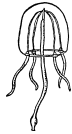


Starfishes (Echinodermata, Asteroidea) new for the Faroe Islands, collected by “BIOFAR”

Halldis Ringvold

SARSIA



Ringvold H. 1999. Starfishes (Echinodermata, Asteroidea) new for the Faroe Islands, collected by “BIOFAR”. *Sarsia* 84:469-472.

Ten out of totally 41 species of starfish that were collected around the Faroe Islands during the “BIOFAR” programme extended their previously known distribution area. The species are: *Odontaster* sp. Verrill, *Tremaster mirabilis* Verrill, *Pseudarchaster gracilis* (Sladen), *Pteraster* (*Apterodon*) cf. *acicula* (Downey), *Pteraster obscurus* (Perrier), *Pteraster pulvillus* M. Sars, *Neomorphaster margaritaceus* (Perrier), *Pedicellaster typicus* M. Sars, *Stephanasterias albula* (Stimpson) and *Stichastrella rosea* (O.F. Müller). *P. gracilis*, *P. (A.)* cf. *acicula* and *N. margaritaceus* are for the first time reported as far north as to the Faroe Islands. *O. obscurus* has extended its depth range down to 600 m.

Halldis Ringvold, Institute of Marine Research, Austevoll Aquaculture Research Station, N-5392 Storebø, Norway.

Keywords: starfishes; Faroe Islands; identification; distribution.

INTRODUCTION

Investigations of the marine environment in the north-east Atlantic have been undertaken for many years. The research vessels *Lightning*, *Porcupine*, *HMS Challenger*, *Vøringen*, *Knight Errant*, *Triton*, *Ingolf* and *Michael Sars* were all doing research cruises in the northeast Atlantic at the end of the 19th century. During 1924-1927 another investigation, concentrating on the upper 200 m depth at the Faroe Islands, revealed 11 species of starfishes (Liberkind 1929). Results from these cruises have been the basis for the present knowledge of the benthic fauna of the Faroe Islands.

A benthic survey from 1973-1982 in the Rockall Trough area revealed 19 starfish-species with extended distribution area. One of these, *Pteraster* (*Apterodon*) cf. *acicula*, was new to the northeast-Atlantic (Gage & al. 1983).

From 1987-1990, systematic dredgings around the Faroe Islands through the “BIOFAR” programme (Marine Benthic Fauna of the Faroe Islands) came about (Nørrevang 1992). Dredgings with different types of gear were done at about 600 localities, mainly from 100 to about 1000 m depth. Totally 41 starfish-species were identified in the BIOFAR material, of which ten were new to the area (Ringvold 1996). In this article these ten species, and information on three juvenile specimens of

an unidentified species (probably from the family Poraniidae), are presented.

For each of the ten species, number of specimens caught, measure in cm from mid of disc to tip of arm (R), BIOFAR stations, geographical and depth distribution are given. Details of BIOFAR stations are given by Nørrevang & al. (1994). If no other references are given for synonyms, geographical, and depth distribution this information is from Clark & Downey (1992).

Odontasteridae Verrill

Odontaster sp. Verrill, 1880

Material: 4 specimens (R = 0.2-0.4 cm) at 4 BIOFAR stations (68, 421, 495, 515).

Remarks: Gage & al. (1983) reported the genus from Porcupine Seabight (R = 2.9 cm). According to Mortensen (1927), *O. mediterraneus* (Marenzeller) is the only species of this genus known from British waters.

Geographical distribution of *O. mediterraneus*: Porcupine Seabight, SW of Ireland (c. 51°N, 12°W) and Bay of Biscay (c. 45°N, 3°W); (but ? *O. mediterraneus*) [sic]; Mediterranean.

Depth distribution: 414-1800 m.

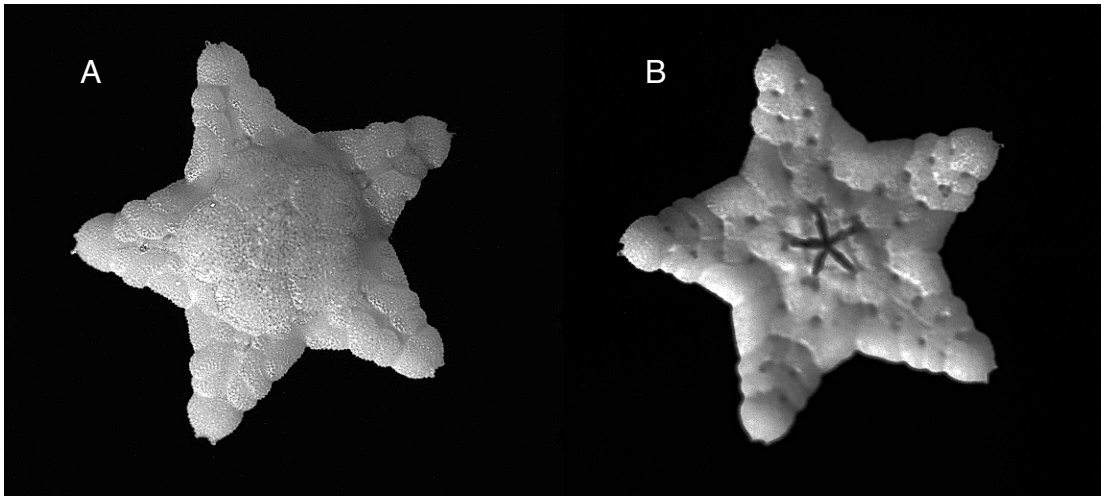


Fig. 1. Juvenile specimen from the Poraniidae family, BIOFAR Stn 158. A: Dorsal side. B: Ventral side. (Photo: Per E. Fredriksen)

Asterinidae Gray

Tremaster mirabilis Verrill, 1880

Material: 1 specimen (R = 2.5 cm) at BIOFAR Stn 118.

Geographical distribution: western Atlantic and adjacent waters from Nova Scotia, south of Cuba, east and south of the Falkland Islands and in the NE off central Norway, also in Arctic from Labrador, SE Greenland, SE Iceland and the Barents Sea and in the Southern Ocean from Kerguelen.

Depth distribution: 150-1060 m.

Poraniidae Perrier, 1893

Three specimens (R = 0.3 cm) were collected at BIOFAR Stn 158 (Fig. 1). Because of the ossicular development and the overlapping, glass-shaped marginal ossicles, the specimens were preliminary identified to this family by Dr. Daniel B. Blake, University of Illinois, USA.

Goniasteridae Forbes

Pseudarchaster gracilis (Sladen, 1889)

Synonym: *Aphroditaster gracilis* Sladen, 1889

Material: 1 specimen (R = 13 cm) at BIOFAR Stn 523.

Remarks: This species is for the first time reported as far north as the Faroe Islands (60°42.41'N, 12°35.87'W).

Geographical distribution of *P. gracilis gracilis*: off Cape Cod and from the Rockall Trough on the two sides of the Atlantic south to the Equator. Gage & al. (1983) reported it from Rockall Trough, and Harvey & al. (1988) from south of the Wyville Thompson Ridge.

Depth distribution: 320-2940 m.

Pterasteridae Perrier

Pteraster (Apterodon) cf. acicula (Downey, 1970)

Synonyms: *Marsipaster acicula* Downey, 1970; *Pteraster acicula* Downey, 1973; ? [sic] *Pteraster* sp. aff. *P. acicula* Clark, 1983.

Material: 76 specimens (R = 0.3-2.8 cm) at 36 BIOFAR stations (68, 88, 89, 115, 117, 120, 124, 283, 299, 317, 324, 335, 341, 411, 419, 420, 421, 423, 483, 495, 499, 509, 515, 524, 536, 587, 698, 726, 727, 737, 738, 742, 744, 747, 760, 765).

Remarks: This species is for the first time reported as far north as the Faroe Islands (BIOFAR Stn 747: 62°43.4'N, 05°55.8'W).

Geographical distribution: off West Palm Beach, Miami, Straits of Florida, Panama City, Cuba, western Gulf of Mexico, possibly from the Rockall Trough (Gage & al. 1983).

Depth distribution: 260-3712 m.

*Pteraster obscurus* (Perrier, 1891)

Synonyms: *Hexaster obscurus* Perrier, 1891; *Pteraster hexactis* Döderlein, 1899.

Material: 6 specimens (R = 1.7-3.0 cm) at 4 BIOFAR stations (172, 268, 749, 750).

Remarks: The specimens caught at 600 m (BIOFAR Stn 750) extend the known depth range of the species.

Geographical distribution: Circumboreal, in the western Atlantic south to Newfoundland, in the eastern Atlantic only to northern Norway, also in the Pacific Arctic.

Depth distribution: 19-512 m.

Pteraster pulvillus M. Sars, 1861

Material: 25 specimens (R = < 0.5-2.5 cm) at 17 BIOFAR stations (33, 68, 100, 120, 122, 132, 234, 333, 341, 397, 421, 482, 483, 523, 727, 738, 9018).

Geographical distribution: Circumboreal, in western Atlantic south to east of Cape Cod, c. 42°N; in eastern Atlantic south to west of Galway, Ireland and southern Norway, also in Pacific and Bering Sea. Gage & al. (1983) reported the species from Rockall Bank, and Harvey & al. (1988) from the Hebrides.

Depth distribution: 36-3700 m.

Neomorphasteriidae Fisher

Neomorphaster margaritaceus (Perrier, 1882)

Synonyms: *Pedicellaster margaritaceus* Perrier, 1882; *Neomorphaster talismani* Perrier, 1894; *Gastraster margaritaceus* Perrier, 1894.

Material: 2 specimens (R = 2.5 cm) at 2 BIOFAR stations (303, 515).

Remarks: The species is for the first time reported as far north as the Faroe Islands (BIOFAR Stn 515: 60°41.8'N, 11°46.5'W). Previously it was known from the Rockall Trough (Harvey & al. 1988).

Geographic distribution: Azores, Hebridean Slope and Rockall Trough, SW Ireland, Morocco.

Depth distribution: 400-5410 m.

Pedicellasteridae Perrier

Pedicellaster typicus M. Sars, 1861

Synonym: *Archaster bifrons* W. Thomson, 1873.

Material: 39 specimens (R = 0.3-2.0 cm) at 26 BIOFAR stations (51, 82, 89, 115, 172, 299, 307, 335, 341, 382, 411, 421, 483, 495, 499, 589, 647, 717, 727, 728, 737, 738, 744, 763, 765, 9018).

Remarks: The species is earlier reported from Rockall Trough (54°17'N, 11°34'W) (Mortensen 1927).

Geographical distribution: Arctic south in the western Atlantic to c. 40°N, New Jersey, and to c. 60°N near Bergen, Norway.

Depth distribution: 100-223 m.

Asteroiidae Gray

Stephanasterias albula (Stimpson, 1853)

Synonyms: *Asteracanthion albulus* Stimpson, 1853; *Stichaster albulus* Verrill, 1866.

Material: 1 specimen (R = 2.5 cm) at BIOFAR Stn 699.

Geographical distribution: Circumboreal, south in western Atlantic to Caribbean, also in Pacific from Bering Sea south to Japan Sea and southern Alaska.

Depth distribution: 33-2300 m.

Stichastrella rosea (O.F. Müller, 1776)

Material: 8 specimens (R = < 0.5-5.0 cm) at 6 BIOFAR stations (90, 319, 505, 507, 515, 526).

Remarks: Clark & Downey (1992) holds *S. ambigua* (Farran, 1913) as a good species. Mortensen (1927) looks upon *S. ambigua* as a variety of *S. rosea*.

S. ambigua has been recorded from the Faroe Islands (Clark & Downey 1992). The dorsal spines on the specimens in the BIOFAR material are all like the ones described for *S. rosea* in Clark & Downey (1992).

Geographical distribution for *S. rosea*: Lofoten Islands to southern Norway, west to NE England, Scotland, the western British Isles and Rockall Bank, south to the Bay of Biscay.

Depth distribution: 4-366 m.

ACKNOWLEDGEMENTS

I wish to thank Jon-Arne Snæli and Arne Nørrevang for letting me work with the "BIOFAR" material, and Prof. Daniel B. Blake at the University of Illinois, USA, for help in identifying three juvenile starfishes.



REFERENCES

- Clark AM, Downey ME. 1992. *Starfishes of the Atlantic*. London: Chapman & Hall. 794 p.
- Gage JD, Clark AM, Paterson LJ, Tyler PA. 1983. Echinoderms of the Rockall Trough and adjacent areas. 1. Crinoidea, Asteroidea and Ophiuroidea. *Bulletin of the British Museum (Natural History) Zoology* 45(5):263-308.
- Harvey R, Gage JD, Billet DSM, Clark AM, Paterson GLJ. 1988. Echinoderms of the Rockall Trough and adjacent areas. 3. Additional records. *Bulletin of the British Museum (Natural History) Zoology* 54(4):153-198.
- Liberkind I. 1929. Echinoderma. *Zoology Faroes* 3(1):1-20.
- Mortensen TH. 1927. *Handbook of the Echinoderms of the British Isles*. London: Oxford Univ. Press. 471 p.
- Nørrevang A. 1992. BIOFAR - et internordisk forskningsprosjekt. In: Kløvstad J, editor. *Nordurlandshusid i Føroyum - Årbok 1991 - 1992*. Torshavn, Faroes: Einars Prent. p 53-58.
- Nørrevang A, Brattegard T, Josefson AB, Sneli J-A, Tendal OS. 1994. List of BIOFAR stations. *Sarsia* 79:165-180.
- Ringvold H. 1996. *Artsbestemming og utbredelse av sjøstjerner (Echinodermata: Asteroidea) rundt Færøyene* [Cand. scient. thesis]. Trondheim: Norwegian University of Science and Technology. 104 p.

Accepted 16 April 1999 – Printed 30 December 1999
Editorial responsibility: Ulf Båmstedt