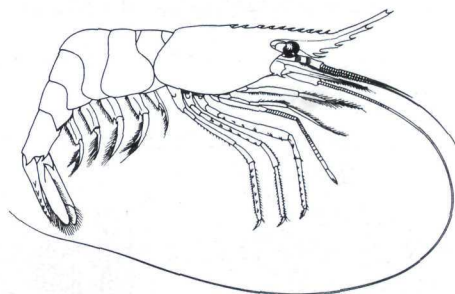
Mynd 29. Skrásætingar av *Pandalus borealis* Krøyer í føroyskum øki.

Breeding: Oviparous females have been taken in April and May.

Water masses: AI (14 stns), AW/AI (1 stn) and NW (1stn).

Atlantic distribution: From Franz Josef Land to Britain; the Faroes; around Iceland and Jan Mayen; East Greenland; West Greenland from ca. 71° N (one record from 75° N) (Stephensen, 1939) to 41° N off the coast of USA (Smaldon *et al.*, 1993).

Atlantic depth range: 20-1355 m, frequently from 80-500 m, hyperbenthic.



**Fig. 30. *Pandalus montagui* Leach**, length usually up to 100 mm, max. 160 mm (From Christiansen, 1972).

**Mynd 30. *Pandalus montagui* Leach**, löngd vanliga upp í 100 mm, í mesta lagi 160 mm (Úr Christiansen, 1972)

### ***Pandalus montagui* Leach, 1814 (Fig. 30)**

Synonym: *Pandalus annulicornis* auctores.

Good descriptions: Calman (1899: 30, pls I-IV, fig. 1); Kemp (1910: 86, pl. X, fig. 8).

Previous records: According to Hansen (1908) and Stephensen (1928) the species seems to be very common at the Faroes, where it has been taken 25-30 times, especially at depths from 2-25 m, but also down to c. 100 m. »Michael Sars«: Stn 44 (1902), 62° 16' N, 6° 06' W, 110 m; Stn 83 (1902), 62° 29' N, 7° 37' W, 120 m, 8.71 °C (Grieg, 1927). Rømer (1991) gives a long list of localities: »Thor«: Stn 21 (O.P) (4 June 1913), Trongisvágur, ? m, 2 specimens; Stn 47 (O.P) (4 June 1913), Trangisvåg, ? m, 2 specimens; Stn 109 (O.P) (June 1913), Trongisvágur, ? m, one specimen; Stn ? (year 1913), one specimen. »Dana«: Stn 5666 (31 July 1937), Gøtuvík sound, 37 m, one specimen; Stns 5668-5669 (6 August 1937) (Kaldbaksfjørður, 30-55 m, one specimen; Stn 5678 (6

August 1937), Sundini, between Haldarsvík and Ljósa, 54 m, 72 specimens. One record by Samuel Petersen (September/ October 1937) from Klaksvík, ? m, one specimen. Records by E. Ursin: 62° 37' N, 7° 03' W, 122-130 m, 3 specimens (10 October 1946); 62° 05' N, 6° 15' W, 102 m, 6 specimens (9 October 1946); 62° 04.4' N, 6° 13.2' W, 104 m, 4 specimens (27 September 1946); 62° 23' N, 7° 03' W, 106 m, 8 specimens (10 October 1946). »Dana«: Stn 9066 (15 June 1954), 61° 17' N, 6° 58' W, 140-147 m, 4 specimens; Stn 9064 (15 June 1954), 61° 31' N, 6° 38.5' W, 65-60 m, 2 specimens. »Hvidbjørnen«: Stn 6 (10 January 1979), 61° 25.3' N, 5° 29.8' W, 195 m, 2 specimens; Stn 7 (14 January 1979), 62° 16.5' N, 6° 25.4' W, 50-45 m, 5 specimens; Stn 15 (17 January 1979), 62° 21.3' N, 5° 51.2' W, 100 m, one specimen; Stn 16 (18 January 1979), 62° 39.0' N, 6° 36.1' W, 155 m, 5 specimens; Stn 17 (18 January 1979), 62° 37.3' N, 6° 45.5' W, 143-135 m, 11 specimens; Stn 18 (18 January 1979), 62° 06.2' N, 7° 48.0' W, 105 m, one specimen; Stn 25 (21 January 1979), 61° 07.1' N, 8° 04.8' W, 135 m, 9 specimens; Stn 24 (21 January 1979), 61° 00.3' N, 8° 48.9' W, 105-100 m, 2 specimens; Stn 26 (21 January 1979), 62° 06.9' N, 7° 47.5' W, ? m, 16 specimens; Stn 27 (22 January 1979), 62° 01.4' N, 7° 19.5' W, 70 m, 2 specimens. Berggren (1994) found it regularly between 0 and 20 m depth in the phytal zone at 14 localities (Gjógv, Oyndarfjørður, Grønskriðudrangur, Vestmanna, Leynar, Kaldbaksbotnur, Kaldbaksfjørður (central north), Kaldbaksfjørður (Mógvanes), Stórafles, Hoyvík, Kirkjubøur, Hvannhólmur, Øravík and Akratangi. BIOFAR stations: 6, 7, 52, 56, 60, 70, 76, 77, 98, 100, 102, 105, 106, 110, 111, 165, 173, 192, 261, 264, 325, 344, 349, 350, 351, 354, 355, 359, 367, 368, 370, 372, 408, 409, 410, 452, 545, 548, 597, 602, 606, 607, 677, 724, 726, 728, 776, 9016. BIOFAR 2 stations: 1150, 1162, 1194, 1197, 1230, 1244, 1341.

Areas: Faroe Bank, the Faroe plateau, and southern slope of Faroe-Iceland Ridge.

Depth range: 0-780 (1003) m, juveniles in shallow water, adults in deep water.

Temperature: measured at 6 stns, 2.2 to 8.7 °C; estimated range -1 - 10.9 °C.

Breeding: Oviparous females have been taken in January, April and June.

Water masses: AW (71 stns), AW/AI (7 stns), AW/AI/NW (1 stn) and AI/NW (1 stn).

Atlantic distribution: From the southern Barents Sea

southwards to 50° N; the Faroes; around Iceland; in the western Atlantic from West Greenland, 69° N (Stephensen, 1939) south to 41° N (Smaldon *et al.*, 1993; own obs).

Atlantic depth range: 0-780 (1003) m, rarely deeper, juveniles in shallow water, adults in deeper water, hyperbenthic.

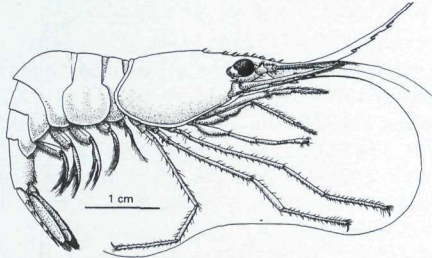


Fig. 31. *Pandalus propinquus* G.O. Sars, length up to 100 mm, max. 150 mm (From Smaldon, 1995).

Mynd 31. *Pandalus propinquus* G.O. Sars, lengd upp í 100 mm, í mesta lagi 150 mm (Úr Smaldon, 1995).

### *Pandalus propinquus* G. O. Sars, 1870

(Fig. 31)

Good descriptions: Calman (1899: 32, pls I-IV, fig. 2); Kemp (1910: 89, pl. XI, figs 1-4).

Previous records: »Ingolf«-Expedition: Stn 46, 61° 32' N, 11 36' W, 1355 m, 2.4 C, two specimens; Stn 47, 61° 32' N, 13° 40' W, 1788 m, 3.2° C, one specimen; caught several times by Wandel and »Thor« (Hansen, 1908). »Dana«: Stn 5840 (14 May 1938), 62° 44' N, 6° 06' W, 320 m, 3 specimens; Stn 5950 (2 July 1938), 61° 30' N, 8° 52' W, 515 m, 5 specimens; Stn 6001 (24 July 1938), 63° 33' N, 11° 25' W, 322 m, 16 specimens; Stn 6004 (24 July 1938), 63° 06' N, 10° 40' W, 437 m, 6 specimens. »Hvidbjørnen«: Stn 24 (21 January 1979), 61° 00.3' N, 8° 48.9' W, 105-100 m, one specimen (Rømer, 1991).

BIOFAR stations: 19, 27, 32, 46, 47, 49, 65, 68, 69, 89, 90, 100, 115, 120, 122, 124, 165, 234, 261, 264, 279, 285, 290, 297, 298, 299, 301, 303, 307, 324, 334, 335, 341, 343, 344, 345, 348, 352, 353, 381, 417, 418, 419, 421, 483, 486, 488, 495, 497, 498, 503, 505, 508, 514, 515, 522, 535, 536, 540, 694, 698, 727, 728, 734, 738, 739, 743, 744, 756, 758, 804, 806, 809, 9004.

Areas: Lousy Bank, Bill Bailly Bank, Faroe Bank, southern slope of Wyville-Thomson Ridge, upper

slopes of the Faroe plateau, top and southern slope of Faroe-Iceland Ridge (Fig. 32).

Depth distribution: 105-1788 m.

Temperature: measured at 11 stns, 0.9 to 8.0 °C; estimated range from -1 to 9.4 °C.

Water masses: AW (36 stns), AW/AI (23 stns), AI (16 stns), AW/AI/NW (3 stns) and AI/NW (2 stns).

Atlantic distribution: From c. 71° N, Norway to Bay of Biscay; the Faroes; Iceland, common off the west coast but rare off the southern and eastern coasts (Stephensen, 1939); in the western Atlantic from West Greenland, 66° 35' N (Stephensen, 1939) southwards to 39° N (Smaldon *et al.*, 1993).

Atlantic depth range: 40-2600 m, hyperbenthic.

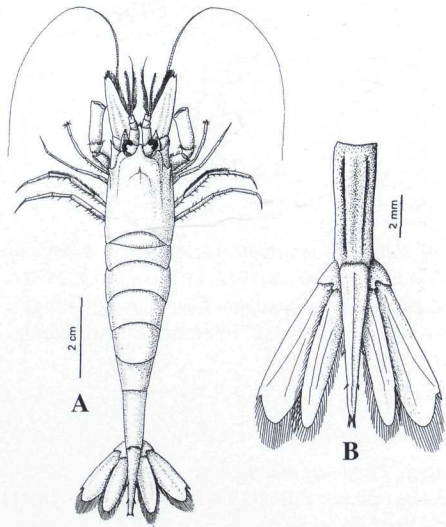


Fig. 33. A: *Crangon crangon* (Linnaeus), a near relative of *C. allmanni* Kinahan. – B: *C. allmanni*, posterior part; body length up to 75 mm (From Smaldon, 1995).

Mynd 33. A: *Crangon crangon* (Linnaeus), nær í ætt við *C. allmanni* Kinahan. – B: *C. allmanni*, partur av afturkroppinum; krops lengd upp í 75 mm (Úr Smaldon, 1995).

### Family CRANGONIDAE

Genus *Crangon* J. C. Fabricius, 1798

*Crangon allmanni* Kinahan, 1857 (Fig. 33 B)

Synonym: *Crangon allmani* auctores.

Good descriptions: Kemp (1910: 138); Wollebæk (1909: 26, pl. VIII, figs 1A-5A).

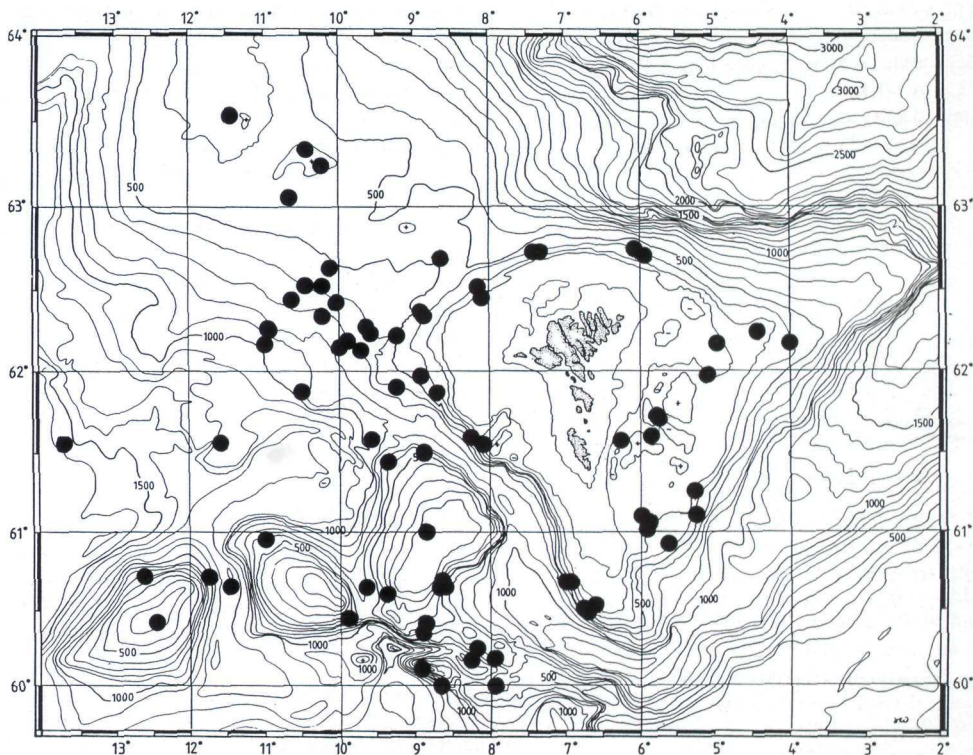


Fig. 32. Records of *Pandalus propinquus* G.O. Sars in the Faroe area.

Mynd 32. Skrásetingar av *Pandalus propinquus* G.O. Sars í føroyskum øki.

Previous records: Regarded as common at the Faroes by Hansen (1908). Five localities: Trongisvágur, 2-6 m and 15-19 m; Tvøroyri, c. 20 m; 6 n.m. NW of Kalsoy, c. 110 m; and Husagrønna, 115 m were listed by Stephensen (1928). »Thor«: Stn 59-10.0 (5 June 1913), Trongisvágur, ? m, one specimen; Stn 96, A-10.0 (7 June 1913), Trongisvágur, ? m, one specimen; Stn ? (5 July 1913), Trongisvágur, ? m, one specimen (Rømer, 1991). »Dana«: Stns 5668-5669 (2 August 1937), Kaldbaksfjørður, 30-55 m, 2 specimens; Stn 5674 (4 August 1937), mouth of Kollefjørður, 67 m, 9 specimens; Stn 5707 (20 August 1937), sound outside Kaldbakfjørður, 61 m, one specimen (Rømer, 1991). Record by E. Ursin: 62° 37' N, 7° 03' W, 122-130 m, one specimen, 10 October 1946 (Rømer, 1991). »Hvidbjørnen«: Stn 15 (17 January 1979), 62° 21.3' N, 5° 51.2' W, 100 m, 1 specimen; Stn 16 (18 January 1979), 62° 39.0' N, 6° 36.1' W, 155 m, one specimen;

Stn ? (18 January 1979), 62° 37.3' N, 6° 45.5' W, 145-135 m, 5 specimens; Stn 24 (21 January 1979), 61° 00.3' N, 8° 48.9' W, 105-100 m, 2 specimens; Stn 25 (21 January 1979), 61° 07.1' N, 8° 04.8' W, 135 m, 2 specimens (Rømer, 1991). Kaldbaksfjørður, 40 m (Bergren, 1994).

BIOFAR stations: 6, 7, 10, 32, 51, 52, 56, 60, 62, 72, 73, 75, 77, 78, 98, 100, **110, 116**, 165, 176, **288, 322**, 325, **326**, 333, 355, 356, 357, 359, 363, 366, 367, 408, 473, 515, 518, 542, 677, 678, 680, 681, 764, 776, 9016.

Areas: Lousy Bank, Faroe Bank, the Faroe plateau.

Depth range: 2-430 (700) m.

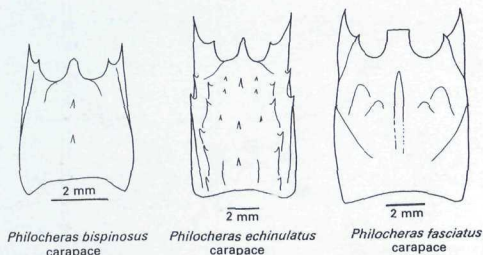
Temperature: measured at 5 stns, 7.7 to 8.0 °C, estimated range 4.7 - 10.9 °C.

Breeding: Ovigerous females have been taken in January and May.

Water masses: AW (54 stns), AW/AI (2 stns) and AI (1 stn).

Atlantic distribution: From the White Sea to the Bay of Biscay; the Faroes; common off the southern and western coasts of Iceland (Smaldon *et al.*, 1993; Stephensen, 1939).

Atlantic depth range: 20-430 (700) m, hyperbenthic.



**Fig. 34.** *Philocheras bispinosus* (Hailstone), carapace, body length up to 26 mm; *P. echinulatus* (M. Sars), carapace, body length up to 45 mm; *P. fasciatus* (Risso), carapace, body length up to 19 mm (From Smaldon, 1995).

**Mynd 34.** *Philocheras bispinosus* (Hailstone), ryggjarskjöldur, kropslongd upp í 26 mm; *P. echinulatus* (M. Sars), ryggjarskjöldur, kropslongd upp í 45 mm; *P. fasciatus* (Risso), ryggjarskjöldur, kropslongd upp í 19 mm (Úr Smaldon, 1995).

### Genus *Philocheras* Stebbing, 1900

#### *Philocheras bispinosus* (Hailstone, 1835)

(Fig. 34)

Synonym: *Pontophilus bispinosus* Hailstone (1835); *Cheraphilus nanus* Krøyer (1842); *Cheraphilus neglectus* Sars (1883); *Philocheras bispinosus* var. *neglectus* Kemp (1910).

Good description: Kemp (1910: 152, pl. XXI, fig. 4a, b).

Previous records: Hansen (1908) mentioned that it (as *Cheraphilus neglectus*) has been recorded several times at the Faroes. Two records, one from Trongisvágur (20-27 m), and one from ESE off Fugloy (c. 130 m), are mentioned by Stephensen (1928) (as *Cheraphilus neglectus*). »Thor«: Stns 104; 106; 110 (O.P) (7 June 1913), Trongisvágur, ? m, 3 specimens Rømer (1991, as *Pontophilus bispinosus*). Also recorded from between 0 and 20 m depth in the phytal zone at Kaldbakstbotnur and in Kaldbakstfjørður (central north), and from a soft bottom locality (40 m) in Kaldbakstfjørður (Berggren, 1994).

BIOFAR stations: 7, 110, 176, 355, 357, 359, 408, 602, 677.

BIOFAR 2 stations: 1150, 1194.

Areas: Faroe Bank and eastern part of the Faroe plateau, also inshore.

Depth range: 0-218 (407) m.

Temperature: measured once, 8.0 °C; estimated range 5.0 – 9.6 °C.

Breeding: Ovigerous females have been taken in May, June and August.

Water masses: AW (14 stns) and AW/AI (1 stn).

Atlantic distribution: From c. 69° N, Norway to the Azores and into the Mediterranean; the Faroes; rare off the southern and western coasts of Iceland (Smaldon *et al.*, 1993; Stephensen, 1939).

Atlantic depth range: 0-218 (407) m, hyperbenthic.

#### *Philocheras echinulatus* (M. Sars, 1861)

(Fig. 34)

Synonym: *Pontophilus echinulatus* Sars (1861); *Cheraphilus echinulatus* Stephensen (1928).

Good description: Kemp (1910: 144, pl. XXI, fig. 7a-d).

Previous records: 61° 08' N, 8° 47' W, 168 m, one specimen (Stephensen, 1928). »Dana«: Stn 6009 (26 July 1938), 61° 14' N, 7° 04' W, 220 m, one specimen (Rømer, 1991).

BIOFAR stations: 32, 70, 73, 522, 764, 9004.

Areas: Faroe Bank and the Faroe plateau.

Depth range: 168-514 m.

Temperature: measured once, 7.9 °C; estimated range 4.9 – 9.6 °C.

Breeding: Ovigerous females have been taken in July.

Water masses: AW (7 stns) and AW/AI (1 stn).

Atlantic distribution: From c. 70° N, Norway and the Faroes to the Atlantic coast of Morocco; in the Mediterranean (Smaldon *et al.*, 1993).

Atlantic depth range: 60-900 m, hyperbenthic.

#### *Philocheras fasciatus* (Risso, 1816)

(Fig. 34)

Synonyms: *Crangon fasciatus* Bell (1853); *Aegeon fasciatus* Kinahan (1861); *Pontophilus fasciatus* auctores.

Good description: Kemp (1910: 151, pl. XXI, fig. 3a, b).

Previous records: None.

BIOFAR station: 77.

Area: Faroe Bank.

Depth range: 99 m.

Temperature: estimated range 7.3 to 0.9 °C.

Water mass: AW (1 stn.).

Atlantic distribution: From southern Iceland, the Faroes and the British Isles to the Azores; the Mediterranean and the Adriatic Sea (Smaldon *et al.*, 1993).

Atlantic depth range: 0-99 m, probably hyperbenthic.

### Genus *Pontophilus* Leach, 1817

#### *Pontophilus norvegicus* (M. Sars, 1861)

(Fig. 35)

Synonym: *Crangon norvegicus* Sars (1861).

Good description: Kemp (1910: 162, pl. XXI, fig. 9a, b).

Previous records: »Thor«: 61° 08' N, 9° 28' W, 847 m;

61° 15' N, 9° 35' W, 941 m. Caught by Wandel: 61° 22' N, 5° 04' W, 479 m, 0.0 °C; 63° 15' N, 9° 35' W, 508 m (Hansen, 1908). »Michael Sars«: Stn 76 (12 August 1902), 59° 23' N, 7° 50' W, 1100 m, 8.07 °C; Stn 86 (1902), 62° 59' N, 10° 37' W, 460 m, 3.36 °C (Grieg, 1927). »Dana«: Stn 5866 (18 May 1938), 62° 27' N, 4° 54' W, 450 m, one specimen; Stn 6001 (24 July 1938), 63° 33' N, 11° 25' W, 317 m, 23 specimens; Stn 6004 (24 July 1938), 63° 06' N, 10° 40' W, 437 m, 18 specimens; Stn 6008 (26 July 1938), 61° 39' N, 7° 55' W, 352 m, 2 specimens; Stn 6229 (11 August 1939), 63° 00' N, 9° 30' W, 495-500 m, 8 specimens (Rømer, 1991).

BIOFAR stations: 10, 19, 32, 33, 62, 65, 68, 70, 100, 117, 120, 124, 158, 165, 172, 189, 232, 233, 267, 268, 269, 283, 285, 292, 344, 359, 380, 381, 382, 408, 416, 419, 420, 421, 422, 424, 425, 452, 457, 483, 495, 496, 516, 517, 518, 522, 524, 646, 647, 690, 694, 695, 713, 714, 717, 738, 739, 742, 743, 747, 767, 9015, 9018.

Areas: Deep water all around the Faroes (Fig. 36).

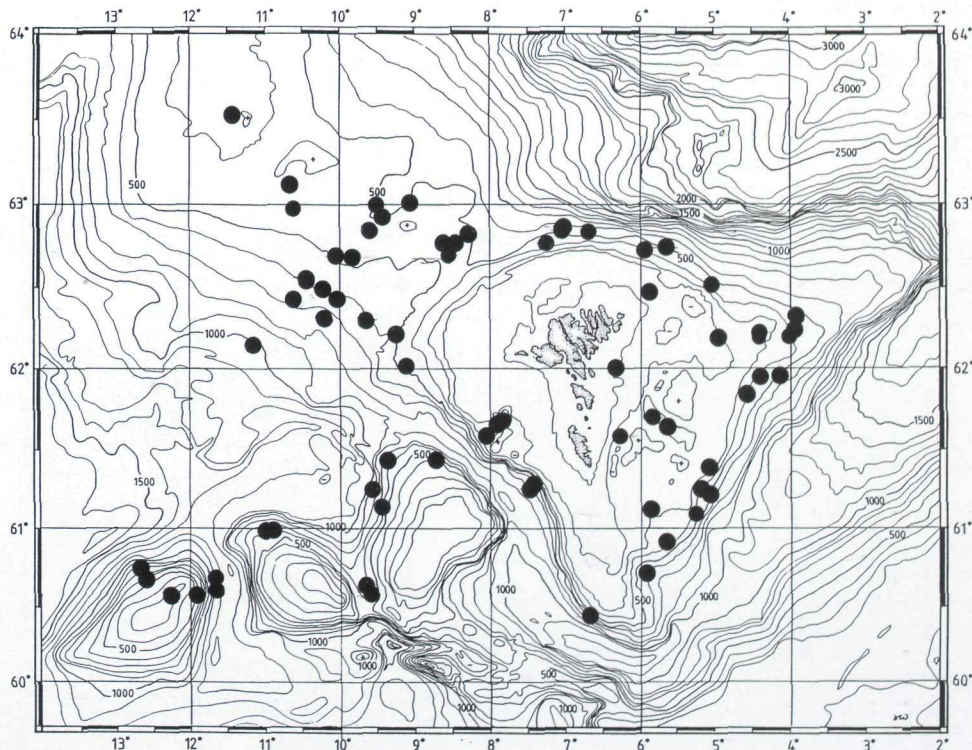
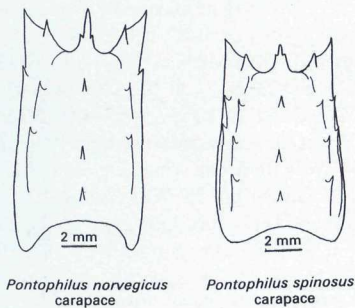


Fig. 36. Records of *Pontophilus norvegicus* (M. Sars) in the Faroe area.

Mynd 36. Skrásetingar av *Pontophilus norvegicus* (M. Sars) í føroyskum øki.



**Fig. 35.** *Pontophilus norvegicus* (M. Sars), carapace, body length up to 75 mm; *P. spinosus* (Leach), carapace, body length up to 52 mm (From Smaldon, 1995).

**Mynd 35.** *Pontophilus norvegicus* (M. Sars), ryggjarskjöldur, kropslongd upp í 75 mm; *P. spinosus* (Leach), ryggjarskjöldur, kropslongd upp í 52 mm (Úr Smaldon, 1995).

Depth range: (110) 276-1100 m.

Temperature: measured at 24 stns, -0.1 to 8.1 °C; estimated range -1 to 9.4 °C.

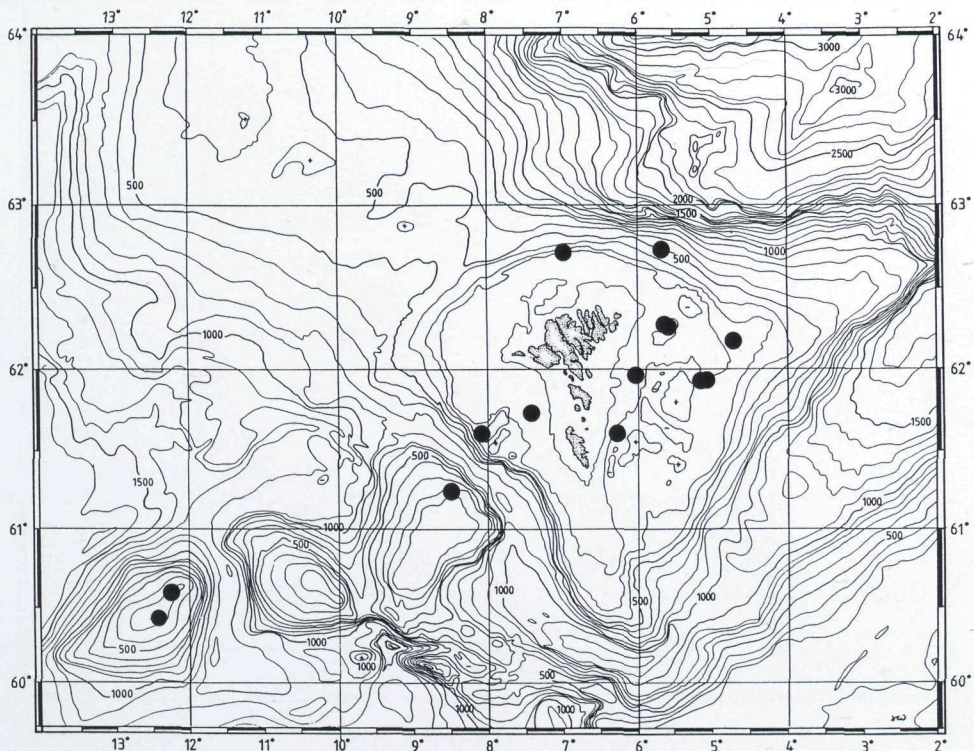
Breeding: Ovigerous females have been taken in May and June.

Water masses: AI (25 stns), AW (24 stns), AW/AI (21 stns), NW (3 stns), and AI/NW (2 stns).

Atlantic distribution: From Spitsbergen southwards to Bay of Biscay; the Faroes; rare in lesser depths than 400 m of the E, S, W, and NW coasts of Iceland (Stephensen, 1939); Denmark Strait and southeast Greenland (Heegaard, 1941); western Mediterranean (Smaldon *et al.*, 1993); in the western Atlantic from West Greenland, 67° N (Stephensen, 1939) to 38° N (Smaldon *et al.*, 1993).

Atlantic depth range: (35) 40-1450 m, usually 200-500 m (Wollebak, 1909; Sivertsen and Holthuis, 1956), hyperbenthic.

Note: Vartdal (1976) has written an unpublished thesis on its reproduction, growth and energy content in Korsfjorden, western Norway.



**Fig. 37.** Records of *Pontophilus spinosus* (Leach) in the Faroe area.

**Mynd 37.** Skrásetingar av *Pontophilus spinosus* (Leach) í færoyskum øki.

***Pontophilus spinosus* (Leach, 1815)** (Fig. 35)

Synonyms: *Crangon spinosus* Bell (1853); *Cheraphilus spinosus* Kinahan (1861).

Good description: Kemp (1910: 160, pl. XXI, fig. 8a-d).

Previous records: None.

BIOFAR records. 6, 7, 27, 28, 65, 73, 100, 408, 543, 602, 690, 764, 9004, 9016, 9018.

Areas: Lousy Bank, Faroe Bank and the Faroe plateau (Fig. 37).

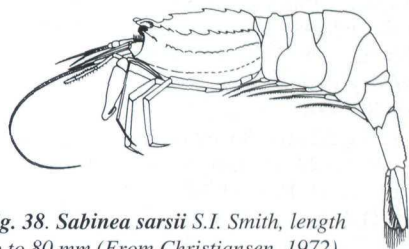
Depth range: 110-357 m. Rømer's (1991) note of 507 m is a mistake.

Temperature: measured at 3 stns, 7.7 – 7.9 °C; estimated range 4.9 – 9.6 °C.

Water masses: AW (13 stns) and AW/AI (1 stn.).

Atlantic distribution: From c. 69° N, Norway to the Bay of Biscay; the Faroes; rare on the west coast of Iceland (Stephensen, 1939); Mediterranean and the Adriatic (Smaldon *et al.*, 1993).

Atlantic depth range: 10-357 m (to 1550 m in the Mediterranean), hyperbenthic.



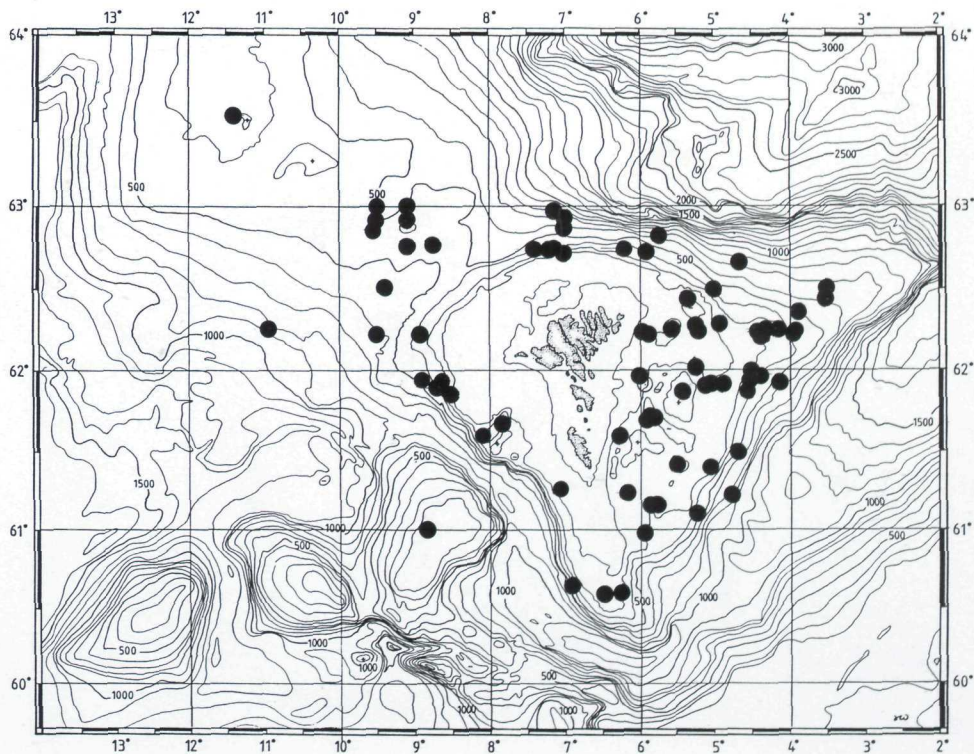
**Fig. 38.** *Sabineia sarsii* S.I. Smith, length up to 80 mm (From Christiansen, 1972).

**Mynd 38.** *Sabineia sarsii* S.I. Smith, longd upp í 80 mm (Úr Christiansen, 1972).

Genus *Sabineia* J. C. Ross, 1835***Sabineia sarsii* S. I. Smith, 1879** (Fig. 38)

Good description: Smith (1886: 655, figs.); Blacker (1957: 42, fig. 23a-c).

Previous records: »Ingolf«-Expedition: Stn 143, 62° 58' N, 7° 09' W, 730 m, -0.4 °C; 61° 23' N, 5° 04' W, 480 m, 0.0 °C, caught by Wandel (Hansen, 1908).



**Fig. 39.** Records of *Sabineia sarsii* S.I. Smith in the Faroe area.

**Mynd 39.** Skrásetingar av *Sabineia sarsii* S.I. Smith í føroyskum øki.

»Michael Sars«: Stn 45 (6 July 1902), 62° 17' N, 4° 57' W, 265 m; Stn 85 (28 August 1902), 62° 53' N, 9° 06' W, 450 m, 3.98 °C (Grieg, 1927). »Dana« Stn 5840 (14 May 1938), 62° 44' N, 6° 06' W, 330 m, one specimen; Stn 6001 (27 July 1938), 63° 33' N, 11° 25' W, 317 m, 6 specimens; Stn 6009 (26 July 1938), 61° 14' N, 7° 04' W, 220 m, 2 specimens; Stn 6017 (30 July 1938), 62° 02' N, 5° 13' W, 220 m, 5 specimens; Stn 6229 (11 August 1939), 63° 00.3' N, 9° 30' W, 495-500 m, 2 specimens. »Hvidbjørnen«: Stn 6 (10 January 1979), 61° 25.3' N, 5° 29.8' W, 195 m, 11 specimens; Stn 24 (21 January 1979), 61° 00.3' N, 8° 48.9' W, 105-100 m, 4 specimens (Rømer, 1991).  
 BIOFAR stations: 6, 10, 15, 19, 27, 28, 29, 32, 33, 41, 44, 49, 51, 62, 65, 100, 115, 117, 119, 120, 170, 171, 172, 174, 175, 233, 234, 266, 282, 283, 287, 288, 333, 334, 353, 354, 356, 359, 380, 382, 390, 401, 411, 417, 424, 427, 452, 453, 458, 475, 483, 562, 602, 604, 713, 714, 717, 727, 747, 750, 756, 758, 765, 766, 767, 9015, 9016, 9018.

Areas: Faroe Bank, the Faroe plateau and the top and southern slope of Faroe-Iceland Ridge (Fig. 39).

Depth range: 105-894 m.

Temperature: measured at 17 stns, -0.63 to 7.7 °C; estimated range -1 - 9.6 °C.

Breeding: Ovigerous females have been taken in April and October.

Water masses: AW (36 stns), AW/AI (20 stns), NW (10 stns), AI (9 stns) and AI/NW (4 stns).

Atlantic distribution: From western Svalbard and eastern Kola Peninsula to Skagerrak; the Faroes; Iceland (Stephensen, 1939); in the western Atlantic from West Greenland at ca. 66° 30' N to about 45° N in Gulf of Maine, USA (Stephensen, 1935).

Atlantic depth range: 50-894 m (Christiansen, 1972), hyperbenthic.

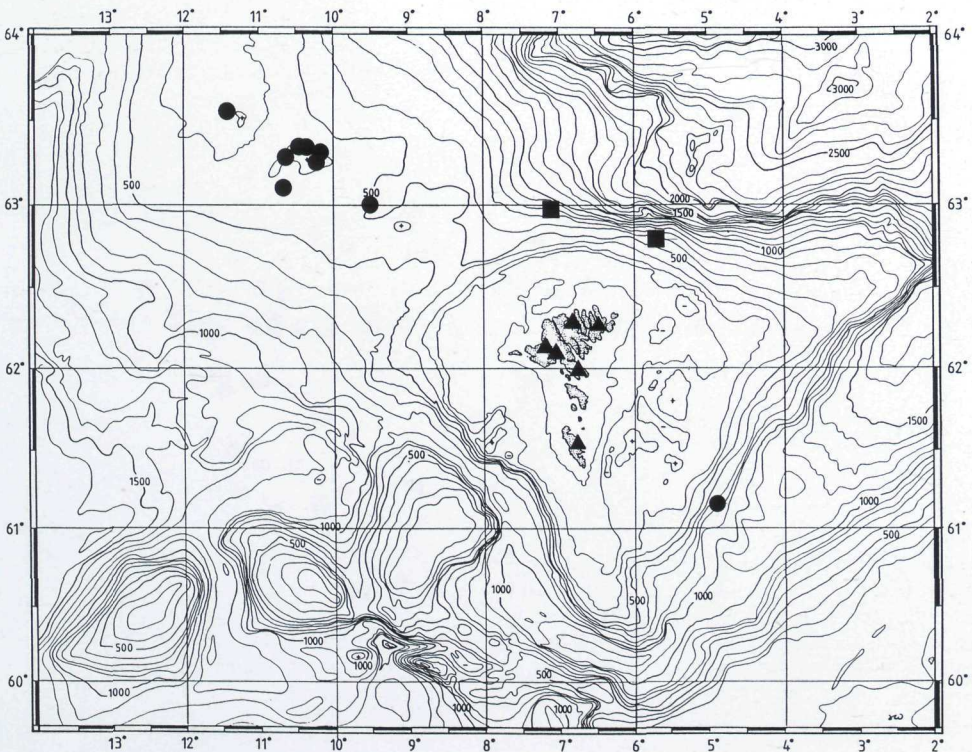
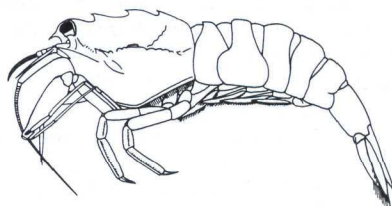
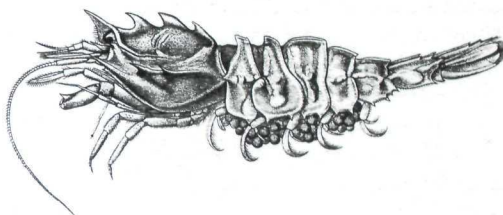


Fig. 41. *Sclerocrangon boreas* (Phipps) (adults ●, juveniles ▲) and *S. ferox* (G.O. Sars) (■) in the Faroe area.  
 Mynd 41. *Sclerocrangon boreas* (Phipps) (vaksin ●, ungdýr ▲) and *S. ferox* (G.O. Sars) (■) í froymskum øki.



**Fig. 40.** *Sclerocrangon boreas* (Phipps), length up to 120 mm (From Christiansen, 1972).

**Mynd 40.** *Sclerocrangon boreas* (Phipps), longd upp í 120 mm (Úr Christiansen, 1972).



**Fig. 42.** *Sclerocrangon ferox* (G.O. Sars), length up to 130 mm (From Sars, 1885).

**Mynd 42.** *Sclerocrangon ferox* (G.O. Sars), longd upp í 130 mm (Úr Sars, 1885).

Genus *Sclerocrangon* G. O. Sars, 1883

*Sclerocrangon boreas* (Phipps, 1774)

(Fig 40)

Synonym: *Crangon boreas* Krøyer (1842).

Good description: Krøyer (1842: 218, pl. 4, figs 1-14); Blacker (1957: 43, fig. 24).

Previous records: Hansen (1908) mentions that it seems to be common at the Faroes. Stephensen (1928) mentions that the species has been taken 15 times at different localities around the islands, at depths from 2 m to about 200 m. »Dana«: Stn 6001 (24 July 1938), 63° 33' N, 11° 25' W, 322 m, 2 specimens; Stn 6004 (24 July 1938), 63° 06' N, 10° 40' W, 437 m, 8 specimens; Stn 6229 (11 August 1939), 63° 00' N, 9° 30' W, 495-500 m, 3 specimens (Rømer, 1991). Also recorded from between 0 and 20 m depth in the phytal zone at Oyndarfjørður, Vestmanna, Leynar, Hoyvík and Øravík (Berggren, 1994).

BIOFAR stations: 107, 230, 806, 807, 808, 809, 810.

Areas: Southeastern slope of the Faroe plateau and the top of Faroe-Iceland Ridge, juveniles in inshore waters (Fig. 41).

Depth range: 0-500 (703) m.

Temperature: measured at 13 stns, -0.63 to 7.7 °C; estimated range -1 to 9.4 °C.

Breeding: Oviparous females have been taken in May.

Water masses: AI (8 stns), AW (1 stn) and NW (1 stn).

Atlantic distribution: From Franz Josef Land and Svalbard south to c. 62° N, Norway; the Faroes; Iceland (Stephensen, 1939); East Greenland; in the western Atlantic from West Greenland, 82° N to the Gulf of Maine at c. 43° N (Stephensen, 1935).

Atlantic depth range: 0-703 (930) m, epibenthic.

*Sclerocrangon ferox* (G. O. Sars, 1877)

(Fig. 42)

Synonyms: *Cheraphilus ferox* Sars (1877);

*Sclerocrangon salebrosus* Sars (1885).

Good description: Sars (1885: 15, pl. II, figs 1-29, as *Sclerocrangon salebrosus*); Blacker (1957: 43, fig. 25)

Previous records: »Ingolf«-Expedition: Stn 143, 62° 58' N, 7° 09' W, 730 m, -0.4 °C (Hansen, 1908).

BIOFAR station: 750.

Area: The northern slope of Faroe-Iceland Ridge (Fig. 41).

Depth: 600-730 m.

Temperature: measured once, -0.4 °C; estimated range -0.4 to 0.4 °C.

Water mass: NW (2 stns).

Atlantic distribution: Svalbard; Barents Sea; Eastern Finnmark, Norway; NE of Shetland; Jan Mayen and Denmark Strait (Heegaard, 1941); East Greenland (Sivertsen, 1935); off West Greenland between 78° N and 67° N (Stephensen, 1935).

Atlantic depth range: 15 - 875 (Sivertsen, 1935; Stephensen, 1935)

## Conclusions

Before the BIOFAR programme sampling started in 1987 only 25 species of natant decapods were recorded from the area defined as the Faroese Fishery Territory.

Thirty-five species of shrimps and prawns have been recorded from the area. The most commonly recorded species were

Species	Life style	Depth range (m)	Number of known records						Water mass	Measured temp. range	Estimated temp. range
			0-299 m		300-999 m		> 1000 m				
			-1986	1987-	-1986	1987-	-1986	1987-			
<i>Hippolyte varians</i>	hyperbenthic	0 - 129	c. 10	43					AW	6.5-10.9	
<i>Eualus gaimardii</i>	hyperbenthic	0 - 20	c. 10	10					AW	> 6.5 ?	
<i>Spirontocaris spinus</i>	epi- or hyper.	5 - 208	5-6	14					AW	5.2-10.6	
<i>Pandalina brevisrostris</i>	hyperbenthic	0 - 134	1	15					AW	7.9-8.0	
<i>Caridion steveni</i>	hyperbenthic	40		1					AW	5.2-10.5	
<i>Philocheras fasciatus</i>	prob. hyperb.	99		1					AW	7.3-10.9	
<i>Eualus pusiolus</i>	hyperbenthic	0 - 300	c. 25	71		1			AW	5.0-10.9	
<i>Philocheras bispinosus</i>	hyperbenthic	0 - 407	> 2	14		1			mainly AW	8.0	
<i>Pandalus montagui</i>	hyperbenthic	0 - 1003	> 27	83		9	1		mainly AW	2.2-8.7	
<i>Crangon allmanni</i>	hyperbenthic	2 - 700	> 5	51		6			mainly AW	7.7-8.0	
<i>Pontophilus spinosus</i>	hyperbenthic	110 - 357		11		4			mainly AW	7.7-7.9	
<i>Spirontocaris lilljeborgi</i>	epi- or hyperb.	96 - 503		23		9			mainly AW	2.0-7.9	
<i>Sclerocrangon boreas</i>	epibenthic	0 - 703	15	6		9			mainly AI	-0.63 to 7.7	
<i>Caridion gordonii</i>	hyperbenthic	68 - 600		20		10			mainly AW	6.6-7.9	
<i>Lebbeus polaris</i>	hyperbenthic	0 - 894	3	44	1	23			mainly AW	-0.6 to 7.9	
<i>Pandalina profunda</i>	hyperbenthic	185 - 357		3		2			AW	7.9	
<i>Philocheras echinolatus</i>	hyperbenthic	168 - 514	1	3		4			AW	7.9	
<i>Cryptocheles pygmaea</i>	epibenthic	235 - 600		1		1			AW	5.1-9.1	
<i>Dichelopandalus bonnierii</i>	hyperbenthic	170 - 725		33		40			mainly AW	0.9-7.9	
<i>Sabinea sarsii</i>	hyperbenthic	105 - 894	1	28	3	47			AW, AI, NW	-0.63 to 7.7	
<i>Pandalus propinquus</i>	hyperbenthic	105 - 1788		14	> 1	62	> 2	2	mainly AW	0.9-8.0	
<i>Pontophilus norvegicus</i>	hyperbenthic	110 - 1100		6	5	59	1	2	AW, AI	-0.1 to 8.1	
<i>Sclerocrangon ferox</i>	epibenthic	600 - 730		1	1				NW	-0.4	
<i>Bythocaris simplicirostris</i>	prob. hyperb.	322 - 780		1	10				mainly AI	0.0-2.2	
<i>Pandalus borealis</i>	hyperbenthic	322 - 1355		1	14	1			mainly AI	-0.1 to 5.3	
<i>Pasiphaea tarda</i>	benthopelagic	*455 - *1100		3	2	1			mainly AW	8.1	
<i>Bythocaris payeri</i>	benthopelagic	*322 - *1338		4	24	1	6		mainly NW	-1.4 to 0.3	
<i>Pasiphaea multidentata</i>	benthopelagic	*300 - *1100		3	4	8			mainly AW	1-9	
<i>Sergestes arcticus</i>	upper mesopel.	*360 - *1500		6 ?	11	1	2		mainly AI		
<i>Sergia robustus</i>	lower mesopel.	*421 - *847		2	1	1			probably AW	proba 4-8	
<i>Bythocaris cf. gracilis</i>	? benthopelagic	502 - *1083			1		2		mainly AI	2.3-2.4	
<i>Hymenodora glacialis</i>	mainly bathyp.c	*742 - 1783		4	2	3	3		mainly NW	-1.4 to -0.4	
<i>Acanthephyra purpurea</i>	lower mesopel.	*1293					2 ?		probably AW	?	
<i>Systellaspis debilis</i>	meso- to bathyp.	*1028					1		probably AW	?	
<i>Bythocaris leucopis</i>	benthopelagic	*1468 - 2199				4	2		NW	-1.0 to -0.4	

**Table 1.** Overview of all species of Decapoda Natantia recorded from the Faroese Fishery Territory: with life style category; depth range of records (\* indicate that specimens may have been caught in the water column); number of records in the depth zones 0-299 m, 300-999 m and > 1000 m for the years prior to 1987 and after 1987; the water mass(-es) from which the species were collected (AW = Atlantic Water; AI = Arctic Intermediate Water; NW = bottom water of the Norwegian Sea); and measured and estimated temperature range.

**Talva 1.** Yvirlit yvir øll sløg av Decapoda Natantia, sum eru skrásett innan fyri føroyskt sjómærk: við bólkingum av lívshátti; skrásett dýpdarøki (\* vísir, at einstøk dýr kunnu vera tikin í vatnjaðaranum); tal á skrásetingum í dýpdarbeltnum 0-299 m, 300-999 m og >1000 m fyri árin undan 1987 og eftir 1989, sjógvurin, har slagid varð tikið (AW = Atlantic Water, t.e. atlantssjógvur; AI = Arctic Intermediate Water, t.e. arktiskur millumsjógvur; NW = bottom water of the Norwegian Sea, t.d. botnsjógvur úr Norskahavinum; og mált og mett temperaturoeki.

the hyperbenthic species *Pandalus montagui* (> 120 records), *Eualus pusiolus* (> 97), *Pandalus propinquus* (> 81), *Sabineia sarsii* (79), *Dichelopandalus bonnieri* (73), and *Pontophilus norvegicus* (73). The dominant species in the phytal zone are *Eualus pusiolus*, *Hippolyte varians*, and juveniles of *Lebbeus polaris* and *Pandalus montagui* (see also Berggren, 1994). Species that were only recorded once were the meso- to bathypelagic species *Systellaspis debilis*, and the hyperbenthic species *Caridion steveni* and *Philocheiras fasciatus*.

A summary of the records of the species is given in Table 1.

The Faroese fauna of Decapoda Natantia consists of 25 hyper- and epibenthic

species, 5 benthopelagic species, and 5 meso- and bathypelagic species. The latter are confined to slope waters (300-999 m) or the deep sea (> 1000 m). Four of the benthopelagic species are recorded most often from slope waters and one species (*Bythocaris leucopis*) exclusively from cold, deep water. Sixteen of the hyper- and epibenthic species are most often recorded from the Faroe plateau or the top of the banks (0-299 m), 3 species seem to be shelf and slope species, and 6 species seem to be slope species.

Twenty-four species are mostly confined to »warm« AW, 5 species are mostly from cool AI, 4 species are mostly from cold NW, and 2 species are recorded from two or three different water masses.

Together with up-coming results on the Icelandic Decapoda Natantia fauna collected during the BIOICE programme (1991-) the improved knowledge of the fauna of shrimps and prawns in the Faroe area will provide a new platform for studies of distributions of natant decapod species in the transition area between the North Atlantic and the Norwegian Sea.

### Acknowledgements

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