



**The Marine Mollusca  
of the Faroes**

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Editor: Dorete Bloch

ANNALES SOCIETATIS SCIENTIARUM FÆROENSIS SUPPLEMENTUM XXXXII

The Marine Mollusca of the Faroes

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Tórshavn 2005  
www.frodskaparfelag.fo

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**Útgevvari** (*Publisher*):

Fróðskaparfelag Føroya

**Umboðssøla:**

(*Orders for individual copies to*):

**Bókamiðsølan**

Óðinshædd 2  
P.O. Box 3222  
FO-110 Tórshavn  
Faroe Islands  
Tel: +298 31 37 56  
Fax: +298 31 99 06  
E-mail: bms@post.olivant.fo

**Kápa** (*Cover design*):

Gramar Spf.

**Prentgerð** (*Layout*):

Gramar Spf.

**Prent** (*Printing*)

Printed in Iceland by Oddi Printing

Tórshavn 2005  
ISBN: 99918-41-42-3



# Tribute to Arne Nørrevang, dr. phil., prof. em.

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## **Childhood**

Arne Nørrevang was born at FASTERHOLT, Herning the 10<sup>th</sup> July, 1933 into a Danish-Faroese family. His father was Danish and the mother Faroese, and the two nationalities has had a great influence on his course of life. His mother was born in the village of Fuglafjørður (“Fjord of birds”) and as a child he spent many of his holidays before the Second World War in the Faroes together with his Faroese relatives. Here he learnt to talk the Faroese language, and he has still several Faroese cousins. During the summer holidays he studied birds and has published the observations from as early as 1950. His father died when Arne only was 6 years old. Then the family moved to the area Skanderborg-Århus where he got his education. Already when he was about 10 years old his interest in bird started by him watching the activities at a wren’s nest at very close hold.

When 15 years old he met dr. phil. Finn Salomonsen on one of his lecture tours, and shortly after he was allowed to ring birds, and the young of 5-6 stork nests were ringed in the vicinity besides many other birds.

## **Teenager and Birds**

In 1950 he published for the first time in DOFT - one short notice on inland breeding of the ringed plover and one article on bird observations in the Faroes. The background of the latter was the fact that he was sent to his mother’s family in the Faroes in summer leaves 1946-1949. He ringed very many arctic terns and when visiting an aunt in Vestmanna he joined as a crewmember on a boat catching birds in and under the bird cliffs. This made him interested in bird catching. In 1951 he published a paper on catching methods to the common shearwater in the Faroes.

While in the last classes of Grammar school he published articles in Aarhus Stiftstidende on nature subjects as a monthly column : “bird of the month” and a feature: “Brabrand Lake must be made a nature reserve” and many years later that was actually implemented. In 1950 he joined an international camp for young people interested in nature conservation on the Dutch island of Texel. There he met a life-time friend Henry Makowski, and the next year they together visited the Faroe Islands. Most important



*Arne Nørrevang*



were the visits to the bird cliffs, where they witnessed the fowling practices, also of the well known island of Mykines, where the breeding places of the gannets are situated and subsequently they wrote scientific and news magazine articles. Speaking fluently Faroese he talked to many of the men engaged in fowling of puffin, guillemot, auk and gannet, and when visiting the island about 20 years later he realised that many of his former informants had passed away. In 1975 he got a grant from the Carlsberg Foundation to study the traditions of fowling as a whole, and he again returned to the Faroes for sampling material to the unique book about the history and tradition in Faroese seabird catch on the dangerous birdcliffs. He interviewed about 60 fowlers, and in 1977 he published the book "Fuglefangsten på Færøerne" ("Fowling in the Faroes", also translated into Faroese).

### Education

After attending the language line in grammar school he had two choices in mind for university studies: comparative languages or zoology. He chose zoology after having been engaged in counting the bird population of the reservation of the Mols Laboratory under the Natural History Museum of Aarhus, lead by professor Harald Thamdorp. During his graduate studies at the University of Copenhagen (interrupted by two years of compulsory military service, ending up as a sergeant), he worked as a substitute teacher in public schools and as assistant at the ringing department of the Zoological Museum. At the time of his studies there were only limited public sup-

port for students, and he had just a grant for free daily meals at the university canteen.

For his master's degree he chose zoology, geography and geology and graduated on two items: The distributions of gulls and the breeding behaviour of the Faroese guillemot. Results were published in 1958 and 1960. The field studies were made at Mykines where there still is a breeding ledge called Arne's ledge! During his student days and also after he started working with marine invertebrates, he has published work from different studies in the Faroes, mostly concerning birds but also for instance on the Faroese Tipulidae (1964). A great part of his heart has always been in the Faroes, and he could not stop being an ornithologist, publishing observations from the many different places he visited on the earth, from Greenland (1973), Selvagen Islands (1983), and Cape Verdes (1984).

Following his graduation in 1960 he was sent as a bird observer to the reservation of Christiansø in the Baltic and he worked for three months at the Ornithological Department, Zoological Museum as substitute for dr. phil. F. Salomonsen, while he was visiting Greenland. He then taught at the Laboratory of Zoology until getting a permanent position in 1961 at the Institute of Comparative Anatomy lead by professor Karl-Georg Wingstrand.

### The international leading scientist

Shortly after getting his permanent position he started investigating the microscopically anatomy of invertebrates. Early in this study he struck upon *Priapulius caudatus* collected in the deepest part of Øresund.



He discovered that the ovaries contained all stages of egg development from oogonia to mature eggs within the same microscopically frame. At the same time transmission electron microscopes (TEM) were acquired at the university and he was then able to study egg development at the ultrastructural level. This led to his dr.phil. degree in 1965. At the critics the first opponent professor D. von Wettstein ironically remarked: "even a blind chicken may find a golden grain" and the prompt answer from Arne was "but don't blame the chicken for taking up the grain". The second opponent was professor K.-G. Wingstrand and as the great scientist he was, he mentioned that the discovery of the unique oogenesis in the priapulids would change the whole phylogeny of the Animal Kingdom. Many years later we found out that Nørrevang and Wingstrand were right. The priapulids are not related to Annelida but to Kinorhyncha and Loricifera, and the thesis "Oogenesis in *Priapulus caudatus* Lamarck" is now a landmark in zoological literature. Just after the defence of the thesis in 1965 Arne was appointed to Associate Professor (docent) of Comparative Anatomy.

After publishing several papers on the anatomy of the phylum Pogonophora, which elsewhere was placed in the Deuterostomia, Arne suggested a new positioning of the group within the Protostomia, close to Polychaeta, and he arranged an international symposium "The Phylogeny and Systematic Position of Pogonophora" in Copenhagen, 1-3 November 1973 on that topic. The master students of the Institute of Comparative Anatomy were invited, too,

and for the first time we understood, that our supervisor was an international famous scientist.

After the symposium he was contacted by Dr. Jacob van der Land who had well fixed material from a deep-sea bank in the Caribbean Sea containing one intact specimen of Vestimentifera. Together they described the specimen in great detail in a major paper. The Vestimentifera and the Pogonophora have several characters in common, but there are also many important differences. Therefore, the authors considered the Vestimentifera as well as the Pogonophora as classes of the phylum Annelida. After this milestone of work Arne joined van der Land on three cruises in the Dutch Kan-Cap Program to Madeira, Selvagen Islands, Canaries and Cape Verdes, and we Master students got lot of materials for our theses.

### **Popular scientific activities**

In addition to many popular science publications (see the publication list) and talks to teachers and politicians, Arne appeared often in a number of newspaper articles, radio interviews and especially the television news reports about Faroe Islands and later also the BIOFAR programmes, however, he also made several films of his own. As member of the Kap Farvel expedition in 1970 he filmed and produced a film on the different activities of that expedition. This was the last real expedition to Greenland, after that we only call it for excursion or workshop. He made several films for Danish TV, starting with "Islands belong to the birds". In the early 1970s he filmed and produces three films from the Faroe Islands:



“Birds, sheep and mountains”, “Mykines, the island of birds” and “From village to town”, the latter on more cultural issues. Also for the Faroese TV he directed three films on the BIOFAR-project, two of them dominated by underwater scenes by Leif Stubkær and Kim Larsen. However, what really making Arne a famous and popular scientific person were his books. Early in his carrier he was the editor of “Jeg ser på Fugle”(1959) and “Jeg ser på insekter”(1961). Later it was the famous 12 volume book series “Danmarks Natur”, which still today are in many homes and libraries in Denmark.

#### **Administrative experience**

Arne never got the top job as a administrator at University of Copenhagen as he later did as the Rector (1998) at University of Faroe Islands. However, he was the chairman of “Strødamudvalget” from 1975-83, and he was the leading expert to restore the Strødam Laboratory as a fieldstation for University of Copenhagen. Here he both invited several very famous scientists to stay as well as a “court” of students who could come and go as they pleased. As the head of the internordic science programme BIOFAR (Marine Benthic Fauna of the Faroes) he built in 1988 the Kaldbak Marine Biological Laboratory at Kaldbak. He had continuous responsibility for budget, operation and management, as well as output recording and evaluation (annual reports, etc) until 1997, when he retired. In this period up to 100 scientists visited Kaldbak and several cruises were operated in the name of BIOFAR. Most famous was per-

haps the German expedition in 1990 with the research vessel “Valdivia” where a totally new interstitial fauna was discovered at Faroe Bank.

#### **The teacher Arne Nørrevang**

Arne’s track of record of zoological research and education spanned more than 40 years and he had at the Institute of Comparative Anatomy (later Cell Biology and Anatomy), University of Copenhagen an ample opportunities to teach and supervise graduate students and PhD-students. In fact, he has been closely involved with universities throughout his whole carrier. He taught and participated in many courses of both invertebrates and vertebrates (Zoology 8), however the most famous course was “Comparative anatomy of invertebrates” which he taught together with K.-G. Wingstrand and J. Lützen (1973-79). Later he also had his own lectures in “Comparative Embryology” (1979-82) where Claus Nielsen also jointed as teacher. Under these courses we learned that the phylogeny of the Animal Kingdom had to be revised. Arne was the most progressive teacher we had ever met as students, and many of our later publications on Gnathostomulida, interstitial Polychaetes and finally the description of the Loricifera were strongly inspired of the “basal laminae theory” of Nørrevang. In fact, the Ecdysozoa-theory (all moulting invertebrates are related) would never have been supported by zoomorphology without Arne’s provocative idea about the coelom condition in the Animal Kingdom. Arne did not only teach in auditoria and classrooms. He really meant that his students should be.



sent out and study the real stuff. This culminated in 1978 when we held "The first Arctic Meiofauna Workshop at Arctic Station, Disko". From this workshop several publications were published about interstitial polychaetes and tardigrades. However, in the early 80'ties Arne was faced with several personal problems, furthermore the institution of excellence, Institute of Comparative Anatomy was fused with Cell Biology. This was the beginning of the end of Arne's excellent carrier as an international famous comparative zoomorphologist, and in 1983 he resigned as an Associate Professor of Zoology.

### Home to The Faroes

When he left the Institute of Cell Biology and Anatomy, University of Copenhagen in 1983 he got a job at the teachers school in Tórshavn at first, but when the BIOFAR project started, and he moved to the Faroese Museum of Natural History, where he established the BIOFAR laboratory in Kaldbak. During the ten years this large project was going, the benthos fauna from 100-1000 m's depth was examined filling a gap in knowledge of the area where many of the most commercially used fishes are growing up.

When the sampling stage of the BIOFAR project had finished, it was followed up by the FARCOS (also called BIOFAR II) project, where the remaining zone from 0-100 m's depth was studied.

Arne Nørrevang is a teacher of the very best and he has taught at the Faroese University where he was appointed to full professor in 1995. This appointment came very

late in his carrier, however it was a great pleasure for his many so-called students, who now joined him in the BIOFAR programmes.

Arne began to retire in 1997, when he left BIOFAR, and from February 1997 he left the museum and finally from August 2000 he also left the University. However, in 2003 we were all back again to the "The Closing Symposium about BIOFAR, Tórshavn 24.- 26 April". More than 30 participants were present to honour Arne and many of the participants were young students of the next generation. Today he has a working room at the Zoological Department of the Museum of Natural History, and we hope to see him every day many years in future.

It happens very seldom for zoologists today, that a new found animal is named after you. But for Arne it has happened with the marine tardigrade *Batillipes noerrevangi* Kristensen, 1976 and later a marine genus of snail *Noerrevangia* Warén and Schander, 1993 was dedicated to Arne. The type species *N. fragilis* was found in the BIOFAR material.

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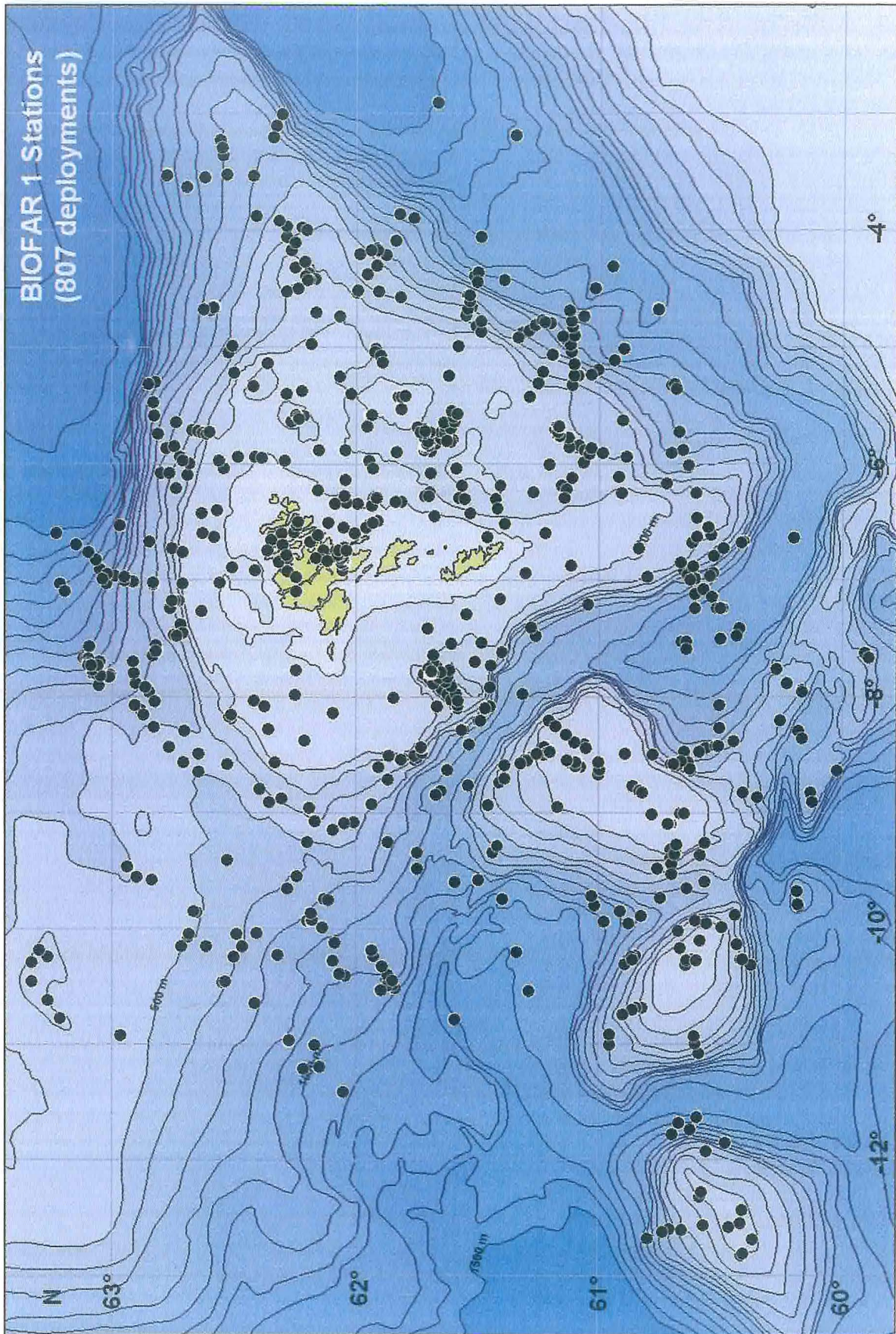


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Map showing all the BIOFAR stations.



# The Marine Mollusca of the Faroes

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## Abstract

Investigations on the marine benthic fauna of the Faroese fisheries territory (EEZ) began in 1987 as a Nordic programme called BIOFAR with sampling efforts concentrated at depths deeper than 100 m. After the BIOFAR sampling was concluded in 1993, a new programme called BIOFAR 2 began in 1995 to sample the marine benthic fauna from the intertidal zone to a depth of 100 m. Some few of the results from BIOFAR 2 are included in this report.

Before BIOFAR, 270 species of marine molluscs had been reported from the Faroese EEZ. The BIOFAR sampling increased the number of species to 394, of which nine have only been found as dead shells. About a hundred species seem to prefer the Faroe plateau or the tops of the banks (0-299 m), 15 species are reported from the plateau and the slope (0-999 m), about 70 species prefer the slope depth (300-999 m), and four species are found only at depths of more than 1000 m. There are 100 species mostly confined to «Warm» Atlantic Water (> 7 °C), 22 species are found only in the cold bottom water of the Norwegian Sea where negative temperatures are present, 82 species are recorded from a mixture of two different water masses and 83 species are distributed in all the main categories of water masses.

For each species the following information is given: the valid name with author and year of publication; the relevant synonyms; a reference to good descriptions or diagnosis; previous Faroese records and the BIOFAR 1

stations where it was found together with known depth range within the whole Faroese EEZ; substrates on which it was found; the type of water mass in which the specimens were taken; measured temperature range or estimated temperature range of the near-bottom water; and their general world distribution with known depth range.

## Previous Investigations

Chemnitz (1785) in his "*Conchylien-Cabinet*", mentions two chitons and a few marine prosobranchs from the Faroes, but Landt (1800) gives a more detailed account. In his synopsis Landt mentions the two chiton species together with nine species of prosobranchs, six bivalve species and one cephalopod. The next time Faroese molluscs are listed is in "*Faunula Molluscorum Færøensium*" by Mørch (1868). In this work no less than five chitons, 44 prosobranchs, 38 bivalves, one schaphopod, and three cephalopods are mentioned (however not all of these have been recorded since then).

In the U.K. two expeditions were con-



ducted under the auspices of the Royal Society in 1868 and 1869: the «Lightning» expedition in 1868 to the area between the Hebrides and the Faroe Islands (Jeffreys 1878), and the «Porcupine» expedition in 1869 of which one section comprised the area between the Hebrides and the Faroe Islands (Jeffreys 1879-1885). These expeditions covered the deeper parts of the Faroe-Shetland Channel, and many of the stations sampled are now within the area belonging to the EEZ (Faroese economic zone). In 1882 the British had another expedition to the seabed lying between the Hebrides and the Faroe Islands using the ship «Triton». This expedition covered especially the Wyville Thomson ridge that was supposed to separate a «warm» area from a «cold» area (Jeffreys 1883). Many of the stations sampled by the «Triton» expedition are now located in the EEZ. The ship «Knight Errant» sampled in the area in 1880 but this ship was small and the weather bad, thus few stations were sampled. A few remarks about this expedition can be found in the above mentioned works of Jeffreys.

The Danish «Ingolf» expedition in 1895-1896 sampled 20 stations around the Faroe Islands, but regarding the molluscs unfortunately only the nudibranchs and a portion of the bivalves were published (Bergh 1899, Jensen 1912). Later Danish naval or research ships such as «Dana», «Thor», «Margrethe», «Diana», and «Beskytteren» together with the Norwegian research vessel «Michael Sars» and the Scottish Fishery Board steamer «Goldseeker» also sampled in the area (Simpson 1910, Grieg 1913, Knudsen 1970a).

From 1924-1927 Danish scientists sampled the coastal waters of the Faroes and the Faroe Bank down to about 200 m. The results of these investigations are published in the Series «The Zoology of the Faroes» (Spärck *et al.* 1928-37, 1928-42, 1935-42; Jensen *et al.* 1928-1971).

Tendal (unpubl.) has made an overview of the historical development of the research and the knowledge on Faroese benthic macrofauna prior to the start of the BIOFAR programme in 1987.

### **The BIOFAR investigations**

The BIOFAR programme «Investigations on the marine benthic fauna of the Faroe Islands» intended to study the invertebrate fauna at depths deeper than 100 m to supplement and update the results of the Danish investigations of 1924-1927. The BIOFAR programme ran through the years 1987 to 1990 (some samples were also taken in 1986 and 1991-93). Roughly 600 localities were sampled at depths from 20 to 2420 m, with 790 deployments of sampling gear (Tendal *et al.* 2005). A list with information on the BIOFAR stations (date, position, depth, sampling gear, bottom type, mean bottom temperature and its standard deviation, water mass or mixture of water masses, maximum amplitude of the total tidal current) is given in Nørrevang *et al.* (1994). The oceanographic data were originally calculated by Håkan Westerberg (see Westerberg 1990).

A successor to the BIOFAR programme, called BIOFAR 2, started in 1995. During this new 3-year programme funded by the Faroese government and the Carlsberg



Foundation in Denmark, the marine fauna from the upper splash zone down to 100 m depth was sampled. Two species new to the Faroes were found: *Lacuna parva* (da Costa, 1778) and *Hydrobia neglecta* Muus, 1963 (see Bruntse *et al.* 1999). Kongsrud (2000) reports a record of *Lacuna crassior* (Montagu, 1803) from *Laminaria stipes*.

### Bottom sediments

In a review Spärck (1929) comments on the benthos communities at depths of about 300 m around the Faroe Islands. Soft bottoms (clay and mud bottoms) are mainly found in the fjords. Elsewhere these sediment types are rare. Rock bottom is mainly found on the steep parts of the continental plateau down to about 50 m depth. The most common bottom types are sandy sediments and shell-sand bottoms mixed with *Modiolus modiolus* (L., 1758). *Modiolus*-bottom is mainly found in shallow water between the islands and on the plateau down to about 80 m depth. Between 100 m and 300 m depth, sand is the dominating substrate.

Klitgaard (1992) has analysed information on the bottom sediment types collected during the BIOFAR programme together with information from local fishermen. East of Nolsoy an area with *Modiolus*-shell-sand and a high concentration of living *Modiolus modiolus* is found at 60 to 100 m depths. On the west and southwest part of the Faroes large areas with shell-sand are found down to about 200 m depth. Further down sand, sometimes mixed with pebbles and stones, dominates the bottom sediments. To both the east and the west of the Faroes a soft bottom area is found at

about 350 m depth. Some parts of the soft bottom area found to the east of the islands are covered with compact mats of sponge spicules. Such mats are also found in other areas down to about 900 m depth.

At the Faroe Bank, and probably also at the Bill Baily and Lousy Banks, the sediments on the top of the banks are dominated by fine shell-sand while the steep parts are dominated by coarse shell remains.

During the BIOFAR programme the sediment brought on deck often gave the impression of a coarser bottom sediment than is actually the case. Eleven hundred underwater pictures taken on the spring cruise 1990 by Dr. Julian Gutt at depths between 60 and 1050 m and a hundred pictures taken by Dr. Håkan Westerberg at Suderoy Bank in the May/June cruise 1989 at 241 to 275 m depth showed mostly sandy sediments (Klitgaard 1992).

### Water masses

Fosså *et al.* (1992) concluded that in an area of complex hydrography species could be grouped and classified according to their distribution in the water masses. Knowledge about the water masses in the Faroe Islands area may be important for zoogeographical analyses. These areas are, according to Hansen & Meincke (1979), Becker & Hansen (1988) and Westerberg (1990), mostly dominated by 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, also called East-Icelandic Water (AI) (Fig 1).



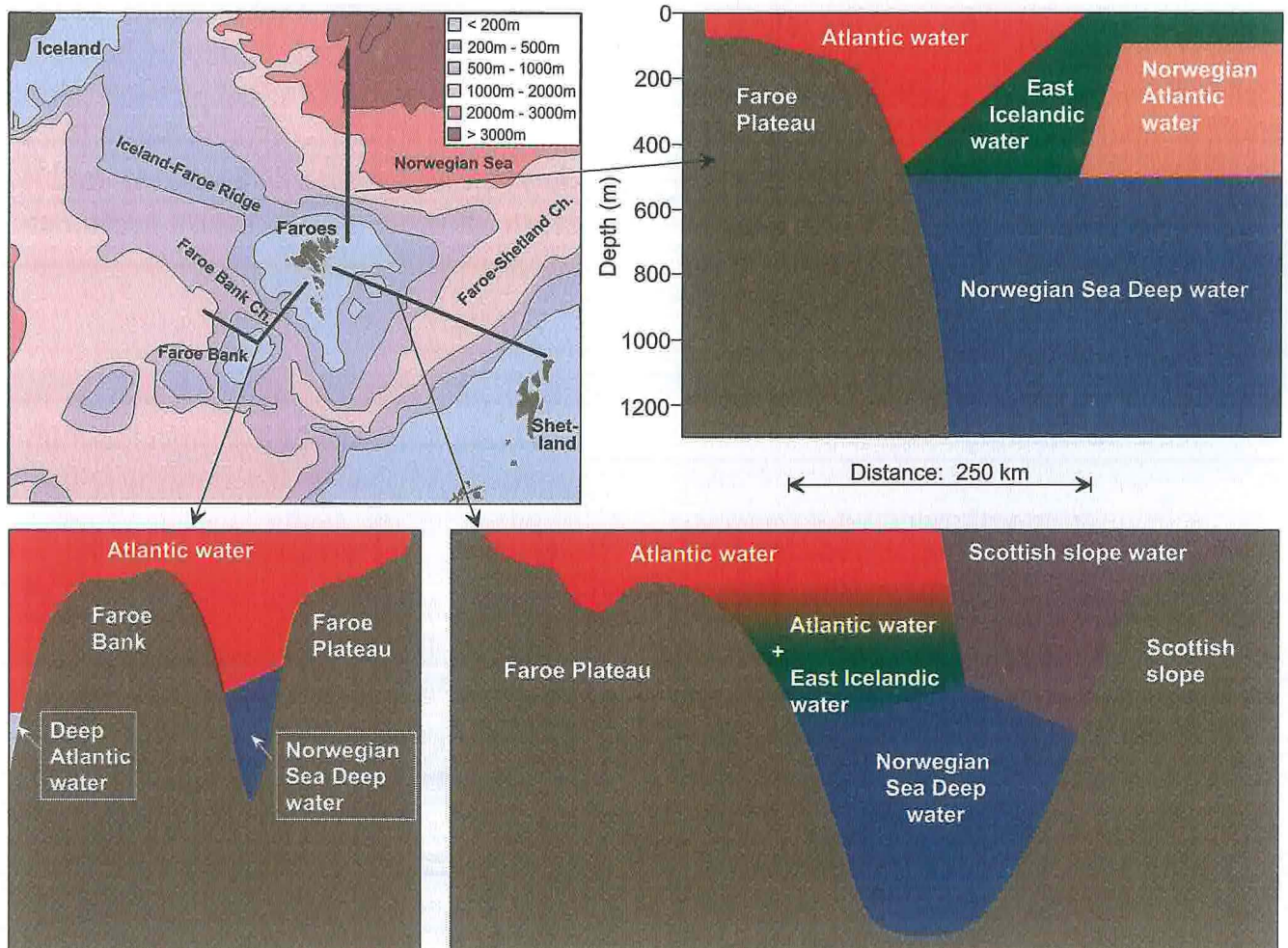
The warm and salty Atlantic Water (AW) forms the inflow of water in the upper layers of the Norwegian Sea. The salinity is  $> 35.1$  ppm. The temperature is above  $7^{\circ}\text{C}$ , except in depressions on the Faroe plateau where winter-cooled water might be trapped.

The bottom water of the Norwegian Sea (NW) forms the coldest component of the water overflowing the thresholds around the Faroes into the Atlantic. The temperature is below  $0^{\circ}\text{C}$  and the salinity *c.* 34.92 ppm.

Between the warm AW and the cold NW, Arctic Intermediate Water (AI) together

with North Icelandic Winter Water (NI), are present. These water masses are formed north of the Arctic (or Polar) front in the Iceland and Greenland Seas. From the areas of generation AI/NI 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 (Brattegard & Meland 1997). In the Faroe area this water mass has a temperature between  $1.5$  and  $3.5^{\circ}\text{C}$  and salinity  $< 34.88$  ppm.

Water with temperatures between  $3.5$  and  $7.0^{\circ}\text{C}$  is a mixture of AW and AI/NI.



**Fig. 1.** General distribution of water masses in the Faroese EEZ illustrated in different colours at three locations marked with black lines in the upper left map. On the Faroese side of the Faroe-Shetland Channel Atlantic water mass is found in the shallower part, deeper down East-Icelandic water is mixed more and more into the Atlantic water. The bottom water consist of water coming from the deeper part of the Norwegian Sea (after Hansen, 2000).



Colder water with temperatures between 0 and 1.5 °C found to the north of the Faroe-Iceland Ridge and the Faroe plateau, and in the Faroe-Shetland Channel is a mixture of AI/NI and NW. A book with comprehensive information on the oceanography of the Faroe Islands is published by Hansen (2000), however, this is only available in the Faroese language.

### Material and methods

The molluscs in the BIOFAR material were collected using four kinds of benthic sampling gear (Nørrevang *et al.* 1994): Commercial shrimp trawl, Triangular dredge, Modified Rothlisberg & Percy epibenthic sampler (Brattegard & Fosså 1991), and Sneli detritus sledge (Sneli 1998).

After the Kaldbak laboratory staff had sorted out the molluscs from the sediment samples taken, one of us (Sneli) sorted the specimens from each station to species and made a first identification. In September 1991 a workshop was held in Frederikshavn where the following specialists were present:

Kathe R. Jensen, Zoological Museum, Copenhagen (KJ)

Jørgen Knudsen, Zoological Museum, Copenhagen (JK)

Kurt W. Ockelmann, Marinbiological Laboratory, Elsinore (KWO)

Jon-Arne Sneli, Trondhjem biological station, Trondheim (JAS)

Øystein Stokland, OCEANOR, Trondheim (ØS)

Anders Warén, Swedish Museum of Natural History, Stockholm (AW)

Per Bie Wikander, Grimstad (PBW)

The material identified by Sneli was confirmed and unnamed material identified.

All the material was then listed and subsequently stored in the BIOFAR database in Kaldbak. This publication is the end product of the process. We have also tried to collect all the information on marine mollusc species from earlier expeditions and publications. The paper does not contain the Faroese Cephalopoda, as they will be published elsewhere by Bent Muus. So far Muus (2002) have treated the *Bathypolypus-Benthoctopus* problem and concludes with three species in Faroese waters: *Bathypolypus arcticus* (Prosch, 1849), *B. bairdii* (Verrill, 1873), and *B. pugniger* Muus, 2002. The number of cephalopod species in Faroese waters will then be about 15 (Nielsen 1930, Muus 1959).

Working up the BIOFAR 2 material of nudibranchs sampled at much lesser depth and mostly with SCUBA diving, Jensen (2005) identified five more species than found during BIOFAR 1: *Aeolidia papillosa?* (Linnaeus, 1761), *Ancula gibbosa* (Risso, 1818), *Onchidoris bilamellata* (Linnaeus, 1767), *Palio dubia* (M. Sars, 1829), and *Tergipes tergipes* (Forsskål, 1775). Two more samples were only identified to genus level (*Doto* sp. and *Facelina* sp.). These taxa are not treated in the following context.

Sneli has prepared the main manuscript, Schiøtte is responsible for the information on the Tectibranchs, Jensen for the Nudibranchs (except the family Dotidae), Wikander for the Limopsidae and Stokland has prepared most of the information on the Turridae. Schiøtte also incorporated some records from the BIOICE-investigations (Investigations on the Marine Benthic



Fauna in Icelandic water) which started in 1990 and ended in 2004.

In the systematic list below the following information is given for each species: the valid name with author and publication year; relevant synonyms; reference to good descriptions of the species; previous Faroese records; the BIOFAR (and to some extent also BIOFAR 2) stations where the species were found; bathymetrical range, dominating bottom sediments in the areas where the species was found, dominating water mass at the same stations (Fig. 1); depth range; measured temperature range (M) or estimated temperature range (E) of the near-bottom water based on data from a database created by Håkan Westerberg (in Nørrevang *et al.* 1994); general depth range of the species, and their general distribution based on various sources.

Relevant synonyms are mainly taken from the CLEMAM list ([www.mnhn.fr/base/malaco.html](http://www.mnhn.fr/base/malaco.html)) as well as various other publications (see References). The number in parenthesis in connection with the water mass information (identified by H. Westerberg, in Nørrevang *et al.* 1994) refers to the number of stations of each dominating water mass where the species are found. The sources for the information on general distribution of the Tectibranchs and Nudibranchs are given in the text. For the other Orders this information is taken from different sources (Among others not especially mentioned in the text: Bardarson, G. 1919, 1920, Friele & Grieg 1901, Johansen 1902, Knudsen 1949, Kreps 2001, Óskarsson 1964, 1969, Perna 1998, Wikander 1989, 1990).

The illustrations used in this publication are all taken from G.O. Sars (1878) unless otherwise stated.

The person(s) who confirmed the identification of the different species at the workshop in Frederikshavn is marked by initials at the end of each treated species.

Jan Sørensen has checked the station number references for each species against the BIOFAR database, prepared for the distribution maps and the index.

## List of species

### Class CAUDOFOVEATA

### Order CHAETODERMATIDA

### Family CHAETODERMATIDAE

### Genus: *Chaetodermata* Lovén, 1845

#### *Chaetoderma nitidulum* Lovén, 1845

Synonym: *Crystallophrisson nitens* Möbius, 1875

Reference to best descriptions of the species: Muus 1959: 13-15, Fig. 4 ; Salvini-Plawen 1975: 39-43, Figs 45-48.

Previous records: Vágsfjørður (43 m), Sørvágur (57 m), Skálafjørður (40 m), Funningsfjørður (54 m), 61°40'N, 07°40'W (255 m) (Knudsen 1970).

New records: BIOFAR stations 31, 43, 49, 61, 63, 64, 65, 100, 158, 188, 275, 279, 282, 287, 328, 361, 366, 451, 453, 474, 476, 488, 489, 540, 1159, 1160, 1216.

Bathymetrical range within the area: 40-1200 m.

Substrate: Hard bottom, stones, sand, gravel.

Temperature: +0.6 - 7.9 °C.

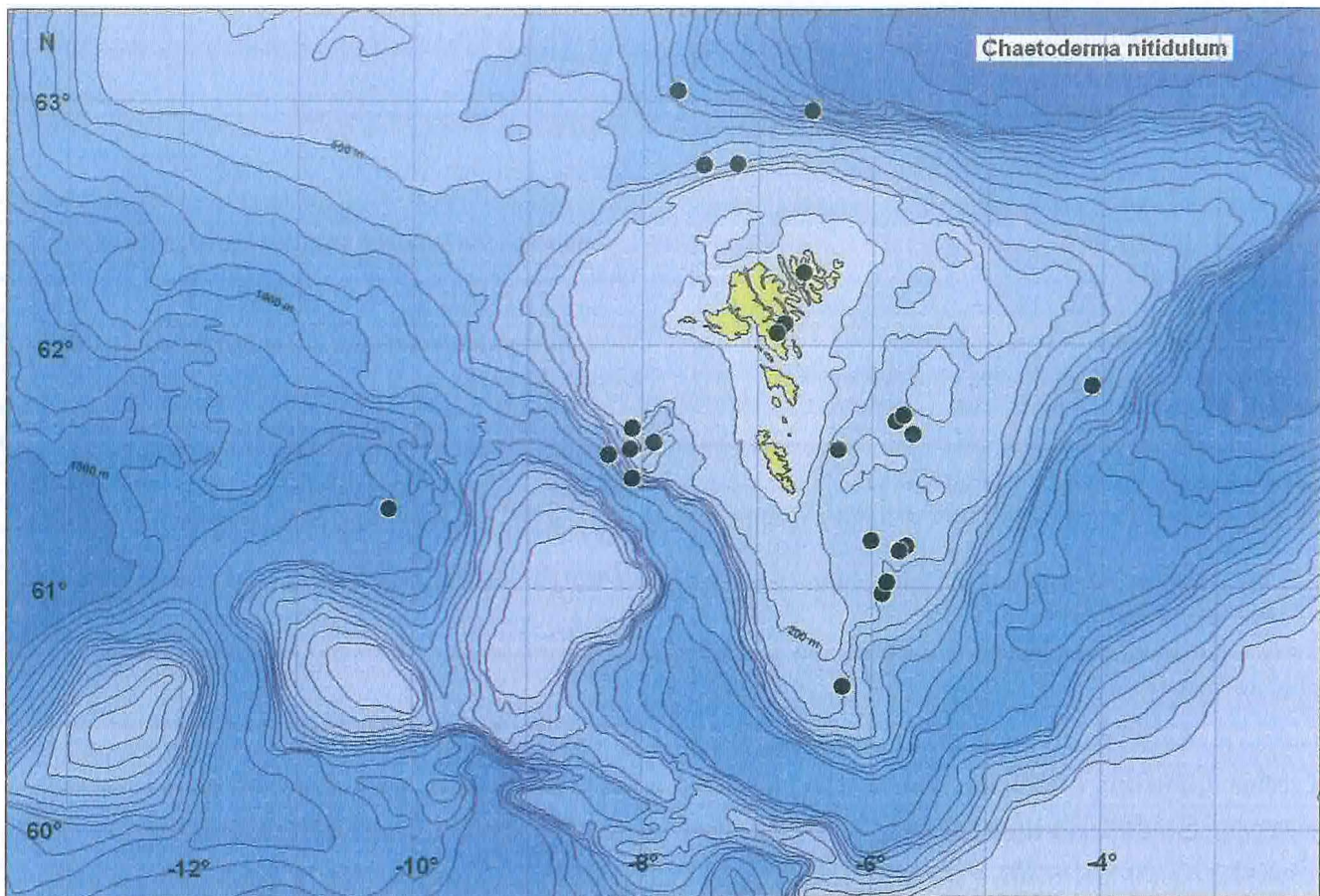
Water mass: AW (14), AW/AI (7), NW (3).

World distribution: E Greenland, Jan Mayen, Svalbard, Iceland, the Faroes, from the White Sea south along the Norwegian coast to Øresund, Skagerrak, the North Sea and the British Isles.

World bathymetrical range: 8-2250 m.

Checked by: JK





### Family LIMIFOSSORIDAE

Genus: *Scutopus* Salvini-Plawen, 1968

*Scutopus ventrolineatus* Salvini-Plawen, 1968

Reference to best descriptions of the species: Salvini-Plawen 1975: 12-16, Figs 10-15.

Previous records: None.

New records: BIOFAR stations 167, 168, 169, 608, 610, 726, 738, 9012.

Bathymetrical range within the area: 65-1032 m.

Substrate: Sandy mud containing foraminiferans.

Temperature: +0.81° C (M: one stn.); +0.6 - 8.0° C (E).

Water mass: NW/AW.

World distribution: The Faroes, from the Vengsøyfjord near Tromsø in northern Norway south to the west coast of Sweden, Skagerrak, east and west coasts of Scotland, Irish Sea, Bay of Biscay, Mediterranean and off Durban in SE Africa.

World bathymetrical range: 40-1248 m.

Checked by: JK

### Class SOLENOGASTRES

Order PHOLIDOSKEPIA

Family DONDESIIDAE

Genus: *Nematomenia* Simroth, 1893

*Nematomenia banyulensis* (Pruvot, 1890)

Synonym: *Nematomenia banyulensis* var. *norvegica* Odhner, 1921.

Reference to best descriptions of the species: Odhner 1921: 43-48, Figs 67-74.

Previous records: None.

New records: BIOFAR stations 27, 28, 82, 98, 551, 607, 609.

Bathymetrical range within the area: 70-732 m.

Substrate: Mud, sand.

Temperature: +0.1 - 8.0 °C (E).

Water mass: AW (6), NW (1).

World distribution: The Faroes, the Trondheimsfjord in Norway south to Northumberland on the English east coast, whole British west coast.

World bathymetrical range: 45-732 m.

Checked by: JK



## Order NEOMENIAMORPHA

## Family NEOMENIIDAE

Genus: *Neomenia* Tullberg, 1875*Neomenia carinata* Tullberg, 1875

Reference to best descriptions of the species: Muus 1959: 16, Fig. 5a-d.

Previous records: None.

New records: BIOFAR stations 51, 289, 295, 329, 500, 605, 694, 716.

Bathymetrical range within the area: 100-714 m.

Substrate: Sand, gravel.

Temperature: +0.05 - 8.0 °C (E).

Water mass: AW (6), AW/AI (1), NW (1).

World distribution: Iceland, the Faroes, Tromsø in northern Norway south to Kattegat, the North Sea, British Isles, Ireland and south into the Mediterranean.

World bathymetrical range: 18-714 m.

Checked by: JK

## Order CAVIBELONIA

## Family SIMROTHIELLIDAE

Genus: *Simrothiella* Pilsbry, 1898*Simrothiella borealis* (Odhner, 1921)

Synonym: *Kruppomonia borealis* Odhner, 1921.

Reference to best descriptions of the species: Odhner 1921: 25-31, Figs 35-43; Muus 1959: 20-21, Fig. 8a-c.

Previous records: None.

New records: BIOFAR stations 7, 82, 100, 317, 341, 344, 381, 621, 646, 691, 716, 724, 734, 737, 739, 747.

Bathymetrical range within the area: 191-850 m.

Substrate: Sand, gravel, stones.

Temperature: +0.1 - 8.6 °C (E).

Water mass: AW (6), AW/AI (5), AI (3), NW (1), AW/AI/NW (1).

World distribution: Iceland, the Faroes, Lofoten in northern Norway south to Stavanger on the Norwegian west coast.

World bathymetrical range: 70-850 m.

Checked by: JK

## Family DREPANOMENIIDAE

Genus: *Drepanomenia* Heath, 1911*Drepanomenia incrustata* (Koren & Danielssen, 1877)

Synonym: *Solenopus incrustatus* Koren & Danielssen, 1877.

Reference to best descriptions of the species: Odhner 1921: 19-22, Figs 17-24.

Previous records: None.

New records: One specimen found in the BIOFAR material, but without reference to locality.

World distribution: the Faroes, Finnmark county in northern Norway.

World bathymetrical range: 360-550 m.

Checked by: JK

## Class: POLYPLACOPHORA

## Order: NEOLORICATA

## Family: LEPTOCHITONIDAE

Genus: *Leptochiton* Gray, 1847*Leptochiton alveolus* (M. Sars MS, Lovén, 1846)

Synonyms: *Chiton alveolus* M. Sars, 1846, *Leptochiton alveolus* Dall, 1879.

Reference to best descriptions of the species: Muus 1959: 36-37, Fig. 20, Kaas & van Belle 1985a: 36-39, Fig. 14.

Previous records: Scotia cruise 1977 (Seaward 1990).

New records: BIOFAR stations 233, 295, 325, 329, 517, 655.

BIOFAR 2 stations: 1099, 1083.

Bathymetrical range within the area: 99-1099 m.

Substrate: Sand, gravel, stones.

Temperature: 4.2 - 9.1 °C (E).

Water mass: AW (2), AW/AI (4).

World distribution: Iceland, the Faroes, from the Barents Sea south along the Norwegian coast to the Swedish west coast, Bay of Biscay and NW Portugal. In the West Atlantic: Gulf of St. Lawrence, between Cape Rosier and the southwest point of Anticosti Id, Gulf of Maine, St. George's Bank. Pacific Ocean: West coast of North America from Point Barrow to Panama Bay, Kurile Island, Okhotsk Sea, Japan Sea, Philippines and Indonesian archipelago, Sri Lanka, Kerguelen Island, South Australia.

World bathymetrical range: 100-4825 m.

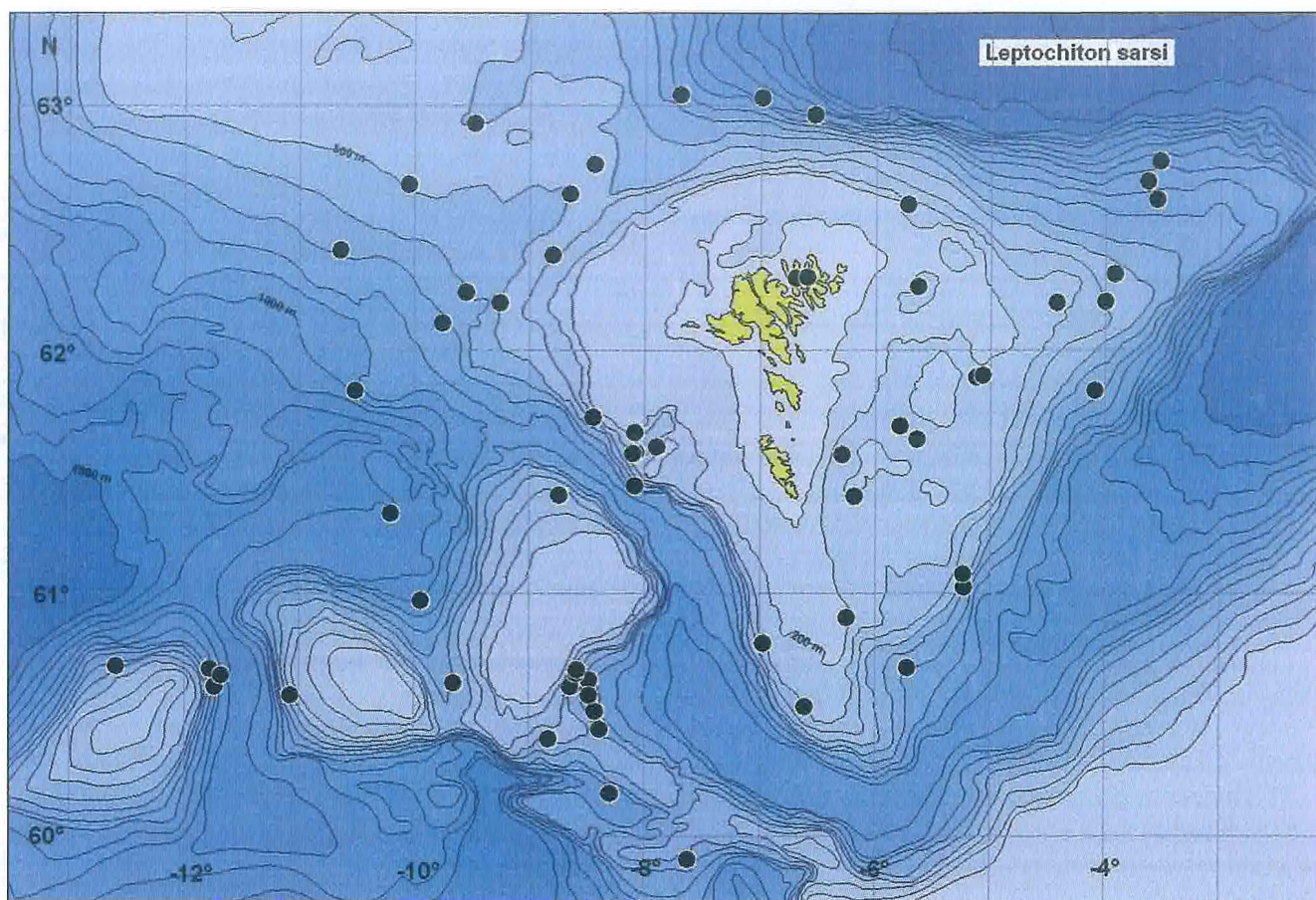
Checked by: JK

*Leptochiton arcticus* (G. O. Sars, 1878)

Synonyms: *Lepidopleurus arcticus* G. O. Sars, 1878, *Chiton arcticus* Jeffreys, 1882.

Reference to best descriptions of the species: Kaas & van Belle 1985a: 46 - 49, Fig. 18.





Previous records: Lightning stns 3, 4.

New records: Not recorded during BIOFAR 1.

World distribution: Iceland, Svalbard, the Varangerfjorden in Northern Norway south to Folla in North-Trøndelag.

World bathymetrical range: 10-200 m.

Remarks: The species has been mixed with *L. asellus*.

Thus old records of both species are to be reconsidered, as they hardly can be trusted (Kaas & van Belle 1985a). According to Kaas & van Belle (1985a) the species is always found below 10 m depth.

### *Leptochiton asellus* (Gmelin, 1791)

Synonyms: *Chiton asellus* Gmelin, 1791, *Chiton cinereus* Montagu, 1803, *Lepidopleurus cinereus* Bardarson, 1919, *Lepidopleurus asellus* Knudsen, 1949a.

Reference to best description of the species: Kaas & van Belle 1985a: 39-42, Fig. 15; Muus 1959: 37-38, Figs 19f, 21.

Previous records: Common all around the Faroese islands (Knudsen, 1970).

New records: BIOFAR stations 7, 19, 56, 70, 80, 89, 100, 105, 106, 107, 116, 120, 131, 140, 147, 172,

189, 190, 192, 193, 203, 204, 205, 233, 268, 281, 285, 295, 299, 311, 325, 329, 334, 335, 339, 341, 343, 344, 345, 349, 353, 364, 365, 368, 369, 370, 371, 381, 382, 398, 402, 411, 419, 421, 422, 423, 425, 451, 452, 454, 466, 473, 482, 495, 497, 498, 499, 504, 505, 506, 508, 514, 515, 516, 523, 528, 544, 545, 546, 556, 589, 597, 598, 599, 600.

BIOFAR 2 stations: 1004, 1011, 1027, 1040, 1123, 1128, 1129, 1131, 1132, 1133, 1134, 1135, 1140, 1142, 1143, 1145, 1146, 1150, 1151, 1152, 1161, 1191, 1194, 1195, 1197, 1199, 1203, 1214, 1217, 1219, 1242, 1243, 1410, 1413, 1448, 1460.

Bathymetrical range within the area: 41-1121 m.

Substrate: Sand, gravel.

Temperature: 0.3 - 2.7° (M: 3 stns), +0.85 - 9.1 °C (E).

Water mass: AW (47), AW/AI (22), AI (6), AI/NW (2), NW (1), AW/AI/NW (6).

World distribution: Iceland, the Faroes, Svalbard, Barents Sea, Scandinavian coasts, British Isles, Ireland and further south to Vigo in Spain.

World bathymetrical range: 0-1121 m.

Checked by: JK



***Leptochiton sarsi* Kaas, 1981**

Synonyms: ? *Chiton islandicus* Gmelin, 1791, *Chiton asellus* varietas a Spengler, 1797, *Lepidopleurus cancellatus* G.O. Sars, 1878 (non Sowerby II, 1840).

Reference to best description of the species: Kaas & van Belle 1985a: 60-63, Fig. 25.

Previous records: None.

New records: BIOFAR stations 7, 19, 27, 28, 31, 51, 61, 63, 64,65, 70, 80, 82, 98,100, 120, 146, 158,167,168,169,172, 188, 268, 275, 281, 289, 295, 299, 317, 329, 335, 341, 343, 344, 361, 366, 369, 381, 398, 411, 419, 423, 425, 473, 482, 483, 489, 490, 495, 497, 499, 500, 504, 506, 508, 514, 515, 516, 523, 9012.

Bathymetrical range within the area: 75-1200 m.

Substrate: Sand, gravel, stones.

Temperature: +0.81 - 2.7° (M: 3 stns); +0.85 - 8.6 °C (E).

Water mass: AW (26), AW/AI (17), AI (3), AI/NW (2), NW (9), AW/AI/NW (4).

World distribution: The Faroes, from Sørøya in west Finnmark in northern Norway south to Bohuslän on the Swedish west coast.

World bathymetrical range: 40-1200 m.

Checked by: JK

**Family: HANLEYIDAE****Genus: *Hanleya* Gray, 1857*****Hanleya hanleyi* (Bean in Thorpe, 1844)**

Synonym: *Chiton hanleyi* Bean in Thorpe, 1844.

Reference to best descriptions of the species: Kaas & van Belle 1985a: 193-196, Fig. 91, Muus 1959: 40-41, Fig. 23.

Previous records: Simpson 1910: stns 16, 16a; E to S of Nólsoy (150 m), N of Nólsoy (180 m), ? Tórshavn, 62°07'N, 04°12'W (350 m), 62°16'N, 06°06'W (90-110 m), 62°35'N, 07°52'W (400 m) (Knudsen 1970a).

New records: BIOFAR stations 7, 19, 90, 122, 146, 147, 163, 204, 279, 298, 359, 419, 421, 451, 452, 471, 472, 486, 493, 503, 515, 599, 726, 727.

Bathymetrical range within the area: 158-800 m.

Substrate: Gravel, stones.

Temperature: 3.0 - 8.2 °C (E).

Water mass: AW (14), AW/AI (8), AW/AI/NW (2).

World distribution: Greenland, Iceland, the Faroes, Barents Sea south to Skagerrak, British Isles, Ireland and further to the Canary Islands, Madeira,

the Azores and the Mediterranean; in East America south to Massachusetts Bay.

World bathymetrical range: 15-800 m.

Checked by: JK

***Hanleya nagelfar* (Lovén, 1846)**

Synonyms: *Chiton nagelfar* Lovén, 1846, *Chiton abyssorum* M. Sars MS, Jeffreys, 1865, *Hanleya abyssorum* Knudsen, 1949a.

Reference to best descriptions of the species: Kaas & van Belle 1985a: 196-199, Fig. 92; Warén & Klitgaard 1991: 51-70.

Previous records: Lousy Bank (Pawsey et al. 1924).

New records: BIOFAR stations 43, 47, 49, 119, 282, 287, 328, 334, 419, 451, 453, 474, 476, 483, 486, 488, 503, 540, 621, 716, 724.

Bathymetrical range within the area: 191-702 m.

Substrate: Hard bottom, sand, gravel, stones, but mostly found on sponges.

Temperature: 2.7 °C (M: one stn.); 3.0 - 8.3 °C (E).

Water mass: AW (14), AW/AI (6), AW/AI/NW (1).

World distribution: Denmark Strait, Iceland, the Faroes, from Hammerfest south along the whole Norwegian coast.

World bathymetrical range: 100-1080 m.

Remarks: This species is often considered a variety of *Hanleya hanleyi* occurring in deeper water only (Dons 1933). The specimens at hand are, however, clearly distinct from *H. hanleyi*. Warén & Klitgaard (1991) have given the taxonomic problems regarding the species a thorough consideration.

Checked by: JK

**Order: ISCHNOCHITONIDA****Family: LEPIDochITONIDAE****Genus: *Tonicella* Carpenter, 1873*****Tonicella marmorea* (Fabricius, 1780)**

Synonyms: *Chiton punctatus* Olafsen & Povelsen, 1772, *Chiton marmoreus* Mørch, 1868, *Boreochiton marmoreus* Johansen, 1902.

Reference to best descriptions of the species: Kaas & van Belle 1985b: 139-142, Fig. 64, Muus 1959: 47-49, Figs 19e, 27.

Previous records: *T. marmorea* has been stated to occur at the Faroes by several authors but they merely quoted each other. Not a single sample was located by Knudsen (1970) and the species was not found



during BIOFAR 2. Thus it can be concluded that the species does not occur at the islands.

World distribution: West Greenland, Iceland, near Svalbard and Franz Josef Land, Barents Sea, White Sea, Kara Sea, whole Norwegian coast to western coast of France; on the east American coast from northern Canada, Hudson Bay, south to Massachusetts Bay; in the Pacific Ocean in Sea of Japan, the Okhotsk Sea, Bering Sea, near the Kurile, the Commander, and the Aleutian Islands.

World bathymetrical range: 0-230 m.

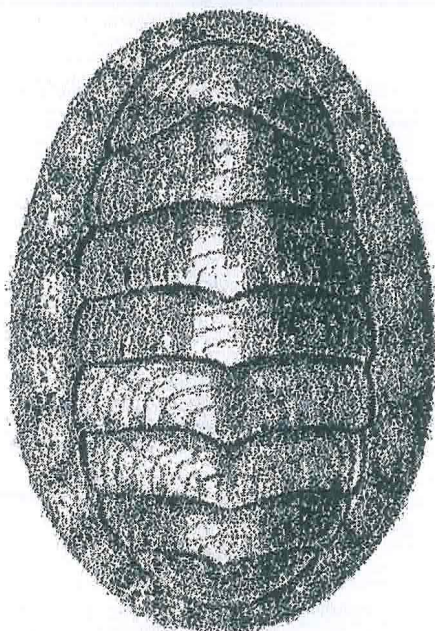


Fig 2. *Tonicella rubra* (Linnaeus, 1767)

***Tonicella rubra* (Linnaeus, 1767)** Fig. 2.

Synonyms: *Chiton ruber* Mohr 1786, *Boreochiton ruber* Johansen 1902, *Trachydermon ruber* Knudsen 1949.

Reference to best descriptions of the species: Kaas & van Belle 1985b: 136-139, Fig. 63; Muus 1959: 46-47, Figs 26, 19d.

Previous records: The species is common all around the islands (Knudsen 1970a).

New records: Not found during BIOFAR 1, but regularly found during BIOFAR 2.

World distribution: Iceland, the Faroes, near Svalbard, Barents Sea, White Sea, whole Norwegian coast south to the British Isles; in east America from Devon Island in northern Canada south to New London, Connecticut; in the Pacific Ocean in Sea

of Japan, the Okotsk Sea, Bering Sea, near the Kurile, the Commander and the Aleutian Islands, the west American coast from Alaska to Seattle, Washington.

World bathymetrical range: 0-270 m.

**Family: ISCHNOCHITONIDAE**

**Genus: *Lepidochitona* Linnaeus, 1767**

***Lepidochitona cinerea* (Linnaeus, 1767)**

Synonyms: *Chiton cinereus* Linnaeus, 1767, *Chiton marginatus* Pennant, 1777, *Chiton cimicinus* Landt, 1800, *Craspedochilus cinereus* G.O. Sars, 1878.

Reference to best descriptions of the species: Kaas & van Belle 1985b: 84-86, Fig. 39, Muus 1959: 43-45, Figs 25, 19c.

Previous records: Lightning stn. 4; Vágafjørður (44 m), Trongisvágsfjørður (15-20 m, Vestmanna (10-11 m, 45 m), Sundini (5-7 m, 6-10 m, 15-20 m, 20-25 m, 25 m), Funningsfjørður (92 m), SE of Kunoy (10-15 m), Hvannasund (80 m), N of the Faroes (145 m) (Knudsen 1970a).

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 5-145 m.

World distribution: The Faroes, Barents Sea south along the Norwegian coast to Kattegat and the western Baltic, North Sea and around the British Isles south to the Mediterranean.

World bathymetrical range: 0-275 m.

**Genus: *Ischnochiton* Gray, 1847**

***Ischnochiton albus* (Linnaeus, 1767)**

Synonyms: *Chiton albus* Mohr, 1786, *Lophyrus albus* Johansen, 1902, *Trachydermon albus* Knudsen, 1949.

Reference to best descriptions of the species: Kaas & van Belle 1990: 60-62, Fig. 24; Muus 1959: 51, Figs 19b, 29.

Previous records: Lightning stns 1, 2; The species is recorded all around the islands (Knudsen 1970a).

New records: BIOFAR stations 56, 192, 369, 490.

Bathymetrical range within the area: 77-1083 m.

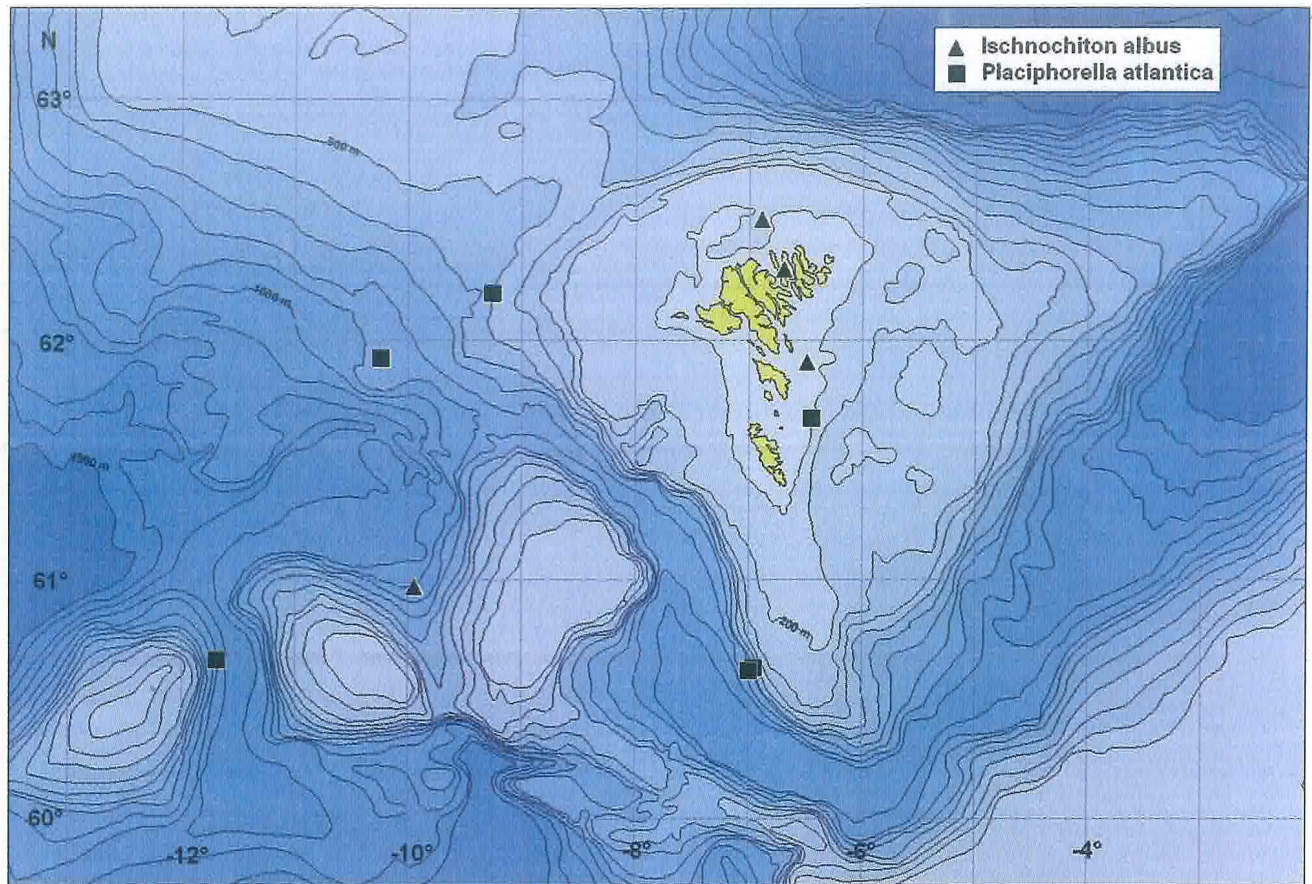
Substrate: Sand, shell-gravel.

Temperature: 6.5 - 8.1 °C (E).

Water mass: AW (4), AW/AI (1).

World distribution: Circumpolar in the Arctic, from Svalbard south to Vigo in Spain, near the Azores; in east America from Canada to Cape Cod; in the





northern Pacific Ocean southeast to San Diego in California and southwest to the Okotsk Sea and the Sea of Japan.

World bathymetrical range: 0 - 1083 m, most commonly found at 10 - 100 m depth.

Remarks: Found at a lot of localities during BIOFAR 2.  
Checked by: JK

### *Ischnochiton exaratus*

(G. O. Sars, 1878) Fig. 3.

Synonyms: *Lophyrus exaratus* G. O. Sars, 1878; *Chondroleura exarata* G. O. Sars, 1878, *Ischnochiton affinis* Thiele, 1906.

Reference to best descriptions of the species: G. O. Sars 1878; Kaas & van Belle 1990: 62-65, Fig 25.

Previous records: None.

New records: BIOFAR stations 726, 727.

Bathymetrical range within the area: 400-500 m.

Substrate: Gravel.

Temperature: 4.0 - 6.7 °C (E).

Water mass: AW/AL.

World distribution: Arctic Ocean and throughout the Atlantic to the Antarctic Seas, even penetrating into the Pacific along the southwest coast of Chile.

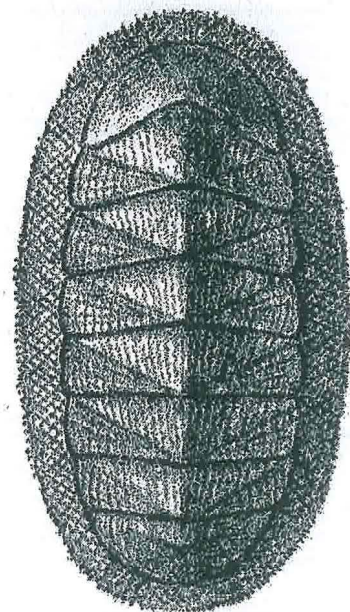


Fig 3. *Ischnochiton exaratus* (G.O. Sars, 1878)

World bathymetrical range: 100-2580 m.

Remarks: Found at a lot of localities during BIOFAR 2.



Family: MOPALIIDAE

Genus: *Placiphorella* Carpenter MS,  
Dall, 1879

*Placiphorella atlantica* (Verrill & Smith,  
1882).

Reference to best descriptions of the species: Verrill &  
Smith 1882: 365, Kaas & van Belle 1994: 318-321,  
Fig. 129.

Previous records: None.

New records: BIOFAR stations 120, 339, 516, 549, 727,  
728.

Bathymetrical range within the area: 78-833 m.

Substrate: Gravel.

Temperature: 1.0 - 8.0 °C (E).

Water mass: AW (1), AW/AI (3), AI/NW (1), AW/AI/  
NW (1).

World distribution: Circumpolar; reported from various  
localities throughout the north Atlantic Ocean, the  
north Pacific Ocean, and the eastern Indian Ocean;  
Chile.

World bathymetrical range: 78-2000 m.

Remarks: Three records of this new species to the  
Faroese fauna are published by Snæli (1992). Three  
more are later known. It is the first finds in the north  
Atlantic north of 50° N.

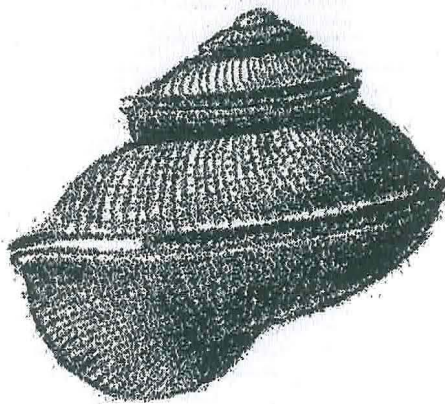
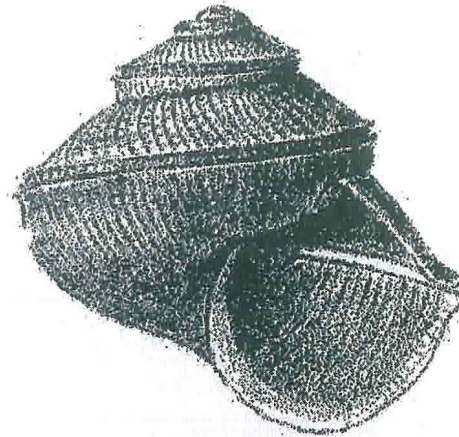


Fig 4. *Anatoma crispata* (Fleming, 1832)

Class GASTROPODA

Subclass PROSOBRANCHIA

Order ARCHAEOGASTROPODA

Superfamily PLEUROTOMARIACEA

Family: SCISSURELLIDAE

Genus: *Anatoma* Woodward, 1859

*Anatoma crispata* (Fleming, 1832) Fig. 4.

Synonyms: *Scissurella crispata* Fleming, 1832;  
*Scissurella angulata* Löven, 1846.

Reference to best description of the species: Fretter &  
Graham 1976: 2-4, Figs 1, 2

Previous records: Lightning stn. 2; Empty shells have  
been found south of Munken and northwest of  
Suðuroy (Spärck & Thorson 1933).

New records: BIOFAR stations 019, 068, 070, 082, 090,  
115, 137, 192, 263, 274, 279, 295, 411, 458, 495,  
496, 500, 501, 506, 514, 515, 516, 518, 522, 523,  
524, 546, 690, 692, 694, 695, 696, 726, 728, 731,  
737, 764.

Bathymetrical range within the area: 107-1319 m.

Substrate: Clay, sand and gravel.

Temperature: +0.9 - 8.6 °C (E).

Water mass: AW (21), AW/AI (5), AW/AI/NW (3), NW  
(7).

World distribution: West and east Greenland, Iceland, the  
Faroes, Svalbard, Barents Sea south to the Canary  
Islands, Mediterranean, the Azores; in east America  
from Hudson Strait south to the West Indies; on the  
west coast of America south to California; Japan.

World bathymetrical range: 10-3000 m.

Checked by: JAS

Family FISSURELLIDAE

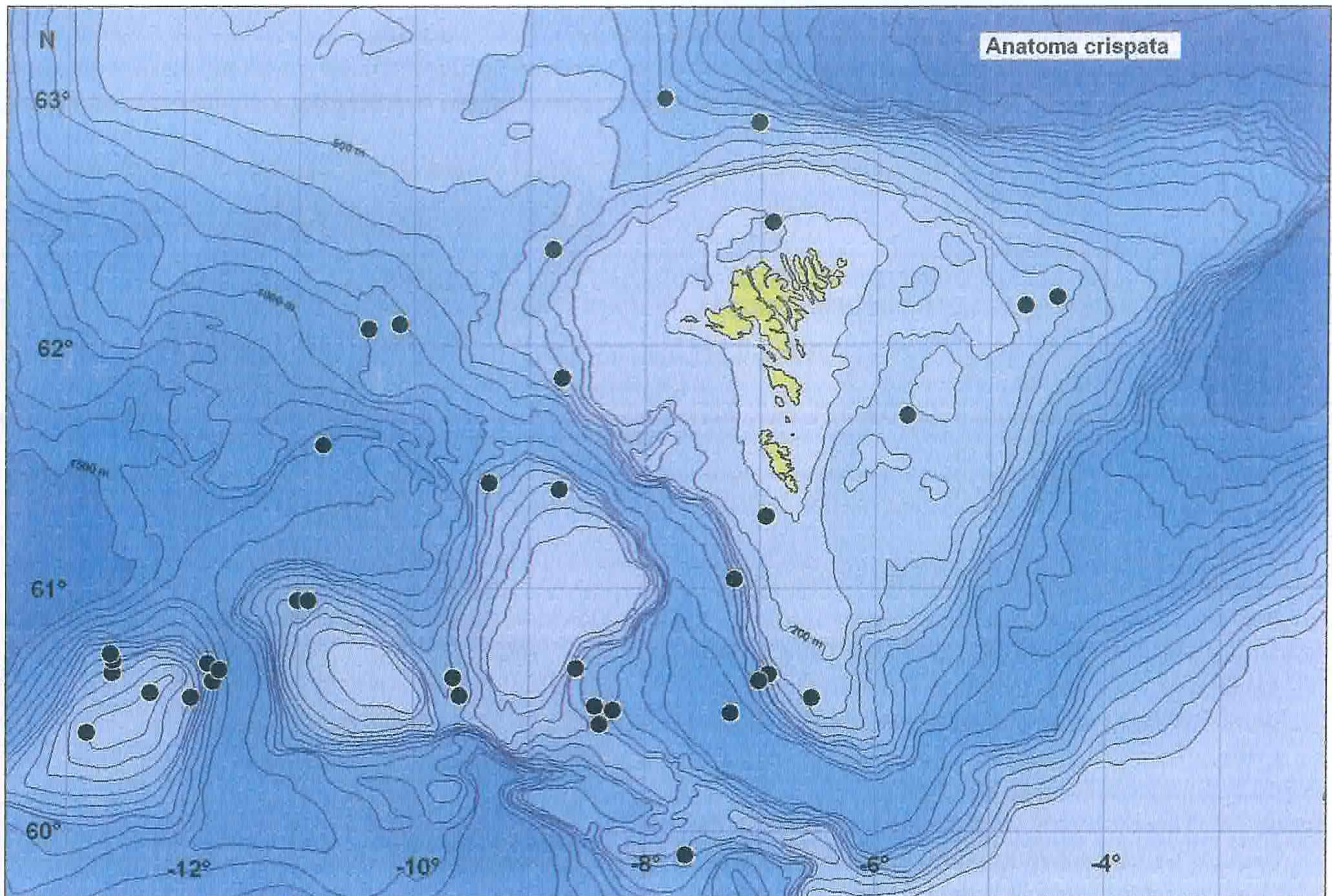
Genus *Emarginula* Flemming, 1822

*Emarginula crassa* Sowerby, 1813

Reference to best description of the species: Fretter &  
Graham 1976: 10-11, Figs 7, 8b.

Previous records: None.





New records: BIOFAR stations 090, 279.

Bathymetrical range within the area: 252-260 m.

Substrate: «Soft bottom».

Temperature range: 7.0 - 8.0 °C (E).

Water mass: AW.

World distribution: the Faroes; from Senja in northern Norway to Halland on the Swedish west coast, west coast of Britain, southwest Ireland, Antrim, Atlantic coast of France and Spain, the Azores.

World bathymetrical range: Sublittoral to 600 m depth. Off the coast of France reported from 748 to 1262 m depth.

Checked by: JAS

### *Emarginula fissura* (Linnaeus, 1767)

Synonyms: *Patella fissura* Linnaeus, 1758; *Emarginula reticulata* J. Sowerby, 1813; *Emarginula conica* M. Sars, 1835 non Lamarck, 1801.

Reference to best description of the species: Fretter &

Graham 1976: 7-9, Figs 5, 8a.

Previous records: Lightning stns 4, 8 (off the Faroe Islands); Taken alive in two localities: The deep hole at the N end of Nólsoy (120 m depth) and N of Viðoy, 82 m, but empty shells are found in a long series of localities (Spärck & Thorson 1933).

New records: BIOFAR stations 090, 107, 193, 279, 333, 364, 597, 605, 606, 607, 608.

Bathymetrical range within the area: 65-260 m.

Substrate: Sand, shell-sand, corals.

Temperature range: 7.0 - 8.2 °C (E).

Water mass: AW.

World distribution: From Tromsø in northern Norway to Kullen on the west coast of Sweden, the Faroes, all British and Irish coasts, coast of the Netherlands to Portugal, Madeira, Mediterranean coast of Spain and Balearic Islands.

World bathymetrical range: 0-400 m.

Remarks: Also recorded during BIOFAR 2.

Checked by: JAS



Genus *Puncturella* Lowe, 1827***Puncturella noachina* (Linnaeus, 1771)**

Synonym: *Patella noachina* Linnaeus, 1771.

Reference to best description of the species: Fretter & Graham 1976: 12-14, Figs 9-10.

Previous records: Lightning stns. 4, 8 (off the Faroe Islands), Triton stn. 13; found alive in three localities: Trongisvágssfjørður (2-20 m depth), SE corner of Kunoy (10-15 m) and one sample only labeled the Faroes (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 007, 019, 027, 068, 088, 090, 116, 131, 172, 189, 190, 233, 279, 281, 295, 299, 317, 344, 356, 357, 363, 411, 421, 424, 451, 455, 473, 481, 482, 483, 495, 496, 497, 499, 514, 515, 518, 522, 523, 524, 546, 595, 689, 698, 728, 747, 762, 764.

Bathymetrical range within the area: 140-923 m.

Substrate: Sand, gravel and stones.

Temperature range: +0.6 - 8.6 °C (E).

Water mass: AW (42), AI (16), NW (7).

Bottom type: On hard, rocky or stony bottoms; corals; sand, clay.

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Franz Joseph Islands, Novaya Zemlya, the White Sea south to Øresund, the British Isles, Ireland and south to Portugal and into the Mediterranean; in east America from Arctic Canada, Newfoundland Bank, Labrador to Cape Cod; in the Pacific at the Aleutians, Point Barrow and south of Juneau in Alaska; Japan.

World bathymetrical range: 20-923 m.

Checked by: JAS

**Family PATELLIDAE**Genus *Patella* Linnaeus, 1758***Patella vulgata* Linnaeus, 1758**

Reference to best description of the species: Fretter & Graham 1976: 25-27, Fig. 18.

Previous records: Abundant at all rocky shores of the Faroes (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1 but found along all shores during BIOFAR 2.

Bathymetrical range within the area: Littoral.

Substrate: Rocky shores.

World distribution: The Faroes, Hammerfest in northern Norway south to the Mediterranean but absent from the east coast of the North Sea and in the Baltic.

World bathymetrical range: In the littoral zone between mean highwater neap (MHWN) and mean highwater spring (MHWS) depending on local factors down to MLWN.

Genus *Ansates* Sowerby, 1839***Ansates pellucida* (Linnaeus, 1758)**

Synonyms: *Patella pellucida* Linnaeus, 1758, *Patella laevis* Pennant, 1777, *Helcion pellucidum* (Linnaeus, 1758).

Reference to best description of the species: Fretter & Graham 1976: 22-25, Figs 16-17.

Previous records: A very common species at the Faroes (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: Iceland, the Faroes, from the Murman coast south to NW Africa and into the Mediterranean, absent from the Baltic, east coast of Denmark and those of Holland and Belgium.

World bathymetrical range: 0-50 m.

Remarks: Found at many stations during BIOFAR 2.

**Family ACMAEIDAE**Genus *Tectura* Gray, 1847***Tectura virginea* (Müller, 1776)**

Synonyms: *Patella virginea* O. F. Müller, 1776, *Acmaea virginea* auct.

Reference to best description of the species: Fretter & Graham 1976: 20-22, Fig. 15.

Previous records: Lightning stn. 4; Very common at the Faroes (19 localities registered) at the southern as well as the northern isles. It rarely occurs alive in depths at more than 20-25 m (Spärck & Thorson 1933).

New record: BIOFAR station 610.

Bathymetrical range within the area: 90 m.

Substrate: Mud and sand, shell-sand

Temperature range: 8.0 °C (E).

Water mass: AW.

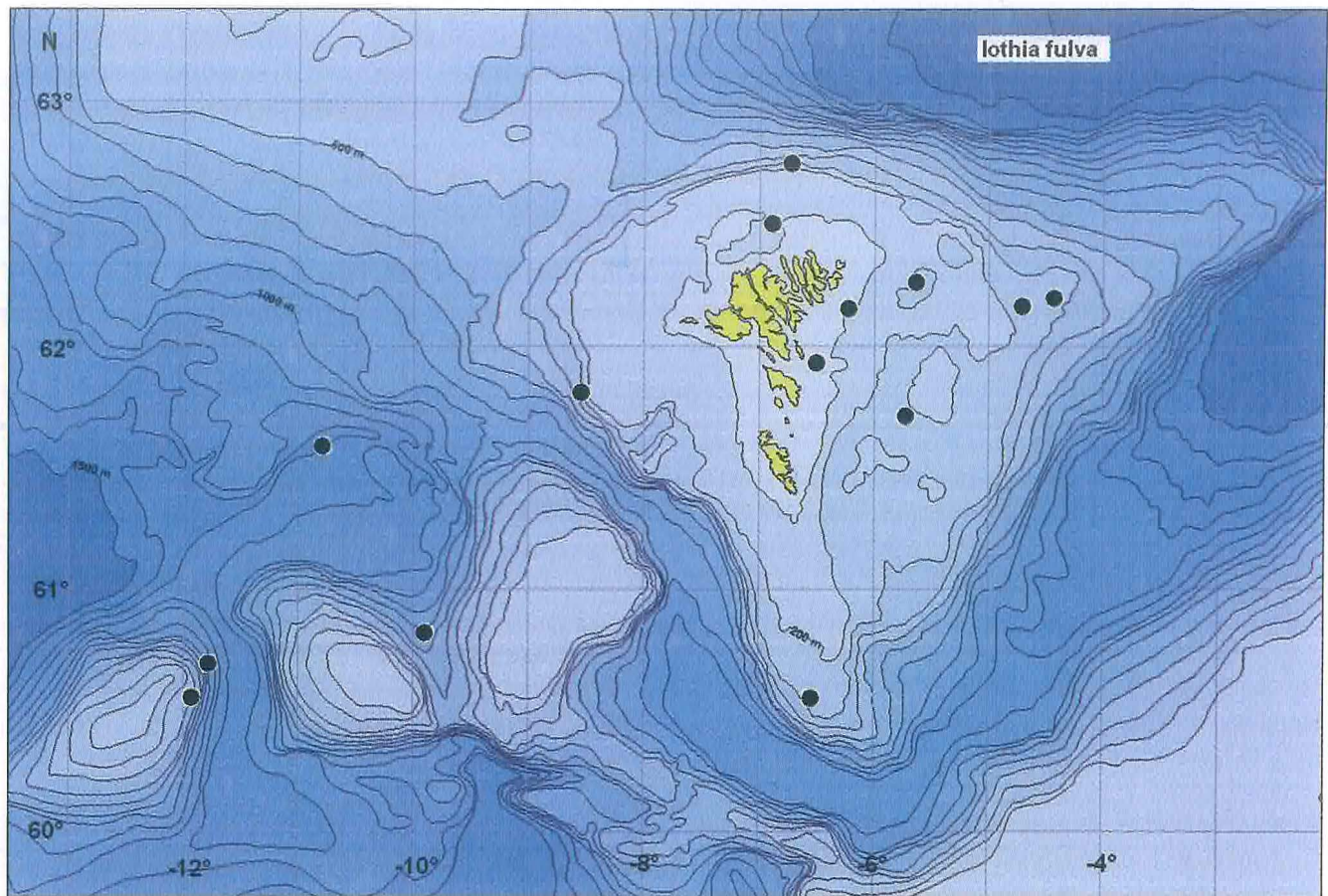
World distribution: Iceland, the Faroes, whole Norwegian coast south to NW Afrika, Cape Verde and St. Helena and into the Mediterranean.

World bathymetrical range: 3-1000 m.

Remarks: There are few records in the BIOFAR material as very few stations were sampled in less than 100 m depth. Found during BIOFAR 2.

Checked by: JAS





## Family LEPETIDAE

### Genus *Lepeta* J.E. Gray, 1847

#### *Lepeta caeca* (O. F. Müller, 1776)

Synonyms: *Patella caeca* Müller, 1776, *Patella candida* Couthouy, 1838.

Reference to best description of the species: Fretter & Graham 1976: 31-32, Fig. 21.

Previous records: Two live specimens sampled in 1846 and labeled «the Faroes» (Spärck & Thorson 1933).

New records: Not found during the BIOFAR cruises.

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Barents Sea south to Kattegat; in east America from Ellesmere Island south to Cape Cod; in the Pacific Ocean Sea of Okhotsk and Sea of Japan.

World bathymetrical range: 5-300 m (At the Azores found at 1200 m).

### Genus *Iothia* Gray, 1857

#### *Iothia fulva* (O. F. Müller, 1776)

Synonyms: *Patella fulva* O. F. Müller, 1776; *Pilidium fulvum* (Müller, 1776), *Scutellina fulva* (G. O. Sars, 1878).

Reference to best description of the species: Fretter & Graham 1976: 32-34, Figs 22-23.

Previous records: Simpson (1910): 16, 16a, 17; Only recorded as empty shells (Spärck & Thorson 1933).

New records: BIOFAR stations 007, 019, 090, 190, 192, 279, 401, 493, 515, 518, 597, 608, 696, 764.

Bathymetrical range within the area: 65-1319 m.

Substrate: Sand, gravel.

Temperature range: 3.0 - 8.6 °C (E).

Water mass: AW.

World distribution: South and west coasts of Iceland, the Faroes, whole Norwegian coast, Kattegat south to Øresund, Shetland, Orkneys, west coast of Scotland, Irish Sea, west coast of Ireland, and south to the Azores.



World bathymetrical range: 20-1319 m. At the Azores taken at 2000 m depth but only as a dead shell (Watson 1885).

Checked by: JAS

### Genus *Propilidium* Forbes & Hanley, 1849

#### *Propilidium exiguum* (Thompson, 1844)

Synonyms: *Patella exigua* Thompson 1844, *Patella ancyloide* Forbes 1840 non *Patella ancyloide* Sowerby, J. de C., 1824.

Reference to best description of the species: Fretter & Graham 1976: 34-36, Figs 24-25.

Previous records: None.

New record: BIOFAR station 401.

Bathymetrical range within the area: 250 m.

Substrate: Stones and gravel.

Temperature range: 7.7 °C (E).

Water mass: AW.

World distribution: The Faroes, Norwegian coast from Lofoten to Bergen, Swedish west coast, Shetland, west Scotland, Ireland, Portugal, the Canaries, Mediterranean.

World bathymetrical range: 20-280 m. Reported found at 2640 m in the North Atlantic.

Checked by: JAS

### Family LEPETELLIDAE

#### Genus *Lepetella* Verrill, 1880

#### *Lepetella laterocompressa* (de Rayneval & Ponzi, 1854)

Synonyms: *Cocculina laterocompressa* de Rayneval & Ponzi, 1854, *Lepetella tubicola* Jeffreys, 1882, not Verrill & Smith, 1880.

Reference to best description of the species: Warén 1972b: 19-22, Figs 2a-d, 3.

Previous records: None.

New record: BIOFAR station 027.

Bathymetrical range within the area: 225 m.

Substrate: sand and sponge spicules.

Temperature range: 7.5 °C (E).

Water mass: AW.

World distribution: The Faroes, west coast of Norway and Sweden, northern North Sea south to the Canary Islands, the Azores, Mediterranean.

World bathymetrical range: 50 to 1200-2000 m.

Remarks: Moskalev (1978) questions the opinion of Warén (1972b) that the genus *Lepetella* has two species, *L. laterocompressa* and *L. tubicola*.

Checked by: JAS

### Family COCCULINIDAE

#### Genus *Copulabyssia* Haszprunar, 1988

#### *Copulabyssia corrugata* (Jeffreys, 1883)

Synonym: *Cocculina corrugata* Jeffreys, 1883.

Reference to best description of the species: Jeffreys 1883c: 394, Pl. 44, figs 2, 2a.

Previous records: Triton stn. 10.

New record: Not found during BIOFAR 1.

Bathymetrical range within the area: 950 m.

Substrate: No information.

Temperature range: 7.8 - 8.1 °C (E).

Water mass: AW.

World distribution: South of the Faroes, west coast of Norway.

World bathymetrical range: 950 m.

#### Genus *Coccopigya* B.A. Marshall, 1986

#### *Coccopigya spinigera* (Jeffreys, 1883)

Synonym: *Cocculina spinigera* Jeffreys, 1883.

Reference to best descriptions of the species: Jeffreys 1883c: 393, Pl. 44, figs 1, 1a-c; Warén 1991: 80-81.

Previous records: Triton stn. 10.

New records: Not found during BIOFAR 1.

Bathymetrical range within the area: 950 m.

Substrate: In submerged wood bored by shipworms, and on parts of whale skeletons.

World distribution: Western and southern Iceland, the Faroes, north of the Hebrides; in east America off New Jersey to North Carolina.

World bathymetrical range: 600-1534 m.

Checked by: AW

### Superfamily TROCHACEA

#### Family TROCHIDAE

#### Genus *Danilia* Brusina, 1865

#### *Danilia tinei* (Calcara, 1839)

Synonyms: *Monodonta tinei* Calcara, 1839; *Danilia*



*otaviana* sensu auct. non Cantraine, 1835, *Monodonta limbata* Philippi, 1844, *Trochus bilabiatus* Philippi, 1847.

Reference to best description of the species: Ghisotti & Steinmann 1970: 1-4; Palazzi & Villari 2001: 11-14, Fig. 19.

Previous records: None.

New records: One dead shell found at BIOFAR station 319.

World distribution: the Faroes (?), the Hardangerfjord on the Norwegian west coast, west coast of Ireland, Mediterranean.

World bathymetrical range: 30-2000 m.

### Genus *Calliostoma* Swainson, 1840

*Calliostoma occidentale* (Mighels & Adams, 1842) Fig. 5.

Synonyms: *Trochus occidentale* Mighels & Adams, 1842; *Trochus formosus* McAndrew & Forbes, 1842; *Margarita alabastrum* Lovén, 1846 ex Beck ms.

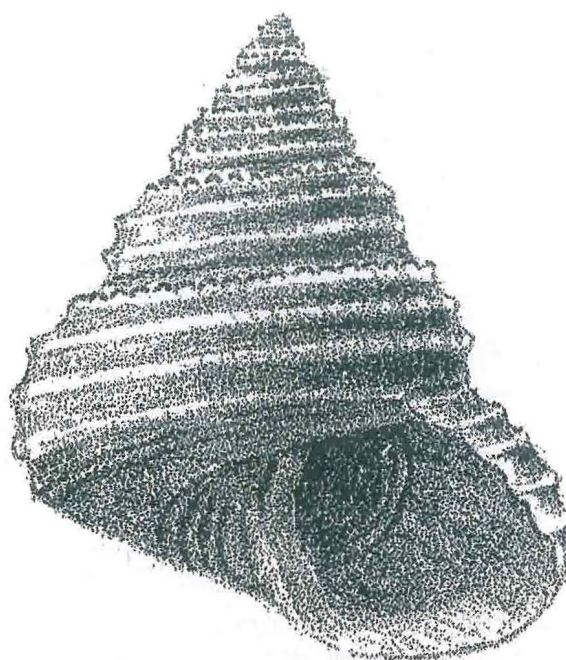
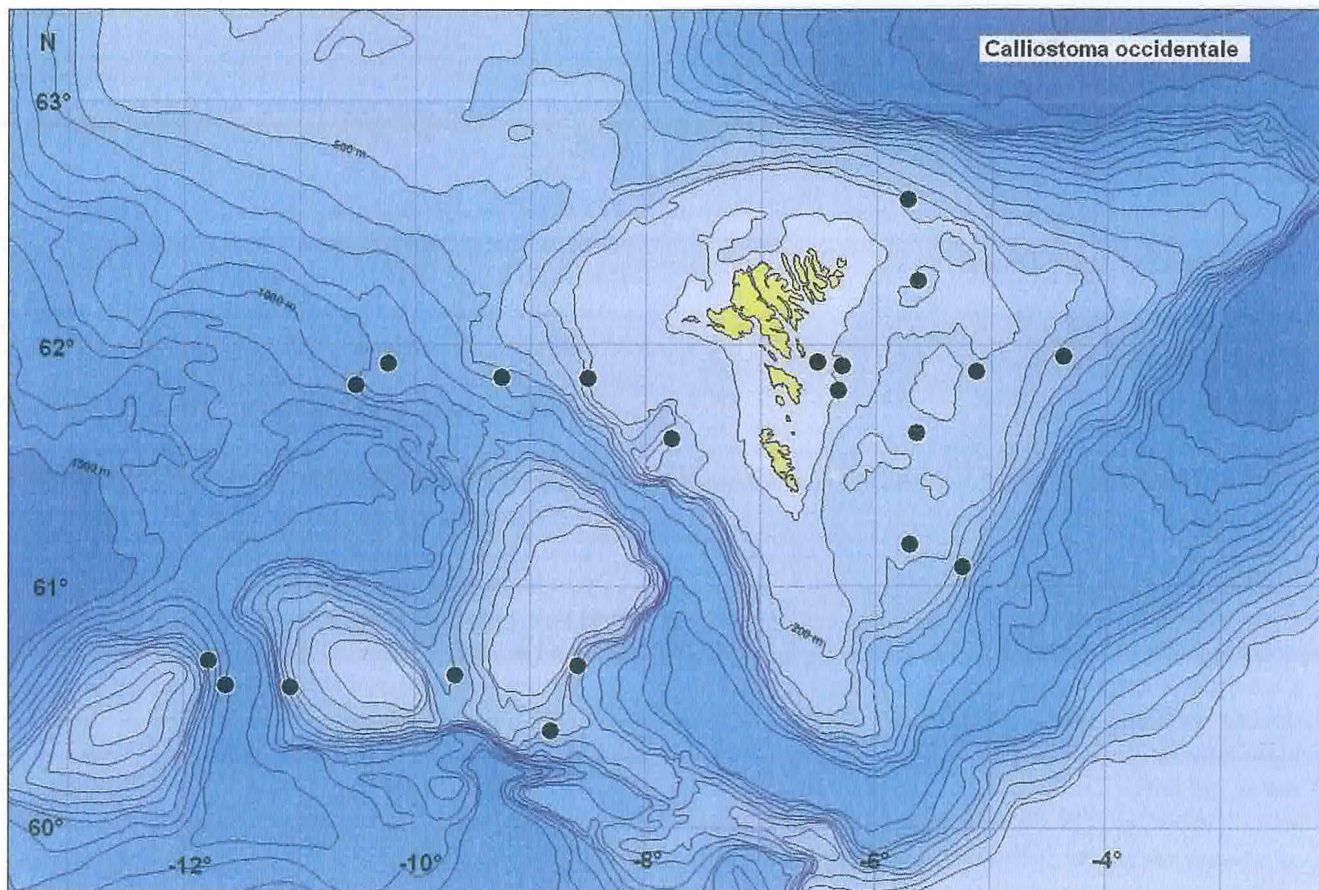


Fig 5. *Calliostoma occidentale* (Mighels & Adams, 1842)





Reference to best description of the species: Fretter & Graham 1977: 79-80, Figs 58-59.

Previous records: Lightning stn. 2; Simpson (1910): 16, 16a, 17; E, S and N of Nólsoy (120-150 m), Skálafjørður, off the mouth of Funningsfjørður (82 m), off the mouth of Borðoyarvík (45-55 m), SSE of Bispen (90 m) (Spärck & Thorson 1933).

New records: BIOFAR stations 007, 028, 043, 116, 131, 158, 317, 335, 339, 359, 473, 483, 495, 497, 506, 515, 517, 605, 606, 607, 698.

Bathymetrical range within the area: 70-1099 m.

Substrate: Gravel and shell-gravel, coral-gravel, sand.

Temperature: 1.5 - 8.5 °C (E).

Water mass: AW (14), AW/AI (6), AW/AI/NW (1).

World distribution: South coast of Iceland, the Faroes, Murman coast south along the Norwegian coast to Hugesund, northern North Sea, east coast of Scotland, Orkneys, west coast of Ireland, Irish Sea and southwest coast of England; in east America from off Nova Scotia south to the Banks off Massachusetts, continuing in deeper water on the continental slope south to the latitude of Barnegat Bay, New Jersey.

World bathymetrical range: 19 m to 1785 m off Georges Bank, Mass.

Checked by: JAS

### *Calliostoma zizyphinum* (Linnaeus, 1758)

Synonyms: *Trochus zizyphinus* Linnaeus, 1758; *Trochus conulus* Linnaeus, 1758; *Trochus conuloides* Lamarck, 1822; *Zizyphinus vulgaris* Gray, 1850.

Reference to best description of the species: Fretter & Graham 1977: 74-77, Figs 54-55.

Previous records: Lightning stn. 4; one sample with live material: N of Fugloy, 90 m depth (Spärck & Thorson 1933).

New records: BIOFAR stations 076, 203, 321, 325, 349, 350, 584, 605, 607, 689, 692.

Bathymetrical range within the area: 70 - 351 m.

Substrate: Hard and stony bottom with some *Laminaria*.

Temperature: 7.8 - 9.1 °C (E).

Water mass: AW.

World distribution: The Faroes, south and west coasts of Norway north to about 67° N, west coast of Sweden; west coast of Jutland, Helgoland, Holland, Belgium, all British and Irish coasts south to Morocco and the Canaries, the Azores, Mediterranean.

World bathymetrical range: Sublittoral to 351 m, at the

Azores in 450 fathoms (Watson 1885).

Remarks: Also recorded during BIOFAR 2.

Checked by: JAS

## Genus *Clelandella* Winckworth, 1932

### *Clelandella milaris* (Brocchi, 1814)

Synonyms: *Trochus milaris* Brocchi, 1814; *Tochus millegranus* Philippi, 1836; *Conulus millegranus* Philippi, Sars, 1878; *Trochus clelandi* Wood, 1828; *Clelandella clelandi* Winckworth, 1932.

Reference to best description of the species: Fretter & Graham 1977: 71-74, Figs 52-53.

Previous records: Lightning stn. 7; live at S and N of Nólsoy (120-150 m) besides records of empty shells (Spärck & Thorson 1933).

New records: BIOFAR stations 105, 116, 301, 319, 349, 538, 595, 597, 691.

Bathymetrical range within the area: 100-506 m.

Temperature: 7.0 - 8.6 °C (E).

Water mass: AW.

Substrate: Large and small stones and gravel; soft bottom with some sand.

World distribution: The Faroes, Norwegian coast from Tromsø south to Kattegat (living specimens only found north to about 68° N), west coast of Sweden, northern part of Øresund, the British Isles, Shetland, Orkneys and at the west European coasts to off Morocco, Cap Verde Isles, western Mediterranean and Adriatic Sea.

World bathymetrical range: 10-20 m to 506 m (727 m off Morocco).

Checked by: JAS

## Genus *Gibbula* Risso, 1826

### *Gibbula cineraria* (Linnaeus, 1758)

Synonyms: *Trochus cinereus* Linnaeus, 1758, *Trochus lineatus* da Costa, 1758.

Reference to best description of the species: Fretter & Graham 1977: 48-52, Figs 33-34.

Previous records: One of the most frequently occurring marine gastropod at the Faroes (Spärck & Thorson 1933).

New record: BIOFAR station 372.

Bathymetrical range within the area: 21 m.

Substrate: Hard bottom with sand and coralline algae, *Fucus* and *Laminaria* species, shell-gravel.



Temperature: 7.6 °C (E).

Water mass: AW.

World distribution: West coast of Iceland, the Faroes, whole Norwegian coast from Vardö in the north to the Swedish west coast and south to Øresund, Doggerbank, Helgoland, Shetland, Orkneys, British Isles, Ireland, European coasts south to Morocco, Mediterranean.

World bathymetrical range: 5-525 m.

Remarks: Common during BIOFAR 2.

Checked by: JAS

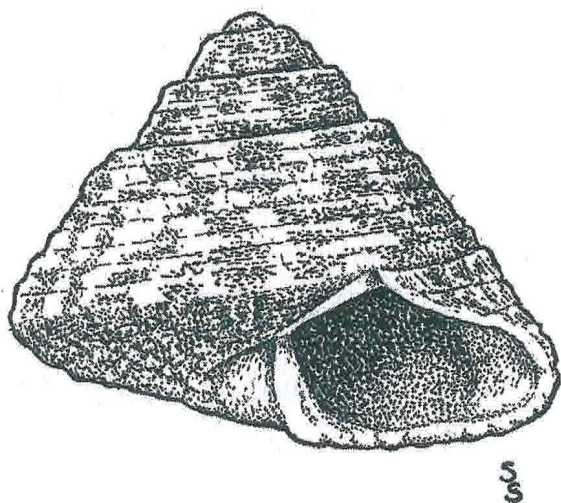


Fig 6. *Gibbula tumida* (Montagu, 1803) S. Sneli, del.

***Gibbula tumida* (Montagu, 1803)** Fig. 6.

Synonym: *Trochus tumidus* Montagu, 1803.

Reference to best description of the species: Fretter & Graham 1977: 58-60, Figs 41-42.

Previous records: Lightning stn.7; A very common gastropod species at the Faroes (Spärck & Thorson 1933).

New records: BIOFAR stations 056, 076, 077, 105, 110, 171, 192, 326, 350, 368, 369, 370, 549, 597, 607, 608, 609, 610.

Bathymetrical range within the area: 32-601 m.

Substrate: Hard bottom with stones; small stones and shell-gravel with calcareous algae; *Laminaria*.

Temperature: 0 - 9.1 °C (E).

Water mass: AW (17), NW (1).

World distribution: South and west coasts of Iceland, the Faroes, Murman coast south to the Swedish west

coast and Øresund, Shetland, Orkneys, British Isles, Ireland, European coasts south to Portugal.

World bathymetrical range: 3-10 m to 601 m depth; SW of the Faroes is has been found to about 1225 m depth.

Remarks: In the BIOFAR material the species had its main distribution above 150 m depth. It is commonly found during BIOFAR 2.

Checked by: JAS

**Genus *Margarites* J.E. Gray, 1847 ex Leach ms.**

***Margarites groenlandicus* (Gmelin, 1791)**

Synonyms: *Trochus groenlandicus* Gmelin, 1791; *Margarita undulata* Sowerby, 1838.

Reference to best description of the species: Fretter & Graham 1977: 42-44, Figs 28-29.

Previous records: Simpson 1910: 16, 17; On the beach of Nólsoy, S of Nólsoy, Tórshavn, Vestmannaund, E of Mykines, Skálafjørður, Hvalvíkfjørður, SE corner of Kunoy, Klaksvík, Sundini (the sound between Streymoy and Eysturoy) (5-100 m depth) (Spärck & Thorson 1933).

New records: BIOFAR stations 263, 546.

Bathymetrical range within the area: 140-859 m.

Substrate: algae, stones, shell-gravel, sand, sponges.

Temperature: 1.0 - 8.2 °C (E).

Water mass: AW (1), AW/Al/NW (1).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, White Sea, Kara Sea, Novaya Zemlya, Barents Sea, Norwegian coast from Varangerfjord south to Lillesand, Shetland, Orkneys, east and west Scotland; in east America from Ellesmere Island to New York.

World bathymetrical range: 0-859 m.

Remarks: Also recorded during BIFAR 2.

Checked by: JAS

***Margarites helycinus* (Phipps, 1774)**

Synonyms: *Clio helycinus* Phipps, 1774; *Margarita helicina* Phipps, 1774; *Turbo helycinus* Phipps, 1774; *Helix margarita* Montagu, 1808; *Margarita arctica* Leach, 1819.

Reference to best description of the species: Fretter & Graham 1977: 40-42, Figs 26-27.

Previous records: Trongisvágsfjørður, the bay at Sand on Sandoy, Tórshavn, Hvalvík, Skálafjørður, SE



corner of Kunoy (0-15 m depth) (Spärck & Thorson 1933).

New records: BIOFAR stations 425, 483.

Bathymetrical range within the area: 405-509 m.

Substrate: Gravel, fine sand.

Temperature: 1.6 - 4.0 °C (E).

Water mass: AW (1), AI (1).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Novaya Zemlya, Barents Sea, Norwegian coast, Swedish west coast into the northern Kattegat, Shetland, Orkneys, British Isles south to Yorkshire on the east coast and to northern Wales on the west coast, in Ireland south to Dublin and Galway; in east America from Ellesmere Island south to Cape Ann; in the Pacific Ocean Sea of Okhotsk, the Aleutians, Alaska south to Catalina Island.

World bathymetrical range: 0-509 m.

Remarks: Also recorded during BIOFAR 2.

Checked by: JAS

### *Margarites olivaceus* (Brown, 1827) Fig. 7.

Synonyms: *Turbo olivaceus* (Brown, 1827), *Trochus argentatus* Gould, 1841, *Margarites glauca* Möller, 1842, *Margarites gigantea* Galkin, 1955.

Reference to best description of the species: Fretter & Graham 1977: 44-45, Fig. 30.

Previous records: None.

New records: BIOFAR stations 411, 424.

Bathymetrical range within the area: 430-509 m.

Substrate: sand and shell-sand.

Temperature: 1.5 - 6.0 °C (E).

Water mass: AW/AI (1), AI (1).

World distribution: East Greenland, Iceland, the Faroes, Shetland, west coast of Scotland, Jan Mayen,

Svalbard, Barents Sea, and along the Norwegian coast from the Varangerfjord to the Lofoten.

World bathymetrical range: 10-509 m.

Checked by: JAS

### Genus *Solariella* S.V. Wood, 1842

#### *Solariella amabilis* (Jeffreys, 1865)

Synonyms: *Trochus cinctus* auct. (not *Trochus cinctus* Philippi, 1836), *Trochus amabilis* Jeffreys, 1865, *Margarita elegantula* Jeffreys, 1861, *Trochus affinis* Jeffreys MS, Friele, 1874, *Trochus affinis* Eichwald, 1850.

Reference to best description of the species: Fretter & Graham 1977: 46-48, Figs 31-32; Warén 1993: 161-162, Figs 2A-B, 7B, 8D.

Previous records: Lightning stn. 2; Porcupine stns 51, 61; Simpson (1910): 16a, 17; Akraleiti (Suðuroy) in 260 m and S of Nólsoy Bank in 200 m depth (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 019, 027, 028, 051, 065, 150, 158, 283, 496, 514, 518, 689, 692, 739, 764.

Bathymetrical range within the area: 218-630 m.

Substrate: Sand, shell-sand, gravel, sponge-spicules.

Temperature: 2.9 - 8.6 °C (E).

Water mass: AW (13), AW/AI (2).

World distribution: Southwest Iceland, the Faroes, Norwegian coast from the Lofoten south to the Hardangerfjord and northern North Sea, Shetland and in deeper water southwest to off western Marocco.

World bathymetrical range: 150-800 m.

Checked by: JAS



Fig 7.  
*Margarites olivaceus*  
(Brown, 1827)



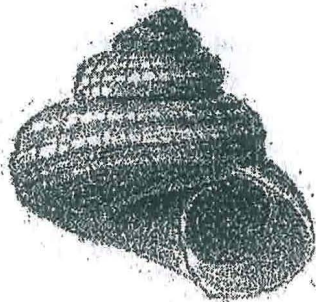
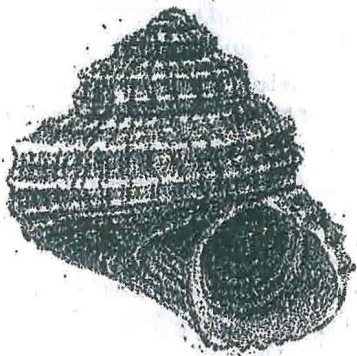
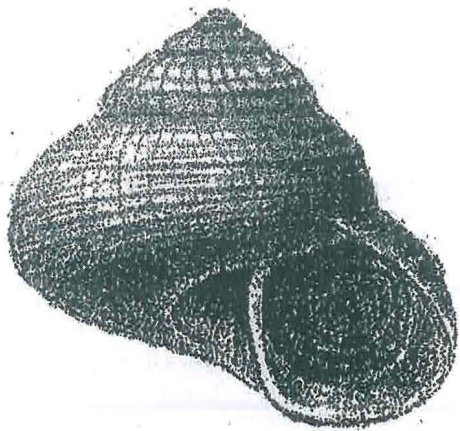


Fig 8. *Solariella obscura* (Couthouy, 1838)

***Solariella obscura* (Couthouy, 1838) Fig. 8.**

Synonyms: *Turbo obscurus* Couthouy, 1838, *Margarita albula* Gould, 1861, *Margarita bella* Verkrüzen, 1875, *Margarita obscura* var. *intermedia* Leche, 1878, *Solariella laevis* Friele, 1886, *Margarita obscura* var. *islandica* Odhner, 1910.

Reference to best description of the species: Warén 1993: 163-167, Figs 4A, 5A-E, 7A, 8B; Galkin 1955: 104-109, Figs 60-61, 64-65 (in Russian).

Previous records: Lightning stn. 2, Porcupine stn. 5.  
New records: BIOFAR stations 019, 027, 098, 124, 189, 381, 422, 424, 447, 452, 455, 458, 483, 698, 699, 705, 728, 729, 730, 731.

Bathymetrical range within the area: 150-1042 m.

Substrate: Sand, gravel, stones.

Temperature: +0.9 - 7.9 °C (E).

Water mass: AW (3), AW/AI (5), AI (4), AI/NW (1), AW/AI/NW (1), NW (6).

World distribution: West and east Greenland, west, north and east Iceland, the Faroes, Jan Mayen, Svalbard, Franz Joseph Islands, Novaya Zemlya, Kara and Laptev Seas east to the Bering Strait, Barents Sea, Norway north of 64° N; in east America from Hudson Strait south to the New England area; in the Pacific Ocean the Okhotsk Sea and Sea of Japan.

World bathymetrical range: 20-1042 m.

Checked by: JAS

**Genus *Calliotropis* Seguenza, 1903**

***Calliotropis ottoi* (Philippi, 1844)**

Synonyms: *Trochus ottoi* Philippi, 1844, *Margarita regalis* Verrill & Smith, 1880, *Solariella infundibulum* Odhner, 1912 (not Watson, 1879), *Lischkeia ottoi* (Abbott 1974).

Reference to best description of the species: Abbott 1974: 39, Fig. 265.

Previous records: Triton stn. 13.

New records: BIOFAR stations: 305, 490.

Bathymetrical range within the area: 1078-1083 m.

Substrate: Cobles, stones, sand.

Temperature: 6.2 - 6.5 °C (E).

Water mass: AW/AI.

World distribution: Nova Scotia to North Carolina, Newfoundland to Iceland and the Faroes, and south to the Mediterranean.

World bathymetrical range: 85 m to at least 1000 m.

Remarks: The specimen found at st. 305 is an empty shell.

Checked by: JAS

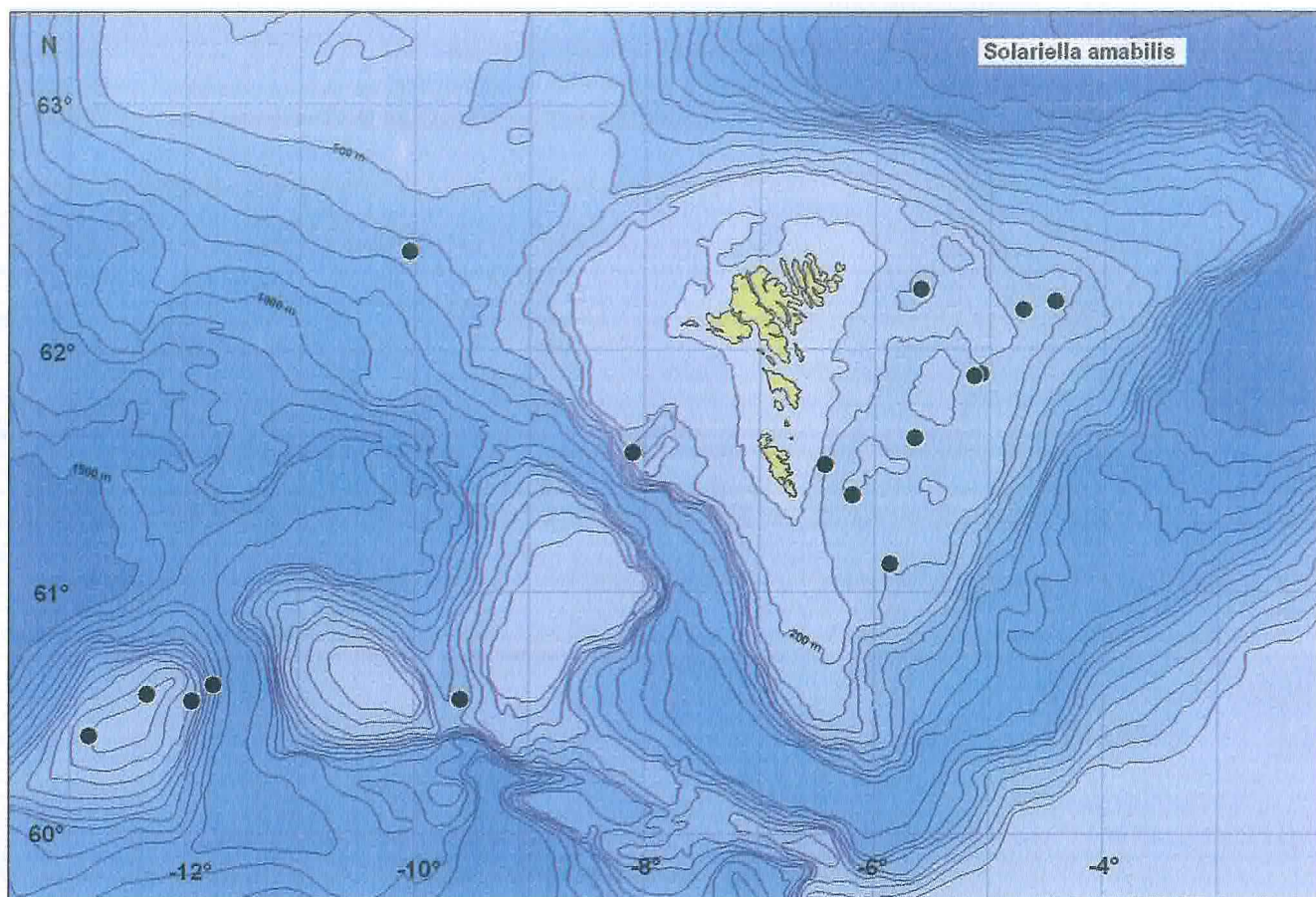
**Family SKENEIDAE**

**Genus *Dikoleps* Høisæter, 1968**

***Dikoleps pusilla* (Jeffreys, 1847)**

Synonyms: *Margarites pusilla* Jeffreys, 1847, not *Cyclostrema nitens* Philippi, 1844.





Reference to best description of the species: Fretter & Graham 1977: 84-85, Figs 62-63.

Previous records: None.

New records: BIOFAR station 056.

Bathymetrical range within the area: 77 m.

Substrate: No information.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: The Faroes, Norwegian coast from Bodø south to Grimstad, further along the European coasts into the Mediterranean but not on the continental side of the North Sea. In Britain more common on the western side and Ireland, dead shells found on the east side of Britain south to Scarborough.

World bathymetrical range: LWST to 100 m.

Remarks: Palazzi & Villari (2001, p. 13) finds *Heliciella mutabilis* an objective synonym of *Margarites pusilla* and *Dikoleps* Höisaeter 1968 a junior synonym of *Heliciella* da Costa, 1861.

Checked by: AW

### Genus *Granigyra* Dall, 1889

#### *Granigyra arenosa* Warén, 1993

Reference to best description of the species: Warén 1993: 180-181, Figs 8E, 18-20.

Previous records: None.

New records: BIOFAR stations 490, 516.

Bathymetrical range within the area: 914-1083 m.

Substrate: Mud, sand, gravel.

Temperature: 6.5 - 6.7 °C (E).

Water mass: AW/AI.

World distribution: Southwest of the Faroes to southwestern Portugal.

World bathymetrical range: 900-2000 m.

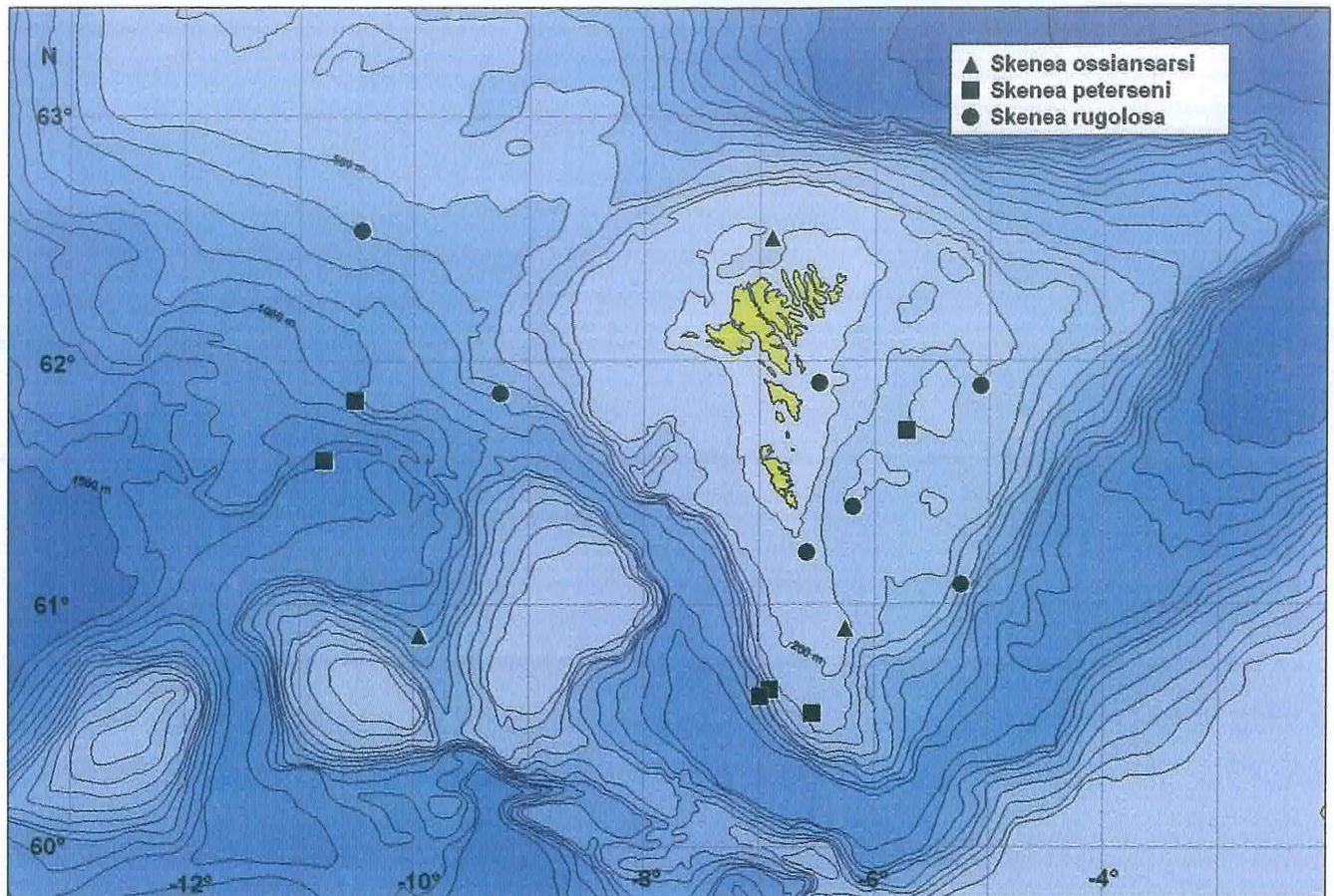
Checked by: AW

### Genus *Skenea* Fleming, 1825

#### *Skenea areolata* (G.O. Sars, 1878)

Synonym: *Cyclostrema areolatum* G.O. Sars, 1878.





Reference to best description of the species: G.O. Sars 1878: 345, Pl. 33, fig. 6a-d.

Previous records: Lightning stn. 2; Simpson (1910) stn. 16a.

New records: None.

Bathymetrical range within the area: 160-300 m.

Temperature: 5.4 °C (E).

World distribution: Norwegian Sea, West Iceland, Wyville-Thomson Ridge south of the Faroes, off Vesterålen in Northern Norway.

World bathymetrical range: 150-1200 m.

Bathymetrical range within the area: 225-1319 m.

Substrate: Sand, gravel, stones, sponge spicules.

Temperature: 1.3 - 2.6° (M: 2 stns), +0.9 - 8.0 °C (E).

Water mass: AW (4), AW/AI (3), AI (2), AW/AI/NW (3), NW (7).

World distribution: Iceland, the Faroes, Svalbard, the Norwegian Sea, Barents Sea, Kara and Laptev seas, Norwegian coast from Tromsø south to Skagerrak, Rockall Trough.

World bathymetrical range: 90-2400 m.

Checked by: AW

### *Skeneia basistriata* (Jeffreys, 1877)

Synonym: *Cyclostrema basistriatum* Jeffreys, 1877.

Reference to best description of the species: Fretter & Graham 1977: 91-92, Fig. 69; Warén 1991: 64-65, Figs 5A-B, E, F, H, 7A,C, 9B.

Previous records: Simpson (1910): Stns 15b, 16, 16a.

New records: BIOFAR stations 019, 027, 032, 070, 090, 113, 263, 271, 274, 381, 421, 458, 483, 492, 500, 696, 729, 730, 731.

### *Skeneia larseni* Warén, 1993

Reference to best description of the species: Warén 1993: 173, Figs 11d-f, 12a, c, e, 13c, 14a-b, 15c-d.

Previous records: None.

New record: BIOFAR station 113.

Bathymetrical range within the area: 872 m.

Substrate: No information.

Temperature: +0.5 °C (M).

Water mass: NW.



World distribution: Southern Iceland and south of the Faroes.

World bathymetrical range: 250-900 m.

Checked by: AW

### *Skenea ossiansarsi* Warén, 1991

Synonym: *Cyclostrema laevigatum* G.O. Sars, 1878 (not Friele, 1876).

Reference to best description of the species: Warén 1991: 58-60, Figs 4c-d, 6f, 9c-d.

Previous stations: None.

New records: BIOFAR stations 098, 192, 492.

Bathymetrical range within the area: 107-900 m.

Substrate: Sand.

Temperature: 7.0 - 7.9 °C (E).

Water mass: AW.

World distribution: Southwest and south Iceland, the Faroes, Svalbard, Severnaya Zemlya, whole Norwegian coast.

World bathymetrical range: 50-900 m.

Checked by: AW

### *Skenea peterseni* (Friele, 1877)

Synonym: *Cyclostrema peterseni* Friele, 1877.

Reference to best description of the species: Friele 1877: 3; Fretter & Graham 1977: 89-90, Figs 67-68; Warén 1991: 60, 3F, 4AB, 6 D.

Previous records: None.

New records: BIOFAR stations 090, 279, 335, 696, 726, 728.

Bathymetrical range within the area: 252 - 1319 m.

Substrate: Soft bottom, gravel.

Temperature: 1.3 °C (M: one stn), 1.0 - 8.0 °C (E).

Water mass: AW (2), AW/AI (2), AI/NW (1), AW/AI/NW (1).

World distribution: Western Iceland, the Faroes, the Norwegian Sea, Barents Sea, whole Norwegian coast south to Skagerrak.

World bathymetrical range: 250-1319 m.

Checked by: AW

### *Skenea rugulosa* (G.O. Sars, 1878)

Synonym: *Cyclostrema rugulosum* G.O. Sars, 1878.

Reference to best description of the species: G.O. Sars 1878: 129, Pl. 21, fig. 1ab; Warén 1991: 63-64, Figs 3E, 4E-F, 6C, 9F.

Previous records: None.

New records: BIOFAR stations 027, 051, 056, 421, 483, 547, 698.

Bathymetrical range within the area: 77-643 m.

Substrate: Sand and gravel.

Temperature: 1.3 - 2.6° (M: 2 stns), 3.1 - 8.1 °C (E).

Water mass: AW (4), AW/AI (1), AW/AI/NW (1).

World distribution: Southwest Iceland, the Faroes, Norwegian coast from south of Tromsø to the northern Swedish west coast.

World bathymetrical range: 150-643 m.

Checked by: AW

### *Skenea trochoides* (Friele, 1876)

Synonyms: *Cyclostrema trochoides* Jeffreys MS in Friele, 1876, *Moelleria laevigata* Jeffreys in Friele, 1876.

Reference to best description of the species: Friele 1876: 60; Warén 1991: 58, Figs 2E-F, 3D,G, 6E, 8B.

Previous records: None.

New records: BIOFAR stations 082, 265, 274, 500.

Bathymetrical range within the area: 684-732 m.

Substrate: Sand, gravel and stones.

Temperature: +0.6 - 4.6 °C (E).

Water mass: AW/AI (1), NW (3).

World distribution: West and southwest Iceland, the Faroes, Norwegian Sea east to Franz Joseph Islands and south to Bergen on the Norwegian coast (a record from the northern part of the Bay of Biscay is probably based on a reworked fossil (Warén 1991).

World bathymetrical range: 200-732 m.

Checked by: AW

## Family: TURBINIDAE

### Genus *Moelleria* Jeffreys, 1865

#### *Moelleria costulata* (Møller, 1842)

Synonym: *Margarita costulata* Møller, 1842.

Reference to best description of the species: Fretter & Graham 1977: 93-95.

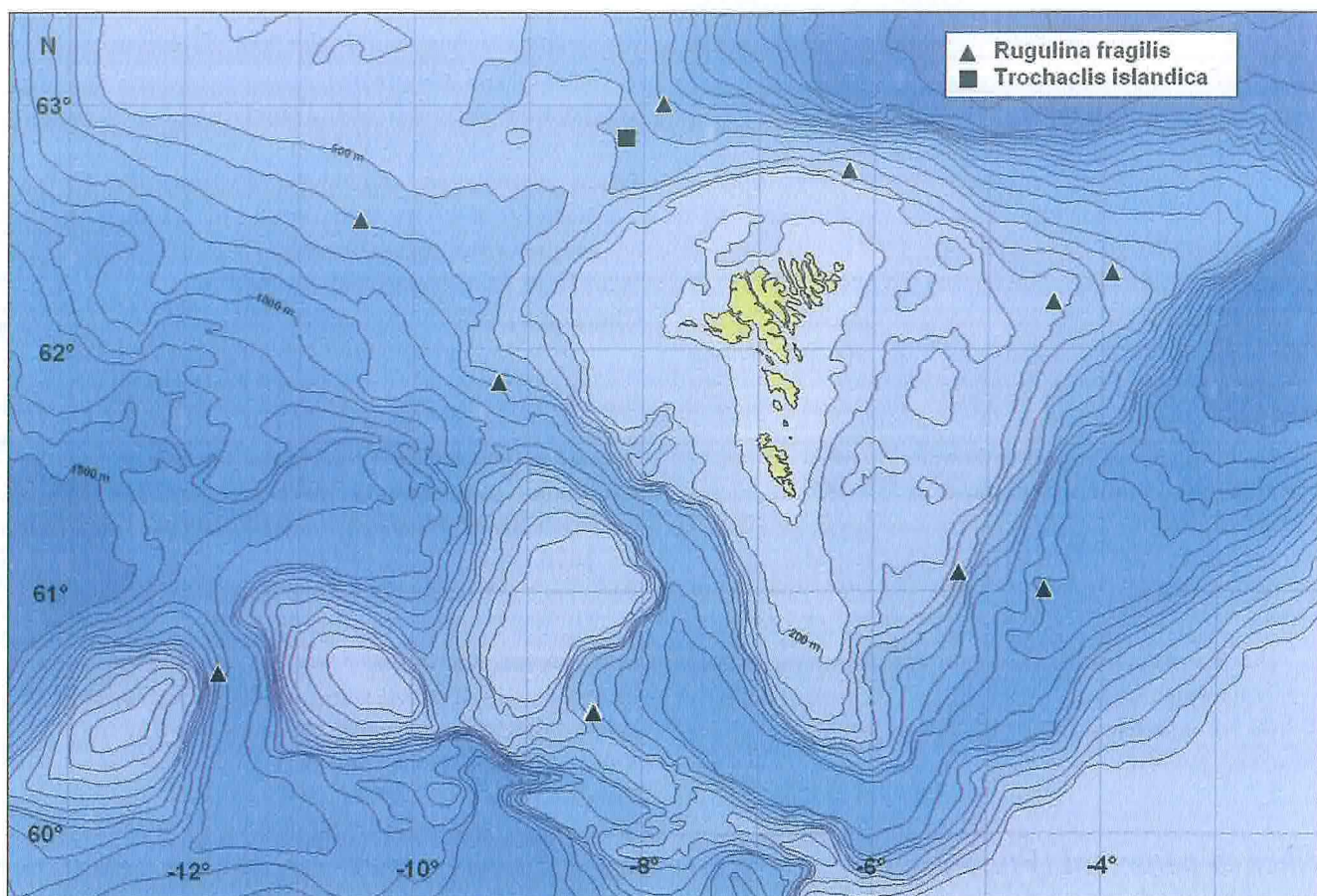
Previous records: Lightning stn. 2; Not recorded alive, but dead shells have been found at four localities (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: West and east Greenland, Iceland, the Faroes (?), Svalbard, Murman Sea, White Sea, Norwegian coast south to Nord-Møre, Swedish west coast, Morocco; in east America Hudson Bay; in the Pacific Ocean at Point Barrow, Alaska.

World bathymetrical range: 8-1943 m.





Family PENDROMIDAE  
Genus *Rugulina* Palazzi, 1988

*Rugulina fragilis* (G. O. Sars, 1878)

Synonym: *Adeorbis fragilis* G.O. Sars, 1878.

Reference to best description of the species: G.O. Sars 1878: 213, Pl. 22, fig. 19a-c; Warén 1991: 72-73, Figs 11A-E, 13A-B.

Previous records: None.

New records: BIOFAR stations 019, 082, 083, 172, 227, 274, 354, 421, 483, 516, 698.

Bathymetrical range within the area: 276-1098 m.

Substrate: Sand, gravel, sponge spicules.

Temperature: 1.3 °C (M: one stn.), +0.85 - 7.0 °C (E).

Water mass: AW (1), AW/AI (4), AI/NW (1), AW/AI/NW (1), NW (4).

World distribution: East Greenland, west and south Iceland, the Faroes, Norwegian coast from Tromsø south to Bergen.

World bathymetrical range: 60-1098 m.

Remarks: Only recorded as empty shells at the Faroes.

Checked by: AW

Family TROCHACLIDIDAE  
Genus *Trochaclis* Thiele, 1912

*Trochaclis islandica* Warén, 1989

Reference to best description of the species: Warén 1989a: 9-11, Figs 6-7.

Previous records: None.

New records: BIOFAR station 271.

Bathymetrical range within the area: 559 m.

Substrate: Soft bottom with Foraminiferans.

Temperature: 2.2 °C (E).

Water mass: AI.

World distribution: Southeast Greenland, east and west Iceland, the Faroes, northern and western Norway, and from south of Ireland into the Mediterranean.

World bathymetrical range: 150 to 1430-1550 m.

Checked by: AW



Order APOGASTROPODA  
 Family TURRITELLIDAE  
 Genus *Turritella* Lamarck, 1799

*Turritella communis* Risso, 1826

Synonym: *Turbo terebra* Pennant 1777 non Linnaeus, 1758.

Reference to best description of the species: Fretter & Graham 1981: 286-289, Figs 215-216.

Previous records: Three very worn shells have been taken in Trongisvágsfjørður and besides two dead specimens without further locality are known from the Faroes (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: the Faroes (?), Norwegian coast south of Lofoten, Kattegat to Øresund, Skagerrak, North Sea, British Isles, Ireland south to North Africa, Mediterranean.

World bathymetrical range: 10-200 m.

Remarks: When inspected at the Zoological Museum in Copenhagen the specimens from the Faroes appear much like subfossils.

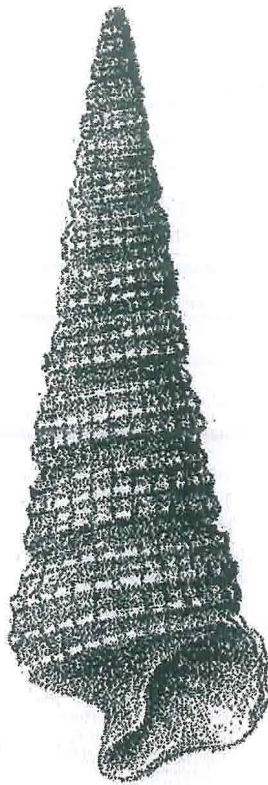


Fig 9. *Cerithiella metula*  
 (Lovén, 1846)

Superfamily TRIPHOROIDEA  
 Family CERITHIOPSIDAE  
 Genus *Krachia* Baluk, 1975

*Krachia cossmanni* (Dautzenberg & Fischer, 1896)

Synonym: *Cerithiella cossmanni* Dautzenberg & Fisher, 1896.

Reference to best description of the species: Dautzenberg & Fischer 1896: 445, Pl. 18, fig. 9; Bouchet & Warén 1993: 606, Figs 1280, 1289, 1344-1345, 1356.

Previous records: None.

New records: BIOFAR stations 082, 158, 418.

Bathymetrical range within the area: 322-899 m.

Substrate: Sand, gravel, stones.

Temperature: +0.1 - 3.5 °C (M: 2 stns ), +0.1 - 6.6 °C (E).

Water mass: AI (1), NW (1), AW/AI/NW (1).

World distribution: Southwest Iceland, the Faroes, the Bergen area in Norway, and the Azores.

World bathymetrical range: 150-1300 m.

Remarks: Warén (1991) reports an empty shell at BIOFAR stn. 355.

Checked by: AW, TS

Genus *Cerithiella* Verrill, 1882

*Cerithiella metula* (Lovén, 1846) Fig. 9.

Synonym: *Cerithium metula* Lovén, 1846, *Cerithium danielsoni* Friele, 1877, *Cerithium procerum* Jeffreys, 1877, *Lovenella metula* G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1982: 376-378, Figs 267, 268, 269; Bouchet & Warén 1993: 590-597, Figs 1274-1276, 1294-1315, 1317-1318.

Previous records: Lightning stns 1, 2; Porcupine stn. 61; Triton stn. 10; Simpson (1910): Stns 16, 16a, 17; five empty shells found NW of Suðuroy (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 019, 027, 051, 095, 100, 158, 189, 295, 299, 358, 382, 418, 424, 458, 479, 482, 490, 515, 518, 520, 522, 525, 542, 694, 698, 718, 719, 736, 764.

Bathymetrical range within the area: 200-1157 m.

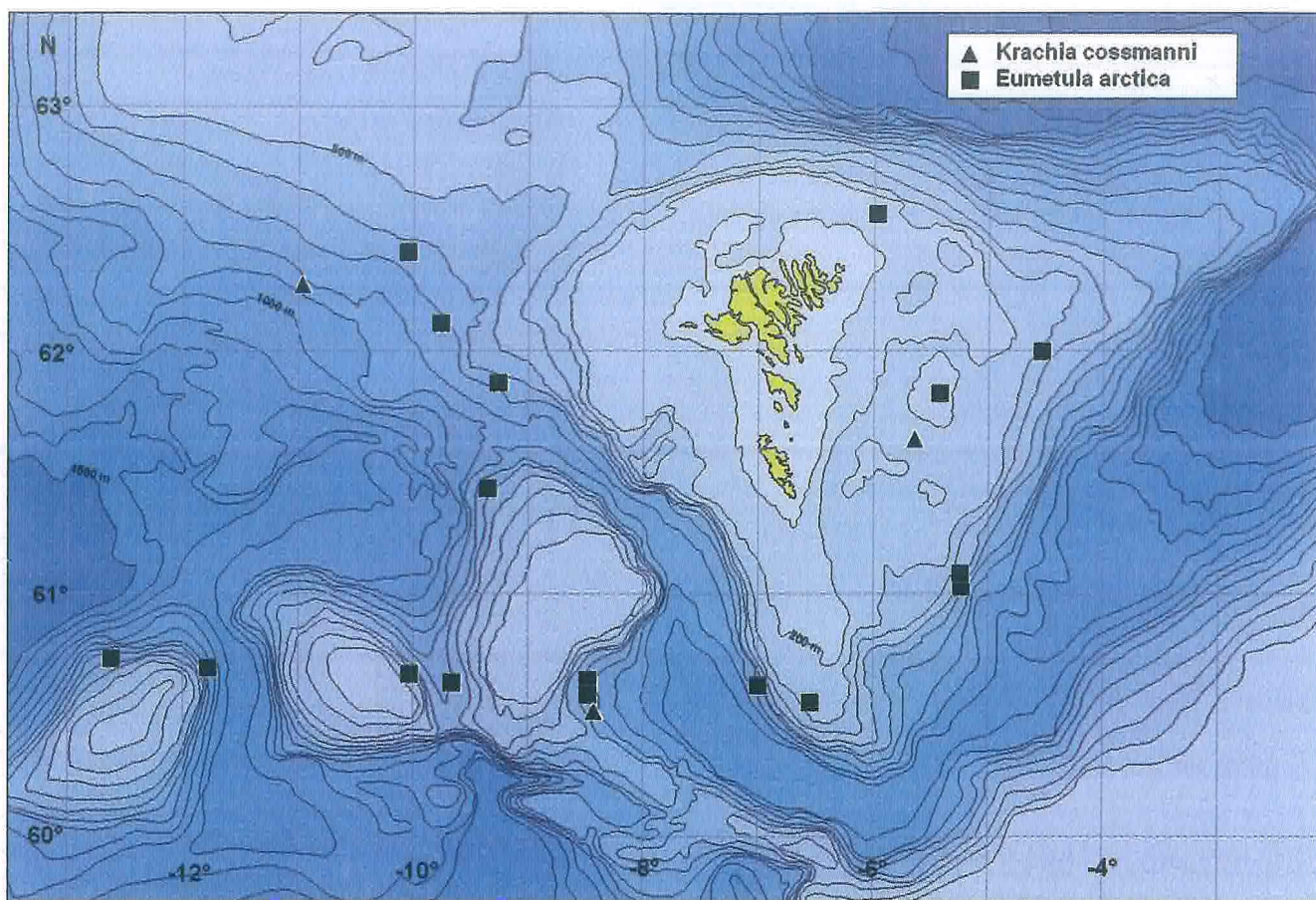
Substrate: Sand, gravel, stones.

Temperature: 0.1 - 1.3 °C (M: 2 stns), +0.66 - 8.6 °C (E).

Water mass: AW (13), AW(AI (7), AI (2), AI/NW (3), NW (3), AW/AI/NW (2).

World distribution: Southeast Greenland, Iceland,





the Faroes, Norwegian Sea, Barents Sea, whole Norwegian coast, Skagerrak, east Scotland, along the continental slope west of the British Isles and the Bay of Biscay south to the Canary Islands and the Azores, the Mediterranean.

World bathymetrical range: 100-2500 m.

Checked by: TS

### Genus *Eumetula* Thiele, 1912

#### *Eumetula arctica* (Mørch, 1857)

Synonyms: *Cerithium arcticum* Mørch, 1857, *Turitella costulata* Møller, 1842 (not *Turitella costulata* Borson, 1825), *Cerithiopsis costulata* G.O. Sars 1878.

Reference to best description of the species: Fretter & Graham 1982: 374, Figs 264, 265, 266.

Previous records: Lightning stn. 2; Triton stn. 8; Simpson (1910): stns 15b, 17; NW of Suðuroy, 250 m (Spärck & Thorson 1933).

New records: BIOFAR stations 029, 068, 080, 090, 341, 355, 358, 482, 483, 495, 499, 515, 524, 589, 698, 728, 739.

Bathymetrical range within the area: 149-710 m.

Substrate: Shell-sand, gravel.

Temperature: 1.3 °C (M: one stn), 0.1 - 8.4 °C (E).

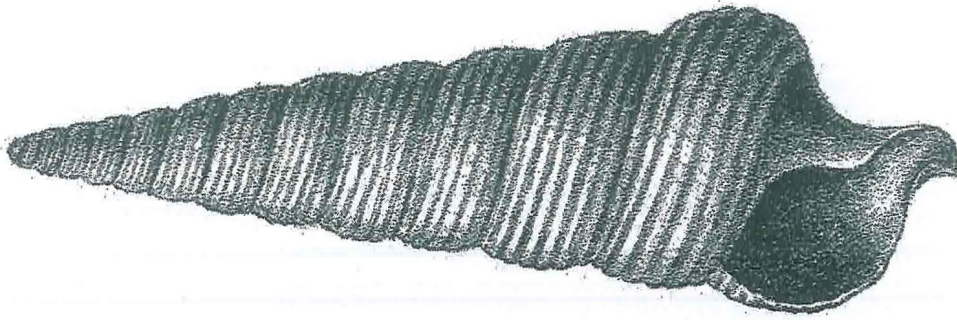
Water mass: AW (9), AW/AI (4), AI (1), AW/AI/NW (2).

World distribution: West and east Greenland, Iceland, the Faroes, White Sea, whole Norwegian coast, Swedish west coast, Skagerrak.

World bathymetrical range: 35-1600 m.

Checked by: TS





**Fig 10.** *Laeocochlis sinistratus*  
(Nyst, 1835)

Genus *Laeocochlis* Dunker & Metzger,  
1874

***Laeocochlis sinistratus*** (Nyst, 1835) Fig. 10.

Synonyms: *Cerithium sinistratum* Nyst, 1835, *Triforis granosa* Wood, 1848, *Triforis macandraea* A. Adams, 1856, *Triforis niveus* M. Sars, 1859, *Laiocochlis pommeraniae* Dunker & Metzger, 1874.

Reference to best description of the species: Bouchet & Warén 1993: 614-616, Figs 1281, 1288, 1367-1370.

Previous records: Lightning stn. 2; Simpson (1910): stn. 16a.

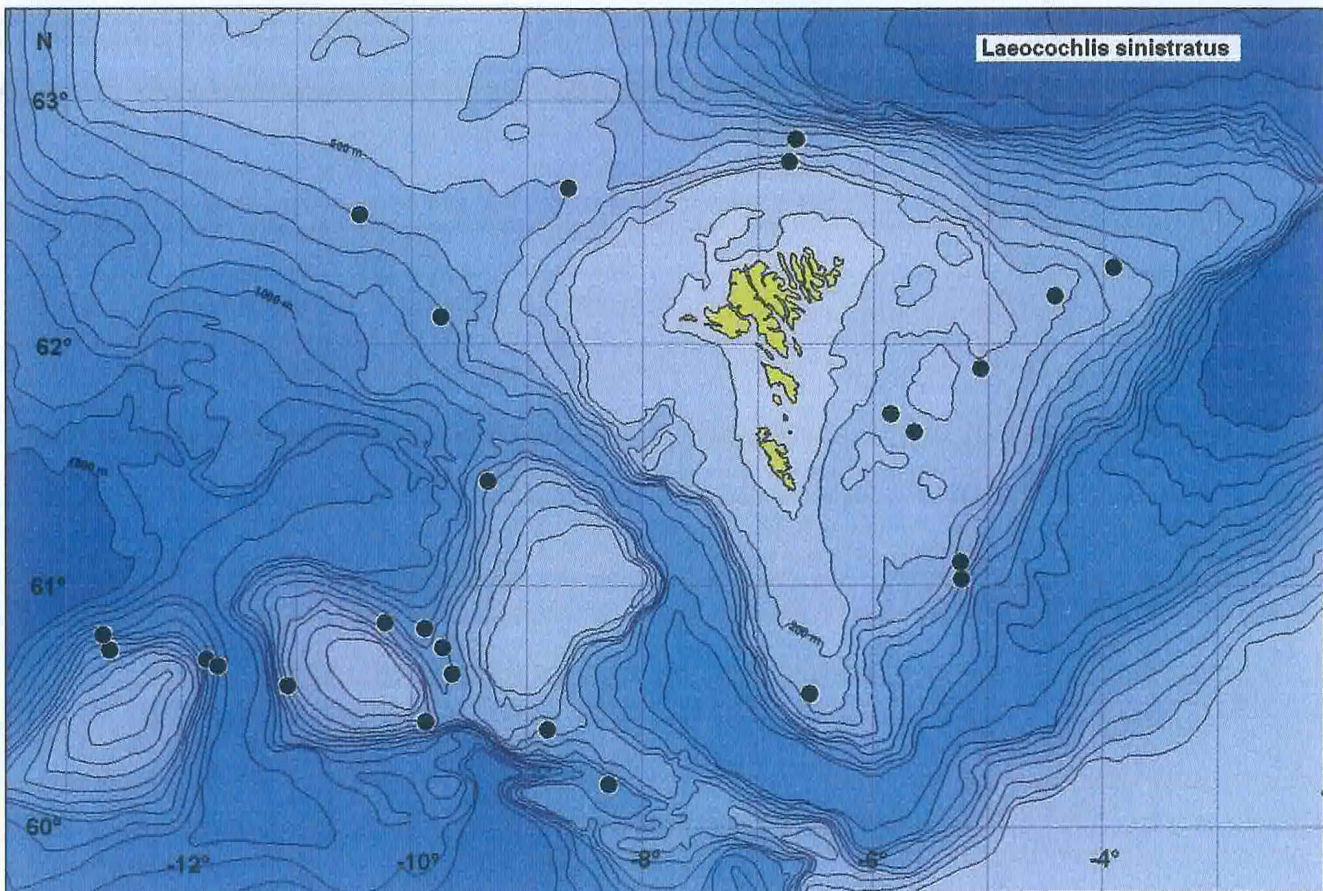
New records: BIOFAR stations 019, 027, 033, 068, 090, 158, 172, 189, 190, 299, 307, 315, 317, 341, 344, 421, 482, 493, 494, 495, 497, 515, 516, 524, 525, 717.

Bathymetrical range within the area: 225-1006 m.

Substrate: Sand, gravel, sponge spicules.

Temperature: 2.6 °C (M: one stn), 1.0- 8.3 °C (E).

Water mass: AW (12), AW/AI (8), AI (1), AI/NW (2), AW/AI/NW (2).





World distribution: Iceland, the Faroes, Barents Sea along the Norwegian coast to Skagerrak, Faroe-Shetland Channel; in east America from Davis Strait to Newfoundland.

World bathymetrical range: 55-1420 m.

Checked by: AW, TS

## Superfamily EPITONIACEA

### Family ACLIDIDAE

#### Genus *Aclis* Lovén, 1846

#### *Aclis sarsi* Dautzenberg & Fischer, 1912

Synonyms: *Aclis walleri* var. *sarsi* Dautzenberg & Fischer 1912, *Aclis walleri* G.O. Sars 1878, *Aclis walleri* Jeffreys 1884 (not Jeffreys 1867).

Reference to best description of the species: Bouchet & Warén 1986: 304, Figs 728-729.

Previous records: None.

BIOFAR stations: 068, 263, 483, 522, 694, 695, 738.

Bathymetrical range within the area: 405-859 m.

Substrate: Sand, gravel, stones, some sponges.

Temperature: 7.95 °C (M: one stn.), 1.0 - 8.6 °C (E).

Water mass: AW (4), AW/AI (1), AW/AI/NW (2).

World distribution: Southwest of Iceland, the Faroes, along the Norwegian coast from Sørøy in Finnmark south to the Swedish west coast, further on the deep continental shelf and upper slope south to Morocco.

World bathymetrical range: 100-1900 m.

Remarks: *Aclis sarsi* has often been confused with *A. walleri*. Thus old information on distribution may be doubtful.

Checked by: AW

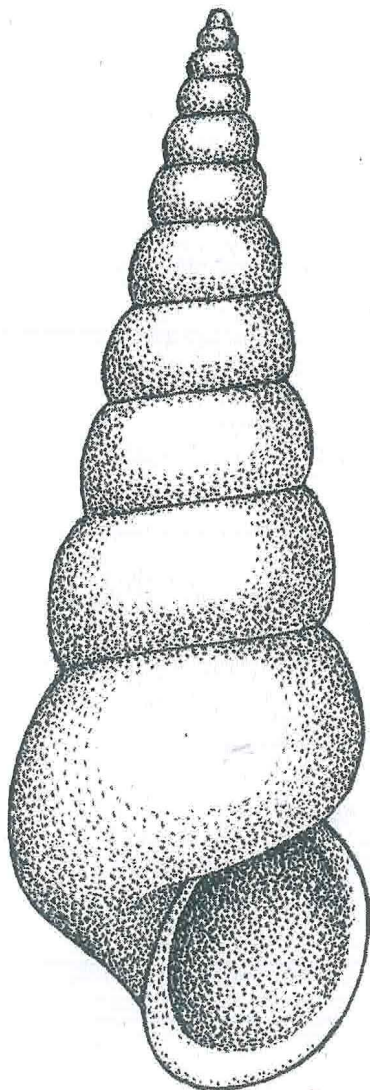


Fig 11. *Aclis walleri* (Jeffreys, 1867; S. Sneli, del.)

#### *Aclis walleri* Jeffreys, 1867 Fig. 11.

Synonyms: *Aclis exigua* G.O. Sars, 1878, *Aclis walleri* var. *minor* Jeffreys 1884

Reference to best description of the species: Jeffreys 1867: 105-106, Pl. 72, fig 4; Fretter & Graham 1982: 401-402, Fig. 286.

Previous records: Porcupine stn. 47.

BIOFAR stations: 263, 483, 524, 694, 695, 738.

Bathymetrical range within the area: 405-859 m.

Substrate: Silt, fine sand, gravel, some sponges.

Temperature: 7.95 °C (M: one stn.), 1.0 - 8.6 °C (E).

Water mass: AW (5), AW/AI/NW (1).

World distribution: The Faroes, from Sørøy i northern Norway south to Skagerrak, northern North Sea, west and south part of British Isles, western Ireland south to north Spain, mainly on the continental shelf and slope.

World bathymetrical range: 200-2200 m.

Remarks: *A. walleri* has eyes while *A. sarsi* has no eyes.

Checked by: AW

## Family EPITONIIDAE

### Genus *Epitonium* Röding, 1798

#### *Epitonium greenlandicum*

(Perry, 1811) Fig. 12.

Synonyms: *Scalaria greenlandica* Perry 1811, *Scalaria groenlandica* var. *crebricostata* G.O. Sars 1878,



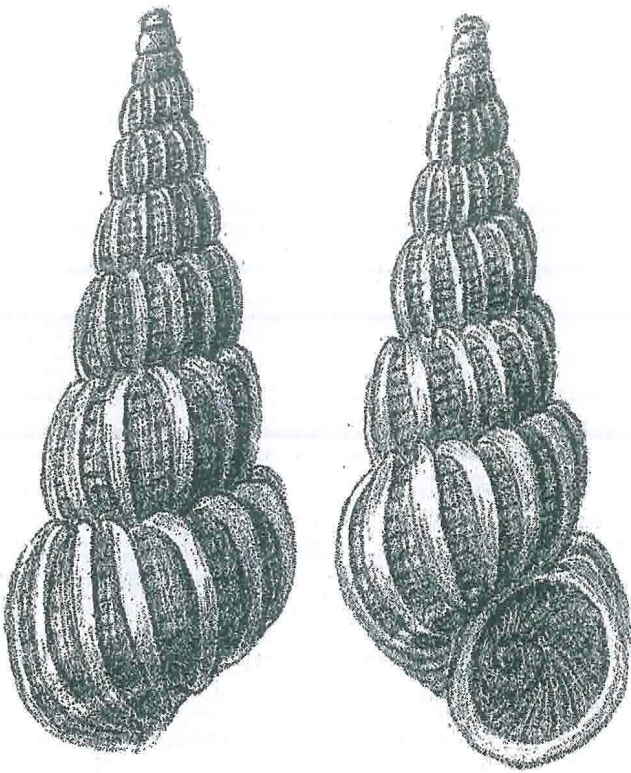


Fig 12. *Epitonium greenlandicum* (Perry, 1811)

*Scalaria groenlandica* var. *ornata* Friele & Grieg  
1901 (not *Scalaria ornata* Baily, 1855).

Reference to best description of the species: Bouchet &  
Warén 1986: 518-519, Figs 1210-1213.

Previous records: Lightning stn. 2.

BIOFAR stations: 424, 425.

Bathymetrical range within the area: 509 m .

Substrate: Fine sand.

Temperature: +0.1 °C (M: 2 stns).

Water mass: AI.

World distribution: West and east Greenland (records  
from eastern Greenland is verified by Wiese &  
Richling (1997)), north, west and east coasts of  
Iceland, the Faroes, from Svalbard along the coast  
of Norway to the Oslofjord; in east America south  
to 41° N; in the Pacific Ocean south to British  
Columbia, Sea of Japan.

World bathymetrical range: 20-650 m.

Checked by: AW

Superfam.: EULIMOIDEA

Family EULIMIDAE

Genus *Bathycrinicola* Bouchet &  
Warén, 1986

*Bathycrinicola micrapex* Bouchet &  
Warén, 1986

Reference to best description of the species: Bouchet &  
Warén 1986: 408, Figs 968, 971-973.

Previous records: None.

New record: BIOFAR station 490.

Bathymetrical range within the area: 1083 m.

Substrate: Soft bottom with fine sand.

Temperature: 6.5 °C (E).

Water mass: AW/AI.

World distribution: South of the Faroes to off  
southwestern Portugal and the Azores.

World bathymetrical range: 1083-2360 m.

Checked by: AW

Genus *Curveulima* Laseron, 1955

*Curveulima macrophthalmica* (Warén,  
1972)

Synonym: *Balcis macrophthalmica* Warén, 1972.

Reference to best description of the species: Warén  
1972: 49, Fig. 1.

Previous records: None.

New records: BIOFAR stations 452, 515, 583.

Bathymetrical range within the area: 105-700 m.

Substrate: Sand, gravel, shell-sand.

Temperature: 6.0 - 8.9 °C (E).

Water mass: AW (2), AW/AI (1).

World distribution: Southwest Iceland, the Faroes, from  
Tromsø in northern Norway southwards along the  
the Scandinavian coasts, west of the British Isles,  
Bay of Biscay, off Portugal and south to 25° N on  
the African coast.

World bathymetrical range: 50-2500 m.

Checked by: AW

Genus *Enteroxenos* Bonnevie, 1902

*Enteroxenos oestergreni* Bonnevie, 1902

Reference to best description of the species: Bonnevie  
1902: 731-792, Pl. 37, fig. 4.

Previous records: None.



BIOFAR station: 522.

Bathymetrical range within the area: 514 m.

Substrate: Endoparasite in the sea cucumber *Stichopus tremulus*.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: The Faroes, from Sørøy in northern Norway along the whole Norwegian coast and the Swedish west coast.

World bathymetrical range: 20-1900 m (depth preference of the host *Stichopus tremulus*).

Checked by: JAS

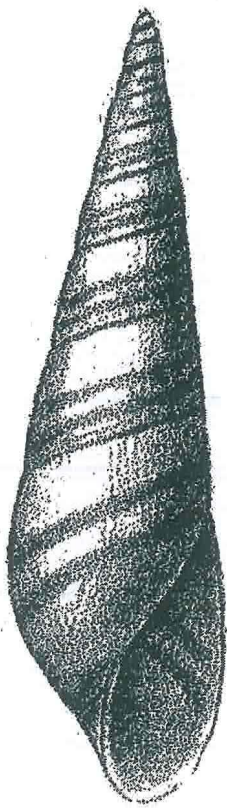


Fig 13. *Eulima bilineata* (Alder, 1848))

### Genus *Eulima* Risso, 1826

*Eulima bilineata* Alder, 1848 Fig. 13.

Synonym: *Turbo trifasciatus* sensu auct. non *Turbo trifasciatus* J. Adams 1800

Reference to best description of the species: Fretter & Graham 1982: 413, Fig. 296; Bouchet & Warén 1986: 320, Figs 754-756, 797.

Previous records: Lightning stn. 2; the Faroe Bank (115 m), SW of the Faroes (173 m), 13 miles W by S of Munken (200 m), Suđuroyflak (119 m) - all records at the southernmost part of the Faroes (Spärck &

Thorson 1933); Thor station 78, SW of the Faroes (835 m) (Fretter & Graham 1982).

New records: BIOFAR stations 027, 033, 064, 065, 068, 075, 100, 295, 325, 382, 492, 493, 515, 522, 524, 546, 583, 677, 681, 689.

Bathymetrical range within the area: 98-900 m.

Substrate: Sand, shell-sand.

Temperature: 7.9 °C (M: one stn.), 6.5 - 9.1 °C (E).

Water mass: AW (18), AW/AI (1).

World distribution: Iceland, the Faroes, from Sørøy in northern Norway south along the European coasts and throughout the Mediterranean.

World bathymetrical range: 50-900 m.

Checked by: AW

### Genus *Haliella* Monterosato, 1878

*Haliella stenostoma* (Jeffreys, 1858)

Synonyms: *Eulima stenostoma* Jeffreys, 1858, *Eulima geographica* de Folin, 1887.

Reference to best description of the species: Fretter & Graham 1982: 414-415, Fig. 297.

Previous records: Porcupine stn. 61.

New records: BIOFAR stations 027, 033, 063, 064, 065, 100, 158, 542.

Bathymetrical range within the area: 200-352 m.

Substrate: Sand and silt, sponge spicules.

Temperature: 6.5 - 8.1 °C (E).

Water mass: AW (5), AW/AI (3).

World distribution: Greenland, the Faroes, whole Norwegian coast, Skagerrak, southwards along the European coasts to the Canaries, the Mediterranean; in east America off eastern Canada and south to Cape Hatteras.

World bathymetrical range: 50-2500 m.

Checked by: AW

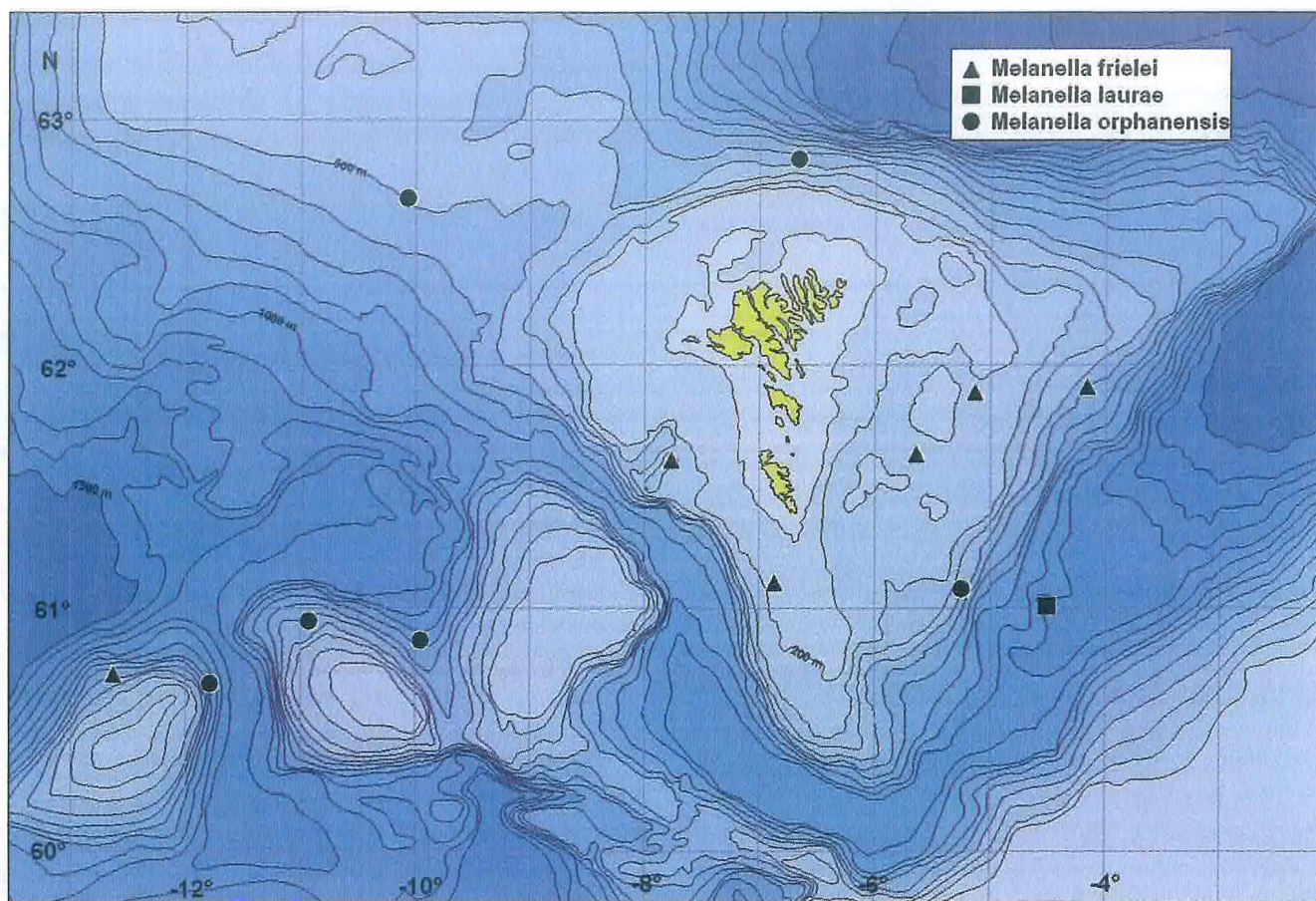
### Genus *Hemiaclis* G.O. Sars, 1878

*Hemiaclis ventrosa* (Jeffreys in Friele, 1876)

Synonyms: *Aclis ventrosa* Jeffreys MS, Friele, 1876, *Aclis ventrosa* var. *minor* Friele, 1876, *Hemiaclis glabra* G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1982: 402-403, Figs 287-288; Bouchet & Warén 1986: 454, Figs 942, 1067-1071, 1074-1075.





Previous records: None.

New records: BIOFAR stations 263, 344, 483, 499.

Bathymetrical range within the area: 405-859 m.

Substrate: Sand, gravel, stones.

Temperature: 1.0 - 4.0 °C (E).

Water mass: AW/AI (2), AW/AI/NW (2).

World distribution: Iceland, the Faroes, whole Norwegian coast, the continental shelf and upper bathyal areas off Scandinavia; in east America off Georgia.

World bathymetrical range: 196-3000 m.

Checked by: AW

## Genus *Melanella* Bowdich, 1822

### *Melanella frielei* (Jordan, 1895)

Synonyms: *Eulima intermedia* G.O: Sars, 1878 (not Cantraine 1835), *Eulima frielei* Jordan, 1895, *Eulima xiphidiopsis* Dautzenberg & Fischer, 1896.

Reference to best description of the species: Fretter & Graham 1982: 418, Fig. 300; Bouchet & Warén

1986: 361-362, Figs 848-852, 920.

Previous records: None.

New records: BIOFAR stations: 021, 028, 131, 138, 158, 524.

Bathymetrical range within the area: 150-700 m.

Substrate: Fine sand, shell-sand, gravel.

Temperature: 6.6 - 8.1 °C (E).

Water mass: AW (4), AW/AI (1).

World distribution: The Faroes, from Tromsø in northern Norway south to Skagerrak, Shetland, western Scotland, British Channel, further west of Ireland and along the continental shelf and upper slope south to the Canaries, Mediterranean.

World bathymetrical range: 30-1300 m.

Checked by: AW



***Melanella lauræ* (Friele, 1886)**

Synonym: *Eulima lauræ* Friele, 1886.

Reference to best description of the species: Friele 1886: 30, Pl.11, figs 13-14; Bouchet & Waren 1986: 367, Figs 861-862.

Previous records: None.

New record: BIOFAR station 227.

Bathymetrical range within the area: 1098 m.

Substrate: Sand, gravel.

Temperature: +0.85 °C (E).

Water mass: NW.

World distribution: The Faroes, Norwegian Sea.

World bathymetrical range: Ca. 1100 m.

Remarks: The species is only known live from the type locality in the Norwegian Sea and the BIOFAR station.

Checked by: AW

***Melanella orphanensis* Clarke, 1974**

Reference to best description of the species: Clarke 1974: 14, Fig. 5; Bouchet & Warén 1986: 370-371, Figs 744-746, 872-873, 919.

Previous records: Thor 1904: 61°15'N, 09°35'W (900 m).

New records: BIOFAR stations 189, 422, 483, 492, 515, 695.

Bathymetrical range within the area: 405-900 m.

Substrate: Sand, gravel, stones.

Temperature: 7.95 °C (M, one stn.), 2.0 - 8.0 °C (E).

Water mass: AW (2), AW/AI (1), AI (3).

World distribution: Iceland, the Faroes, Lofoten to the Trondheimsfjord in Norway; in east America off Labrador to New Jersey.

World bathymetrical range: 40-1760 m.

Checked by: AW

**Superfamily LITTORINOIDEA****Family LITTORINIDAE****Genus *Littorina* Férussac, 1822*****Littorina obtusata* (Linnaeus, 1758)**

Synonym: *Turbo obtusata* Linnaeus, 1758.

Previous records: This species has been found at the northern as well as the southern islands and is known alive from in all 11 localities. No live specimens have been taken in depths of more than 2-3 metres. However it does not seem to appear above the high water mark as does *L. rudis* (Spärck & Thorson 1933).

New records: Not found during BIOFAR 1.

Remarks: *Littorina obtusata* was split into two species, *L. obtusata* and *L. mariae*, by Sacchi & Rastelli (1966). Later *L. mariae* is put into synonymy by Reid (1996) as the species in fact was described already in 1825 by W. Turton as *L. fabalis*. Both *L. obtusata* and *L. fabalis* have been found alive near the Kaldbak laboratory by Jon-Arne Sneli. When the BIOFAR 2 material is worked up both species will probably be found common on many localities at the Faroe islands.

***Littorina saxatilis* (Olivi, 1797)**

Synonyms: *Turbo saxatilis* Olivi, 1792, *Turbo rudis* Maton, 1797. A comprehensive list of synonyms is published in Reid (1996).

Previous records: This «species» seems to be common anywhere at the coasts of the Faroes where it has been taken alive to a number of several hundred specimens in 16 localities, both at the northern and the southern islands (Spärck & Thorson 1933).

New records: Not found during BIOFAR 1.

Remarks: *L. saxatilis* has been a species puzzle for years. Reid (1996) discuss the synonymy of *L. saxatilis* and among others he puts *L. neglecta* Bean, 1844 on the synonymy list to *L. saxatilis*, but regards *L. compressa* Jeffreys, 1865 and *L. arcana* Hannaford Ellis, 1978 as good species. At the Faroes *L. saxatilis*, *L. compressa* (= *L. nigrolineata* Philippi, 1846) and *L. arcana* are common (Jon-Arne Sneli pers. obs.).

**Family LACUNIDAE****Genus *Lacuna* Turton, 1827*****Lacuna pallidula* (da Costa, 1778)**

Synonyms: *Nerita pallidula* da Costa, 1778, *Lacuna patula* Thorpe, 1844.

Reference to best description of the species: Fretter & Graham 1980: 250-252, Figs 201-202.

Previous records: Tórshavn (1846), Trongisvágsfjørður (1897, 1902), Skálafjørður (1926). The frequency of the species at the Faroes must be stated to be variable (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: Greenland, Iceland, the Faroes, Svalbard, whole Norwegian coast, through Kattegat into Øresund and the Belts, British Isles and Ireland but not in central North Sea, south to Bay of Biscay; in east America south to Connecticut.



World bathymetrical range: 2-70 m.

Remarks: Together with *L. pallidula*, *Lacuna vincta*, *L. parva*, and *L. crassior* were recorded during BIOFAR 2.

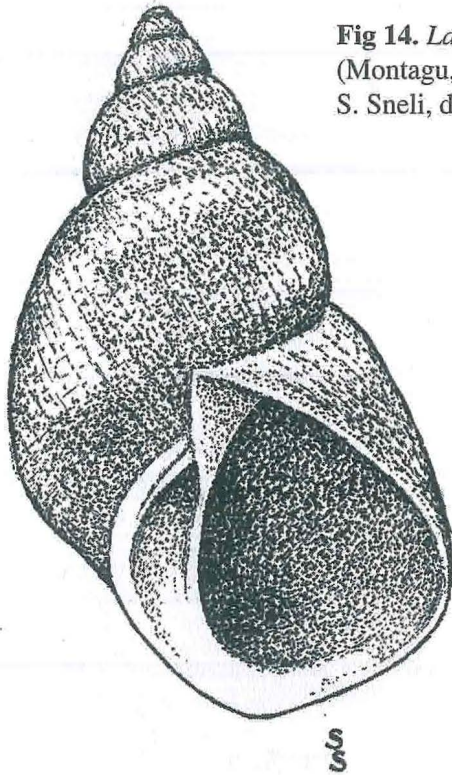


Fig 14. *Lacuna vincta*  
(Montagu, 1803)  
S. Sneli, del.

*Lacuna vincta* (Montagu, 1803) Fig. 14.

Synonyms: *Helix vincta* Montagu, 1803, *Helix divaricata* O. Fabricius, 1780 non Linnaeus, 1767.

Reference to best description of the species: Fretter & Graham 1980: 244-247, Figs 196-197.

Previous records: This species belongs to the most common of the marine Prosobranchia at the Faroes. It occurs at the northernmost as well as the southernmost islands (Spärck & Thorson 1933).

New records: BIOFAR stations 110, 150, 548.

Bathymetrical range within the area: 32-157 m.

Substrate: Shell-gravel, stones.

Temperature: 7.6 - 8.2 °C (E).

Water mass: AW.

World distribution: Southwest Greenland, Iceland, the Faroes, Svalbard, White Sea, Murman coast south to Øresund and into the Baltic, North Sea, both sides of British Isles to northern France; in east America

from Canada south to Rhode Island; In the Pacific Ocean from Alaska to California.

World bathymetrical range: Littoral to 157 m depth (normally to 60 m depth).

Checked by: JAS, AW

## Family SKENEOPSISIDAE

### Genus *Skeneopsis* Iredale, 1915

#### *Skeneopsis planorbis* (O. Fabricius, 1780)

Synonym: *Helix planorbis* O. Fabricius, 1780.

Reference to best description of the species: Hayward, Wigham & Yonow 1990: 670, Fig. 12.12.

Previous records: Taken alive at Tórshavn, Hvalvík, Borðoyarvík, Fugloy (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: Southwest Greenland, Iceland, the Faroes, Svalbard, whole Norwegian coast, British Isles, Ireland and south to Madeira and the Mediterranean; in east America from Labrador to Cape Cod.

World bathymetrical range: 0-75 m.

Remarks: Many records during BIOFAR 2 as the species is common close to the shore all around the Faroes.

## Superfamily RISSOOIDEA

### Family RISSOIDAE

#### Genus *Rissoa* Fréminville in Desmarest, 1814

#### *Rissoa parva* (da Costa, 1778)

Synonyms: *Turbo parvus* da Costa, 1778, *Turbo interruptus* J. Adams, 1800, *Rissoa interrupta* var. *bifasciata* G.O. Sars, 1878.

Previous records: The species is rather frequent at the Faroes and during "The Zoology of the Faroes", it was taken alive at three localities (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: The Faroes, Bear Island, White Sea, whole Norwegian coast, Skagerrak and Kattegat to Øresund and the Limfjord, Shetland, Orkneys, British Isles, Ireland and south to Gibraltar and the Moroccan west coast.

World bathymetrical range: 0-10 m.

Remarks: Frequently found during BIOFAR 2.



## Genus *Alvania* Risso, 1826

### *Alvania cimicoides* (Forbes, 1844)

Synonyms: *Rissoa cimicoides* Forbes, 1844, *Rissoa sculpta* Philippi, 1844, *Rissoa intermedia* Aradas, 1847.

Reference to best description of the species: Fretter & Graham 1978: 175-176, Figs 150-151.

Previous records: Lightning stn. 2; an empty shell found NW of Suderoy (Spärck & Thorson 1933).

New records: BIOFAR station 131 (one empty shell).

Bathymetrical range within the area: 250 m.

Substrate: Gravel.

Temperature: 8.0 °C (E).

Water mass: AW.

World distribution: Denmark Strait between Greenland and Iceland, northern Iceland, the Faroes (?), whole Norwegian coast from Sørøy in west Finnmark, west Scotland to the Azores and the Canaries, and throughout the Mediterranean.

World bathymetrical range: 30-1000 m.

Checked by: AW

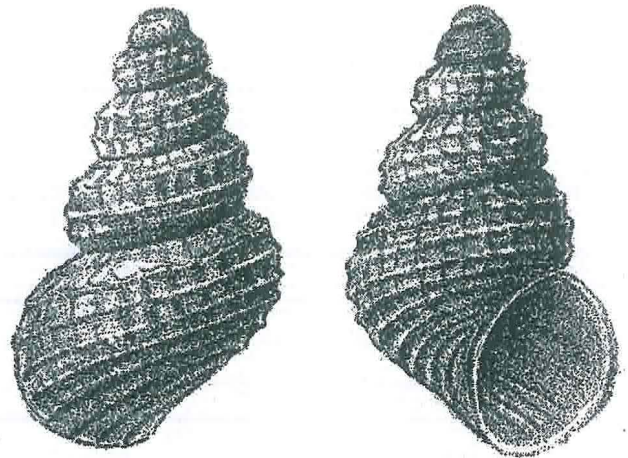


Fig 15. *Alvania jeffreysi* (Waller, 1864).

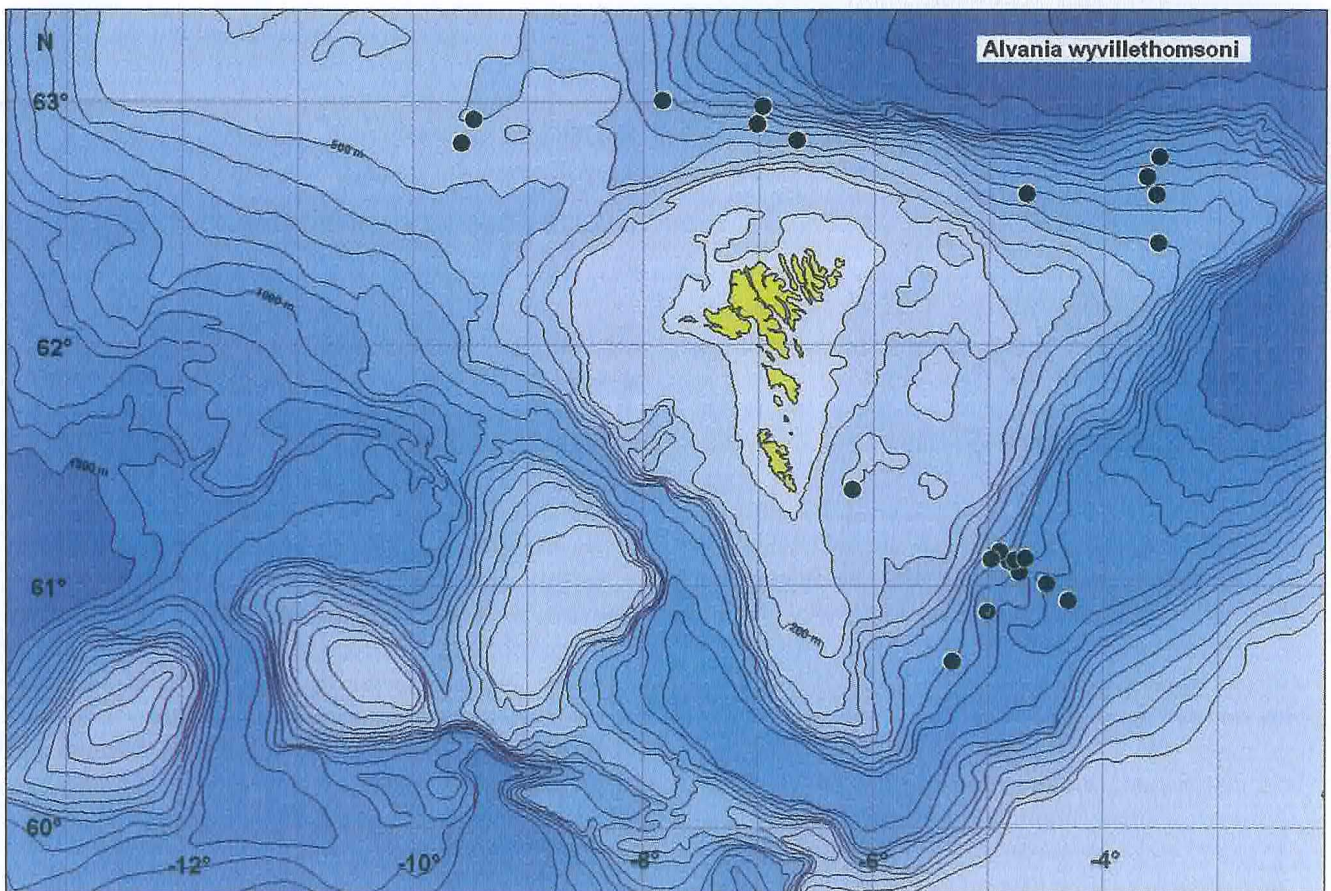
### *Alvania jeffreysi* (Waller, 1864)

Fig. 15.

Synonym: *Rissoa jeffreysi* Waller, 1864.

Reference to best description of the species: Fretter & Graham 1978: 182-184, Figs 156-157.

Previous records: Lightning stn. 2; Simpson (1910): Stns 16, 16a; Dead shells in two localities: NW of





Suðuroy and south of Nólsoy (Spärck & Thorson 1933).

New records: BIOFAR stations 019, 051, 065, 068, 090, 100, 279, 354, 382, 726.

Bathymetrical range within the area: 235-600 m.

Substrate: Sand, gravel, stones.

Temperature: 6.3 - 8.1 °C (E).

Water mass: AW (6), AW/AI (4).

World distribution: Southeast Greenland, west, south and east Iceland, the Faroes, whole Norwegian coast and south to Portugal.

World bathymetrical range: 50-2000 m.

Checked by: AW

### *Alvania moerchi* (Collin, 1886)

Synonym: *Cingula mörchi* Collin, 1886.

Reference to best description of the species: Warén 1974: 133, Figs 44, 55, 56; Warén 1996: 222, Figs 18f, 19a-b.

Previous records: None.

New records: BIOFAR station 458.

Bathymetrical range within the area: 675 m.

Substrate: Gravel and small stones.

Temperature: +0.57 °C (E).

Water mass: NW.

World distribution: East Greenland, the Faroes, Jan Mayen, Svalbard to Franz Joseph Islands and King Carl's Land, Kara Sea and Laptev Sea; in east America from Prins Regent Inlet to Ceswell Bay.

World bathymetrical range: 10-680 m.

Checked by: AW

### *Alvania punctura* (Montagu, 1803) Fig. 16.

Synonym: *Turbo puncturus* Montagu, 1803.

Reference to best description of the species: Fretter & Graham 1978: 184-186, Figs 158-159.

Previous records: Found live in Vágssfjørður and Trongisvágsfjørður on Suðuroy, Vestmanna and Kaldbaksfjørður at Streymoy (Spärck & Thorson 1933). Dead shells have been found at several localities.

New records: Not found during BIOFAR 1.

World distribution: The Faroes, from Tromsø in northern Norway south to Skagerrak and Kattegat, British Isles and Ireland south to the Mediterranean.

World bathymetrical range: 2-120 m.

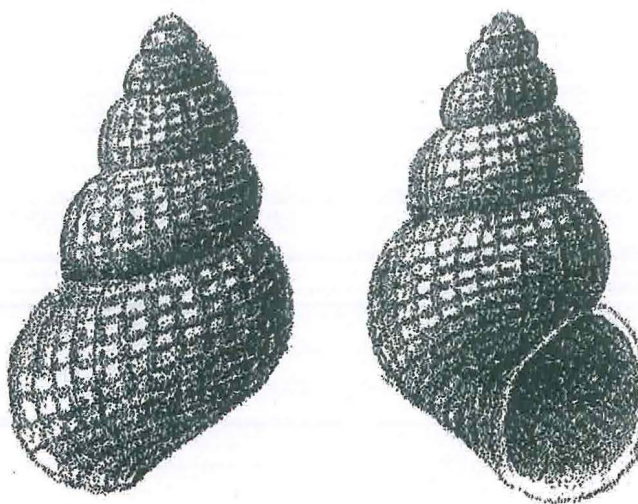


Fig 16. *Alvania punctura* (Montagu, 1803)

### *Alvania wyvillethomsoni* (Friele, 1877)

Synonyms: *Rissoa Wyville Thomsoni* Friele, 1877, *Rissoa wyvillethomsoni* Friele, 1879.

Reference to best description of the species: Friele 1877, Bouchet & Warén 1993: 651, Figs 1480-1481, 1515.

Previous records: Lightning stn. 1.

New records: BIOFAR stations 015, 051, 095, 167, 168, 169, 171, 189, 227, 228, 230, 274, 424, 425, 458, 459, 477, 478, 479, 720, 722, 723.

Bathymetrical range within the area: 235-1150.

Substrate: Mud, sand, gravel.

Temperature: +0.6 - 0.1 °C (M: 2 stns). +0.6 - 7.1 °C (E).

Water mass: AI (3), NW (19).

World distribution: Northeast Greenland, off north and east Iceland, south to the Faroe-Shetland Channel, Jan Mayen, Svalbard, Franz Joseph Islands, off western Norway.

World bathymetrical range: 235-2800 m.

Checked by: AW

### *Alvania zetlandica* (Montagu, 1815)

Synonym: *Turbo zetlandicus* Montagu, 1815.

Reference to best description of the species: Bouchet & Warén 1993: 655-657, Figs 1494-1496, 1502.

Previous records: Lightning stn. 2; Simpson (1910): stns 16, 17.

New records: Not found during BIOFAR 1.

World distribution: The Faroes, whole Norwegian



coast southward from Tromsø, Scottish west coast, western Ireland and off Bretagne in France south to the Canaries and in western Mediterranean.

World bathymetrical range: 30-300 (1000) m.

### Genus *Benthonella* Dall, 1889

#### *Benthonella tenella* (Jeffreys, 1869)

Synonyms: *Lacuna tenella* Jeffreys, 1869, *Lacuna abyssorum* Locard, 1896, *Benthonella kullenbergi* Odhner, 1960.

Reference to best description of the species: Jeffreys 1869a: 204-205, Fig. 7, Pl. 4, fig 1; Bouchet & Warén 1993: 697-701.

Previous records: SW of the Faroes, 61°15'N, 09°35'E (Bouchet & Warén 1993).

New records: BIOFAR stations 480, 490, 517, 736.

Bathymetrical range within the area: 806-1157 m.

Substrate: Silt, fine sand, sponge spicules.

Temperature: +0.6 - 6.5 °C (E).

Water mass: AW (1), AW/AI (2), NW (1).

World distribution: Off southern Iceland, the Faroes, throughout the Atlantic with an uncertain southern limit, Mediterranean; in east America south to the Caribbean.

World bathymetrical range: 500-4000 m.

Checked by: AW

### Genus *Obtusella* Cossmann, 1921

#### *Obtusella intersecta* (S. V. Wood, 1857)

Synonyms: *Rissoa obtusa* Cantraine, 1842, *Rissoa intersecta* S.V. Wood, 1857, *Rissoa alderi* Jeffreys, 1858.

Reference to best description of the species: Bouchet & Warén 1993: 693-694, Figs 1626-1627, 1633.

Previous records: Unpublished samples from the Faroes located in Zoological Museum, Copenhagen (Bouchet & Warén 1993).

New records: BIOFAR stations 677, 681.

Bathymetrical range within the area: 129-133 m.

Substrate: Shell-sand.

Temperature: 7.9 - 8.0 °C (M: 2 stns); 8.6 - 8.9 °C (E).

Water mass: AW.

World distribution: South and southwest Iceland, the Faroes, Norwegian coast from Tromsø to Kattegat and Skagerrak, southwards along the European west coasts to the Mediterranean and northwest Morocco.

World bathymetrical range: 20-800 m.

Remarks: Dead shells were found on BIOFAR stn. 056.

Checked by: AW

#### *Obtusella tumidula* (G.O. Sars, 1878)

Synonyms: *Cingula tumidula* G.O. Sars, 1878, *Rissoa griegi* Friele, 1879.

Reference to best description of the species: G.O. Sars 1878: 174, Pl. 10, figs 2a-b; Warén 1989a: 11-12, Fig. 8c-d, f-g.

Previous records: None.

New records: BIOFAR stations 137, 729.

Bathymetrical range within the area: 542-850 m.

Substrate: Sand, shell-sand, gravel.

Temperature: +0.6 - 4.0 °C (E).

Water mass: AW/AI (1), NW (1).

World distribution: North of Iceland, the Faroe-Iceland Ridge, west of Svalbard, White Sea and the Varangerfjord in Finnmark, northern Norway.

World bathymetrical range: 10-850 m.

Checked by: JAS

### Genus *Onoba* H. & A. Adams, 1854

#### *Onoba aculeus* (Gould, 1841)

Synonym: *Cingula aculeus* Gould, 1841, *Onoba saxatilis* Møller, 1842, *Cingula arctica* Lovén, 1846, *Onoba proxima* G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1978: 166-167.

Previous records: Common in the Faroes (Warén 1996:228).

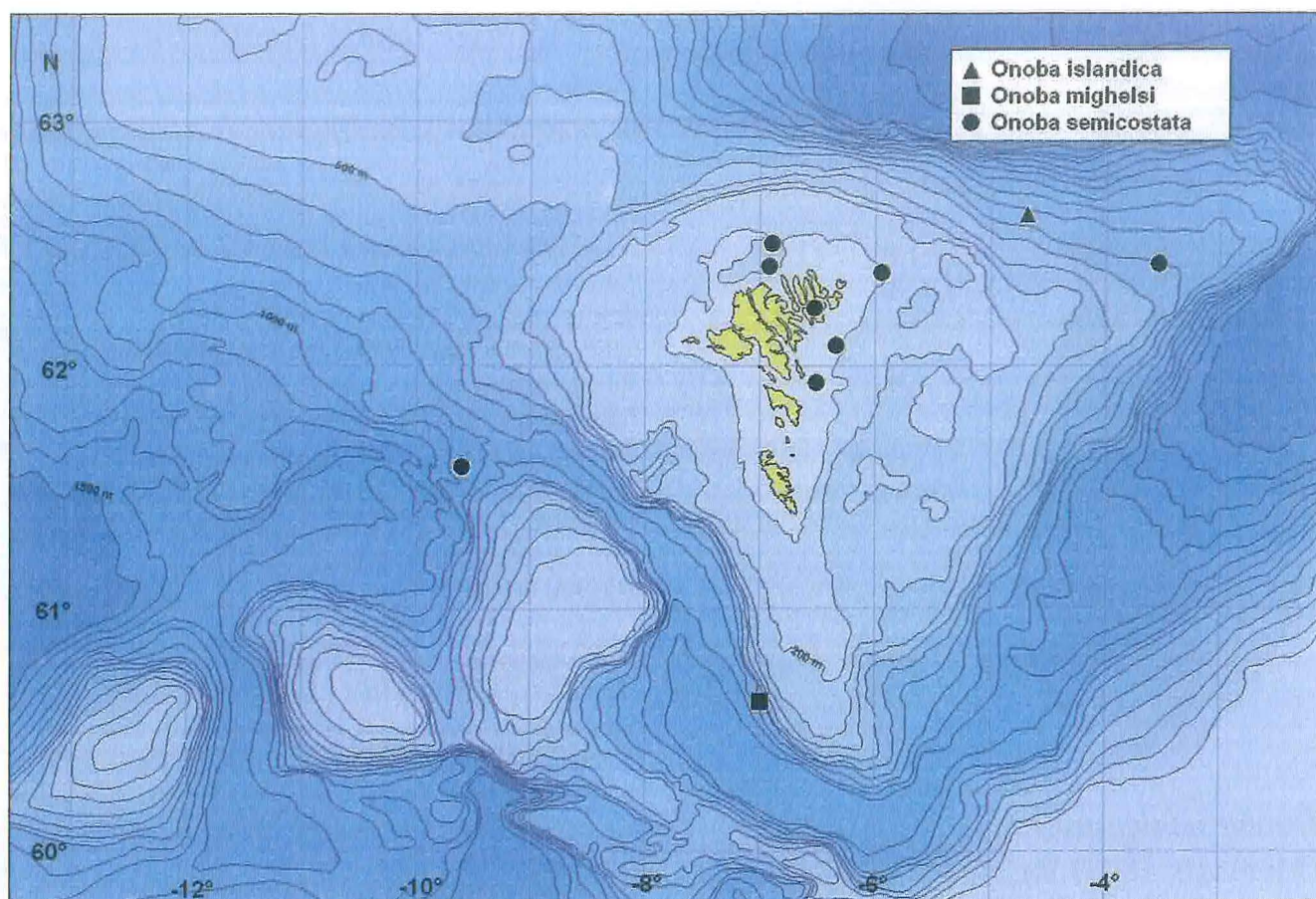
New records: Not found during BIOFAR 1.

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Murman coast and whole Norwegian coast to Skagerrak, Kattegat and the southernmost Baltic, Shetland, British Isles, Ireland south to northwestern Spain; in east America from Nova Scotia south to New Jersey.

World bathymetrical range: 0-200 m.

Remarks: *Onoba aculeus* and *O. semicostata* are close to impossible to distinguish. Thus specimens of *O. aculeus* are probably mixed with samples of *O. semicostata*. Samples containing «*Rissoa striatus*» from the Faroe Islands at the Zoological Museum in Copenhagen have shown to contain both species (A. Warén det.) They both are shallow living species, which also may explain that no specimens of *O. aculeus* was found during BIOFAR 1.





### *Onoba islandica* (Friele, 1886)

Synonym: *Rissoa islandica* Friele, 1886.

Reference to best description of the species: Friele 1886: 28, Pl. 11, figs 8-9; Bouchet & Warén 1993: 659, Figs 1493, 1508-1511.

Previous records: None.

New records: BIOFAR station 015.

Bathymetrical range within the area: 683 m.

Substrate: Sand.

Temperature: +0.6° (M)

Water mass: NW.

World distribution: West, south and east Iceland, and south of the Faroes.

World bathymetrical range: 130-683 m.

Remarks: Empty shells were found at BIOFAR stn. 082.

Checked by: AW

### *Onoba mighelsi* (Stimpson, 1851)

Synonyms: *Cingula arenaria* sensu Mighels & Adams, 1842 non Maton & Rackett, 1807, *Rissoa mighelsi* Stimpson, 1851.

Reference to best description of the species: Warén 1974: 129-130, Figs 28-34, 51, 52, 57, 58.

Previous records: Lightning stn. 2

New records: BIOFAR station 728.

Bathymetrical range within the area: 640 m.

Substrate: Coarse gravel.

Temperature: 1.0 °C (E).

Water mass: AI/NW.

World distribution: West and east Greenland, east Iceland, the Faroes, Svalbard, Finnmark; in east America from eastern Canada to Newfoundland and Maine; in the Pacific Ocean Alaska and Aleutian Islands.

World bathymetrical range: 0-640 m.

Checked by: JAS





Fig 17. *Onoba semicostata*  
(Montagu, 1803)

***Onoba semicostata***  
(Montagu, 1803) Fig. 17.

Synonyms: *Turbo striatus* J. Adams, 1797 non da Costa 1778, *Turbo semicostatus* Montagu, 1803, *Onoba striata* G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1978: 163-165, Figs 139-140.

Previous records: Lightning stns 2, 4; very common at the Faroes where the localities belong to the northern as well as the southern islands (Spärck & Thorson 1933).

New records: BIOFAR stations 110, 171, 192, 193, 203, 261, 608, 610.

Bathymetrical range within the area: 32-1003 m.

Substrate: Sandy mud and shell-sand.

Temperature: 0 - 8.7 °C (E).

Water mass: AW (7), NW (1).

World distribution: The Faroes, north Norwegian coast south to Kattegat and Skagerrak, British Isles, Ireland south to the Mediterranean, but not found in the Baltic or on Danish and German North Sea coasts.

World bathymetrical range: 0-1000 m. In Scandinavia at shallow depth.

Remarks: Common during BIOFAR 2. See also comments under *O. aculeus*.

Checked by: AW

**Genus *Pseudosetia* Monterosato, 1884**

***Pseudosetia semipellucida* (Friele, 1879)**

Synonym: *Rissoa semipellucida* Friele, 1879.

Reference to best description of the species: Friele 1879: 274, Bouchet & Warén 1979: 222, Fig. 42.

Previous records: None.

New records: BIOFAR stations 274, 502.

Bathymetrical range within the area: 698-890 m.

Substrate: Soft bottom, gravel.

Temperature: +0.6 °C (E).

Water mass: NW.

World distribution: Abyssal parts of the Norwegian Basin.

World bathymetrical range: 700-3200 m.

Checked by: AW

***Pseudosetia turgida* (Jeffreys, 1870)**

Synonym: *Rissoa turgida* Jefferys, 1870.

Reference to best description of the species: Fretter & Graham 1978: 162-163, Fig. 138; Warén & Bouchet 1993: 691, Figs 1380, 1598-1602, 1605-1608.

Previous records: None.

New records: BIOFAR station 027.

Bathymetrical range within the area: 225 m.

Substrate: Sand, sponge spicules.

Temperature: 7.5 °C (E).

Water mass: AW.

World distribution: the Faroes, from Porsanger in northern Norway to the Oslofjord, southward along the European continental slopes to northern Spain.

World bathymetrical range: 90-1500 m.

Checked by: AW

**Superfam.: STROMBOIDEA**

**Family APORRHAIIDAE**

**Genus *Aporrhais* da Costa, 1778**

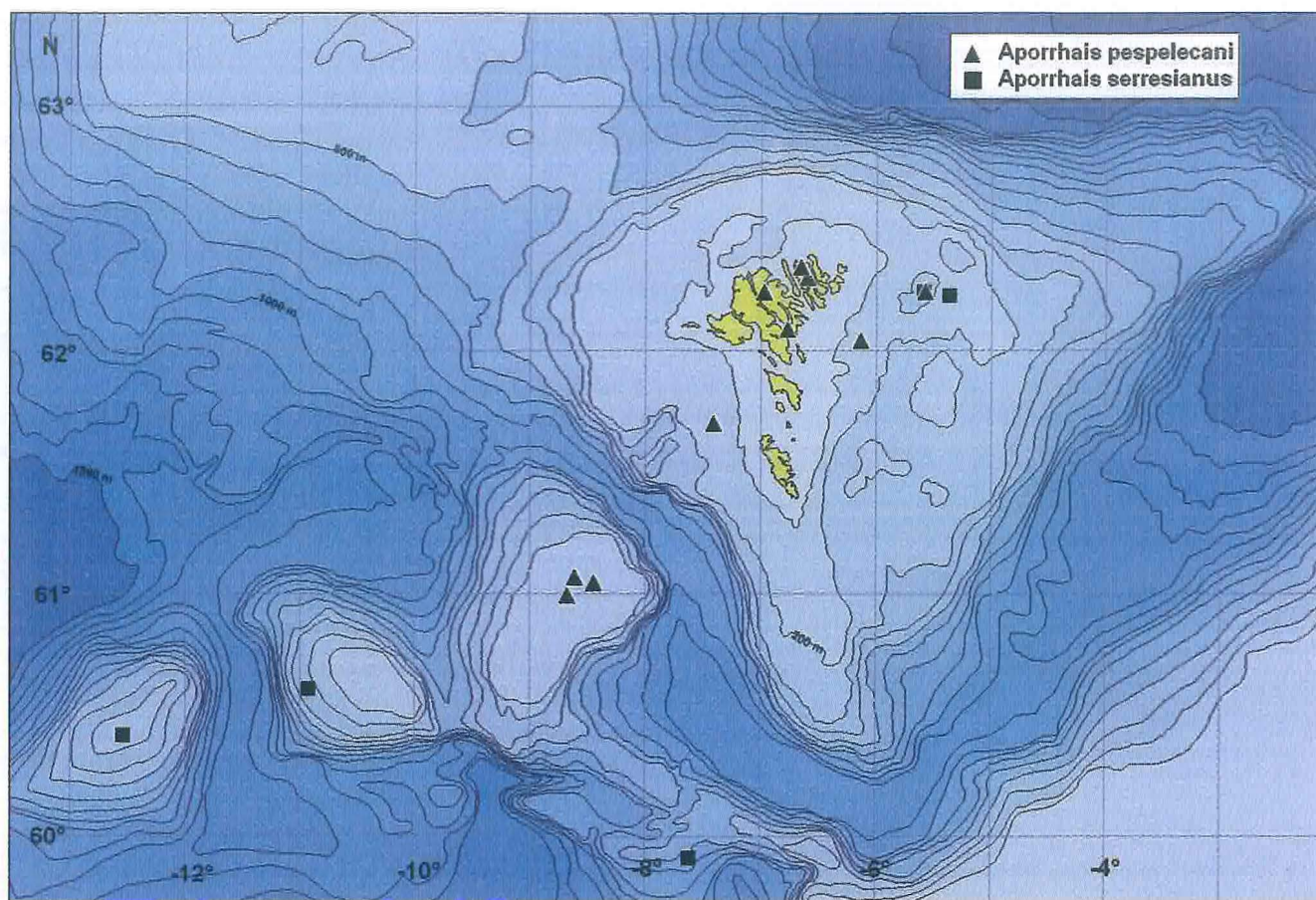
***Aporrhais pespelecani* (Linnaeus, 1758)**

Synonyms: *Strombus pes pelecani* Linnaeus, 1758, *Aporrhais quadrifidus* da Costa, 1776.

Reference to best description of the species: Fretter & Graham 1981: 295-298, Figs 219-220.

Previous records: Two localities in Trongisvágsfjørður, Kollafjørður (Streymoy), off Skarvsoyri in Sundini, Oyndarfjørður, Funningfjørður (Eysturoy), Borðoyarvík and Klaksvík; clay bottom down to 54 m depth (Spärck & Thorson 1933).





New records: BIOFAR stations 103, 325, 326, 364, 366, 367, 372, 543, 584, 600.

Bathymetrical range within the area: 21-247 m.

Substrate: Shell-sand.

Temperature: 7.4 - 9.1 °C (E).

Water mass: AW.

World distribution: Iceland, the Faroes, from Tromsø in northern Norway along the Norwegian, Swedish and Danish coasts and Kattegat to Øresund, British Isles, Ireland and further along the European coasts into the Mediterranean. It is less common in central North Sea and is not found off the Danish West coast.

World bathymetrical range: 0-247 m.

Remarks: Also recorded during BIOFAR 2.

Checked by: TS

### *Aporrhais serresianus*

(Michaud, 1828) Fig. 18.

Synonyms: *Rostellaria serresianus* Michaud, 1828, *Aporrhais macandreae* Jeffreys, 1867, *Aporrhais pespelecani sarsii* Kobelt, 1908.

Reference to best description of the species: Fretter & Graham 1981: 298-299, Fig. 221; Bouchet & Warén 1993: 708, Figs 1661-1668.

Previous records: Porcupine stn. 64 (1150 m); Triton stns 3, 10 13; Porcupine-Expedition on the Faroe Bank in 174 m depth (Spärck & Thorson 1933).

New records: BIOFAR stations 295, 319, 363, 519, 598.

Bathymetrical range within the area: 170-656 m.

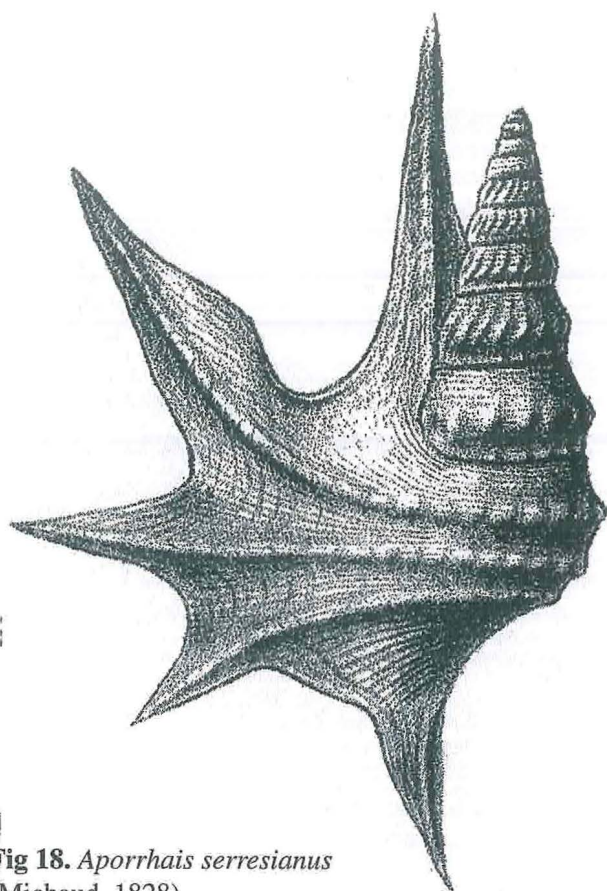
Substrate: Sand, gravel, stones.

Temperature: 7.4 - 8.6 °C (E).

Water mass: AW.

World distribution: Iceland, the Faroes, from 86°N south along the coast of Norway, off the west coasts of Scotland and Ireland, and southwards along the





**Fig 18.** *Aporrhais serresianus*  
(Michaud, 1828)

European coasts to off northwestern Morocco,  
Mediterranean.

World bathymetrical range: 100-1000 m.

Checked by: TS

Superfam.: CALYPTRAEOIDEA

Family CAPULIDAE

Genus *Capulus* de Montfort, 1810

*Capulus ungaricus* (Linnaeus, 1758)

Synonyms: *Patella ungarica* Linnaeus, 1758, *Phileopsis ungaricus* Linnaeus, 1758.

Reference to best description of the species: Fretter & Graham 1981: 305-309, Figs 224, 225, 226.

Previous records: Lightning stns 2, 4; only found as empty shells (Spärck & Thorson 1933).

New records: BIOFAR stations 019, 033, 090, 154, 279, 283, 295, 308, 345, 349, 401, 473, 495, 518, 520, 522, 538, 605, 606, 689, 692, 705.

Bathymetrical range within the area: 90-1038 m.

Substrate: Sand, shell-sand, gravel, small stones.

Temperature: +0.5 - 7.9 °C (M: 3 stns), +0.83 - 8.6 °C (E).

Water mass: AW (18), AW/AI (3), NW (1).

World distribution: Southern Iceland, the Faroes, from Hammerfest in northern Norway south to the Mediterranean, the Azores and the Gulf of Guinea.

World bathymetrical range: 10-2500 m.

Checked by: AW

Family TRICHOTROPIDIDAE

Genus *Torellia* Jeffreys, 1883

*Torellia delicata* (Philippi, 1844)

Synonyms: *Cyclostoma delicatum* Philippi, 1844, *Torellia vestita* Jeffreys, 1867, *Trachysma fragilis* G.O. Sars, 1878, *Trachysma fragilis* var. *expansa* G.O. Sars, 1878, *Torellia vestita* var. *abyssicola* Friele, 1903.

Reference to best description of the species: Fretter & Graham 1981: 303-305, Fig. 223; Bouchet & Warén 1993: 732-735, Figs 1739-1740, 1743-1745, 1748, 1750-1754.

Previous records: Lightning stn. 4; Porcupine stn. 58.

New records: BIOFAR stations 015, 065, 082, 088, 230, 274, 447, 458, 516, 517, 696, 731, 736, 737.

Bathymetrical range within the area: 322-1319 m.

Substrate: Sand, gravel, stones.

Temperature: 1.3 °C (M: one stn), +0.9 - 7.9 °C (E).

Water mass: AW (2), AW/AI (2), NW (8), AW/AI/NW (2).

World distribution: West and east Iceland, the Faroes, the Norwegian coast from west Finnmark to Rogaland county, east of Shetland and south to the Ibero-Moroccan Gulf and the Gorrige Bank, Mediterranean.

World bathymetrical range: 100-2500 m.

Checked by: AW

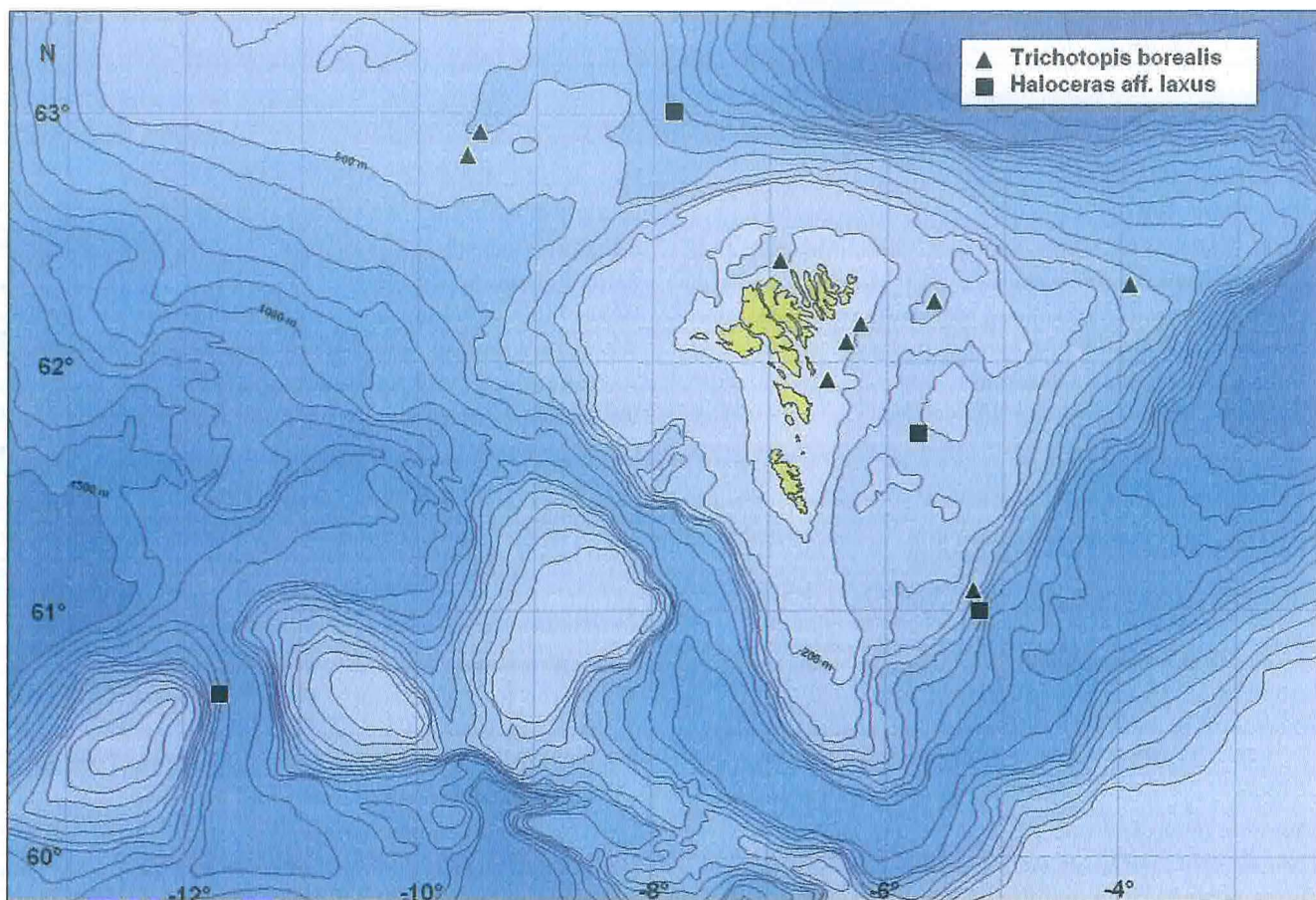
Genus *Trichotropis* Broderip & Sowerby, 1829

*Trichotropis borealis* Broderip & Sowerby, 1829

Reference to best description of the species: Fretter & Graham 1981: 302-303, Fig. 222.

Previous records: Lightning stn. 4; Very common both at the northern as well as the southern islands, mostly in 30-100 m depth (Spärck & Thorson 1933).





New records: BIOFAR stations 006, 172, 193, 424, 425, 483, 597, 608, 610.

Bathymetrical range within the area: 65-509 m.

Substrate: Sand, shell-sand.

Temperature: 0.1°C (M: one stn), 1.0 - 8.2°C (E).

Water mass: AW (5), AW/AI (1), AI (2), AI/NW (1).

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Barents Sea, Kara Sea, Norwegian coast south to Bergen, northern North Sea, Morray Firth on the east coast of Scotland, the west coast of Scotland south to Argyll; in east America from Ellesmere Island to Maine, in the Pacific Ocean from Arctic Canada to British Columbia.

World bathymetrical range: 10-509 m.

Checked by: AW

*Trichotropis conica* Møller, 1842 Fig. 19.

Reference to best description of the species: G.O.: Sars 1878: 163, Pl.13, fig. 3; Macperson 1971: 46, Pl. 3, fig.1.

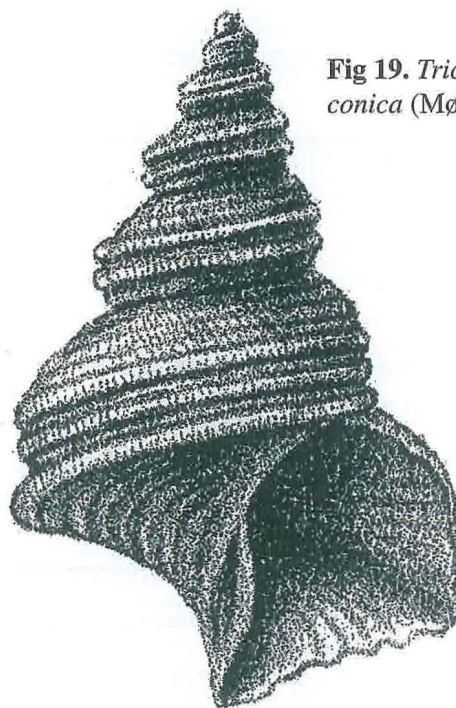


Fig 19. *Trichotropis conica* (Møller, 1842)



Previous records: None.

New records: BIOFAR station 481.

Bathymetrical range within the area: 604 m.

Substrate: Mud, gravel and stones.

Temperature: 0.6 °C (E).

Water mass: NW.

World distribution: West and east Greenland, Iceland, the Faroes, Norwegian Sea, Jan Mayen, Svalbard, Murman coast and along the northern Norwegian coast south to 69° N; in east America from Prince Regent Inlet to Cape Sable.

World bathymetrical range: 15-600 m.

Checked by: AW

## Family HALOCERATIDAE

### Genus *Haloceras* Dall, 1889

#### *Haloceras* aff. *laxus* (Jeffreys, 1885)

Synonym: *Seguenzia laxa* Jeffreys, 1885.

Reference to best description of the species: Jeffreys 1885: 44, Pl. 5 figs 4, 4a; Warén 1993:187, Figs 26-27.

Previous records: None.

New records: BIOFAR stations: 274, 279, 481, 516.

Bathymetrical range within the area: 260-914 m.

Substrate: Mud, coarse gravel.

Temperature: +0.6 - 7.0 °C (E).

Water mass: AW (1), AW/AI (1), NW (2).

World distribution: The Faroes to western Spain.

World bathymetrical range: 260-2175 m.

Remarks: It seems likely that the specimens from BIOFAR 1 belongs to a species different from *H. laxa*. Warén (1993) however, abstains from describing it as a new species as the specimens are young or the shells are in a bad condition.

Checked by: AW

## Superfamily LAMELLARIOIDEA

### Family LAMELLARIIDAE

#### Genus *Calyptoconcha* Bouchet & Warén, 1993

#### *Calyptoconcha pellucida* (Verrill, 1880)

Synonyms: *Lamellaria pellucida* Verrill, 1880, *Oncidiopsis aurantiacus* Locard, 1897 ex P. Fischer ms, *Marsenia leptolemnium* Bergh, 1899, *Lamellaria pellucida* var. *farrani* Odhner, 1912.

Reference to best description of the species: Odhner 1926 (2): 31-35, Figs 19-24; Bouchet & Warén 1993: 742-746, Figs 1760-1762, 1764-1770.

Previous records: None.

New record: BIOFAR station 345.

Bathymetrical range within the area: 358 m.

Substrate: Gravel.

Temperature: 6.2 °C (E).

Water mass: AW/AI.

World distribution: The Faroes, Norwegian coast from Bergen north to the Trondheimsfjord.

World bathymetrical range: 130-4450 m.

Checked by: AW

### Genus *Lamellaria* Montagu, 1815

#### *Lamellaria latens* (O.F. Müller, 1776)

Synonym: *Bulla latens* O.F. Müller, 1776.

Reference to best description of the species: Fretter & Graham 1981: 321-322, Fig. 233.

Previous records: Three dead specimens from Tórshavn, 1864 (Spärck & Thorson 1933).

New record: BIOFAR station 279.

Bathymetrical range within the area: 260 m.

Substrate: Clay and silt, corals.

Temperature: 7.0 °C (E).

Water mass: AW.

World distribution: The Faroes, Norwegian coast from Finnmark south to Rogaland county, British Isles to Northumberland on the east side and Isle of Man on the west side, western Ireland and south to the Mediterranean; probably not in Kattegat, Skagerrak and central North Sea.

World bathymetrical range: 10-1200 m.

#### *Lamellaria perspicua* (Linnaeus, 1758)

Synonyms: *Helix perspicua* Linnaeus, 1758, *Lamellaria tentaculata* Montagu, 1811.

Reference to best description of the species: Fretter & Graham 1981: 319-320, Fig. 232.

Previous records: Two live and 10 dead specimens labelled the Faroes (Spärck & Thorson 1933).

New record: BIOFAR station 279.

Bathymetrical range within the area: 260 m.

Substrate: Clay and silt, corals.

Temperature: 7.0 °C (E).

Water mass: AW.

World distribution: Iceland, the Faroes, from Finnmark



i northern Norway to Skagerrak, both sides of the British Isles, Ireland and along the European coasts to the Mediterranean and the Azores; not on Danish coasts.

World bathymetrical range: 10-1200 m.

## Family TRIVIIDAE

### Genus *Trivia* Gray, 1837

#### *Trivia arctica* (Pulteney, 1799)

Synonyms: *Cypraea arctica* Pulteney, 1799, *Cypraea norvegica* M. Sars 1835.

Reference to best description of the species: Fretter & Graham 1981: 330-331, Fig. 239.

Previous records: One live specimen labeled the Faroes besides five dead specimens from four different localities indicating that the species occur at the Faroes (Spärck & Thorson 1933).

New record: BIOFAR station 325.

Bathymetrical range within the area: 98 m.

Substrate: Shell-sand.

Temperature: 9.1 °C (E).

Water mass: AW.

World distribution: The Faroes, Lofoten in northern Norway south to Bohuslän on the Swedish west coast, Shetland, British Isles, Ireland and along the coasts of Holland, Belgium and France.

World bathymetrical range: 10-1000 m.

Checked by: AW

## Family VELUTINIDAE

### Genus *Limneria* H. & A. Adams, 1853

#### *Limneria undata* Brown in Smith, 1839

Synonyms: *Velutina undata* Brown in Smith, 1839, *Velutina zonata* Gould, 1841, *Morvillia undata* G.O. Sars, 1878.

Reference to best description of the species: Gulbin & Golikov 1998: 213-214, Fig. 1.

Previous records: Triton stn. 4.

New records: BIOFAR stations 027, 029, 357, 381, 447, 458, 483.

Bathymetrical range within the area: 170-675 m.

Substrate: Sand, gravel and stones.

Temperature: +0.57 - 7.7 °C (E).

Water mass: AW (3), AW/AI (1), AI (1), NW (2).

World distribution: The Faroes, Jan Mayen, Svalbard, Norwegian coast south to Kristiansund (63°N), the

Viking Bank in the North Sea; in east America from Ellesmere Island south to Massachusetts Bay; in the Pacific Ocean from Point Barrow, the Bering Strait and south to Kudobin Islands.

World bathymetrical range: 8-1187 m.

Checked by: TS

### Genus *Piliscus* Lovén, 1859

#### *Piliscus radiatus* (M. Sars, 1851)

Synonyms: *Capulus radiatus* M. Sars, 1851, *Piliscus probus* Lovén, 1859, *Capulacmaea radiata* M. Sars, 1859, *Piliscus commodus* Verrill, 1885 (not *Pilidium commodum* Middendorf, 1851).

Reference to best description of the species: M. Sars 1851: 184, G.O. Sars 1878: 144-145, Pl. 8, fig 6a-d.

Previous records: Triton stn. 9.

New records: BIOFAR stations 015, 481.

Bathymetrical range within the area: 604-683 m.

Substrate: Mud, sand, coarse gravel and stones.

Temperature: +0.6 °C (M, one stn), +0.6 - 0.0 °C (E).

Water mass: NW.

World distribution: Greenland, southwestern Iceland, the Faroes, Norwegian Sea, Svalbard, Barents and Kara Seas, eastern part of the Laptev Sea south to Vesterålen in northern Norway; in east America from Ellesmere Island to Hudson Bay and Nova Scotia.

World bathymetrical range: 20-683 m.

Remarks: Gulbin & Golikov (1997) do not synonymize *P. radiatus* with *P. commodus* because of the difference in their protoconchs.

Checked by: AW

### Genus *Velutella* J.E. Gray, 1847

#### *Velutella plicatilis* (O.F. Müller, 1776)

Synonyms: *Bulla plicatilis* O.F. Müller, 1776, *Bulla flexilis* Montagu, 1808.

Reference to best description of the species: Fretter & Graham 1981: 322-323, Fig. 234.

Previous records: Trongisvágsfjørður off Punthavn (Suderoy), Tórshavn, deep hole at the northern end of Nólsoy, Vestmanna (Streymoy), Borðoyarnes and off the mouth of Borðoyarvík, depths between 8 to 120 m (Spärck & Thorson 1933).

New record: BIOFAR station 230.

Bathymetrical range within the area: 703 m .



Substrate: Gravel and stones.

Temperature: +0.6 °C (E).

Water mass: NW.

World distribution: East Greenland, Iceland, the Faroes, Svalbard, the White Sea, whole Norwegian coast, Skagerrak, Kattegat, northern North Sea, west coast of Scotland, Ireland, south to northern Spain; in east America at Newfoundland and Nova Scotia; in the Pacific Ocean from Bering Strait to Peter the Great Bay, northern Honsu and the Gulf of Alaska.

World bathymetrical range: 0-703 m.

Checked by: JAS

### Genus *Velutina* Fleming, 1821

#### *Velutina velutina* (O.F. Müller, 1776)

Fig. 20.

Synonyms: *Bulla velutina* O.F. Müller, 1776, *Helix laevigata* Pennant, 1777, *Helix halitoides* Fabricius, 1780.

Reference to best description of the species: Fretter & Graham 1981: 323-325, Fig. 235; Gulbin & Golikov 1999: 230, Fig. 5.

Previous records: Trongisvágsfjørður (Suðuroy), between Skúvoy and Sandoy, Bay of Sand (Sandoy), deep area at the North end of Nólsoy, East of the South point of Eysturoy, Hvannasund between Borðoy and Viðoy, and some specimens only labelled the Faroes (Spärck & Thorson 1933).

New records: BIOFAR stations 015, 227, 274, 359, 424, 482, 542.

Bathymetrical range within the area: 200-1098 m.

Substrate: Mud, sand and gravel.

Temperature: 0.1 °C (M: one stn), +0.85 - 8.1 °C (E).

Water mass: AW (1), AI (1), AI/NW (1), NW (3).

World distribution: West and east Greenland, Iceland, the

Faroes, Jan Mayen, Svalbard, Novaya Zemlya, White Sea, Kara Sea, Murman coast and whole Norwegian coast south to Skagerrak, Kattegat, northern parts of the North Sea, British Isles, Ireland, and south to the Mediterranean; in east America from Ellesmere Island south to Cape Hatteras; in the Pacific Ocean from the Bering Strait to Gulf of Alaska and to Monterey Bay, the Okhotsk and Japan Seas.

World bathymetrical range: 1-1098 m.

Remarks: Also recorded during BIOFAR 2.

Checked by: JAS

### Superfamily NATICOIDEA

#### Family NATICIDAE

#### Genus *Amauropsis* Mørch, 1867

#### *Amauropsis islandica* (Gmelin, 1791)

Synonym: *Nerita islandica* Gmelin, 1791.

Reference to best description of the species: Fretter & Graham 1981: 346-349, Fig. 251.

Previous records: Simpson (1910): 16, 17; Trongisvágsfjørður, Vestmanna, Sandsvág, Borðoyarvík (Spärck & Thorson 1933).

New record: BIOFAR station 192.

Bathymetrical range within the area: 107 m.

Substrate: No information.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: West and east Greenland, south and west Iceland, the Faroes, Svalbard, whole Norwegian coast south to Lindesnes, Kattegat, east coast of British Isles south to Northumberland, western Scotland, southeast coast of Ireland; in east America south to Virginia; Strait of Behring.

World bathymetrical range: 0-107 m, not intertidal.

Checked by: AW

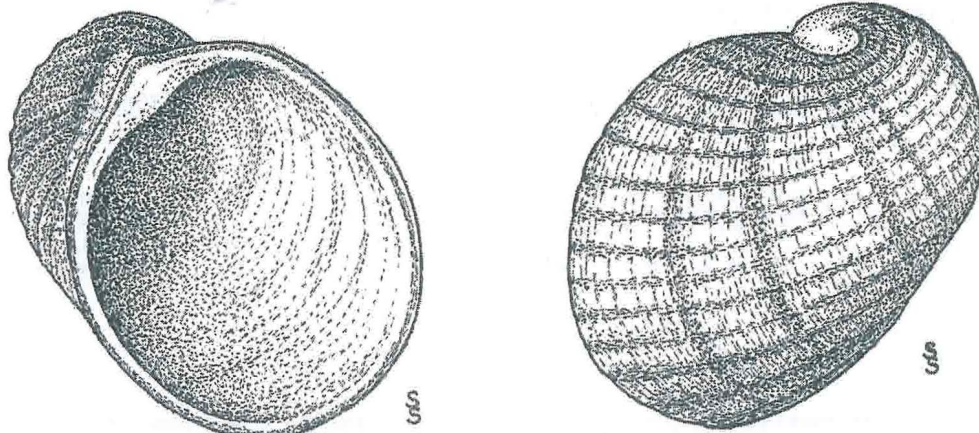
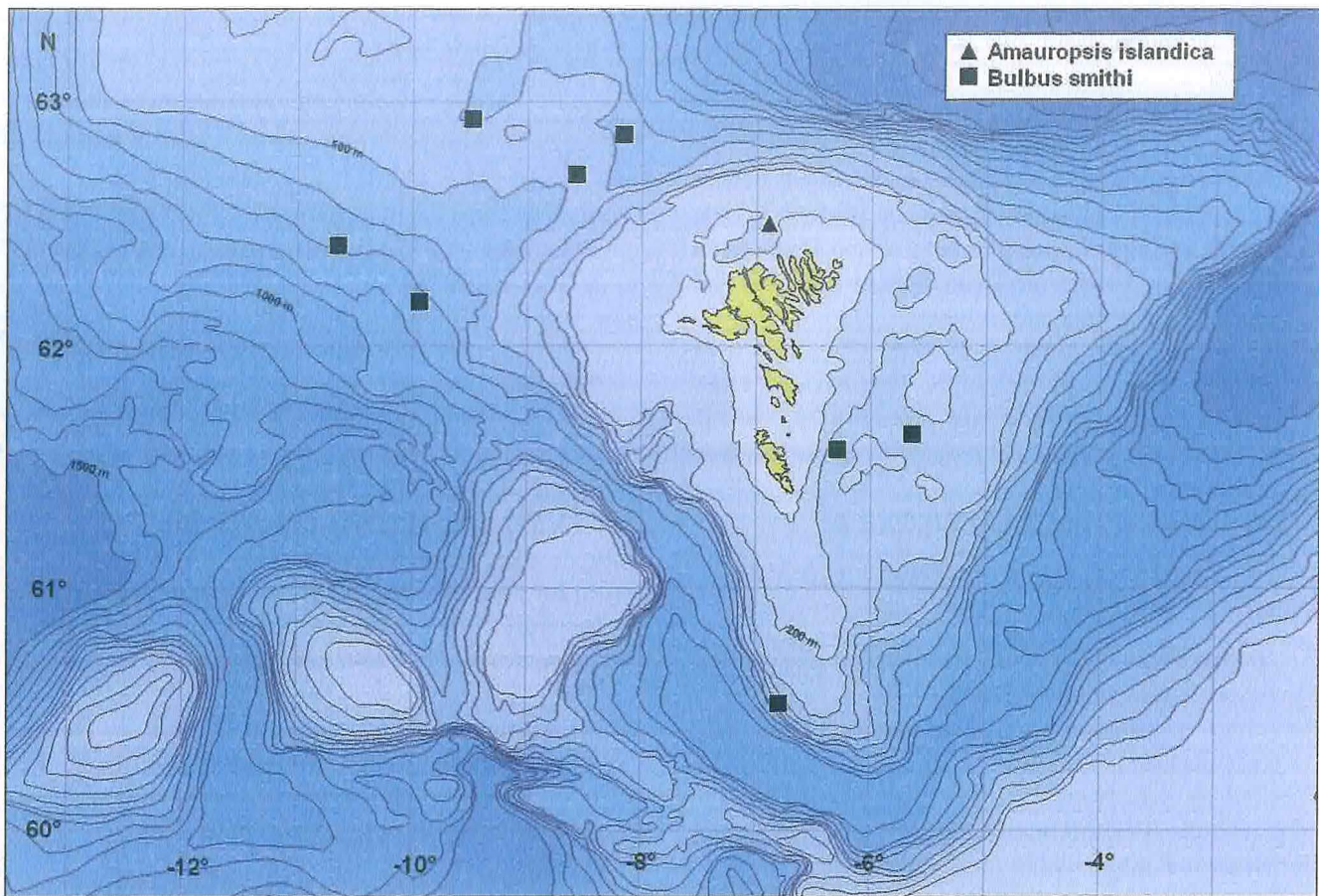


Fig 20. *Velutina velutina* (O.F. Müller, 1776) S. Sneli, del.





### Genus *Bulbus* Brown, 1839

#### *Bulbus smithi* Brown, 1839

Synonyms: *Natica flava* Gould 1840, *Ampullina smithii* G.O. Sars 1878.

Reference to best description of the species: G.O. Sars 1878: 155-156, Pl. 12, fig. 2a-b, Pl. 21, fig. 18.

Previous record: In the stomach of a haddock off Húsagrynna (Spärck & Thorson 1933).

New records: BIOFAR stations 089, 100, 122, 158, 267, 271, 419, 425.

Bathymetrical range within the area: 283-725 m.

Substrate: Sand, shell-sand, gravel.

Temperature: 1.6 - 6.8 °C (E).

Water mass: AW/AI (5), AI (2), AW/AI/NW (1).

World distribution: Iceland, the Faroes, Svalbard, Barents Sea, coast of northern Norway south to Lofoten; in east America from Gulf of St. Lawrence to George Bank in Massachusetts; Pacific Ocean the Okotsk Sea.

World bathymetrical range: 30-725 m.

Checked by: AW

### Genus *Cryptonatica* Dall, 1892

#### *Cryptonatica affinis* (Gmelin, 1791)

Synonyms: *Nerita affinis* Gmelin, 1791, *Natica clausa* Broderip & Sowerby, 1829, *Natica septentrionalis* Möller, 1842.

Reference to best description of the species: Fretter & Graham 1981: 344-346, Figs 249-250.

Previous records: Triton stns 8, 9; Simpson (1910): 16, 16a, 17; Vestmanna, Klaksvík, off the mouth of Borðoyarvík and Borðoyarvík (Spärck & Thorson 1933).

New records: BIOFAR stations 027, 080, 089, 105, 124, 158, 174, 230, 263, 268, 274, 285, 299, 328, 370, 421, 422, 423, 447, 458, 478, 481, 482, 483, 490, 499, 514, 516, 517, 525, 605, 607, 689, 694, 698, 699, 723, 728, 729, 738, 9012.

Bathymetrical range within the area: 66-1099 m.

Substrate: Mud, sand, gravel, stones, sponge spicules.

Temperature: 0.0 - 7.9 °C (M: 5 stns); +0.6 - 8.6 °C (E).

Water mass: AW (8), AW/AI (13), AI (2), AW/AI/NW (2), NW (9).



World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Franz Joseph Land, Novaya Zemlya, Barents Sea, Kara Sea, Siberian Arctic Sea, White Sea, Murman coast south along the Norwegian coast to Skagerrak, Shetland, British Isles, Ireland and south to Bay of Biscay; in east America from Ellesmere Island to Cape Hatteras; in the Pacific Ocean from Point Barrow south to San Diego in California and to Japan.

World bathymetrical range: 0-2500 m. Circumpolar in shallow water (0-200 m), in the East Atlantic south of Lofoten it descends into deeper water, in the West Atlantic it does the same in the New England region.

Remarks: Also recorded during BIOFAR 2.

Checked by: AW

### *Cryptonatica bathybi* (Friele, 1879)

Synonym: *Natica bathybi* Friele, 1879.

Reference to best description of the species: Friele 1879: 272; Odhner 1913: 24, Pl. 3.

Previous records: None.

New records: BIOFAR station 722.

Bathymetrical range within the area: 918 m.

Substrate: Mud, sponge spicules.

Temperature:  $\pm 0.65$  °C (E).

Water mass: NW.

World distribution: Bathyal and abyssal parts of the Norwegian - and Greenland Seas.

World bathymetrical range: 150-3000 m. Some of the records of *C. affinis* from deep water should probably be referred to this species.

Checked by: JAS

## Genus *Euspira* Agassiz, 1838

### *Euspira fusca* (de Blainville, 1825)

Synonyms: *Natica fusca* de Blainville, 1825, *Natica angulata* Jeffreys, 1885, *Natica compacta* Jeffreys, 1885.

Reference to best description of the species: Bouchet & Warén 1993: 776-777, Figs 1801, 1847, 1861, 1885, 1901, 1913.

Previous records: Lightning stn. 7.

New records: Not found during BIOFAR 1.

Bathymetrical range within the area: 1200 m.

World distribution: The Faroes, British Isles, Ireland and south to Angola, Mediterranean.

World bathymetrical range: 100-1200 m.

### *Euspira montagui* (Forbes, 1838)

Synonyms: *Natica montagui* Forbes, 1838, *Lunatia montagui* auct., *Polinices montagui* auct.

Reference to best description of the species: Fretter & Graham 1981: 340-341, Figs 244-245, 248B.

Previous records: Lightning stns 6, 7; Porcupine stn. 47; Triton stns 10, 13; only found as dead shells (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 007, 019, 027, 028, 032, 033, 063, 065, 068, 075, 076, 077, 078, 082, 090, 091, 098, 100, 105, 131, 158, 165, 190, 203, 279, 295, 305, 317, 349, 354, 357, 359, 382, 401, 411, 421, 452, 482, 492, 493, 494, 495, 496, 497, 506, 514, 515, 518, 519, 520, 522, 523, 524, 525, 542, 597, 599, 601, 606, 692, 695, 764.

Bathymetrical range within the area: 90-1078 m.

Substrate: Sand, shell-sand, gravel, sponge spicules.

Temperature: 7.95 °C (M: one stn);  $\pm 0.1 - 9.1$  °C (E).

Water mass: AW (47), AW/AI (10), AI/NW (2), AW/AI/NW (1).

World distribution: South and west Iceland, the Faroes, whole Norwegian coast, Kattegat, Skagerrak, British Isles, Ireland south to northwestern Morocco.

World bathymetrical range: 10-1078 m.

Checked by: AW

### *Euspira pallida* (Broderip & Sowerby, 1829)

Synonyms: *Natica pallida* Broderip & Sowerby, 1829; *Natica groenlandica* Möller, 1842.

Reference to best of the species: Fretter & Graham 1981: 343, Fig. 247.

Previous records: Porcupine stn. 58; Triton stn. 13.

New records: BIOFAR stations 006, 007, 089, 271, 317, 356, 381, 608, 696, 736.

Bathymetrical range within the area: 65-1319 m.

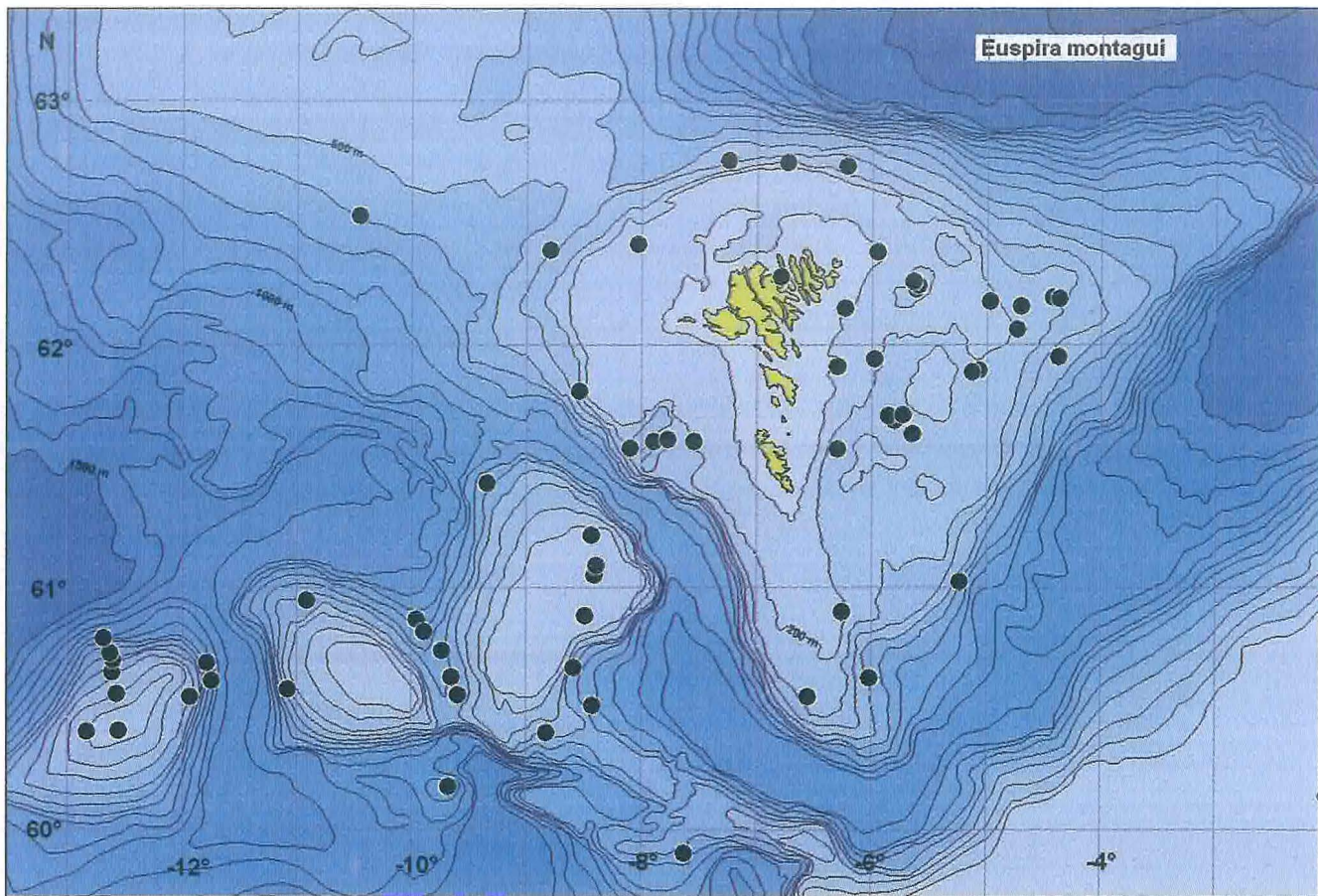
Substrate: Mud, sand, gravel.

Temperature: 2.2 - 8.2 °C (E).

Water mass: AW (6), AW/AI (1), AI (1), AW/AI/NW (1).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Franz Joseph Land, Novaya Zemlya, Barents Sea, Kara Sea, Siberian Arctic Sea, White Sea, Murman coast south along the Norwegian coast and Swedish west coast to Øresund, Skagerrak, North Sea, Shetland, Scottish west coast to Iles of Man, British east coast south to Durham; in east America from Ellesmere Island south to North Carolina; in the Pacific Ocean from



**Euspira montagui**

north of the Bering Strait to Monterey, the Aleutians, Sea of Okhotsk, Japan.

World bathymetrical range: 10-2400 m.

Checked by: JAS

## Order APOGASTROPODA

### Superfamily MURICOIDEA

### Family MURICIDAE

### Genus *Boreotrophon* P. Fischer, 1884

### *Boreotrophon barvicensis* (Johnston, 1825)

Synonym: *Fusus barvicensis* Johnston, 1825.

Reference to best description of the species: Fretter & Graham 1985: 441-443, Fig. 313; Bouchet & Warén 1985: 131, Figs 291-296, 341.

Previous records: One record of 5 dead shells taken at 13 miles W by S of Munken in a depth of about 200 m (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 019, 027, 028, 065, 068, 354, 356, 357, 401, 495, 518, 522, 690, 695, 727, 764.

Bathymetrical range within the area: 205-630 m.

Substrate: Sand.

Temperature: 4.0 - 8.6 °C (E).

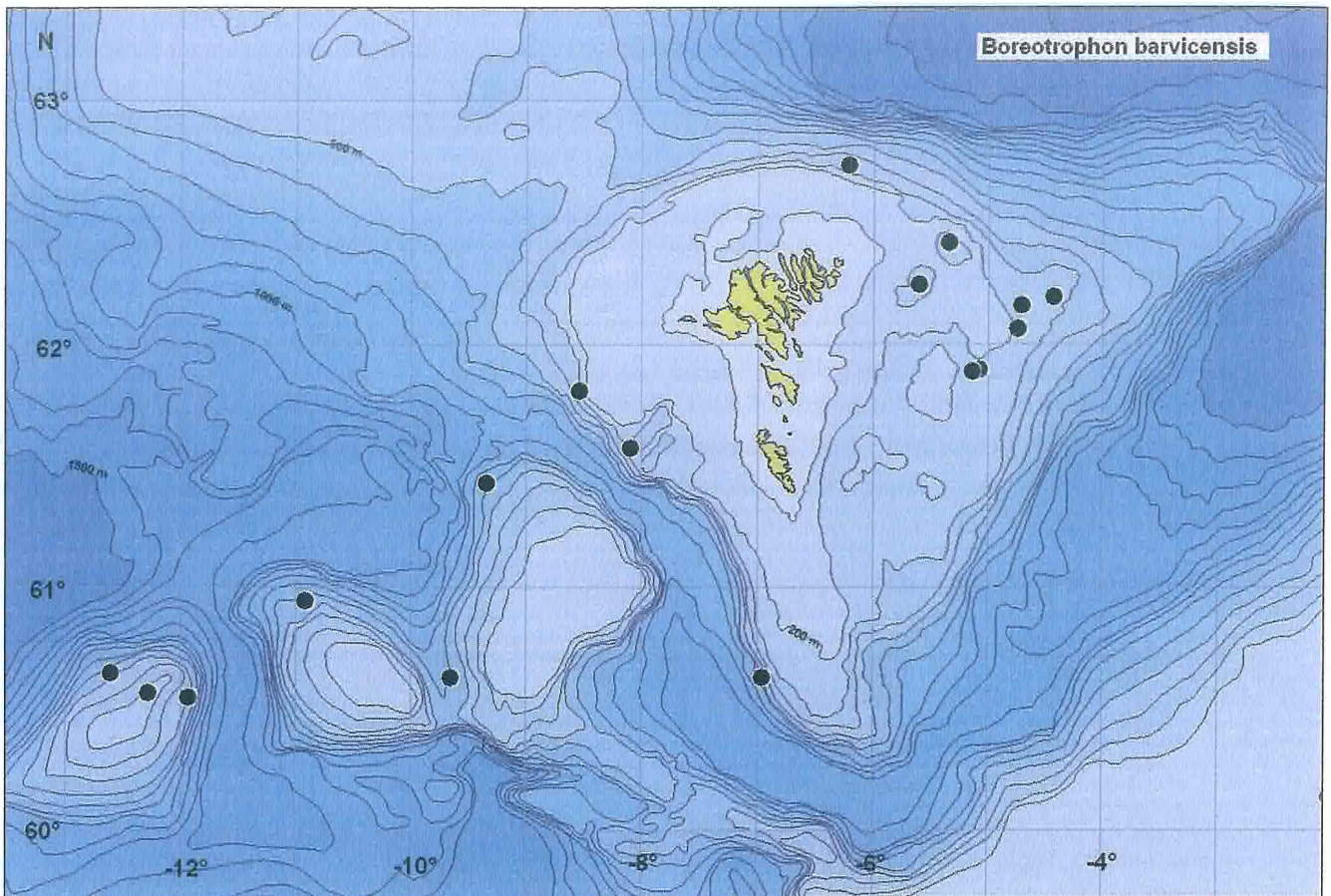
Water mass: AW (15), AW/AI (2).

World distribution: Iceland, the Faroes, West Finnmark southward along the shelf and in coastal waters to off Morocco.

World bathymetrical range: 50-700 m.

Checked by: AW





***Boreotrophon clathratus***  
(Linnaeus, 1767) Fig. 21.

Synonyms: *Murex clathratus* Linnaeus, 1767, *Buccinum lyratum* Gmelin, 1790, *Tritonium gunneri* Lovén, 1846.

Reference to best description of the species: Bouchet & Warén 1985: 129, Figs 284-285, 325-326.

Previous records: Taken alive at seven localities at the northern as well as the southern islands in depths of 8-30 m. The variety *gunneri* Lovén, 1846 was found alive also at seven localities (4-50 m depth), but dead shells were found at a long series of different localities (Spärck & Thorson 1933).

New records: BIOFAR stations 090, 102, 111, 279, 368, 371, 607, 609, 610.

Bathymetrical range within the area: 50-260 m.

Substrate: Mud, sand.

Temperature: 7.0 - 8.0 °C (E).

Water mass: AW.

World distribution: West and east Greenland, Iceland,

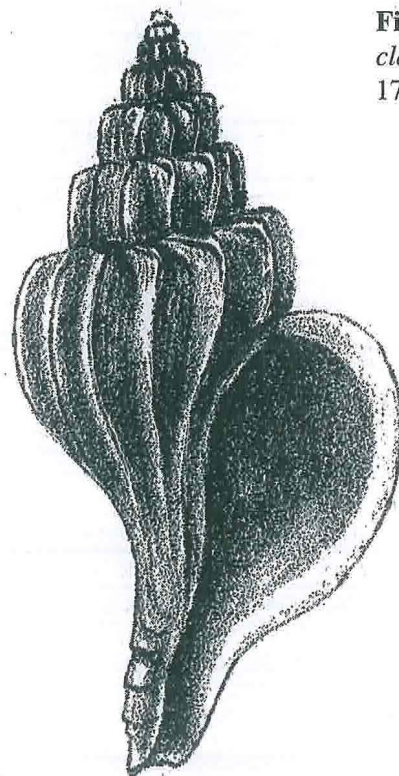


Fig 21. *Boreotrophon clathratus* (Linnaeus, 1767)



the Faroes, Svalbard, north Norwegian coast south to Lofoten; in east America from Labrador to New England; in the Pacific Ocean Bering Strait and at Point Barrow.

World bathymetrical range: 5-300 m.

Checked by: AW

***Boreotrophon clavatus* G.O. Sars, 1878**

Synonym: *Trophon clavatus* G. O. Sars, 1878.

Reference to best description of the species: Bouchet & Warén 1985: 130, Figs 286-290, 322-324, 331, 339.

Previous records: None.

New records: BIOFAR stations 063, 116, 344, 466, 482, 692.

Bathymetrical range within the area: 208-509 m.

Substrate: Clay, sand.

Temperature: 7.9 °C (M: one stn), 1.0 - 8.6 °C (E).

Water mass: AW (3), AW/AI (1), AI (1), AI/NW (1).

World distribution: South of Iceland, the Faroes, Lofoten in northern Norway south to the Swedish west coast.

World bathymetrical range: 50-900 m.

Checked by: AW

***Boreotrophon dabneyi* Dautzenberg, 1889**

Synonyms: *Trophon dabneyi* Dautzenberg, 1889, *Trophon decoratus* Locard, 1897.

Reference to best description of the species: Dautzenberg 1889: 36, Pl. 2, fig. 7; Bouchet & Warén 1985: 136, Figs 304-305, 319, 334.

Previous records: None.

New records: BIOFAR station 696.

Bathymetrical range within the area: 1319 m.

Substrate: No information.

Temperature: 1.3 °C (M), 3.0 °C (E).

Water mass: AW/AI/NW.

World distribution: The Faroes, the bathyal parts of the eastern Atlantic from Bay of Biscay to the Cape Verde Islands and the Azores.

World bathymetrical range: 1225-2670 m.

Checked by: JAS

***Boreotrophon echinatus* (Kiener, 1840)**

Synonyms: *Fusus echinatus* Kiener, 1840, *Trophon carinatus* Jeffreys, 1883, *Trophon grimaldii* Dautzenberg & Fisher, 1896, *Trophon cossmanni*

Locard, 1897.

Reference to best description of the species: Bouchet & Warén 1985: 137-139, Figs 308-318, 333, 335-338.

Previous records: Triton stn. 13.

New records: Not found during BIOFAR 1.

Bathymetrical range within the area: 1050 m

World distribution: The Faroes, continental slopes from Rockall Trough south to Bay of Biscay, the Azores, Mediterranean.

World bathymetrical range: 1000-3000 m.

***Boreotrophon truncatus* Strøm, 1768**

Synonym: *Buccinum truncatus* Strøm 1768.

Reference to best description of the species: Fretter & Graham 1985: 437-438, Fig. 310; Bouchet & Warén 1985: 128, Figs 282-283.

Previous records: Trongisvágssfjørður (20 m), Miðvágur, Tórshavn (25-30 m), Vestmanna, off the mouth of Borðoyarvík (38-56 m), Árnafjørður (30-40 m), Funningsfjørður (85 m), Hvannasund (80 m) (Spärck & Thorson 1933).

New records: BIOFAR stations 076, 077, 203, 371, 546, 549, 597, 608, 695.

Bathymetrical range within the area: 65-630 m.

Substrate: Shell-sand, shell-gravel.

Temperature: 7.6 - 9.1 °C (E).

Water mass: AW.

World distribution: Greenland, Iceland, the Faroes, Svalbard, Barents Sea, the Siberian Arctic Seas, Murman coast and Norwegian coast south to Bergen, Kattegat, east and west coasts of Scotland, Ireland; in east American from Hudson Bay south to George's Bank; in the Pacific Ocean at Point Barrow.

World bathymetrical range: 3-630 m.

Checked by: AW

**Genus *Nucella* Röding, 1798**

***Nucella lapillus* (Linnaeus, 1758)**

Synonym: *Purpura lapillus* Linnaeus, 1758.

Reference to best description of the species: Fretter & Graham 1985: 444-449, Fig. 314.

Previous records: This species is one of the most common littoral Gastropods of the Faroes and is to be found in almost any place at the coasts of the islands (Spärck & Thorson 1933).

BIOFAR stations: Not recorded during BIOFAR 1.

World distribution: Southwest Greenland, Iceland, the



Faroes, Murman coast and whole Norwegian coast south to northwestern Kattegat, British Isles, Ireland south to Spain, the Azores, the Canarie Islands; in east America from south Labrador to New York.

World bathymetrical range: 0-55 m.

Remarks: A common species during BIOFAR 2.

## Family BUCCINIDAE

### Genus *Buccinum* Linnaeus, 1758

#### *Buccinum cyaneum* Bruguière, 1792

Synonyms: *Buccinum groenlandicum* Chemnitz, 1788 (not binominal), *Buccinum tenebrosus* Hancock, 1846.

Reference to best description of the species: Macpherson 1971: 89-91, Pl. 6, fig. 9; G.O. Sars 1878: 259-261, Pl. 25, fig. 1, Pl. 13, fig. 9a-b.

Previous records: None.

BIOFAR stations: 077, 121, 124, 420.

Bathymetrical range within the area: 99-728 m.

Substrate: Coarse sand, shell-sand, gravel.

Temperature: 0.9 - 2.6 °C (M: 2 stns), 3.1 - 9.1 °C (E)

Water mass: AW (1), AW/AI (2), AW/AI/NW (1).

World distribution: West and southeast Greenland, Iceland, the Faroes, Svalbard, Arctic Russia, Norwegian coast south to Lofoten; in east America from Ellesmere Island to Labrador; in the Pacific Ocean from the Bering Strait south to British Columbia.

World bathymetrical range: 0-728 m.

Checked by: JAS

#### *Buccinum humphreysianum* Bennett, 1824

Synonyms: *Buccinum humphreysianum* Bennett, 1824, *Buccinum fusiforme* Kiener, 1834, *Buccinum striatum* Philippi, 1844, *Buccinum monterosatoi* Locard, 1886.

Reference to best description of the species: Fretter & Graham 1985: 489-490, Fig. 338-339; Bouchet & Warén 1985: 188-189, Figs 486, 494-496.

Previous records: None.

New records: BIOFAR stations 341, 357, 699.

Bathymetrical range within the area: 205-864 m.

Substrate: Mud, sand, fine gravel, coarse stones.

Temperature: 1.5 - 7.7 °C (E).

Water mass: AW (1), AW/AI (1), AW/AI/NW (1).

World distribution: From east of Iceland, the Faroes and

Finmark in northern Norway to western Morocco and the western part of the Mediterranean.

World bathymetrical range: 15-1190 m.

Checked by: AW

#### *Buccinum hydrophanum* Hancock, 1846

Reference to best description of the species: Fretter & Graham 1985: 491-492, Fig. 340.

Previous records: Triton stn. 4.

New records: Not found during BIOFAR 1.

Bathymetrical range within the area: 600-800 m.

World distribution: West and east Greenland, Iceland, the Faroes and Shetland, Svalbard, Franz Joseph Land, Siberian Ice Sea, Murman coast south to the Trondheimsfjord in Norway; in east America from Arctic Canada to Newfoundland.

World bathymetrical range: 3-1200 m.

#### *Buccinum kjennerudae* Bouchet & Warén, 1985

Synonym: *Buccinum sulcatum* Friele, 1882.

Reference to best description of the species: Bouchet & Warén 1985: 190, Figs 442, 460, 502-504.

Previous records: None.

New records: BIOFAR stations 335.

Bathymetrical range within the area: 997 m.

Substrate: Sand and fine gravel.

Temperature: 3.7° (E).

Water mass: AW/AI.

World distribution: Davis Strait in west Greenland, the Faroes and north of Lofoten in northern Norway.

World bathymetrical range: 300-1150 m.

Checked by: AW

#### *Buccinum nivale* Friele, 1882

Reference to best description of the species: Friele 1882: 32, Pl. 3, figs 24-25; Warén 1993: 189-192, Fig. 29a-b.

Previous records: None.

New records: BIOFAR stations 275, 500.

Bathymetrical range within the area: 714-804 m.

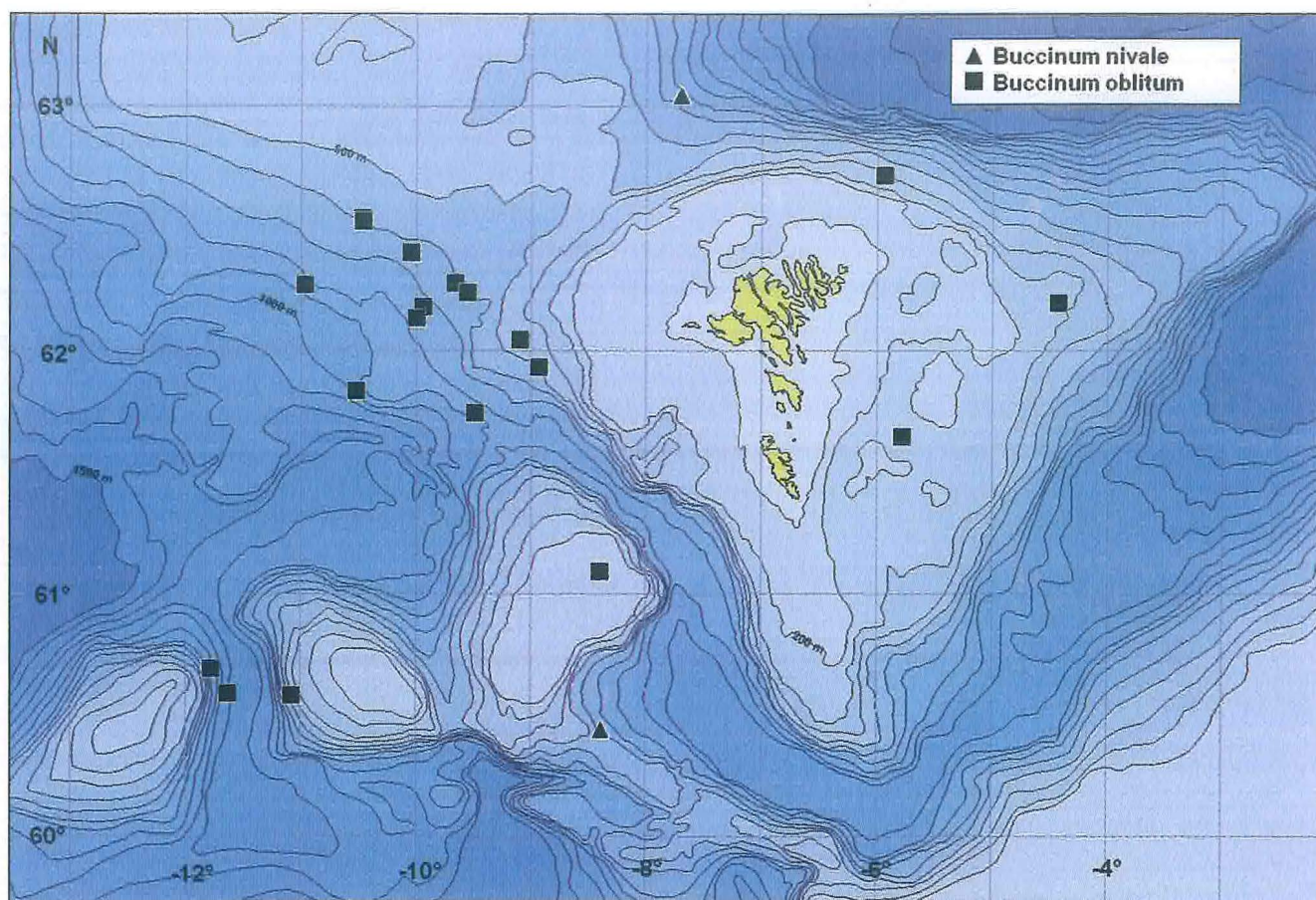
Substrate: Coarse sand, gravel, stones.

Temperature: +0.65 - +0.05 °C (E).

Water mass: NW.

World distribution: East Greenland, northern Iceland, the Faroes, west and north of Lofoten in northern Norway, Kara Sea; in east America in the northeast Arctic Canada.





World bathymetrical range: 100-1000 m.  
Checked by: AW

### *Buccinum oblitum* Sykes, 1911

Reference to best description of the species: Bouchet & Warén 1985:189, Figs 500-501.

Previous records: None.

New records: BIOFAR stations 019, 077, 118, 122, 124, 217, 264, 317, 334, 335, 343, 418, 420, 421, 515, 517, 699, 739, 747.

Bathymetrical range within the area: 99-1099 m.

Substrate: Sand, gravel, stones.

Temperature: 1.5 - 9.1 °C (E).

Water mass: AW (3), AW/AI (9), AI (1), AW/AI/NW (4).

World distribution: Southern Iceland, the Faroes, the Korsfjord in western Norway, the seamounts off southwestern Portugal and the Strait of Gibraltar.

World bathymetrical range: 200-1100 m.

Remarks: Except for the live records from the Faroes the

species is mainly known from dead shells.  
Checked by: AW

### *Buccinum undatum* Linnaeus, 1758

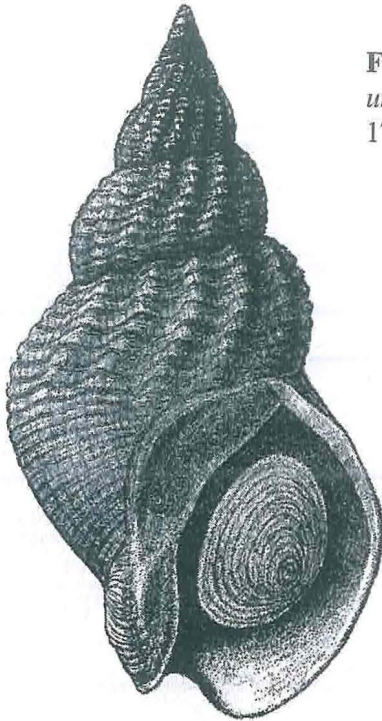
Fig. 22.

Reference to best description of the species: Fretter & Graham 1985: 486-489, Fig. 336-337.

Previous records: At the Faroes found at the northern as well as the southern islands in almost equal frequency in the fjords and off the islands (Spärck & Thorson 1933).

New records: BIOFAR stations 003, 006, 007, 019, 027, 028, 029, 047, 076, 080, 082, 090, 098, 102, 105, 107, 108, 110, 111, 118, 119, 124, 165, 168, 169, 171, 174, 175, 189, 192, 204, 230, 268, 274, 275, 286, 288, 289, 292, 297, 311, 325, 330, 331, 333, 341, 343, 344, 345, 346, 349, 350, 351, 352, 356, 357, 363, 364, 365, 366, 367, 368, 371, 372, 381, 382, 398, 420, 421, 447, 451, 452, 454, 467, 482,





**Fig 22.** *Buccinum undatum* (Linnaeus, 1758)

483, 499, 500, 512, 536, 538, 543, 544, 545, 597, 600, 601, 603, 605, 606, 607, 678, 691, 698, 699, 725, 726, 727, 728, 732, 734, 738, 739, 757, 760, 764

Bathymetrical range within the area: 32-1319 m.

Substrate: Sandy mud, gravel, stones.

Temperature: +0.9 - 9.1 °C (E).

Water mass: AW (89), AW/AI (13), AI (4), AI/NW (5), AW/AI/NW (7), NW (11).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Novaya Zemlya, White Sea and Barents Sea south to Gibraltar (probably only as subfossil in the Mediterranean); in east America from Hudson Strait to New Jersey; in the Pacific Ocean at Point Barrow in Alaska.

World bathymetrical range: 0-1500 m.

Remarks: Referring to Dautzenberg & Fischer (1912) Spärck & Thorson (1933) mentions four varieties of the species *B. undatum* at the Faroes: *flexuosa*, *vulgaris*, *carinatum* and *zetlandicum*. Recorded commonly during BIOFAR 2.

Checked by: AW

## Genus *Colus* Röding, 1798

***Colus gracilis*** (da Costa, 1778) Fig. 23.  
Synonyms: *Buccinum gracile* da Costa, 1778, *Sipho glaber* Verkrüzen in Kobelt, 1876.

Reference to best descriptions of the species: Fretter & Graham 1985: 470-471, Fig. 326; Bouchet & Warén 1985: 227-228, Figs 414-416, 587-589, 592-605.

Previous records: Simpson (1910): stns 16, 16a; N, E and S of Mykines, Akraleiti, at Tórshavn, N of Viðoy and Vestmanna in 10-24 m depth (Spärck & Thorson 1933).

New records: BIOFAR stations 003, 006, 070, 071, 073, 080, 090, 095, 097, 105, 124, 147, 153, 158, 163, 170, 204, 268, 274, 280, 285, 286, 289, 297, 299, 301, 302, 307, 308, 309, 313, 315, 317, 320, 322, 323, 324, 329, 330, 345, 348, 351, 352, 354, 357, 361, 363, 364, 381, 390, 401, 418, 419, 425, 453, 456, 457, 468, 473, 482, 483, 493, 494, 495, 496, 497, 499, 501, 503, 508, 509, 511, 514, 515, 524, 525, 538, 543, 586, 593, 595, 597, 598, 601, 603, 620, 621, 646, 647, 678, 691, 695, 696, 698, 705, 716, 717, 718, 720, 721, 724, 725, 728, 729, 730, 731, 732, 738, 748, 758, 762, 764, 765, 778, 9012.

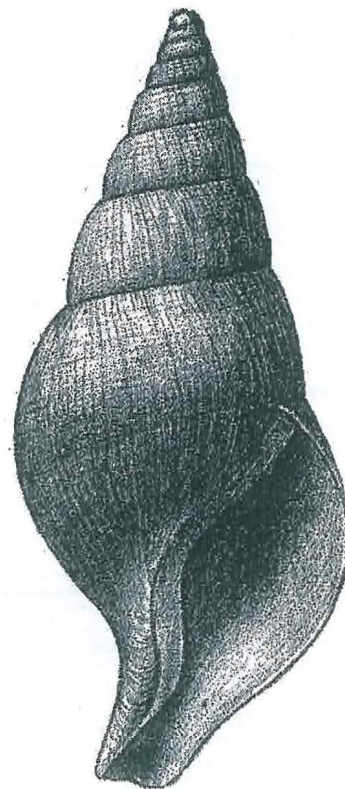
Bathymetrical range within the area: 100-1319 m.

Substrate: Coarse sand, shell-sand, gravel, large stones.

Temperature: +0.9 - 8.8 °C (E).

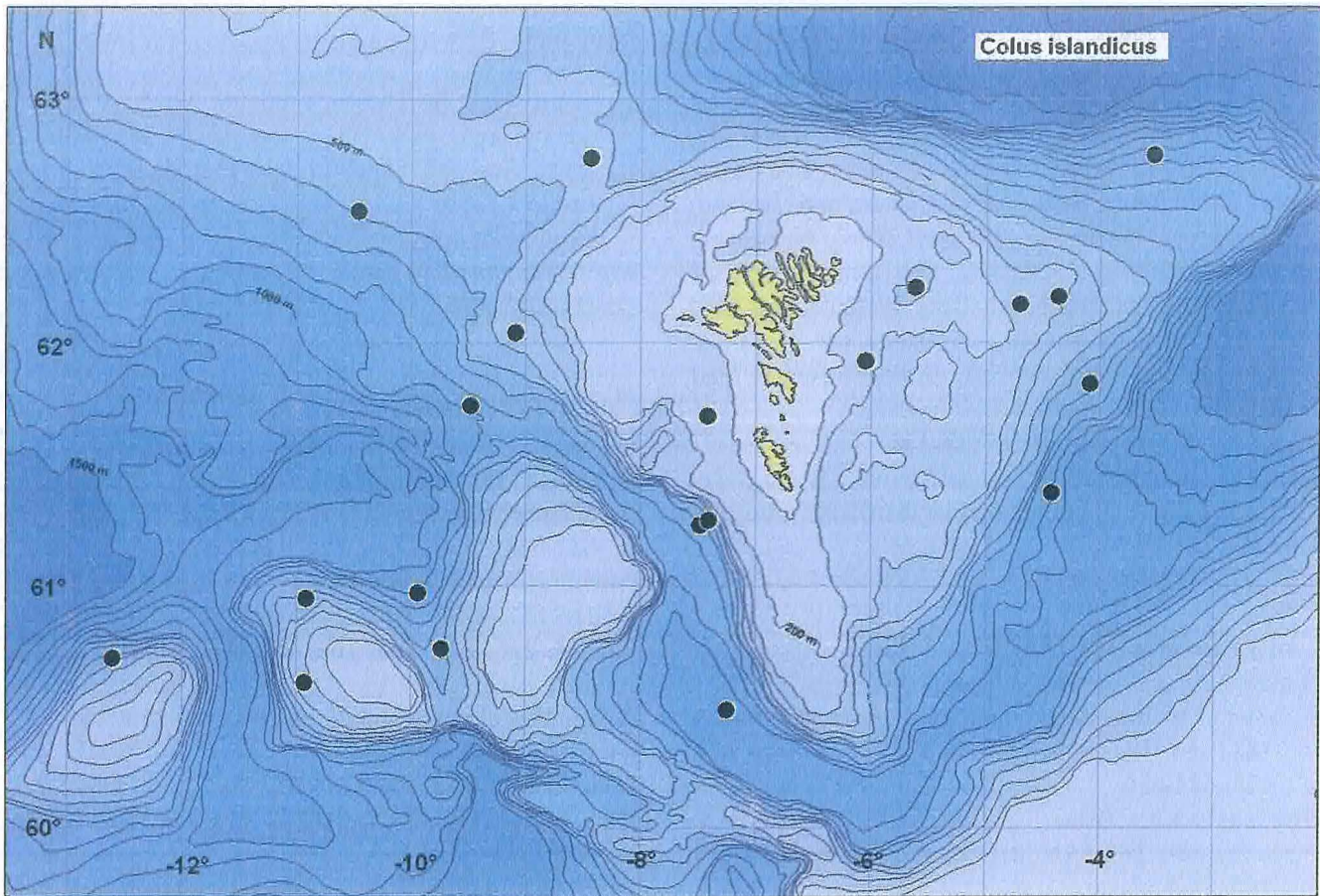
Water mass: AW (70), AW/AI (15), AI (6), AI/NW (5), AW/AI/NW (7), NW (11).

World distribution: Southeast Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, the Murman coast southwards along the Scandinavian coasts to



**Fig 23.** *Colus gracilis* (da Costa, 1778)





southern Kattegat, British Isles, Ireland and south to Portugal.

World bathymetrical range: 50-1500 m.

Remarks: *C. gracilis* is a highly variable species that occurs in several morphologic geographical and bathymetrical forms.

Checked by: AW

### *Colus holboelli* (Møller, 1842)

Synonyms: *Fusus holbölli* Møller, 1842, *Fusus tortuosus* Reeve, 1855, *Sipho tortuosus* var. *attenuata* G.O. Sars, 1878, *Fusus delicatus* Jeffreys, 1883.

Reference to best description of the species: Bouchet & Warén 1985: 228-229, Figs 419-421, 471, 606-611.

Previous records: Triton stns 8, 9.

New records: BIOFAR stations 015, 082, 184, 188, 230, 308, 310, 343, 344, 359, 415, 454, 459, 477, 491, 492, 494, 496, 500, 501, 515, 517, 525, 695, 9012.

Bathymetrical range within the area: 69-1150 m.

Substrate: Fine sand, gravel.

Temperature: +0.85 - 8.3 °C (E).

Water mass: AW (7), AW/AI (9), NW (9).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Norwegian Sea and along the whole Norwegian coast south to the Fensfjord in Hordaland county; in east America from Prince Regent Inlet to Ungava Bay.

World bathymetrical range: 10-1500 m.

Checked by: AW

### *Colus islandicus* (Mohr, 1786)

Synonym: *Murex islandicus* Mohr, 1786.

Reference to best description of the species: Fretter & Graham 1985: 471-473, Fig. 327; Bouchet & Warén 1985: 229, Figs 479, 612-616.

Previous records: Triton stns 8, 9; Faroe Bank, Tórshavn (Spärck & Thorson 1933).

New records: BIOFAR stations 118, 268, 319, 361, 382, 420, 490, 494, 523, 543, 563, 599, 603, 646, 647, 695, 699, 731, 757, 764.



Bathymetrical range within the area: 139-1083 m.

Substrate: Sand, gravel, stones.

Temperature: +0.9 - 8.5 °C (E).

Water mass: AW (8), AW/AI (5), AI (1), AW/AI/NW (2), NW (4).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, whole Norwegian coast south to Lindesnes, the outer parts of Skagerrak and the North Sea, Shetland and west of the British Isles, Bay of Biscay, off Spain and Morocco; in east America from Prince Regent Inlet south to Newfoundland and Virginia.

World bathymetrical range: 5-2000 m.

Remarks: In the Arctic *C. islandicus* occurs shallower than in the southern parts of its distribution area.

Checked by: AW

### *Colus latericeus* (Møller, 1842)

Synonym: *Fusus latericeus* Møller, 1842.

Reference to best description of the species: Møller 1842: 88; Bouchet & Warén 1985: 231, Figs 423, 478, 634-636.

Previous records: None.

New records: BIOFAR stations 275, 292, 420, 458, 482.

Bathymetrical range within the area: 509-804 m.

Substrate: Coarse gravel.

Temperature: +0.57 - 3.1 °C (E).

Water mass: AI (1), AI/NW (1), AW/AI/NW (1), NW (2).

World distribution: West Greenland, Northwest and north Iceland, the Faroes, Jan Mayen, Svalbard, Barents Sea, northern Norwegian coast south to Tromsø.

World bathymetrical range: 20-800 m.

Checked by: AW

### *Colus sabini* Gray, 1824

Synonyms: *Buccinum sabini* Gray, 1824, *Fusus togatus* Mörch, 1869, *Fusus ebur* Mörch, 1869, *Neptunea hanseni* Friele, 1879, *Fusus hirsutus* Jeffreys, 1883.

Reference to best description of the species: Fretter & Graham 1985: 475-476, Fig 330; Bouchet & Warén 1985: 232-233, Figs 418, 472, 647-652.

Previous records: Triton stns 8, 9.

New records: BIOFAR stations 169, 563.

Bathymetrical range within the area: 808-1030.

Substrate: Soft bottom.

Temperature: +0.60 - 0.85 °C (E).

Water mass: NW.

World distribution: West and east Greenland, north and east Iceland, the Faroes, Svalbard, Novaya Zemlya, Laptev Sea, Norwegian Sea south to northern North Sea and Skagerrak; in east America from Arctic Canada to 150 miles south of Cape Race, Newfoundland.

World bathymetrical range: 35-1500 m.

Checked by: AW

### *Colus turgidulus* (Friele, 1877)

Synonym: *Fusus turgidula* Jeffreys in Friele, 1877.

Reference to best description of the species: Friele 1877: 8, Bouchet & Warén 1985: 234, Figs 417, 422, 470, 637-638.

Previous records: Triton stn. 9.

New records: BIOFAR stations 095, 122, 188, 230, 264, 274, 275, 292, 294, 361, 420, 477, 478, 479, 500, 563, 9012.

Bathymetrical range within the area: 570-1150 m.

Substrate: Mud, sand, gravel.

Temperature: +0.85 - 4.0 °C (E).

Water mass: AW/AI (2), AI/NW (1), AW/AI/NW (1), NW (13).

World distribution: East Iceland, the Faroes, between Svalbard and Norway along the slopes of the Norwegian Basin to the Faroe-Shetland Channel and Rockall Trough.

World bathymetrical range: 400-1150 m.

Remarks: The species glides into *C. gracilis*.

Checked by: AW

### *Colus verkruezeni* (Kobelt, 1876)

Synonyms: *Sipho verkrüzeni* Kobelt, 1876, *Neptunea virgata* Friele, 1879.

Reference to best description of the species: Kobelt 1876: 70, pl. 2 fig. 2; Bouchet & Warén 1985: 234, Figs 661-664.

Previous records: None.

New records: BIOFAR stations 080, 095, 424, 425.

Bathymetrical range within the area: 509-803 m.

Substrate: Fine sand.

Temperature: +0.6 - 1.6 °C (E).

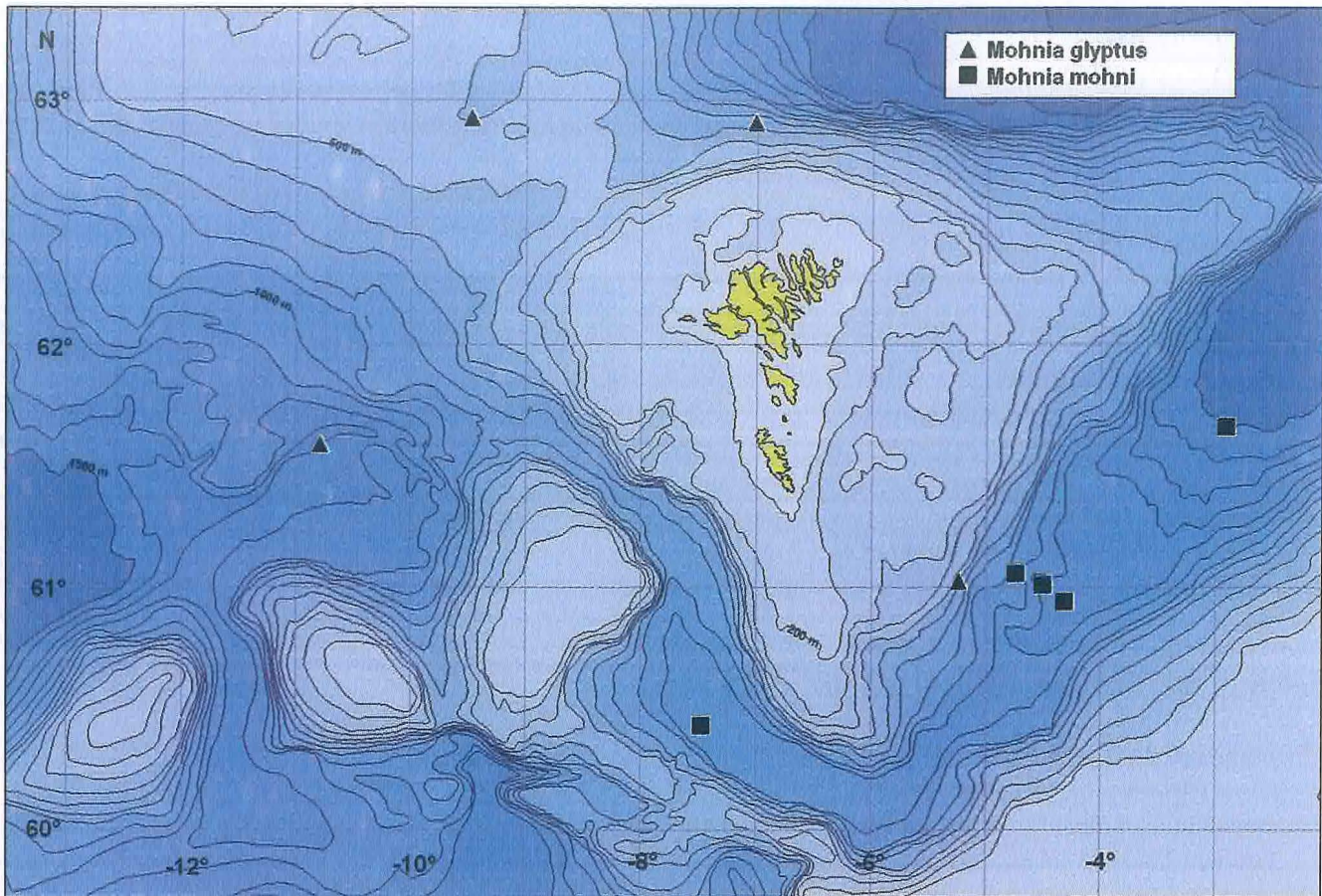
Water mass: AI (2), AW/AI/NW (1), NW (1).

World distribution: East Greenland, north Iceland, the Faroes, Svalbard, Kara Sea, Finnmark in northern Norway.

World bathymetrical range: 30-800 m.

Checked by: AW





### Genus *Liomesus* Stimpson, 1865

#### *Liomesus ovum* (Turton, 1825)

Synonyms: *Buccinum ovum* Turton, 1825, *Tritonium eburneum* M. Sars, 1851.

Reference to best description of the species: Fretter & Graham 1985: 464-465, Figs 322-323; Bouchet & Warén 1985: 186, Figs 440, 461, 490-491.

Previous records: None.

New records: BIOFAR stations 019, 314, 467, 493, 500, 505.

Bathymetrical range within the area: 276-800 m.

Substrate: Shell-sand, gravel.

Temperature: +0.05 - 8.4 °C (E).

Water mass: AW (3), AW/AI (2), NW (1).

World distribution: West and northwest of Iceland, the Faroes and from Lofoten in northern Norway south to the western North Sea, Shetland, west Scotland and south to the extreme north of Bay of Biscay.

World bathymetrical range: 100-1175 m.

Checked by: AW

### Genus *Mohnia* Friele in Kobelt, 1878

#### *Mohnia glyptus* (Verrill, 1882)

Synonym: *Sipho glyptus* Verrill, 1882.

Reference to best description of the species: Verrill 1882: 505, pl. 52, fig. 22, pl. 53, fig. 1; Bouchet & Warén 1985: 213, Figs 430, 453, 552-554.

Previous records: None.

New records: BIOFAR stations 425, 458, 482, 696.

Bathymetrical range within the area: 509-1319 m.

Substrate: Mud, sand, gravel.

Temperature: +0.57 - 3.0 °C (E).

Water mass: AI (1), AW/AI/NW (1), AI/NW (1), NW (1).

World distribution: West Greenland, south of Iceland, the Faroes; in east America off New Jersey.

World bathymetrical range: 300-1319 m.

Checked by: AW



***Mohnia mohni* (Friele, 1877)**

Synonyms: *Fusus mohni* Friele, 1877, *Fusus concinnus* Jeffreys, 1883.

Reference to best description of the species: Friele 1877: 6, Bouchet & Warén 1985: 205-206, Figs 435, 482, 530-531.

Previous records: Triton stns 8, 9.

New records: BIOFAR stations 227, 294, 477, 478, 564.

Bathymetrical range within the area: 973-1500 m.

Substrate: Mud, sand, gravel.

Temperature: +0.89 - +0.80 °C (E).

Water mass: NW.

World distribution: The Faroes, Norwegian Sea and Arctic abyssal basins.

World bathymetrical range: 650-3800 m.

Checked by: AW

**Genus *Neptunea* Röding, 1798*****Neptunea antiqua* (Linnaeus, 1758)**

Synonym: *Murex antiqua* Linnaeus, 1758.

Reference to best description of the species: Fretter & Graham 1985: 481-483, Fig. 333.

Previous records: Tvøroyri in Trongisvágssfjørður (0-6 m), Sørvágur (0 m), Vestmanna (6-10 m), Vík in Sundini (25 m) (Spärck & Thorson 1933).

New records: BIOFAR station 103.

Bathymetrical range within the area: 32 m.

Substrate: Mud.

Temperature: 7.6 °C (E).

Water mass: AW.

World distribution: The Faroes, North Sea and around the British Isles and Ireland.

World bathymetrical range: 15-1000 m.

Checked by: JAS

***Neptunea despecta* (Linnaeus, 1758)**

Fig. 24.

Synonyms: *Fusus despectus* Linnaeus, 1758, *Murex carinatus* Pennant, 1777.

Reference to best description of the species: G.O. Sars 1878: 267-268, Pl. 14, fig. 4a-c; Fretter & Graham 1985: 483-484, Figs 334-335.

Previous records: Simpson (1910): 16a; Trongisvágssfjørður. Also the variety *carinata* Pennant, 1777 has

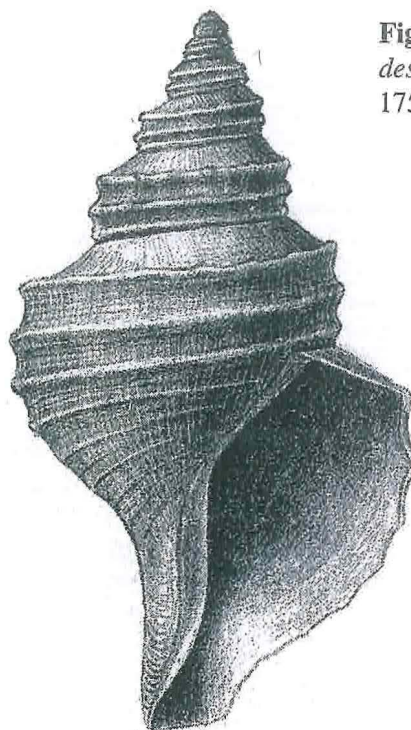


Fig 24. *Neptunea despecta* (Linnaeus, 1758)

been recorded alive but only labelled the Faroes (Spärck & Thorson 1933).

New records: BIOFAR stations 003, 105, 122, 271, 295, 335, 341, 343, 350, 354, 366, 425, 456, 458, 499, 500, 509, 515, 543, 544, 589, 598, 601, 602, 605, 606, 698, 727, 728, 732, 734.

Bathymetrical range within the area: 75-997 m.

Substrate: Sand, shell-sand, gravel.

Temperature: +0.57 - 8.6 °C (E).

Water mass: AW (16), AW/AI (7), AI (4), AI/NW (1), NW (2), AW/AI/NW (1).

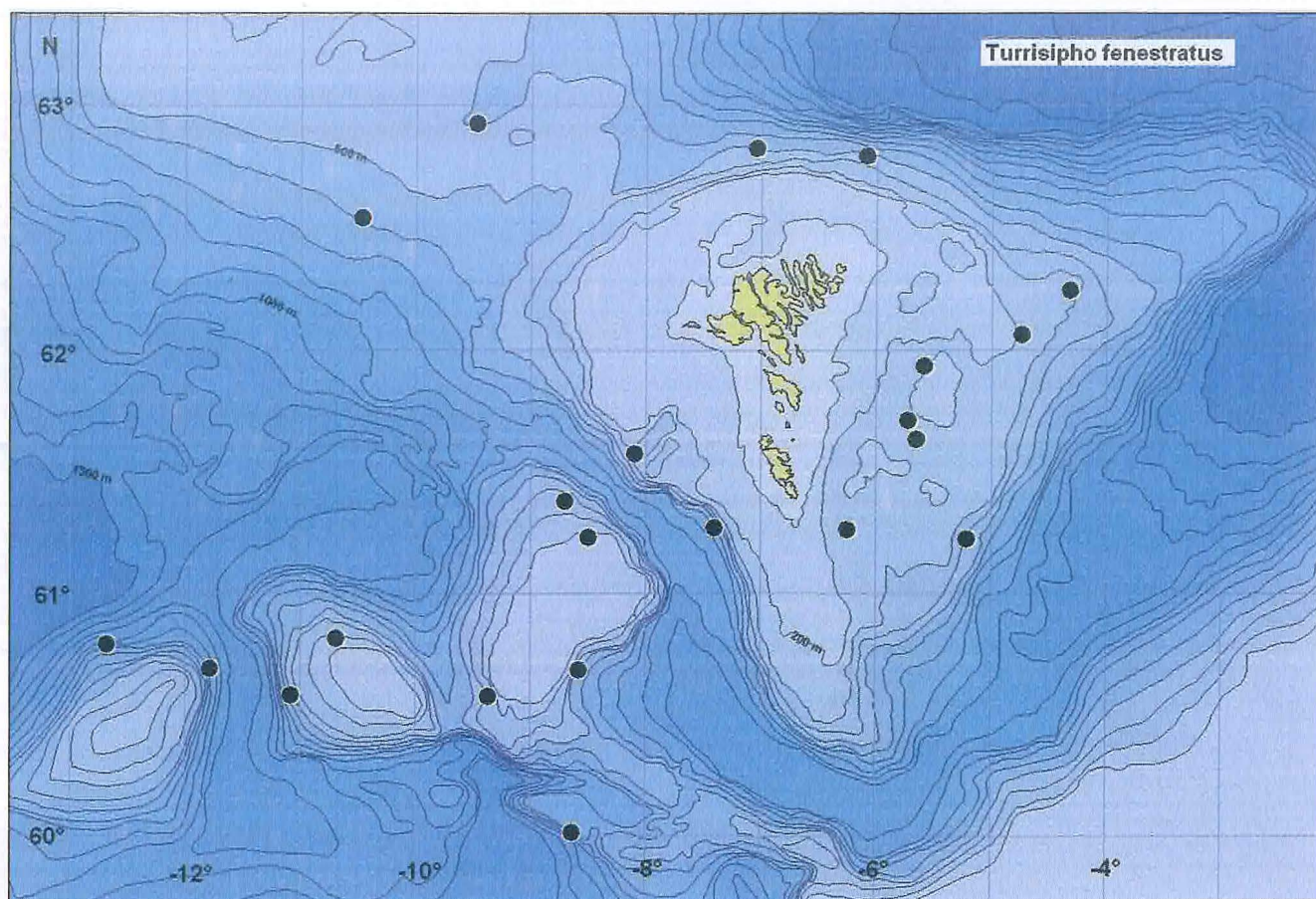
World distribution: West and east Greenland, Iceland, the Faroes, Norwegian Sea, Jan Mayen, Svalbard, Bear Island, Franz Joseph Land, Novaya Zemlya, Barents Sea, Kara Sea, Siberian Arctic seas, White Sea, Murman coast south along the Norwegian coast to Skagerrak and northern North Sea, Shetland, northwestern coast of Ireland, Portugal; in east America from Arctic Canada south to Massachusetts; in the Pacific Ocean through Bering Strait to Japan.

World bathymetrical range: 6-1400 m.

Remarks: Commonly recorded during BIOFAR 2.

Checked by: AW





## Genus *Turrisipho* Dautzenberg & Fischer, 1912

### *Turrisipho dalli* (Friele, 1881)

Synonym: *Sipho dalli* Friele in Tryon, 1881.

Reference to best description of the species: Friele 1882: 19-20, Pl. 2, fig 18-19; Bouchet & Warén 1985: 215, Figs 557-558.

Previous records: None.

New records: BIOFAR stations 271, 290, 292, 344, 421, 424, 454, 457, 482, 483, 698, 727, 728, 733.

Bathymetrical range within the area: 370-643 m.

Substrate: Mud, sand, shell-sand, coarse gravel.

Temperature: 0.5 - 5.9 °C (E).

Water mass: AW/AI (7), AI (3), AI/NW (3), AW/AI/NW (1).

World distribution: East of Iceland, the Faroes, Barents Sea, whole north Norwegian coast and coastal shelf south to Bergen and the Faroe-Shetland Channel.

World bathymetrical range: 250-1160 m.

Checked by: AW

### *Turrisipho fenestratus* (Turton, 1834)

Synonyms: *Buccinum fusiforme* Broderip, 1830, *Siphonorbis fusiformis* Broderip, 1830, *Fusus fenestratus* Turton, 1834.

Reference to best description of the species: Fretter & Graham 1985: 477-478, Fig. 331; Bouchet & Warén 1985: 217, Figs 406, 483, 571-574, 591.

Previous records: Simpson (1910): stn. 16.

New records: BIOFAR stations 065, 071, 073, 149, 158, 175, 233, 301, 317, 324, 357, 420, 425, 457, 466, 508, 515, 525, 593, 621, 647, 778.

Bathymetrical range within the area: 158-1006 m.

Substrate: Sand, coarse gravel, stones.

Temperature: 1.6 - 8.6 °C (E).

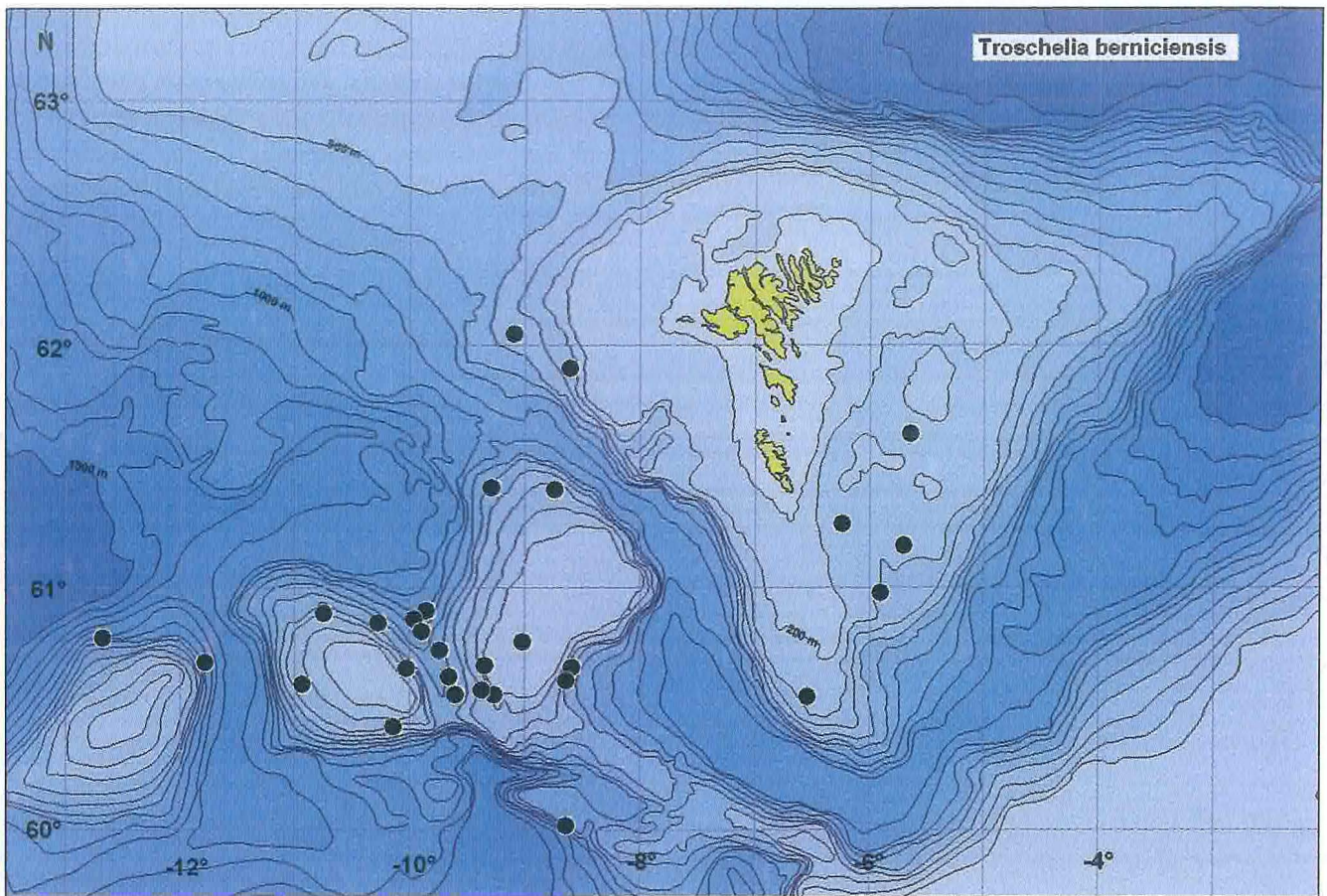
Water mass: AW (14), AW/AI (6), AI (1), AW/AI/NW (1).

World distribution: Southeast Greenland, southwest and south of Iceland, the Faroes, whole Norwegian coast, off western coast of Scotland, southwest Ireland, Bay of Biscay and off Morocco.

World bathymetrical range: 50-1200 m.

Checked by: AW





***Turrisipho lachesis* (Mørch, 1869)**

Synonyms: *Fusus lachesis* Mørch, 1869, *Sipho undulatus* Friele, 1881, *Sipho costiferus* Posselt, 1898.

Reference to best description of the species: G.O. Sars 1878: 274-275, Pl. 15, fig. 6, Bouchet & Warén 1985: 215-216, Figs 409, 458, 560-566.

Previous records: Triton stn. 9.

New records: BIOFAR stations 015, 080, 095, 169, 172, 189, 230, 263, 267, 269, 271, 274, 275, 344, 425, 447, 457, 458, 459, 482, 489, 500, 720, 729, 730.

Bathymetrical range within the area: 498-1200 m.

Substrate: Mud, sand, gravel, stones.

Temperature: +0.7 - 4.0 °C (E).

Water mass: AW/AI (3), AI (5), AI/NW (2), AW/AI/NW (2), NW (13).

World distribution: Southwest and southeast Greenland, north and northwest Iceland, the Faroes, Svalbard, Barents Sea, Kara Sea, Norwegian coast south to Møre county; in east America Davis Strait and off Newfoundland.

World bathymetrical range: 200-1500 m.

Checked by: AW

***Turrisipho moebii* (Dunker & Metzger, 1874)**

Synonyms: *Tritonofusus moebii* Dunker & Metzger, 1874, *Fusus ebur* Friele, 1877, *Sipho sarsi* Jeffreys in G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1985: 478-479, Fig. 332; Bouchet & Warén 1985: 217, Figs 407-408, 455, 575-578.

Previous records: Some very easily determinable fragments of shells taken southwest of Mykines (Spärck & Thorson 1933).

New records: BIOFAR stations 119, 164, 175, 287, 295, 309, 357, 364, 621, 646, 698, 705, 731, 733, 764, 765.

Bathymetrical range within the area: 191-1042 m.



Substrate: Sand, gravel, stones.  
 Temperature: +0.9 - 8.4 °C (E).  
 Water mass: AW (9), AW/AI (4), AI (1), NW (2)  
 World distribution: South Iceland, the Faroes, Bear Island, Barents Sea, whole Norwegian coast south to Skagerrak.  
 World bathymetrical range: 190-1050 m.  
 Checked by: AW

### Genus *Troschelia* Mørch, 1876

#### *Troschelia berniciensis* (King, 1846)

Synonym: *Fusus berniciensis* King, 1846.  
 Reference to best description of the species: G.O. Sars 1878: 278-279, Pl. 14, fig 2, Bouchet & Warén 1985: 193, Figs 412, 484-485, 505-510.  
 Previous records: Triton stns 8, 13.  
 New records: BIOFAR stations 043, 049, 069, 070, 090, 118, 149, 158, 301, 308, 316, 319, 322, 323, 324, 333, 491, 492, 493, 494, 495, 496, 504, 506, 511, 515, 525, 586, 589, 596.  
 Bathymetrical range within the area: 105-1006 m.  
 Substrate: Sand, gravel, stones.  
 Temperature: 6.2 - 8.7 °C (E).  
 Water mass: AW (27), AW/AI (4).  
 World distribution: Between Greenland and Iceland, the Faroes, Jan Mayen, whole Norwegian coast south to Bergen and western North Sea, western Scotland and further to off northwest Africa (25°N).  
 World bathymetrical range: 90-2000 m.  
 Checked by: TS

### Genus *Beringius* Dall, 1886

#### *Beringius turtoni* (Bean, 1834)

Synonyms: *Fusus turtoni* Bean, 1834, *Chrysodomus turtoni* G.O. Sars, 1878, *Neptunea ossiania* Friele, 1879.  
 Reference to best description of the species: Fretter & Graham 1985: 466-467, Fig. 324; Bouchet & Warén 1985: 197-198, Figs 446-447, 466, 514-516, 519.  
 Previous records: None.  
 New records: BIOFAR stations 459, 620, 699, 705.  
 Bathymetrical range within the area: 260-1038 m.  
 Substrate: Coarse shell-gravel, gravel, corals.  
 Temperature: +0.83 - 7.0 °C (E).  
 Water mass: AW (1), AW/AI/NW (1), NW (2).  
 World distribution: West Greenland, between Greenland

and Svalbard, Iceland, the Faroes, Svalbard, north of Franz Joseph's Land, Bear Islands, Kola Peninsula south along the Norwegian coast to Bergen and the North Sea, east coast of England, Shetland and west coast of Scotland; in east America from Gulf of St. Lawrence south to Cape Race, Newfoundland.  
 World bathymetrical range: 25-1447 m.  
 Checked by: AW

### Genus *Volutopsius* Mørch, 1857

#### *Volutopsius norwegicus*

(Gmelin, 1791) Fig. 25.  
 Synonym: *Strombus norwegicus* Gmelin, 1791.  
 Reference to best description of the species: Fretter & Graham 1985: 468-469, Fig. 325; Bouchet & Warén 1985: 200, Figs 443-444, 467, 518, 520-524.  
 Previous stations: Triton stn. 3.  
 New records: BIOFAR stations 068, 089, 111, 118, 204, 274, 290, 297, 298, 315, 322, 330, 344, 346, 457, 474, 499, 524, 531, 546, 606, 691, 727, 732.  
 Bathymetrical range within the area: 50-742 m.  
 Substrate: Sand, shell-sand, gravel, stones.  
 Temperature: +0.6 - 8.6 °C (E).  
 Water mass: AW (12), AW/AI (8), AI (2), AW/AI/NW (1), NW (1).  
 World distribution: West and east Greenland, Iceland,

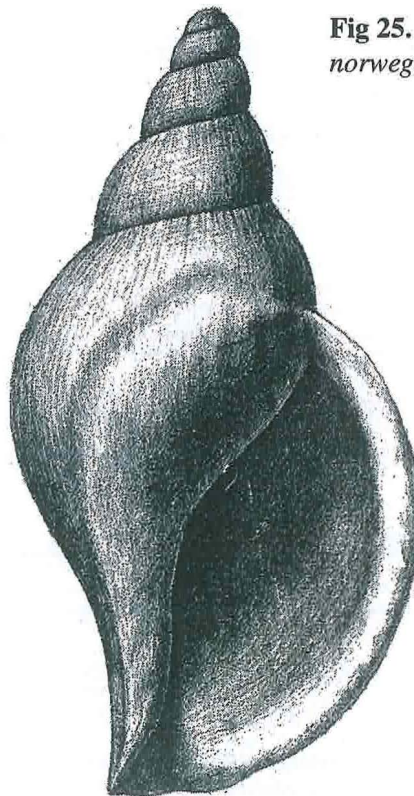


Fig 25. *Volutopsius norwegicus* (Gmelin, 1791)



the Faroes, Jan Mayen, Svalbard, Barents Sea, Murman coast south along the Norwegian coast to Møre county, the North Sea and east coast of England, Shetland, the Hebrides and west Scotland; in east America from Darnley Bay in Arctic Canada to George's Bank.

World bathymetrical range: 25-2000 m.

Checked by: AW

## Family NASSARIDAE

### Genus: *Nassarius* Duméril, 1806

#### *Nassarius incrassatus* (Strøm, 1768)

Synonym: *Buccinum incrassatum* Strøm, 1768, *Nassa incrassatus* Strøm, 1768, *Buccinum minutum* Pennant, 1777.

Reference to best description of the species: Fretter & Graham 1985: 498-500, Fig. 344.

Previous records: None.

New records: BIOFAR station 116.

Bathymetrical range within the area: 208 m.

Substrate: No information.

Temperature: 7,9 °C (E).

Water mass: AW.

World distribution: Iceland, the Faroes, whole Norwegian coast from Söröya in western Finnmark to Skagerrak, Kattegat and around the North Sea, British Isles, Ireland south into the Mediterranean, the Azores.

World bathymetrical range: 0-208 m.

Checked by: TS

## Family COLUMBELLIDAE

### Genus *Amphissa* H. & A. Adams, 1853

#### *Amphissa acutecostata*

(Philippi, 1844)

Fig. 26.

Synonyms: *Fusus costulatus* Cantraine, 1835, *Buccinum acutecostata* Philippi, 1844, *Columbella haliaeeti* Jeffreys, 1867, *Bela grimaldi* Dautzenberg, 1889, *Oenopota harpularia* Grieg, 1931.

Reference to best description of the species: Jeffreys 1869: 356-359, Pl. 88, fig. 3, Bouchet & Warén 1985: 165-167, Figs 392, 395-398.

Previous records: Triton stns 10, 13; Simpson (1910): stns 15b, 16.

New records: BIOFAR stations 027, 028, 068, 082, 295, 305, 317, 343, 418, 489, 490, 492, 493, 495, 497,

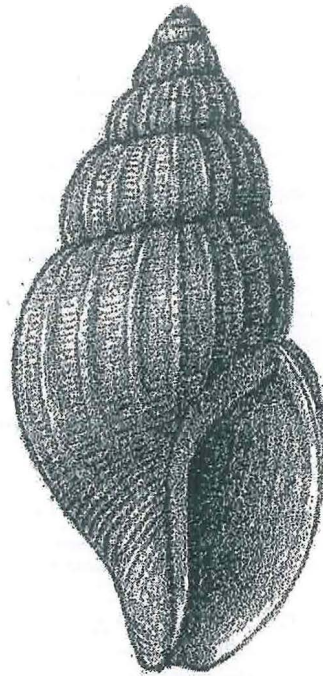


Fig 26. *Amphissa acutecostata* (Philippi, 1844)

504, 506, 514, 515, 516, 517, 518, 520, 522, 523, 524, 525, 677, 696, 698, 736, 739, 764.

Bathymetrical range within the area: 72-1319 m.

Substrate: Sand, gravel, small stones.

Temperature: 1.3 °C (M: 2 stns), +0.1 - 8.6 °C (E).

Water mass: AW: (21), AW/AI: (9), AI: (1), NW: (1), AW/AI/NW: (2).

World distribution: South of Iceland, the Faroes, Norwegian coast from Lofoten to Møre, the continental slopes of western Scotland and Ireland, Bay of Biscay south to 31°43'N, the Azores, Mediterranean; in east America off the coast south to North Carolina.

World bathymetrical range: 70-1319 m.

Checked by: TS

### Genus *Mitrella* Risso, 1826

#### *Mitrella rosacea* (Gould, 1840)

Fig. 27.

Synonyms: *Buccinum rosacea* Gould, 1840, *Pyrene rosacea* G. O. Sars, 1878, *Astyris rosacea* auct., *Fusus holbølli* Møller, 1842.

Reference to best description of the species: G. O. Sars 1878: 251, Pl. 16, fig. 1.

Previous records: None.

New records: BIOFAR stations 189, 698, 728.

Bathymetrical range within the area: 351-640 m.

Substrate: Sand, shell-sand, gravel.



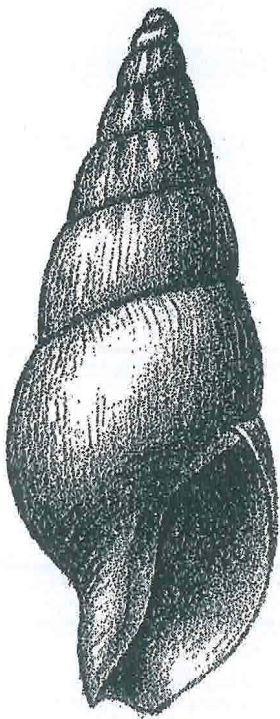
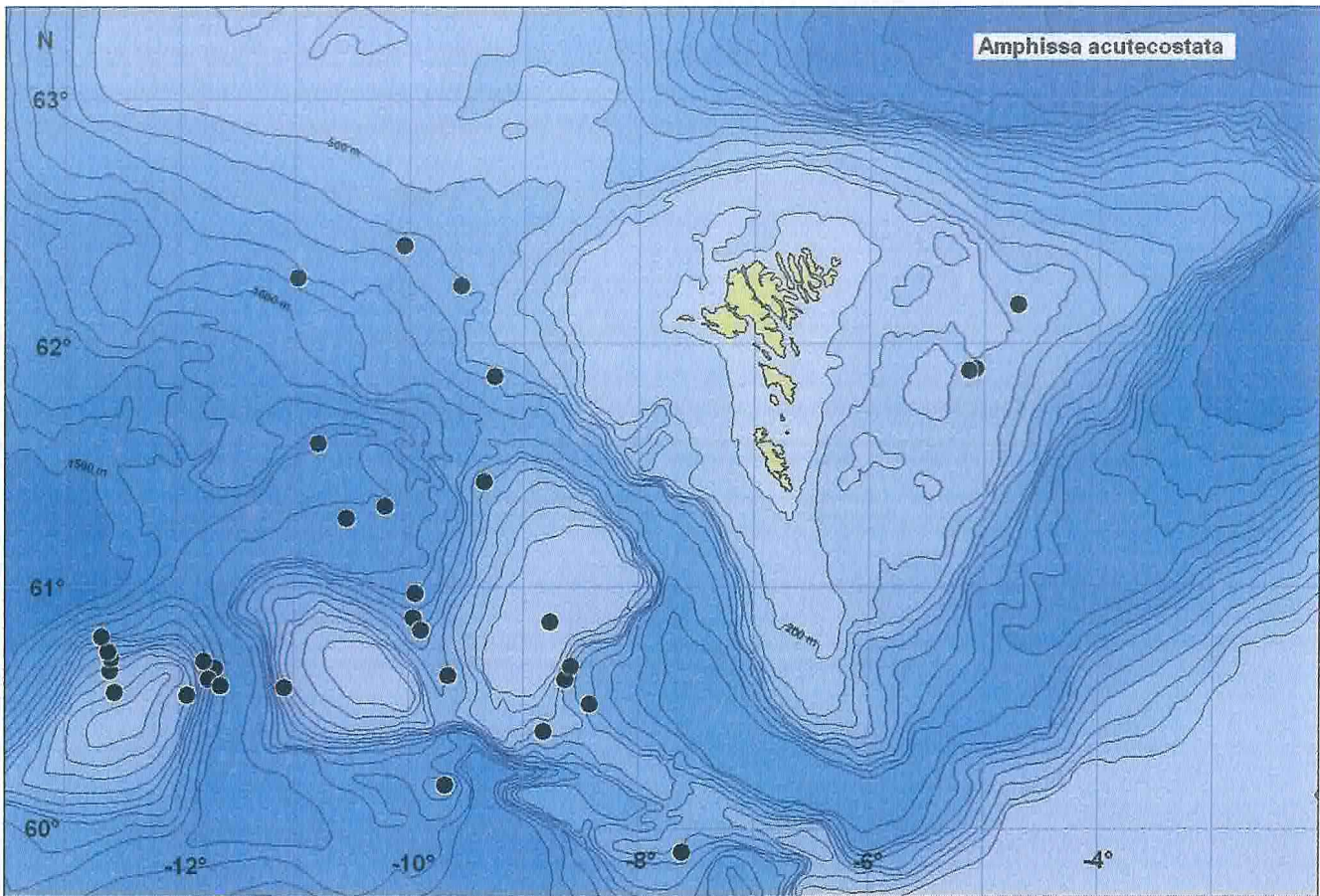


Fig 27. *Mitrella rosacea*  
(Gould, 1840)

Temperature: 7.9 °C (M: one stn.), 1.0 - 8.6 °C (E).

Water mass: AW(1), AI(1), AI/NW (1).

World distribution: West and southeast Greenland, north and east Iceland, the Faroes, Svalbard, Novaya Zemlya, White Sea, Murman coast and Norwegian coast south to Bergen; in east America from Labrador to Cape Cod; in the Pacific Ocean from the Bering Sea to Alaska.

World bathymetrical range: 1-640 m.

Checked by: TS

Family TURBINELLIDAE

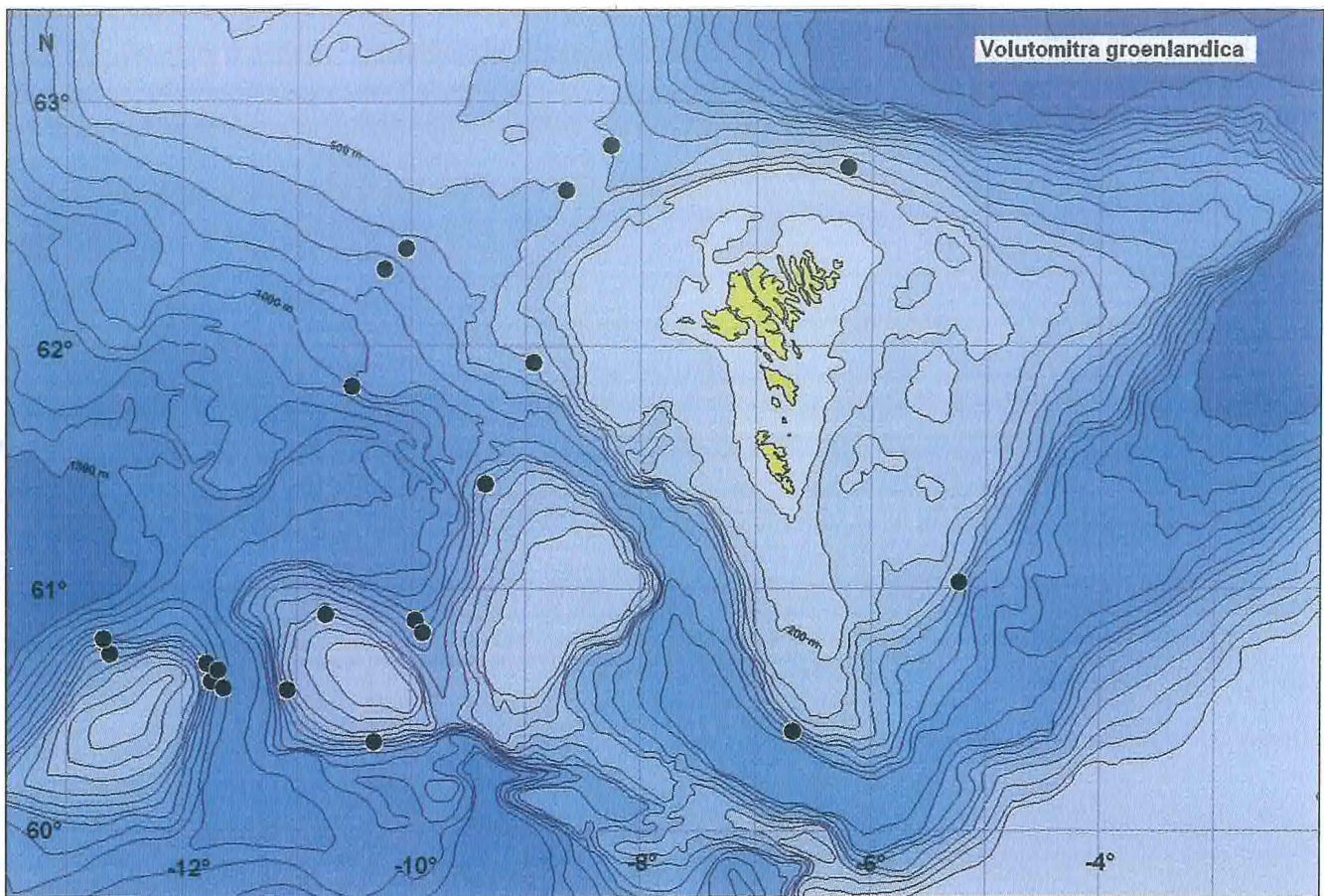
Genus *Metzgeria* Norman, 1879

*Metzgeria alba* (Jeffreys in Thomson, 1873)

Synonyms: *Latirus albus* Jeffreys in Thomson, 1873, *Lathyrus albellus* Dunker Metzger, 1874, *Meyeria pusilla* M. Sars in G.O. Sars, 1878.

Reference to best description of the species: G. O. Sars





1878: 245, Pl. 13, fig. 8, Bouchet & Warén 1985: 254, Figs 393, 677-678.

Previous records: Simpson (1910): stn.16a.

New records: BIOFAR stations 095, 274, 311, 315, 319, 345, 508, 515, 523, 524.

Bathymetrical range within the area: 293-803 m.

Substrate: Shell-sand and gravel.

Temperature: +0.6 - 8.5 °C (E).

Water mass: AW (7), AW/AI (1), NW (2).

World distribution: The Faroes and the Faroe-Shetland Channel, whole Norwegian coast south to West-Agder county. Records from Davis Strait and Iceland are based on dead shells.

World bathymetrical range: 100-1960 m.

Checked by: AW

Family VOLUTOMITRIDAE  
Genus *Volutomitra* H. & A. Adams,  
1853

*Volutomitra groenlandica*  
(Møller, 1842)

Fig. 28.

Synonym: *Mitra groenlandica* Beck in Möller, 1842.

Reference to best description of the species: Bouchet & Warén 1985: 251, Figs 391, 671-672.

Previous records: Simpson (1910): stns 16, 16a, 17.

New records: BIOFAR stations 068, 269, 292, 310, 317, 334, 335, 344, 354, 482, 492, 493, 514, 515, 516, 517, 524, 525, 596, 738, 739.

Bathymetrical range within the area: 317-1099 m.

Substrate: Sand, gravel.

Temperature: 0.5 - 8.6 °C (E).

Water mass: AW (9), AW/AI (7), AI (4), AI/NW (2), AW/AI/NW (1).

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Novaya Zemlya, off the



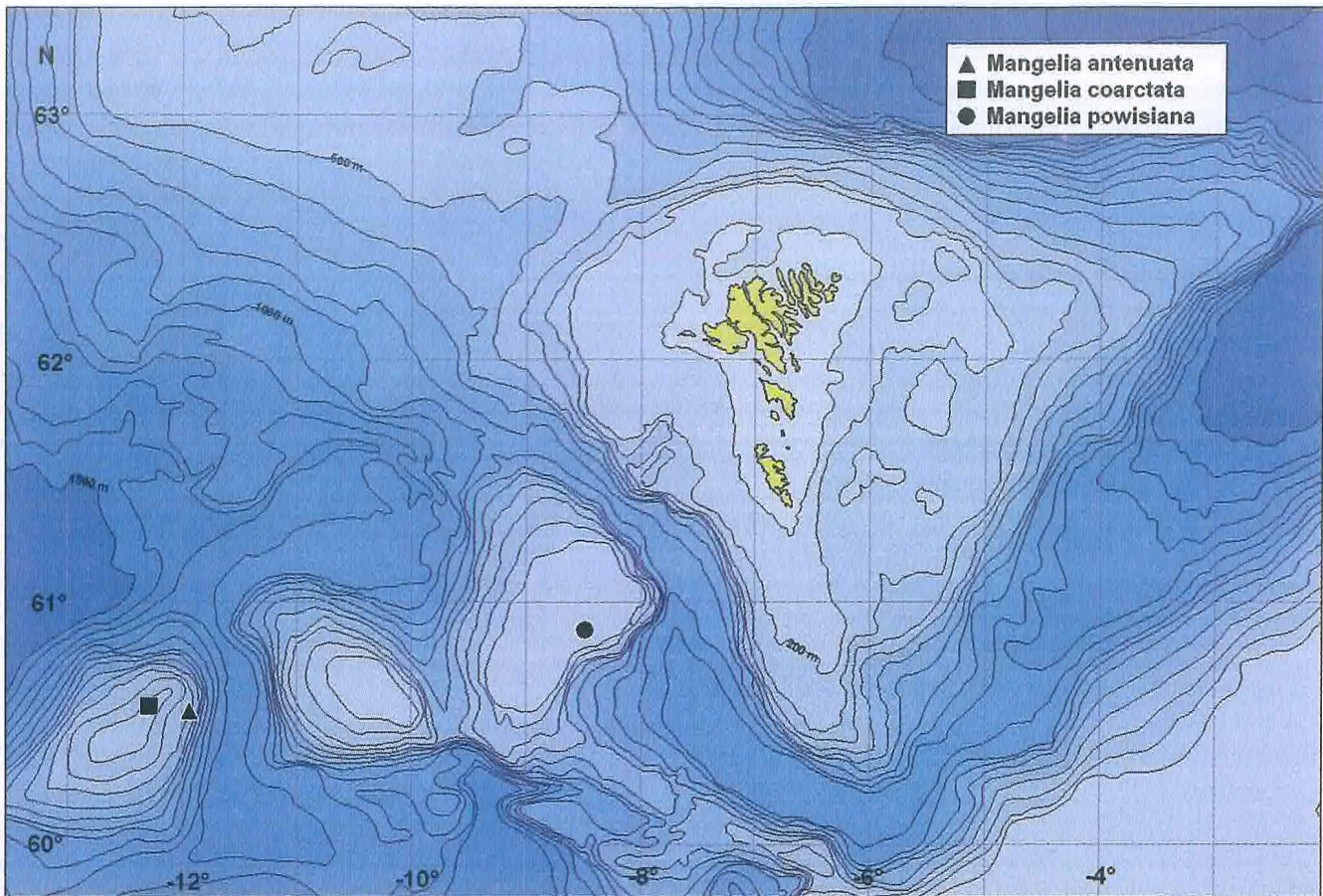
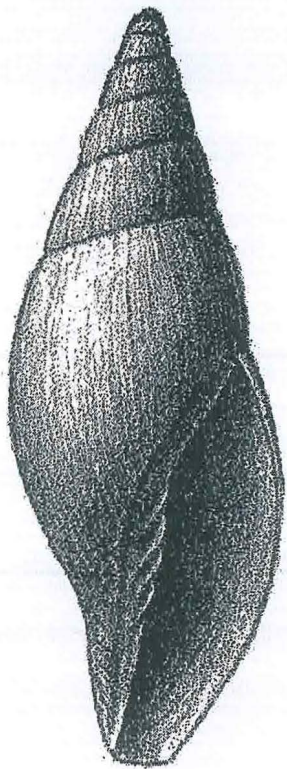


Fig 28. *Volutomitra groenlandica* (Möller, 1842)



Norwegian coast south to Stadt Peninsula; in east America from Perry Islands to Nova Scotia.  
World bathymetrical range: 20-1100 m.  
Checked by: JAS

Superfamily CONOIDEA

Family CONIDAE

Genus *Mangelia* Risso, 1826

*Mangelia attenuata* (Montagu, 1803)

Synonym: *Murex attenuatus* Montagu, 1803.

Reference to best description of the species: Fretter & Graham 1985: 525-526, Fig. 362.

Previous records: None.

New records: BIOFAR station 518.

Bathymetrical range within the area: 423 m.

Substrate: Sand.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: The Faroes, Norwegian coast from



the Fensfjord in Sogn and Fjordane county south to the Swedish west coast, Kattegat and Skagerrak, British Isles, Ireland, Brittany.

World bathymetrical range: 5-423 m.

Checked by: AW

***Mangelia coarctata* (Forbes, 1840)**

Synonym: *Pleurotoma coarctata* Forbes, 1840

Reference to best description of the species: Fretter & Graham 1985: 529-530, Fig. 365.

Previous records: None.

New records: BIOFAR station 690.

Bathymetrical range within the area: 357 m.

Substrate: No information.

Temperature: 7.9 °C (M: one stn.), 8.6 °C (E).

Water mass: AW.

World distribution: The Faroes, Norwegian coast from Sogn and Fjordane county south to the Swedish west coast, Kattegat and Skagerrak, British Isles and Ireland.

World bathymetrical range: 10-357 m.

Checked by: JAS

***Mangelia powisiana* (Dautzenberg, 1887)**

Synonyms: *Bela powisiana* Dautzenberg, 1887.

Reference to best description of the species: Fretter & Graham 1985: 524-525, Fig. 361.

Previous records: None.

New records: BIOFAR station 078.

Bathymetrical range within the area: 150 m.

Substrate: Fine shell-sand.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: The Faroes, East and West Agder counties in southern Norway, west and south coasts of British Isles, Ireland and south to Bay of Biscay.

World bathymetrical range: 5-150 m.

Checked by: AW

**Genus *Nepotilla* Headly, 1918**

***Nepotilla amoena* (G.O. Sars, 1878) Fig. 29.**

Synonym: *Raphitoma amoena* G.O. Sars, 1878.

Reference to best description of the species: G.O. Sars 1878: 220, Pl. 17, fig. 10a-b; Bouchet & Warén 1980: 75, Figs 36-37.

Previous records: None.

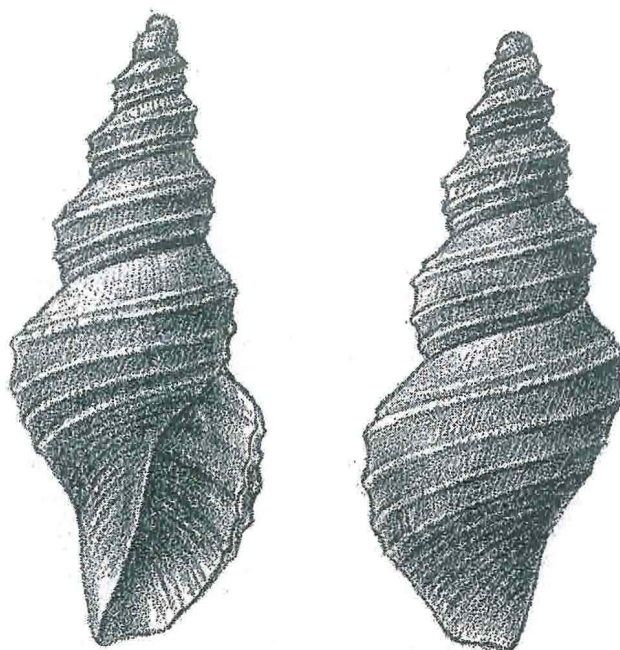


Fig 29. *Nepotilla amoena* (G.O. Sars, 1878)

New records: BIOFAR stations 381, 482, 483.

Bathymetrical range within the area: 402-509 m.

Substrate: Sand, gravel.

Temperature: 6.5 °C (M: one stn.), 1.0 - 4.0 °C (E).

Water mass: AW/AI (1), AI (1), AI/NW (1).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, whole Norwegian coast from Tromsø in the north to the Swedish border.

World bathymetrical range: 100-550 m.

Checked by: ØS

**Genus *Raphitoma* Bellardi, 1847**

***Raphitoma linearis* (Montagu, 1803)**

Synonyms: *Murex linearis* Montagu, 1803, *Clathurella linearis* G.O. Sars, 1878, *Pleurotoma linearis* auct.

Reference to best description of the species: Fretter & Graham 1985: 535-537, Figs 368-369.

Previous records: Only 2 specimens taken W by S of Munken, about 200 m depth (Spärck & Thorson 1933).

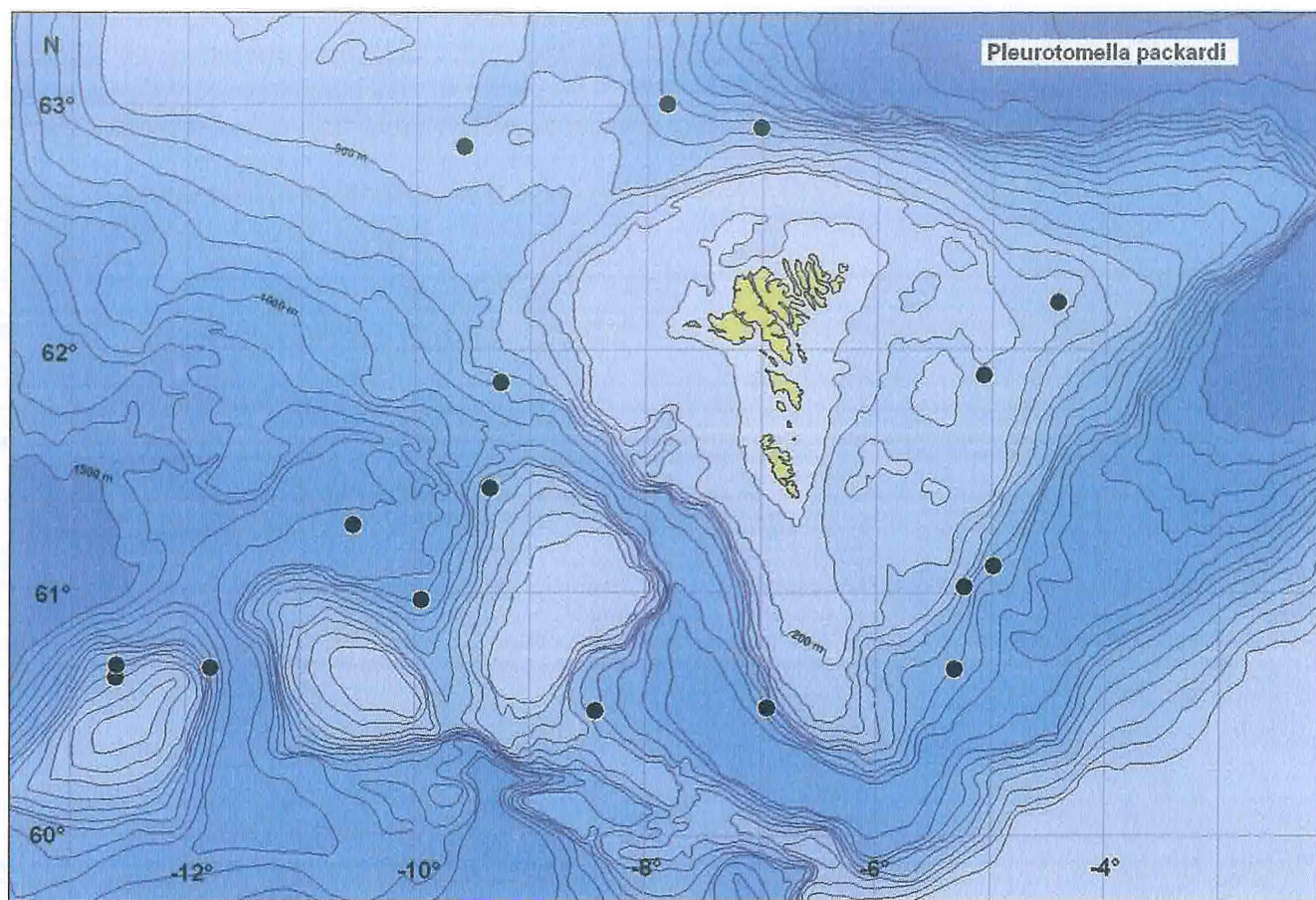
New records: BIOFAR stations 019, 027, 192, 402.

Bathymetrical range within the area: 107-276 m.

Substrate: Shell-sand, sponge spicules.

Temperature: 6.5 - 7.9 °C (E).





Water mass: AW (3), AW/AI (1).

World distribution: South Iceland, the Faroes, Norwegian coast from Sørøy in Troms county south to the Swedish west coast, Kattegat and Øresund, Skagerrak, British Isles and Ireland southwards into the Mediterranean, Madeira, the Canarie Islands.

World bathymetrical range: 10-276 m.

Checked by: ØS

### Genus *Pleurotomella* Verrill, 1872

#### *Pleurotomella packardii* Verrill, 1872

Synonym: *Defrancia formosa* Jeffreys, 1883.

Reference to best description of the species: Verrill 1872: 15; Bouchet & Warén 1980: 38, Figs 31, 96-97, 216.

Previous records: Triton stn. 13.

New records: BIOFAR stations 019, 027, 068, 082, 088, 095, 274, 424, 458, 482, 490, 515, 522, 523, 698, 720, 736.

Bathymetrical range within the area: 225-1157 m.

Substrate: Silt, sand.

Temperature: 0.1 - 1.3 °C (M: 2 stns), +0.6 - 8.6 °C (E).

Water mass: AW (6), AW/AI (3), AI (1), AI/NW (1), NW (6).

World distribution: North Atlantic, not in the Mediterranean.

World bathymetrical range: 200-4425 m.

Checked by: ØS

### Genus *Taranis* Jeffreys, 1870

#### *Taranis moerchi* (Malm, 1863)

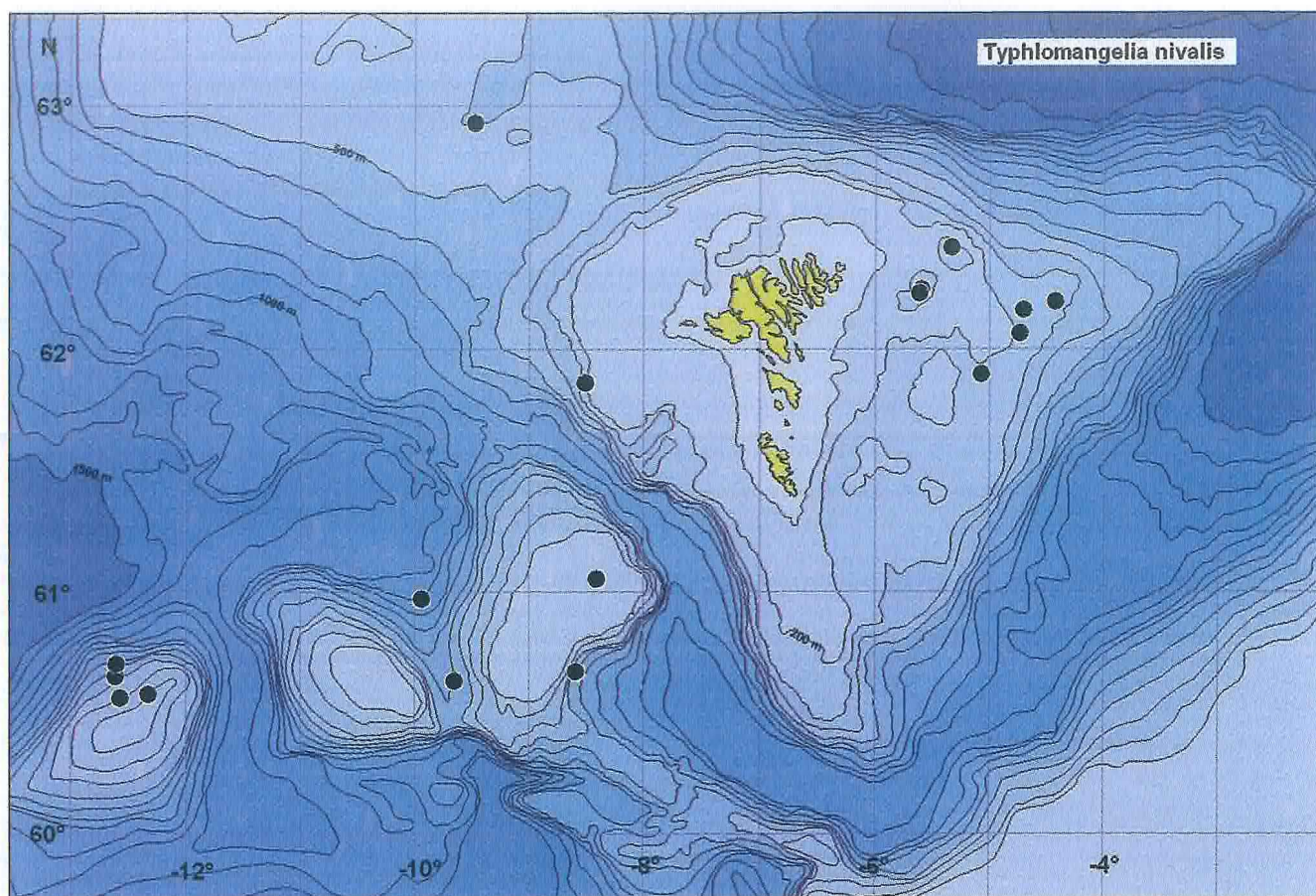
Synonym: *Trophon moerchi* Malm 1863.

Reference to best description of the species: Fretter & Graham 1985: 546-547, Fig. 375; Bouchet & Warén 1980: 80-81, Figs 163-165, 274-275.

Previous records: Simpson (1910): stn. 16.

New records: BIOFAR stations 006, 100, 158.





Bathymetrical range within the area: 231-322 m.  
 Substrate: Clay, sand, shell-gravel.  
 Temperature: 6.6 - 7.5 °C (E).  
 Water mass: AW (1), AW/AI (2).  
 World distribution: The Faroes, whole Norwegian coast, Swedish west coast, Kattegat, Rockall Trough and south into the Mediterranean.  
 World bathymetrical range: 80-2644 m.  
 Checked by: ØS

### Genus *Teretia* Norman, 1888

#### *Teretia teres* (Reeve, 1844)

Synonyms: *Pleurotoma teres* Reeve, 1844, *Pleurotoma borealis* Lovén, 1846, *Pleurotoma anceps* auct. non Eichwald, 1830 (fossil).

Reference to best description of the species: Fretter & Graham 1985: 543-545, Figs 373-374; Bouchet & Warén 1980: 81-82, Figs 168, 229.

Previous records: None.

New records: BIOFAR stations 019, 028, 065, 068, 307,

452, 495, 524, 689, 764.

Bathymetrical range within the area: 218-702 m.

Substrate: Sand and shell-sand with stones.

Temperature: 7.9 °C (M: one stn.), 6.0 - 8.6 °C (E).

Water mass: AW (8), AW/AI (2).

World distribution: The Faroes, Svalbard, Sørøya in Troms county south along the western parts of the British Isles, Ireland and into the Mediterranean.

World bathymetrical range: 200-700 m.

Checked by: ØS

### Genus *Thesbia* Jeffreys, 1867

#### *Thesbia nana* (Lovén, 1846)

Synonym: *Tritonium nanum* Lovén, 1846.

Reference to best description of the species: Fretter & Graham 1985: 520, Fig. 357; Bouchet & Warén 1980: 75-76, Figs 35, 158, 199.

Previous records: Simpson (1910): stns 16, 16a, 17.

New records: BIOFAR stations 027, 051, 382, 483, 546, 694, 696, 726, 736, 764.



Bathymetrical range within the area: 140-1319 m.  
 Substrate: Sand, gravel, stones.  
 Temperature: 1.3 °C (M: one stn.), 3.0 - 8.2 °C (E).  
 Water mass: AW (6), AW/AI (3), AW/AI/NW (1).  
 World distribution: Iceland, the Faroes, whole Norwegian coast, Scottish east coast.  
 World bathymetrical range: 80-1319 m.  
 Checked by: ØS

Genus *Typhlomangelia* G.O. Sars, 1878

*Typhlomangelia nivalis*

(Lovén, 1846)

Fig. 30.

Synonyms: *Pleurotoma nivalis* Lovén, 1846, *Pleurotoma composita* Dautzenberg & Fisher, 1896.

Reference to best description of the species: Fretter & Graham 1985: 518-519, Fig. 356; Bouchet & Warén 1980: 16-18, Figs 52-53, 55-58, 193.

Previous records: Only as empty shells, at Akraberg (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 019, 027, 076, 116, 356, 357, 425, 490, 495, 506, 520, 522, 523, 599, 689, 764.

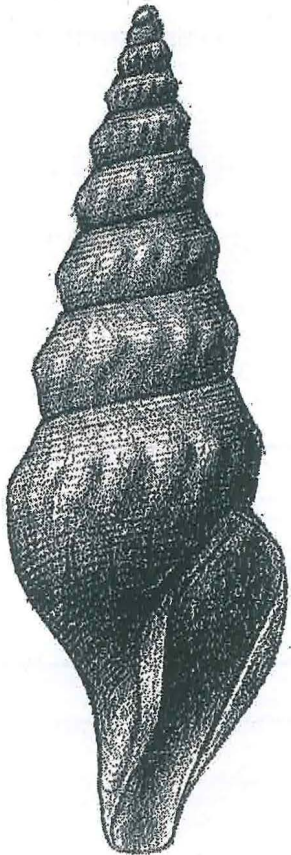


Fig 30. *Typhlomangelia nivalis* (Lovén, 1846)

Bathymetrical range within the area: 99-1083 m.  
 Substrate: Sand, shell-sand  
 Temperature: 7.9 °C (M: one stn.), 1.6 - 9.1 °C (E)  
 Water mass: AW (14), AW/AI (2), AI (1).  
 World distribution: Iceland, the Faroes, whole Norwegian coast, northern North Sea, Shetland, Rockall Trough, southwestern Ireland south to 15°N on the African coast, Mediterranean.  
 World bathymetrical range: 45-3000 m.  
 Checked by: ØS

Genus *Oenopota* Mørch, 1852

*Oenopota bergensis* (Friele, 1886)

Synonyms: *Bela rugulata* var. *bergensis* Friele, 1886; *Bela rugulata* sensu G. O. Sars, 1878; *Bela rugulata* forma *typica* Friele, 1886.

Reference to best description of the species: G.O. Sars 1878: 230, Pl. 23 fig. 6; Bouchet & Warén 1980: 73, Figs 146-148, 265.

Previous records: 16 miles E by S of the south point of Nólsoy in 150 m. depth (Spärck & Thorson 1933).

New records: BIOFAR stations 019, 051, 189, 192, 305, 422, 490, 502, 525, 696, 719, 720, 721, 722, 726, 729, 730.

Bathymetrical range within the area: 107-1083 m.

Substrate: Silt, sand, gravel.

Temperature: 1.3 - 6.5 °C (M: 2 stns), +0.7 - 7.9 °C (E).

Water mass: AW (2), AW/AI (5), AI (2), AI/NW (1), NW (6), AW/AI/NW (1).

World distribution: Uncertain owing to confusion with related species. With certainty known from the Faroes, Jan Mayen, Barents Sea south along the Norwegian coast to the Swedish west coast.

World bathymetrical range: 100-1083 m.

Remarks: The species is by some authors set into the genus *Propebela*.

Checked by: ØS

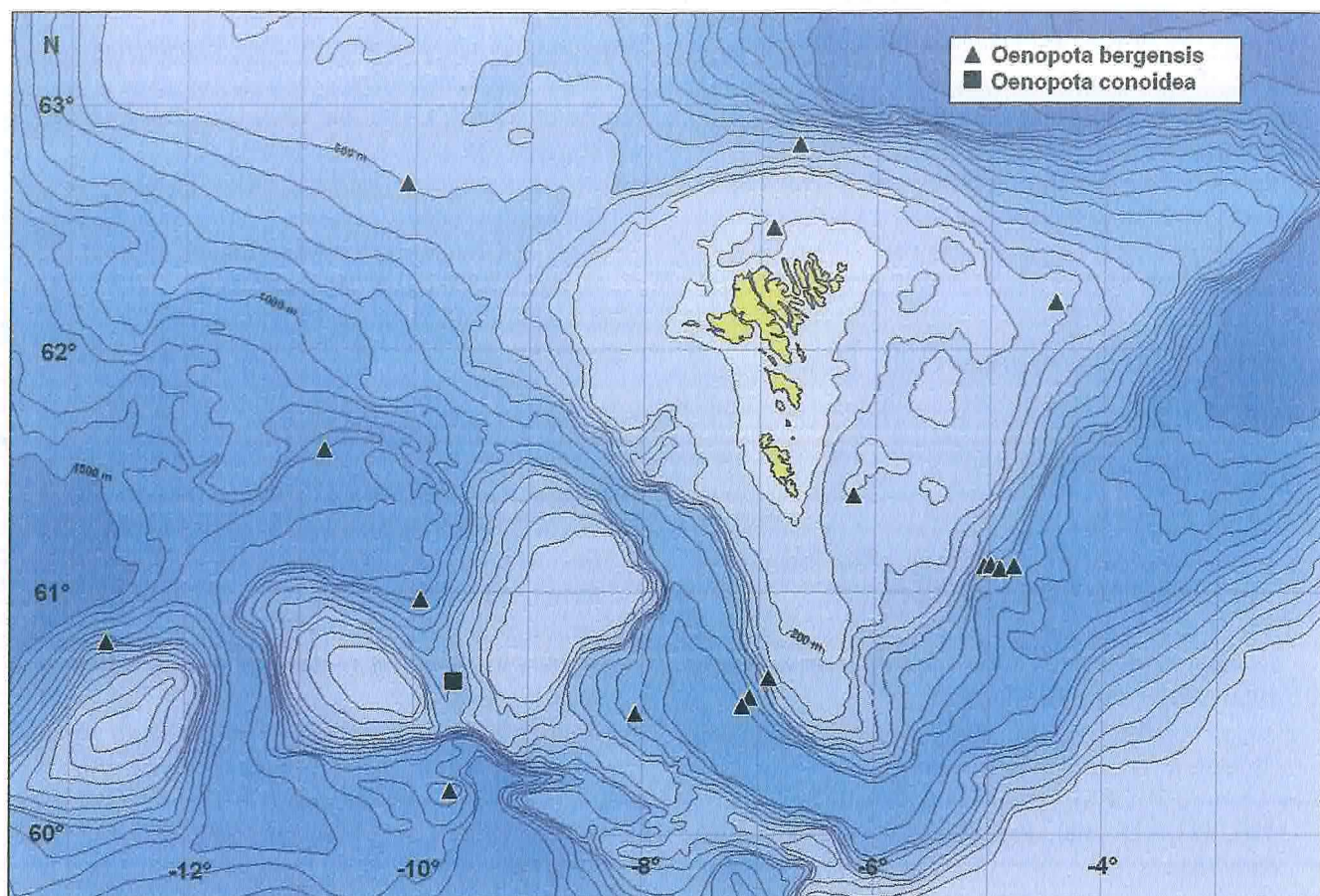
*Oenopota conoidea* (G.O. Sars, 1878)

Synonym: *Bela conoidea* G. O. Sars, 1878 not *Bela decussata* var. *conoidea* sensu Friele, 1886.

Reference to best description of the species: G.O. Sars 1878: 236, Pl. 16 fig. 14.

Previous records: None, but *O. pyramidalis* (Strøm, 1788), which possibly is conspecific with *O. conoidea*, has been recorded at eight localities at 0 to about 40 m depth (Spärck & Thorson 1933).





New records: BIOFAR station 495.

Bathymetrical range within the area: 584 m.

Substrate: Soft bottom, sand, cobbles.

Temperature: 8.2 °C (E).

Water mass: AW.

World distribution: The Faroes, Svalbard, Barents Sea, Kara and Laptev Seas, whole Norwegian coast south to Bergen.

World bathymetrical range: 100-1000 m.

Remarks: By some authors set in the genus *Curtitoma*.

The species has a strong affinity to *O. pyramidalis* (Strøm, 1788) and may be conspecific with this species. One empty shell referred to *O. pyramidalis* by AW was found at BIOFAR stn. 357.

Checked by: ØS

### *Oenopota elegans* (Møller, 1842)

Synonyms: *Defrancia elegans* Møller, 1842, not *Bela elegans* G.O. Sars, 1878; *Bela angulosa* G. O. Sars,

1878, *Bela cancellata* sensu auct. non Mighels & Adams, 1842.

Reference to best description of the species: *Bela angulosa* G.O. Sars 1878: 227, Pl. 16, fig 16, Pl. 8, fig. 10; Bouchet & Warén 1980: 75, Figs 140, 266.

Previous records: None.

New records: BIOFAR stations 019, 230, 424, 447, 481, 482, 515, 522, 608, 609, 718, 721, 728, 730, 764.

Bathymetrical range within the area: 65-949 m.

Substrate: Clay, sand, gravel.

Temperature: 0.1 °C (M: one stn.), +0.7 - 8.6 °C (E).

Water mass: AW (5), AW/AI (1), AI (1), AI/NW (3), NW (5).

World distribution: West Greenland, Iceland, the Faroes, Novaya Zemelya, Kara Sea, Siberian Arctic Sea, Bering Sea, northern Norway south to Bay of Biscay.

World bathymetrical range: 65-1300 m.

Checked by: ØS



***Oenopota impressa* (Mørch, 1869)**

Synonyms: *Pleurotoma impressa* Beck ex Mørch, 1869, *Bela cancellata* sensu G. O. Sars, 1878, *Bela kobelti* Verkrüzen, 1876.

Reference to best description of the species: G.O. Sars 1878: 224, Pl. 8, fig. 9, Pl. 23, fig. 3; Friele, 1886: 8, Pl. 7, figs 18-19, Pl. 10, figs. 3-4.

Previous records: None.

New records: BIOFAR stations 088, 089, 095, 230, 274, 382, 421, 477, 481, 482, 490, 522.

Bathymetrical range within the area: 281-1150 m.

Substrate: Fine sand with gravel.

Temperature: 2.6 °C (M: one stn.), +0.85 - 8.6 °C (E).

Water mass: AW (1), AW/AI (3), AI/NW (1), NW (6), AW/AI/NW (1).

World distribution: the Faroes, Svalbard, north Norwegian coast south to Lofoten; in east America at the Labrador coast.

World bathymetrical range: 20-1150 m.

Checked by: ØS

***Oenopota nobilis* (Møller, 1842)** Fig. 31.

Synonyms: *Defranchia nobilis* Møller, 1842, *Defranchia scalaris* Møller, 1842, *Bela scalaris* var. *ecarinata* G.O. Sars, 1878, *Bela turricula* sensu auct. non (Montagu, 1803: *Murex*).

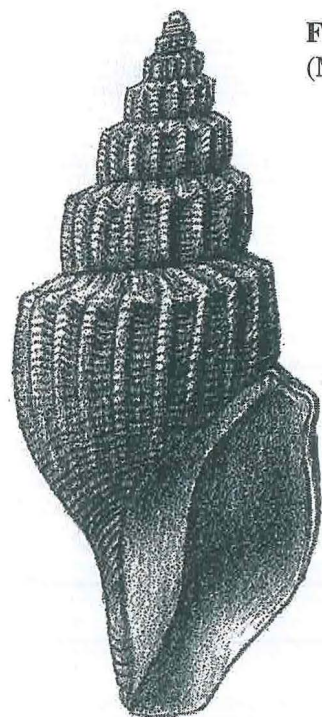


Fig 31. *Oenopota nobilis* (Møller, 1842)

Reference to best description of the species: G.O. Sars 1878: 228, Pl. 16, figs 19-20 (*Bela nobilis*); 229, Pl. 23 fig. 5 (*Bela scalaris*); Pl.16 fig. 9 (*Bela scalaris* var. *ecarinata*).

Previous records: Akraberg, 175 m depth, 3 empty shells (Spärck & Thorson 1933).

New records: BIOFAR stations 006, 028, 033, 065, 088, 095, 188, 274, 356, 365, 421, 424, 425, 458, 479, 481, 482, 599.

Bathymetrical range within the area: 100-990 m.

Substrate: Sand, gravel.

Temperature: 0.1 - 2.6 °C (M: 2 stns), +0.84 - 8.7 °C (E)

Water mass: AW (6), AW/AI (1), AI (2), AI/NW (1), NW (7), AW/AI/NW (1).

World distribution: Iceland, the Faroes, Svalbard, Novaya Zemelya, the Trondheimsfjord on the Norwegian coast; in east America in Arctic Canada.

World bathymetrical range: 35-1700 m.

Remarks: Is by some authors set into the genus *Propebela*.

Checked by: ØS

***Oenopota ovalis* (Friele, 1877)**

Synonyms: *Pleurotoma ovalis* Friele, 1877, *Bela decussata* var. *Kobelt*, 1905, *Pleurotoma exigua* Jeffreys, 1883.

Reference to best description of the species: Friele 1877: 9, fig. 5; Friele 1886 Pl. 8, figs 21-22; Bouchet & Warén 1979: 227, fig. 53; Bouchet & Warén 1980:68, Figs 144, 258-259.

Previous records: North of the Faroes, 63° 22'N, 05° 29'W.

New records: BIOFAR station 490.

Bathymetrical range within the area: 1083 m.

Substrate: Soft bottom with fine sand.

Temperature: 6.5 °C (E).

Water mass: AW/AI.

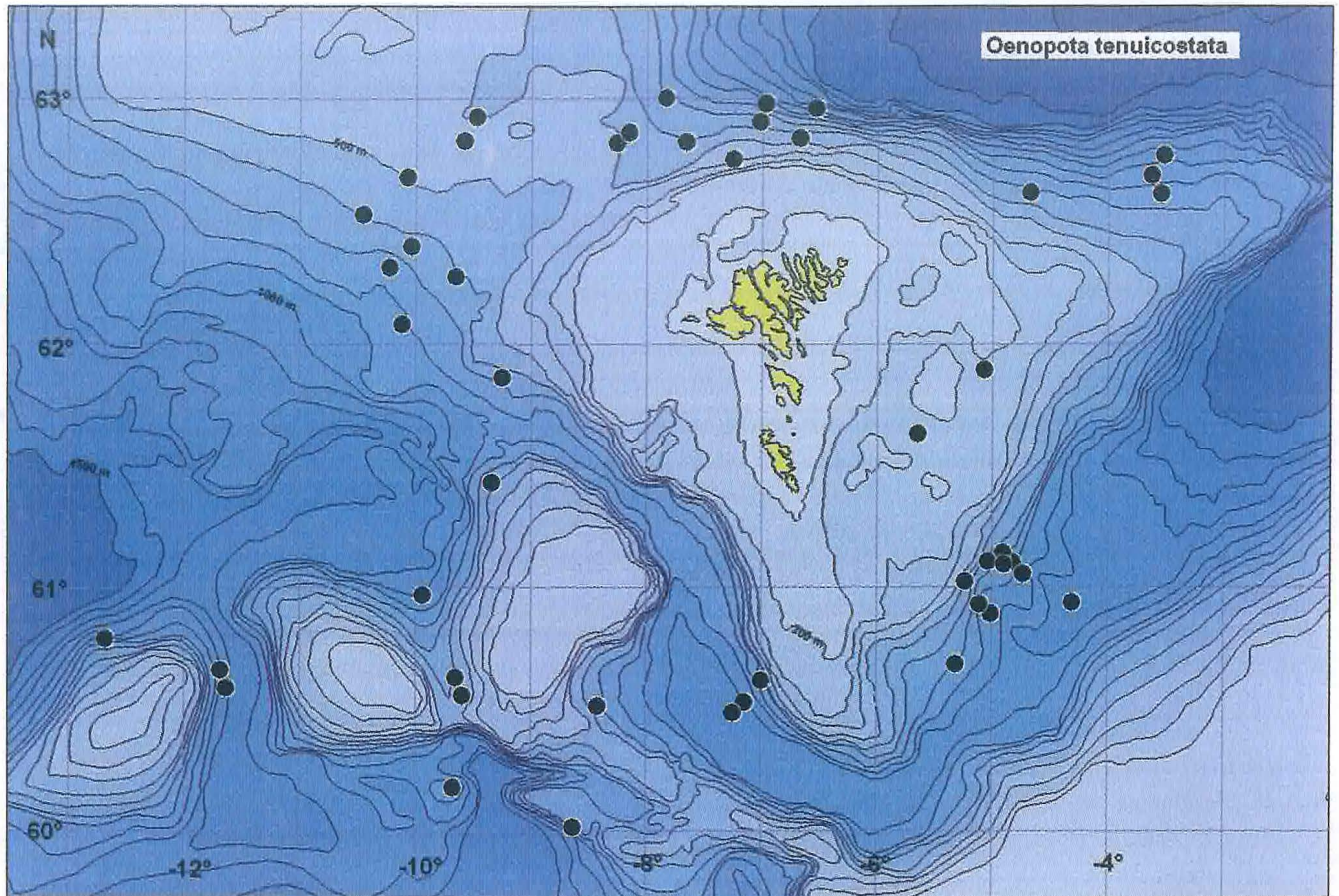
World distribution: The Faroes, whole northern North Atlantic, west of the British Isles, Bay of Biscay, off Portugal.

World bathymetrical range: 200-5000 m.

Remarks: The species has been placed in the genus *Curtitoma* by authors.

Checked by: ØS





***Oenopota tenuicostata***  
(G.O. Sars, 1878) Fig. 32.

Synonyms: *Pleurotoma decussata* Couthouy 1839 (?),  
*Bela tenuicostata* M. Sars ex G.O. Sars 1878, *Bela*  
*willei* Friele 1877, *Bela conoidea* Friele 1886, *Bela*  
*finmarchia* Friele 1886.

Reference to best description of the species: G.O. Sars  
1878: 237, Pl.17, fig. 1a and 1b

Previous records: Triton stn. 8.

New stations: BIOFAR stations 015, 027, 068, 082, 095,  
124, 158, 167, 168, 169, 188, 189, 228, 230, 263,  
269, 271, 274, 305, 421, 422, 424, 425, 447, 452,  
458, 459, 477, 478, 479, 480, 482, 490, 495, 496,  
501, 516, 517, 525, 698, 719, 721, 728, 730, 731,  
738, 739.

Bathymetrical range within the area: 225-1150 m.

Substrate: Sand, gravel.

Temperature: 0.1 - 6.5 °C (M: 4 stns), +0.9 - 8.2 °C  
(E).

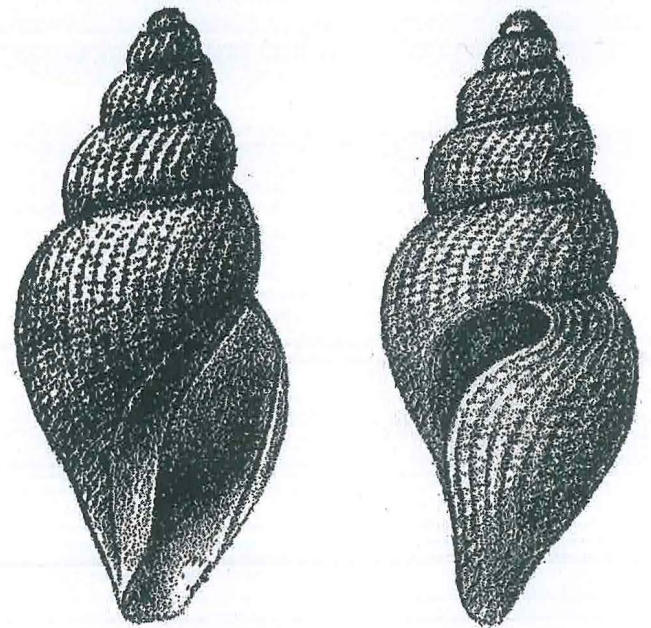


Fig 32. *Oenopota tenuicostata* (G.O. Sars, 1878)



Water mass: AW (4), AW/AI (9), AI (7), AI/NW (3), NW (21), AW/AI/NW (3).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Norwegian Sea, Barents Sea, Novaya Zemelya, whole Norwegian coast south to Bergen.

World bathymetrical range: 40-1150 m.

Checked by: ØS

### *Oenopota trevelliiana* (Turton, 1834)

Synonyms: *Defrancia trevelliiana* Turton, 1834, *Pleurotoma reticulata* Brown, 1827, *Pleurotoma trevelyana* var. *smithi* Jeffreys, 1877, *Bela decussata* var. *finmarchia* Friele, 1886.

Reference to best description of the species: G.O. Sars 1878: 235, Pl. 6, fig. 13; Fretter & Graham 1985: 514-516, Fig. 354; Bouchet & Warén 1980: 75, Figs 155-156, 264.

Previous records: Vestmanna 25-35 m (Spärck & Thorson 1933).

New stations: BIOFAR stations 605, 608, 610, 729, 736.

Bathymetrical range within the area: 65-1157 m.

Substrate: Mud and sand.

Temperature: +0.6 - 8.0 °C (E).

Water mass: AW (4), NW (1).

World distribution: Iceland, the Faroes, whole Norwegian coast, Kattegat, northern part of the North Sea and western Scotland; in east America from Prince Regent Inlet to Maine; in the Pacific Ocean south to California.

World bathymetrical range: 20-1157 m.

Remarks: *Propebela smithi* (Jeffreys, 1877) is probably a good species.

### *Oenopota turricula* (Montagu, 1803)

Synonym: *Murex turricula* Montagu, 1803.

Reference to best description of the species: Fretter & Graham 1985: 512-514, Fig. 351, 353; Bouchet & Warén 1980: 72, Figs 154, 267.

Previous records: S of the south point of Nólsoy, 150 m depth (Spärck & Thorson 1933).

New records: BIOFAR station 721.

Bathymetrical range within the area: 810 m.

Substrate: Fine sand.

Temperature: +0.6 °C (E).

Water mass: NW.

World distribution: The Faroes, Norwegian west coast

from Stadt Peninsula south to Kattegat and Øresund, British Isles, Ireland; in east America from Prince Regent Inlet south to Massachusetts; in the Pacific Ocean south to Washington.

World bathymetrical range: 200-810 m.

### *Oenopota violacea* (Mighels & Adams, 1842)

Synonyms: *Pleurotoma violacea* Mighels & Adams, 1842; *Defrancia beckii* Møller, 1842; *Defrancia livida* Møller, 1842, *Pleurotoma bicarinata* Couthouy, 1838, *Bela laevior* G.O. Sars, 1878, *Defrancia cylindracea* Møller, 1842, *Bela brevior* Mørch in Rink, 1857, *Bela expansa* G.O. Sars, 1878.

Reference to best description of the species: G. O. Sars, 1878: 238, Pl.17, fig. 2 (forma typica), Pl.17, fig. 3 (forma laevior); Bouchet & Warén 1980: 74-75, Figs . 145, 261.

Previous records: None.

New records: BIOFAR stations 010, 019, 028, 029, 082, 088, 189, 230, 263, 274, 381, 382, 421, 424, 452, 454, 458, 482, 496, 514, 515, 523, 524, 695, 698, 716, 718, 726, 764.

Bathymetrical range within the area: 170-859 m.

Substrate: Sand, gravel.

Temperature: 0.1 - 7.95 °C (M: 4 stns), +0.6 - 8.6 °C (E).

Water mass: AW (10), AW/AI (6), AI (4), AI/NW (2), NW (2), AW/AI/NW (2).

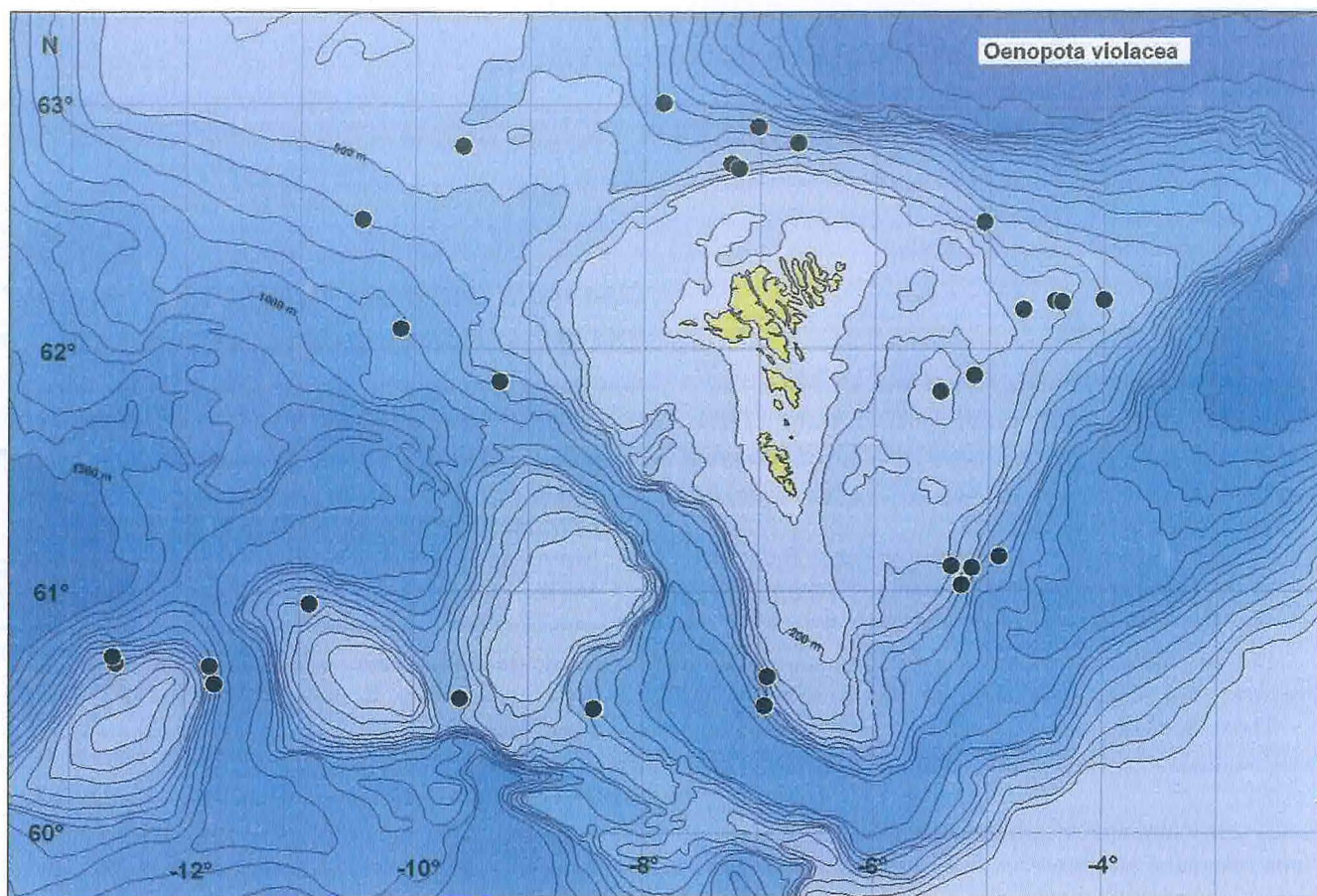
World distribution: West and east Greenland, the Faroes, Svalbard, Novaya Zemlya, Barents Sea, Kara and Laptev Seas, whole Norwegian coast, west of Ireland; in east America east of Nahant in Massachusetts.

World bathymetrical range: 100-1000 m.

Remarks: *O. violacea* is probably conspecific with *O. bicarinata* (Couthouy, 1838), but this has not been taken into consideration here, since the actual specimens all belong to forms traditionally associated with the name *violacea*. The species has been placed in the genus *Curtitoma* by authors.

Checked by: ØS





### Family DRILLIIDAE

#### Genus *Spirotropis* G.O. Sars, 1878

#### *Spirotropis monterosatoi*

(Locard, 1897) Fig. 33.

Synonyms: *Pleurotoma monterosatoi* Locard, 1897, *Mangelia eburnea* M. Sars, 1859, *Spirotropis carinata* G.O.Sars, 1878, *Spirotropis sarsi* Warén, 1975 (new name for *S. carinata* sensu G.O. Sars, 1878).

Reference to best description of the species: Fretter & Graham 1985: 508-509, Fig. 349; Bouchet & Warén 1980: 16-18, Figs 52-53, 55-58, 193.

Previous records: None.

New records: BIOFAR stations 019, 122, 158, 189, 269, 329, 345, 381, 424, 482, 490, 491, 496, 525, 543, 695, 718, 728, 739.

Bathymetrical range within the area: 139-1083 m.

Substrate: Sand, gravel.

Temperature: 0.1 - 7.95 °C (M: 2 stns), 1.0 - 8.2 °C (E).

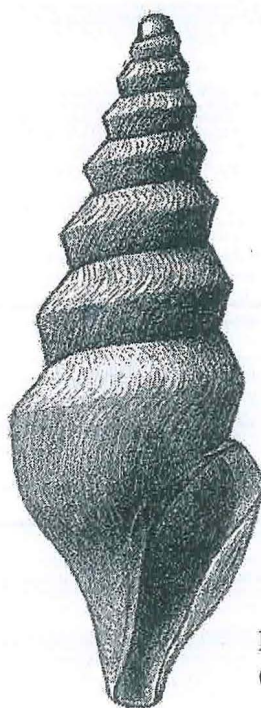


Fig 33. *Spirotropis monterosatoi* (Locard, 1897)



Water mass: AW (3), AW/AI (8), AI (5), AI/NW (3).

World distribution: Iceland, the Faroes, whole Norwegian coast south to Rogaland county, off western Scotland, Rockall Trough and south to Morocco, Mediterranean.

World bathymetrical range: 100-1083 m.

Checked by: ØS

## Superfamily CANCELLAROIDEA

### Family CANCELLARIIDAE

#### Genus *Admete* Krøyer in Möller, 1842

#### *Admete viridula* (H.O. Fabricius, 1780)

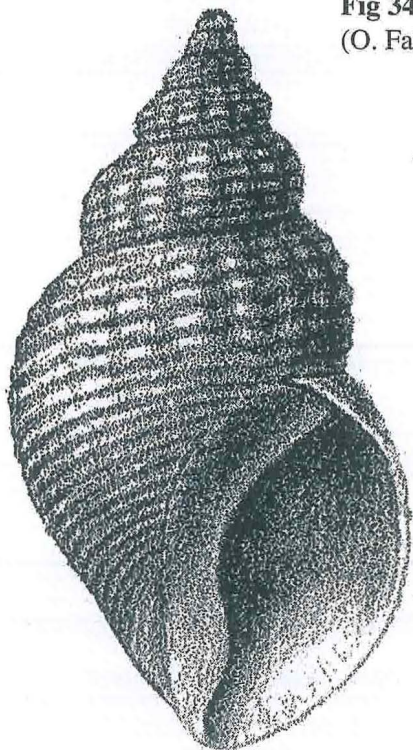
Fig. 34.

Synonyms: *Tritonium viridulum* Fabricius, 1780, *Cancellaria couthouyi* Jay, 1839, *Admete crista* Möller, 1842, *Admete viridula* var. *producta* G.O. Sars, 1878, *Admete contabulata* Friele, 1879.

Reference to best descriptions of the species: Fretter & Graham 1985: 506-507, Fig. 348; Bouchet & Warén 1985: 258, Figs 683-689.

Previous records: Lightning stns 1, 3; Porcupine stn. 61; only dead specimens have been found at two localities, viz. Akraleiti and Tórshavn (Spärck & Thorson 1933).

Fig 34. *Admete viridula*  
(O. Fabricius, 1780)



New records: BIOFAR stations 006, 019, 027, 028, 095, 100, 158, 170, 171, 189, 228, 230, 269, 274, 275, 421, 424, 425, 447, 458, 477, 479, 480, 482, 483, 501, 502, 696, 718, 720, 722, 728, 731, 747, 764, 9012.

Bathymetrical range within the area: 218-1319 m.

Substrate: Silt, sand and gravel, sponge spicules.

Temperature: +0.81 - 2.6 °C (M: 4 stns), +0.9 - 7.6 °C (E).

Water mass: AW (3), AW/AI (4), AI (6), AI/NW (3), AW/AI/NW (2), NW (18).

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Novaya Zemlya, Barents Sea, Kara Sea, White Sea and along the whole Norwegian coast to northern North Sea; in east America from Prince Regent Inlet south to Massachusetts.

World bathymetrical range: 10-1300 m.

Checked by: ØS

#### Genus *Iphinopsis* Dall, 1924

#### *Iphinopsis alba* Bouchet & Warén, 1985

Reference to best description of the species: Bouchet & Warén 1985: 263, Figs 695-697.

Previous records: None.

New records: BIOFAR station 227.

Bathymetrical range within the area: 1098 m.

Substrate: Sand and gravel.

Temperature: +0.85 °C (E).

Water mass: NW.

World distribution: Western Iceland, the Faroes, continental slopes of Rockall Trough and Bay of Biscay.

World bathymetrical range: 1000-3000 m.

Checked by: AW

#### *Iphinopsis inflata* (Friele, 1879)

Synonyms: *Trichotropis inflata* Friele, 1879, *Admete inflata* Friele, 1886.

Reference to best description of the species: Friele 1886: 25, Pl. 8, fig. 33, Bouchet & Warén 1985: 262, Figs 698-699.

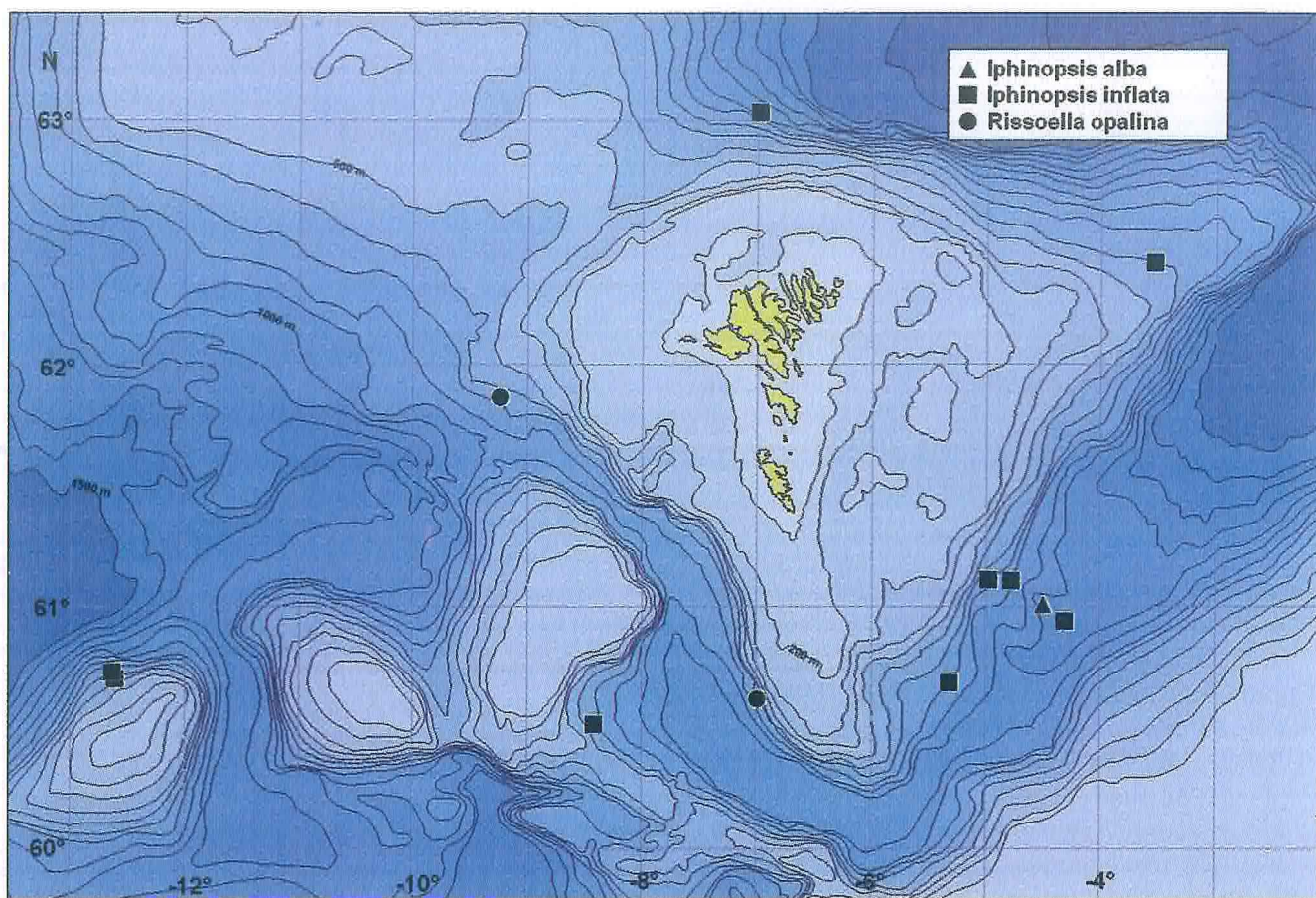
Previous records: None.

New records: BIOFAR stations 082, 095, 171, 477, 523, 524, 720, 722, 9012.

Bathymetrical range within the area: 601-1150 m.

Substrate: Mud, sand, few stones.





Temperature:  $\pm 0.81$  °C (M: one stn),  $+0.85 - 8.5$  °C (E).

Water mass: AW (2), NW (7).

World distribution: Iceland, the Faroes, Rockall Trough, Barents Sea between Norway and Svalbard.

World bathymetrical range: 408-1322 m.

Checked by: ØS

Subclass HETEROBRANCHIA  
Order HETEROSTROPHA  
Superfamily RISSOELLOIDEA  
Family RISSOELLIDAE  
Genus *Rissoella* M.E. Gray, 1850

*Rissoella opalina* (Jeffreys, 1848)

Synonym: *Jeffreysia opalina* Jeffreys, 1848.

Reference to best description of the species: Jeffreys 1867: 60-62.

Previous records: None.

New records: BIOFAR stations 698, 728.

Bathymetrical range within the area: 640-643 m.

Substrate: Coarse sand, gravel.

Temperature: 1.3 C (M: one stn.), 1.0 - 3.9 C (E).

Water mass: AW/AI (1), AI/NW (1).

World distribution: the Faroes, Norwegian Sea, Orkneys, western and southern parts of British Isles, Ireland, Brittany.

World bathymetrical range: 0-643 m.

Checked by: JAS

Superfamily OMALOGYROIDEA  
Family OMALOGYRIDAE  
Genus *Omalogyra* Jeffreys, 1860

*Omalogyra atomus* (Philippi, 1841) Fig. 35.

Synonym: *Truncatella atomus* Philippi, 1841; *Skenea nitidissima* Forbes & Hanley, 1853.

Reference to best description of the species: G.O. Sars 1878: 215-216, Pl. 22, fig. 21 a-c.



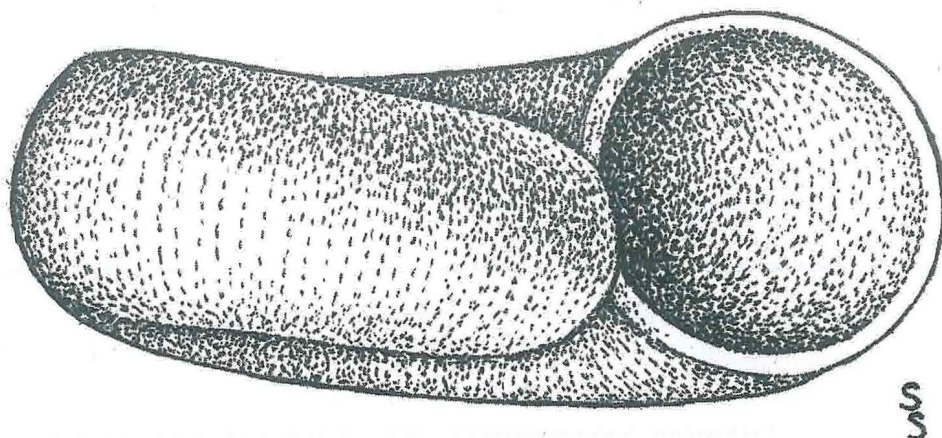


Fig 35. *Omalogyra atomus* (Philippi, 1844)

Previous records: Trongisvágsfjørður, Vestmanna, East of Klaksvík (Spärck & Thorson 1933).

New records: Not recorded during BIOFAR 1.

World distribution: W Greenland, Iceland, the Faroes, whole Norwegian coast and Swedish west coast to Øresund, British Isles, Ireland and south to Madeira, Mediterranean.

World bathymetrical range: 0-40 m.

### Superfam. VALVATOIDEA

### Family CORNIROSTRIDAE

### Genus *Noerrevangia* Warén & Schander, 1993

#### *Noerrevangia fragilis* Warén & Schander, 1993

Reference to best description of the species: Warén, Gofas & Schander 1993: 7-10, figs 14-25.

Previous records: None.

New records: Off Tórshavn, 62°04.5'N, 06°42.8'W.

Bathymetrical range within the area: 43 m.

Substrate: Clay.

Water mass: AW.

World distribution: Faroes.

World bathymetrical range: 43 m.

Remarks: One specimen known only from the type locality.

### Superfamily PYRAMIDELLOIDEA

### Family PYRAMIDELLIDAE

### Genus *Brachystomia* Monterosato, 1885

#### *Brachystomia eulimoides* (Hanley, 1844)

Synonyms: *Odostomia eulimoides* Hanley 1844, *Odostomia pallida* (Montagu 1803)

Reference to best description of the species: Fretter & Graham 1986: 601-603, Figs 414-415.

Previous records: Hoyvík (16-18 m).

New records: BIOFAR station 862.

Bathymetrical range within the area: 64 m.

Substrate: Hard bottom and gravel.

Water mass: AW.

World distribution: Iceland (?), the Faroes, from Bodø in northern Norway south to the Swedish west coast, the Limfjord in Denmark, British Isles, Ireland and south to the Mediterranean.

World bathymetrical range: 10-120 m.

Remarks: Dead shells found at BIOFAR stns 863, 865, 866 and at other localities around the islands (Schander 1995).

### Genus *Chryssalida* Carpenter, 1856

#### *Chryssalida eximia* (Jeffreys, 1849)

Synonyms: *Rissoa eximia* Jeffreys, 1849, *Parthenia eximia* G.O. Sars, 1878

Reference to best description of the species: Fretter & Graham 1986: 569-571, Figs 386-387.

Previous records: Lightning stn. 2; only found as dead shells at four localities (Spärck & Thorson 1933).



New records: Not found during BIOFAR 1 but dead shells found at Tórshavn, Argir, Hoyvík, Nólsoy (Schander 1995).

World distribution: West and south Iceland, the Faroes (?), whole Norwegian coast and Swedish west coast, western Scotland.

World bathymetrical range: 20->1000 m.

Remarks: The species is so far not recorded alive from the Faroes.

### *Chryssalida pellucida* (Dillwyn, 1817)

Synonyms: *Turbo spiralis* Montagu 1803, *Voluta pellucida* Dillwyn, 1817, *Parthenia spiralis* G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1986: 573-575, Figs 390-391.

Previous records: Dead specimens found at two localities (Spärck & Thorson 1933).

New records: Not found during BIOFAR 1 but dead shells found at Tórshavn, Argir, Hoyvík, Kaldbak, 62°03'N, 06°55'W (Schander 1995).

World distribution: Iceland(?), the Faroes(?), from Tromsø in northern Norway into the Kattegat to Øresund, British Isles, Ireland south to Morocco, Mauritania, Senegal and the Canary Islands.

World bathymetrical range: 0-120 m.

### *Chrysalida sublustris* (Friele, 1886)

Synonym: *Odostomia sublustris* Friele 1886.

Reference to best description of the species: Friele 1886: 29, Pl. 11, fig. 11; Warén 1991:102, Fig. 31D.

Previous records: None.

New records: BIOFAR stations 274, 458.

Bathymetrical range within the area: 675-698 m.

Substrate: Gravel, stones.

Temperature: +0.57 - +0.6 °C (E).

Water mass: NW.

World distribution: South to off northeastern Iceland, north of the Faroes, south of Jan Mayen, Norwegian Sea, east of northwestern Norway.

World bathymetrical range: 364-1187 m.

Remarks: The asteroid *Hymenaster pellucidus* is found at stns 274 and 458, *Henricia pertusa* at stn 458. The general distribution pattern is to some extent based on samples of dead shells.

Checked by: AW

## Genus *Eulimella* Forbes & MacAndrew, 1846

### *Eulimella ataktos* Warén, 1991

Reference to best description of the species: Warén 1991: 114, Figs 37b, 38e.

Previous records: Funningsfjørður (23-38 m).

New records: Not found during BIOFAR 1 but one dead shell found by Schander (1995).

World distribution: the Faroes (?), Grøtsund in Troms county in northern Norway.

World bathymetrical range: 100-200 m.

Remarks: *E. ataktos* may be more widespread geographically as it earlier was not separated from *E. ventricosa* (Shander 1995).

### *Eulimella scillae* (Scacchi, 1835) Fig. 36.

Synonyms: *Melania scillae* Scacchi, 1835, *Eulimella macandrei* Forbes, 1844.

Reference to best description of the species: Fretter & Graham 1986: 624-625, Fig. 434-435.

Previous records: Lightning stn. 2; one specimen Southwest of Mykines at 254 m depth (Spärck & Thorson 1933).

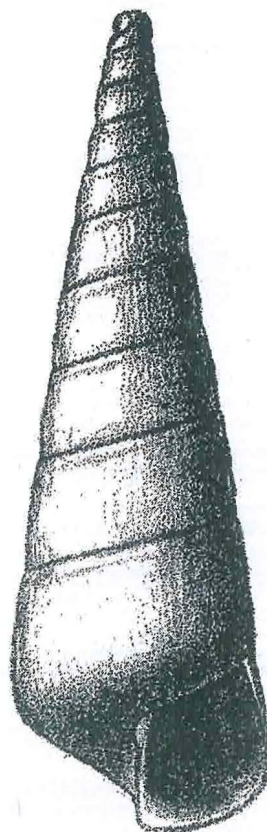


Fig 36. *Eulimella scillae* (Scacchi, 1835)



New records: BIOFAR stations 073, 295, 329, 694, 764.

Bathymetrical range within the area: 185-655 m.

Substrate: Mud, sand, gravel and stones.

Temperature: 6.0 - 8.6 °C (E).

Water mass: AW (4), AW/AI (1).

World distribution: Western Iceland, the Faroes, Hammerfest in northern Norway south to Kattegat and the Swedish west coast, North Sea, British Isles, Ireland and south into the Mediterranean, Madeira, the Canarie Islands.

World bathymetrical range: 50-650 m.

Remarks: The specimen from Stn. 295 is a dead shell.

The asteroid *Pontaster tenuispinus* is found at the same station, stn. 295.

Checked by: AW

### *Eulimella ventricosa* (Forbes, 1844)

Synonyms: *Parthenia ventricosa* Forbes, 1844, *Eulimella obeliscus* Jeffreys, 1858.

Reference to best description of the species: Fretter & Graham 1986: 627-629, Figs 437-438.

Previous records: Lightning stn. 2; Vestmanna at 10-12 m depth, and Funningsfjørður at about 20-40 m (Spärck & Thorson 1933).

New records: BIOFAR station 100.

Bathymetrical range within the area: 283 m.

Substrate: Sand and coarse shell-sand.

Temperature: 6.8 °C (E).

Water mass: AW/AI.

World distribution: West and southwest Iceland, the Faroes, Hammerfest in northern Norway south to the Swedish west coast, northern and western Scotland, Ireland and south into the Mediterranean.

World bathymetrical range: 50-1000 m.

Remarks: Dead shells found at BIOFAR stns 865 and 866. The asteroid species *Leptychaster arcticus*, *Pteraster pulvillus*, and *Henricia pertusa* are found at stn. 100.

Checked by: AW

## Genus *Odostomia* Flemming, 1813

### *Odostomia turrata* Hanley, 1844

Synonym: *Odostomia acuta* Spärck & Thorson 1933: 27 (part).

Reference to best description of the species: Fretter & Graham 1986: 610-612, Fig. 422.

Previous records: Lightning stn. 4; Vestmanna, dead shells (Spärck & Thorson 1933)

New records: BIOFAR stations 862, 865, 866.

Bathymetrical range within the area: 64-90 m.

Substrate: Gravel and hard bottom.

Water mass: AW.

World distribution: South Iceland, the Faroes, whole Norwegian coast, Swedish west coast, Kattegat to Øresund, British Isles, Ireland and south to the Mediterranean.

World bathymetrical range: 0-100 m.

Remarks: The three BIOFAR stations are listed in Bruntse *et al.* (1999) as BIOFAR stations with beds of *Modiolus modiolus*. Schander (1995) has found dead shells at several localities around the islands.

### *Odostomia unidentata* (Montagu, 1803)

Synonyms: *Turbo unidentata* Montagu, 1803, *Turbonilla albella* Lovén, 1846, *Odostomia acuta* Spärck & Thorson 1933: 27 (part).

Reference to best description of the species: Fretter & Graham 1986: 614-615, Figs 425-426.

Previous records: Lightning stns 2, 4; Trongisvágsfjørður

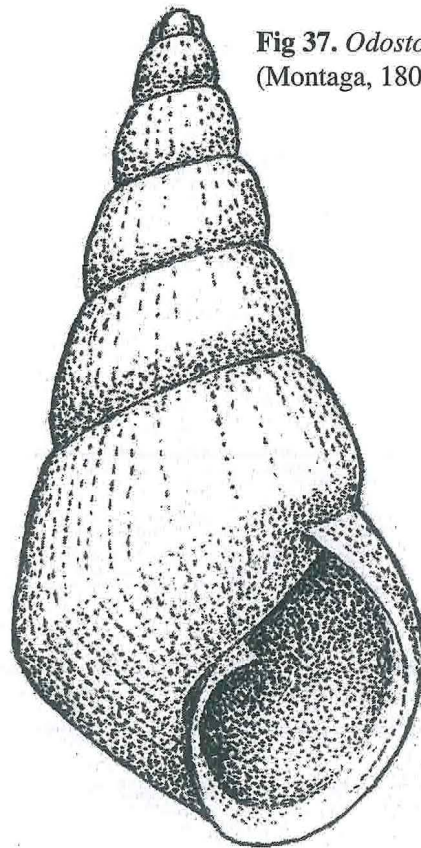


Fig 37. *Odostomia unidentata* (Montagu, 1803) (S. Sneli)



(42 m), Klaksvík (20-30 m) (Spärck & Thorson 1933).

New records: BIOFAR stations 862, 865, 866.

Bathymetrical range within the area: 64 - 90 m.

Substrate: Gravel and hard bottom.

Water mass: AW.

World distribution: West and south Iceland, the Faroes, Svalbard, whole Norwegian coast, the Swedish west coast, Skagerrak, British Isles, Ireland and south to the Mediterranean.

World bathymetrical range: 0-100 m.

Remarks: Dead shells found at several localities around the Faroe islands (Schander 1995).

### Genus *Ondina* de Folin, 1870

#### *Ondina diaphana* (Jeffreys, 1848)

Synonym: *Odostomia diaphana* Jeffreys, 1848.

Reference to best description of the species: Fretter & Graham 1986: 583-584, Figs 397-398, Schander 1995:60-61, Fig. 1E.

Previous records: None.

New records: Not recorded during BIOFAR 1 but found live at 61°35'N, 07°11'W (119 m), and also several localities with dead shells (Schander 1995).

World distribution: Iceland, the Faroes, Swedish west coast, southwestern British Isles.

World bathymetrical range: 20-120 m.

Remarks: *Ondina diaphana* is commonly synonymised with *O. perezii* and thus the distribution of these two species is unclear (Schander 1995).

#### *Ondina divisa* (J. Adams, 1797)

Synonyms: *Turbo divisa* J.A. Adams, 1797, *Turbo insculpta* Montagu, 1808, *Auriculina insculpta* var. *nobilis* G.O. Sars, 1878.

Reference to best description of the species: Fretter & Graham 1986: 581-582, Figs 394-396.

Previous records: Lightning stn. 4; Trongisvágsfjørður (21-31 m), Vestmanna (10-12 m), some localities with dead shells (Spärck & Thorson 1933), Funningsfjørður (23-38 m), 62°04'30"N, 06°42'46"W (43 m), Kaldbak (17 m), between Flesjarnar and Eysturoy (35 m).

New records: Not found alive during BIOFAR 1 but dead shells found at stns 862, 865, 866 besides many other localities with dead shells (Schander 1995).

World distribution: West and southwest Iceland, the

Faroes, Hammerfest in northern Norway to Swedish west coast, Kattegat and Øresund, British Isles, Ireland and south to the Bay of Biscay.

World bathymetrical range: 10-350 m.

#### *Ondina perezii* (Dautzenberg & Fisher, 1925)

Synonym: *Odontostomia (Auristomia) perezii* Dautzenberg & Fisher, 1925.

Reference to best description of the species: van Aartsen 1987: 14-15, 17, Fig. 48.

Previous records: None.

New records: Not recorded during BIOFAR 1 but dead shells found outside Nólsoy harbour (15-20 m) (Schander 1995).

World distribution: The Faroes, Swedish west coast, French atlantic coast, British Isles.

World bathymetrical range: 10-100 m (?).

Remarks: The distribution is uncertain due to confusion with *O. diaphana* (Schander 1995).

### Family TJERNOEIDAE

#### Genus *Tjaernoeia* Warén & Bouchet, 1988

##### *Tjaernoeia boucheti* Warén, 1991

Reference to best description of the species: Warén 1991: 91-92, Figs 23a-d, 24b-d, 25c-e.

Previous records: None.

New stations: BIOFAR station 722.

Bathymetrical range within the area: 918 m.

Substrate: Mud, sponge spicules, corals.

Temperature: +0.65 °C (E).

Water mass: NW.

World distribution: North of Iceland, the Faroes, Rockall Trough, Bay of Biscay.

World bathymetrical range: 540-2091 m.

Checked by: JAS

### Subclass Opisthobranchia

#### Family ACTEONIDAE Orbigny, 1835

##### Genus *Acteon* Montfort, 1810

##### *Acteon tornatilis* (Linnaeus, 1758)

Synonyms: *Actaeon subulatus* Wood, 1848, *Bulla tornatilis* Linnaeus, 1758, *Turbo ovalis* da Costa,



1778, *Actæon tenellus* Lovén, 1846, *Tornatella pellucida* MacGillivray, 1843, *Voluta bifasciata* Gmelin, 1791.

Reference to best description of the species: Thompson 1988: 26-27, Fig. 4.

Previous records: "Fishing ground" [? Faroe Bank] (Mørch 1868: 76 as *Actæon tornatilis* L. var.?, Mørch 1868: 76-77 as *Actæon tenellus*). A few occurrences on the Faroe plateau (Lemche 1929: 1-2, Lemche 1929: 2 as *Actæon tornatilis* var. *tenellus* Lemche, 1948).

New records: BIOFAR stns 543, 602.

Bathymetrical range within the area: 40-160 m.

Substrate: Shell-gravel, gravel, stones.

Temperature: 8.1 - 8.2 °C (E).

Water mass: AW.

World distribution: South, west and northwest Iceland, the Faroes, Shetland, British Isles, European mainland from Lofoten to the Mediterranean as far as the Aegean Sea (Platts 1985, Thompson 1988).

World bathymetrical range: 16-250 m (Lemche 1938).

## Family AKERIDAE

### Genus *Akera* O.F. Müller, 1776

#### *Akera bullata* O.F. Müller, 1776

Synonyms: *Akera farrani* Winckworth, 1932, *Akera tenuis* Brusina, 1866, *Bulla akera* Gmelin, 1791, *Bulla fragilis* Lamarck, 1822, *Bulla globosa* Cantraine, 1840, *Bulla hanleyi* Adams, 1855, *Bulla norvegica* Bruguière, 1789, *Bulla resiliens* Donovan, 1801, *Eucampe donovani* Leach, 1852.

Reference to best description of the species: Thompson 1988: 72-73, Fig. 27.

Previous records: Occurrence in Vestmanna and Skálafjørður (Lemche 1929: 5-6 as *Acera bullata*; Lemche 1948).

New records: None.

Bathymetrical range within the area: 7-70 m.

Substrate, temperature and water mass: No data.

World distribution: The Faroes, Shetland, British Isles, European mainland from Tromsø in northern Norway to the Mediterranean as far as the Greek Ionian Sea (Platts 1985, Thompson 1988).

World bathymetrical range: 0-370 m (own observation, Thompson 1988).

## Family DIAPHANIDAE

### Genus *Colpodaspis* M. Sars, 1870

#### *Colpodaspis pusilla* M. Sars, 1870

Synonym: *Amphisphyra quadrata* Monterosato, 1874.

Reference to best description of the species: Brown 1979: 202-217, Pl. 1b-c, Textfigs 1-6.

Previous records: None.

New records: BIOFAR stns 019, 032, 065.

Bathymetrical range within the area: 276-354 m.

Substrate: Often with many sponge spicules.

Temperature: 6.5 - 7.9 °C (E).

Water mass: AW (1), AW/AI (2).

World distribution: The Faroes, coasts of Europe from the Oslofjord in Norway to the Mediterranean (Brown 1979, Schiøtte 1998).

World bathymetrical range: 4-354 m (Brown 1979, this study).

### Genus *Diaphana* Brown, 1827

#### *Diaphana globosa* (Lovén, 1846)

Synonym: *Amphisphyra globosa* Lovén, 1846.

Reference to best description of the species: Schiøtte 1998: 114-118, Figs 21, 22b.

Previous records: BIOFAR stn. 522, BIOICE stn. 9 / 2337 (Schiøtte 1998: 114-118).

New records: None.

Bathymetrical range within the area: 514-1099 m.

Substrate: Silty sand, pebbles.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: North Atlantic from southeast of Iceland to west of Britain, European mainland from northernmost Norway to Bay of Biscay (Schiøtte 1998).

World bathymetrical range: 25-2644 m, occurrences in less than 100 m rare (Schiøtte 1998).

Remarks: For many years *Diaphana globosa* was confused with *D. hiemalis* in spite of the distinctly differing descriptions. *D. globosa* has a flat spire with all whorls clearly visible, while *D. hiemalis* has an involute spire with only a small apical hole. In both species there seems to be a tendency towards increasing protoconch size with increasing depth.



***Diaphana hiemalis* (Couthouy, 1839)**

Synonyms: *Amphisphyra hiemalis loveni* Friele, 1886, *Bulla hiemalis* Couthouy, 1839, *Bulla vitrea* Sars, 1866, *Philina laevis* M. Sars, 1859.

Reference to best description of the species: Schiøtte 1998: 118-122, Figs 16d, 19c-d, 23.

Previous records: 61°49'N, 5°36'W, 160 m (Simpson 1910: 115 as *Diaphana expansa* [not Jeffreys, 1865]), around the islands at 218 to 1150 m, including BIOFAR stns 15, 27, 28, 82, 95, 168, 189, 230, 263, 271, 274, 458, 459, 477, 501 (Schiøtte 1998: 118-122).

New records: BIOICE st. 7 / 2332, 62°55'N 12°14'W, 550 m.

Bathymetrical range within the area: 160-1150 m.

Substrate: Gravel, sand, mud, foraminiferans.

Temperature: +0,8 - 7.8 °C (mostly in the lower end of the range) (E).

Water mass: AW (2), AI (2), AW/AI/NW (1), NW (10).

World distribution: Circumpolar distribution radiating from the high Arctic into the northwest Pacific Ocean down to Japan and into the North Atlantic. American east coast down to Massachusetts, Greenland, Iceland, European waters south to at least west of the British Isles, possibly even into the Mediterranean (Schiøtte 1998).

World bathymetrical range: 5 m in high Arctic to 2400 m in the North Atlantic (Schiøtte 1998).

Remarks: The BIOFAR and BIOICE collections show that *Diaphana hiemalis* is common at 1000-2000 m in the North Atlantic and is actually predominantly a deep water species. Deep water shells of *D. hiemalis* often have larger apical holes than those from more shallow water, a phenomenon that usually begins to be noticeable from about 800 to 1000 m depth. See also remarks under *D. globosa*.

***Diaphana lactea* (Jeffreys, 1877)**

Synonyms: *Diaphana jonica* Geronimo, 1974, *Utriculus lacteus* Jeffreys, 1877.

Reference to best description of the species: Schiøtte 1998: 122-124, Figs 22a, 24a-c.

Previous records: Mainly N and E of the islands, including BIOFAR stns 015, 167, 169, 228, 271, 274, 361, 477, BIOICE stn. 9 / 2337 (Schiøtte 1998: 122-124).

New records: None.

Bathymetrical range within the area: 559-1150 m.

Substrate: Gravel, sand, sometimes with sponge spicules, fine mud.

Temperature: +0.85 - 2.2 °C (usually below 0 °C) (E).

Water mass: AI (1), NW (8).

World distribution: Norwegian Sea, Denmark Strait, North Atlantic and Mediterranean (Schiøtte 1998).

World bathymetrical range: 559-4268 m (Schiøtte 1998).

***Diaphana makarovi* Gorbunov, 1946**

Synonyms: *Diaphana makarovi* Gorbunov, 1946, *Diaphana vedelsbyae* Schiøtte, 1989.

Reference to best description of the species: Schiøtte 1989: 13-14, Fig. 9a-c, Schiøtte 1998: 85-87, Figs 7a-c, 7i-l, 8a, 18i.

Previous records: NW of the Faroes at 453 to 772 m, including BIOFAR stn. 271, BIOICE stns 2 / 2318, 3 / 2323, 4 / 2324, 6 / 2329 (Schiøtte 1992b: 96 as *Diaphana vedelsbyae*, Schiøtte 1998: 85-87).

New records: BIOICE stns 1 / 2317, 64°7'N, 9°3'W, 996 m, 3 / 2321, 63°56'N, 10°0'W, 639 m, 4 / 2325, 63°45'N, 10°11'W, 555 m, 6 / 2330, 63°5'N, 11°20'W, 453 m.

Bathymetrical range within the area: 453-996 m.

Substrate: Fine mud, some foraminiferans.

Temperature: 2.2 °C (E).

Water mass: AI.

World distribution: Laptev Sea, Kara Sea, northeast Greenland, the continental slope north of the Faroe Islands and Iceland (Schiøtte 1998).

World bathymetrical range: 9 m in northern Greenland to 1400 m north of Iceland (Schiøtte 1998).

***Diaphana minuta* Brown, 1827**

Synonyms: *Amphisphyra expansa* Jeffreys, 1865, *Bulla debilis* Gould, 1840, *Bulla hyalina* Turton, 1834, *Bulla subangulata* Møller, 1842, *Diaphana candida* Brown, 1827, *Diaphana hyalina spirata* Odhner, 1907, *Diaphana pellucida* Brown, 1827.

Reference to best description of the species: Schiøtte 1998: 96-102, Figs 13, 18f-h.

Previous records: Simpson (1910): Stn. 16a; In the fjords and on the plateau around the Faroes at 5 to 119 m (Lemche 1929: 5 as *Diaphana hyalina*) and on the Faroe-Iceland ridge, BIOICE stn. 18 / 2356 at 327 m (Schiøtte 1998: 96-102).

New records: BIOICE stn. 19 / 2358, 64°10'N, 11°32'W, 318 m.



Bathymetrical range within the area: 5-327 m.

Substrates, temperature, water mass: No data.

World distribution: North Atlantic and northern Pacific oceans and adjoining low Arctic area. On the American east coast the species is found at least down to Massachusetts, in Europe to the Spanish west coast, perhaps into the Mediterranean. In the Arctic it occurs in the Barents Sea to Novaya Zemlya, White Sea, around Iceland, and about halfway up along the west Greenland coast. *Diaphana minuta* is found also in the northern Pacific Ocean, south to Japan on the western side, and to British Columbia on the eastern (Schjøtte 1998).

World bathymetrical range: 0-327 m, but occurrences from more than 100 m are rare (Schjøtte 1998).

### Genus *Rhinodiaphana* Lemche, 1967

#### ?*Rhinodiaphana ventricosa* (Jeffreys, 1865)

Synonyms: *Amphisphyra ventricosa* Jeffreys, 1865, *Philine velutinoides* Sars, 1878, *Utriculus ventrosus* Jeffreys, 1867.

Reference to best description of the species: Lemche 1967: 207-213, Figs 1-11.

Previous records: None.

New records: BIOFAR stn. 421.

Bathymetrical range within the area: 597 m.

Substrate: fine gravel.

Temperature: 2.6 °C (M: one stn), 3.1 °C (E).

Water mass: AW/AI/NW.

World distribution: South Iceland, the Faroes, Norway from Lofoten to Bergen, southwest and west British Isles, Irish Sea (own observation, this study, Platts 1985).

World bathymetrical range: 80-597 m.

Remarks: There is only one very small specimen in the BIOFAR material and dissection has not been attempted, which is why the identification must still be taken with some reservation.

### Family PHILINIDAE

#### Genus *Philine* Ascanius, 1772

#### *Philine angulata* Jeffreys, 1867

Reference to best description of the species: Thompson 1988: 56-57, Fig. 19a-b.

Previous records: Vestmanna and Trongisvágsfjørður

at 7 to 31 m (Lemche 1929: 7, as *Philine punctata* (Clark) [not Adams, 1800]).

New records: BIOFAR stns 073, 077, 098, 192, 355.

Bathymetrical range within the area: 7-185 m.

Substrate: Coarse sand, fine shell-sand, shell-gravel.

Temperature: 7.7 - 9.1 °C (E).

Water mass: AW.

World distribution: Northeast Atlantic from Møre in Norway to the Mediterranean, possibly also in the northwest Atlantic (based with some doubt on Thompson 1988).

World bathymetrical range: 7-185 m.

Remarks: Lemche (1929) mentions Greenland in the distribution for the species, but this seems unfounded.

#### ?*Philine aperta* (Linnaeus, 1767)

Synonyms: *Bulla aperta* Linnaeus, 1767, *Bulla bulla* DaCosta, 1778, *Bulla emarginata* Adams, 1800, *Bullaeaplanciana* Lamarck, 1801, *Bullaea schroeteri* Philippi, 1844, *Lobaria quadriloba* Müller, 1776, *Philine quadripartita* Ascanius, 1772.

Reference to best description of the species: Thompson 1988: 54-55, Fig. 18.

Previous records: One occurrence in Borðoyarvík (Lemche 1929: 6).

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 14-20 m.

Substrate: Sand.

Temperature, water mass: No data.

World distribution: European coasts from Nordland county in Norway to the Mediterranean, South Africa, Ceylon and the Philippines (Thompson 1988).

World bathymetrical range: Down to 500 m (Thompson 1988), but predominantly a shallow water species.

Remarks: Lemche (1929) expressed some doubt about the identity of the two, small shells that constitute the only recorded material of this species from the Faroes.

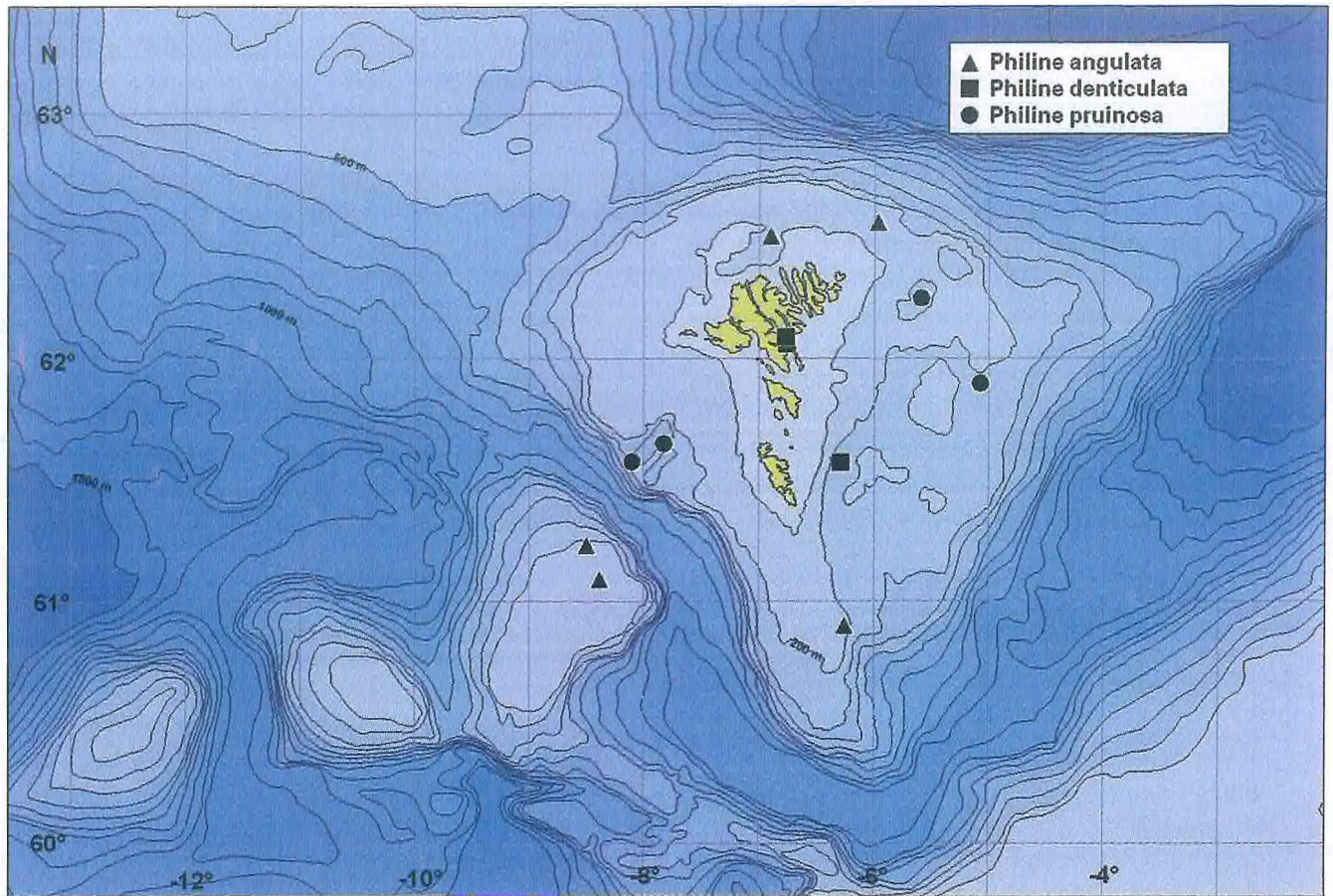
#### *Philine denticulata* (Adams, 1800)

Synonyms: *Bulla denticulata* Adams, 1800, *Philine nitida* Jeffreys, 1867, *Philine sinuata* Stimpson, 1850.

Reference to best description of the species: Thompson 1988: 56-57, Fig. 19c-d.

Previous records: Vágsfjørður, Funningsfjørður and





Hvalvík (Lemche 1929: 7, as *Philine sinuata*).  
 New records: BIOFAR stns 060, 100, 103.  
 Bathymetrical range within the area: 10-283 m.  
 Substrate: Sand and shell-gravel, mud.  
 Temperature: 6.8 - 7.8 °C (E).  
 Water mass: AW (2), AW/AI (1).  
 World distribution: The Faroes, west coast of British Isles, European mainland from 69.5°N to the Mediterranean; west coast of North America (Lemche 1941a, Høisæter 1986, Thompson 1988).  
 World bathymetrical range: Usually in shallow water (Thompson 1988) but may be found down to 283 m (this study).

### *Philine finmarchica* M. Sars, 1858

Synonyms: *Philine cingulata* Sars, 1878, *Philine fragilis* Sars, 1878, *Philine intermedia* Knipowitsch, 1901, *Philine ossiansarsi* Friele, 1877.

Reference to best description of the species: M. Sars 1858 suppl. with Lemche 1948: 61-69, Figs 67-72.

Previous records: Western shelf part (Simpson 1910: 16a).

New records: BIOFAR stns 015, 019, 082, 095, 189, 227, 230, 263, 267, 271, 274, 294, 381, 422, 424, 447, 458, 459, 477, 482, 483, BIOICE stns 1 / 2315, 64°6'N 9°3'W, 991 m, 1 / 2317, 64°7'N 9°3'W, 996 m, 2 / 2318, 64°2'N 9°37'W, 772 m, 2 / 2319, 64°1'N 9°37'W, 776 m, 3 / 2322, 63°55'N 10°4'W, 627 m, 3 / 2323, 63°55'N 10°5'W, 623 m, 4 / 2325, 63°45'N 10°11'W, 555 m, 5 / 2327, 63°21'N 10°51'W, 430 m, 5 / 2328, 63°20'N 10°57'W, 430 m, 6 / 2329, 63°5'N 11°21'W, 453 m, 6 / 2330, 63°5'N 11°20'W, 453 m, 10 / 2338, 62°11'N 13°19'W, 1290 m, 10 / 2340, 62°8'N 13°20'W, 1302 m, 14 / 2344, 63°12'N 12°58'W, 610 m, 15 / 2345, 63°23'N 12°37'W, 497 m, 15 / 2346, 63°23'N 12°38'W, 501 m, 16 / 2348, 63°36'N 12°15'W, 407 m, 17 / 2351, 63°47'N 11°51'W, 355 m, 17 / 2352, 63°47'N 11°49'W, 350 m, 18 / 2355, 63°54'N 11°35'W, 317 m, 18 / 2356, 63°55'N 11°37'W, 327 m, 19 / 2357, 64°10'N 11°25'W, 309 m, 19 / 2358, 64°10'N 11°32'W, 318



m, 20 / 2360, 64°17'N 10°49'W, 391 m, 37 / 2381, 63°43'N 11°30'W, 389 m.

Bathymetrical range within the area: 160-1302 m.

Substrate: Sand, gravel, gravel and stones, sponge spicules, fine mud with foraminiferans.

Temperature: 0.1 °C (M: one stn),  $\pm 0.85$  - 6.5 °C (E).

Water mass: AW/AI (3), AI (5), AI/NW (1), AW/AI/NW (1), NW (12).

World distribution: Greenland to northernmost parts, north and east Iceland, the Faroes, Svalbard, whole coast of Norway south to Bergen; east coast of North America (Lemche 1941a, Schiøtte 1989, present study).

World bathymetrical range: About 25 (Lemche 1941a) to about 1300 m (own observation).

### *Philine pruinosa* (Clark, 1827)

Synonyms: *Bullaea pruinosa* Clark, 1827, *Philine flexuosa* Sars, 1870.

Reference to best description of the species: Thompson 1988: 60-61, Fig. 21.

Previous records: None.

New records: BIOFAR stns 006, 027, 062, 065, 100.

Bathymetrical range within the area: 225-350 m.

Substrate: Sand with sponge spicules, sand with shell-gravel.

Temperature: 6.8 - 7.9 °C (E).

Water mass: AW (4), AW/AI (1).

World distribution: the Faroes, British Isles except southeast England, European mainland from Lofoten in Norway to the Mediterranean (Thompson 1988).

World bathymetrical range: 2-400 m (Thompson 1988).

### *Philine punctata* (Adams, 1800)

Synonym: *Bulla punctata* Adams, 1800.

Reference to best description of the species: Thompson 1988: 62-63, Fig. 22.

Previous records: None (Lemche's 1929 "*Philine punctata* (Clark)" = *P. angulata*).

New records: BIOFAR stn. 065.

Bathymetrical range within the area: 322 m.

Substrate: Unknown.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: The Faroes, Shetland, and British Isles, European mainland from Vikna in Norway to the Mediterranean (modified from Thompson 1988).

World bathymetrical range: From shore pools to 322 m (Thompson 1988, this study).

Remarks: Thompson (1988) mentions Greenland in the distribution range, but this seems unfounded and may have its origin in Lemche's abovementioned record of *Philine punctata* (Clark), which he also believes to be found in Greenland.

### *Philine quadrata* (Wood, 1839)

Synonym: *Bulla quadrata* Wood, 1839.

Reference to best description of the species: Thompson 1988: 64, Fig. 23.

Previous records: BIOFAR without further specification (Schiøtte 1992b: 96-97).

New records: BIOFAR stns 6, 7, 15, 19, 27, 28, 29, 32, 33, 65, 82, 95, 100, 137, 158, 167, 168, 169, 172, 188, 189, 263, 267, 271, 274, 295, 381, 421, 422, 424, 425, 459, 477, 482, 483, 489, 490, 493, 522, 9014, BIOICE stns 2 / 2318, 64°2'N 9°37'W, 772 m, 3 / 2323, 63°55'N 10°5'W, 623 m, 4 / 2325, 63°45'N 10°11'W, 555 m, 6 / 2329, 63°5'N 11°21'W, 453 m, 6 / 2330, 63°5'N 11°20'W, 453 m, 7 / 2332, 62°55'N 12°14'W, 550 m, 8 / 2334, 62°43'N 12°43'W, 803 m, 9 / 2337, 62°27'N 12°55'W, 1099 m, 15 / 2345, 63°23'N 12°37'W, 497 m, 15 / 2346, 63°23'N 12°38'W, 501 m, 16 / 2348, 63°36'N 12°15'W, 407 m, 17 / 2351, 63°47'N 11°51'W, 355 m, 17 / 2352, 63°47'N 11°49'W, 350 m, 18 / 2355, 63°54'N 11°35'W, 317 m, 18 / 2356, 63°55'N 11°37'W, 327 m.

Bathymetrical range within the area: 170 - 1200 m.

Substrate: Clay, sand, and shell-gravel, sponge spicules, soft silt with foraminiferans

Temperature:  $\pm 0.5$  - 0.1 °C (M: 3 stns),  $\pm 0.85$  - 8.6 °C (E).

Water mass: AW (8), AW/AI (10), AI (6), AI/NW (2), AW/AI/NW (2), NW (11).

World distribution: West Greenland, north and east Iceland, the Faroes, British Isles, European mainland from the White Sea to the Mediterranean; east coast of North America (Lemche 1941a, Thompson 1988).

World bathymetrical range: 170 (this study)-2150 m (Thompson 1988).

### *Philine scabra* (O.F. Müller, 1776)

Synonyms: *Bulla pectinata* Dillwyn, 1817, *Bulla scabra* O.F. Müller, 1776, *Philine loveni* Malm, 1855.



Reference to best description of the species: Thompson 1988: 65, Fig. 24.

Previous records: Funningsfjørður, Trongisvágsfjørður, Vágafjørður, Kaldbaksfjørður, Ædúvík, Hvannasund, 8 to 80 m (Lemche 1929: 6-7).

New records: BIOFAR stns 006, 027, 028, 032, 065, 100, 103, 158, 165, 295, 356, 357, 492, 493, 515, 524, 542.

Bathymetrical range within the area: 8-900 m.

Substrate: Sand, sand with sponge spicules, sand with shell-gravel.

Temperature: 6.5° - 8.1 °C (E).

Water mass: AW(14), AW/AI(3).

World distribution: Northwest, west and south Iceland, the Faroes, Shetland, British Isles, European mainland from Sørøy in northern Norway to the Mediterranean, West Africa, Madeira (Platts 1985, Thompson 1988).

World bathymetrical range: 8-1500 m (this study, Thompson 1988).

## Family RETUSIDAE

### Genus *Pyrunculus* Pilsbry, 1894

#### *Pyrunculus ovatus* (Jeffreys, 1870)

Synonym: *Cylichna ovata* Jeffreys, 1870.

Reference to best description of the species: G.O. Sars 1878: 287, Fig. 17a-b (as *Utriculo conulus*), Bouchet 1975: 332-334, Fig. 6.

Previous records: Triton stn. 13.

New records: BIOFAR st. 124.

Bathymetrical range within the area: 600 m.

Substrate: Unrecorded.

Temperature: 3.9 °C.

Water mass: AW/AI.

World distribution: Northwest, west and south Iceland, the Faroes, Shetland, Troms and Nordland county in northern Norway, southwest and west British Isles (Lemche 1938, Platts 1985, Høisæter 1986).

World bathymetrical range: 600 (this study)-2000 m (Bouchet 1975).

### Genus *Retusa* Brown, 1827

#### *Retusa obtusa* (Montagu, 1803) s.l.

Synonyms: *Bulla clandestina* Montpereux, 1831, *Bulla incincta* Mighels, 1844, *Bulla lajonkairieana* Basterot, 1825, *Bulla obtusa* Montagu, 1803, *Bulla*

*pertenuis* Mighels, 1843, *Bulla spirata* Montpereux, 1831, *Bulla terebellata* Montpereux, 1831, *Bulla turrita* Møller, 1842, *Cylichna leptoneilema* Brusina, 1866, *Retusa discors* Brown, 1827, *Retusa plicata* Brown, 1827, *Voluta alba* Kanmacher, 1798.

Reference to best description of the species: Thompson 1988: 32-33, Fig. 7.

Previous records: Many records all around the islands from about 8 to 200 m, in shallow water only as shells (Lemche 1929: 2-3 as *Retusa pertenuis*).

New records: BIOFAR stns 167, 168, 169, BIOICE stn. 9 / 2337, 62°27'N 12°55'W, 1099 m.

Bathymetrical range within the area: 808-1032 m.

Substrate: Soft with foraminiferans.

Temperature: +0.7 - +0.95 °C (M).

Water mass: NW.

World distribution: Greenland, Iceland, the Faroes, British Isles, Scandinavia from northernmost Norway, Arctic Ocean, Baffin Bay, Nova Scotia, Gulf of Maine, Bering Strait and Sea, Aleutian Islands (Lemche 1929, Høisæter 1986, Thompson 1988).

World bathymetrical range: 5-1099 m (this study).

Remarks: It is rather certain that Lemche (1948) lumped several species under the name *Retusa obtusa*. The name is here used with that reservation, since a taxonomic revision is outside the scope of the present work. The distribution of the species in the Faroe area indicates that actually at least two distinct "obtusa"-like species are found here.

#### *Retusa truncatula* (Bruguière, 1792)

Synonyms: *Bulla jeverensis* Schröter, 1804, *Bulla retusa* Maton & Rackett, 1807, *Bulla semisulcata* Philippi, 1836, *Bulla truncatula* Bruguière, 1792, *Volvaria pellucida* Brown, 1827.

Reference to best description of the species: Thompson 1988: 34-35, Fig. 8.

Previous records: One shell at Vestmanna (Lemche 1929: 2 as *Retusa truncatula* var. *pellucida*).

New records: None.

Bathymetrical range within the area: Around 11 m.

Substrates, temperature, water mass: Unknown.

World distribution: The Faroes, British Isles, European mainland from 70°N to the Mediterranean, the Canaries (Lemche 1929, Høisæter 1986, Thompson 1988).

World bathymetrical range: 10-200 m (own observation, Thompson 1988).



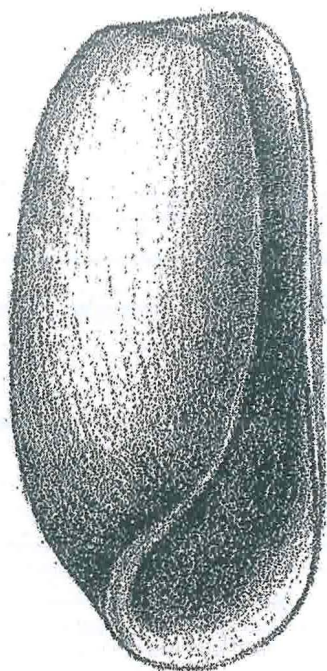


Fig 38. *Cylichna alba*  
(Brown, 1827)

Family SCAPHANDRIDAE  
Genus *Cylichna* Lovén, 1846

*Cylichna alba* (Brown, 1827) Fig. 38.

Synonyms: *Bulla alba* Turton, 1825, *Bulla corticata* Møller, 1842, *Bulla nucleola* Reeve, 1855, *Bulla triticea* Couthouy, 1838, *Volvaria alba* Brown, 1827.

Reference to best description of the species: Thompson 1988: 44-45, Fig. 13.

Previous records: Triton stns 10, 13; On E part of plateau (Simpson 1910: 16, 16a as *Bullinella alba*); Evenly distributed on the plateau (Lemche 1929: 4); Large vertical distribution in cold and warm water (Schiøtte 1992b: 96-97).

New records: BIOFAR stns 006, 010, 015, 033, 051, 063, 065, 082, 095, 100, 158, 165, 167, 169, 172, 269, 270, 271, 274, 335, 356, 361, 381, 411, 421, 422, 425, 477, 479, 480, 482, 483, 490, 495, 496, 499, 500, 517, 525, BIOICE stns 1 / 2317, 64°7'N 9°3'W, 996 m, 2 / 2318, 64°2'N 9°37'W, 772 m, 2 / 2319, 64°1'N 9°37'W, 776 m, 3 / 2321, 63°56'N 10°0'W, 639 m, 3 / 2323, 63°55'N 10°5'W, 623 m, 4 / 2324, 63°45'N 10°11'W, 554 m, 4 / 2325, 63°45'N 10°11'W, 555 m, 5 / 2328, 63°20'N 10°57'W, 430 m, 6 / 2329, 63°5'N 11°21'W, 453 m, 6 / 2330, 63°5'N 11°20'W, 453 m, 7 / 2331, 62°55'N 12°13'W, 563 m, 7 / 2332, 62°55'N 12°14'W, 550 m, 8 / 2333, 62°43'N 12°49'W, 800 m, 8 / 2334, 62°43'N

12°43'W, 803 m, 9 / 2337, 62°27'N 12°55'W, 1099 m, 10 / 2338, 62°11'N 13°19'W, 1290 m, 10 / 2340, 62°8'N 13°20'W, 1302 m, 13 / 2343, 63°4'N 13°7'W, 698 m, 15 / 2346, 63°23'N 12°38'W, 501 m, 17 / 2351, 63°47'N 11°51'W, 355 m, 17 / 2352, 63°47'N 11°49'W, 350 m, 18 / 2355, 63°54'N 11°35'W, 317 m, 18 / 2356, 63°55'N 11°37'W, 327 m, 19 / 2357, 64°10'N 11°25'W, 309 m, 19 / 2358, 64°10'N 11°32'W, 318 m, 20 / 2359, 64°17'N 10°50'W, 394 m, 20 / 2360, 64°17'N 10°49'W, 391 m, 37 / 2381, 63°43'N 11°30'W, 389 m.

Bathymetrical range within the area: 10-1302 m.

Substrate: All combinations of stones, gravel, sand, silt, sponge spicules, clay.

Temperature: 2.6 °C (M: one stn), +0.85 - 8.2°C (E).

Water mass: AW (8), AW/AI (7), AI (6), AI/NW (5), AW/AI/NW (2), NW (11).

World distribution: Greenland, Iceland, the Faroes, Shetland, Svalbard, European mainland from northernmost Norway to the Mediterranean; West Atlantic south to Pernambuco; Arctic Sea, Bering Sea, east Pacific Ocean south to California (Lemche 1929, Platts 1985, own observation).

World bathymetrical range: 6-2700 m (Lemche 1941a, 1929).

Remarks: It is rather certain that *Cylichna alba*, as the name is used here, is actually several species, but the delimitation between these has not been readily apparent. The name *Cylichna alba* is used with that reservation, since a taxonomic revision is outside the scope of the present work.

*Cylichna magna* Lemche, 1941

Reference to best description of the species: Lemche 1948: 43-49, Figs 41-42.

Previous records: None.

New records: BIOFAR stns 271, 274, 361, 381, BIOICE stns 1 / 2315, 64°6'N 9°3'W, 991 m, 1 / 2317, 64°7'N 9°3'W, 996 m, 2 / 2318, 64°2'N 9°37'W, 772 m, 2 / 2319, 64°1'N 9°37'W, 776 m, 3 / 2321, 63°56'N 10°0'W, 639 m, 3 / 2323, 63°55'N 10°5'W, 623 m, 5 / 2327, 63°21'N 10°51'W, 430 m, 5 / 2328, 63°20'N 10°57'W, 430 m, 6 / 2329, 63°5'N 11°21'W, 453 m, 6 / 2330, 63°5'N 11°20'W, 453 m, 17 / 2352, 63°47'N 11°49'W, 350 m, 20 / 2359, 64°17'N 10°50'W, 394 m, 20 / 2360, 64°17'N 10°49'W, 391 m.

Bathymetrical range within the area: 350-996 m.

Substrate: Fine mud with foraminiferans or sponge spicules, sand, gravel with a few, smaller stones.



Temperature: +0.6 - 2.8 °C (E).

Water mass: AI (2), NW (2).

World distribution: North, west and east Greenland, north Iceland, the Faroes (Lemche 1941a, 1941b, Schiøtte 1989, own observation, this study).

World bathymetrical range: 10-996 m (Lemche 1941a, this study).

### Genus *Roxania* Gray, 1847

#### *Roxania utriculus* (Brocchi, 1814)

Synonyms: *Bulla cecilei* Weinkauff, 1862, *Bulla cranchii* Fleming, 1828, *Bulla utriculata* Locard, 1886, *Bulla utriculus* Brocchi, 1814.

Reference to best description of the species: Thompson 1988: 48-49, Fig. 15.

Previous records: One locality on western shelf (Simpson 1910: 115).

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 130 m.

Substrates, temperature, water mass: No data.

World distribution: The Faroes, Shetland, Hebrides, British Isles, northwestern Europe from 65.5°N south to the Mediterranean, the Canaries (Høisæter 1986, Thompson 1988).

World bathymetrical range: 130 m (this study)-1500 m (Thompson 1988).

### Genus *Scaphander* Montfort, 1810

#### *Scaphander lignarius*

(Linnaeus, 1758)

Fig. 39.

Synonyms: *Assula convoluta* Schumacher, 1817, *Bulla lignaria* Linnaeus, 1758, *Bulla zonata* Turton,

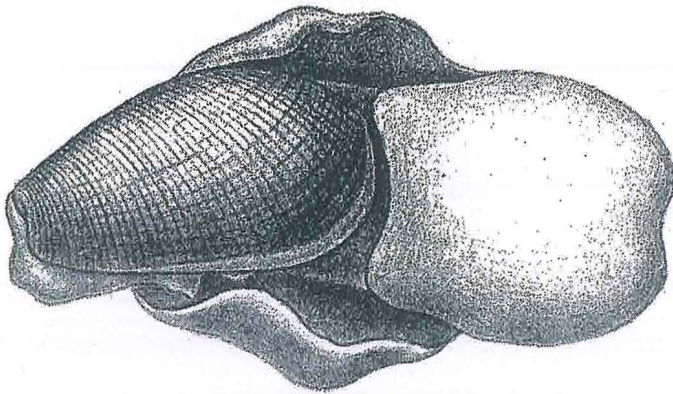


Fig 39. *Scaphander lignarius* (Linnaeus, 1758)

1834, *Gioënia sicula* Bruguière, 1789, *Scaphander britannicus* Locard & Caziot, 1900, *Scaphander brownii* Leach, 1852, *Tricla gioeni* Philipsson, 1788.

Reference to best description of the species: Thompson 1988: 50-51, Fig. 16.

Previous records: A few localities at Suðuroy and the Faroe Bank from about 168 to 270 m (Lemche 1929: 3)

New records: BIOFAR stns 006, 007, 008, 019, 027, 028, 029, 032, 033, 045, 063, 065, 076, 100, 158, 163, 165, 204, 289, 322, 323, 333, 346, 356, 357, 363, 364, 473, 510, 512, 519, 539, 542, 543.

Bathymetrical range within the area: 8 - 354 m.

Substrate: Silt, mud, sand, gravel, shell-gravel, stones, sponge spicules.

Temperature: 6.4 - 9.1 °C (E).

Water mass: AW (28), AW/AI (6).

World distribution: South Iceland, the Faroes, British Isles, European mainland from Sørøya in northern Norway to the Mediterranean, the Canaries (Lemche 1941a, Thompson 1988, and own observation).

World bathymetrical range: Quite shallow (few m's to, usually, a few hundred meters, rarely to 700 m (Thompson 1988, this study).

#### *Scaphander punctostriatus* (Mighels, 1841)

Synonyms: *Bulla punctostriata* Mighels, 1841, *Cryptaxis crebripunctatus* Jeffreys, 1883, *Scaphander librarius* Lovén, 1846.

Reference to best description of the species: Thompson 1988: 52-53, Fig. 17.

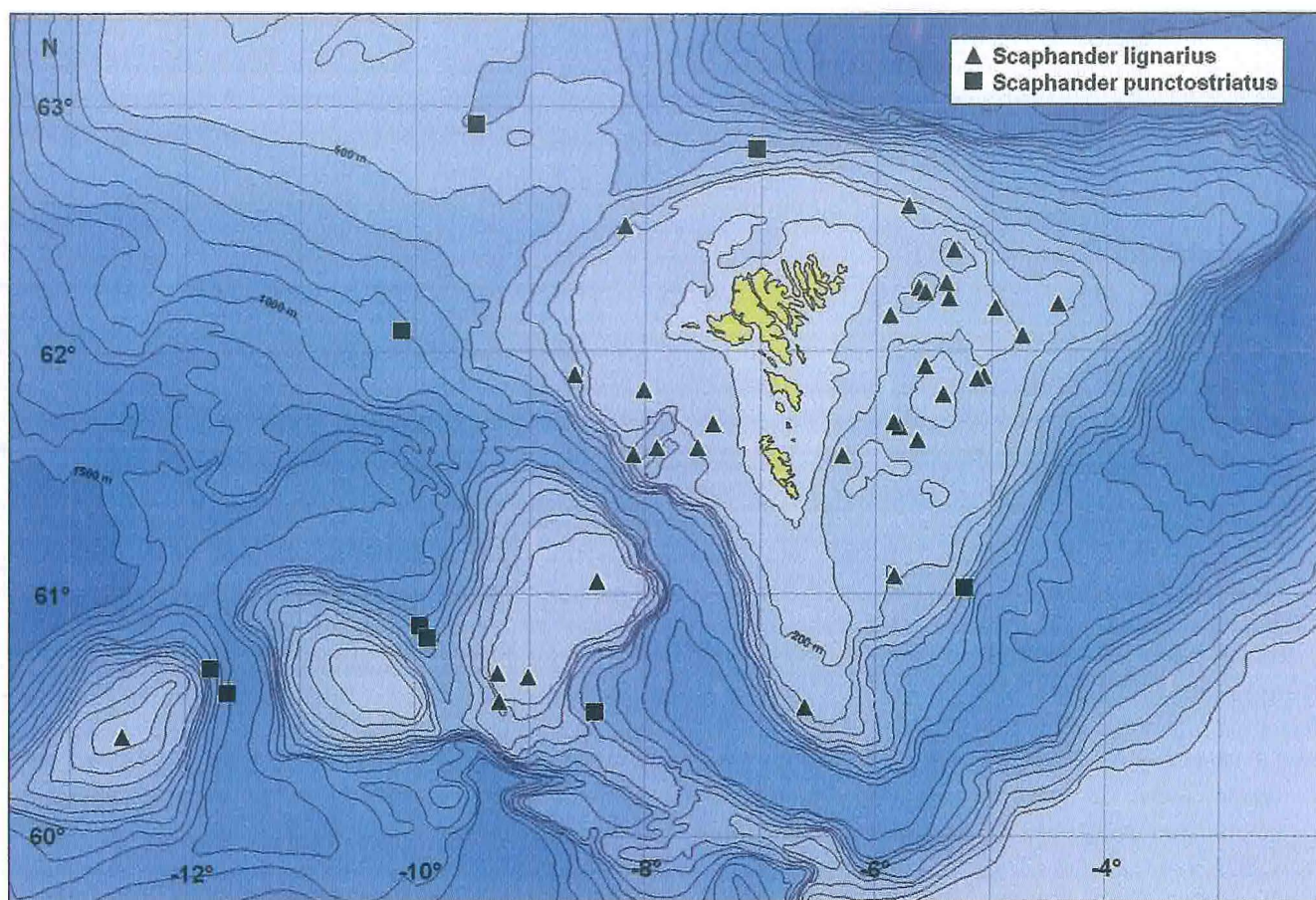
Previous records: Triton stn. 13; 61°23'N 5°4'W (Lemche 1929: 3-4).

New records: BIOFAR stns 082, 263, 425, 457, 482, 492, 493, 515, 517, 525, BIOICE stns 7 / 2331, 62°55'N 12°13'W, 563 m, 7 / 2332, 62°55'N 12°14'W, 550 m, 8 / 2333, 62°43'N 12°49'W, 800 m, 9 / 2337, 62°27'N 12°55'W, 1099 m, 10 / 2338, 62°11'N 13°19'W, 1290 m, 10 / 2340, 62°8'N 13°20'W, 1302 m, 13 / 2343, 63°4'N 13°7'W, 698 m, 14 / 2344, 63°12'N 12°58'W, 610 m, 15 / 2346, 63°23'N 12°38'W, 501 m, 16 / 2348, 63°36'N 12°15'W, 407 m.

Bathymetrical range within the area: 407-1302 m.

Substrate: Combinations of stones, gravel, sand, shell-sand and silt.





Temperature: +0.1 - 7.6 °C (E).

Water mass: AW (3), AW/AI (2), AI (2), AI/NW (1), AW/AI/NW (1), NW (1).

World distribution: Southeast Greenland, south and west Iceland, the Faroes, northern British coasts, Svalbard, European mainland from Murman Sea perhaps to the Mediterranean; doubtful records from the Canaries; in east America from Newfoundland to Massachusetts and the West Indies; India, and Australia (Lemche 1941a, Thompson 1988).

World bathymetrical range: Lemche (1929: 4) states that the species has been recorded from 10 to 3000 m depth, but records from less than 100 m should probably be regarded with scepticism.

## Order NUDIBRANCHIA

### Family AEGIRETIDAE

#### Genus *Triopella* G.O. Sars, 1872

#### *Triopella incisa* G.O. Sars, 1872 (ex M. Sars, manuscript?)

Synonym: *Triopa incisa* M. Sars

Reference to best description of the species: G.O. Sars 1878: 310-311, Pl. 27, fig. 3a-d.

Previous records: None.

New records: BIOFAR stns 019, 027, 131, 265.

Substrate: Sand, sand with sponge spicules, gravel.

Bathymetrical range within the area: 225-684 m.

Temperature: 4.6 - 8.0 °C.

Water mass: AW (2), AW/AI (2).

World distribution: The Faroes (this study), from Hammerfest in north Norway to the Oslofjord (Odhner, 1922).

World bathymetrical range: 20-684 m (Odhner 1922, and this study).



Remarks: This species is poorly known. The BIOFAR material is the first record outside Norway. One specimen from station 19 has been dissected.

## Family ALDISIDAE

### Genus *Aldisa* Bergh, 1878

#### *Aldisa zetlandica* (Alder & Hancock, 1854)

Synonym: *Doris zetlandica* Alder & Hancock, 1854.

Reference to best description of the species: Thompson & Brown 1984: 78, Fig. 19c.

Previous records: Grieg (1913), Jensen & Fredriksen (1992).

New records: BIOFAR stns 028, 122, 267, 341, 401, 411, 421, 499.

Bathymetrical range within the area: 218-725 m.

Substrate: Fine sand and gravel.

Temperature: 1.5 - 7.7 °C.

Water mass: AW (2), AW/AI (4), AW/AI/NW (2).

World distribution: Iceland, the Faroes, British Isles, whole coast of Norway and western Sweden (Thompson & Brown 1984), the Azores (Odhner 1907).

World bathymetrical range: 10-1900 m (Millen & Gosliner 1985).

Remarks: Radulae of 5 specimens have been examined for identification. The species has been considered rare (Thompson & Brown 1984), but the present collections show that most likely it is just a deep water species. Millen & Gosliner (1985) considered the specimens from the Azores a separate species.

## Family ARCHIDORIDIDAE

### Genus *Archidoris* Bergh, 1878

#### *Archidoris pseudoargus* (Rapp, 1827)

Synonyms: *Doris argus* Bergh in Mörch, 1871, *Doris britannica* Johnston, 1838, *Doris flammea* Alder & Hancock, 1844, *Doris mera* Alder & Hancock, 1844, *Doris montagui* Johnston, 1838, *Doris pseudoargus* Rapp, 1827, *Doris tuberculata* M. Sars, 1851.

Reference to best description of the species: Thompson & Brown 1984: 84-85, Pls. 22-23.

Previous records: Lemche 1929 (as *Archidoris britannica* (Johnston)), 0-150 m depth, abundant.

New records: BIOFAR stns 368, 481.

Bathymetrical range within the area: 0-604 m.

Substrate: Mud.

Temperature: 0.0 - 7.9 °C.

Water mass: AW, NW.

World distribution: Iceland (as *A. britannica*) (Lemche 1938), the Faroes (as *A. britannica*) (Lemche 1929), British Isles, mainland Europe from Varanger in northern Norway to the Mediterranean (Thompson & Brown 1984).

World bathymetrical range: 0-300 m (Lemche 1929, Odhner 1939).

Remarks: Radula of specimen from BIOFAR station 481 was examined for identification.

## Family CHROMODORIDIDAE

### Genus *Cadlina* Bergh, 1891

#### *Cadlina ?laevis* (Linnaeus, 1767)

Synonyms: *Doris glabra* Friele & Hansen, 1876, *Doris laevis* Linnaeus, 1767, *Doris obvelata* O.F. Müller, 1776, *Doris repanda* Alder & Hancock, 1842.

Reference to best description of the species: Thompson & Brown 1984: 77-78, Pl. 21e.

Previous records: Lemche 1929 ("low water"), Øravík (Suðuroy) and "Faroese".

New records: BIOFAR stns 010, 019, 057, 068, 070, 090, 100, 131, 234, 335, 495, 515.

Bathymetrical range within the area: 2-997 m.

Substrate: gravel, stones.

Temperature: 3.1 - 8.2 °C.

Water mass: AW (9), AW/AI (3), AI (1).

World distribution: Greenland (Lemche 1941a, b), Iceland (Lemche 1938), the Faroes (Lemche 1929), British Isles, mainland Europe from White Sea to Mediterranean, eastern USA (New England) (Thompson & Brown 1984).

World bathymetrical range: 2-997 m (Lemche 1929, and this study).

Remarks: Radulae of two specimens have been examined for identification. The present specimens show some differences from specimens from Sweden (e.g. they are more papillose), and it is possible that they belong to a different species, or that the synonymisation of *Doris glabra* with *Cadlina laevis* has been premature.



## Family DENDRONOTIDAE

Genus *Dendronotus* Alder & Hancock, 1845*Dendronotus frondosus* (Ascanius, 1774)

Synonyms: *Amphitrite frondosa* Ascanius, 1774, *Campaspe pusilla* Bergh, 1863, *Doris arborescens* O.F. Müller, 1776.

Reference to best description of the species: Thompson & Brown 1984: 22-24, Pl. 5.

Previous records: Lemche 1929 (1-150 m depth), abundant.

New records: BIOFAR stns 028, 056, 065, 100, 113, 294, 357, 602.

Bathymetrical range within the area: 1-1096 m.

Temperature: +0.84 - 8.1 °C.

Water mass: AW (5), AW/AI (1), NW (2).

World distribution: Greenland, Iceland, the Faroes, British Isles, Jan Mayen, Barents Sea, East Siberian Sea, mainland Europe from northern Norway to France, Canada, USA (New Jersey, California) (Thompson & Brown 1984).

World bathymetrical range: 1-1096 m (Lemche 1929, this study).

Remarks: *Dendronotus robustus* Verrill has also been recorded from the Faroes (Seaward 1982); it has a very large oral veil. After the redescription of *Dendronotus lacteus* (Thompson, 1840) (Tholleson 1998), which was previously included in the synonymy of *D. frondosus* (Thompson & Brown 1984), the BIOFAR specimens should be reexamined.

## Family DOTIDAE

Genus *Doto* Oken, 1815*Doto* cf. *cuspidata* Alder & Hancock, 1862

Synonym: *Doto aurae* Trinchese, 1881.

Reference to best description of the species: Thompson & Brown 1984: 30, Pl. 7; Just & Edmunds 1985: 22-23, Pl. 7.

Previous records: None.

New records: BIOFAR stns 203, 368.

Bathymetrical range within the area: 80-96 m.

Substrate: Mud, shell-sand.

Temperature: 7.9 - 8.7 °C (E).

Water mass: AW.

World distribution: The Faroes, British Isles, Spain,

Norwegian coast from the Trondheimsfjord to North Cape, the Swedish west coast and Denmark (?).  
World bathymetrical range: 10-300 m (Odhner 1939).

*Doto coronata?* (Gmelin, 1791)

Synonyms: *Doris coronata* Gmelin, 1791, *Melibaea coronata* Alder & Hancock, 1842.

Reference to best description of the species: Thompson & Brown 1984: 27-30, Pl. 6.

Previous records: Sundini (15-20 m), SSE of Bispen (Fugloy) (90 m), N by E of Mykines (107 m), N by W of Kalsoy (120 m).

New records: BIOFAR stns 019, 056, 203, 368.

Bathymetrical range within the area: 77-276 m.

Substrate: Mud, shell-sand, sponge spicules.

Temperature: 6.5 - 8.7 °C (E).

Water mass: AW (3), AW/AI (1).

World distribution: Iceland, the Faroes, British Isles, Svalbard, Murman coast and whole Norwegian coast south to Kattegat, west coasts of Europe into the Mediterranean; in east America from Maine to New Jersey.

World bathymetrical range: 0-276 m.

Remarks: This species appears to be a species complex containing several cryptic species (Lemche 1976, Morrow et al. 1992).

*Doto crassicornis* M. Sars, 1870

Reference to best description of the species: M. Sars 1870: 81, Just & Edmunds 1985: 20-21, Pl. 6.

Previous records: None.

New records: BIOFAR stns 098, 100.

Bathymetrical range within the area: 150-283 m.

Substrate: Coarse sand.

Temperature: 6.8 - 7.9 °C (E).

Water mass: AW (1), AW/AI (1).

World distribution: The Faroes, Norwegian coast from the Trondheimsfjord south to the Swedish west coast.

World bathymetrical range: 36-283 m.

*Doto fragilis* (Forbes, 1838)

Synonyms: *Melibaea fragilis* Forbes, 1838, ? *Doto crassicornis* M. Sars, 1870

Reference to best description of the species: Thompson & Brown 1984: 31-32, Pl. 7.

Previous records: Sandur Bay at Sandoy, E of Nólsoy



(60 m), N by E of Mykines (107 m), N by W of Kalsoy (120 m), SW of Mykines (254 m).

New records: Not found during BIOFAR 1.

World distribution: Iceland, the Faroes, whole Norwegian coast from Stjærnsund in west Finnmark south to Skagerrak, British Isles, European west coasts to Spain and Portugal, Mediterranean (?).

World bathymetrical range: 0-255 m.

Remarks: *D. crassicornis* M. Sars may be a synonym of *D. fragilis*, but until further studies will support this view, they are here treated as distinct species.

## Family DORIDOXIDAE

### Genus *Doridoxa* Bergh, 1899

#### *Doridoxa ingolfiana* Bergh, 1899

Reference to best description of the species: Just & Edmunds 1985: 44-45, Pl. 18.

Previous records: None.

New record: BIOFAR stn. 447.

Bathymetrical range within the area: 603 m.

Substrate: Sand and gravel.

Temperature: 0 °C (E).

Water mass: NW.

World distribution: Greenland (Lemche 1941a), the Faroes (this study).

World bathymetrical range: 103-603 m (Lemche 1941a, and this study).

Remarks: This species is poorly known.

## Family EUBRANCHIDAE

### Genus *Eubbranchus* Forbes, 1838

#### *Eubbranchus* cf. *pallidus* (Alder & Hancock, 1842)

Synonyms: ?*Tergipes rupium* Møller, 1842, *Eolis flavescens* Friele & Hansen, 1876, *Eolis minuta* Alder & Hancock, 1842, *Eolis pallida* Alder & Hancock, 1842, *Eolis picta* Alder & Hancock, 1847

Reference to best description of the species: Thompson & Brown 1984: 134-135, Pl. 33

Previous records: Lemche 1929: NW of Kalsoy (120 m).

New record: BIOFAR stn. 056.

Bathymetrical range within the area: 77-120 m.

Substrate: No information.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: ?Greenland (as *E. rupium*, Lemche 1941a), Iceland, Faroes (Lemche 1929), British Isles, mainland Europe from northern Norway to Mediterranean, Suez Canal (Edmunds & Kress 1969), northeastern USA (Thompson & Brown 1984).

World bathymetrical range: 2-120 m (Thompson & Brown 1984, Lemche 1929).

Remarks: There is some confusion about the identity of earlier records (Edmunds & Kress 1969). F. ex. Lemche (1929) included *E. exiguus* in the synonymy of this species. Also, *E. rupium* is sometimes considered a separate species (Lemche 1941a, Just & Edmunds 1985).

#### *Eubbranchus* cf. *tricolor* Forbes, 1838

Synonyms: *Eolis amethystina* Alder & Hancock, 1845, *Eolis violacea* Alder & Hancock, 1844, *Galvina viridula* Bergh, 1873.

Reference to best description of the species: Thompson & Brown 1984: 135-137, Pl. 32.

Previous records: Lemche 1929 as *Eubbranchus viridulus*: NW of Kalsoy and SSE of Bispen (Fugloy), (90-120 m).

New records: BIOFAR stns 027, 029, 075.

Bathymetrical range within the area: 90-225 m.

Substrate: Shell-sand, sand with sponge spicules.

Temperature: 7.5 - 8.6 °C (E).

Water mass: AW.

World distribution: Greenland (as *Egalvina viridula*; Lemche 1941a), the Faroes (Lemche 1929), British Isles, mainland Europe from northern Norway to English Channel (Edmunds & Kress 1969).

World bathymetrical range: 16-225 m (Edmunds & Kress 1969, this study).

Remarks: There is some doubt about the inclusion of *E. viridula* in the synonymy of this species, and hence about the species distribution (Edmunds & Kress 1969).

#### *Eubbranchus exiguus* (Alder & Hancock, 1848)

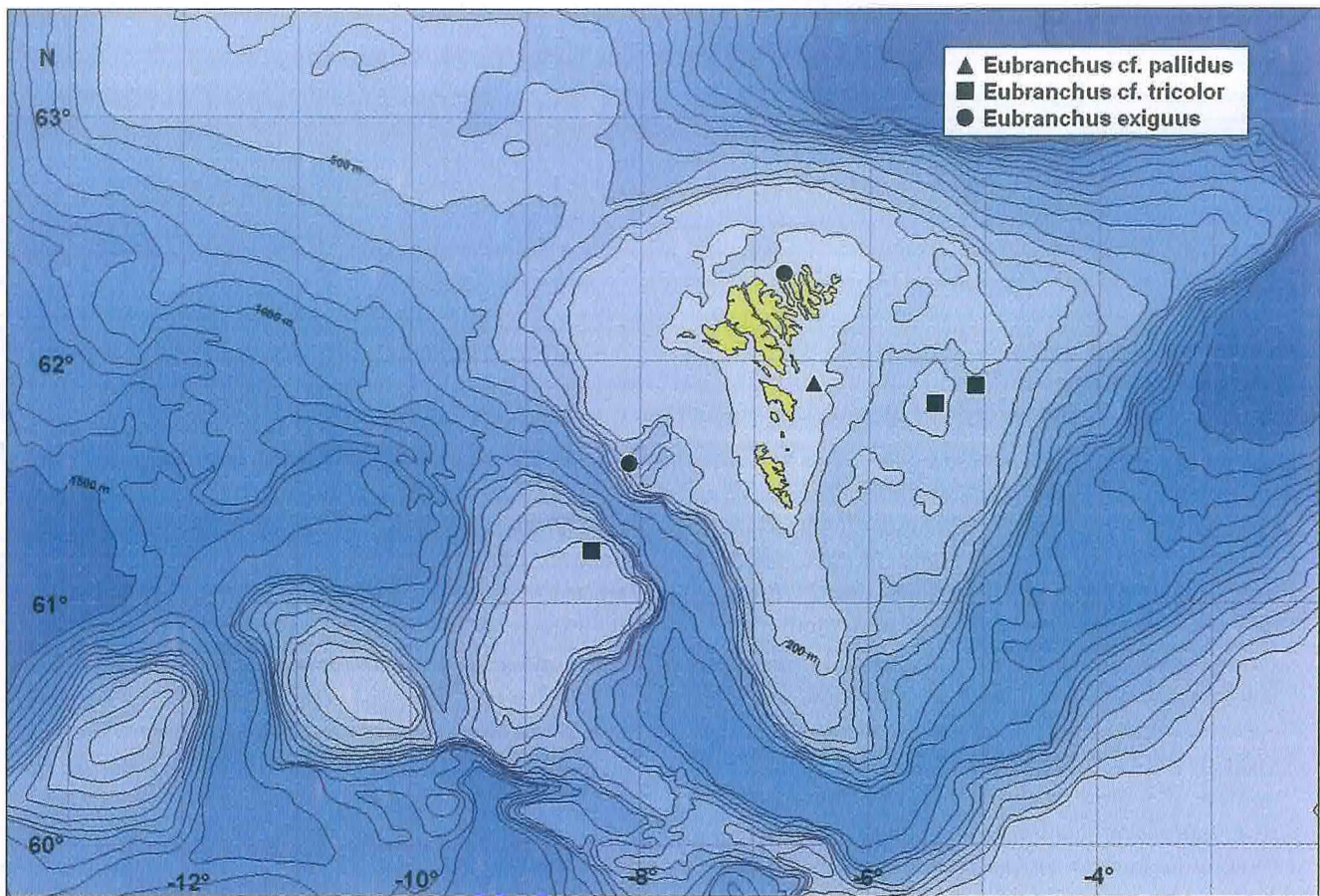
Synonym: *Eolis exigua* Alder & Hancock, 1848.

Reference to best description of the species: Thompson & Brown 1984: 132-134. Pl. 34.

Previous records: None.

New records: BIOFAR stns 065, 368.





Bathymetrical range within the area: 80-322 m.

Substrate: Mud with dead shells.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: the Faroes (present study), British Isles, White Sea (Roginskaya 1962), mainland Europe from North Cape in northern Norway to Mediterranean (Edmunds & Kress 1969), eastern USA (Massachusetts, Connecticut) (Franz 1970).

World bathymetrical range: 2-322 m (Edmunds & Kress 1969, present study).

Remarks: There are some doubts about the synonymies of the species, and hence some doubts about earlier records (Edmunds & Kress 1969).

### *Eubrancheus* sp.

Previous records: None.

New record: BIOFAR st. 098.

Bathymetrical range within the area: 150 m.

Substrate: coarse sand.

Temperature: 7.9 °C (E).

Water mass: AW.

### Family FACELINIDAE

#### Genus *Facelina* Alder & Hancock, 1855

##### *Facelina* sp.

Previous records: None.

New record: BIOFAR st. 381.

Bathymetrical range within the area: 402 m.

Substrate: sand, gravel and stones.

Temperature: 6.5 °C (M).

Water mass: AI.

Remarks: The specimen was too damaged for identification.

### Family FLABELLINIDAE

#### Genus *Coryphella* Gray, 1850

##### *Coryphella* cf. *nobilis* Verrill, 1880

Synonym: *Coryphella sarsi* Friele, 1902.

Reference to best description of the species: Kuzirian 1977: 231-240, Figs 1-6.

Previous records: Kuzirian (1977) quotes Lemche 1929



as *C. rufibranchialis* (see *C. verrucosa*).

New records: BIOFAR stns 006, 065, 100, 172, 357.

Bathymetrical range within the area: 205-507 m.

Substrate: sand, shell-gravel.

Temperature: 1.0 °C (M), 6.8 - 7.9 °C (E).

Water mass: AW (2), AW/AI (1).

World distribution: Greenland (Lemche 1941a, b), Iceland, the Faroes, Jan Mayen (Lemche 1929), Barents Sea (Kuzirian 1977), Norway from the Trondheimsfjord to North Cape, North Sea; North America (Maine).

World bathymetrical range: 20-507 m (Kuzirian 1977, this study).

Remarks: There is some discussion about the identity of the species recorded as *C. rufibranchialis* by Lemche (1929) (Kuzirian, 1977). Some of the BIOFAR specimens were first identified as *C. borealis* Odhner, 1922 and *C. salmonacea* (Couthouy, 1838). Examination of the radula of several specimens showed intermediate structures between the three species: the rachidian tooth has a prominent central cusp as in *C. salmonacea*, but is broad as in *C. nobilis*; the jaws have many rows of denticles as in *C. nobilis*, but a long, free masticatory process, though not as long as in *C. salmonacea*. The lateral teeth are most similar to *C. borealis*.

***Coryphella* cf. *pellucida* (Alder & Hancock, 1843)**

Synonyms: *Coryphella rutila* Verrill, 1879, *Eolis pellucida* Alder & Hancock, 1843,

Reference to best description of the species: Thompson & Brown, 1984: 113-114, Pl. 27.

Previous records: Lemche 1929, between Nólsoy and Eysturoy (120 m).

New records: BIOFAR stns 007, 100.

Bathymetrical range within the area: 218-283 m.

Substrate: Sand with shell-gravel.

Temperature: 6.8 - 7.6 °C (E).

Water mass: AW (1), AW/AI (1).

World distribution: the Faroes (Lemche 1929), Norway, northern part of British Isles; USA (Maine, Massachusetts, Cape Cod) (Kuzirian 1979).

World bathymetrical range: 0-283 m.

***Coryphella* cf. *verrucosa***

(M. Sars, 1829)

Fig. 40.

Synonyms: *Coryphella robusta* Trinchese, 1874, *Eolidia embletoni* Johnston, 1835, *Eolidia verrucosa* M. Sars, 1829, *Eolis diversa* Couthouy, 1839, *Eolis mananensis* Stimpson, 1854, *Eolis rufibranchialis* Johnston, 1832.

Reference to best description of the species: Thompson & Brown 1984: 114-115, Pl. 28.

Previous records: Lemche 1929 as *Coryphella rufibranchialis*, SW of Suðuroy and Sandoy.

New records: BIOFAR stns 006, 007, 056, 057, 062, 065, 075, 098, 100, 192, 356

Bathymetrical range within the area: 73 to 350 m.

Substrate: shell-sand, shell-gravel.

Temperature: 6.8 - 8.6 °C.

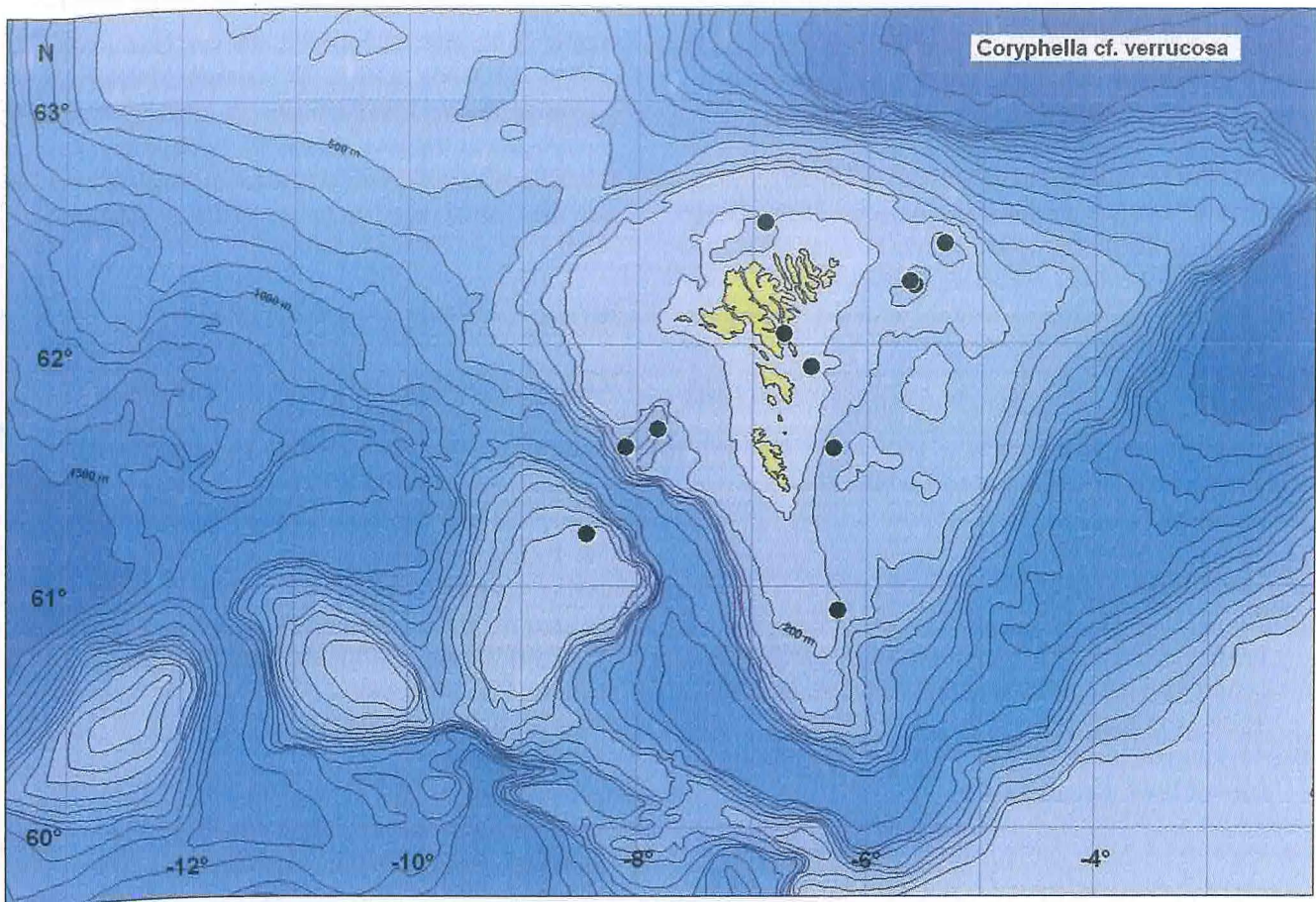
Water mass: AW (10), AW/AI (1).

World distribution: Greenland (Lemche 1941a,b), the Faroes (Lemche 1929), Svalbard, mainland Europe from Barents Sea to southern North Sea; North America (New England, Maine) Bering Sea (Kuzirian 1979).



Fig 40. *Coryphella* cf. *verrucosa* (M. Sars, 1829)





World bathymetrical range: 0-450 m (Odhner 1907).

Remarks: It is still debated whether *Coryphella* and *Flabellina* Voight, 1834 are synonymous (see Gosliner & Griffiths 1981, Thompson & Brown 1984). Records from the Mediterranean need reconfirmation (Thompson & Brown 1984).

***Coryphella gracilis*** (Alder & Hancock, 1844)

Synonyms: *Coryphella frigida* Grieg, 1907, *Eolis gracilis* Alder & Hancock, 1844, *Eolis smaragdina* Alder & Hancock, 1851, *Eolis stellata* Stimpson, 1854

Reference to best description of the species: Thompson & Brown 1984: 109-111, Pl. 28

Previous records: Lemche 1929 (5-60 m), abundant.

New records: BIOFAR st. 203.

Bathymetrical range within the area: 5-96 m.

Substrate: Fine shell-sand.

Temperature: 8.7 °C (E).

Water mass: AW.

World distribution: Iceland (Lemche 1938), the Faroes (Lemche 1929), Bjarkøy, Vågsøy and Ålesund in Norway (Evertsen 2001), British Isles, Denmark to Atlantic coast of France; North America from Newfoundland to Cape Cod (Kuzirian 1979).

World bathymetrical range: 2-96 m (Lemche 1938, present study).

***Coryphella* sp.**

Previous records: None.

New records: BIOFAR stns 015, 032, 098, 165.

Bathymetrical range within the area: 150 - 683 m.

Substrate: Coarse sand.

Temperature: +0.5 - 6.6 °C (M), 7.9 °C (E).

Water mass: AW (2), AW/AI (1), NW (1).

Remarks: These specimens were either too small or too damaged to identify to species.



## Family GONIODORIDIDAE

Genus *Goniodoris* Forbes & Goodsir, 1839*Goniodoris nodosa* (Montagu, 1808)

Synonyms: *Doris barvicensis* Johnston, 1838, *Doris elongata* Thompson, 1840, *Doris nodosa* Montagu, 1808, *Goniodoris emarginata* Forbes, 1840.

Reference to best description of the species: Thompson & Brown 1984: 41-42, Pl. 10.

Previous records: Lemche 1929 (24-120 m), between Nósoy and Eysturoy, Funningsfjørður.

New records: BIOFAR st. 056.

Bathymetrical range within the area: 24-120 m.

Substrate: No information.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: the Faroes (Lemche 1929), British Isles, mainland Europe from Støtt in Nordland county in northern Norway to Spain (Evertsen 2001, Thompson & Brown 1984).

World bathymetrical range: 0-120 m (Thompson & Brown 1984, Lemche 1929).

Genus *Lophodoris* Odhner, 1922

The genus *Lophodoris* was first mentioned by G.O. Sars (1878) as a *nomen nudum*, i.e. with no description, only as a listing in a table and a figure caption.

*Lophodoris danielsseni* (Friele & Hansen, 1876)

Synonym: *Goniodoris danielsseni* Friele & Hansen, 1876.

Reference to best description of the species: Odhner 1922: 25-28, Fig. 9, 10.

Previous records: None.

New records: BIOFAR stns 027, 056.

Bathymetrical range within the area: 77-225 m.

Substrate: Sand and sponge spicules.

Temperature: 7.5 - 7.9 °C (E).

Water mass: AW.

World distribution: ?Greenland (Just & Edmunds 1985), the Faroes (this study), the Hardangerfjord to Vällersund in North-Trøndelag county in Norway (Evertsen 2001).

World bathymetrical range: 30-225 m (Just & Edmunds 1985, this study).

Remarks: This species is poorly known. One specimen from BIOFAR station 27 dissected. The record from southern Greenland (Just & Edmunds 1985) is uncertain as the specimen collected by Lemche and labelled as *Lophodoris danielsseni*, which is retained in the ZMUC, appears to be a different species.

Genus *Okenia* Menke, 1830*Okenia aspersa* (Alder & Hancock, 1845).

Synonyms: *Idalia aspersa* Alder & Hancock, 1845, *Idalia inaequalis* Forbes & Hanley, 1851, *Idalia caudata* Ørsted, 1844.

Reference to best description of the species: Thompson & Brown 1984: 42-43, Fig. 6b.

Previous records: None.

New records: BIOFAR stns 073, 356.

Bathymetrical range within the area: 185-240 m.

Substrate: Fine shell-sand.

Temperature: 7.4 - 8.6 °C (E).

Water mass: AW.

World distribution: The Faroes (this study), British Isles, mainland Europe from northern Norway to Atlantic coast of France (Thompson & Brown 1984).

World bathymetrical range: ?-240 m.

Remarks: The specimen from BIOFAR station 073 is parasitized by a copepod, which has also been mentioned by Thompson & Brown (1984). The specimens from BIOFAR station 356 may be *Okenia pulchella*.

## Family HEROIDAE

Genus *Hero* Alder & Hancock, 1855*Hero formosa* (Lovén, 1841)

Synonyms: *Cloelia formosa* Lovén, 1841, *Cloelia trilineata* M. Sars, 1850.

Reference to best description of the species: Thompson & Brown 1984: 100-102, Pl. 25.

Previous records: None.

New records: BIOFAR stns 007, 019.

Bathymetrical range within the area: 218-276 m.

Substrate: Sponge spicules.

Temperature: 6.5 - 7.6 °C (E).

Water mass: AW (1), AW/AI (1).

World distribution: The Faroes (this study), British Isles, Tromsø in northern Norway to the Swedish west coast (Evertsen 2001).

World bathymetrical range: ?-276 m.



## Family KENTRODORIDIDAE

Genus *Jorunna* Bergh, 1876*Jorunna* cf. *tomentosa* (Cuvier, 1804)

Synonyms: *Doris johnstoni* Alder & Hancock, 1845, *Doris obvelata* Johnston, 1838 non O.F. Müller, 1776), *Doris tomentosa* Cuvier, 1804, *Jorunna lemchei* Marcus, 1976.

Reference to best description of the species: Thompson & Brown 1984: 91-93, Pl. 21.

Previous records: Lemche 1929 (120 m depth), Midvágur and NW of Kalsoy.

New records: BIOFAR stns 070, 234, 402, 481.

Bathymetrical range within the area: 120-604 m.

Substrate: Sand, gravel, stones.

Temperature: 0.0 - 7.9 °C (E).

Water mass: AW, NW.

World distribution: The Faroes (Lemche 1929), British Isles, mainland Europe from 65°N to Mediterranean (Thompson & Brown 1984).

World bathymetrical range: 2-604 m (Lemche 1929).

Remarks: The largest specimens were originally identified as *Boreodoris setidens* Odhner, 1939, based on external morphology. However, examination of radula and reproductive anatomy showed it to belong to the genus *Jorunna*. The present specimens show some differences from specimens of *J. tomentosa* from the U.K. and Sweden, so they may belong to another species. The radula of the specimen from BIOFAR station 070 has been removed for examination; the specimen from BIOFAR station 402 has been dissected.

## Family LOMANOTIDAE

Genus *Lomanotus* Vérany, 1846*Lomanotus genei* Vérany, 1846

Synonyms: *Lomanotus hancocki* Norman, 1877, *Lomanotus portlandicus* Thompson, 1860, *Lomanotus varians* Garstang, 1889 (part).

Reference to best description of the species: Thompson & Brown, 1984: 18-19, Pl. 3.

Previous records: None.

New records: BIOFAR stn. 032.

Bathymetrical range within the area: 354 m.

Substrate: No information.

Temperature: 6.5 °C (E).

Water mass: AW/AI.

World distribution: The Faroes (this study), British Isles, Mediterranean (Thompson & Brown 1984).

World bathymetrical range: ?-354 m (this study).

Remarks: The single individual represents the northernmost as well as the deepest living occurrence of this species.

## Family ONCHIDORIDIDAE

Genus *Acanthodoris* Gray, 1850*Acanthodoris pilosa* (Abildgaard in O.F. Müller, 1789)

Synonyms: *Doris flemingi* Forbes, 1838, *Doris nigricans* Fleming, 1820, *Doris pilosa* Abildgaard in O.F. Müller, 1789, *Doris stellata* Gmelin, 1791, *Doris sublaevis* Thompson, 1840.

Reference to best description of the species: Thompson & Brown 1984: 62-64, Pl. 14.

Previous records: Lemche 1929 (6-220 m depth), abundant.

New records: BIOFAR stns 299, 522.

Bathymetrical range within the area: 6-923 m.

Substrate: Clay and silt mixed with gravel.

Temperature: 4.2 °C (M), 0 - 8.6 °C (E).

Water mass: AW (1), AW/AI/NW (1).

World distribution: Greenland, Iceland (Lemche 1938), the Faroes, British Isles, mainland Europe from the Varangerfjord in northern Norway to Mediterranean and Atlantic coast of Morocco (Thompson & Brown 1984); eastern Canada and USA to Virginia (Franz 1970), Aleutian Islands and Vancouver (Thompson & Brown 1984).

World bathymetrical range: 2-923 m (Lemche 1929, this study).

Genus *Onchidoris* Blainville, 1816*Onchidoris ?oblonga* (Alder & Hancock, 1845)

Synonym: *Doris oblonga* Alder & Hancock, 1845.

Reference to best description of the species: Thompson & Brown 1984: 59-60, Pl. 15.

Previous records: None.

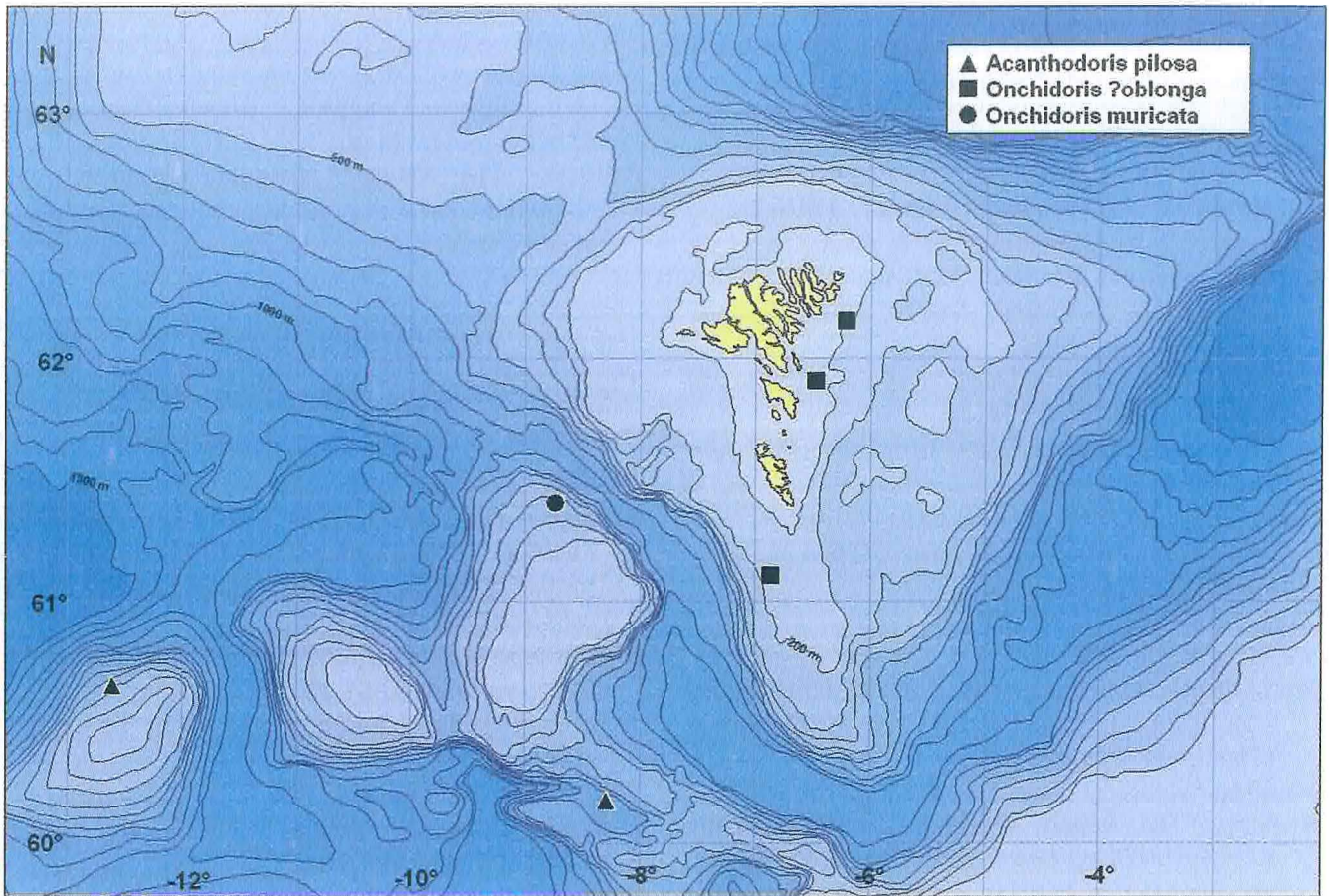
New records: BIOFAR stns 056, 138, 597.

Bathymetrical range within the area: 77-150 m.

Substrate: Shell-sand and dead bivalve shells.

Temperature: 7.9 - 8.1 °C (E).





Water mass: AW.

World distribution: The Faroes (this study), British Isles, southern Norway, West coast of Sweden (Thompson & Brown 1984).

World bathymetrical range: ?-150 m.

Remarks: The identification to species is only tentative. *O. oblonga* feeds on bryozoans of genus *Cellaria*.

***Onchidoris muricata*** (O.F. Müller, 1776)

Synonyms: *Doris aspersa* Alder & Hancock, 1842, *Doris diaphana* Alder & Hancock, 1845, *Doris muricata* O.F. Müller, 1776, *Doris ulidiana* Thompson, 1845.

Reference to best description of the species: Thompson & Brown 1984: 58-59, Pl. 14.

Previous records: Lemche 1929, as *Onchidoris muricata*, 0-6 m depth, abundant.

New records: BIOFAR stn. 070.

Bathymetrical range within the area: 0-352 m.

Substrate: Large stones.

Temperature: 7.5 °C (E).

Water mass: AW.

World distribution: Greenland, Iceland, the Faroes (Lemche 1929), Svalbard, White Sea, European mainland from Murman coast to Atlantic coast of France, British Isles; eastern USA to Connecticut, Alaska, Canada, San Juan Island (Thompson & Brown 1984).

World bathymetrical range: 0-352 m (Lemche 1929, this study).

***Onchidoris* sp.**

Previous records: None.

New records: BIOFAR stn.006

Bathymetrical range within the area: 231 m.

Sediment: No information

Temperature: 7.5 °C (E)

Water mass: AW



## Family POLYCERIDAE

Genus *Limacia* O.F. Müller, 1781*Limacia clavigera* (O.F. Müller, 1776)

Synonyms: *Doris clavigera* O.F. Müller, 1776, *Euplocamus plumosus* Thompson, 1840, *Tergipes pulchra* Johnston, 1834, *Triopa lucida* Stimpson, 1855.

Reference to best description of the species: Thompson & Brown 1984: 75, Pl. 19.

Previous records: Lemche 1929 as *Euphurus claviger* (14-30 m), Borðoyarvík.

New records: BIOFAR stns 056, 192, 368.

Bathymetrical range within the area: 14-07 m.

Substrate: Mud and dead shells.

Temperature: 7.9 - 8.2 °C (E).

Water mass: AW.

World distribution: the Faroes (this study), British Isles, mainland Europe from Senja in northern Norway to Mediterranean, Morocco, South Africa (Thompson & Brown 1984).

World bathymetrical range: 0-107 m (Thompson & Brown 1984, this study).

Genus *Polycera* Cuvier, 1817*Polycera faeroensis* Lemche, 1929

Synonym: ?*Polycera nonlineata* Thompson, 1840.

Reference to best description of the species: Thompson & Brown 1984: 67-68, Pl. 18.

Previous records: Lemche 1929 (120 m), between Nólsoy and Eysturoy.

New records: BIOFAR stn. 029.

Bathymetrical range within the area: 120-170 m.

Substrate: No information.

Temperature: 7.7 °C (E).

Water mass: AW.

World distribution: The Faroes (Lemche 1929), British Isles, west coast of Sweden (Thompson & Brown 1984), the Trondheimsfjord in Norway (dt. Lemche).

World bathymetrical range: Shallow sublittoral-170 m (Thompson & Brown 1984, this study).

## Family TERGIPEDIDAE

Genus *Cuthona* Alder & Hancock, 1855*Cuthona* sp.

Previous records: None.

New records: BIOFAR stns 007, 098.

Bathymetrical range within the area: 150-218 m.

Substrate: Coarse sand.

Temperature: 7.6 - 7.9 °C (E).

Water mass: AW.

Remarks: The specimens were too damaged for identification.

Genus *Tenellia* Costa, 1866*Tenellia adspersa* (Nordmann, 1845)

Synonyms: *Embletonia pallida* Alder & Hancock, 1854, *Eolis ventilabrum* Dalyell, 1853, *Tenellia mediterranea* Costa, 1866, *Tergipes adspersa* Nordmann, 1845.

Reference to best description of the species: Thompson & Brown 1984: 128-129, Pl. 31.

Previous records: None.

New records: BIOFAR stn. 056.

Bathymetrical range within the area: 77 m.

Substrate: No information.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: The Faroes (this study), British Isles, mainland Europe from Lofoten into the Baltic Sea (Evertsen 2001), Mediterranean (Schmekel & Portmann 1982), Azov Sea (Roginskaya 1972); eastern USA (Eyster 1979), Brazil (Marcus 1955); Japan (Baba & Hamatani 1963). Possibly cosmopolitan.

World bathymetrical range: 0-77 m.

Remarks: World distribution may have been caused by transportation in fouling organisms on ship hulls. This species is sometimes referred to the family Cuthonidae Odhner, 1934, and the two families are sometimes considered synonymous (Platts, 1985).



## Family TRITONIIDAE

Genus *Tritonia* Cuvier, 1798*Tritonia hombergi* Cuvier, 1803

Synonyms: *Sphaerostoma jamesoni* Macgillivray, 1843, *Tritonia alba* Alder & Hancock, 1854, *Tritonia atrofusca* Macgillivray, 1843, *Tritonia pustulosa* Deshayes, 1853.

Reference to best description of the species: Thompson & Brown 1984: 11-12, Pl. 1.

Previous records: None.

New records: BIOFAR stn. 298.

Bathymetrical range within the area: 593 m.

Substrate: Hard bottom.

Temperature: 5.0 °C (E).

Water mass: AW/AI.

World distribution: The Faroes (this study), British Isles, mainland Europe from Grøtøy near Tromsø in northern Norway to Mediterranean (Thompson & Brown, 1984, Evertsen 2001).

World bathymetrical range: 0-593 m.

*Tritonia plebeia* Johnston, 1828

Synonyms: *Candiella plebeia* Gray, 1850, *Tritonia pulchra* Johnston, 1828.

Reference to best description of the species: Thompson & Brown 1984: 16-17, Pl. 2.

Previous records: Lemche 1929 as *Duvaucelia plebeia* Johnston (150 m), SW of Suðuroy.

New records: BIOFAR stns 056, 192, 203, 546.

Bathymetrical range within the area: 77-150 m.

Substrate: Shell-sand and shell-gravel.

Temperature: 7.9 - 8.7 °C (E).

Water mass: AW.

World distribution: The Faroes (Lemche 1929), British Isles, mainland Europe from Vikna in North Trøndelag county to Mediterranean (Thompson & Brown 1984, Evertsen 2001).

World bathymetrical range: 0-150 m.

*Tritonia* sp. (aff. *Tritonia* sp. A of Just & Edmunds 1985)

Reference to best description of the species: Just & Edmunds 1985: 12-13, Pl. 2.

Previous records: None.

New records: BIOFAR stns 056, 192.

Bathymetrical range within the area: 77-107 m.

Substrate: No information.

Temperature: 7.9 °C.

Water mass: AW.

Remarks: These specimens resemble the species labelled as *Tritonia* sp. A by Just & Edmunds (1985). As mentioned by these authors, it is most similar to *T. plebeia*.

## Class SCAPHOPODA

## Order DENTALIOIDA

## Family DENTALIIDAE

Genus *Antalis* H. A. Adams, 1854*Antalis agilis* (G. O. Sars, 1872)

Reference to best description of the species: Muus 1959: 68-70, Fig. 43; G.O. Sars 1878: 102, Pl. 20, fig. 9a-b.

Previous records: Porcupine stn. 65.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 630 m.

Temperature: +1.0 °C (E).

World distribution: Iceland, the Faroes, whole Norwegian coast south of Lofoten in northern Norway, Skagerrak, Kattegat, northern North Sea and along the shelf south to the Azores, the Canary Islands, Ascension, Mediterranean.

World bathymetrical range: 55-3640 m.

Checked by: JAS

*Antalis entalis* (Linnaeus, 1758)

Synonym: *Dentalium entalis* Linnaeus, 1758.

Reference to best description of the species: Muus 1959: 66-68, Fig. 42.

Previous records: Exceedingly common at the Faroes, on clay bottoms in the fjords of 7-70 m depth, on the sand plateaus off the islands at depth of about 300 m, and on the Faroe Bank at 160 m (Thorson & Spärck 1929).

New records: BIOFAR stations 019, 033, 061, 065, 075, 078, 089, 103, 115, 120, 158, 163, 175, 190, 269, 281, 283, 286, 287, 288, 289, 295, 299, 305, 322, 324, 333, 334, 341, 345, 346, 348, 354, 356, 363.

Bathymetrical range within the area: 7-1078 m.

Substrate: Sand, gravel, shell-sand, some stones.

Temperature: 2.9 - 8.6 °C (E).

Water mass: AW (20), AW/AI (13), AI (1), AW/AI/NW (1).



World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Barents Sea and from the Murman coast along the Norwegian and Swedish west coasts to Øresund, Kattegat, Skagerrak, the North Sea, the British Isles, Ireland south to the Mediterranean, the Canary Islands and the Azores; in east America from Fundy Bay south to Maine.

World bathymetrical range: 1-3200 m.

Checked by: JAS

### *Antalis occidentalis* (Stimpson, 1851)

Synonym: *Dentalium occidentalis* Stimpson, 1851.

Reference to best description of the species: Muus 1959: 65-66, Fig. 40.

Previous records: Nine live specimens from the following localities: Vágsfjørður at Suðuroy (62, 67 m), Funningsfjørður at Eusturoy (18 m), Klaksvík at Borðoy (20-30 m), one specimen labelled the Faroes (Thorson & Spärck 1929).

New records: None.

Bathymetrical range within the area: 18-67 m.

World distribution: Iceland, the Faroes, whole Norwegian coast, Swedish west coast, Skagerrak, and south to the Azores. It is not reported in shallow water of the British Isles and Ireland.

World bathymetrical range: 100-2300 m.

Checked by: JAS

## Order SIPHONODENTALIOIDA

### Family PULSELIDAE

#### Genus *Pulsellum* Stoliczka, 1868

##### *Pulsellum lofotense* (M. Sars, 1865)

Synonym: *Siphonodentalium lofotensis* M. Sars, 1865.

Reference to best description of the species: Muus 1959: 61, Fig. 36, G.O. Sars 1878: 104, Pl. 20, fig 11a-b.

Previous records: Simpson (1910): Stn. 8.

New records: BIOFAR stations 027, 100.

Bathymetrical range within the area: 225-283 m.

Substrate: Sand, coarse shell-sand.

Temperature: 6.8 - 7.5 °C (E).

Water mass: AW (1), AW/AI (1).

World distribution: West Greenland, the Faroes, whole Norwegian coast from Hasvik in Finnmark, Skagerrak, Scottish west coast, southern Ireland, Rockall Trough.

World bathymetrical range: 55-3240 m.

Checked by: JAS

#### Genus *Siphonodentalium* M. Sars, 1859

##### *Siphonodentalium laubieri* Bouchet & Warén, 1979

Reference to best description of the species: Bouchet & Warén 1979: 219-220, Figs 8, 35, 36.

Previous records: Lightning stn. 1 (as *S. lobatum*?).

New record: Not recorded during BIOFAR 1.

World distribution: Faroe-Shetland Ridge, Norwegian Sea.

World bathymetrical range: ?-2212 m

Remarks: Bouchet & Warén (1979) are of the opinion that records published by Clarke (1963) of *Siphonodentalium lobatum* (G.B. Sowerby II, 1860) from south of the Faroe-Shetland Ridge probably are due to misidentification, and should instead be referred to *S. laubieri*.

Checked by: JAS

## Family GADILIDAE

#### Genus *Gadila* J.E. Gray, 1847

##### *Gadila subfusiformis* (M. Sars, 1850)

Synonyms: *Cadulus subfusiformis* M. Sars, 1850, *Cadulus jeffreysi* Monterosato, 1875.

Reference to best description of the species: Muus 1959: 62-63.

Previous records: Porcupine stn. 61; Simpson (1910): 16a; two shells have been found northwest of Suðuroy (Thorson & Spärck 1929).

New records: BIOFAR stations 019, 027, 100.

Bathymetrical range within the area: 225-283 m.

Substrate: Mud, sand, coarse shell-sand.

Temperature: 6.5 - 7.5 °C (E).

Water mass: AW (1), AW/AI (2).

World distribution: Iceland-Greenland Strait, the Faroes, whole Norwegian coast from Hasvik in West Finnmark to the Oslofjord, Skagerrak, northern North Sea, Rockall Trough and south to the Biscaya Bay, the Azores, the Canary Islands and St. Helena, Mediterranean; in east America at Martha's Vineyard.

World bathymetrical range: 74-2083 m.

Checked by: JAS



## Genus *Cadulus* Philippi, 1844

### *Cadulus propinquus* G.O. Sars, 1878

Reference to best description of the species: G.O. Sars 1878: 106-107, Pl. 20, fig 15a-b; Muus 1959: 64-65, Fig. 39.

Previous records: None.

New record: BIOFAR station 305.

Bathymetrical range within the area: 1078 m.

Substrate: cobbles and stones.

Temperature: 6.5 °C (E).

Water mass: AW/AI.

World distribution: Iceland, the Faroes, along the Norwegian coast from Hasvik in west Finnmark to Bergen, Bay of Biscay.

World bathymetrical range: 180-078 m.

Checked by: JAS

## Class BIVALVIA

### Subclass PROTOBRANCHIA

### Order NUCULOIDA

### Family NUCULIDAE

## Genus *Ennucula* Iredale, 1931

### *Ennucula corticata* (Møller, 1842) Fig. 41.

Synonyms: *Nucula corticata* Møller 1842, *Nucula delphinodonta* sensu auct. non Mighels & Adams 1842.

Reference to best description of the species: G.O. Sars 1878: 34, Tab. 4, figs 4a-c.

Previous records: Lightning stn. 3; Porcupine stn. 65; «Faroës» (Jensen & Spärck 1934).

New record: BIOFAR station 344.

Bathymetrical range within the area: 498 m.

Substrate: Soft bottom with gravel.

Temperature: 3.9 °C (E).

Water mass: AW/AI

World distribution: West Greenland, the Faroes, Kong Karl Land and Erik Eriksen Strait, the Murman coast south along the Norwegian coast to the Oslofjord; in east America south to New Jersey.

World bathymetrical range: 50-1000 m (Jensen & Spärck 1934).

Remarks: Neither G.O. Sars (1878), Jensen & Spärck (1934) or Smith & Heppell (1991) discriminated between *Nuculoma delphinodonta* and *N. corticata*. Høisæter (1986) states, however, that *N. corticata* (Møller, 1842) is synonymous with *N. delphinodonta*

auct., non Mighels & Adams, 1842. The opinion of Smith & Heppell (1991) is followed here (PBW). According to the literature this species seems to be discontinuously distributed along the Norwegian coast but recent encounters from Bodø in Nordland county and Jøssingfjord in Rogaland county contradicts this (PBW, unpubl.).

Checked by: PBW, KWO

## Genus *Nucula* Lamarck, 1799

### *Nucula atacellana* Schenk, 1939

Synonyms: *Nucula reticulata* Jeffreys, 1876 (replacement name), *Nucula cancellata* Jeffreys, 1881.

Reference to best descriptions of the species: Schenk 1939: 21-41, Pl. 5, figs 4, 5, 9, 10, 13, 16; Salas 1996: 36, Figs 4-6.

Previous records: None.

New record: BIOFAR stations 295, 489, 525.

Bathymetrical range within the area: 655-1200 m.

Substrate: Gravel.

Temperature: 4.0 - 7.8 °C (E).

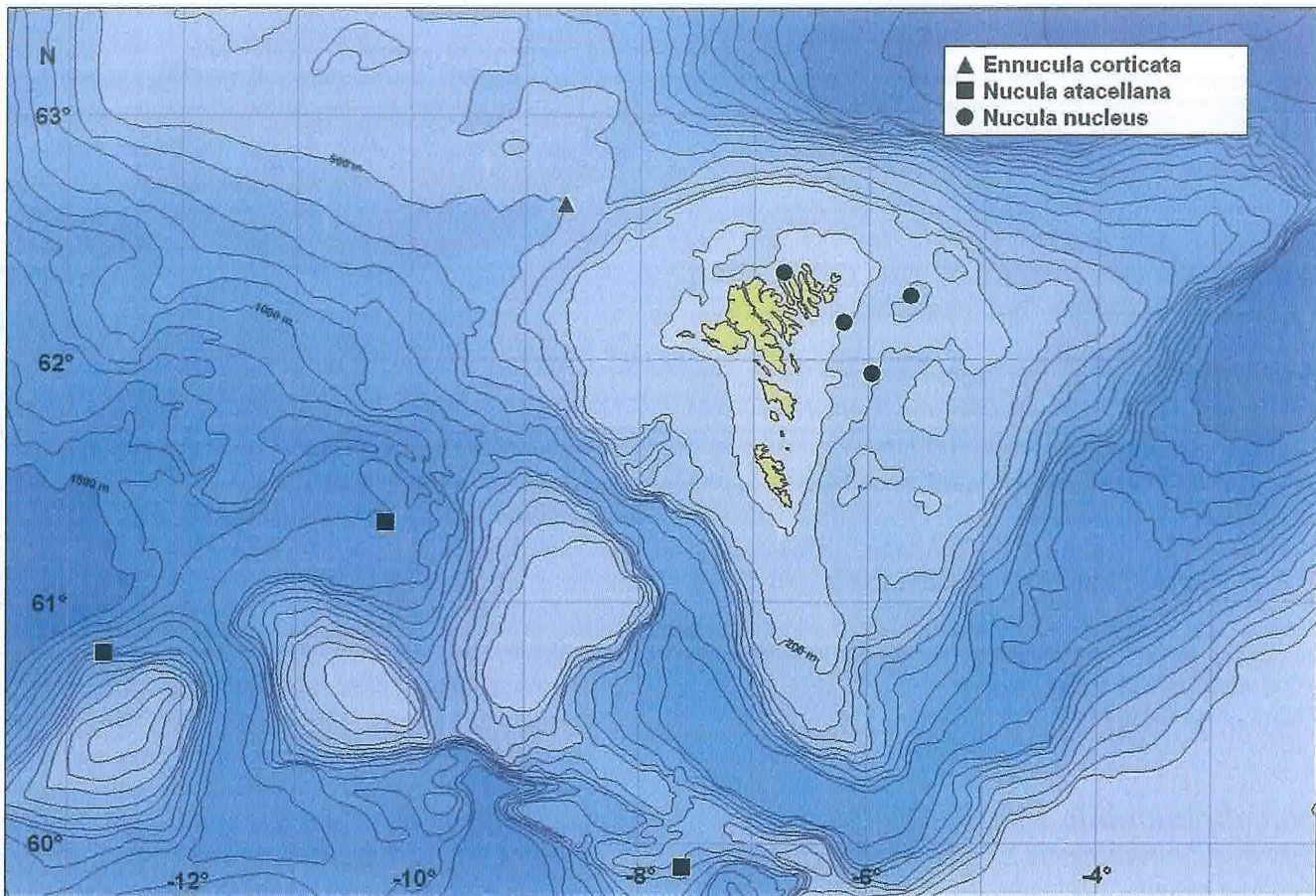
Water mass: AW (1), AW/AI (2).

World distribution: the Faroes, Northwest Ireland (dead shells), Ibero-Moroccan Gulf, Georges Bank off Nova Scotia.



Fig 41. *Ennucula corticata* (Møller, 1842)





World bathymetrical range: 655-1378 m (dead shells at 2700 m).

Checked by: AW

### *Nucula corbuloides* Møller, 1842

Previous records: Triton stn. 10.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 940 m.

Temperature: 7.8 °C (E).

Water mass: AW.

### *Nucula nucleus* (Linnaeus, 1758)

Synonyms: *Arca nucleus* Linnaeus 1758, *Glycimeris argentea* da Costa 1777, *Arca margaritacea* Bruguière, 1792.

Reference to best description of the species: Tebble 1966: 25, 27, Pl. 1 fig. e, Fig. 14 c.

Previous records: Lightning stn. 4; *N. nucleus* is common all over the area in 6 to 132 m depth (Petersen 1968).

New records: BIOFAR stations 007, 368, 597, 601.

Bathymetrical range within the area: 6-218 m.

Substrate: Mud, shell-sand.

Temperature: 7.9 - 8.3 °C (E).

Water mass: AW.

World distribution: The Faroes, from Lofoten in northern Norway to Øresund and south to Spain and into the Mediterranean and the Black Sea; in east America possibly further south to Cape of Good Hope, and in the Indian Ocean north to Natal.

World bathymetrical range: 0-975 m (1500 m - Massy 1930).

Checked by: AW, KWO; PBW

### *Nucula tenuis* (Montagu, 1808)

Synonym: *Arca tenuis* Montagu, 1808.

Reference to best description of the species: Tebble 1966: 28, Pl. 1, fig. a, Fig. 14e.

Previous records: Lightning stns 2, 3, 7; Porcupine stns 61, 62; Triton stn. 8; Trongisvágsfjørður, Skálafjørður, Kollafjørður, Sundini, Vágsfjørður,



Kaldbaksfjørður, Funningsfjørður, Hvalvíksfjørður -  
*N. tenuis* occurs only in the fjords (Petersen 1968).

New records: BIOFAR stations 126, 176, 366.

Bathymetrical range within the area: 35-75 m.

Substrate: Soft mud.

Temperature: 7.6 - 7.9 °C (E).

Water mass: AW.

World distribution: Greenland, the Faroes, Kong Karl Land, Barents Sea, whole Norwegian coast, Kattegat to Øresund, Ireland, south to Morocco, Mediterranean; in east America south to Florida Straits; in the Pacific Ocean from Arctic Alaska and Siberia south to California and Japan.

World bathymetrical range: 5-350 m (2290 m - Massy 1930).

Remarks: *Nuculoma bellotii* (A. Adams, 1856) is often synonymized with *N. tenuis*, but recent investigations (Lubinsky 1980, Richling 2000) have shown that in the north (Canadian Arctic and Laptev Sea), *N. bellotii* is a good species.

Checked by: AW, PBW

### *Nucula tumidula* Malm, 1861

Synonym: *Nucula pumila* M. Sars, 1851.

Previous records: Porcupine stn. 47; Triton stns 10, 13; Simpson (1910): 11.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 900-1000 m (acc. to previous records).

Temperature: 6.8 - 7.5 °C (E, acc. to previous measurements).

Water mass: AW.

World distribution: The Faroes, whole Norwegian coast from Hammerfest in Finnmark county south to Morocco, Mediterranean.

World bathymetrical range: 180-2650 m.

## Family NUCULANIDAE

### Genus *Jupiteria* Bellardi, 1875

#### *Jupiteria minuta* (O.F. Müller, 1779)

Fig. 42.

Synonyms: *Arca minuta* O.F. Müller, 1779, *Nuculana minuta* auct.

Reference to best description of the species: Tebble 1966: 28-29, Pl. 1, Fig. f.

Previous records: The sounds opposite Haldarsvík (3-4 m), inner Vágssfjørður (10 m), Kollafjørður (20 m),



Fig 42. *Jupiteria minuta* (O.F. Müller, 1776)

Funningsfjørður (23-38 m, 75 m, 92 m), Skálafjørður (65 m), Hvalvíksfjørður.

New records: BIOFAR stations 056, 193, 597.

Bathymetrical range within the area: 77-108 m.

Substrate: Coarse shell-sand.

Temperature: 8.1 - 8.2 °C (E).

Water mass: AW.

World distribution: West and southeast Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, White Sea, Murman coast and along the Norwegian coast and Swedish west coast south to Øresund, North Sea, western British Isles and east Ireland; in east America at Baffinland, Labrador, Nova Scotia and south to Maine; in the Pacific Ocean from the Bering Strait into the Bering Sea, the Chukotsk and Beaufort Seas south to northern Japan, and to San Diego in California.

World bathymetrical range: 4-1900 m.

Checked by: AW

### Genus *Nuculana* Link, 1807

#### *Nuculana pernula* (O.F. Müller, 1779)

Synonyms: *Arca pernula* O.F. Müller, 1779, *Leda pernula* G.O. Sars, 1878.

Reference to best description of the species: G.O. Sars 1878: 35-36, Pl. 5, fig. 1a-d.

Previous records: Live findings from Skálafjørður, opposite Skarvsoyri in Sundini, Kongshavn - *Nuculana pernula* occurs in the northeastern parts of the Faroes. The species was not represented in the large material from Suðuroy (Petersen 1968).

New record: BIOFAR station 126.

Bathymetrical range within the area: 52 m.

Substrate: Fine soft bottom.

Temperature: 7.6 °C (E).

Water mass: AW.



World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Franz Joseph Land, Novaya Semlya, Kara Sea, White Sea and from Murman coast along the Norwegian coast and Swedish west coast south to Øresund and the Belt Sea in Denmark, northern North Sea (Dead shells found in the Bay of Biscay - (Ockelmann 1958); in east America from Grindell Land, Baffinland, Labrador to New England south of Cape Cod; in the Pacific Ocean from the Siberian Ice Sea to the Bering Strait and the Bering Sea.

World bathymetrical range: 4-1275 m.

Checked by: AW

### Nuculanidae n. sp.

New records: BIOFAR stations 305, 517.

Bathymetrical range within the area: 1078-1099 m.

Substrate: Stones, foraminiferans.

Temperature: 5.6 - 6.2 °C (E).

Water mass: AW/AI.

Remarks: According to Anders Warén the BIOFAR material contains samples of a new species of the family Nuculanidae. The species is not yet described.

Checked by: AW

## Family YOLDIIDAE

### Genus *Yoldiella* Verrill & Bush, 1897

#### *Yoldiella annenkovae* (Gorbunov, 1946)

Synonym: *Portlandia annenkovae* Gorbunov, 1946.

Reference to best description of the species: Warén 1989c: 241-243, Figs 1b-d, 8a-b.

Previous records: None.

New records: BIOFAR stations 167, 478, 479, 480.

Bathymetrical range within the area: 806-1032 m.

Substrate: Mud with fine sand and sponge spicules.

Temperature: +0.85 - +0.6 °C (E).

Water mass: NW.

World distribution: North and northwest Iceland, the Faroes, Norwegian Sea, northeast of Franz Joseph Land and in the Polar Basin.

World bathymetrical range: 700-2450 m.

Checked by: AW

#### *Yoldiella lenticula* (Møller, 1842)

Synonyms: *Nucula lenticula* Møller, 1842, *Yoldiella abyssicola* Torell, 1859.

Reference to best descriptions of the species: Warén 1989c: 239, Figs 8 c-d, 10 e-f, Allen *et al.* 1995: 76-78.

Previous records: «The Faroes», 2 shells (Petersen 1968).

New record: None.

World distribution: West and east Greenland, north and east Iceland, the Faroes (?), Jan Mayen, Svalbard, Barents Sea, Laptev Sea and the Newsiberian Islands, Murman coast and Norwegian coast south to Vikna in North-Trøndelag county, Shetland and western Scotland (dead shells have been recorded further south).

World bathymetrical range: 10-350 m (1400 m at Shetland).

Checked by: AW

#### *Yoldiella lucida* (Lovén, 1846) Fig. 43.

Synonyms: *Portlandia lucida* Lovén, 1846, *Leda obesa* Stimpson, 1851, *Yoldiella iris* Verrill & Bush, 1898.

Reference to best descriptions of the species: Tebble 1966: 29, Warén 1989c: 227, Figs 4g, 5a-b, 6a-d.

Previous records: Lightning stns 1, 2, 3; Porcupine stn. 62; Triton stns 10, 13; 61°40'N, 7°40'W, six empty shells (Petersen 1968).

New records: BIOFAR stations 006, 015, 019, 027, 031, 032, 033, 061, 063, 064, 065, 068, 100, 113, 158,

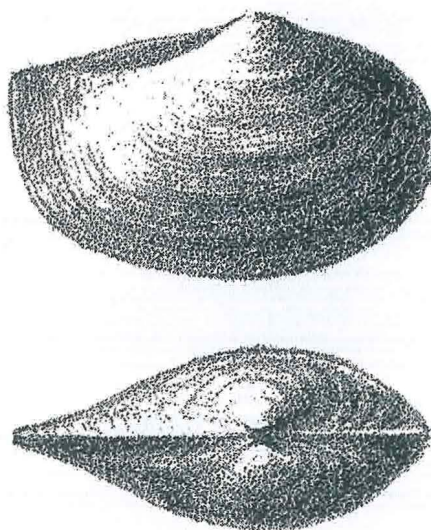
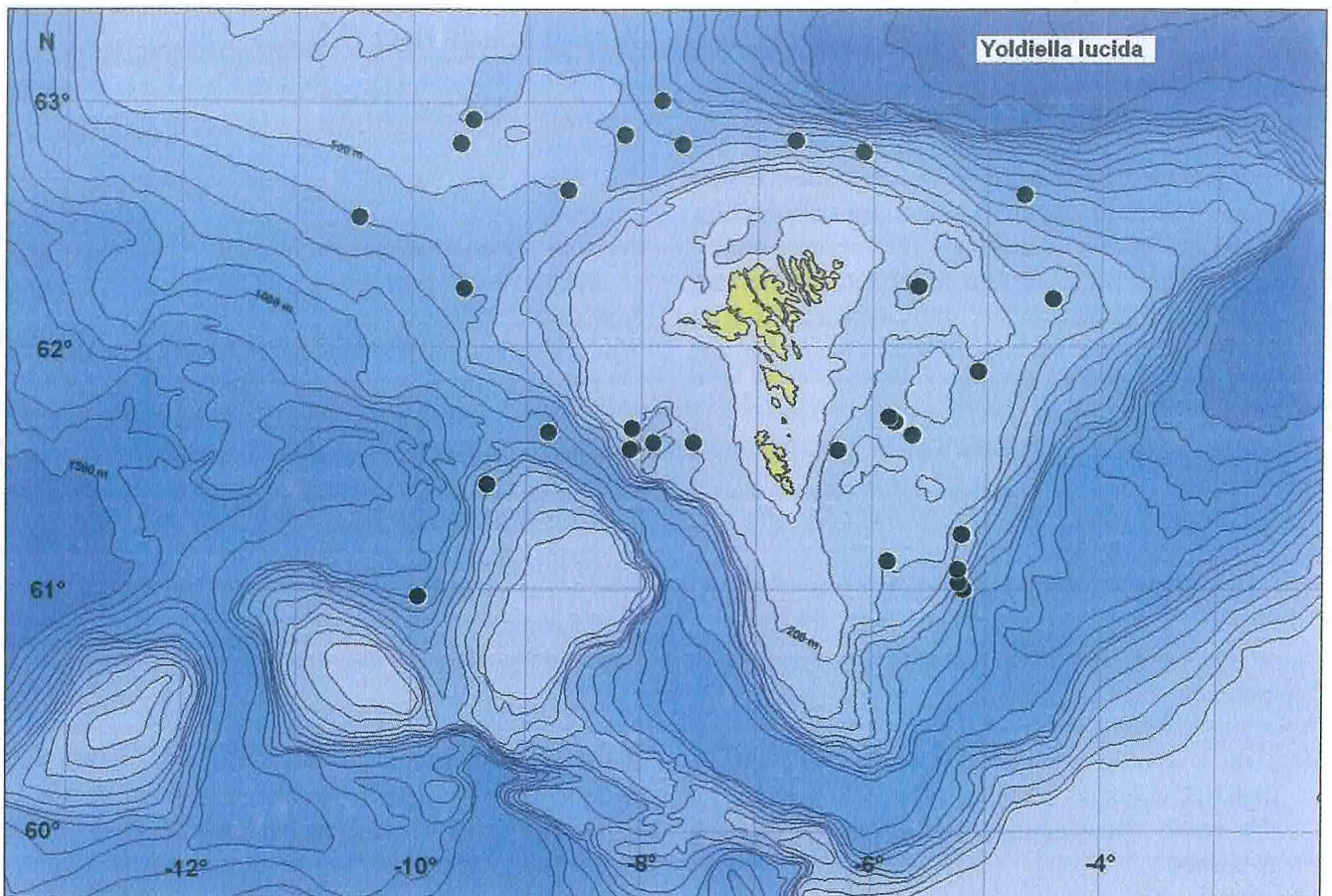


Fig 43. *Yoldiella lucida* (Lovén, 1846)





189, 233, 271, 274, 283, 343, 344, 421, 424, 425,  
447, 466, 481, 482, 483, 490, 542.

Bathymetrical range within the area: 200-1083 m.

Substrate: Mud, sand, fine gravel, foraminiferans,  
sponge spicules.

Temperature: 0.1 - 2.6 °C (M: 2 stns), +0.6 - 8.1 °C  
(E).

Water mass: AW (9), AW/AI (10), AI (5), AI/NW (1),  
NW (5), AW/AI/NW (1).

World distribution: West and southeast Greenland,  
Iceland, the Faroes, Svalbard, Novaya Zemlya,  
Murman coast south along the whole Norwegian  
coast to Bohuslän on the Swedish west coast,  
northern North Sea, western Scotland south into the  
Mediterranean; in east America from the Gulf of St.  
Lawrence to North Carolina.

World bathymetrical range: 30-2740 m.

Checked by: AW, ØS

***Yoldiella messanensis*** (Seguensa MS, Jef-  
freys, 1870)

Synonyms: *Leda messanensis* Seguensa MS, Jeffreys,  
1870, *Leda acuminata* Seguensa, 1877.

Reference to best description of the species: Warén  
1989c: 239-241, Figs 3e, 11a-b.

Previous records: None.

New record: BIOFAR station 295.

Bathymetrical range within the area: 655 m.

Substrate: Mud, gravel and stones.

Temperature: 7.8 °C (E).

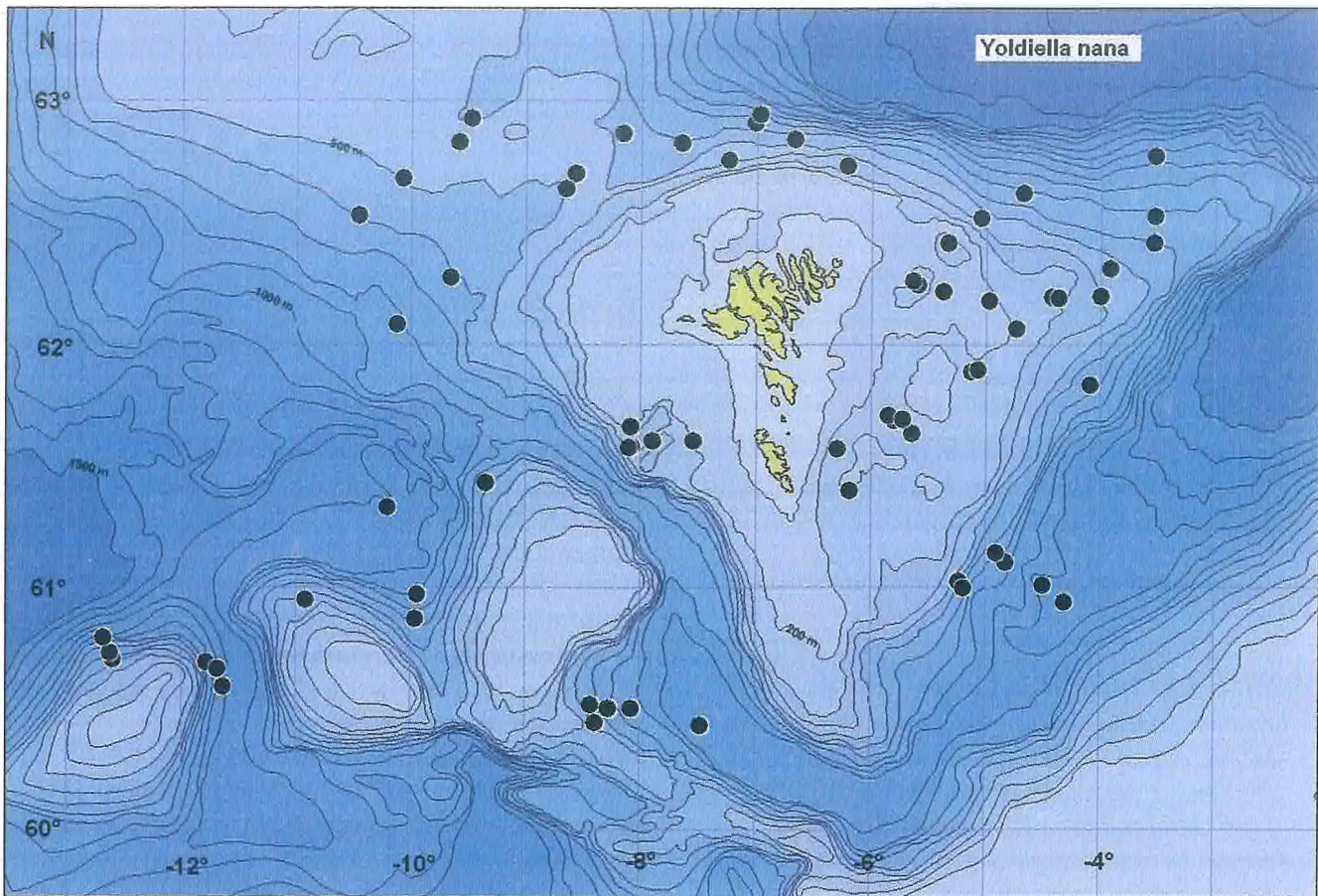
Water mass: AW.

World distribution: West and southwest Iceland, the  
Faroes, western Norway to the Mediterranean and  
the Azores.

World bathymetrical range: 200-2000 m.

Checked by: AW





### *Yoldiella nana* (M. Sars, 1865)

Synonyms: *Yoldia nana* M. Sars, 1865, *Yoldiella fraterna* Verrill & Bush, 1898, *Yoldia inconspiqua* Verrill & Bush, 1898.

Reference to best description of the species: Warén 1989: 227-233, Figs 5c-h, 6e-g.

Previous records: West of Suðuroy, 4 shells (Petersen 1968).

New records: BIOFAR stations 006, 007, 010, 015, 019, 027, 028, 031, 032, 033, 051, 061, 063, 064, 065, 068, 082, 100, 124, 158, 165, 167, 170, 171, 172, 189, 227, 228, 230, 263, 267, 271, 281, 294, 344, 354, 356, 357, 361, 363, 381, 382, 421, 422, 424, 425, 447, 452, 458, 477, 481, 482, 489, 490, 492, 500, 501, 502, 515, 516, 517, 523, 524, 525, 542, 695, 9014.

Bathymetrical range within the area: 170-1200 m.

Substrate: Sand, gravel, some stones.

Temperature: +0.50 - 7.95 °C (M: 4 stns), +0.85 - 8.5 °C (E).

Water mass: AW (21), AW/AI (16), AI (7), AI/NW (2),

AW/AI/NW (2), NW (17).

World distribution: Iceland, the Faroes, Laptev Sea (?), whole Norwegian coast, Skagerrak, and south to the Mediterranean.

World bathymetrical range: 96-1200 m.

Remarks: Richling (2000) discusses a find with 708 specimens of *Y. nana* from the Laptev Sea which looks like small but not juvenile *Y. frigida* sensu Jensen (1905). The hinge line in *Y. nana* is stronger than in *Y. frigida* but weaker than in *Y. solidula*. The intestine pattern is although in accordance with the drawing of Warén (1978).

Checked by: AW, ØS

### *Yoldiella philippiana* (Nyst, 1845)

Synonyms: *Nucula tenuis* Philippi, 1836 (not Montagu, 1808), *Nucula pygmaea* Münster: Philippi, 1844, *Nucula philippiana* Nyst, 1845 (replacement name for *N. tenuis* Philippi, 1836), *Yoldiella lenticula tomlini* Winckworth, 1932 (replacement name for



*Leda pygmaea* as used by Jeffreys, 1864, not Münster, 1835).

Reference to best description of the species: Warén 1989c: 237, Figs 8g-h, 10c-d.

Previous records: Vágur: 43 and 67 m, Hvannasund: 45 m (Petersen 1968).

New records: BIOFAR stations 006, 007, 010, 019, 027, 028, 029, 051, 056, 100, 131, 165, 354, 356, 357, 363, 495, 518, 519, 522, 542, 602.

Bathymetrical range within the area: 77-584 m.

Substrate: Sand, gravel, stones.

Temperature: 3.1 - 8.6 °C (E).

Water mass: AW (17), AW/AI (2), AI (1).

World distribution: The Faroes, whole Norwegian coast and south to northwestern Africa.

World bathymetrical range: 25-584 m.

Checked by: AW, ØS

### *Yoldiella propinqua* (Leche, 1878)

Synonyms: *Yoldia* forma *propinqua* Leche, 1878, *Yoldia pygmaea* Münster *symmetrica* Friele, 1878, *Portlandia subaequilatera* Ockelmann, 1959 not *Leda subaequilatera* Jeffreys, 1879.

Reference to best description of the species: Warén 1989c: 235-237, Figs 6h, 8e-f.

Previous records: the Faroes (Ingolf Exped., unpublished), between the Faroes and Scotland, and North of Shetland (Ockelmann 1958).

New records: BIOFAR stations 015, 095, 140, 167, 168, 171, 188, 227, 228, 230, 274, 361, 381, 447, 458, 459, 477, 478, 479, 480.

Bathymetrical range within the area: 402-1150 m.

Substrate: Mud with foraminiferans and sponge spicules, sand, gravel.

Temperature: +0.85 - 2.8 °C (E).

Water mass: AI (1), NW (19).

World distribution: West Greenland, Iceland, the Faroes, Jan Mayen, Barents Sea to Laptev Sea, south to Vikna in North-Trøndelag county, and the Faroe-Shetland Channel.

World bathymetrical range: 113-1300 m.

Checked by: AW, ØS

### *Yoldiella pustulosa* (Jeffreys, 1876)

Synonym: *Leda pustulosa* Jefferys, 1879.

Reference to best description of the species: Jeffreys 1876: 430-431.

Previous records: Porcupine stn. 58.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 950 m.

Temperature: +0.7 °C (E).

World distribution: The Faroes, lower slope of Norwegian Sea south to 61°N.

World bathymetrical range: 550-2700 m.

### *Yoldiella solidula* Warén, 1989

Reference to best description of the species: Warén 1989c: 233-235, Fig. 7a-d.

Previous records: None.

New record: BIOFAR station 168.

Bathymetrical range within the area: 899 m.

Substrate: Clay and silt.

Temperature: +0.95 °C (E).

Water mass: NW.

World distribution: From New England north to west and east Greenland, north and northwest Iceland, the Faroes, Svalbard east to Laptev Sea, and south to Tromsø in northern Norway.

World bathymetrical range: 10-1000 m.

Remarks: Richling (2000) had a huge material of this species from the Laptev Sea. She questions whether *Y. nana* and *Y. solidula* are two good species or just extreme forms of one species having a large intraspecific variation (see also remarks under *Y. nana*). In Icelandic waters Jónsson (1994) found that *Y. solidula* is difficult to separate from *Y. nana* in deep water but distinct in shallow water.

Checked by: AW

### *Yoldiella striolata* (Brugnone, 1877)

Synonym: *Yoldia striolata* Brugnone, 1877.

Reference to best description of the species: Jeffreys 1879: 578.

Previous records: Lightning stn. 3; Porcupine stn. 47.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 900-990 m.

Temperature: 1.0 - 6.6 °C (E).

World distribution: The Faroes, Atlantic Sea, Mediterranean.

World bathymetrical range: ca. 200-1500 m.

### *Yoldiella subaequilatera* (Jeffreys, 1879)

Synonym: *Leda subaequilatera* Jefferys, 1879.

Reference to best description of the species: Jeffreys 1879: 579-580, Pl. 46, fig. 3.



Previous records: Lightning stn. 3; Porcupine stn. 65.  
 New records: Not recorded during BIOFAR 1.  
 Bathymetrical range within the area: 700-900 m.  
 Temperature: ca. 1 °C (E).  
 World distribution: The Faroes, lower slope of Norwegian Sea south to 61°N.  
 World bathymetrical range: 700-1400 m.

***Yoldiella tomlini* Winckworth, 1932**

Reference to best description of the species: Tebble 1966: 29-30, Fig. 15a.  
 Previous records: Vágur (43 m, 67 m), Hvannasund (45 m)  
 New record: BIOFAR stations 056, 100 (?)  
 Bathymetrical range within the area: 77-283 m.  
 Substrate: Sand, coarse shell-sand.  
 Temperature: 6.8 - 7.9 °C (E).  
 Water mass: AW (1), AW/AI (1).  
 World distribution: The Faroes, north coast of Scotland, west coast of Ireland.  
 World bathymetrical range: 77-? M.  
 Checked by: KWO

**Subclass PTEROMORPHIA**

**Order ARCOIDA**

**Superfamily**

**Family ARCIDAE**

**Genus *Asperarca* Sacco, 1898**

***Asperarca nodulosa***

(O.F. Müller, 1776)

Fig. 44.

Synonyms: *Arca nodulosa* O.F. Müller, 1776, *Arca scabra* Poli, 1795, *Barbatia nodulosa* Poppe & Goto, 1993.

Reference to best description of the species: Oliver & Allen 1980: 64-68, Figs 18-21.

Previous records: Lightning stns 2, 4; Porcupine stn.

61; Simpson (1910): stn.16a; only recorded as dead shells (Petersen 1968).

New records: BIOFAR stations 043, 047, 049, 068, 069, 070, 089, 090, 115, 131, 143, 147, 156, 163, 190, 205, 234, 279, 281, 282, 287, 288, 295, 302, 303, 307, 311, 319, 324, 325, 328, 333, 334, 345, 353, 354, 373, 397, 399, 400, 484, 486, 497, 498, 506, 507, 508, 509, 514, 515, 516, 524, 528, 529, 532, 587.

Barthymetrical range within the area: 98- 914 m.

Substrate: Gravel with stones, hard bottom.

Temperature: 4.9 - 9.1 °C (E).

Water mass: AW (45), AW/AI (11).

World distribution: Southwest Iceland, the Faroes, Norwegian coast from Gisundet in Troms county south to West Africa, the Azores, the Canary Islands.

World bathymetrical range: 20-4134 m.

Checked by: PBW

**Genus *Arca* Linnaeus, 1758**

***Arca tetragona* Poli, 1795**

Reference to best description of the species: Tebble 1966: 31, Plate 2 d-f.

Previous records: Only five records as dead shells (Petersen 1968).

New records: BIOFAR stations 150, 279, 349, 355, 545, 546.

Bathymetrical range within the area: 135-157 m.

Substrate: Shell-sand, shell-gravel.

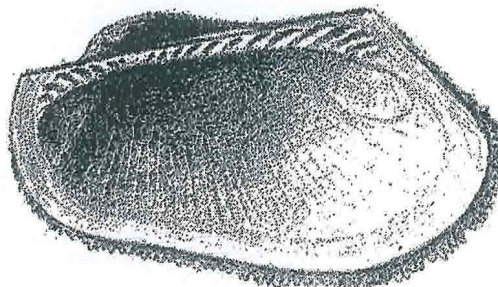
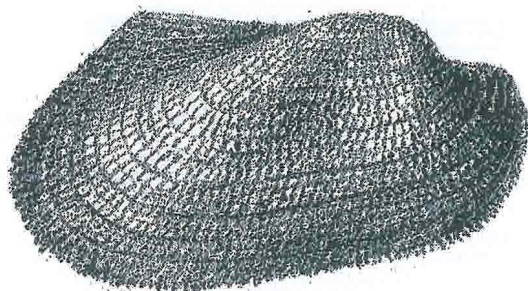
Temperature: 7.7 - 8.2 °C (E).

Water mass: AW.

World distribution: The Faroes, British Isles, Norwegian coast from about Tromsø south to the Iberian Peninsula and into the Mediterranean, the Azores, the Canary Isles.

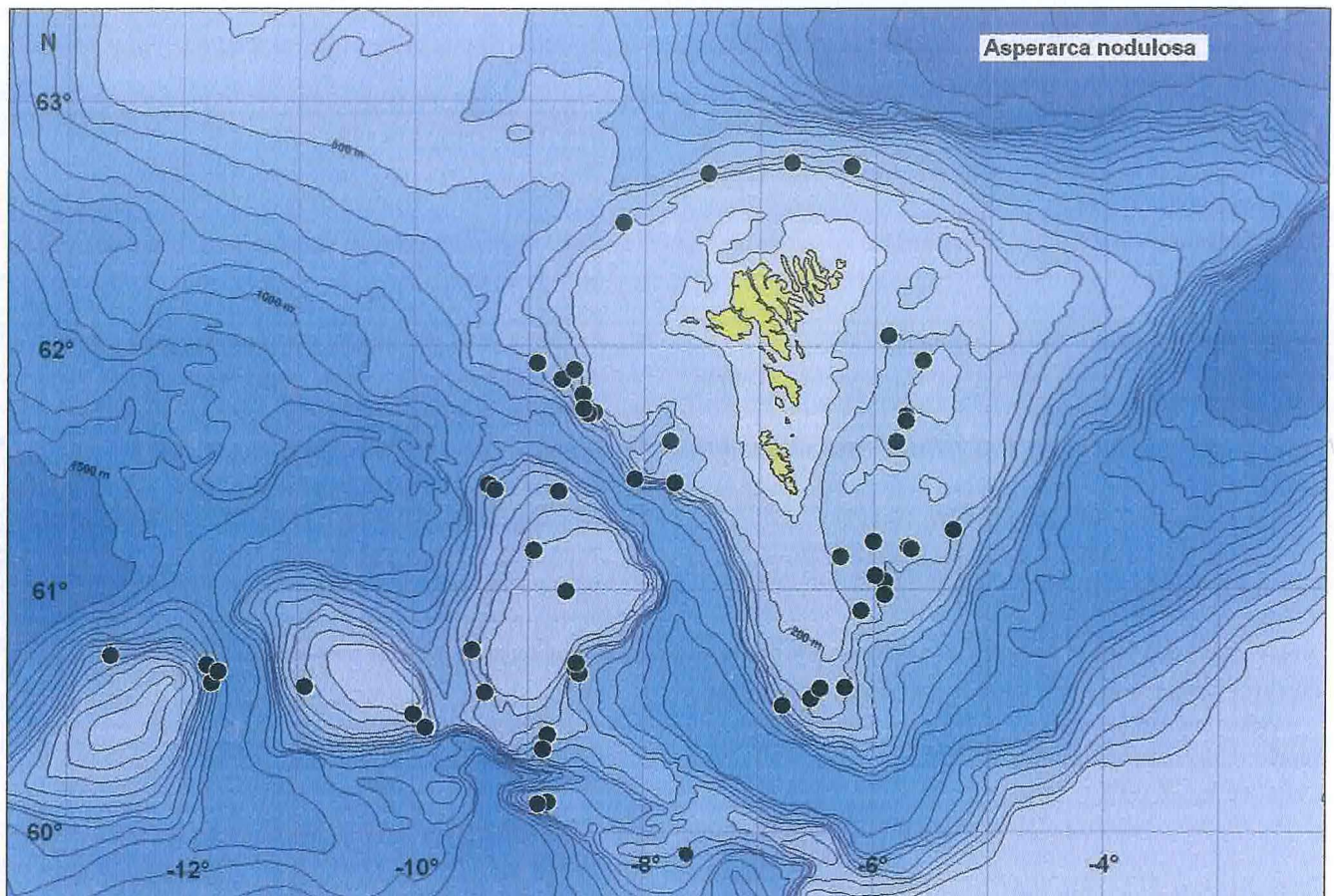
World bathymetrical range: 0-157 m.

Checked by: PBW



**Fig 44.**  
*Asperarca nodulosa* (O.F. Müller, 1776)





### Genus *Bathyarca* Kobelt, 1891

#### *Bathyarca frielei* (Friele, 1877)

Synonym: *Arca frielei* Friele, 1877, Jeffreys ms.

Reference to best descriptions of the species: Friele 1877: 2; Ockelmann 1958: 42, Pl. 1, fig. 17; Warén 1980: 42, Pl. 7, figs 7-8.

Previous records: None.

New records: BIOFAR station 279.

Bathymetrical range within the area: 260 m.

Substrate: Clay.

Temperature: 7 °C (E).

Water mass: AW.

World distribution: Northeast Greenland, north and east Iceland, the Faroes, Norwegian Sea, Jan Mayen, west and south of Svalbard, Franz Joseph Land, Laptev Sea, Norwegian west coast.

World bathymetrical range: 20-4000 m.

Checked by: AW

#### *Bathyarca pectunculoides* (Scacchi, 1834)

Synonym: *Arca pectunculoides* Sacchi, 1834; *Arca koreni* Danielssen, 1859.

Reference to best description of the species: Tebble 1966: 32-33, Fig. 16.

Previous records: Lightning stns 2, 7; Porcupine stns 61, 62, 65; Triton stn. 9; only recorded as dead shells (Petersen 1968).

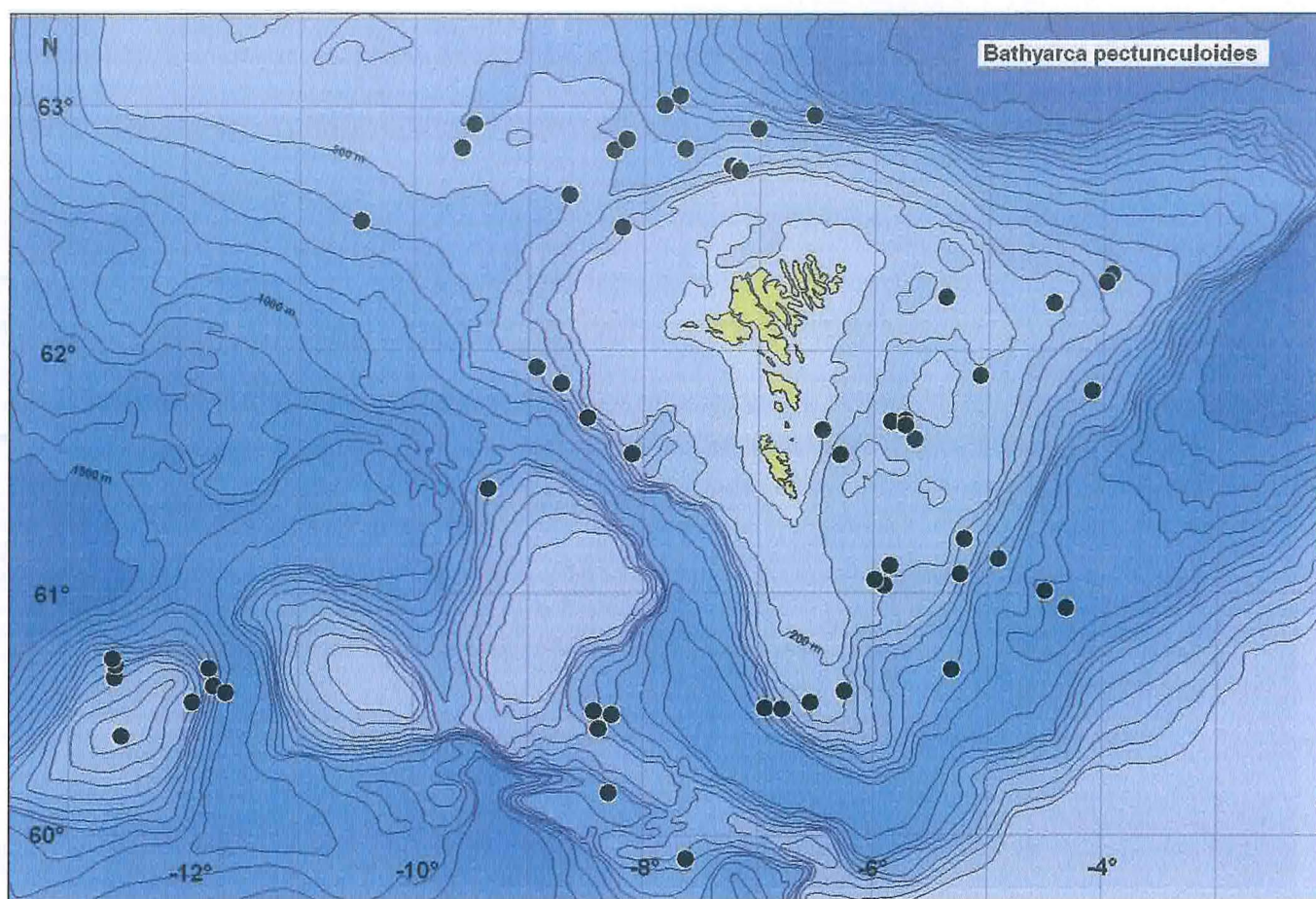
New records: BIOFAR stations 019, 027, 033, 047, 065, 068, 082, 088, 089, 090, 095, 100, 115, 158, 172, 188, 227, 230, 233, 269, 271, 274, 275, 279, 281, 283, 287, 295, 299, 334, 344, 345, 361, 363, 397, 421, 424, 425, 447, 452, 453, 454, 458, 477, 483, 486, 500, 501, 514, 515, 517, 518, 519, 522, 523, 524, 549, 758.

Barthymetrical range within the area: 78-1150 m.

Substrate: Sand, gravel, corals.

Temperature: 0.1, 2.6 °C (M: 2 stn.), +0.85 - 8.6 °C (E).





Water mass: AW (20), AW/AI (17), AI (4), AI/NW (2), NW (14), AW/AI/NW (2).

World distribution: Southwest Greenland, Iceland, the Faroes, Svalbard, Polar Basin, Barents Sea to Laptev Sea, whole Norwegian coast, Skagerrak south to Morocco and the Mediterranean, the Azores; Gulf of Mexico (?).

World bathymetrical range: 5-2000 m.

Checked by: PBW

### *Bathyarca philippiana* (Nyst, 1848)

Synonym: *Arca philippiana* Nyst, 1848, *Arca grenophia* Risso, 1826.

Previous records: Porcupine stn. 65.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 730 m.

Temperature:  $\pm 0,7$  °C (E).

Water mass: NW.

World distribution: Shetland-Faroe Ridge to the Ibero-Moroccan Gulf, Mediterranean.

World bathymetrical range: 135-730 m.

Remarks: Salas (1996) remarks that an incorrect usage of the name *B. grenophia* has started to establish for *B. pectunculoides*, and she has proposed to ICZN to suppress the name *Arca grenophia* in order to avoid further confusion.

## Subclass PTEROMORPHIA

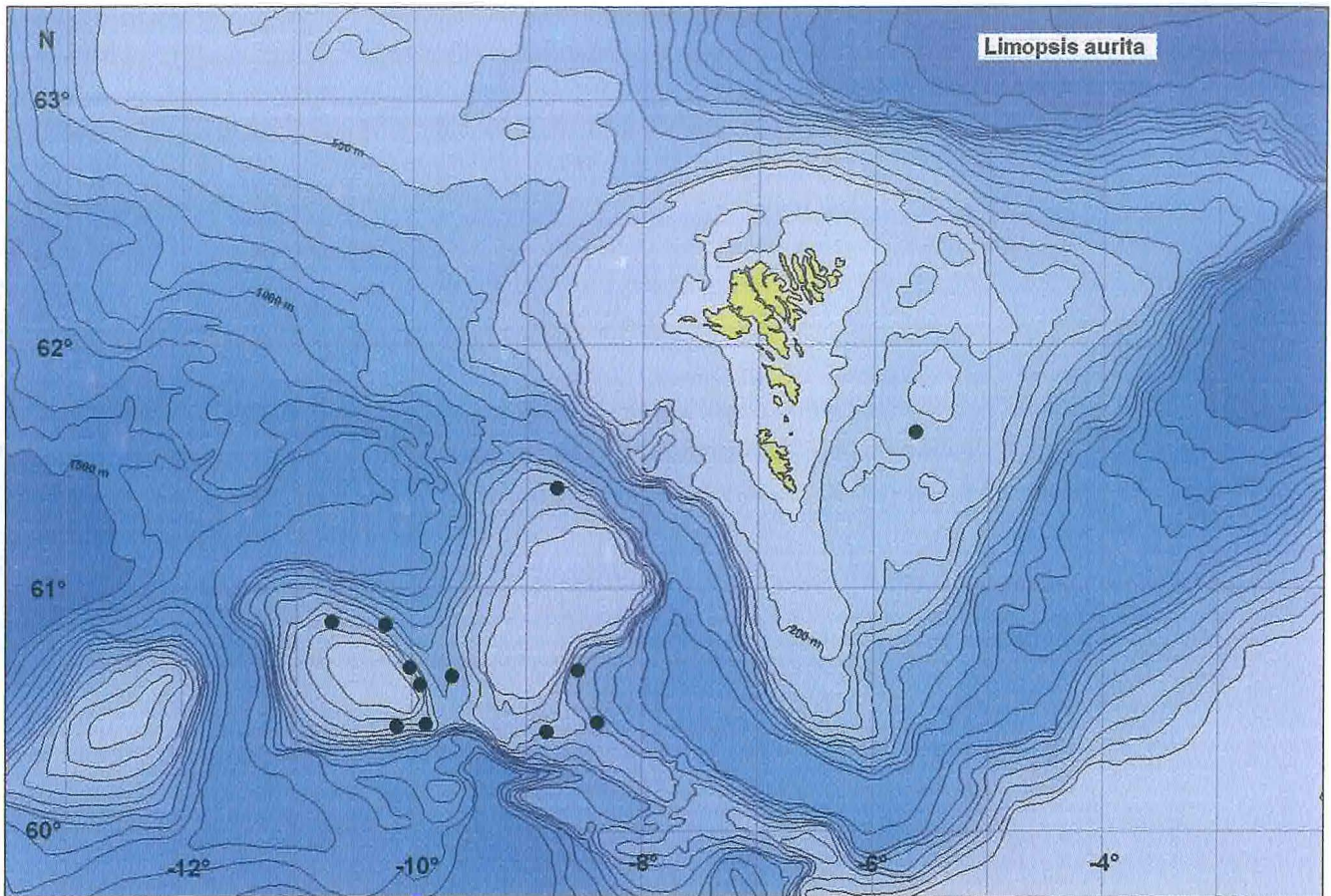
### Family LIMOPSIDAE

### Genus *Limopsis* Sassi, 1827

#### Remarks on the genus:

Apparently there exists some confusion about which species of *Limopsis* are expected to be encountered with in the North Atlantic. Jensen & Spärck (1934) report *L. aurita* from NW North Sea and state *L. minuta* as occurring on the W. coast of Norway. McMillan (1968) reports only *L. aurita* from British waters. Høisæter (1986) lists only *L. minuta* from Norwegian waters and *L. aurita* NW of Scotland.





Massy (1930) however, mentions three species: *L. aurita*, *L. minuta* and *L. cristata*. Smith & Heppell (1991) state that four species belong to the British marine fauna: *L. tenella* in addition to the three species mentioned above. A. Warén (pers. comm.) concludes that it is *L. cristata* which is most common along the Norwegian coast and has only seen one specimen of *L. minuta* from this area (Bergen) however several from the Haltenbank oil field. The description of *L. minuta* (Philippi, 1836) was based on Pliocene fossil material. Jeffreys (1869) used the name *L. borealis* Woodward MS Jeffreys, 1869 for the recent representatives of *L. minuta*, but concluded later (Jeffreys 1879) that the two are conspecific (see also Salas 1996). However, Warén (1980) questions this opinion, concluding they are two species, but Salas (1996), after having studied a considerable material of both fossil and recent specimens was not able to recognize species specific differences between the two forms. To conclude, there seem to exist four, possibly five species of *Limopsis* in North Atlantic waters:

*Limopsis aurita* (Brocchi, 1814)

*L. cristata* Jeffreys, 1876

*L. minuta* (Philippi, 1836)

*L. tenella* Jeffreys, 1876

*L. borealis* Woodward MS Jeffreys, 1868 ?

For the synonymy, see Knudsen (1967, 1970b), Salas (1996) and Oliver & Allen (1980). In the present treatment I (PBW) have preferred to consider *L. borealis* as a synonym for *L. minuta*.

### ***Limopsis aurita* (Brocchi, 1814)**

Synonym: *Arca aurita* Brocchi, 1814.

Reference to best descriptions of the species: Oliver & Allen 1980: 78-87, Figs 1, 2, 6; Tebble 1966: 33-34, Fig. 17; Salas 1996: 49, Figs 71-73.

Previous records: Lightning stns 2, 7; Porcupine stn. 65.

New records: BIOFAR stations 70, 158, 307, 308, 313, 315, 495, 497, 500, 507, 589, 595.

Bathymetrical range within the area: 250-584 m.

Substrate: Sand, gravel.



Temperature: 6.6 - 8.4 °C (E).

Water mass: AW (9), AW/AI (1).

World distribution: The Faroes, western Norway south to Senegal in West Africa, the Azores, Madeira, Mediterranean; in east America from New England to West Indies and Bermuda.

World bathymetrical range: 37-3230 m (Massy 1930).

Remarks: *L. aurita* appears to be the most dominant species of *Limopsis* in the BIOFAR material. The species is recognized by being relatively compressed and with a smooth inner shell margin at all stages.

Checked by: PBW

### *Limopsis cristata* Jeffreys, 1876

Reference to best description of the species: Oliver & Allen 1980: 100-105, Figs 21-23, 25; Salas 1996: 49, Figs 78-81.

Previous records: Triton stn. 10; «Faroes» (Massy 1930).

New records: BIOFAR stations 19, 115, 175, 343, 344, 360, 382, 421, 425, 492, 495, 515, 523, 525.

Bathymetrical range within the area: 276-900 m.

Substrate: Sand, gravel with small stones, sponge spicules.

Temperature: 1.5 - 8.5 °C (E).

Water mass: AW (4), AW/AI (5), AI (1).

World distribution: The Faroes south to Morocco; in east America from Davis Strait and New England south to Gulf of Mexico, Bermuda.

World bathymetrical range: 350-3150 m (Massy 1930).

Remarks: Oliver & Allen (1980) consider *L. cristata* a species-complex and describe four sub-species: *Limopsis cristata cristata* Jeffreys, 1876 with type locality west of Ireland; *Limopsis c. affinis* Verrill, 1885 with type locality off New England; *Limopsis c. intermedia* Oliver & Allen, 1980 with type locality off Surinam; *Limopsis c. lanceolata* Oliver & Allen, 1980 with type locality off Angola.

Diagnostic characters of *Limopsis cristata cristata*: relatively small (8 mm), not higher than long, posterior and anterior margins rounded, inner margins crenulated, somewhat compressed in contrast to *L. minuta*.

Checked by: PBW

### *Limopsis minuta* (Phillipi, 1836)

Synonyms: *Pectunculus minutus* Philippi, 1836, *L. abyssicola* Adams, 1862, *L. anceps* Thile, 1931, *L. borealis* Woodward MS Jeffreys, 1869.

Reference to best description of the species: Oliver & Allen 1980: 96-99, Figs 17, 19-20; Salas 1996: 49, Figs 74-77.

Previous records: Porcupine stn. 65; Triton stn. 10.

New records: BIOFAR stations 382, 496, 515, 517, 522, 525, 695.

Bathymetrical range within the area: 281-1099 m.

Substrate: Sand, gravel.

Temperature: +0.05 - 8.6 °C (E).

Water mass: AW (8), AW/AI (3), AI (1), AW/AI/NW (1), NW (1).

World distribution: the Faroes, whole Norwegian coast south to the Azores and Cap Verde Islands, Mediterranean, Cape of Good Hope; in east America from New Jersey to Gulf of Mexico and the West Indies.

World bathymetrical range: 37-4130 m (Massy 1930).

Remarks: Diagnostic characters: Inner margins crenulated, shell much more inflated than *L. aurita*.

Checked by: AW, PBW

## Family GLYCYMERIDIDAE

### Genus *Glycymeris* da Costa, 1778

#### *Glycymeris glycymeris* (Linnaeus, 1758)

Synonym: *Arca glycymeris* Linnaeus, 1758.

Reference to best description of the species: Tebble 1966: 33, Pl. 2, Figs a, b, c

Previous records: Only six finds of dead shells (Petersen 1968).

New records: BIOFAR stations 076, 325, 326.

Bathymetrical range within the area: 98-99 m.

Substrate: Shell-sand.

Temperature: 9.1 °C (E).

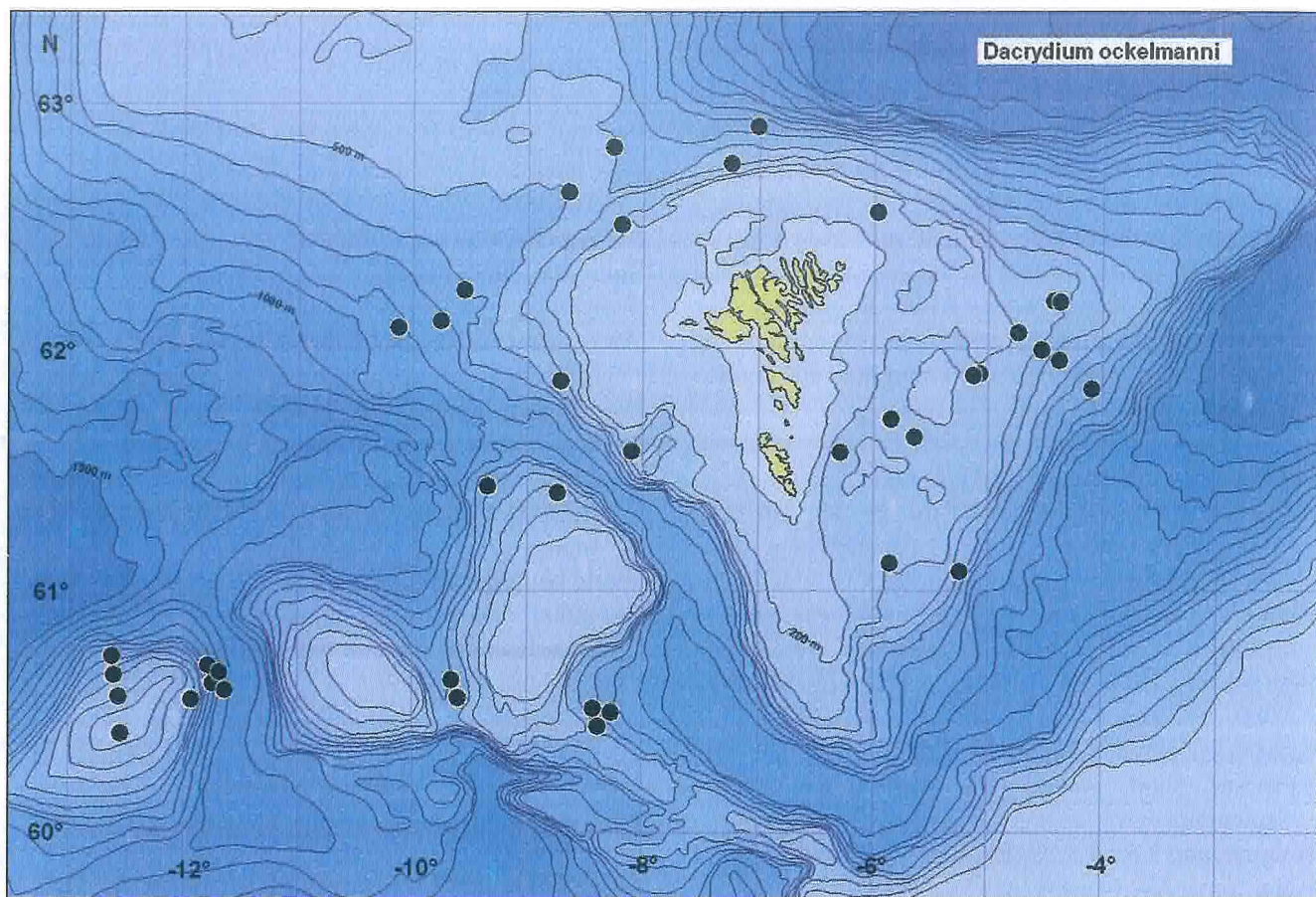
Water mass: AW.

World distribution: The Faroes, Norwegian Sea, British Isles, the Netherlands and Ireland south to Morocco, Madeira and the Canary Islands, Mediterranean.

World bathymetrical range: 0-99 m (in literature: 1200 m).

Checked by: PBW





Order MYTILOIDA  
Family MYTILIDAE  
Genus *Crenella* Brown, 1827

*Crenella decussata* (Montagu, 1808)

Synonym: *Mytilus decussata* Montagu, 1808.

Reference to best description of the species: Tebble 1966: 48, Fig. 19.

Previous records: Lightning stn. 4; *C. decussata* is common at the Faroes both in the fjords and off the islands (Petersen 1968).

New records: BIOFAR stations 056, 103, 192, 193, 203, 348, 349, 355, 365, 538, 544, 545, 546, 597.

Bathymetrical range within the area: 32-149 m.

Substrate: Shell-sand.

Temperature: 7.6 - 8.7 °C (E).

Water mass: AW.

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Franz Joseph Land, Novaya Zemlya, White Sea, and from Kara Sea along the

Murman coast south to Bergen on the Norwegian coast, Kattegat, North Sea (Monkey bank), Shetland, east of the British Isles south to Northumberland, all along the western British coasts, Ireland; in east America from Labrador to Cape Hatteras; in the Pacific Ocean from the Bering Strait to California (San Pedro) and Korea.

World bathymetrical range: 2-1100 m.

Checked by: KWO

Genus *Dacrydium* Torell, 1859

*Dacrydium ockelmanni* Mattson & Warén, 1977

Reference to best description of the species: Mattson & Warén 1977: 2-6, Figs 6, 8, 10, 11, 12, 13.

Previous records: None.

New records: BIOFAR stations 019, 027, 028, 033, 065, 068, 070, 082, 100, 115, 158, 263, 269, 283, 341,



343, 344, 345, 355, 357, 358, 359, 361, 382, 452, 458, 483, 495, 496, 500, 501, 514, 515, 516, 517, 518, 519, 520, 522, 524.

Bathymetrical range within the area: 149-1099 m.

Substrate: Sand, gravel, stones, sponge spicules.

Temperature: +0.6 - 8.6 °C (E).

Water mass: AW (20), AW/AI (13), AI (1), AW/AI/NW (1), NW (5).

World distribution: West, southwest and southeast of Iceland, the Faroes, northwest of Ireland, western Norway from Kristiansund south to the Bay of Biscay.

World bathymetrical range: 100-1099 m.

Remarks: Stns 082 and 361 had negative temperatures at bottom. As *D. ockelmanni* seems to prefer warm water, the specimens recorded at Stns 082 and 361 may therefore belong to *D. viterum* which is a cold water species.

Checked by: KWO

### *Dacrydium vitreum* (Holbøll in Møller, 1842)

Synonym: *Mytilus? vitrea* Hobøll in Møller, 1842.

Reference to best description of the species: Møller 1842: 92; G.O. Sars 1878: 28, Pl. 3 fig. 2a-b; Ockelmann 1958: Pl. 1, fig. 19.

Previous records: Porcupine stn. 65; Triton stn. 13.

New records: BIOFAR stations 188, 361, 425, 458, 9014.

Bathymetrical range within the area: 509-990 m.

Substrate: Mud and fine sand with foraminiferans and sponge spicules.

Temperature: +0.50 °C (M: one stn.), +0.84 - 1.9 °C (E).

Water mass: AI (1), NW (4).

World distribution: West and east Greenland, north and east Iceland, the Faroes, Jan Mayen, Svalbard, Kong Karl Land, Barents Sea, Novaya Zemlya, White Sea, from the Kara Sea along the Murman coast south to Bergen on the Norwegian west coast, northern North Sea; in east America probably in the Gulf of St. Lawrence and Nova Scotia.

World bathymetrical range: 5-2258 m (Jeffreys (1876) reports living specimens from 2435 fms in Atlantic ooze).

Checked by: KWO

### Genus *Modiolus* Lamarck, 1799

#### *Modiolus modiolus* (Linnaeus, 1758)

Synonym: *Mytilus modiolus* Linnaeus, 1758.

Reference to best description of the species: Tebble 1966: 43.

Previous records: Where bottom conditions are suitable, *Modiolus modilus* is commonly found all over the Faroes from about 5 to 200 m depth (Petersen 1968).

New records: BIOFAR stations 044, 077, 090, 098, 102, 105, 107, 108, 193, 203, 204, 327, 349, 350, 351, 368, 371, 457, 538, 546, 547, 597.

Bathymetrical range within the area: 5-498 m.

Substrate: Coarse shell-sand, gravel.

Temperature: 3.0 - 9.1 °C (E).

Water mass: AW (21), AI (1).

World distribution: Iceland, the Faroes, from the Gulf of Onega in the White Sea along the European coasts to the Bay of Biscay; in east America from Labrador to North Carolina; in the Pacific Ocean from the Bering Strait south to Japan and California. Not found at Greenland or at Svalbard.

World bathymetrical range: 5-500 m.

Checked by: KWO

### Genus *Modiolula* Sacco in Bellardi & Sacco, 1898

#### *Modiolula phaseolina* (Philippi, 1844)

Synonyms: *Mytilus phaseolinus* Philippi, 1844, *Modiolus phaseolinus* Tebble, 1966.

Reference to best description of the species: Tebble 1966: 45, Fig. 22a-b, Pl. 1, fig. i.

Previous records: Live records from E by S of the south point of Nólsoy, 56 m; 61°56'N, 7°04'W (56 m); off Akraleiti (about 282 m depth); also eight records with empty shells (Petersen 1968).

New records: BIOFAR stations 027, 043, 044, 047, 051, 075, 089, 098, 105, 107, 115, 131, 147, 149, 150, 153, 154, 156, 158, 163, 192, 193, 223, 279, 281, 283, 287, 288, 313, 320, 321, 322, 323, 325, 329, 345, 348, 350, 363, 364, 365, 366, 370, 372, 397, 401, 402, 486, 497, 506, 508, 509, 528, 529, 538, 542, 543, 544, 545, 584, 587, 589, 597, 602, 603.

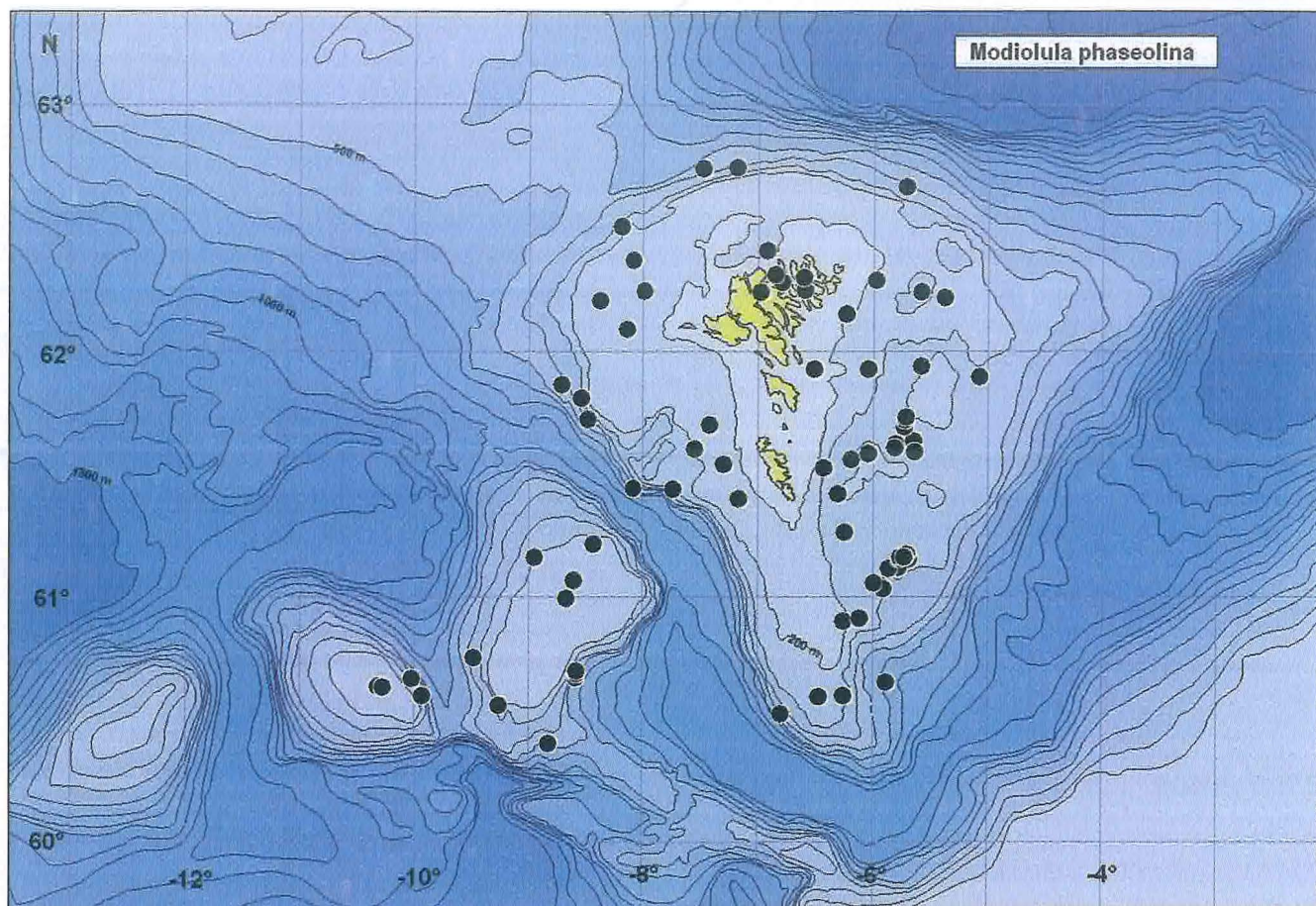
Bathymetrical range within the area: 21-460 m.

Substrate: Sand, shell-sand, gravel, some stones.

Temperature: 4.0 - 9.1 °C (E).

Water mass: AW (56), AW/AI (8).





World distribution: Southwest Iceland, the Faroes, whole coast of Norway, Skagerrak, Kattegat to Øresund, North Sea, British east coast south to Northumberland, whole British west coast, Ireland, south to the Iberian Peninsula and the Mediterranean, Black Sea, Morocco.

World bathymetrical range: 0-460 m (in litt. 1000 m).

Checked by: KWO, PBW

### Genus *Musculus* Röding, 1798

#### *Musculus niger* (J.E. Gray, 1824)

Synonym: *Modiolaria nigra* Mörch, 1868.

Reference to best description of the species: Tebble 1966: 47-48, Pl. 3, fig. d.

Previous records: Lightning stn. 8 "off the Faroes"; Trongisvágsfjørður (2-4 m, 4 m, 4-5 m, 20-27 m), Vestmanna (9 m, 9-11 m), Borðoyarvík (19 m), Skálafjørður (58 m, 70 m), Kaldbakfjørður (19-75 m), ESE of Bispen (132 m), Kollafjørður (Petersen 1968).

New records: BIOFAR stations 103, 126, 192, 365, 538, 597.

Bathymetrical range within the area: 32-135 m.

Substrate: Mud, fine shell-sand.

Temperature: 7.6 - 8.7 °C (E).

Water mass: AW.

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Franz Joseph Land, Novaya Zemlya, Kara Sea, the Siberian Ice Sea, Murman coast south to Skagerrak, Kattegat and Øresund, in the North Sea south to the Netherlands, Shetland, east coast of the British Isles; in east America from Parry Islands southward to Cape Hatteras; in the Pacific Ocean in Bering Strait and Bering Sea, Sea of Okhotsk and along the west coast of North America south to Oregon.

World bathymetrical range: 1-376 m.

Checked by: KWO



## Genus *Mytilus* Linnaeus, 1758

### *Mytilus edulis* Linnaeus, 1758

Synonym: *Mytilus galloprovincialis* Lamarck, 1818.

Reference to best description of the species: Tebble 1966: 40-43, Pl. 3, figs a, b.

Previous records: *Mytilus edulis* is common along all coasts at the Faroes in and below the tidal zone. But in the samples from 1924 to 1927 the species is not represented from the northeastern islands (Petersen 1968).

New records: Not found during BIOFAR 1, but very common in BIOFAR 2.

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Novaya Zemlya, Beaufort and Kara Seas, Barents Sea and along the coasts of Europe south to northwestern Afrika, Mediterranean. It penetrates far into the Baltic; in east America from Labrador to north Carolina; in the Pacific Ocean from the Bering Strait south to Japan and lower California.

World bathymetrical range: From the tidal zone to 260 m depth (at Jan Mayen to 180 m depth) but only occasionally, however, at depths below 50 m.

Remarks: BIOFAR 1 took very few samples in depths shallower than 200 m, and of course none in the intertidal zone. A sample from BIOFAR station 279 at 260 m depth is referred to *M. edulis*. This sample should be looked at once more.

## Order PTEROIDA

### Family PECTINIDAE

## Genus *Pecten* O.F. Müller, 1776

### *Pecten maximus* (Linnaeus, 1758)

Reference to best description of the species: Tebble 1966: 57, Pl. 2, fig. g, Pl. 5, fig. e

Previous records: None.

New records: Not recorded during BIOFAR 1 but the species has been found in 2001 by commercial dredging for "Queen scallop" at Húsagrynna east of Nólsoy (Sólgerd Andreassen, pers. comm.). The species is also reported to be found at the Faroe Bank.

World distribution: The Faroes, whole Norwegian coast from Lofoten in northern Norway to the North Sea, British Isles and Ireland and south to the Iberian Peninsula, Mediterranean.

World bathymetrical range: 5-100 m.

## Genus *Arctinula* Thiele, 1935

### *Arctinula greenlandica* (Sowerby, 1842)

Synonyms: *Pecten greenlandicus* Sowerby, 1842, *Pecten grønlandicus* G.O. Sars, 1878.

Reference to best description of the species: G.O. Sars 1878: 23, Pl. 2, fig. 4a-c.

Previous records: None.

New records: BIOFAR station 425.

Bathymetrical range within the area: 509 m.

Substrate: Sand with stones.

Temperature: +0.1 °C (M), 1.6 °C (E).

Water mass: AI.

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Barents Sea, Laptev Sea, Norwegian coast south to Vesterålen; in east America from Arctic Canada south to Newfoundland.

World bathymetrical range: 5-2000 m.

Checked by: KWO

### *Arctinula* n. sp.

BIOFAR stations: 492, 495, 496, 515, 522, 523.

Bathymetrical range within the area: 514-900 m.

Substrate: Silt, sand, shell-sand.

Temperature: 7.0 - 8.6 °C (E).

Water mass: AW.

Remarks: The species will be described elsewhere.

Checked by: KWO

## Genus *Aequipecten* Fisher, 1886

### *Aequipecten opercularis* (Linnaeus, 1758)

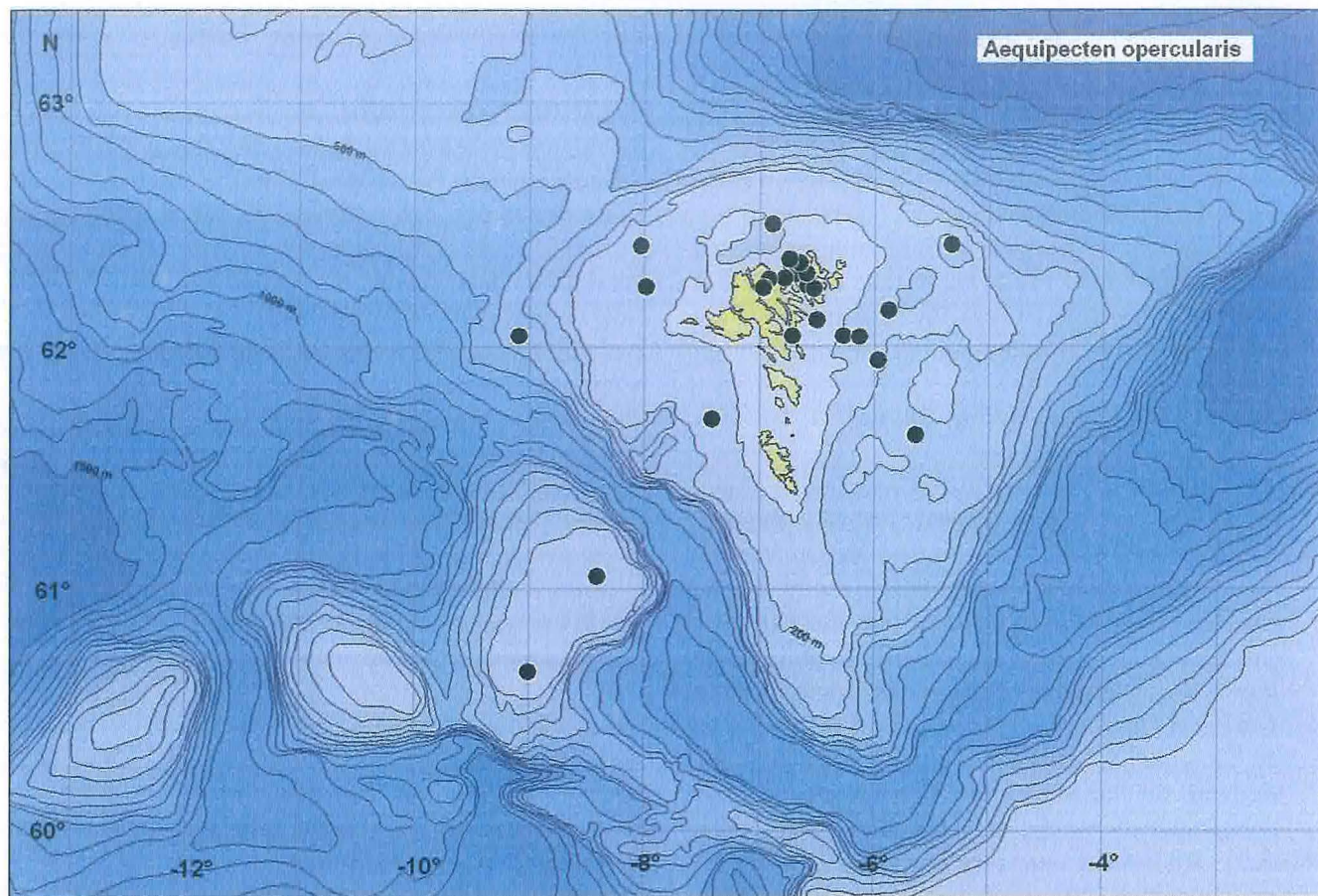
Synonyms: *Ostrea opercularis* Linnaeus, 1758, *Pecten opercularis* Mörch, 1868, *Chlamys opercularis* Tebble, 1966.

Reference to best description of the species: Tebble 1966: 60-61, Pl. 5, figs b, d.

Previous records: Lightning stn. 4; SW of Suðuroy (145 m), Trongisvágur (3-23 m), NW of Sandoy (72 m), SE of Nólsoy (151 m), Skálafjørður, N by W of Kalsoy (113 m), Funningsfjørður (23-38 m), off Borðoyarvík (38-56 m), N of Fugloy, Húsagrynna, N of Viðoy. *A. opercularis* is commonly found all over the area in waters outside the islands, depth 50-200 m. Occasionally in the fjords (Petersen 1968).

New records: BIOFAR stations 003, 076, 102, 105, 107, 110, 111, 118, 158, 192, 204, 349, 350, 356, 366, 367, 368, 369, 371, 372, 510, 543, 600, 601.





Bathymetrical range within the area: 21-450 m.

Substrate: Shell-sand, shell-gravel.

Temperature: 6.2° - 8.7 °C (E).

Water mass: AW (21), AW/AI (1).

World distribution: The Faroes, Vesterålen in Northern Norway south to Skagerrak, Kattegat to Øresund, North Sea, southern Irish Sea south to the Iberian Peninsula, the Azores, the Canary Islands, Mediterranean.

World bathymetrical range: 0-2664 m.

Remarks: In an area east of Nólsoy A. opercularis is commercially harvested.

Checked by: KWO

## Genus *Chlamys* Röding, 1798

### *Chlamys islandica* O.F. Müller 1776

Synonym: *Pecten islandicus* Müller, 1776, *Chlamys costellata* Verrill & Bush in Verrill, 1897.

Reference to best description of the species: G.O. Sars 1878: 16-17, Pl. 2 fig. 2.

Previous records: «The Faroes», one specimen, four shells found S of Akraberg and at 62°30'N, 07°03'W (Petersen 1968).

New records: None.

World distribution: Iceland, the Faroes, Barents Sea, whole Norwegian coast; in east America from Arctic Seas to Buzzards Bay in Massachusetts; in the Pacific Ocean south to Korea and Puget Sound in Alaska.

World bathymetrical range: 2-350 m.

### *Chlamys sulcata* (O.F. Müller, 1776)

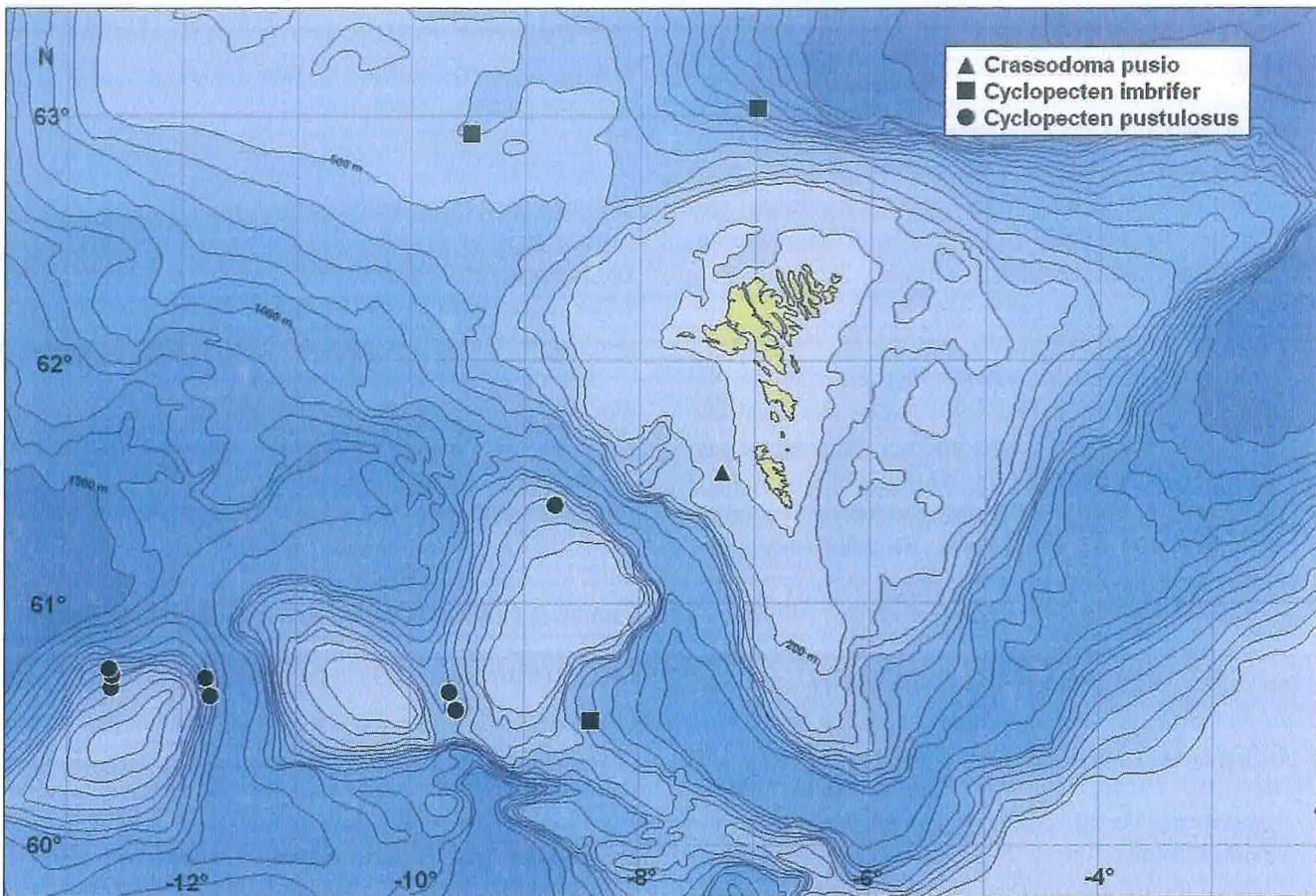
Synonyms: *Pecten sulcatus* O.F. Müller, 1776, *Ostrea arata* Gmelin, 1790, *Pecten bruei* Payraudeau, 1826.

Reference to best description of the species: Tebble 1966: 59, Pl. 6, fig. f.

Previous records: Lightning stn. 4; Simpson (1910): stns 16a, 18a.

New records: BIOFAR stations 049, 069, 089, 279, 282, 295, 303, 307, 310, 316, 328, 329, 334, 373, 486,





495, 507, 509, 514, 515, 523, 524, 536.

Bathymetrical range within the area: 253-702 m.

Substrate: Gravel, stones.

Temperature: 4.0 - 8.6 °C (E).

Water mass: AW (14), AW/AI (3).

World distribution: West and south of Iceland, the Faroes, whole Norwegian coast from Sørøya in Troms county, North Sea (German Bight), off northern coast of Scotland south to northwest Africa.

World bathymetrical range: 253-1500 m.

Checked by: KWO

### *Chlamys varia* (Linnaeus, 1758)

Synonym: *Ostrea varia* Linnaeus, 1758.

Reference to best description of the species: Tebble 1966: 59, Pl. 5, figs f-g.

Previous records: None.

New records: BIOFAR station 368.

Bathymetrical range within the area: 80 m.

Substrate: Mud.

Temperature: 7.9 °C (E).

Water mass: AW.

World distribution: The Faroes, from Senja in northern Norway south to Kattegat, British Isles, the Netherlands, southern Irish Sea south to the Iberian Peninsula and off west Africa to Senegal, Mediterranean.

World bathymetrical range: 1-100 m.

Checked by: AW

### Genus *Crassodoma* Bernhard, 1986

#### *Crassodoma pusio* (Linnaeus, 1758)

Synonyms: *Ostrea pusio* Linnaeus, 1758, *Pecten distortus* da Costa, 1778.

Reference to best description of the species: Tebble 1966: 60, Pl. 6, figs h, i, and Pl. 12, figs b, c.

Previous records: Lightning stn. 4; Triton stn. 3; 62° 23'N, 7° 03'W (106 m, live specimens), also 5 samples with dead shells (Petersen 1968).

New records: BIOFAR station 544.

Bathymetrical range within the area: 106-134 m.



Substrate: Shell-gravel, stones.

Temperature: 8.3 °C (E).

Water mass: AW.

World distribution: Southern Iceland, the Faroes, from Vesterålen in Northern Norway south along both sides of the British Isles, the Netherlands and Brittany to the Iberian Peninsula, Mediterranean, the Azores, south to Gulf of Guinea.

World bathymetrical range: 2-200 m.

Remarks: *Crassodoma pusio* occurs in two forms: one is, when adult, permanently attached to the surface on which it rest. This form is the usual one in the northern part of the species distribution and the species is therefore mostly known as *Chlamys distortus* da Costa in Nordic countries. The other, free-living form is dominant in the Mediterranean.

Checked by: KWO

### Genus *Cyclopecten* Verrill, 1897

#### *Cyclopecten imbrifer* (Lovén, 1846)

Synonyms: *Pecten imbrifer* Lovén, 1846, *Pecten pustulosus* Verrill, 1873, *Pecten hoskynsi* auct. non Forbes, 1844.

Reference to best description of the species: G.O. Sars 1878: 20, Pl. 2, fig. 1a-e (as *Pecten hoskynsi*).

Previous records: Porcupine stn. 65; Triton stn.13; Simpson (1910): Stns 15b, 18a.

New records: BIOFAR stations 082, 425, 9012.

Bathymetrical range within the area: 509-958 m.

Substrate: Sand, gravel with stones.

Temperature: +0.1° - +0.81 °C (E).

Water mass: AI (1), NW (2).

World distribution: East Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Kara Sea, Laptev Sea, whole Norwegian coast south to Stavanger and the North Sea; in east America from Arctic Seas south to off New Jersey.

World bathymetrical range: 51-2400 m.

Remarks: Jensen (1912) described a southern form «minor» of *Cyclopecten imbrifer*. Based on differences in the anatomy, ecology and distribution, Ockelmann (1958) regarded it as a species distinct from *C. imbrifer*. He suggested it could turn up to be identical with one of the related forms described from north-eastern America, such as *C. pustulosus* Verrill or *C. subimbrifer* Verrill & Bush. Here we have therefore treated the form «minor» separately and as belonging to the species *C. pustulosus*.

Checked by: KWO

#### *Cyclopecten pustulosus* (Verrill, 1873)

Synonym: *Pecten pustulosus* Verrill 1873.

Previous records: None.

New records: BIOFAR stations 070, 495, 496, 514, 515, 522, 523, 524.

Bathymetrical range within the area: 281-700 m.

Substrate: Sand, gravel.

Temperature: 6.3 - 8.6 °C (E).

Water mass: AW (7), AW/AI (1).

World distribution: Iceland, the Faroes; in east America from Gulf of Maine to off Massachusetts.

World bathymetrical range: 225-850 m.

Remarks: See remarks under the species *Cyclopecten imbrifer* Lovén, 1846.

Checked by: KWO

### Genus *Delectopecten* Stewart, 1930

#### *Delectopecten vitreus* (Gmelin, 1791)

Fig. 45.

Synonym: *Ostrea vitrea* Gmelin, 1771.

Reference to best description of the species: Tebble 1966: 64-65, Fig. 27a-b.

Previous records: Lightning stns 6, 7; Triton stn. 10.

New records: BIOFAR stations 068, 279, 314, 486, 421, 514, 515, 517, 525, 536.

Bathymetrical range within the area: 260-1006.

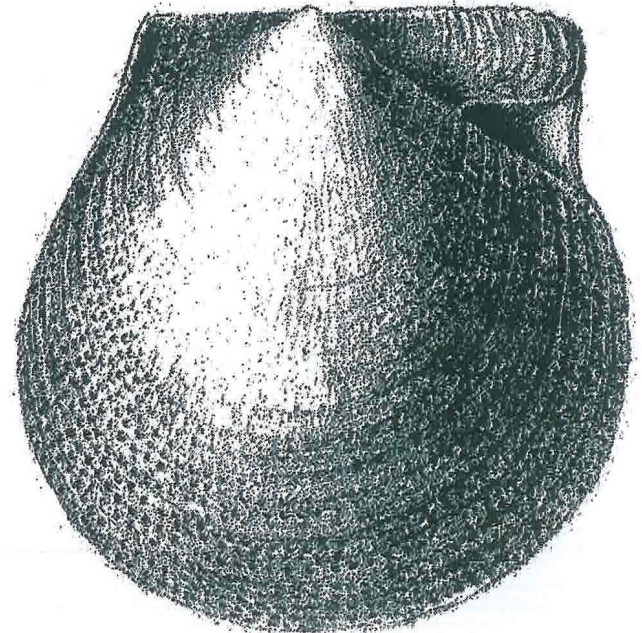


Fig 45. *Delectopecten vitreus* (Gmelin, 1791)



Substrate: Sand, gravel.

Temperature: 2.6 °C (M: one stn.), 6.0 - 8.6 °C (E).

Water mass: AW (6), AW/AI (2), AW/AI/NW (1).

World distribution: West and south Iceland, the Faroes, Hammerfest in northern Norway south to Skagerrak, off northern Scotland, south to off west Africa, Mediterranean; in east America off Newfoundland to Martha's Vineyard, Massachusetts; in the Pacific Ocean at Clipperton Island and Japan.

World bathymetrical range: 40-4000 m.

Checked by: KWO

### Genus *Hyalopecten* Verrill, 1897

#### *Hyalopecten similis* (Laskey, 1811)

Synonym: *Pecten similis* Laskey, 1811.

Reference to best description of the species: Tebble 1966: 63-64, Fig. 26.

Previous records: NW of Kalsoy (113 m), also many localities with dead shells. The species is found both in the fjords, and, more commonly, offshore (Petersen 1968).

New records: BIOFAR stations 056, 065, 070, 295, 506, 520, 522, 544.

Bathymetrical range within the area: 77-655 m.

Substrate: Gravel, stones.

Temperature: 7.5 - 8.6 °C (E).

Water mass: AW.

World distribution: South Iceland, the Faroes, whole Norwegian coast to Kattegat, northern North Sea, British Isles and southern Irish Sea south to the Iberian Peninsula, Mediterranean, the Canary Islands.

World bathymetrical range: 4-655 m.

Checked by: KWO

### Genus *Palliolum* Monterosato, 1884

#### *Palliolum furtivum* (Lovén, 1846)

Synonym: *Pecten furtivus* Lovén, 1846.

Reference to best description of the species: Tebble 1966: 62-63, Pl. 6, fig. d.

Previous records: None.

New records: BIOFAR stations 353, 356, 363, 514.

Bathymetrical range within the area: 170-496 m.

Substrate: Coarse sand, gravel, stones.

Temperature: 6.9 - 8.6 °C (E).

Water mass: AW (3), AW/AI (1).

World distribution: South Iceland, the Faroes, from

Senja in northern Norway south to Kattegat, Shetland, west coast of the British Isles and to the Iberian Peninsula.

World bathymetrical range: 7-496 m.

Checked by: KWO

#### *Palliolum striatum* (O.F. Müller, 1776)

Synonym: *Pecten striatus* Müller, 1776.

Reference to best description of the species: Tebble 1966: 63, Pl. 6, figs j, k, l, and n.

Previous records: South point of Nólsoy (151 m, live) and six records of shells (Petersen 1968).

New records: BIOFAR stations 043, 056, 090, 156, 175, 190, 234, 235, 279, 287, 333, 357, 371, 373, 456, 473, 474, 486.

Bathymetrical range within the area: 77-285 m.

Substrate: Shell-sand, shell-gravel, stones.

Temperature: 6.3 - 8.0 °C (E).

Water mass: AW (17), AW/AI (1).

World distribution: S Iceland, the Faroes, Jan Mayen, whole Norwegian coast south to Kattegat, North Sea, British Isles, and west of Ireland to the Iberian Peninsula and the western Mediterranean.

World bathymetrical range: 10-800 m.

Checked by: KWO

#### *Palliolum tigrinum* (O.F. Müller, 1776)

Synonym: *Pecten tigrina* Müller, 1776.

Reference to best description of the species: Tebble 1966: 62, Pl. 6, figs a, b, c, e and g.

Previous records: Lightning stn. 2; Borðoyarvík (38-56 m), 62°37'N, 7°03'W (122-130 m), the deep hole north of Nólsoy (188 m), SW of Munken (282 m) besides many record with dead shells. The species has an even distribution offshore the islands (Petersen 1968).

New records: BIOFAR stations 007, 056, 102, 105, 116, 138, 154, 190, 192, 286, 287, 368, 453, 468, 473, 597.

Bathymetrical range within the area: 77-400 m.

Substrate: Shell-gravel, stones.

Temperature: 6.2 - 8.1 °C (E).

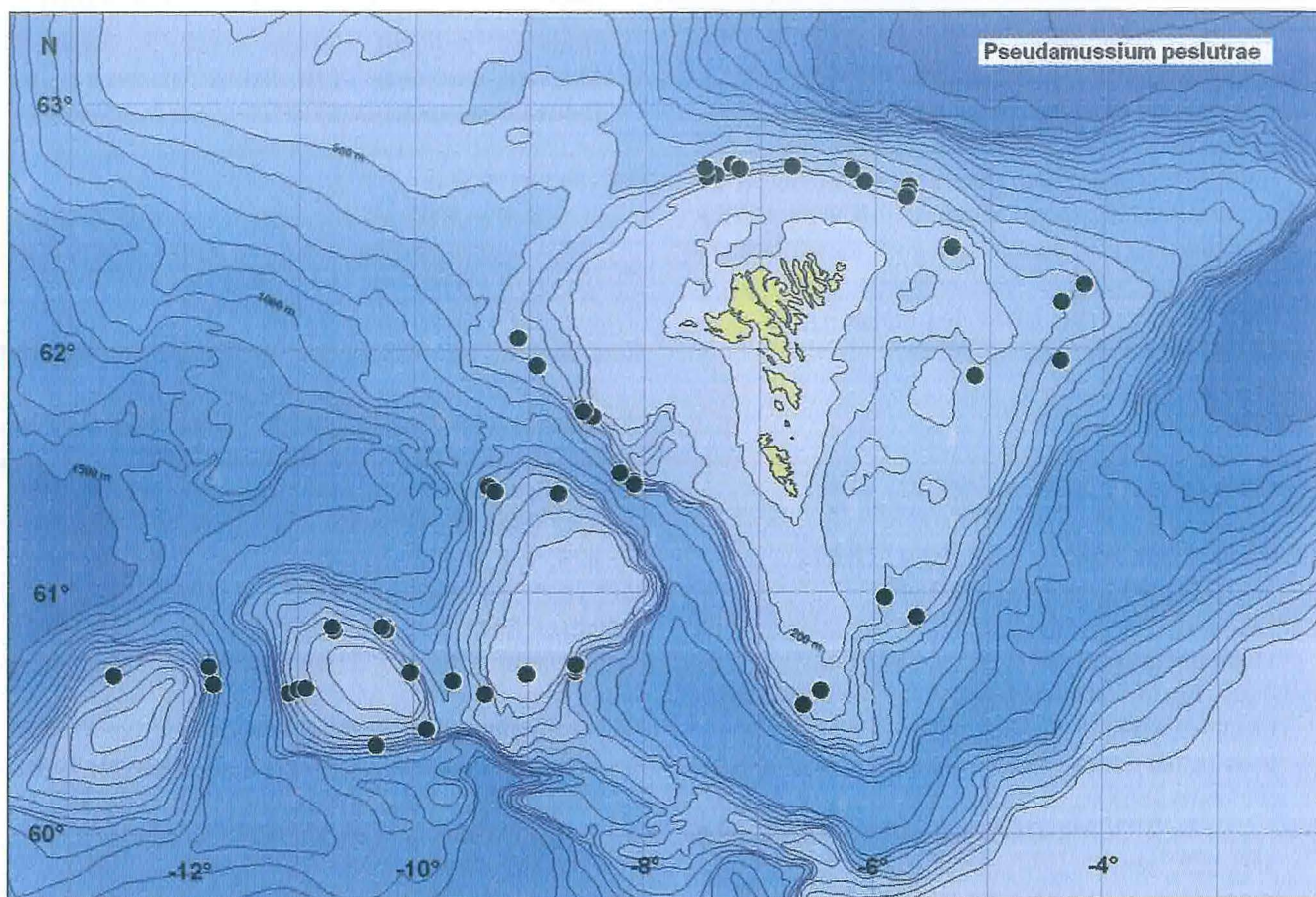
Water mass: AW (15), AW/AI (1).

World distribution: West and south Iceland, the Faroes, whole Norwegian coast to Kattegat, British Isles and southern Irish Sea south to Portugal and Morocco.

World bathymetrical range: 10-550 m.

Checked by: KWO





### Genus *Pseudamussium* Mørch, 1853

#### *Pseudamussium peslutrae* (Linnaeus, 1771).

Synonyms: *Pecten peslutrae* Linnaeus, 1771,  
*Pseudamussium septemradiatum* (O.F. Müller,  
1776).

Reference to best description of the species: Tebble  
1966: 61-62, Pl. 5, fig. a and c, Pl. 6, fig. m.

Previous records: Lightning stns 2, 4, 8; S of Akraberg  
(280 m), 62°30'N, 8°21'W (249 m) (Petersen  
1968).

New records: BIOFAR stations 028, 049, 068, 069, 070,  
118, 174, 190, 285, 288, 289, 307, 310, 314, 315,  
316, 317, 318, 319, 324, 328, 329, 330, 331, 334,  
352, 353, 354, 356, 359, 382, 398, 451, 452, 453,  
454, 468, 469, 470, 471, 495, 506, 508, 509, 510,  
514, 515, 522, 531, 532, 589, 594, 595.

Bathymetrical range within the area: 136-700 m.

Substrate: Sand, gravel, stones.

Temperature: 3.6 - 8.7 °C (E).

Water mass: AW (36), AW/AI (17).

World distribution: West and south Iceland, the Faroes,  
whole Norwegian coast south to Kattegat and  
Øresund, North Sea, east coast of England, western  
Scotland south to northwest Africa, Mediterranean.

World bathymetrical range: 10-700 m.

Remarks: Dijkstra (1999) has revised the Linnaean  
collection in London and found the well known  
species *Pseudamussium septemradiatus* (Müller,  
1776) synonymous with the species *Pecten peslutrae*  
which Linnaeus described in 1771.

### Family ANOMIIDAE

#### Genus *Anomia* Linnaeus, 1758

##### *Anomia ehippium* Linnaeus, 1758

Reference to best description of the species: Tebble  
1966: 35, Pl. 2, fig. g, Fig. 18a.

Previous records: Lightning stns 2, 3.

New records: Not recorded during BIOFAR 1.



Bathymetrical range within the area: 300-900 m.  
 Temperature: 0.7 - 5.4 °C (E).  
 World distribution: the Faroes, British Isles, Ireland south to the Mediterranean and the Atlantic coast of Morocco to Ghana.  
 World bathymetrical range: 10-900 m.

***Heteranomia squamula* (Linnaeus, 1758)**

Synonym: *Anomia squamula* Linnaeus, 1758.

Reference to best description of the species: Tebble 1966: 37, Figs 4b, 18d.

Previous records: Triton stn. 10; «*Heteranomia squamula* is very common all over the area especially in the fjords», from 0 to 282 m depth (Petersen 1968).

New records: BIOFAR stations 043, 090, 105, 108, 175, 279, 287, 315, 320, 321, 329, 333, 350, 370, 371, 525, 528.

Bathymetrical range within the area: 66-1006 m.

Substrate: Sand, gravel, mollusc shells.

Temperature: 6.0 - 8.6 °C (E).

Water mass: AW (12), AW/AI (3).

World distribution: Iceland, the Faroes, the White Sea south along the European coasts to Bay of Biscay, Mediterranean; in east America from Labrador to Newfoundland.

World bathymetrical range: 0->1000 m.

Checked by: KWO, PBW

**Genus *Pododesmus* Philippi, 1837**

***Pododesmus squama* (Gmelin, 1791)**

Synonyms: *Patella squama* Gmelin, 1791, *Anomia patelliformis* Linnaeus, 1761, *Anomia undulata* Gmelin, 1791.

Reference to best description of the species: Tebble 1966: 35-36, Fig. 18b.

Previous records: Lighting stn. 8; Triton stn. 3; Skálafjørður (8-19 m), Ljósá í Sundini (20-25 m), NW of Streymoy (113 m), «*Monia patelliformis* has an even distribution in the area» (Petersen 1968).

New records: BIOFAR stations 043, 100, 116, 203, 204, 205, 333.

Bathymetrical range within the area: 96-283.

Substrate: Sand, gravel, stones.

Temperature: 6.8 - 8.7 °C (E).

Water mass: AW (6), AW/AI (1).

World distribution: Southwest Iceland, the Faroes, whole Norwegian coast from Hammerfest in Finnmark,

North Sea, British Isles, Ireland and offshore south to western Africa, Mediterranean. World bathymetrical range: 10-300 (?) m.

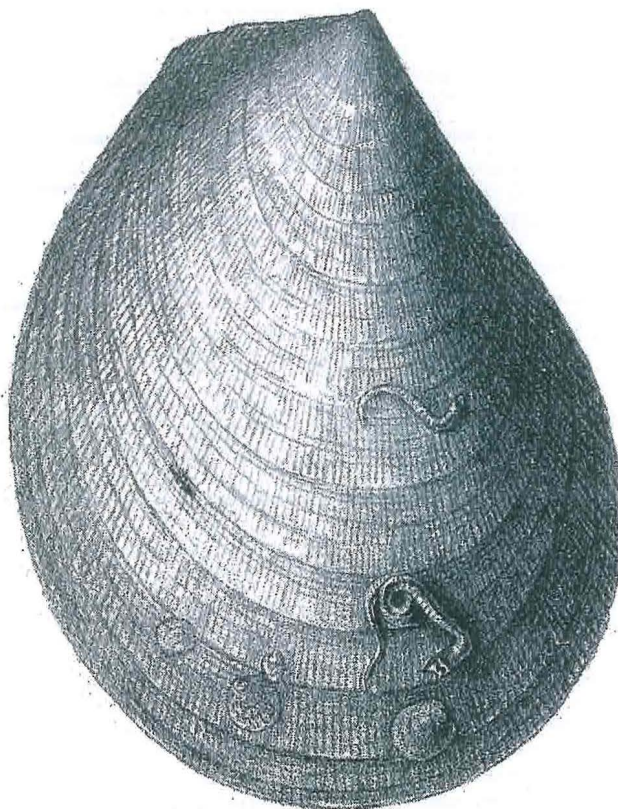


Fig. 46. *Acesta excavata* (J.C. Fabricius, 1779)

**Family LIMIDAE**

**Genus *Acesta* H. & A. Adams, 1858**

***Acesta excavata* (J.C. Fabricius, 1779)**

Fig. 46.

Synonyms: *Lima excavata* J.C. Fabricius, 1779, *Lima solida* Calcare, 1845.

Reference to best description of the species: G.O. Sars 1878: 24-25, Pl. 3, fig. 1a-d.

Previous records: None.

New records: BIOFAR stations 047, 090, 279, 287, 486.

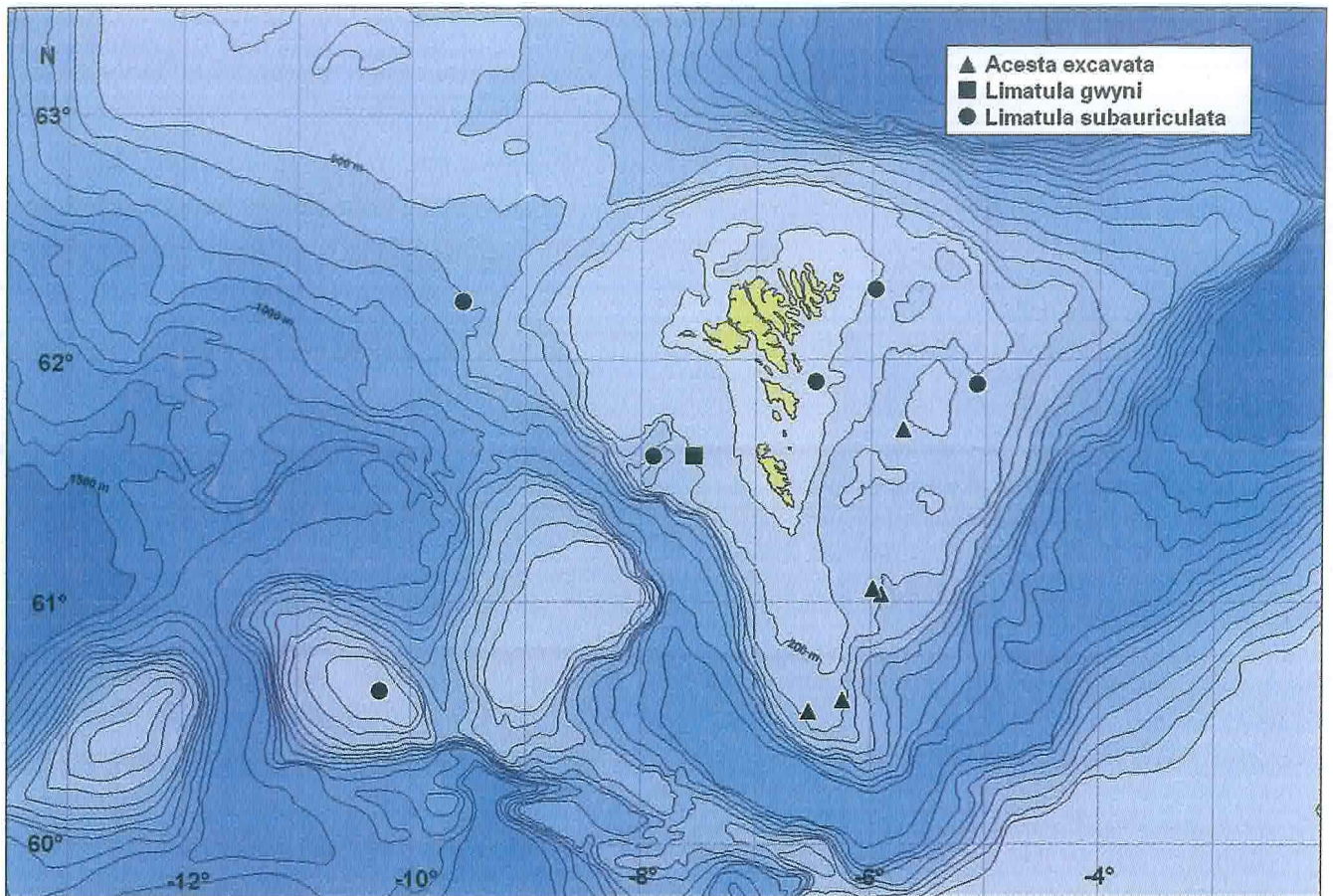
Bathymetrical range within the area: 252-285 m.

Substrate: Hard bottom, corals.

Temperature: 7.0 - 8.0 °C (E).

Water mass: AW.





World distribution: Southwest Greenland, south of Iceland, the Faroes, whole Norwegian coast, Swedish west coast, east Atlantic south to the Azores and west of Sudan, Mediterranean.

World bathymetrical range: 50-2500 m.

Checked by: KWO

### Genus *Limatula* S.V. Wood, 1839

#### *Limatula gwyni* (Sykes, 1903)

Synonyms: *Lima gwyni* Sykes, 1903, *Lima elliptica* Jeffreys, 1863.

Reference to best description of the species: Jensen & Spärck 1934: 68-69, Fig. 50, Jensen 1912: Pl. 2, fig. 4a-c.

Previous records: Lightning stn. 2; Porcupine stn. 61.

New records: BIOFAR station 542.

Bathymetrical range within the area: 200 m.

Substrate: Mud and silt.

Temperature: 8.1 °C (E).

Water mass: AW.

World distribution: South Iceland (live?), the Faroes,

from Lofoten in northern Norway south to Skagerrak and Kattegat, Shetland, western Scotland and further south to the Mediterranean.

World bathymetrical range: 10-750 m.

Checked by: KWO

#### *Limatula hyperborea* Jensen, 1905

Synonym: *Lima sulculus* Leche 1878 (non Leach).

Reference to best description of the species: Jensen 1905: 329-330, Fig. 1a-d.

Previous records: None.

New records: BIOFAR station 9012.

Bathymetrical range within the area: 1022 m.

Substrate: No information.

Temperature: +0.81 °C (E).

Water mass: NW.

World distribution: Northwest and northeast Greenland, the Faroes, Jan Mayen, Svalbard, Barents Sea to Laptev Sea.

World bathymetrical range: 75-1320 m.

Checked by: KWO



***Limatula subauriculata* (Montagu, 1808)**

Synonym: *Pecten subauriculata* Montagu 1808.

Reference to best description of the species: Tebble 1966: 68, Fig. 28a-b.

Previous records: Lightning stns 2, 6, 7; Porcupine stn. 62; Triton stn. 13.

New records: BIOFAR stations 027, 056, 063, 321, 343, 365.

Bathymetrical range within the area: 77-594 m.

Substrate: Sand, shell-gravel.

Temperature: 4.8 - 8.7 °C (E).

Water mass: AW (5), AW/AI (1).

World distribution: West and southeast Greenland, Iceland, the Faroes, Finnmark in northern Norway south to the Canary Islands, Mediterranean; in east America from Labrador south to Puerto Rico; in the Pacific Ocean from the Bering Sea south to Lower California.

World bathymetrical range: 7-600 m (?3300 m according to Jeffreys 1879, but probably *L. similis* according to Jensen 1912).

Checked by: KWO, AW

***Limatula subovata* (Jefferys, 1876)**

Synonym: *Lima subovata* Jefferys, 1876.

Reference to best description of the species: Jeffreys 1876: 427-428.

Previous records: Triton stn. 13.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 1000 m.

Temperature: 7.6 °C (E).

World distribution: the Faroes, Mediterranean.

World bathymetrical range: ?-3300 m.

***Limatula* n. sp.**

BIOFAR stations 359, 361, 9012.

Bathymetrical range within the area: 407-1022 m.

Substrate: Mud with some spicules, sand.

Temperature: +0.81 - 3.6 °C (E).

Water mass: AW/AI (1), NW (2).

Remarks: This new species will be described elsewhere ("*jenseni*").

Checked by: KWO

**Genus *Limea* Bronn, 1831*****Limea loscombi* Sowerby, 1824**

Synonyms: *Lima loscombii* Sowerby, G.B. I, 1824, *Lima loscombei* auct.

Reference to best description of the species: Tebble 1966: 66, Pl. 11, figs c and m.

Previous records: Only as dead shells from south of Nólsoy (1 shell, 151 m) and SW of Munken (1 shell, 282 m) (Petersen 1968).

New records: Not recorded during BIOFAR 1.

World distribution: The Faroes (?), Norwegian Sea, Norwegian coast from Lofoten to Skagerrak and Kattegat, northern North Sea, British Isles south to the Iberian Peninsula and Morocco, Mediterranean.

World bathymetrical range: 10-400 m (2600 m i the Mediterranean?).

**Genus *Notolimea* Iredale, 1924*****Notolimea crassa* (Forbes, 1844)**

Synonyms: *Lima crassa* Forbes 1844, *Lima sarsi* Lovén 1846.

Reference to best description of the species: Tebble 1966: fig. 29 (as *Limea sarsi*).

Previous records: Lightning stn. 2; Porcupine stn. 65.

New records: BIOFAR stations 019, 352, 354, 401, 514, 518, 520.

Bathymetrical range within the area: 250-496 m.

Substrate: Sand, gravel, small stones.

Temperature: 6.2 - 8.6 °C (E).

Water mass: AW (5), AW/AI (2).

World distribution: The Faroes, whole Norwegian coast south to Lindesnes, Shetland, North Sea, south to the Iberian Peninsula and West Africa, Mediterranean.

World bathymetrical range: 100-2000 m.

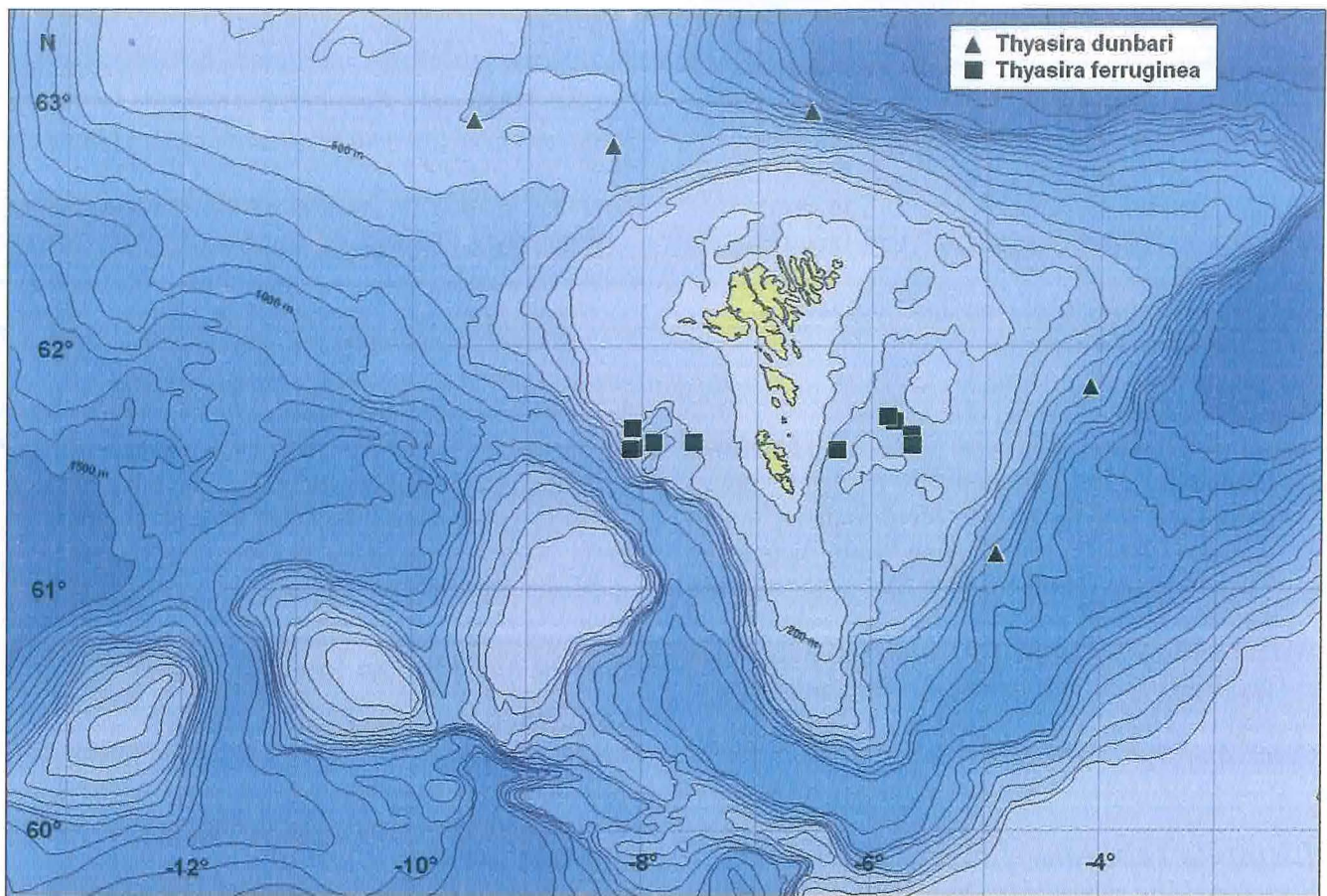
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**Subclass HETERODONTA****Order VENEROIDA****Family LUCINIDAE****Genus *Lucinoma* Dall, 1901*****Lucinoma borealis* (Linnaeus, 1767)**

Synonyms: *Venus borealis* Linnaeus, 1767, *Phacoides borealis* Jutting, 1943, *Lucina borealis* auct.

Reference to best description of the species: Tebble 1966: 76-77, Fig. 31b.





Previous records: Klaksvík (18-27 m), Funningsfjørður (23-38 m), Vágur (43 m, 67 m), Hvannasund (45 m), Sørvágur (57 m), Vágafjørður (62 m, 64 m) (Petersen 1968).

New records: BIOFAR stations 366, 542, 600.

Bathymetrical range within the area: 75-200 m.

Substrate: Mud, sand with shell remains.

Temperature: 7.9 - 8.1 °C (E).

Water mass: AW.

World distribution: The Faroes, whole Norwegian coast, Kattegat, North Sea, British Isles south to Mauritania in west Africa, Mediterranean, Mid Atlantic Islands.

World bathymetrical range: 0-1494 m.

Checked by: PBW, ØS

## Family THYASIRIDAE

### Genus *Thyasira* Lamarck, 1818

#### *Thyasira croulinensis* (Jeffreys, 1847)

Synonym: *Clausina croulinensis* Jeffreys, 1847 not *Clausina croulinensis* Jeffreys, 1863 nec *Axinus*

*croulinensis* sensu G.O. Sars, 1878.

Reference to best description of the species: Payne & Allen 1991: 525-529, Figs 69, 72-75, Oliver & Killeen 2002: 50-52, Pl. 3C, 20.

Previous records: Lightning stn. 7; Vágur (43 m, 67 m) (Petersen 1968).

New records: BIOFAR stations 019, 031, 063, 064, 065, 100, 158, 356, 524.

Bathymetrical range within the area: 240-702 m.

Substrate: Sand with some silt.

Temperature: 6.5 - 7.9 °C (E).

Water mass: AW (5), AW/AI (4).

World distribution: West Greenland, west Iceland, the Faroes, Svalbard, Barents Sea, Norwegian coast from Hammerfest south to Skagerrak, North Sea, the British Isles, the Azores and Canary Islands to Angola and the Guinea Basin, Mediterranean; in east America off Bermuda.

World bathymetrical range: 40-3861 m.

Remarks: Often mixed with *T. obsoleta* in older literature.

Checked by: KWO, ØS



***Thyasira dunbari* Lubinsky, 1976**

Synonym: *Thyasira equalis* sensu Ockelmann, 1958 not Verrill & Bush 1898.

Reference to best description of the species: Lubinsky 1976: 1667-1670, Pl. 1, figs 1-6, Oliver & Killeen 2002: 59-60, Pl. 24A-E.

Previous records: None.

New records: BIOFAR stations 188, 230, 269, 361, 425.

Bathymetrical range within the area: 509-990 m.

Substrate: Mud, fine sand, foraminiferans.

Temperature: +0.6 - 2.9 °C (E).

Water mass: AI (2), NW (3).

World distribution: East Greenland, Jan Mayen, the Faroes; in east America in High-Arctic areas of Canada.

World bathymetrical range: 2-1032 m.

Checked by: KWO, ØS

***Thyasira ferruginea* (Locard, 1886)**

Synonyms: *Axinus ferrugineus* Locard, 1886, *Lucina ferruginosa* Forbes, 1844, *Kellia ferruginosa* Forbes, 1844, *Axinus ferruginosus* G.O. Sars, 1878, *Axinulus ferruginosus* Richling, 2000.

Reference to best description of the species: Payne & Allen 1991: 534-539, Figs 82, 87, Oliver & Killeen 2002: 54-56, Pl. 3D, 22.

Previous records: Porcupine stn. 47.

New records: BIOFAR stations 031, 033, 061, 063, 064, 065, 100, 158, 223, 542.

Bathymetrical range within the area: 200-352 m.

Substrate: Mud, sand.

Temperature: 6.5 - 8.1 °C (E).

Water mass: AW (5), AW/AI (5).

World distribution: Greenland, Iceland, the Faroes, Svalbard, Barents Sea to Laptev Sea, North-Atlantic and into the Mediterranean.

World bathymetrical range: 8-4825 m.

Remarks: The nomenclature of *T. ferruginea* is not clear.

We have selected Locard (1886) although his name may just be a spelling error.

Checked by: KWO, ØS

***Thyasira flexuosa* (Montagu, 1803)**

Synonym: *Tellina flexuosa* Montagu, 1803, not *Axinus flexuosus* G.O. Sars, 1878.

Reference to best description of the species: Oliver & Killeen 2002: 24-27, Pl. 2A, 6A, 7, 8, 9C-D, 10B.

Previous records: Lightning stns 1, 3; Porcupine stn. 62; Funningsfjørður (10 m, 20 m, 54 m, 56 m), Skálafjørður (19 m, 65 m), Kollafjørður (20 m, 40 m), Sørvágur (24 m, 55 m, 57 m), Sundini (26 m, 30 m, 57 m, 70 m), Trongisvágur (32 m), Vágafjørður (64 m, 67 m) - the species is common in the fjords (Petersen 1968).

New records: BIOFAR stations 103, 126, 271, 274, 366, 371, 524.

Bathymetrical range within the area: 32-702 m.

Substrate: Mud, shell-gravel.

Temperature: -0.6 - 7.9 °C (E).

Water mass: AW (5), AI (1), NW (1).

World distribution: Iceland, the Faroes, northern Norway south to Morocco, Mediterranean, the Azores and Canary Islands.

World bathymetrical range: 5-702 m.

Remarks: *Thyasira flexuosa* has often been confused with other species in the genus and large *Thyasirid* specimens have without doubt been identified as *T. flexuosa*.

Checked by: KWO, ØS

***Thyasira gouldi* (Philippi, 1845)** Fig. 47.

Synonyms: *Lucina flexuosa* Gould, 1841, *Axinus gouldii* sensu G.O. Sars, 1878.

Reference to best description of the species: Oliver & Killeen 2002: 30-35, Pl 2C, 6B, 10A, 11-13.

Previous records: Funningsfjørður (10 m, 12 m, 20 m, 43 m, 56 m), Skálafjørður (15 m, 19 m, 40 m, 62 m, 65 m, 70 m), Kollafjørður (16 m, 20 m, 40 m), Sørvágur (24 m, 26-31 m, 57 m), Sundalagið (26 m, 57 m), Klaksvík (19-28 m), Trongisvágur (32 m), Vág (43 m, 63 m), Hvannasund (45 m), Vágafjørður (62 m, 64 m) - *Thyasira gouldi* is common in the fjords (Petersen 1968).

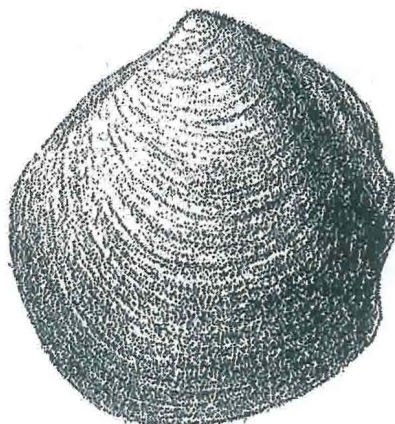
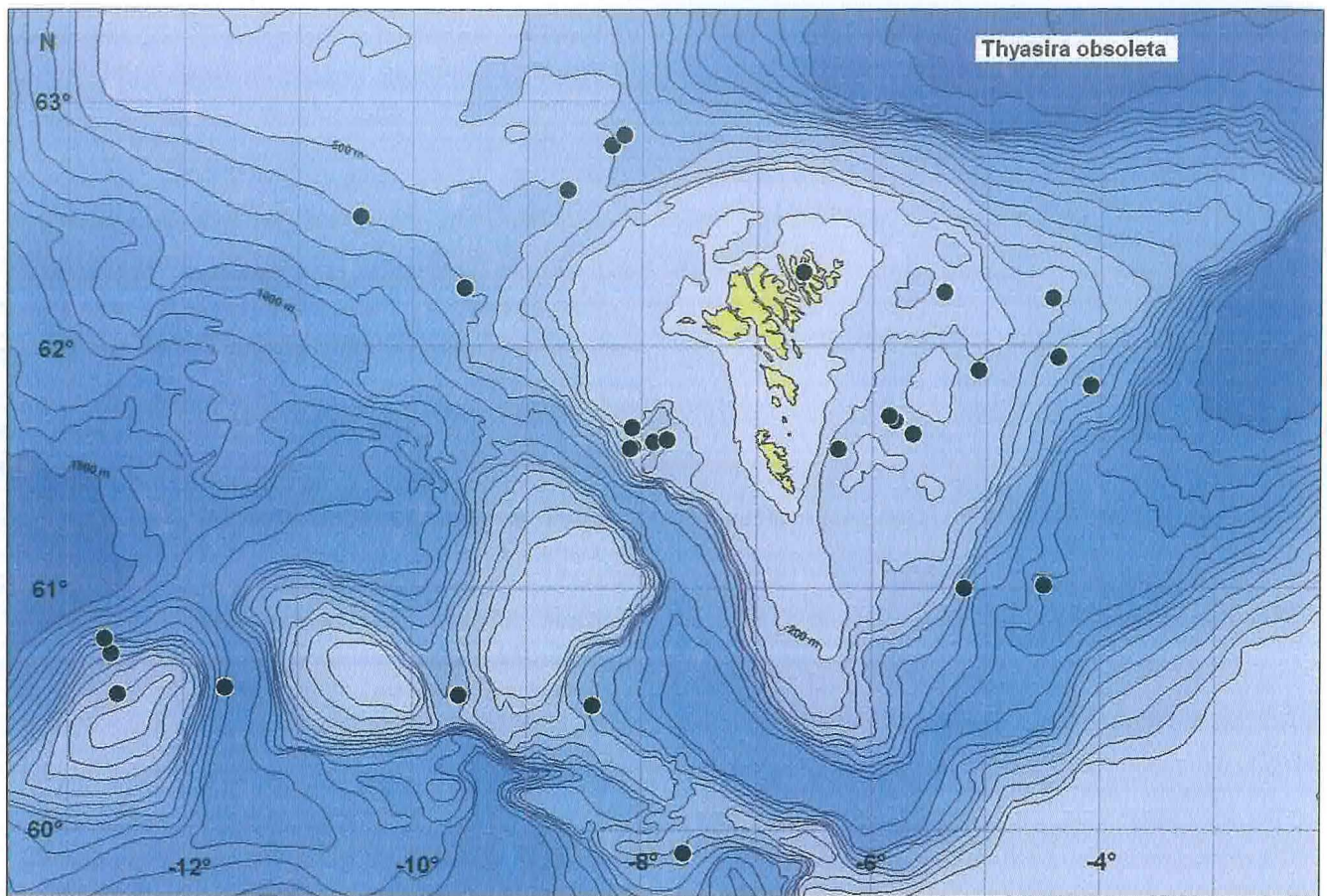


Fig. 47. *Thyasira gouldi* (Philippi, 1845)





New records: BIOFAR stations 126, 366.  
 Bathymetrical range within the area: 52-75 m.  
 Substrate: Clay.  
 Temperature: 7.6 °C (E).  
 Water mass: AW.  
 World distribution: Panarctic with a probably circumpolar distribution (Lubinski 1980).  
 World bathymetrical range: 5-385 m.  
 Checked by: KWO, ØS

***Thyasira granulosa* (Monterosato, 1874)**

Synonym: *Axinus orbiculatus* sensu Jeffreys, 1881.  
 Reference to best description of the species: Payne & Allen 1991: 501, Fig. 31 - no description but a good illustration for comparison with other species, Oliver & Killeen 2002: 41-43, Pl. 6F, 16.  
 Previous records: None.  
 New records: BIOFAR stations 033, 061, 064, 065, 158.  
 Bathymetrical range within the area: 322-351 m.  
 Substrate: Silt, fine sand.

Temperature: 6.5 - 7.9 °C (E).  
 Water mass: AW (3), AW/AI (2).  
 World distribution: the Faroes, Norwegian coast south of Lofoten, Bay of Biscay, Mediterranean, the Canary Islands.  
 World bathymetrical range: 90-1200 m.  
 Checked by: KWO, ØS

***Thyasira incrassatus* (Jeffreys, 1876)**

Synonym: *Axinus incrassatus* Jeffreys, 1876.  
 Reference to best description of the species: Tebble 1966: 35, Pl. 2, fig. g, Fig. 18a.  
 Previous records: Porcupine stn. 61.  
 New records: Not recorded during BIOFAR 1.  
 Bathymetrical range within the area: 200 m.  
 Temperature: 7.2 °C (E).  
 World distribution: the Faroes, Shetland, northern North Sea, Rockall Trough, Bay of Biscay, Mediterranean; in east America at Baffins Bay.  
 World bathymetrical range: 200-3500 m.





Fig. 48. *Thyasira obsoleta*  
(Verrill & Bush, 1898)

### *Thyasira obsoleta*

(Verrill & Bush, 1898) Fig. 48.

Synonym: *Axinus croulinensis* sensu G.O. Sars, 1878.

Reference to best description of the species: Payne & Allen 1991: 493-496, Figs 19-20, 22-23, Oliver & Killeen 2002: 44-47, Pl. 3B, 17, 18.

Previous records: Porcupine stn. 62, ca. 225 m (Jeffreys 1881 as *Axinus flexuosus* var. *rotunda*).

New records: BIOFAR stations 019, 027, 031, 032, 033, 061, 063, 064, 065, 082, 100, 131, 158, 227, 269, 271, 295, 343, 344, 359, 361, 363, 366, 421, 481, 496, 517, 520, 524, 525.

Bathymetrical range within the area: 75-1099 m.

Substrate: Mud, sand, gravel, sponge spicules.

Temperature: 2.6 °C (M: one stn.), +0.85 - 8.6 °C (E).

Water mass: AW (12), AW/AI (1), AI (1), AI/NW (10), AW/AI/NW (1), NW (4).

World distribution: The Faroes, Hammerfest in northern Norway south to the Sierra Leone and Angola Basins, and the North American Basin.

World bathymetrical range: 24-2900 m.

Checked by: KWO, ØS

### *Thyasira pygmaea* (Verrill & Bush, 1898)

Synonyms: *Cryptodon pygmaeus* Verrill & Bush, 1898, *Thyasira ferruginosa* auct. not Locard, 1886.

Reference to best description of the species: Payne & Allen 1991: 540-541, Figs 91, 96, Oliver & Killeen 2002: 56-58, Pl. 23.

Previous records: None.

New records: BIOFAR stations 082, 188, 269, 274, 344, 361, 425, 481.

Bathymetrical range within the area: 498-990 m.

Substrate: Mud, gravel, stones.

Temperature: +0.84 - 3.9 °C (E).

Water mass: AW/AI (1), AI (2), NW (5).

World distribution: South of Iceland, the Faroes, Nor-

wegian coast south of Lofoten; in east America from Martha's Vineyard to east of Newfoundland.

World bathymetrical range: 377-1470 m.

Checked by: KWO, ØS

### *Thyasira subovata* (Jeffreys, 1881)

Synonym: *Axinus subovatus* Jeffreys, 1881.

Reference to best description of the species: Payne & Allen 1991: 513-515, Figs 48, 53, Oliver & Killeen 2002: 60, Pl. 25A-B.

Previous records: Porcupine stn. 58.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 980 m.

Temperature: +0.7 °C (E).

World distribution: Iceland, the Faroes, the Hebrides, western Ireland south to Cape Verde, Angola and Argentina, Mediterranean.

World bathymetrical range: 216-3917 m.

### *Thyasira succisa* (Jeffreys, 1876)

Synonym: *Axinus incrassatus* auct. non Jeffreys, 1876.

Reference to best description of the species: Payne & Allen 1991: 496-500, Figs 24-25, 28, Oliver & Killeen 2002: 48-50, Pl. 19.

Previous records: Porcupine stn. 61, ca 200 m (Jeffreys 1881 as *A. incrassatus* var. *succisa*).

New records: BIOFAR stations 019, 497, 506, 522.

Bathymetrical range within the area: 276-514 m.

Substrate: Sand, gravel, small stones.

Temperature: 6.5 - 8.6 °C (E).

Water mass: AW (3), AW/AI (1).

World distribution: Iceland, the Faroes south to Spain, Portugal, Mediterranean; in east America from New England to Florida.

World bathymetrical range: 73-2813 m.

Checked by: KWO, ØS

## Family KELLIIDAE

### Genus *Kellia* Turton, 1822

#### *Kellia suborbicularis*

(Montagu, 1803) Fig. 49.

Synonym: *Mya suborbicularis* Montagu, 1803.

Reference to best description of the species: Tebble 1966: 83-84, Fig. 37a-c.

Previous records: Only found as dead shells (Petersen 1968).

New records: BIOFAR stations 090, 279.

Bathymetrical range within the area: 252-350 m.

Substrate: Silt, shell-sand.





**Fig. 49.** *Kellia suborbicularis* (Montagu, 1803)

Temperature: 7.9 - 8.0 °C (E).

Water mass: AW.

World distribution: West and south Iceland, the Faroes, from Sørøya in northern Norway south to Kattegat and Øresund, British Isles, the Netherlands south to the Canary Islands, Mediterranean.

World bathymetrical range: 0-350 m (in litt. 1429 m).

Checked by: AW

## Family MONTACUTIDAE

### Genus *Montacuta* Turton, 1822

#### *Montacuta substriata* (Montagu, 1808)

Synonym: *Ligula substriata* Montagu, 1808.

Reference to best description of the species: Tebble 1966: 89, Fig. 42a-c.

Previous records: Lightning stn. 2; 61°40'N, 07°40' W (254 m), also two records of empty shells south of the Faroe Islands (Petersen 1968).

New records: BIOFAR stations 492, 542.

Bathymetrical range within the area: 200-900 m.

Substrate: Mud, fine sand.

Temperature: 7.0 - 8.1 °C (E).

Water mass: AW.

World distribution: South Iceland, the Faroes, whole Norwegian coast from Finnmark in Northern Norway south to Kattegat, British Isles, Ireland and south into the Mediterranean.

World bathymetrical range: 10-900 m.

Remarks: The species lives attached to the anal spines of echinoderms.

Checked by: ØS

## Genus *Mysella* Angas, 1877

#### *Mysella bidentata* (Montagu, 1803)

Synonym: *Montacuta bidentata* Montagu, 1803.

Reference to best description of the species: Tebble 1966: 91-92, Fig. 44a-c.

Previous records: A common species in the Faroese fjords (Petersen 1968).

New records: Not found during BIOFAR 1.

World distribution: Iceland, the Faroes, from Sørøya in northern Norway south to Kattegat and Øresund, North Sea, British Isles south to Portuguese Guinea on the coast of northwest Africa, Madeira, the Azores, Mediterranean.

World bathymetrical range: 2-120 m.

## Family ASTARTIDAE

### Genus *Astarte* J. Sowerby, 1816

#### *Astarte acuticostata* Friele, 1877 ex Jeffrey's MS

Synonym: *Astarte crenata* var. *acuticostata* Jensen, 1912.

Reference to best descriptions of the species: Jensen 1912: 117, Pl. 4, fig. 5k-m, Warén 1980: 44, Pl. 8, fig. 5-6 (lectotype).

Previous records: Lightning stns 1, 3; Porcupine stn. 65.

New records: BIOFAR stations 015, 082, 095, 171, 172, 228, 230, 271, 274, 275, 362, 421, 424, 447, 458, 459, 479, 480, 481.

Bathymetrical range within the area: 509-910 m.

Substrate: Sand, gravel.

Temperature: 0.1 °C, 2.6 °C (M: two stns); +0.6 - 3.1 °C (E).

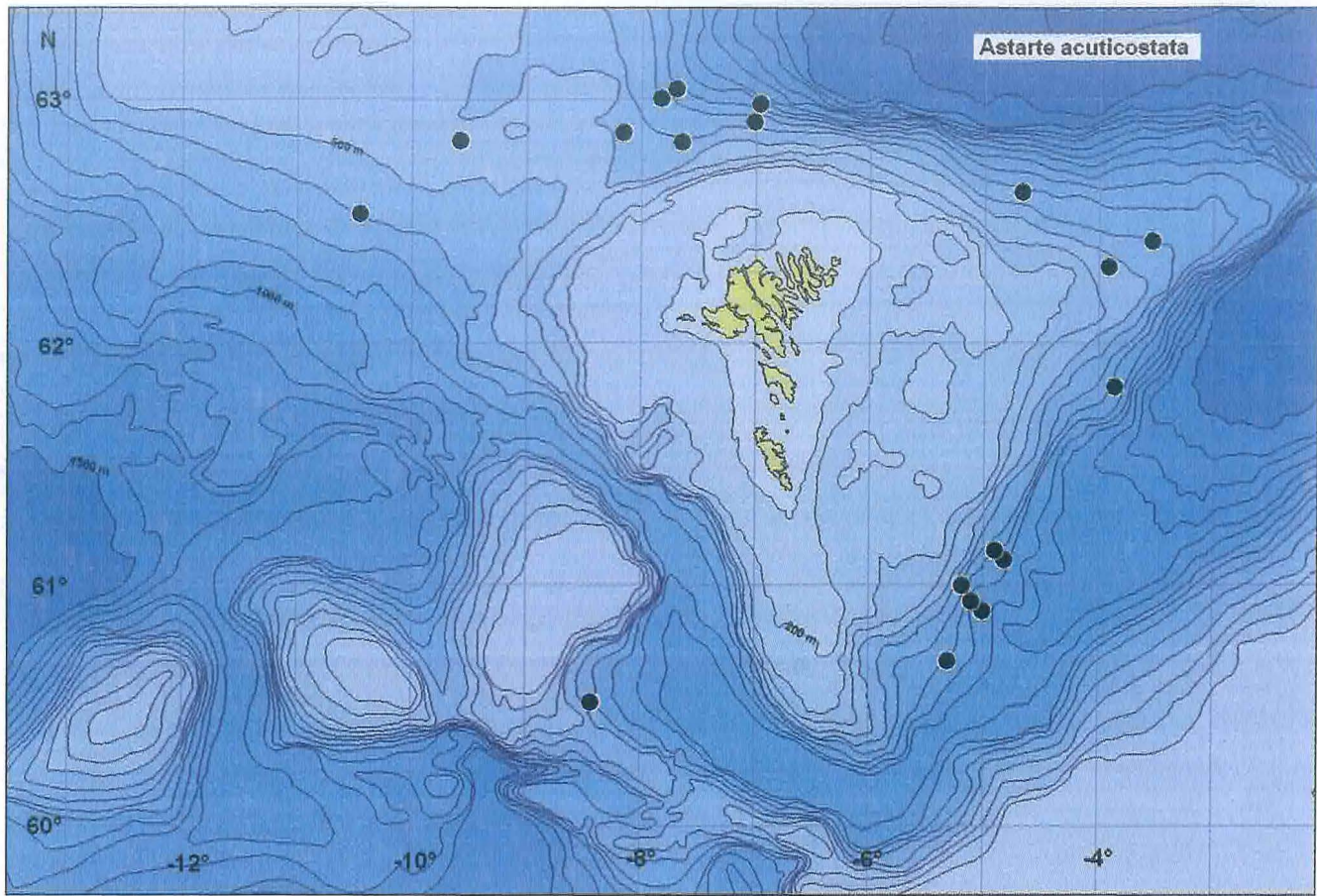
Water mass: AI (2), AI/NW (1), AW/AI/NW (1), NW (15).

World distribution: East Greenland, Jan Mayen, the Faroes, Norwegian Sea, Kong Karl Land, Polar Basin, Laptev Sea, Murman coast along the Norwegian coast south to North-Trøndelag county, British Isles.

World bathymetrical range: 20-910 m.

Checked by: AW, ØS





***Astarte elliptica* (Brown, 1827)**

Synonyms: *Crassina elliptica* Brown, 1827, *Astarte compressa* Posselt, 1895.

Reference to best description of the species: Tebble 1966: 70-71, Pl. 7, fig c, Petersen 2001: 32, 59, Pls 13, 26.

Previous records: *Astarte elliptica* is common in the fjords especially at 10-50 m (Petersen 1968).

New records: BIOFAR station 597.

Bathymetrical range within the area: 100 m.

Substrate: Shells.

Temperature: 8.1 °C (E).

Water mass: AW.

World distribution: West and east Greenland, Iceland, the Faroes, Svalbard, Barents Sea and Kara Sea, the White Sea, Murman coast and whole Norwegian coast, Kattegat and Øresund, northern areas of the British Isles; in east America from Labrador south to Massachusetts Bay.

World bathymetrical range: 2-442 m.

Checked by: AW, ØS

***Astarte montagui* (Dillwyn, 1817)**

Synonyms: *Venus montagui* Dillwyn, 1817, *Astarte compressa* Jeffreys, 1869, *Astarte striata* var. *globosa* Friele, 1878, *Astarte banksii* auct.

Reference to best description of the species: Tebble 1966: 71, Pl. 7, fig. b.

Previous records: *A. montagui* is common in all the fjords preferably at 10-50 m. Only few specimens were found outside the fjords (Petersen 1968).

New records: BIOFAR stations 107, 350, 369, 597.

Bathymetrical range within the area: 100-125 m.

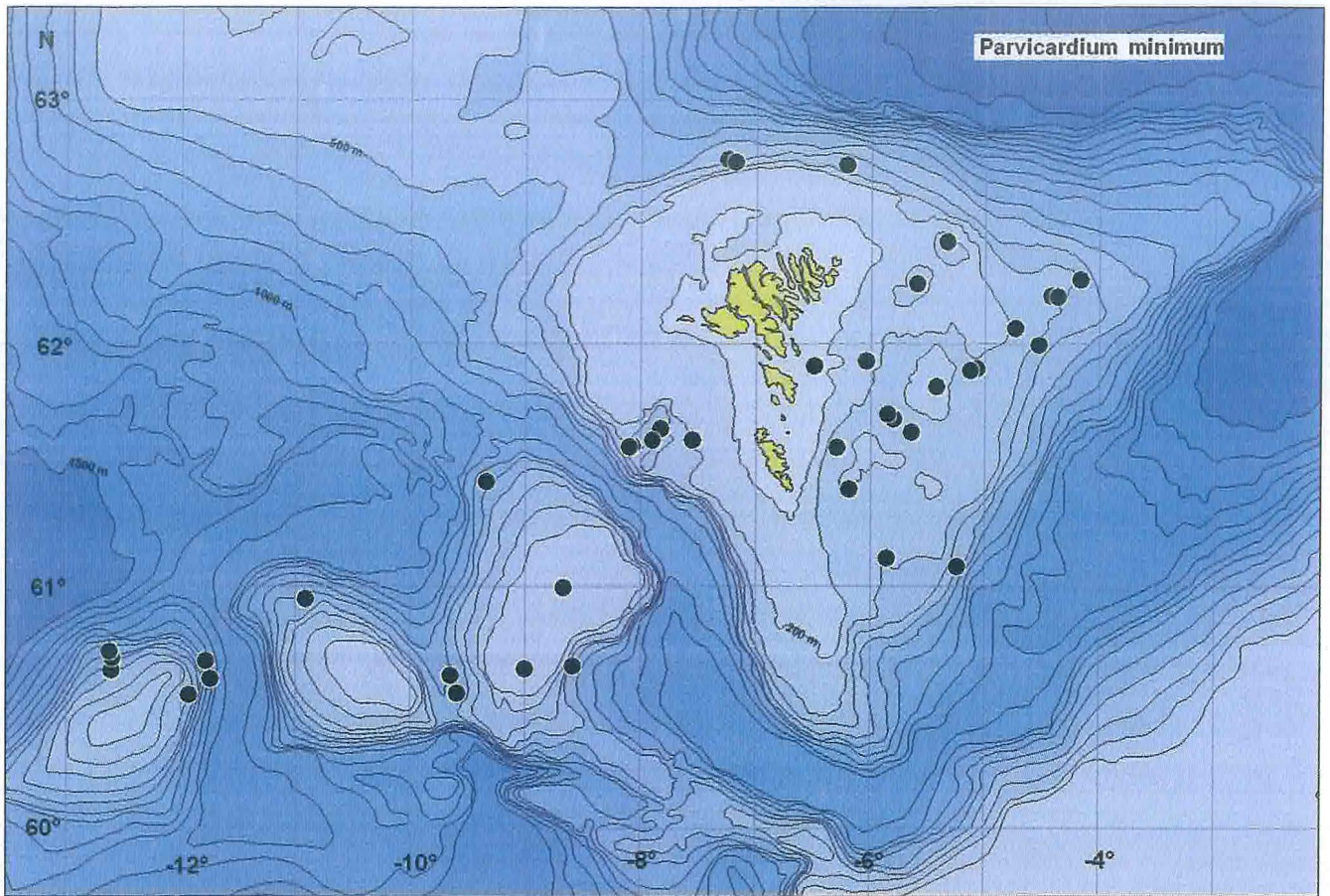
Substrate: Shell, sand and gravel.

Temperature: 8.1 °C (E).

Water mass: AW.

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Barents Sea to Laptev Sea, the White Sea, Murman coast south to Kattegat, Øresund and the Belts, North Sea, off northern and western coasts of Scotland, the Bay of Biscay; in east America from Parry Islands south to Massachusetts Bay; in the Pacific Ocean from the





Bering Sea south to the Aleutians.  
World bathymetrical range: 2-450 m.  
Checked by: AW, ØS, TS

***Astarte sulcata* (da Costa, 1778)**

Synonym: *Pectunculus sulcata* da Costa, 1778.

Reference to best description of the species: Tebble 1966: 70, Fig. 12a-b, Petersen 2001: 62, Pl. 29.

Previous records: Lightning stns 1, 2; Porcupine stns 62, 65; Funningsfjørður (23-38 m), S of Mykineshólmur (132 m), E by S of Nólsoy (151 m), the deep hole N of Nólsoy (188 m), E of Fugloy (211 m, 300 m), S of Akraleiti (280 m), SW of Suðuroy (341 m). *A. sulcata* is common outside the fjords in southern and eastern parts of the area, depth more than 100 m (Petersen 1968).

New records: BIOFAR stations 027, 073, 090, 095, 100, 115, 124, 146, 165, 192, 271, 274, 323, 329, 341, 362, 381, 401, 411, 421, 422, 424, 481, 492, 507, 515, 524, 540, 542, 594, 597, 695.

Bathymetrical range within the area: 100-803 m.

Substrate: Sand, gravel, small stones.

Temperature: 0.1 - 7.95 °C (M: 3 stns), 2.8 - 8.4 °C (E).

Water mass: AW (16), AW/AI (8), AI (4), NW (4).

World distribution: Southeast Greenland, Iceland, the Faroes, Barents Sea and western part of the Murman coast south to the northern part of Kattegat, North Sea, British Isles to off northwest Africa, Mediterranean.

World bathymetrical range: 5-830 m (in litt. 2000 m).

Checked by: AW, ØS

**Family CARDIIDAE**

**Genus *Acanthocardia* J.E. Gray, 1851**

***Acanthocardia echinata* (Linnaeus, 1758)**

Synonyms: *Cardium echinatum* Linnaeus, 1758, *Cardium flexuosa* Gmelin, 1791.

Reference to best description of the species: Tebble 1966: 98, Figs 47, 49b.



Previous records: Porcupine stn. 61; *A. echinata* has a wide distribution in the fjords and on the Faeroe plateau (Petersen 1968).

New records: BIOFAR stations 027, 028, 100, 126, 356, 363, 364, 366, 371, 372, 543.

Bathymetrical range within the area: 21-283 m.

Substrate: Clay, shell-gravel.

Temperature: 6.8 - 8.2 °C (E).

Water mass: AW(10), AW/AI (1).

World distribution: South Iceland, the Faroes, west Finnmark in northern Norway to Kattegat and Øresund, North Sea and south to the Iberian Peninsula, Morocco and the Canary Islands, Mediterranean.

World bathymetrical range: 4-350 m.

Checked by: PBW

### Genus *Parvicardium* Monterosato, 1884

#### *Parvicardium exiguum* (Gmelin, 1791)

Synonym: *Cardium exiguum* Gmelin, 1791.

Reference to best description of the species: Tebble 1966: 103-104, Fig. 54a-b.

Previous records: Lightning stn. 4, Faeroe Bank.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: c. 200-960 m.

Temperature: 8.5 °C (E).

World distribution: the Faroes, British Isles, Ireland south to the Mediterranean; not on the east coasts of the North Sea.

World bathymetrical range: 0-960 m.

#### *Parvicardium minimum* (Philippi, 1836)

Synonyms: *Cardium minimum* Philippi, 1836, *Cardium minimum suedense* Reeve, 1845.

Reference to best description of the species: Tebble 1966: 100-101, Fig. 11a-b.

Previous records: Lightning stn. 2; Porcupine stns 47, 61, 65; Vestmanna (9-11 m), Funningsfjørður (23-38 m), 61°40'N, 07°40'W (254 m), 12 miles off Akraleiti, 282 m (Petersen 1968).

New records: BIOFAR stations 006, 019, 027, 028, 029, 032, 033, 051, 056, 062, 063, 064, 065, 068, 100, 158, 174, 283, 325, 354, 356, 357, 358, 382, 452, 453, 483, 495, 496, 506, 510, 514, 515, 518, 522, 523, 524, 542, 602, 695.

Bathymetrical range within the area: 77-700 m.

Substrate: Mud, sand, gravel, stones, sponge spicules,

coral gravel.

Temperature: 7.95 °C (M: one stn.), 4.0 - 9.1 °C (E).

Water mass: AW (30), AW/AI (10).

World distribution: Southwest Iceland, the Faroes, eastern Finnmark in northern Norway to Kattegat, western coasts of the British Isles, Ireland and south to Morocco, Mediterranean.

World bathymetrical range: 10-2000 m.

Checked by: PBW

#### *Parvicardium pinnulatum*

(Conrad, 1831)

Fig. 50.

Synonyms: *Cardium ovale* G.B. Sowerby II, 1840, *Cardium elongatum* Montagu, 1803, *Cardium fasciatum* Montagu, 1808 non Gmelin, 1791.

Reference to best description of the species: Tebble 1966: 102, Fig. 52.

Previous records: *C. ovale* is very common all over the area from shallow water in the fjords to a depth of more than 200 m around the islands (Petersen 1968).

New records: BIOFAR stations 027, 029, 056, 073, 098, 100, 103, 110, 126, 192, 325, 371, 543, 602.

Bathymetrical range within the area: 32-350 m.

Substrate: Mud, sand, shell-sand.

Temperature: 6.5 - 9.1 °C (E).

Water mass: AW (12), AW/AI (2).

World distribution: Iceland, the Faroes to northern Scotland, Murman coast south to Kattegat and Øresund; in east America from Labrador to North Carolina.

World bathymetrical range: 4-350 m.

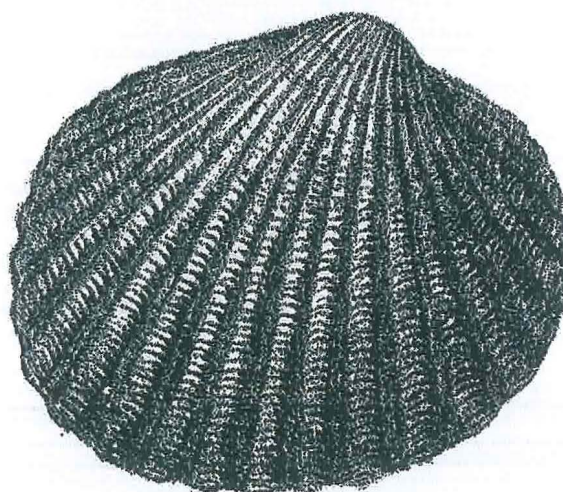


Fig. 50. *Parvicardium pinnulatum* (Conrad, 1831)



Remarks: The East-Atlantic and Mediterranean *Cardium* species have recently been treated by Voskuil & Onverwagt (1989) and van Aarsten & Gould (2000).

Checked by: PBW

## Family MACTRIDAE

### Genus *Spisula* J.E. Gray, 1837

#### *Spisula elliptica* (Brown, 1827)

Synonym: *Mactra elliptica* Brown, 1827.

Reference to best description of the species: Tebble 1966: 131, Fig. 68a-b.

Previous records: Eiðsvík (9-11 m), Vestmanna (9-11 m, 28-56 m), Borðoyarvík (13-19 m), Sundini (20-25 m), E of Nólsoy (19-28 m), Sørvágur (35 m), Trongisvágsfjørður (37 m, 42-43 m, 58 m, 66 m), NW of Vágur (94 m), 62° 05'N, 07°16'W off Mýlingur (101 m), NE of Mykines (107 m), N of the Faroes (110 m), S of Mykinesholmur (132 m), SW of the Faroes (140 m, 173 m), many localities with dead shells. *S. elliptica* is common and found all over the area. It has been found at any depth but most frequently from 10-200 m (Petersen 1968).

New records: BIOFAR stations 027, 028, 048, 056, 073, 076, 077, 078, 105, 113, 183, 192, 203, 320, 323, 325, 348, 349, 350, 365, 369, 402, 538, 543, 544, 600, 601, 603.

Bathymetrical range within the area: 70-872 m.

Substrate: Shell-sand.

Temperature: 7.0 - 9.1 °C (E).

Water mass: AW.

World distribution: Iceland, the Faroes, western parts of the Barents Sea south to Kattegat, British Isles, Ireland.

World bathymetrical range: 10-872 m.

Remarks: Jeffreys (1881) reports finds of *S. solida* and *S. solida* var. *elliptica* from Lightning stns 4, 7, and Faroe Isles.

Checked by: PBW

## Family CULTELLIDAE

### Genus *Ensis* Schumacher, 1817

#### *Ensis arcuatus* (Jeffreys, 1865)

Synonym: *Solen siliqua* var. *arcuata* Jefferys, 1865.

Reference to best description of the species: van Urk (1964): 29-31, Pl. 2, fig. 5.

Previous records: the "Faroës" (Petersen 1968).

New records: Not found during BIOFAR 1.

World distribution: the Faroes, from Vesterålen

in northern Norway south to Grimstad on the Norwegian southeast coast, British Isles, Ireland south to Portugal.

World bathymetrical range: 0-40 m.

#### *Ensis ensis* (Linnaeus, 1758)

Synonym: *Solen ensis* Linnaeus, 1758.

Reference to best description of the species: van Urk (1964): 37-39, Pl. 1, fig. 4.

Previous records: 62°17.5'N, 7°05'W (9 m) (Petersen 1968).

New records: Not found during BIOFAR 1.

World distribution: Iceland, the Faroes, from Nord-Møre county to the Bergen area in western Norway, Kattegat and Øresund, British Isles, Ireland south to the Mediterranean.

World bathymetrical range: 0-20 m.

## Family TELLINIDAE

### Genus *Arcopagia* Brown, 1827

#### *Arcopagia crassa* (Pennant, 1777)

Synonym: *Tellina crassa* Pennant 1777.

Reference to best description of the species: Tebble 1966: 146-147, Fig. 75.

Previous records: Five records with dead shells (Petersen 1968).

New records: BIOFAR stations 348, 538, 584.

Bathymetrical range within the area: 105-135 m.

Substrate: Shell-sand.

Temperature: 7.8 - 8.9 °C (E).

Water mass: AW.

World distribution: West and south of Iceland, the Faroes, south of Jan Mayen, Norway south of Lofoten to Skagerrak, British Isles, Ireland to the Iberian Peninsula, and along the Atlantic coast of Morocco south to Senegal, Mediterranean.

World bathymetrical range: 10-146 m.

### Genus *Macoma* Leach, 1819

#### *Macoma calcarea* (Gmelin, 1791) Fig. 51.

Synonyms: *Tellina calcarea* Gmelin, 1791, *Macoma tenera* Leach, 1819.

Reference to best description of the species: G.O. Sars 1878: 76, Pl. 6, fig. 2a-b.

Previous records: Trongisvágsfjørður (4-5 m, 0-8 m, 8 m, 7-9 m, 10 m, 12-13 m, 10-14 m, 13-14 m, 37 m, 19-38 m), Funningsfjørður (10 m, 12 m, 20 m, 56 m), Vágsfjørður (10 m, 11 m, 62 m, 67 m), Skálafjørður (12 m, 15 m, 19 m, 40 m), Kollafjørður





Fig. 51. *Macoma calcarea* (Gmelin, 1819)

(16 m, 20 m, 40 m), Sørvágur (24 m 26-31 m, 57 m), Kaldbaksfjørður (19-75 m), also many record of dead shells. *M. calcarea* is common everywhere in the fjords, especially innermost in shallow water (Petersen 1968).

New records: BIOFAR stations 103, 176.

Bathymetrical range within the area: 32-35 m.

Substrate: Mud.

Temperature: 7.6 °C (E).

Water mass: AW.

World distribution: West and east Greenland, south Iceland, the Faroes, Svalbard, the Barents Sea to Laptev Sea, the White Sea, Murman coast south to the North Sea, Skagerrak, Kattegat, the Belt Seas, in the Baltic to Bornholm, Biscaya; in east America south to Long Island Sound; in the Pacific Ocean from Bering Sea and Sea of Okhotsk south to Japan, Aleuthians south to California.

World bathymetrical range: 0-320 m (in litt. 1300 m).

Checked by: KWO, PBW

## Genus *Tellina* Linnaeus, 1758

### *Tellina pygmaea* Lovén, 1846

Synonyms: *Tellinapusilla* Philippi, 1836, ?*Asbjoernsenia striata* Friele, 1886.

Reference to best description of the species: Tebble 1966: 145-146, Fig. 74 b.

Previous records: Trongisvágsfjørður (18-21 m), Tórshavn, SW of Munken (ca. 282 m), SW of the Faroes (173 m). *T. pygmaea* occurs sporadically all over the area in and outside the fjords (Petersen 1968).

New records: BIOFAR stations 077, 538.

Bathymetrical range within the area: 99-135 m.

Substrate: Shell-sand.

Temperature: 7.8 - 9.1 °C (E).

Water mass: AW.

World distribution: The Faroes, Finnmark south to Skagerrak and Kattegat, British Isles south to the Ivory Coast, Mediterranean.

World bathymetrical range: 0-150 m (in litt. 1090 m).

Remarks: The exact distribution is not clear because of confusion with *T. donacina* Linnaeus, 1758 and whether *T. pusilla* is a good species.

Checked by: KWO, PBW

## Family PSAMMOBIIDAE

### Genus *Gari* Schumacher, 1817

#### *Gari costulata* (Turton, 1822)

Synonym: *Psammobia costulata* Turton, 1822.

Reference to best description of the species: Tebble 1966: 157-158, Fig. 81a-b.

Previous records: Lightning stn. 2; Simpson (1910): stn. 16a.

New records: BIOFAR station 073.

Bathymetrical range within the area: 185 m.

Substrate: Muddy sand.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: The Faroes, western British Isles, Ireland south to the Canary Islands, Madeira, and at the east coast of South Africa, Mediterranean.

World bathymetrical range: 10-185 m.

Remarks: Empty shells of the species were found at BIOFAR stn. 597.

Checked by: AW

#### *Gari fervensis* (Gmelin, 1791)

Synonyms: *Tellina fervensis* Gmelin, 1791, *Tellina trifasciata* Gmelin, 1791, *Tellina ferroensis* Chemnitz, 1782, *Psammobia faeroensis* auct.

Reference to best description of the species: Tebble 1966: 155-156, Pl. 10, fig. c.

Previous records: Sundini (15-20 m), Trongisvágsfjørður (32 m), the deep hole N of Nólsoy (188 m), Sørvágur (no depth), many records of dead shells. *G. fervensis* is common all over the area in the fjords as well as offshore (Petersen 1968).

New records: BIOFAR stations 078, 356, 543, 544, 603.

Bathymetrical range within the area: 134-240 m.

Substrate: Shell-sand, shell-gravel.

Temperature: 7.4 - 8.6 °C (E).

Water mass: AW.



World distribution: Iceland, the Faroes, whole Norwegian coast from North Cape to Kattegat, North Sea, British Isles, Ireland south to the Iberian Peninsula, and the Atlantic coast of Morocco south to Senegal, the Canary Islands and the Azores, Mediterranean.

World bathymetrical range: 5-240 m.

Checked by: PBW

### *Gari tellinella* (Lamarck, 1818)

Synonym: *Psammobia tellinella* Lamarck, 1818.

Reference to best description of the species: Tebble 1966: 157, Fig. 80 b.

Previous records: N of the Faroes (110 m), SW of Munken (ca 282 m), localities with dead shells only. *G. tellinella* occurs mostly offshore the islands, depth more than 100 m (Petersen 1968).

New records: BIOFAR stations 077, 203, 325, 365, 544, 591.

Bathymetrical range within the area: 96-160 m.

Substrate: Shell-sand, shell-gravel.

Temperature: 8.3 - 9.1 °C (E).

Water mass: AW.

World distribution: West and south Iceland, the Faroes, and from Tromsø in northern Norway to northern Kattegat, North Sea, British Isles, Ireland and into the Mediterranean.

World bathymetrical range: 2-300 m.

Checked by: KWO, PBW

## Family SEMELIDAE

### Genus *Abra* Lamarck, 1818

#### *Abra alba* (W. Wood, 1802)

Synonym: *Maetra alba* W. Wood, 1802.

Reference to best description of the species: Tebble 1966: 151-152, Fig. 78a-b.

Previous records: Triton stn. 10.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 960 m.

Temperature: 8.0 °C (E).

World distribution: the Faroes, whole Norwegian coast from Lofoten in northern Norway, British Isles, the Netherlands, Ireland south to the Mediterranean and the Atlantic coast of Africa to Senegal.

World bathymetrical range: 2-1000 m.

#### *Abra longicallus* (Scacchi, 1834) Fig. 52.

Synonym: *Tellina longicallus* Scacchi, 1834.

Reference to best descriptions of the species: Tebble 1966: 153, Fig. 79; G.O. Sars 1878: 73, Pl. 6, figs 3a-c, Pl. 20, fig. 14.

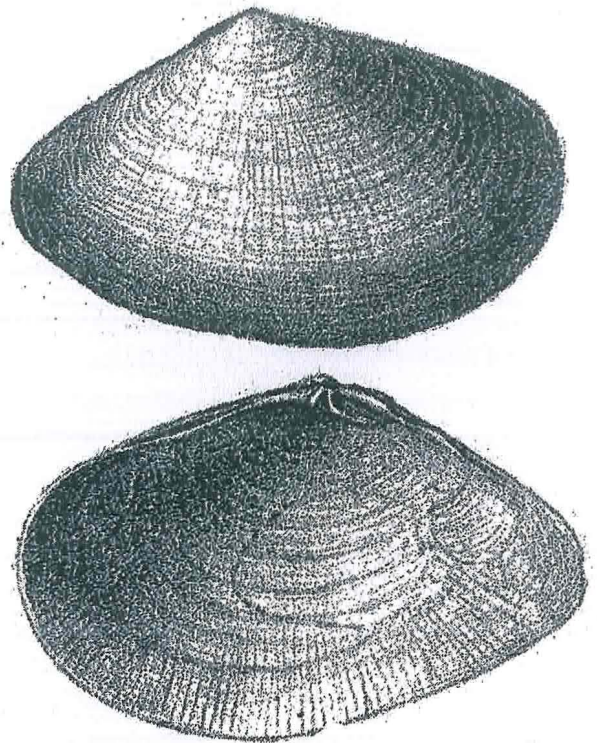


Fig. 52. *Abra longicallus* (Scacchi, 1835)

Previous records: Simpson (1910): stn. 8.

New records: BIOFAR station 295.

Bathymetrical range within the area: 655 m.

Substrate: Clay, gravel and stones.

Temperature: 7.8 °C (E).

Water mass: AW.

World distribution: The Faroes, Norwegian Sea, Lofoten in northern Norway to the British Isles, the west of Ireland south to Morocco and the Azores, Mediterranean; in east America from New England south to Brazil.

World bathymetrical range: 40-4360 m.

Checked by: KWO, PBW

#### *Abra nitida* (O.F. Müller, 1776)

Synonym: *Mya nitida* O.F. Müller 1776.

Reference to best description of the species: Tebble 1966: 152-153, Fig. 77 b.

Previous records: *Abra nitida* is common throughout the fjords (Petersen 1968).

New records: BIOFAR stations 065, 100, 103, 126, 176, 295, 366, 372.

Bathymetrical range within the area: 21-655 m.

Substrate: Mud, sand, gravel.



Temperature: 6.8 - 7.9 °C (E).

Water mass: AW (7), AW/AI (1).

World distribution: Iceland, the Faroes, whole Norwegian coast from Sørøya in northern Troms to Kattegat, eastern North Sea, British Isles south to western Morocco, Mediterranean, the Azores.

World bathymetrical range: 6-2290 m (in litt. 4060 m).

Checked by: PBW

### *Abra prismatica* (Montagu, 1808)

Synonyms: *Ligula prismatica* Montagu, 1808, *Abra fragilis* Risso, 1826, *Psammotaea striata* da Costa, 1829.

Reference to best description of the species: Tebble 1966: 153, 154, Fig. 78 c-d.

Previous records: Porcupine stn. 51; Vestmanna (11 m), Funningsfjørður (43 m, 56 m, 75 m), Vágafjørður (43 m, 62 m, 64 m, 67 m), W and S of Munken (288 m). *A. prismatica* occurs sporadically in the area, most often in the fjords (Petersen 1968).

New records: BIOFAR stations 028, 051, 065, 100, 356, 357, 359, 363, 366, 542, 544, 597, 600, 603.

Bathymetrical range within the area: 75-407 m.

Substrate: Mud, sand, gravel.

Temperature: 3.6 - 8.3 °C (E).

Water mass: AW (12), AW/AI (2).

World distribution: Iceland, the Faroes, Finnmark on northern Norway south to Morocco, Mediterranean.

World bathymetrical range: 0-400 m (in litt. 1850 m).

Checked by: KWO, PBW, ØS

### Family ARCTICIDAE

#### Genus *Arctica* Schumacher, 1817

### *Arctica islandica* (Linnaeus, 1767)

Synonyms: *Venus islandica* Linnaeus, 1767, *Arctica vulgaris* Schumacher, 1817, *Cyprina islandica* auct.

Reference to best description of the species: Tebble 1966: 92-93, Fig. 45.

Previous records: Vestmanna (7-9 m, 9-11 m, 19-56 m), Eidsvík (9-11 m), Borðoyarvík (13-19 m, 19 m), Skálafjørður (19 m), Funningur (23 m), Funningsfjørður (43 m, 54 m), Sundini (20-25m, 25 m), Trongisvágsfjørður (18-28 m, 21-31 m, 37 m), Árnafjørður (30-43 m), Vágsfjørður (44 m), Hvannasund (45 m), Sørvágsfjørður (55 m, 57 m), Vágur (67 m), 62°04.4'N, 06°13.2'W (122-130

m). Also dead shells and localities with no depth information. *Arctica islandica* is common in the fjords (Petersen 1968).

New records: BIOFAR stations 006, 100, 103, 126, 152, 164, 364, 366, 367, 371, 542, 543, 544, 600, 601, 603.

Bathymetrical range within the area: 32-317 m.

Substrate: Shell, shell-gravel.

Temperature: 6.7 - 8.3 °C (E).

Water mass: AW (11), AW/AI (2).

World distribution: Greenland, Iceland, the Faroes, Svalbard, Barents Sea, the White Sea south along the whole Norwegian coast to Kattegat, North Sea, British Isles, Ireland to Gulf of Cadiz; in east America from Labrador to North Carolina.

World bathymetrical range: 0-2260 m.

Checked by: PBW

### Family KELLIELLIDAE

#### Genus *Kelliella* M. Sars, 1870

### *Kelliella miliaris* (Philippi, 1844) Fig. 53.

Synonyms: *Venus miliaris* Philippi, 1844, *Kelliella abyssicola* M. Sars, 1870.

Reference to best description of the species: G. O. Sars 1878: 65, Pl.19 figs a-c.

Previous records: None.

New records: BIOFAR station 522.

Bathymetrical range within the area: 514 m.

Substrate: Sand, small stones.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: South Iceland, the Faroes, Shetland, Vesterålen in northern Norway south to Skagerrak, Shetland, east and west Scotland, western Ireland, Bay of Biscay and off Senegal and west Africa, Mediterranean.

World bathymetrical range: 24-3223 m.

Remarks: The species has been confused with juvenile



Fig. 53. *Kelliella miliaris* (Philippi, 1844)



stages of *Glossus humanus* (Linnaeus, 1758) - see  
Jeffreys (1869), Odhner (1960).

Checked by: KWO, PBW

## Family VENERIDAE

### Genus *Venus* Linnaeus, 1758

#### *Venus casina* Linnaeus, 1758

Reference to best description of the species: Tebble  
1966: 115-116, Pl. 8, fig. e.

Previous records: Lightning stn. 4; nine records, all as  
dead shells (Petersen 1968).

New records: BIOFAR stations 323, 325, 351, 456, 509,  
510, 513, 538, 589, 603.

Bathymetrical range within the area: 98-271 m.

Substrate: Shell-sand.

Temperature: 7.7 - 9.1 °C (E).

Water mass: AW.

World distribution: the Faroes, Norway from the Trond-  
heimsfjord to the Oslofjord, British Isles, Ireland,  
Iberian Peninsula, Atlantic coast of Morocco, the  
Canary Islands, Senegal and Dahomey, Mediter-  
ranean.

World bathymetrical range: 5-271 m.

Checked by: KWO, PBW

### Genus *Clausinella* J.E. Gray, 1851

#### *Clausinella fasciata* (da Costa, 1778)

Synonym: *Pectunculus fasciata* da Costa, 1778.

Reference to best description of the species: Tebble  
1966: 117, Pl. 9, figs a-c.

Previous records: 62°23'N, 07°03' W (122-130 m),  
seven records with dead shells (Petersen 1968).

New records: BIOFAR stations 076, 325, 326, 350, 351,  
369, 402, 545, 583.

Bathymetrical range within the area: 98-149 m.

Substrate: Shell-sand.

Temperature: 7.9 - 9.1 °C (E).

Water mass: AW.

World distribution: The Faroes, Vesterålen in northern  
Norway south to Kattegat, British Isles, Brittany,  
Ireland south to the Iberian Peninsula, Morocco, the  
Canary Islands, Mediterranean.

World bathymetrical range: 4-149 m.

Checked by: KWO, PBW

### Genus *Dosinia* Scopoli, 1777

#### *Dosinia lincta* (Pulteney, 1799)

Synonym: *Venus lincta* Pulteney, 1799.

Reference to best description of the species: Tebble  
1966: 113, Pl. 11, fig. a.

Previous records: Vestmanna (7-9 m), north of Viðoy  
(170 m), four records with dead shells only (Petersen  
1968).

New records: BIOFAR stations 356, 366, 542, 543,  
602.

Bathymetrical range within the area: 75-240 m.

Substrate: Shell-gravel, mud.

Temperature: 7.4 - 8.2 °C (E).

Water mass: AW.

World distribution: Iceland, the Faroes, from Tromsø  
in northern Norway south to Kattegat, North Sea  
(German Bight), British Isles, Ireland to the Iberian  
Peninsula, the Canary Islands, Senegal, Ghana and  
the Ivory Coast, Mediterranean (?).

World bathymetrical range: 0-240 m.

Remarks: According to Jensen & Knudsen (1995)  
*Dosinia lupinus* (Linnaeus, 1758) is a Mediterranean  
species, though sometimes quoted as senior synonym  
of *D. lincta*. Thus we have here chosen to use the  
name *D. lincta* for the specimens at hand from the  
Faroe Islands.

Checked by: KWO, PBW

### Genus *Gouldia* C.B. Adams, 1847

#### *Gouldia minima* (Montagu, 1803)

Synonym: *Venus minima* Montagu, 1803, *Gafrarium*  
*minimum* auct.

Reference to best description of the species: Tebble  
1966: 113, Pl. 9, figs d-e, Fig. 60.

Previous records: Dead shells found 9 miles ESE of  
Bispen and 13 miles W by S of Munken (Petersen  
1968).

New records: BIOFAR station 585.

Bathymetrical range within the area: 92 m.

Substrate: Fine shell-sand.

Temperature: 9.1 °C (E).

Water mass: AW.

World distribution: the Faroes, area close to Bergen in  
western Norway, North Sea, British Isles, Ireland  
south to Liberia and the Ivory Coast, the Azores  
and Cape Verde Islands, the Canary Islands,  
Mediterranean.



World bathymetrical range: 0-130 m.

Checked by: AW

## Genus *Timoclea* Brown, 1827

### *Timoclea ovata* (Pennant, 1777)

Synonym: *Venus ovata* Pennant, 1777, *Venus radiata* Brocchi, 1814.

Reference to best description of the species: Tebble 1966: 116, Fig. 62 a-b.

Previous records: Lightning stns 3, 7; Porcupine stns 61, 62; Vestmanna (9-11 m, 19-24 m, 19-56 m), Viðareiði (19 m), Borðoyarvík (13-19 m), Trongisvágsfjørður north of Tjaldarvík (22-24 m), Klaksvík (19-28 m), E of Nólsoy (19-28 m), Trongisvágsfjørður (37 m, 42-43 m, 58 m), Funningsfjørður (23-38 m), Vágur (43 m, 64 m), E of Nólsoy lighthouse (56 m), SW of the Faroes (173 m), the deep hole n of Nólsoy (188 m), Akraberg in N (282 m), Húsagrynnna (111 m), W by E of Munken (282 m), 62°18'N, 06°53'W (75 m), 62°06,5'N, 06°22'W (82 m), 62°23'N, 07°03'W (106 m). *T. ovata* is common all over the area in the fjords as well as outside, though not in shallow water (Petersen 1968).

New records: BIOFAR stations 006, 019, 027, 028, 029, 056, 065, 068, 076, 078, 100, 107, 108, 115, 158, 308, 309, 311, 313, 319, 323, 324, 349, 354, 356, 357, 358, 365, 368, 371, 372, 382, 401, 452, 454, 456, 468, 473, 495, 496, 506, 508, 509, 519, 520, 522, 523, 532, 542, 543, 545, 546, 587, 589, 595, 597, 600, 601, 602.

Bathymetrical range within the area: 21-606 m.

Substrate: Sand, gravel, stones.

Temperature: 6.0 - 9.1 °C (E).

Water mass: AW (51), AW/AI (8).

World distribution: Iceland, the Faroes, Lofoten in northern Norway south to the North Sea, British Isles, Rockall Trough and further to the Iberian Peninsula, Morocco and the Canary Islands, Mediterranean.

World bathymetrical range: 4-606 m.

Checked by: KWO, PBW

## Genus *Phaphia* Röding, 1798

### *Phaphia pullastra* (Montagu, 1803)

Synonyms: *Venus pullastra* Montagu, 1803, *Venus senegalensis* Gmelin, 1791.

Reference to best description of the species: Tebble

1966: 121-123, Pl. 8, fig. g, Fig. 58.

Previous records: Trongisvágur (58 m) (Petersen 1968).

New records: Not found during BIOFAR 1.

World distribution: the Faroes, along the whole Norwegian coast from Tromsø in northern Norway, Kattegat and Øresund, North Sea, British Isles, Ireland south to Morocco, Mediterranean.

World bathymetrical range: 0-40 m.

### *Phaphia rhomboides* (Pennant, 1777)

Synonyms: *Venus rhomboides* Pennant, 1777, *Venus virago* Lovén, 1846.

Reference to best description of the species: Tebble 1966: 120-121, Pl. 8, fig. f, Fig. 63b.

Previous records: Vestmanna (8-9 m), S of Skálhøvdi (55 m), 62°23'N, 07°03'W (122-130 m) together with records of dead shells (Petersen 1968).

New records: BIOFAR stations 105, 107, 348, 365.

Bathymetrical range within the area: 100-150 m.

Substrate: Shell-sand.

Temperature: 7.9 - 8.7 °C (E).

Water mass: AW.

World distribution: the Faroes, Norway, eastern North Sea, the Netherlands, British Isles, Ireland to the Mediterranean, Morocco.

World bathymetrical range: 0-183 m.

Checked by: KWO

## Order MYOIDA

### Family HIATELLIDAE

## Genus *Hiatella* Bosc, 1801 ex Daudin ms.

### *Hiatella arctica* (Linnaeus, 1767)

Synonym: *Mya arctica* Linnaeus, 1767.

Reference to best description of the species: Tebble 1966: 172-173, Pl. 7, fig. h.

Previous records: Petersen (1968) did not separate the two species *H. arctica* and *H. gallicana* and found them common all over the area in fjords as well as offshore in shallow water to a depth of 300 m.

New records: BIOFAR stations 090, 163, 279, 282, 288, 363.

Bathymetrical range within the area: 170-253 m.

Substrate: Gravel, stones.

Temperature: 7.0 - 8.0 °C (E).



Water mass: AW.

World distribution: Northwest and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Barents Sea to Laptev Sea, White Sea, Murman coast south to the Mediterranean; probably also east and west North-America.

World bathymetrical range: 0-c. 2000 m.

Checked by: KWO, PBW

### *Hiatella rugosa* Linnaeus, 1767

Synonyms: *Mytilus rugosa* Linnaeus, 1767, *Saxicava gallicana* Lamarck, 1818, *Saxicava groenlandica* Poliez & Michaud, 1844

Reference to best descriptions of the species: Tebble 1966: 172-173, Hunter & Russell 1949: 271-289, 12 figs.

Previous records: Lightning stns 1, 2; Porcupine stns 62, 65; Petersen (1968) considered *H. rugosa* as a synonym of the one or two species of *Hiatella* occurring in the North Atlantic and thus gave no specific information of its distribution at the Faroes.

New records: BIOFAR stations 056, 068, 070, 317, 350, 368, 370, 402, 514, 521, 525, 526, 528.

Bathymetrical range within the area: 66-1006 m.

Substrate: Hard bottom, stones, gravel and sand.

Temperature: 6.8 - 8.6 °C (E).

Water mass: AW (12), AW/AI (1).

World distribution: Not well known.

World bathymetrical range: ?

Remarks: At present it seems impossible to refer the adults of the genus *Hiatella* occurring in the North Atlantic and the Mediterranean to reasonably defined, different species. There may be one, two, or perhaps even three of them, if the two or perhaps three different larval forms occurring are taken into consideration (Ockelmann 1958).

Checked by: KWO, PBW

### *Hiatella* spp

BIOFAR stations: 043, 044, 046, 069, 106, 111, 147, 153, 155, 158, 163, 205, 288, 303, 316, 320, 321, 349, 350, 370, 486, 488, 514, 515, 520, 524, 528, 529.

Bathymetrical range within the area: 50-702 m.

Substrate: Hard bottom, stones, shell-sand.

Temperature: 6.6 - 8.8 °C (E).

Water mass: AW (27), AW/AI (1).

Remarks: See remarks to *H. rugosa*.

## Family MYIDAE

### Genus *Mya* Linnaeus, 1758

#### *Mya truncata* Linnaeus, 1758

Synonym: *Mya uddevalensis* Hancock, 1846.

Reference to best descriptions of the species: Tebble 1966: 167, Fig. 88.

Previous records: Sørvágur (0 m), Funningsfjørður (10 m, 12 m), Vágafjørður (10 m), Trongisvágsfjørður (10-12 m), Skálafjørður (15 m), Sundini (20 m). *Mya truncata* is common in the fjords from the foreshore to a depth of more than 50 m, also in a few localities off the shore at a depth of 100-200 m. Not at greater distances from land (Petersen 1968).

New records: BIOFAR station 193.

Bathymetrical range within the area: 108 m.

Substrate: shell-sand.

Temperature: 8.2 °C (E).

Water mass: AW.

World distribution: West and east Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Franz Joseph Land, Novaya Zemlya, Barents Sea, Kara Sea, the Siberian Ice Sea, White Sea, Murman coast south along the Norwegian coast, Skagerrak, Kattegat to Øresund, British Isles, Ireland south to Bay of Biscay; East America from Baffinland south to Massachusetts; in the Pacific Ocean from the Bering Strait to Hakodadi in Japan and Port Orchard in Washington.

World bathymetrical range: 0-625 m.

Checked by: KWO

## Suborder PHOLADINA

### Family TEREDINIDAE

#### Genus *Psiloteredo* Bartsch, 1822

#### *Psiloteredo megotara* (Forbes & Hanley, 1848)

Synonyms: *Teredo megotara* Forbes & Hanley, 1848, *Teredo dilatata* Stimpson, 1851, *Teredo subericola* Macgillivray, 1845.

Reference to best description of the species: Turner 1966: 76, Figs 9 a-c, Pls 25 a-b, 26 a, e, 27 b; Tebble 1966: 190, Fig. 101c.

Previous records: Triton stn. 10; «Faroes» (Petersen 1968).

New records: BIOFAR station 9012.

Bathymetrical range within the area: 1022 m.

Substrate: Wood.

Temperature: +0.81 °C (E).



Water mass: NW.

World distribution: North Atlantic to the Arctic, Mediterranean.

World bathymetrical range: Normally in drift wood and wooden ship hulls.

Checked by: PBW

### Subclass ANOMALODESMATA

### Order PHOLADOMYOIDA

### Family LYONSIIDAE

### Genus *Lyonsia* Turton, 1822

#### *Lyonsia norwegica* (Gmelin, 1791)

Synonyms: *Mya norwegia* Gmelin, 1791, *Mya striata* Montagu, 1815, *Myatella montagui* Brown, 1844.

Reference to best description of the species: Tebble 1966: 199, Fig. 105a-b.

Previous records: Simpson (1910): stns 8, 16; Vestmanna 7-9 m, Funningfjørður 23-38 m, 16 miles E by S of the south point of Nólsoy, ca. 150 m, SW of Mykines 254 m, Akraleiti in N 57 W, 12 miles, c. 282 m, 62°04.5'N 6°13.5'W, 111 m.

New records: BIOFAR stations 073, 100, 359, 598, 602.

Bathymetrical range within the area: 140-407 m.

Substrate: Sand and gravel.

Temperature: 3.6 - 8.6 °C (E).

Water mass: AW (3), AW/AI (2).

World distribution: Iceland, the Faroes, east Finnmark in northern Norway south to Skagerrak, North Sea, British Isles, Ireland to the Iberian Peninsula, off the Atlantic coast of Morocco, Madeira, the Canary Islands, Mediterranean.

World bathymetrical range: 7-407 m.

Checked by: KWO, ØS

### Family PANDORIDAE

### Genus *Pandora* Bruguière, 1797

#### *Pandora pinna* (Montagu, 1803)

Synonyms: *Solen pinna* Montagu, 1803, *Pandora obtusa* Lamarck, 1818.

Reference to best description of the species: Tebble 1966: 201, Pl. 11, fig. j.

Previous records: None.

New records: BIOFAR stations 098, 322, 356, 764.

Bathymetrical range within the area: 150 - 251 m.

Substrate: Sand.

Temperature: 6.5 - 8.4 °C (E).

Water mass: AW.

World distribution: The Faroes, Scottish east coast, west and south coasts of the British Isles, Ireland south to the Mediterranean and Morocco.

World bathymetrical range: 30-250 m (?)

Checked by: JAS

### Family PERIPLOMATIDAE

### Genus *Cochlodesma* Couthouy, 1839

#### *Cochlodesma praetenu* (Pulteney, 1799)

Synonym: *Mya pratenuis* Pulteney, 1799.

Reference to best description of the species: Tebble 1966: 194-195, Fig. 102a-c.

Previous records: Sørvágur (26-31 m). Dead shells found scattered all around the islands (Petersen 1968).

New records: BIOFAR station 078.

Bathymetrical range within the area: 150 m.

Substrate: Fine shell-sand.

Temperature: 8.6 °C (E).

Water mass: AW.

World distribution: West Iceland, the Faroes, Vesterålen in northern Norway south to Kattegat, North Sea, British Isles, Ireland to the Iberian Peninsula, Mediterranean.

World bathymetrical range: 0-50 m.

Checked by: AW

### Family THRACIIDAE

### Genus *Thracia* J. Sowerby, 1823 ex

### Leach ms

#### *Thracia convexa* (Wood, 1815)

Synonym: *Mya convexa* Wood, 1815.

Reference to best description of the species: Tebble 1966: 197-198, Fig. 104b.

Previous records: Sundini (30 m), Sørvágur (26-31 m), Trongisvágssfjørður (32 m), Funningsfjørður (43 m), Kaldbaksfjørður (19-75 m) (Petersen 1968).

New records: Not found during BIOFAR 1.

World distribution: the Faroes, southern Norwegian coast from the Trondheimsfjord, Kattegat, Øresund, southern North Sea, British Isles except off the east coast of Scotland, Ireland and south to the Mediterranean.

World bathymetrical range: 30-? m.



***Thracia myopsis* Beck in Møller, 1842**

Synonym: *Thracia truncata* G.O. Sars, 1878 non Turton 1822.

Reference to best description of the species: G.O. Sars 1878: 84-85, Pl. 6, fig. 10a-b.

Previous records: Vestmanna (7-9 m, 19 m), Borðoyarvík (20-25 m), Klaksvík (19-28 m), Kongshavn (23-30 m), Vágur (67 m), Funningsfjørður, "the Faroes" (Petersen 1968).

New records: Not found during BIOFAR 1.

World distribution: Greenland, Svalbard, the Faroes, whole Norwegian coast south to Bergen, the northern North Sea; in east America south to Massachusetts.

World bathymetrical range: 10-? m.

**Family POROMYIDAE****Genus *Poromya* Forbes, 1844*****Poromya granulata* (Nyst & Westendorp, 1839)**

Synonyms: *Corbula granulata* Nyst & Westendorp, 1839, *Embla koreni* Lovén, 1846.

Reference to best description of the species: Allen & Morgan 1981: 515-521, Figs 78-94, 96; Tebble 1966: 202-203, Fig. 107a-c.

Previous records: Lightning stn. 2; Simpson (1910): stn. 16a; S of Akraberg (282 m) (Petersen 1968).

New records: BIOFAR stations 006, 051, 082, 088, 172, 263, 267, 295, 316, 332, 335, 344, 357, 360, 382, 421, 425, 458, 492, 495, 514, 515, 522, 524, 695.

Bathymetrical range within the area: 235-900 m.

Substrate: Sand, shell-sand, gravel, stones.

Temperature: 2.6 - 7.95 °C (M: 2 stns); +0.6 - 8.2 °C (E).

Water mass: AW (19), AW/AI (1), AI/NW (1), AW/AI/NW (2), NW (2).

World distribution: SW Greenland, Iceland, the Faroes, Norway from east Finnmark in northern Norway south to Grimstad, eastern North Sea, west coasts of Scotland and Ireland, Rockall Trough south to Morocco, Madeira, Mediterranean; in east America from Cape Hatteras to the West Indies.

World bathymetrical range: 30-2650 m.

Checked by: KWO

**Family CUSPIDARIIDAE****Genus *Cardiomya* A. Adams, 1864*****Cardiomya costellata* (Deshayes, 1835)**

Synonyms: *Corbula costellata* Deshayes 1835, *Neaera sulcata* Lovén 1846, *Neaera costellata* var. *lactea* Jeffreys, 1865.

Reference to best description of the species: Allen & Morgan 1981: 464-466, Fig. 29; Tebble 1966: 204-205, Figs 109a-b, 110a.

Previous records: Porcupine stn. 61.

New records: BIOFAR stations 028, 065, 100, 158, 356, 357, 496, 517, 519, 522, 527.

Bathymetrical range within the area: 205-515 m.

Substrate: Sand, shell-gravel.

Temperature: 6.6 - 8.6 °C (E).

Water mass: AW.

World distribution: the Faroes and the Faroe-Shetland Channel, Norwegian coast from the Trondheimsfjord, eastern North Sea, east and west coasts of Scotland, Irish Sea, Rockall Trough south to the Mediterranean, Madeira, the Azores, the Canary Islands and south to Liberia, Ghana and Gabon.

World bathymetrical range: 4-1900 m.

Remarks: The distribution is doubtful due to probably numerous misidentifications.

Checked by: KWO

***Cardiomya curta* (Jeffreys, 1876)**

Synonym: *Neaera curta* Jeffreys, 1876

Reference to best description of the species: Jeffreys 1881: 943-944, Pl. 71, fig. 10; Salas 1996: 76-79, Figs 135-136.

Previous records: None.

New records: BIOFAR station 516.

Bathymetrical range within the area: 914 m.

Substrate: Gravel.

Temperature: 6.7 °C (E).

Water mass: AW/AI.

World distribution: the Faroes, Atlantic ocean south to the Iberian Peninsula, the Azores; off Bermuda.

World bathymetrical range: 35-2078 m.

Checked by: KWO



***Cardiomya striata* (Jeffreys, 1876)**

Synonym: *Neaera striata* Jeffreys, 1876.

Reference to best description of the species: Jeffreys 1876: 495-496, Jeffreys 1881 Pl. 71, fig. 11.

Previous records: Lightning stns 4, 6.

New records: Not recorded during BIOFAR 1.

Bathymetrical range within the area: 420-965 m.

Temperature: 8.5 - 8.9 °C (M).

World distribution: the Faroes, Rockall Trough.

World bathymetrical range: 400-1000 m.

**Genus *Cuspidaria* Nardo, 1840*****Cuspidaria arctica* (M. Sars, 1859) Fig. 54.**

Synonym: *Neaera arctica* Sars, 1859.

Reference to best description of the species: G.O. Sars 1878: 85-86, Pl. 6, fig. 5a-c.

Previous records: None.

New records: BIOFAR station 425.

Bathymetrical range within the area: 509 m.

Substrate: Fine sand.

Temperature: +0.1 °C (E).

Water mass: AI.

World distribution: Northeast Greenland, Iceland, the Faroes, Jan Mayen, Svalbard, Barents Sea to Laptev Sea, Murman Sea south to Bergen on the Norwegian west coast.

World bathymetrical range: 30-1190 m (dead shells found at 1373 m).

Checked by: KWO

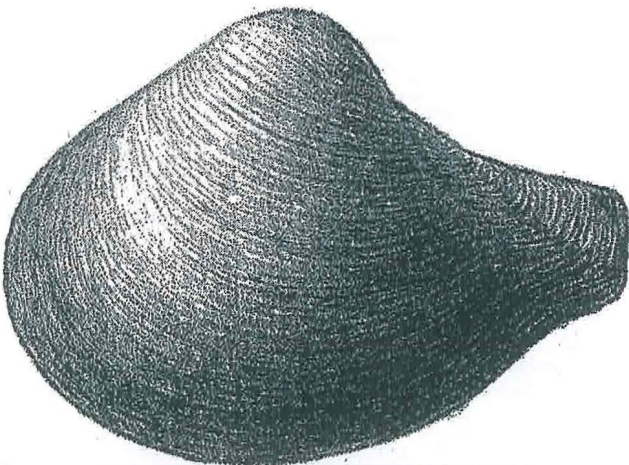


Fig. 54. *Cuspidaria arctica* (M. Sars, 1859)

***Cuspidaria lamellosa* (G.O. Sars, 1878)**

Synonyms: *Neaera lamellosa* G.O. Sars, 1878, *Neaera jugosa* G. O. Sars, 1878.

Reference to best description of the species: G.O. Sars 1878: 88-89, Pl. 6, fig. 9a-c (as *N. jugosa*).

Previous records: Lightning stns 2, 3; Porcupine stn. 61; Simpson (1910): stn. 16a.

New records: BIOFAR stations 019, 027, 031, 032, 033, 063, 065, 100, 158, 283, 344, 352, 354, 357, 382, 516, 517, 519, 520, 522.

Bathymetrical range within the area: 205-1099 m.

Substrate: Sand, sand with sponge spicules, gravel.

Temperature: 3.9 - 8.6 °C (E).

Water mass: AW (13), AW/AI (10).

World distribution: the Faroes and the Faroe-Shetland Channel, Norwegian Sea, Norwegian coast from North Cape to Grimstad.

World bathymetrical range: 93-1800 m.

Checked by: KWO

***Cuspidaria obesa* (Lovén, 1846)**

Synonym: *Neaera obesa* Lovén, 1846.

Reference to best description of the species: G. O. Sars 1878: 86-87, Pl. 6, fig. 4a-c; Allen & Morgan 1981: 429-446, Figs 1-12.

Previous records: "The Faroes" Seaward (1990).

New records: BIOFAR stations 019, 027, 158, 172, 305, 361, 525.

Bathymetrical range within the area: 225-1078 m.

Substrate: Sand, gravel, sponge spicules.

Temperature: +0.6 - 7.5 °C (E).

Water mass: AW(1), AW/AI (4), AI/NW (1), NW (1).

World distribution: W and SE Greenland, Iceland, the Faroes, Hammerfest in northern Norway south to Skagerak, south of Ireland, west of Morocco, the Azores, Mediterranean; East America from Gulf of St. Lawrence to the West Indies.

World bathymetrical range: 18-4336 m (?)

Checked by: KWO

***Cuspidaria rostrata* (Spengler, 1793)**

Fig. 55.

Synonyms: *Mya rostrata* Spengler, 1793, *Neaera attenuata* Forbes, 1844, *Neaera rostrata* Friele & Grieg, 1901.



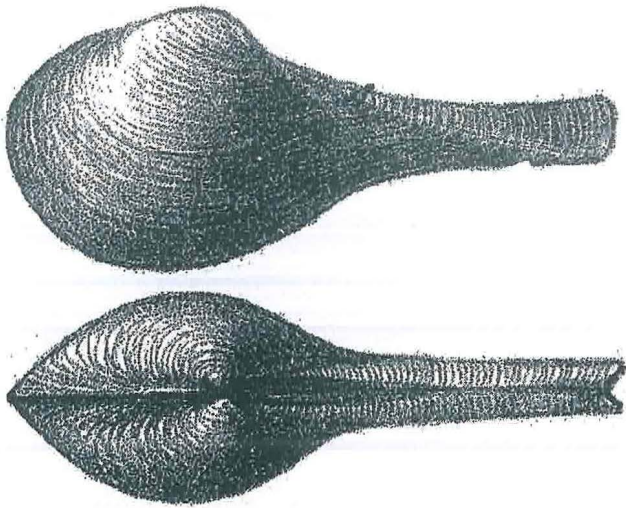


Fig. 55. *Cuspidaria rostrata* (Spengler, 1793)

Reference to best descriptions of the species: Tebble 1966: 204, Fig. 108b; G. O. Sars 1878: 89, Pl. 6, fig. 7.

Previous records: Porcupine stn. 61; one shell (S of Akraberg) (Petersen 1968).

New records: BIOFAR stations 008, 031, 033, 100, 357.

Bathymetrical range within the area: 171-351 m.

Substrate: sand with stones, shell-gravel.

Temperature: 6.5 - 8.0 °C (E).

Water mass: AW (2), AW/AI (3).

World distribution: S Iceland, the Faroes, from Sørøya in Troms county along the whole Norwegian coast, off Scottish and Irish coasts to the Atlantic coast of Morocco, Sierra Leone and Liberia, Canary Islands, Azores, Mediterranean; East America from Arctic Seas to the West Indies.

World bathymetrical range: 100-650 m (off the East American coast to 1600 fathoms).

Checked by: KWO

### *Cuspidaria subtorta* (G. O. Sars, 1878)

Synonyms: *Neaera subtorta* G.O. Sars, 1878, *Neaera obesa* var. *glacialis* Jensen, 1905 (in part), *Cuspidaria glacialis* Odhner, 1915 (in part).

Reference to best description of the species: G. O. Sars 1878: 87-88, Pl. 6, fig. 6a-c.

Previous records: Lightning stns 1, 3; Porcupine stn. 62; Triton stn. 8.

New records: BIOFAR stations 188, 425, 459.

Bathymetrical range within the area: 509-990 m.

Substrate: Silt, sand.

Temperature: +0.68 - 1.6°C (E).

Water mass: AI (1), NW (2).

World distribution: E Greenland, E Iceland, the Faroes, Jan Mayen, Svalbard, Barent Sea to Laptev Sea, Murman coast south to Bergen on the Norwegian west coast.

World bathymetrical range: 0-990 m.

Checked by: KWO

## Family VERTICORDIIDAE

### Genus *Lyonsiella* G.O. Sars, 1872 ex M. Sars ms

#### *Lyonsiella abyssicola* G. O. Sars, 1872 (M. Sars ms)

Synonym: *Pecchiolia abyssicola* M. Sars, 1872.

Reference to best description of the species: G. O. Sars 1878: 82, Pl. 20, fig. 5a-d.

Previous records: None.

New records: BIOFAR stations 033, 051, 070, 082, 095, 172, 227, 230, 263, 271, 274, 295, 299, 343, 421, 425, 447, 458, 459, 477, 495, 522, 695, 9012.

Bathymetrical range within the area: 235-1150 m.

Substrate: Sand, gravel, small stones.

Temperature: 2.6 - 7.95 °C (M: 2 stns); +0.85 - 8.6 °C (E).

Water mass: AW (6), AW/AI (2), AI (3), AW/AI/NW (3), NW (9).

World distribution: West and east Greenland, off northeast Iceland, the Faroes, Svalbard, Barents Sea to Laptev Sea, whole Norwegian coast south to Lista, off western Ireland south to the Bay of Biscay, the Azores; in east America from Baffin Bay south to Martha's Vineyard in Massachusetts.

World bathymetrical range: 40-2000 m.

Checked by: KWO



## Conclusions

A total of 394 species of marine molluscs (except cephalopods) are now known from the Faroe Islands, nine of them only found as empty, dead shells (*Danilia tinei*, *Moelleria costulata*, *Turritella communis*, *Alvania cimicoides*, *Chryssalida eximia*, *Chryssalida pellucida*, *Ondina perezii*, *Yoldiella lenticula*, *Limea loscombi*). Of the 385 species found alive, 216 species were recorded during the BIOFAR programme, 120 of them new to the area. Of the total number of species so far known, 52 were not found during BIOFAR 1, of them 10 species are living in the littoral zone or at shallow depths. About seven of the species found during BIOFAR 1 are new to science. Table 1 gives the development in known species from 1785 to 2000 (see Reference list for reference to this information).

Of the species occurring in the Faroese exclusive zone (EEZ) 22 of the species are reported found from the time of Mörch and forward, 42 more are mentioned in publications later than Mörch (1868), 123 are only mentioned from BIOFAR, and 52 species known species were not found during BIOFAR 1.

**Table 1.** Number of marine molluscan species from the Faroes published by Mörch (1868), found by R/V "Lightning", "Porcupine", "Triton" and "Gold-seeker" ("Deep water"), published in "Zoology of the Faroes", and found during the programme "BIOFAR"

	Mörch	Deep water	Zool. Faroes	BIOFAR etc.
Placophora	0	0	1	6
Polyplacophora	5	4	6	11
Prosobranchia	44	69	61	159
Heterobranchia	1	14	41	76
Scaphopoda	1	4	3	7
Bivalvia	38	59	71	126

The most commonly recorded species during BIOFAR 1 were *Leptochiton asellus*, *L. sarsi*, *Euspira montagui*, *Buccinum undatum*, *Colus gracilis*, *Yoldiella nana*, *Asperarca nodulosa*, *Bathyarca pectunculoides*, *Modiolus phaseolina*, and *Timoclea ovata*. Many, 74 species, are recorded only once, 43 of these during BIOFAR. A summary of the records of the species is given in Table 2.

In the BIOFAR material all Classes together, 101 species are mainly confirmed to "warm" atlantic water (AW), 7 species are mostly found in cool AI, 23 species are

**Table 2.** Number of species of Molluscs recorded from the Faroe Island since the late 1700 century and up to the year 2000

Total number of species recorded from the Faroes	394
Species found only as dead shells	9
Number of live species found during BIOFAR	385
Species new to the area found during BIOFAR	120
New species to the area, recorded at only one station	43
Species recorded earlier, recorded at only one station during BIOFAR	31
Known species, but not found during BIOFAR	52



*Table 3. Species sampled during BIOFAR 1 related to watermass preference. Species are presented as preferring only one type of water mass or a mixture of two or more water masses. Species belonging to the Classes Aplacophora, Polyplacophora and Scaphopoda is not present in the table. For reference to water masses, see headings to Table 4 and pages 17-18.*

	WATERMASS							
	AW	AW/AI	AI	AI/NW	NW	AW/AI/NW	2 types	3-6 types
Prosobranchia	30	6	2	1	14	0	25	60
Opisthobranchia	28	4	2	0	4	1	18	8
Bivalvia	42	3	2	0	4	0	39	15

mostly from NW, and 43 species are found in all types of watermasses (Table 3). In Table 4 a summary of the biological factors collected for each of the sampled species during BIOFAR is present.

### Acknowledgements

We are grateful to Professor Arne Nørrevang for the opportunity to study the Mollusca collected during the BIOFAR Programme and the staff of the Kaldbak Marine Laboratory for their care in undertaking the primary sorting of the samples. We also want to thank Torleiv Brattegard, Ole S. Tendal, Anne B. Klitgaard, Håkan Westerberg and many others for fruitful co-operation on the research vessels «Magnus Heinason» (Fiskirannsóknarstovan, Tórshavn) and «Håkon Mosby» (University of Bergen) and in the Kaldbak Marine Laboratory. The crew on both ships should be thanked for their skill in handling the different gear on rough bottoms and in different kinds of weather. Mrs. Elizabeth Platts has kindly corrected the English general text. Bogi Hansen has kindly allowed us to use a figure (Fig. 8.10) from his book "Havið".

Contribution of the BIOFAR research programme.



**Table 4.** Overview of all species recorded from the Faroese fishery territory, with preference to temperature range, water masses and depth. (AW = Atlantic water; AI = Arctic intermediate water; NW = bottom water of the Norwegian Sea; AW/AI and AW/AI/NW = mixtures of water masses).

	Temperature ° C		Watermasses %					Depth m	Pref. Depth m	
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW AW/AI/NW			
<b>PLACOPHORA</b>										
Scutopus ventrolineatus	-0.81	-0.6 - 8.0						65-1032	40-1248	
Chaetoderma nitidulum								40-1200	128049	
Nematomenia banyulensis		-0.6 - 8.0	86	14				70-732	45-732	
Neomenia carinata		-0.05 - 8.0	75	13			12	100-714	18-714	
Simrothiella borealis		-0.1 - 8.6						191-850	70-850	
Drepanomenia incrustata										
<b>POLYPLACOPHORA</b>										
Leptochiton alveolus		4.2 - 9.1						99-1099	100-4825	
Leptochiton arcticus									10-200	
Leptochiton asellus	0.3 - 2.7	-0.85 - 9.1						41-1121	0-1121	
Leptochiton sarsi	-0.81 - 2.7	-0.85 - 8.6						75-1200	40-1200	
Hanleya hanleyi		3.0 - 8.2						158-800	15-800	
Hanleya nagelfar	2.7	3.0 - 8.3						191-702	100-1080	
Tonicella rubra									0-270	
Lepidochiton cinereus								5-145	0-275	
Stenosemus albus		6.5 - 8.1						77-1083	0-1083	
Ichnochiton exaratus		4.0 - 6.7		100				400-500	100-2580	
Placiophorella atlantica		1.0 - 8.0						78-833	78-2000	
<b>PROSOBRANCHIA</b>										
Anatoma crispata		-0.9 - 8.6	58	14			19	8	107-1319	10-3000
Emarginula crassa		7.0 - 8.0	100						252-260	5-600
Emarginula fissura		7.0 - 8.2	100						65-260	0-400
Puncturella noachina		-0.6 - 8.6	64		25		11		140-923	20-923
Patella vulgata										0-3
Ansates pellucida										0-50
Tectura virginea		8.0	100						90	3-1000
Lepeta caeca ?										5-300
Iothia fulva		3.0 - 8.6	100						65-1319	20-1319
Propilidium exiguum		7.7	100						250	20-280
Lepetella laterocompressa		7.5	100						225	50-2000
Copulabyssia corrugata										950
Coccpigya spinigera										600-1534
Danilia tinei										30-2000
Calliostoma occidentale	1.5 - 8.5		67	28				5	70-1099	19-1785
Calliostoma zizyphinum	7.8 - 9.1		100						70-351	3-351
Clelandella miliaris	7.0 - 8.6		100						100-506	10-506
Gibbula cineraria	7.6		100						21	5-525
Gibbula tumida	0 - 9.1		94				6		32-601	3-1225
Margarites groenlandicus	1.0 - 8.2		50					50	140-859	2-859
Margarites helycinus	1.6 - 4.0		50		50				405-509	0-509
Margarites olivacea	1.5 - 6.0			50	50				430-509	10-509
Solariella amabilis	2.9 - 8.6		87	13					218-630	150-800



Table 4 continued.

	Temperature ° C		Watermasses %					Depth m	Pref. Depth m	
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NWAW/AI/NW			
<i>Solariella obscura</i>		-0.9 - 7.9	15	25	20	5	30	5	150-1042	20-1042
<i>Calliotropis otto</i>		6.2 - 6.5		100					1078-1083	85-1100
<i>Dikoleps pusilla</i>		7.9	100						77	2-100
<i>Granigyra arenosa</i>		6.5 - 6.7		100					914-1083	900-2000
<i>Skenea areolata</i>										150-1200
<i>Skenea basistriata</i>	1.3 - 2.6	-0.9 - 8.0	21	16	10		37	3	225-1319	90-2400
<i>Skenea larseni</i>	-0.5						100		872	250-900
<i>Skenea ossiansarsi</i>		7.0 - 7.9	100						107-900	50-900
<i>Skenea peterseni</i>	1.3	1.0 - 8.0	33	33		17		17	252-1319	250-1319
<i>Skenea rugulosa</i>	1.3 - 2.6	3.1 - 8.1	66	17				17	77-643	150-643
<i>Skenea trochoides</i>		-0.6 - 4.6		25			75		684-732	200-732
<i>Moelleria costulata</i>										8-1943
<i>Rugulina fragilis</i>	1.3	-0.85 - 7.0	9	36		9	36	9	276-1098	60-1098
<i>Trochaclis islandica</i>		2.2			100				559	150-1550
<i>Turitella communis</i>										10-200
<i>Krachia cossmani</i>	-0.1 - 3.5	-0.1 - 6.6			33		33	33	322-899	150-1300
<i>Cerithiella metula</i>	0.1 - 1.3	-0.66 - 8.6	43	23	7	10	10	7	200-1157	100-2500
<i>Chasteria danielsseni</i>										760-1300
<i>Eumetula arctica</i>	1.3	0.1 - 8.4	56	25	6			12	149-710	35-1600
<i>Laeocochlis sinistratus</i>	2.6	1.0 - 8.3	48	32	4	8		8	225-1006	55-1420
<i>Aclis sarsi</i>	7.95	1.0 - 8.6	57	14				28	405-859	100-1900
<i>Aclis walleri</i>	7.95	1.0 - 8.6	83					17	405-859	200-2200
<i>Epitonium greenlandicum</i>	-0.1				100				509	20-650
<i>Bathycrinicola micrapex</i>		6.5		100					1083	1083-2360
<i>Curveulima macrophthalmica</i>		6.0 - 8.9	66	33					105-700	50-2500
<i>Enteroxenos oestergreni</i>		8.6	100						514	20-1900
<i>Eulima bilineata</i>	7.9	6.5 - 9.1	95	5					98-900	50-900
<i>Haliella stenostoma</i>		6.5 - 8.1	63	37					200-352	50-2500
<i>Hemiaclis ventrosa</i>		1.0 - 4.0		50				50	405-859	196-3000
<i>Melanella frielei</i>		6.6 - 8.1	80	20					150-700	30-1300
<i>Melanella laurae</i>		-0.85					100		1098	1100
<i>Melanella orphanesis</i>	7.95	2.0 - 8.0	33	17	50				405-900	40-1760
<i>Littorina obtusata</i>										0
<i>Littorina saxatilis</i>										0
<i>Lacuna pallidula</i>										0-100
<i>Lacuna vincta</i>		7.6 - 8.2	100						32-157	0-157
<i>Skeneopsis planorbis</i>										0-75
<i>Rissoa parva</i>										0-10
<i>Alvania cimicoides</i>		8.0	100						250	30-1000
<i>Alvania jeffreysi</i>		6.3 - 8.1	60	40					235-600	50-2000
<i>Alvania moerchi</i>		-0.57					100		675	10-680
<i>Alvania punctura</i>										2-120
<i>Alvania wyvilletomsoni</i>	-0.6 - 0.1	-0.6 - 7.1			14		86		235-1150	235-2800
<i>Alvania zetlandica</i>										30-300
<i>Bentonella tenella</i>		-0.6 - 6.5	25	50			25		806-1157	500-4000



Table 4 continued.

	Temperature ° C		Watermasses %						Depth m	Pref. Depth m
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW	AW/AI/NW		
<i>Obtusella intersecta</i>	7.9 - 8.0	8.6 - 8.9	100						129-133	20-800
<i>Obtusella tumidula</i>		-0.6 - 4.0		50			50		542-850	10-850
<i>Onoba aculeus</i>										0-200
<i>Onoba islandica</i>	-0.6						100		683	130-683
<i>Onoba mighelsi</i>		1.0				100			640	0-640
<i>Onoba semicostata</i>		0.0 - 8.7	88				12		32-1003	0-1000
<i>Pseudosetia semipellucida</i>		-0.6					100		698-890	700-3200
<i>Pseudosetia turgida</i>		7.5	100						225	90-1500
<i>Aporrhais pespelecani</i>		7.4 - 9.1	100						21-247	0-247
<i>Aporrhais serresianus</i>		7.4 - 8.6	100						170-656	100-1000
<i>Capulus ungaricus</i>	-0.5 - 7.9	-0.83 - 8.6	82	14			4		90-1038	10-2500
<i>Torellia delicata</i>	1.3	-0.9 - 7.9	14	14			58	14	322-1319	100-2500
<i>Trichotropis borealis</i>	0.1	1.0 - 8.2	56	11	22	11			65-509	10-509
<i>Trichotropis conica</i>		0.6					100		604	15-600
<i>Haloceras aff. Laxus</i>		-0.6 - 7.0	25	25			50		260-914	260-2175
<i>Calyptochonca pellucida</i>		6.2		100					358	
<i>Lamellaria latens</i>		7.0	100						260	10-1200
<i>Lamellaria perspicua</i>		7.0	100						260	10-1200
<i>Trivia arctica</i>		9.1	100						98	10-1000
<i>Limneria undata</i>		-0.57 - 7.7	43	14	14		28		170-675	8-1187
<i>Piliscus radiatus</i>	-0.6	-0.6 - 0.0					100		604-683	20-683
<i>Velutina plicatilis</i>		-0.6					100		703	0-703
<i>Velutina velutina</i>	0.1	-0.85 - 8.1	17		17	17	50		200-1098	1-1098
<i>Amauropsis islandica</i>		7.9	100						107	3-107
<i>Bulbus smithi</i>		1.6 - 6.8		63	25			12	283-725	30-725
<i>Cryptonatica affinis</i>	0.0 - 7.9	-0.6 - 8.6	24	38	6		26	6	66-1099	0-2500
<i>Cryptonatica bathybi</i>		-0.65					100		918	150-3000
<i>Euspira fusca</i>										100-1200
<i>Euspira montagui</i>	7.95	-0.1 - 9.1	78	17		3		2	90-1078	10-1078
<i>Euspira pallida</i>		2.2 - 8.2	67	11	11			11	65-1319	10-2400
<i>Boreotrophon barvicensis</i>		4.0 - 8.6	88	12					205-630	50-700
<i>Boreotrophon clathratus</i>		7.0 - 8.0	100						50-260	5-300
<i>Boreotrophon clavatus</i>	7.9	1.0 - 8.6	50	17	17	17			208-509	50-900
<i>Boreotrophon dabneyi</i>	1.3	3.0						100	1319	1225-2670
<i>Boreotrophon echinatus</i>										1000-3000
<i>Boreotrophon truncatus</i>		7.6 - 9.1	100						65-630	3-630
<i>Nucella lapillus</i>										0-55
<i>Buccinum cyaneum</i>	0.9 - 2.6	3.1 - 9.1	25	50				25	99-728	0-728
<i>Buccinum humphreysianum</i>		1.5 - 7.7	33	33				33	205-864	15-1190
<i>Buccinum hydrophanum</i>										3-1200
<i>Buccinum kjennerudae</i>		3.7		100					997	300-1150
<i>Buccinum nivale</i>		-0.65 - 0.0					100		714-804	100-1000
<i>Buccinum oblitum</i>		1.5 - 9.1		18	53	6		23	99-1099	200-1100
<i>Buccinum undatum</i>		-0.9 - 9.1	69	10	3	4	9	5	32-1319	0-1500
<i>Colus gracilis</i>		-0.9 - 8.8	61	13	5	4	10	6	100-1319	50-1500



Table 4 continued.

	Temperature ° C		Watermasses %						Depth m	Pref. Depth m
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW AW/AI/NW			
<i>Colus holboelli</i>		-0.85 - 8.3	28	36			36		69-1150	10-1500
<i>Colus islandicus</i>		-0.9 - 8.5	40	25	5		20	10	139-1083	5-2000
<i>Colus latericeus</i>		-0.57 - 3.1			20	20	40	20	509-804	20-800
<i>Colus sabini</i>		-0.6 - 0.85					100		808-1030	35-1500
<i>Colus turgidulus</i>		-0.85 - 4.0		12		6	76	6	570-1150	400-1150
<i>Colus verkruzeni</i>		-0.6 - 1.6			50		25	25	509-803	30-800
<i>Liomesus ovum</i>		-0.05 - 8.4	50	33			17		276-800	100-1175
<i>Mohnia glyptus</i>		-0.57 - 3.0			25	25	25	25	509-1319	300-1319
<i>Mohnia mohni</i>		-0.89 - -0.8					100		973-1500	650-3800
<i>Neptunea antiqua</i>		7.6	100						32	15 - 1000
<i>Neptunea despecta</i>		-0.57 - 8.6	52	23	13	3	6	3	75 - 997	6-1400
<i>Turrisipho dalli</i>		0.5 - 5.9		50	21	21		8	370-643	250-1160
<i>Turrisipho fenestratus</i>		1.6 - 8.6	63	27	5			5	158-1006	50-1200
<i>Turrisipho lachesis</i>		-0.7 - 4.0		12	20	8	52	8	498-1200	200-1500
<i>Turrisipho moebii</i>		-0.9 - 8.4	56	25	6		12		191-1042	190-1050
<i>Troschelia berniciensis</i>		6.2 - 8.7	87	13					105-1006	90-2000
<i>Beringius turtoni</i>		-0.83 - 7.0	25				50	25	260-1038	25-1447
<i>Volutopsius norwegicus</i>		-0.6 - 8.6	50	33	8		4	4	50-742	25-2000
<i>Nassarius incrassatus</i>		7.9	100						208	0-208
<i>Amphissa acutecostata</i>	1.3	-0.1 - 8.6	62	26	3		6	3	72-1319	70-1319
<i>Mitrella rosacea</i>	7.9	1.0 - 8.6	34		33	33			351-640	1-640
<i>Metzgeria alba</i>		-0.6 - 8.5	70			10	20		293-803	100-1960
<i>Volutomitra groenlandica</i>		0.5 - 8.6	39	30	17	12		6	317-1099	20-1100
<i>Mangelia attenuata</i>		8.6	100						423	5-423
<i>Mangelia coarctata</i>	7.9		100						357	10-357
<i>Mangelia powisiana</i>		8.6	100						150	5-150
<i>Nepotilla amoena</i>	6.5	1.0 - 4.0		34	33	33			402-509	100-550
<i>Raphitoma linearis</i>		6.5 - 7.9	75	25					107-276	10-276
<i>Pleurotomella packardii</i>	0.1 - 1.3	-0.6 - 8.6	35	18	6	6	35		225-1157	200-4425
<i>Taranis moerchi</i>		6.6 - 7.5	33	67					231-322	80-2644
<i>Teretia teres</i>	7.9	6.0 - 8.6	80	20					218-702	200-702
<i>Thesbia nana</i>	1.3	3.0 - 8.2	60	30				10	140-1319	80-1319
<i>Typhlomangelia nivalis</i>	7.9	1.6 - 9.1	82	12	6				99-1083	45-3000
<i>Oenopota bergensis</i>	1.3 - 6.5	-0.7 - 7.9	12	29	12	6	35	6	107-1083	100-1083
<i>Oenopota conoidea</i>		8.2	100						584	100-1000
<i>Oenopota elegans</i>	0.1	-0.7 - 8.6	33	7	7	20	33		65-949	65-1300
<i>Oenopota impressa</i>	2.6	-0.85 - 8.6	8	25		8	50	8	281-1150	20-1150
<i>Oenopota nobilis</i>	0.1 - 2.6	-0.84 - 8.7	35	5	10	5	40	5	100-990	35-1700
<i>Oenopota ovalis</i>		6.5		100					1083	200-5000
<i>Oenopota tenuicostata</i>	0.1 - 6.5	-0.9 - 8.2	8	19	15	6	45	6	225-1150	40-1150
<i>Oenopota trevelliana</i>		-0.6 - 8.0	80	20					65-1157	20-1157
<i>Oenopota turricula</i>		-0.6					100		810	200-810
<i>Oenopota violacea</i>	0.1 - 7.95	-0.6 - 8.6	38	23	15	8	8	8	170-859	100-1000
<i>Spirotropis monterosatoi</i>	0.1-7.95	1.0 - 8.2	16	42	26	16			139-1083	100-1083
<i>Admete viridula</i>	-0.81 - 2.6	-0.9 - 7.6	8	11	17	8	50	6	218-1319	10-1319



Table 4 continued.

	Temperature ° C		Watermasses %						Depth m	Pref. Depth m
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW	AW/AI/NW		
<i>Iphinopsis alba</i>		-0.85						100	1098	1000-3000
<i>Iphinopsis inflata</i>	-0.81	-0.85 - 8.5	13					77	601-1150	408-1322
HETEROBRANCHIA										
<i>Rissoella opalina</i>	1.3	1.0 - 3.9		50		50			640-643	0-643
<i>Omalogyra atomus</i>										0-40
<i>Noerrevangia fragilis</i>		?	100						43	43
<i>Brachystomia eulimoides</i>		?	100						64	10-120
<i>Chryssalida eximia</i>										20->1000
<i>Chryssalida pellucida</i>										0-120
<i>Chryssalida sublustris</i>		-0.57 - -0.6						100	675-698	364-1187
<i>Eulimella ataktos</i>										100-200
<i>Eulimella scillae</i>		6.0 - 8.6	80	20					655	50-655
<i>Eulimella ventricosa</i>		6.8		100					283	50-1000
<i>Odostomia turrata</i>		?	100						64-90	0-100
<i>Odostomia unidentata</i>		?	100						64-90	0-100
<i>Ondina diaphana</i>										20-120
<i>Ondina divisa</i>									10-35	10-350
<i>Ondina perezi</i>										10-100?
<i>Tjaernoecia boucheti</i>		-0.65						100	918	540-2091
OPISTHOBRACHIA										
<i>Acteon tornatilis</i>		8.1 - 8.2	100						40-160	16-250
<i>Akera bullata</i>									7-70	0-370
<i>Colpodaspis pusilla</i>		6.5 - 7.9	33	66					276-354	4-354
<i>Diaphana globosa</i>		8.6	100						514-1099	25-2644
<i>Diaphana hiemalis</i>		-0.8 - 7.8	13		13		67	7	160-1150	5-2400
<i>Diaphana lactea</i>		-0.85 - 2.2			11		89		559-1150	559-4268
<i>Diaphana makarovi</i>		2.2			100				453-996	9-1400
<i>Diaphana minuta</i>										0-327
? <i>Rhinodiaphana ventricosa</i>	2.6	3.1						100	597	80-597
<i>Philine angulata</i>		7.7 - 9.1	100						7-185	7-185
? <i>Philine aperta</i>									14-20	0-500
<i>Philine denticulata</i>		6.8 - 7.8	66	33					10-283	0-283
<i>Philine finmarchica</i>	0.1	-0.85 - 6.5		14	23	5	53	5	160-1302	25-1300
<i>Philine pruinosa</i>		6.8 - 7.9	80	20					225-350	2-400
<i>Philine punctata</i>		7.9	100						322	0-322
<i>Philine quadrata</i>	-0.5 - 0.1	-0.85 - 8.6	20	26	15	13	28	13	170-1200	170-2150
<i>Philine scabra</i>		6.5 - 8.1	82	18					8-900	8-1500
<i>Pyrrunculus ovatus</i>		3.9		100					600	600-2000
<i>Retusa obtusa</i>		-0.6 - -0.85						100	8-1032	5-1032
<i>Retusa truncatula</i>									11	10-200
<i>Cylichna alba</i>	2.6	-0.85 - 8.2	20	18	15	13	29	5	10-1302	6-2700
<i>Cylichna magna</i>		-0.6 - 2.8			50		50		350-996	10-996
<i>Roxania utriculus</i>									130	130-1500
<i>Scaphander lignarius</i>		6.4 - 9.1	82	18					8-354	5 - 700
<i>Scaphander punctostriatus</i>		-0.1 - 7.6	30	20	20	10	10	10	407-1302	10-3000



Table 4 continued.

	Temperature ° C		Watermasses %					Depth m	Pref. Depth m
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW AW/AI/NW		
<i>Triopella incisa</i>		4.6 - 8.0	50	50				225-684	20-684
<i>Aldisa zetlandica</i>		1.5 - 7.7	25	50			25	218-725	10-1900
<i>Archidoris pseudoargus</i>		7.9	100					0-150	0-300
<i>Cadlina ?laevis</i>		3.1 - 8.2	69	23	7			2-997	2-997
<i>Dendronotus frondosus</i>		-0.84 - 8.1	63	13			24	1-1096	1-1096
<i>Doto cf. Cuspidata</i>		7.9 - 8.7	100					80-96	30-100
<i>Doto coronata</i>		6.5 - 8.7	80	20				77-276	0-276
<i>Doto crassicornis</i>		6.8 - 7.9	50	50				150-283	36-283
<i>Doto fragilis</i>									0-255
<i>Doto sp.</i>		7.9	100					77	
<i>Doridoxa ingolfiana</i>		0.0					100	603	103-603
<i>Eubranchus cf. pallidus</i>		7.9	100					77-120	2-120
<i>Eubranchus cf. tricolor</i>		7.5 - 8.6	100					90-225	16-225
<i>Eubranchus exiguus</i>		7.9	100					80-322	2-322
<i>Eubranchus sp.</i>		7.9	100					150	
<i>Facelina sp.</i>		2.8			100			402	
<i>Coryphella cf. nobilis</i>		6.8 - 7.9	66	33				205-507	20-507
<i>Coryphella cf. pellucida</i>		6.8 - 7.6	50	50				218-283	0-283
<i>Coryphella cf. verrucosa</i>		6.8 - 8.6	91	9				73-350	0-450
<i>Coryphella gracilis</i>		8.7	100					5-96	2-96
<i>Coryphella sp.</i>		-0.5 - 7.9	50	25			25	150-683	
<i>Goniodoris nodosa</i>		7.9	100					24-120	0-120
<i>Lophodoris danielsseni</i>		7.5 - 7.9	100					77-225	30-225
<i>Okenia aspera</i>		7.4 - 8.6	100					185-240	?-240
<i>Hero formosa</i>		6.5 - 7.6	50	50				218-276	?-276
<i>Jorunna cf. tomentosa</i>		7.0 - 7.9	100					120-352	2-604
<i>Lomanotus genei</i>		6.5		100				354	?-354
<i>Acanthodoris pilosa</i>		3.0 - 8.6	50				50	6-923	2-923
<i>Onchidoris ?oblonga</i>		7.9 - 8.1	100					77-150	?-150
<i>Onchidoris muricata</i>		7.5	100					0-352	0-352
<i>Onchidoris sp.</i>		7.5	100					231	
<i>Limacia clavigera</i>		7.9	100					14-107	0-107
<i>Polycera faeroensis</i>		7.7	100					120-170	2-170
<i>Cuthona sp.</i>		7.6 - 7.9	100					150-218	
<i>Tenellia adspersa</i>		7.9	100					77	0-77
<i>Tritonia hombergi</i>		5.0		100				593	0-593
<i>Tritonia plebeia</i>		7.9 - 8.7	100					77-150	0-150
<i>Tritonia sp.</i>		7.9	100					77-107	
SCHAPHOPODA									
<i>Antalis agilis</i>								630	55-3640
<i>Antalis entalis</i>		2.9 - 8.6	57	37	3		3	32-1078	1-3200
<i>Antalis occidentalis</i>								18-67	100-2300
<i>Pulsellum lofotense</i>		6.8 - 7.5	50	50				225-283	55-3240
<i>Siphonodentalium laubieri</i>									?-2212
<i>Gadila subfusiformis</i>		6.5 - 7.5	33	66				225-283	74-2083



Table 4 continued.

	Temperature ° C		AW	Watermasses %				Depth m	Pref. Depth m	
	Measured	Estimated		AW/AI	AI	AI/NW	NW AW/AI/NW			
Cadulus propinquus		6.5		100				1078	180-1078	
BIVALVIA										
Ennucula corticata		3.9		100				498	50-1000	
Nucula atacellana			33	66				655-1200	655-1200	
Nucula nucleus		7.9 - 8.3	100					80-218	0-975	
Nucula tenuis		7.6 - 7.9	100					35-75	5-350	
Nucula tumidula									180-2650	
Jupitera minuta		8.1 - 8.2	100					77-108	4-1900	
Nuculana pernula		7.6	100					52	4-1275	
Nuculanidae n. sp.		5.6 - 6.2		100				1078-1099		
Yoldiella annenkovae		-0.85 - -0.6					100	806-1032	700-2450	
Yoldiella lenticula									10-350	
Yoldiella lucida	0.1 - 2.6	-0.6 - 8.1	30	32	16	3	16	3	200-1083	30-2740
Yoldiella messanensis		7.8	100					655	200-2000	
Yoldiella nana	-0.5 - 7.95	-0.85 - 8.5	32	25	11	3	26	3	170-1200	96-1200
Yoldiella philippiana		3.1 - 8.6	85	10	5				77-584	25-584
Yoldiella propinqua		-0.85 - 2.8			5		95		402-1150	113-1300
Yoldiella pustulosa									550-2700	
Yoldiella solidula		-0.95					100	899	10-1000	
Yoldiella striolata									200-1500	
Yoldiella subaequilatera									700-1400	
Yoldiella tomlini		6.8 - 7.9	50	50				77-283	77-?	
Asperarca nodulosa		4.9 - 9.1	80	20				98-914	20-4134	
Arca tetragona		7.7 - 8.2	100					135-157	0-157	
Bathyarca frielei		7.0	100					260	20-4000	
Bathyarca pectunculoides	0.1 - 2.6	-0.85 - 8.6	34	29	7	3	24	3	78-1150	5-2000
Bathyarca philippiana									135-546	
Limopsis aurita		6.6 - 8.4	90	10				250-584	37-3230	
Limopsis cristata		1.5 - 8.5	40	50	10			276-900	350-3150	
Limopsis minuta		-0.05 - 8.6	58	21	7		7	7	281-1099	37-4130
Glycymeris glycymeris		9.1	100					98-99	0-99	
Crenella decussata		7.6 - 8.7	100					32-149	2-1100	
Dacrydium ockelmanni			50	33	2		13	2	149-1099	100-1099
Dacrydium vitreum	0.50	-0.84 - 1.9			20		80		509-990	5-2258
Modiolus modiolus		3.0 - 9.1	96		4				80-498	5-498
Modiolula phaseolina		4.0 - 9.1	88	12					21-460	0-460
Musculus niger		7.6 - 8.7	100						32-135	1-376
Mytilus edulis										0-260
Pecten maximus										5-100
Arctiula greenlandica	-0.1	1.6			100			509	5-2000	
Arctiula sp.		7.0 - 8.6	100					514-900		
Aequipecten opercularis		6.2 - 8.7	91	9				21-450	0-2664	
Chlamys islandica									2-350	
Clamys sulcata		4.0 - 8.6	82	18				253-702	253-1500	
Chlamys varia		7.9	100					80	1-100	



Table 4 continued.

	Temperature ° C		Watermasses %						Depth m	Pref. Depth m	
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW	AW/AI/NW			
Crassodoma pusio		8.3	100							134	2-200
Cyclopecten imbrifer		-0.1 - -0.81			33			66		509-958	51-2400
Cyclopecten pustulosus		6.3 - 8.6	88	12						281-700	225-850
Delectopecten vitreus	2.6	6.0 - 8.6	67	22				11		260-1006	40-4000
Hyalopecten similis		7.5 - 8.6	100							77-655	4-655
Palliolum furtivum		6.9 - 8.6	75	25						170-496	7-496
Palliolum striatum		6.3 - 8.0	95	5						77-285	10-800
Palliolum tigrinum		6.2 - 8.1	94	6						77-400	10-550
Pseudamussium peslustrae		3.6 - 8.7	68	32						136-700	10-700
Anomia ephippium											10-900
Heteranomia squamula		6.0 - 8.6	80	20						66-1006	0->1000
Pododesmus squama		6.8 - 8.7	86	14						96-283	10-300(?)
Acesta excavata		7.0 - 8.0	100							252-285	50-2500
Limatula gwyni		8.1	100							200	10-750
Limatula hyperborea		-0.81						100		1022	75-1320
Limatula sp.		-0.81 - 3.6		33				66		407-1022	
Limatula subauriculata		4.8 - 8.7	83	17						77-594	7-600
Limatula subovata											150-3300
Limea loscombi											10-400
Notolimea crassa		6.2 - 8.6	72	28						250-496	100-2000
Lucinoma borealis		7.9 - 8.1	100							75-200	0-1494
Thyasira croulinensis		6.5 - 7.9	56	44						240-702	40-3861
Thyasira dunbari		-0.6 - 2.9			40			60		509-990	2-1032
Thyasira ferruginea		6.5 - 8.1	50	50						200-352	8-4825
Thyasira flexuosa		-0.6 - 7.9	72		14			14		32-702	5-702
Thyasira gouldi		7.6	100							52-75	5-385
Thyasira granulosa		6.5 - 7.9	60	40						322-351	90-1200
Thyasira incrassatus											200-3500
Thyasira obsoleta	2.6	-0.85 - 8.6	42	3	3	34	14	3		75-1099	24-2900
Thyasira pygmaea		0.84 - 3.9	12		24			64		498-990	377-1470
Thyasira subovata											216-3917
Thyasira succisa		6.5 - 8.6	75	25						276-514	73-2813
Kellia suborbicularis		7.9 - 8.0	100							252-350	0-350
Montacuta substriata		7.0 - 8.1	100							200-900	10-900
Astarte acuticostata	0.1 - 2.6	-0.6 - 3.1			10	5	80	5		509-910	20-910
Astarte elliptica		8.1	100							100	2-442
Astarte montagui		8.1	100							100-125	2-450
Astarte sulcata	0.1 - 7.95	2.8 - 8.4	50	25	12			13		100-803	5-830
Acanthocardia echinata		6.8 - 8.2	91	9						21-283	4-350
Parvicardium exiguum											0-960
Parvicardium minimum	7.95	4.0 - 9.1	75	25						77-700	10-2000
Parvicardium pinnulatum		6.5 - 9.1	86	14						32-350	4-350
Spisula elliptica		7.0 - 9.1	100							70-872	10-872
Arcopagia crassa		7.8 - 8.9	100							105-135	10-146
Macoma calcarea		7.6	100							32-35	0-320



Table 4 continued.

	Temperature ° C		Watermasses %						Depth m	Pref. Depth m
	Measured	Estimated	AW	AW/AI	AI	AI/NW	NW	AW/AI/NW		
<i>Tellina pygmaea</i>		7.8 - 9.1	100						99-135	0-150
<i>Gari costulata</i>		8.6	100						185	10-185
<i>Gari fervensis</i>		7.4 - 8.6	100						134-240	5-240
<i>Gari tellinella</i>		8.3 - 9.1	100						96-160	2-300
<i>Abra alba</i>										2-1000
<i>Abra longicallus</i>		7.8	100						655	40-4360
<i>Abra nitida</i>		6.8 - 7.9	88	12					21-655	6-2290
<i>Abra prismatica</i>		3.6 - 8.3	86	14					75-407	0-407
<i>Arctica islandica</i>		6.7 - 8.3	85	15					32-317	0-2260
<i>Kelliella miliaris</i>		8.6	100						514	24-3223
<i>Venus casina</i>		7.7 - 9.1	100						98-271	5-271
<i>Clausinella fasciata</i>		7.9 - 9.1	100						98-149	4-149
<i>Dosinia lincta</i>		7.4 - 8.2	100						75-240	0-240
<i>Gouldia minima</i>		9.1	100						92	0-130
<i>Timoclea ovata</i>		6.0 - 9.1	90	10					21-606	4-606
<i>Phapia rhomboides</i>		7.9-8.7	100						100-150	0-183
<i>Hiatella arctica</i>		7.0 - 8.0	100						170-253	0-2000
<i>Hiatella rugosa</i>		6.8 - 8.6	92	8					66-1006	50-1100
<i>Hiatella</i> spp.		6.6 - 8.8	100						50-702	
<i>Mya truncata</i>		8.2	100						108	0-625
<i>Psiloteredo megotara</i>		-0.81						100	1022	
<i>Lyonsia norwegica</i>		3.6 - 8.6	60	40					140-407	7-407
<i>Pandora pinna</i>		6.5 - 8.4	100						150-251	30-251
<i>Cochlodesma preatenu</i>		8.6	100						150	0-150
<i>Poromya granulata</i>	2.6 - 7.95	-0.6 - 8.2	76	4		4	8	8	235-900	30-2650
<i>Cardiomya costellata</i>		6.6 - 8.6	100						205-515	4-1900
<i>Cardiomya curta</i>		6.7		100					914	450-2000
<i>Cardiomya striata</i>										400-1000
<i>Cuspidaria arctica</i>		-0.1			100				509	30-1190
<i>Cuspidaria lamellosa</i>		3.9 - 8.6	57	43					205-1099	93-1800
<i>Cuspidaria obesa</i>		-0.6 - 7.5	14	58		14	14		225-1078	18-4336
<i>Cuspidaria rostrata</i>		6.5 - 8.0	40	60					171-351	100-650
<i>Cuspidaria subtorta</i>		-0.68 - 1.6			33		66		509-990	0-990
<i>Lyonsiella abyssicola</i>	2.6 - 7.95	-0.85 - 8.6	26	9	13		39	13	235-1150	40-2000



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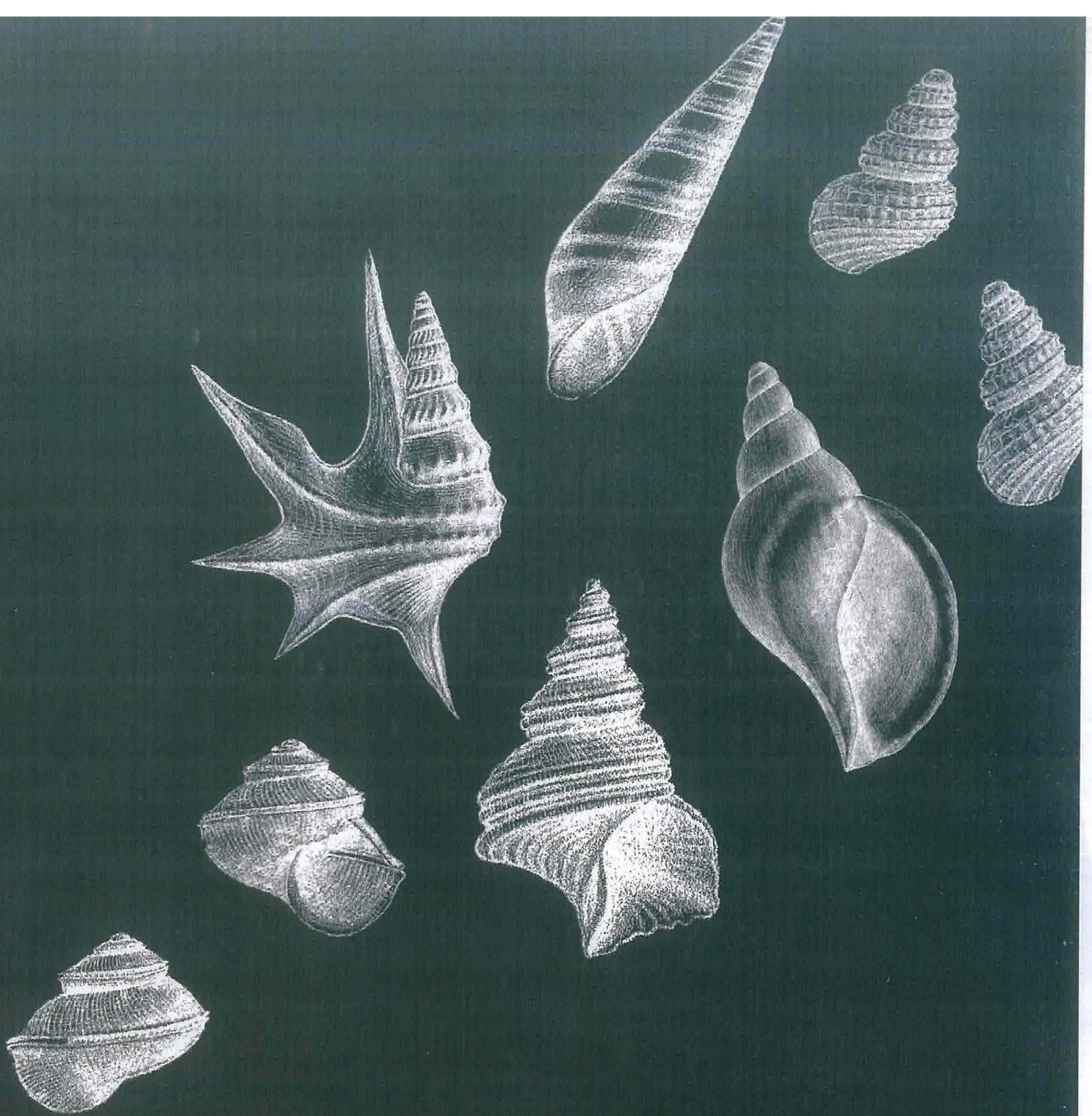


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editor:  
Dorete Bloch

# The Marine Mollusca of the Faroes

ISBN 99918-41-42-3

