

2016 North Sea Expedition: PRELIMINARY REPORT



February, 2017

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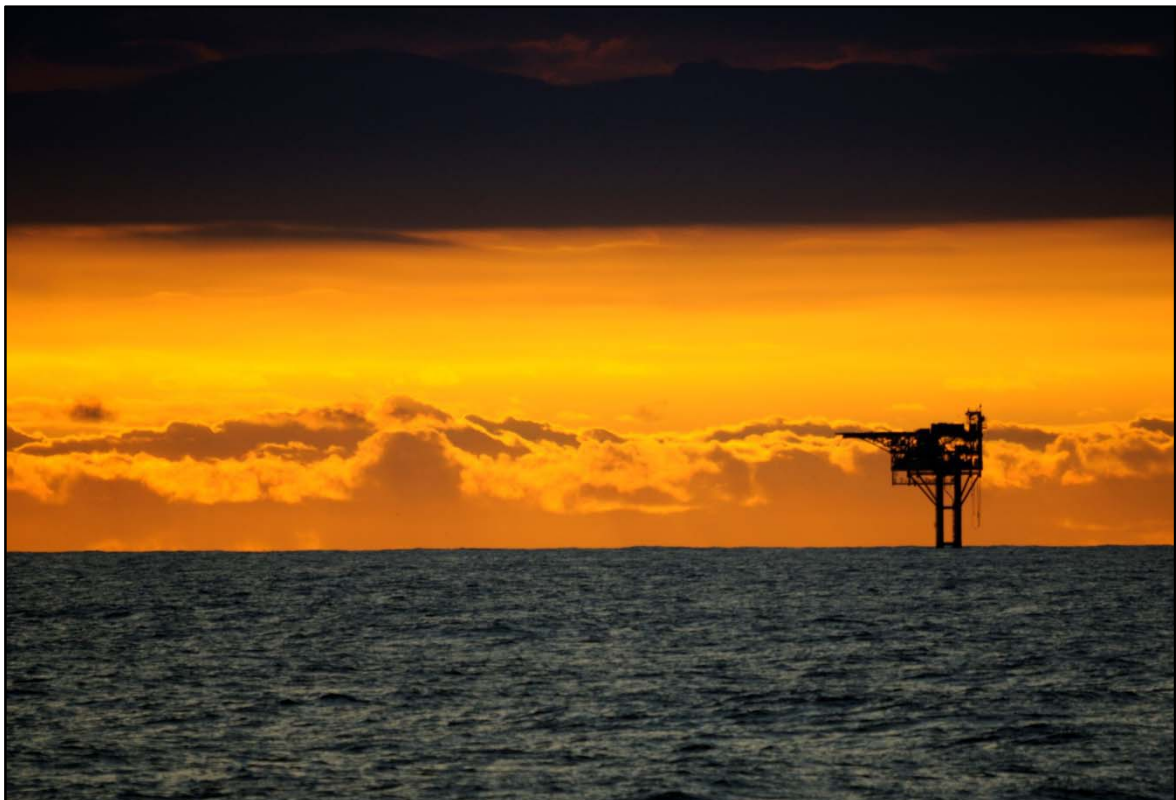
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1. INTRODUCTION

The North Sea is one of the most productive seas in the world, with a wide range of plankton, fish, seabirds, and organisms that live on the seafloor. It harbours valuable marine ecosystems like cold water reefs and seagrass meadows, and rich marine biodiversity including whales, dolphins, sharks and a wealth of commercial fish species. It is also of high socio-economic value due to its fisheries, oil and gas extraction, harbours and industry – which in turn have also made it one of the busiest, most highly disturbed seas in the world. North Sea marine ecosystems have been under tremendous pressure for hundreds of years, and few areas of the seabed are untouched by fishing, particularly bottom trawling.



A well-designed and effectively managed network of MPAs is key to addressing threats to marine ecosystems. MPAs that are properly designed and well-managed help to build ecosystem resilience, and they support and contribute to a wide variety of environmental priorities:

- Conserving biodiversity, including protecting rare and threatened species and habitats.
- Reversing global and local declines in fish populations and productivity by protecting crucial nursery, breeding and feeding grounds.

- Providing resistance and resilience to change in diverse marine communities. This helps to buffer them against threats such as climate change and alien species.
- Protecting and maintaining ‘ecosystem goods and services’, like commercial fishing, upon which humans are highly dependent.
- Reducing negative fisheries impacts on target and non-target species, including bycatch, discards and direct physical impacts from destructive practices such as trawling and dredging.
- Reducing the impacts of other threats, such as eutrophication and pollution.

In order to achieve the full range of benefits above, the North Sea network of MPAs must be strengthened. Currently, the majority of MPAs are coastal and therefore fail to adequately protect offshore species, including commercially exploited ones. Furthermore, many existing MPAs lack effective management, which limits their potential to achieve their intended aims.

In order to identify priority areas for protection, and to improve management of existing areas, there is a need to improve our knowledge and understanding of North Sea marine ecosystems and species. Despite a long history of marine research in the region, some areas of the North Sea remain poorly studied and documented, especially in offshore and deeper waters.

1.1 Objective

Oceana carried out a two-month expedition in July-August 2016, with the aim of documenting coastal and offshore areas in the waters of four North Sea countries: Denmark, the Netherlands, Norway, and the United Kingdom.

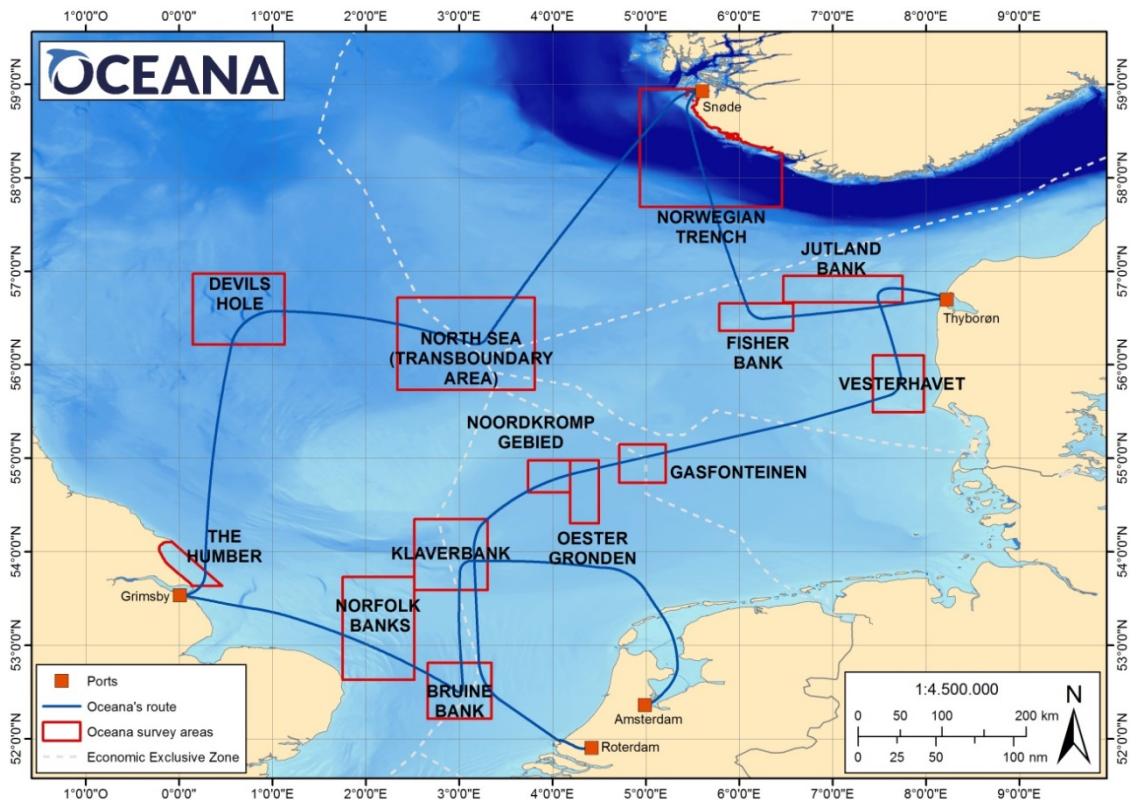
This at-sea expedition was carefully planned in order to document fish species, habitats and communities in selected areas of the North Sea, and to gather first-hand information from those areas where data are especially lacking, in order to advance the protection of new areas that are important for biodiversity. Oceana’s overall goal is to contribute to the declaration of a **larger network of Marine Protected Areas** within the North Sea, and to help strengthen the management of existing protected areas.

2. METHODOLOGY

Oceana visited a total of 13 areas in the North Sea (see Figure 1), two of which are areas of potential ecological importance in Norway. The first one was part of a so-called “Transboundary Area” in the centre of the North Sea, and the second one included part of the so-called “Norwegian Trench”, in an area that reaches more than 400 m depth. The survey of these zones was carried out onboard the research survey vessel MV Neptune, a fully-equipped vessel of 49.85 m overall length and 10 m extreme breadth.

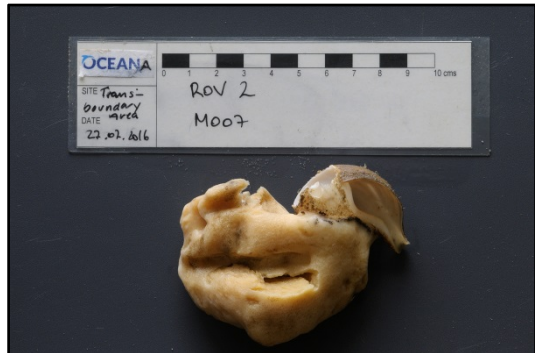
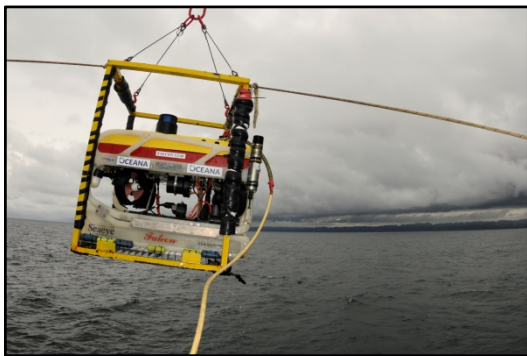
In each area, the seabed was explored mostly by visual means, using a remotely operated vehicle (ROV) with a high-definition camera, and a team of professional divers composed of photographers and videographers. For ROV image recording, a Saab Seaeye Falcon DR ROV was used, equipped with a High Definition Video (HDV) camera of 480 TVL with minimum scene illumination of 0.2 LUX (F1.4), ½” CCD Image Sensor, and a wide-angle, fixed focus ½” aspherical 3.8 mm lens. During ROV transects, images were recorded both in high definition and low resolution, and simultaneously documented position, depth, course and time. Considering the average speed and the wide angle of the camera (i.e., it was able to film transects of ca. 1.5 m width), the ROV allowed the observation of around 650 m² (±6 m²) per hour of seabed. Samples of key habitat-forming species were also collected (by means of the robotic arm of the ROV and directly by SCUBA divers) for detailed analyses to confirm preliminary identification.

Figure 1. Expedition route



Together with the ROV, a series of sediment samples were collected with a Van Veen grab in soft bottoms. In total, the sampling carried out in Norwegian waters is summarised as follows:

- 9 ROV dives
- 9 SCUBA dives
- 32 sediment grab samples
- 78 biological samples
- Approximately 600 underwater photos
- Approximately 600 underwater videos



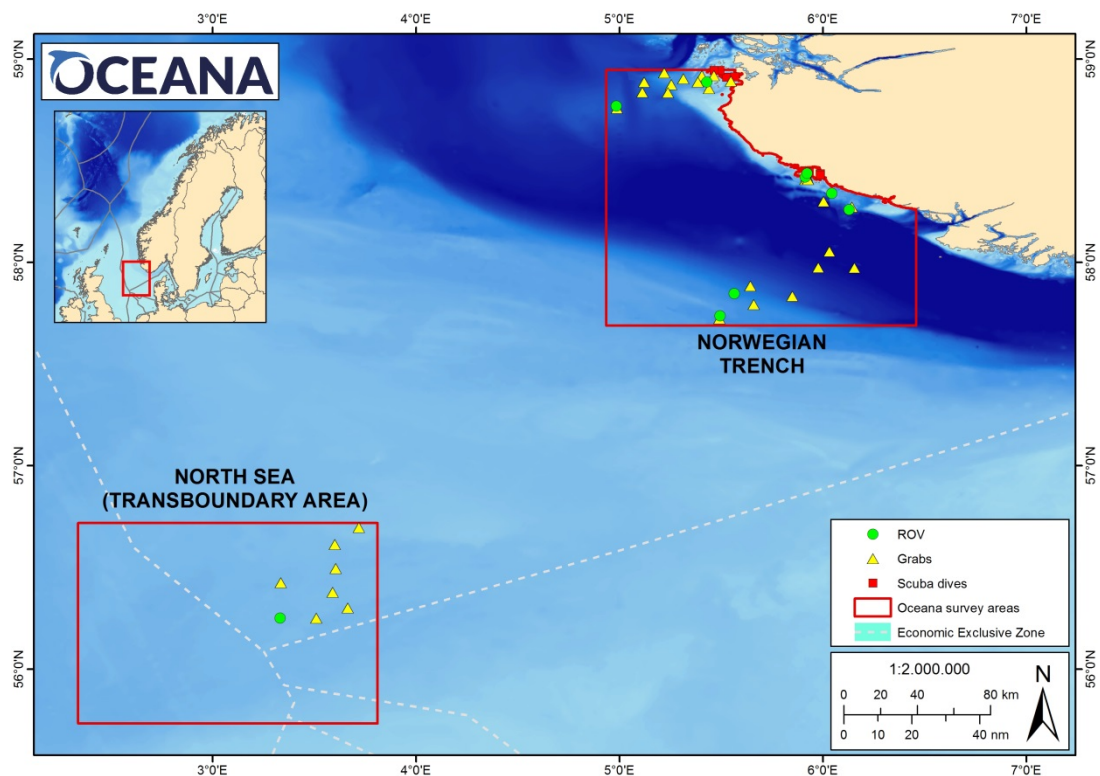
3. RESULTS

In total, Oceana documented roughly 400 species across a diverse range of habitats. Most of the survey areas were dominated by soft bottoms (i.e., sand and mud), sometimes also with pebbles and rocky areas. Other habitats of interest included: areas characterised by cnidarians, with a high abundance of anemones, and occasionally soft corals, sea-pens and gorgonians; kelp forests; and sponge aggregations.

Among the areas surveyed, there were some that appeared to provide important habitat for a range of commercial fishes, such as cod (*Gadus morhua*) and flatfishes (e.g., *Limanda limanda*, *Pleuronectes platessa*), elasmobranchs such as *Chimaera monstrosa* and crustaceans such as Norway lobster (*Nephrops norvegicus*) and edible crab (*Cancer pagurus*).

The expedition also documented impacts of widespread human disturbance, including evidence of bottom trawling, discarded or 'ghost' fishing nets, and extensive infrastructure such as oil platforms, cables, and wind farms.

Figure 2. Sampling done in Norwegian areas



More detailed information from each of the surveyed areas (ROVs, grabs and species lists) is presented below.

a. Area 1: Transboundary Area

ROV 1							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
27/07/2016	9:06	9:12	10:03	56° 15,079' N	3° 19,941' E	72	Mud/fine sand

IDENTIFIED SPECIES

- | | |
|-----------------------------------|---------------------------------------|
| - <i>Abietinaria abietina</i> | - <i>Gadus morhua</i> |
| - <i>Acanthocardia</i> sp. | - <i>Halecium</i> cf. <i>plumosum</i> |
| - <i>Actinauge richardi</i> | - <i>Hippoglossoides platessoides</i> |
| - <i>Alcyonidium diaphanum</i> | - <i>Hormathia digitata</i> |
| - <i>Alcyonium digitatum</i> | - <i>Limanda limanda</i> |
| - <i>Anapagurus chiroacanthus</i> | - <i>Merlangius merlangus</i> |
| - Annelida | - <i>Microstomus kitt</i> |
| - <i>Antalis</i> sp. | - <i>Ophiura ophiura</i> |
| - <i>Antalis vulgaris</i> | - <i>Oxydromus flexosus</i> |
| - <i>Arctica islandica</i> | - <i>Pagurus bernhardus</i> |
| - <i>Arenicola marina</i> | - <i>Pagurus cuanensis</i> |
| - <i>Asterias rubens</i> | - <i>Pectinaria</i> cf. <i>koreni</i> |
| - <i>Brissus unicolor</i> | - <i>Pleurobrachia pileus</i> |
| - <i>Buccinum undatum</i> | - <i>Pleuronectes platessa</i> |
| - <i>Corystes casivellanus</i> | - Porifera |
| - <i>Epizoanthus incrustatus</i> | - Serpulida |
| - <i>Eucretea loricata</i> | - <i>Virgularia mirabilis</i> |

GRAB 1			
Date	Latitude	Longitude	Bottom description
27/07/2016	56° 15, 760' N	3° 30, 577' E	Fine sand

IDENTIFIED SPECIES

- Cf. *Abra prismatica*
- *Afrodita aculeata*
- *Amphiura filiformis*
- *Antalis vulgaris*
- *Arctica islandica*
- *Astarte montagui*

- *Chamaelea striatula*
- Cf. Conidae
- *Echinocardium flavescens*
- *Ennucula tenuis*
- *Mimachlamys varia*
- *Retusa* sp.
- *Spisula elliptica*

GRAB 2			
Date	Latitude Start	Longitude Start	Bottom description
27/07/2016	56° 18, 799' N	3° 39, 850' E	Fine sand

IDENTIFIED SPECIES

- *Antalis vulgaris*
- *Arctica islandica*
- *Astarte montagui*
- *Chamaelea striatula*
- Cf. Conidae
- *Echinocardium flavescens*
- *Lucinoma borealis*
- *Pectinaria* sp.
- *Retusa* sp.
- Cf. *Tellymia ferruginosa*

GRAB 3			
Date	Latitude Start	Longitude Start	Bottom description
27/07/2016	56° 23, 375' N	3° 35, 425' E	Fine sand

IDENTIFIED SPECIES

- *Amphiura filiformis*
- *Astarte sulcata*
- *Astropecten irregularis*
- *Chamaelea striatula*
- *Ditrupa arietina*
- *Echinocardium flavescens*

GRAB 4			
Date	Latitude Start	Longitude Start	Bottom description
27/07/2016	56° 26, 234' N	3° 20, 136' E	Fine sand

IDENTIFIED SPECIES

- *Acteon tornatilis*
- *Amphiura filiformis*
- *Astropecten irregularis*
- *Chamaelea striatula*
- *Cylichna cylindracea*
- *Echinocardium flavescens*
- *Gouldia minima*
- *Nebalia bipes*
- *Pectinaria koreni*

GRAB 5			
Date	Latitude Start	Longitude Start	Bottom description
27/07/2016	56° 30,383' N	3° 36,376' E	Fine sand

IDENTIFIED SPECIES

- *Acanthocardia echinata*
- *Amphiura filiformis*
- *Antalis vulgaris*
- *Arctica islandica*
- *Chamaelea striatula*
- *Echinocardium flavescens*
- *Epitonium clathratulum*
- *Pectinaria* sp.
- *Spisula elliptica*
- *Thyasira biplicata*

GRAB 6			
Date	Latitude Start	Longitude Start	Bottom description
27/07/2016	56° 37,527' N	3° 36,101' E	Fine sand

IDENTIFIED SPECIES

- *Acanthocardia echinata*
- *Acteon tornatilis*
- *Amphiura filiformis*
- *Antalis vulgaris*
- *Astarte montagui*
- *Chamaelea striatula*
- *Echinocardium flavescens*
- *Epitonium clathratus*
- *Thyasira biplicata*

GRAB 7			
Date	Latitude Start	Longitude Start	Bottom description
27/07/2016	56° 42,532' N	3° 43,147' E	Fine sand

IDENTIFIED SPECIES

- *Antalis vulgaris*
- *Astarte montagui*
- *Astarte sulcata*
- *Astropecten irregularis*
- *Callista chione*
- *Chamalea striatula*
- *Echinocardium flavescens*
- *Lucinoma borealis*
- *Phaxas pellucidus*

b. Area 2: Norwegian trench

ROV 1							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	12:17	12:20	14:09	57° 44,250' N	5° 29,728' E	130	Mud/fine sand

IDENTIFIED SPECIES

- *Abietinaria abietina*
- *Acanthodoris pillosa*
- *Achaeus cranchii*
- *Actinauge richardi*
- *Ampelisca* sp.
- *Amphipoda*
- *Anomia ehippium*
- *Anomura* sp.
- *Antedon bifida*
- *Antho dichotoma*
- *Aporrhais pespelecani*
- *Ascidia virginea*
- *Ascidiella aspersa*
- *Astacilla longicornis*
- *Astarte sulcata*
- *Asterias rubens*
- *Balanus crenatus*
- *Balanus* sp.
- *Hornera lichenoides*
- *Hydractinia* sp.
- *Hydroides* sp.
- *Hymedesmia paupertas*
- *Hymedesmia* cf. *brondstei*
- *Iophon nigricans*
- *Lanice conchilega*
- *Limanda limanda*
- *Lophius piscatorius*
- *Luidia sarsi*
- *Lumpenus lampraetaeformis*
- *Metridium senile*
- *Molgula manhattensis*
- *Munida intermedia*
- *Munida rugosa*
- *Novocrania anomala*
- *Ophiactis balli*
- *Ophiothrix fragilis*

- *Bathynectes maravigna*
- *Biemna varantia*
- *Bolma rugosa*
- *Bolocera tuedia*
- *Brachiopoda*
- *Brissus unicolor*
- *Bryozoa*
- *Buccinum undatus*
- *Caberea boryi*
- *Caberea ellisii*
- *Caberea* sp.
- *Callionymus lira*
- *Caprella linearis*
- *Chiton* sp.
- *Ciona intestinalis*
- *Corella paralelograma*
- *Crangon crangon*
- *Craniella zetlandica*
- *Cuttlefish eggs*
- *Cyanea capillata*
- *Cyanea lamarcki*
- *Ditrupa arietina*
- *Eualus pusiolus*
- *Galathea intermedia*
- *Galatheidae*
- *Gracilechinus acutus*
- *Gracilechinus* cf. *elegans*
- C.f *Halichondria panicea*
- *Haliclona urceolus*
- *Henricis* sp.
- *Hippasterias phrygiana*
- C.f *Hippoglossoides* sp.
- *Hormathia digitata*
- *Ophiura ophiura*
- *Pagurus cuanensis*
- *Pagurus pubescens*
- *Palmiskenea skenei*
- C.f *Pandalina brevirostris*
- *Pandalus borealis*
- *Parastichopus tremulus*
- C.f *Parerithropodium* sp.
- *Pectinaria* sp.
- *Pelosina arborescens*
- *Phakellia rugosa*
- *Phakellia ventilabrum*
- *Placostegus tridentatus*
- *Platynereis dumerilii*
- *Polymastia robusta*
- *Pomatoceros triqueter*
- *Pseudamussium peslutrae*
- *Pteraster miliaris*
- *Reteporella beaniana*
- *Reteporella* sp.
- *Sabellidae*
- *Scalpellum scalpellum*
- *Scaphander lignarius*
- C.f *Serpula vermicularis*
- *Sertularella* cf. *mediterranea*
- *Sertularella* sp.
- *Spiochaetopterus* sp.
- *Stenopleustes latipes*
- *Stichastrella rosea*
- *Stomphia coccinea*
- *Stryphnus* sp.
- *Terebratulina retusa*

ROV 2							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	15:58	16:06	17:27	57° 50,846' N	5° 33,854' E	149	Mud/fine sand

IDENTIFIED SPECIES

- *Aphrodita aculeata*
- *Astacilla longicornis*
- *Asterias rubens*
- *Asteronix loveni*
- *Limanda limanda*
- *Lycodes vahli*
- *Meganyctiphanes norvegica*
- *Myxine glutinosa*

- *Astropecten irregularis*
- *Bolocera tuediae*
- *Corymorpha nutans*
- *Ditrupa arietina*
- *Funiculina quadrangularis*
- *Gadiculus argenteus*
- *Glyptocephalus cynoglossus*
- *Gracilechinus acutus*
- *Hippoglossoides platessoides*
- *Kophobelemnion stelliferum*
- *Lebbeus polaris*
- *Leptomedusa* sp.
- *Nephrops norvegicus*
- *Ophiura ophiura*
- *Pagurus* sp.
- *Pelosina arborescens*
- *Pennatula phosphorea*
- Pictinidae
- *Pollachius pollachius*
- *Pseudamysium peslutrae*
- *Rossia glaucopis*
- *Scaphander lignarius*
- *Trisopterus esmarki*
- *Virgularia mirabilis*

ROV 3							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	14:02	14:19	16:10	58° 15,621' N	6° 07,735' E	172	Rock

IDENTIFIED SPECIES

- *Antho dichotoma*
- *Aplysilla rosea*
- *Argentina silus*
- *Astacilla longicornis*
- *Axinella infundibuliformis*
- *Bolocera tuediae*
- *Bonellia viridis*
- *Caberea* sp.
- *Cancer pagurus*
- *Chimaera monstrosa*
- *Clathria barleei*
- *Craniella zetlandica*
- *Diphasia alata*
- *Diphasia margareta*
- *Echinus esculentus*
- Euphasiacea
- *Filograna implexa*
- *Flustra foliacea*
- *Gadus morhua*
- *Geodia atlantica*
- *Geodia baretii*
- *Geodia* sp.
- *Gorgonocephalus medusae*
- *Halichondria bowerbanki*
- *Halichondria* cf. *panacea*
- *Hydroides* sp.
- *Lebbeus polaris*
- *Lithodes maja*
- *Meganyctiphanes norvegica*
- *Merlangius merlangus*
- *Munida rugosa*
- *Mycale lingua*
- *Novocrania anomala*
- *Pagurus pubescens*
- *Pandalus borealis*
- *Paramuricea placomus*
- *Parastichopus tremulus*
- *Phakellia robusta*
- *Phakellia ventilabrum*
- *Pollachius pollachius*
- *Pollachius virens*
- *Polycarpa pomaria*
- *Polymastia* sp.
- *Polyplumaria flabellate*
- *Pomatoceros triqueter*
- *Porania pulvillus*
- *Pteraster militaris*
- *Sebastes viviparus*
- *Sepiola* sp.
- *Sertularella* sp.

- *Halichondria* sp.
- *Haliclona urceolus*
- *Helicolenus dactylopterus*
- *Henricia* sp.
- *Hexadella detritifera*
- *Hippasteria phrygiana*
- *Spirontocaris liljeborgi*
- *Stichastrella rosea*
- *Stryphnus fortis*
- *Trisopterus esmarki*
- *Urticina felina*

ROV 4							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	19:06	19:12	20:45	58° 20,420' N	6° 02,647' E	104	Mix

IDENTIFIED SPECIES

- *Acantholabrus palloni*
- *Acidia mentula*
- *Antedon bifida*
- *Antho dichotoma*
- *Argentina* sp.
- *Ascidia conchilega*
- *Ascidia mentula*
- *Ascidiella aspersa*
- *Asterias rubens*
- *Axinella infundibuliformis*
- *Balanomorpha*
- *Brachiopoda*
- *Cancer pagurus*
- *Clathria* sp.
- *Cyanea lamarckii*
- *Filograna implexa*
- *Gadus morhua*
- *Galathea* sp.
- *Geodia baretti*
- *Geodia* sp.
- *Halichondria* sp.
- *Haliclona urceolus*
- *Henricia* sp.
- *Hornera lichenoides*
- *Hydroides* sp.
- *Hydrozoa*
- *Hymedesmia paupertas*
- *Hymedesmia* sp.
- *Iophonopsis nigricans*
- *Lithodes maja*
- *Lophius piscatorius*
- *Marthasterias glacialis*
- *Melanogrammus aeglefinus*
- *Molva molva*
- *Munida rugosa*
- *Mycale lingua*
- *Novocrania anomala*
- *Omalosecosa ramulosa*
- *Pagurus bernhardus*
- *Pagurus* sp.
- *Palmiskenea skenei*
- *Pandalina brevirostris*
- *Phakellia rugosa*
- *Phakellia ventilabrum*
- *Phrynorhombus norvegicus*
- *Placostegus tridentatus*
- *C.f Polymastia* sp.
- *Pomatoceros triqueter*
- *Pomatoschistus* sp.
- *Porania pulvillus*
- *Porifera*
- *Reteporella* sp.
- *Rhizocaulus verticillatus*
- *Cf. Sarcodyction* sp.
- *Sebastes viviparus*
- *Serpulidae*
- *Spirorbis* sp.
- *Stichastrella rosea*
- *Terebratulina retusa*
- *Trisopterus esmarki*
- *Urticina felina*

ROV 5							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	16:57	17:00	17:53	58° 53,311' N	5° 25,735' E	48	rock

IDENTIFIED SPECIES

- | | |
|-------------------------------------|----------------------------------|
| - <i>Cf. Antho involvens</i> | - <i>Leptasterias muelleri</i> |
| - <i>Adamsia carciniopados</i> | - <i>Metridium senile</i> |
| - <i>Antedon bifida</i> | - <i>Molva molva</i> |
| - <i>Ascidia conchilega</i> | - <i>Munida rugosa</i> |
| - <i>Ascidia mentula</i> | - <i>Omalosecosa ramulosa</i> |
| - <i>Asterias Rubens</i> | - <i>Ophiothrix fragilis</i> |
| - <i>Axinella infundibuliformis</i> | - <i>Ophiuroidea sp.</i> |
| - <i>Balanus balanus</i> | - <i>Pagurus prideauxi</i> |
| - Bryozoa | - <i>Polychaeta</i> |
| - <i>Calliostoma zizyphinum</i> | - <i>Polymastia boletiformis</i> |
| - <i>Cf. Callyonimus sp.</i> | - <i>Polymastia mamillaris</i> |
| - <i>Cancer pagurus</i> | - <i>Pomatoceros triqueter</i> |
| - <i>Caryophyllia zyziphinum</i> | - <i>Porania pulvillus</i> |
| - Cottidae | - <i>Porella compressa</i> |
| - <i>Crisia sp.</i> | - Porifera |
| - <i>Crossaster papposus</i> | - <i>Reteporella sp.</i> |
| - <i>Echinus esculentus</i> | - <i>Sebastes viviparus</i> |
| - <i>Filograna implexa</i> | - <i>Serpulidae</i> |
| - <i>Gadus morhua</i> | - <i>Spirorbis sp.</i> |
| - <i>Galathea strigosa</i> | - <i>Stichastrella rosea</i> |
| - <i>Halecium sp.</i> | - <i>Tectura virginea</i> |
| - <i>Henricia sp.</i> | - <i>Trisopterus esmarki</i> |
| - <i>Hydroides sp.</i> | - <i>Urticina felina</i> |
| - Hydrozoa | |

ROV 6							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	7:54	8:06	9:45	58° 46,154' N	4° 59,140' E	208	mud/stone

IDENTIFIED SPECIES

- | | |
|-------------------------------|--------------------------------|
| - <i>Abietinaria abietina</i> | - |
| - <i>Amphipoda</i> | - <i>Hymedesmia sp.</i> |
| - <i>Antedon bifida</i> | - <i>Iophonopsis nigricans</i> |
| - <i>Antho dichotoma</i> | - <i>Iphimedia obesa</i> |
| - <i>Aplysilla rosea</i> | - Isopoda |
| - <i>Aplysilla sulfurea</i> | - <i>Kinetoskias sp.</i> |

- *Ascidia* sp.
- *Astacilla longicornis*
- *Axinella infundibuliformis*
- *Bienma varantia*
- *Bolocera tuediae*
- *Bonellia viridis*
- Brachiopoda
- Bryozoa
- *Buccinum undatum*
- *Bugula* sp.
- *Caberea* sp.
- *Ceramaster granularis*
- Cf. *Quasilina brevis*
- *Clathria laevis*
- *Clathria* sp.
- *Crania anomala*
- *Craniella zetlandica*
- *Diphasia alata*
- *Echinus acutus*
- *Etmopterus spinax*
- *Filograna implexa*
- *Gadiculus argenteus*
- *Gadus morhua*
- Gastropoda
- *Geodia baretii*
- *Gracilechinus acutus*
- *Gracilechinus cf. elegans*
- *Guancha* sp.
- Cf. *Halichondria bowerbanki*
- *Halichondria cf. panicea*
- *Helicolenus dactylopterus*
- *Henricia sanguinolenta*
- *Henricia* sp.
- *Hexadella detritifera*
- *Hormathia digitata*
- *Hornera cf. lichenoides*
- *Hornera lichenoides*
- *Hydroides* sp.
- Hydrozoa
- *Hymedesmia paupertas*
- *Lebbeus polaris*
- Cf. *Macandrevia cranium*
- *Meganyctiphanes norvegica*
- *Merlangius merlangus*
- *Molgula* sp.
- Mollusca
- *Munida rugosa*
- *Mycale lingua*
- *Myxine glutinosa*
- *Neocrania anomala*
- *Omalosecosa ramulosa*
- *Pagurus* sp.
- *Palmiskenea*
- *Pandalina* sp.
- *Pandalus borealis*
- *Phakellia robusta*
- *Phakellia rugosa*
- *Phakellia ventilabrum*
- Plumulariidae
- *Pollachius pollachius*
- *Pollachius virens*
- *Polycarpa cf. pomaria*
- *Polymastia bolletiformis*
- *Polymastia* sp.
- Porifera
- *Pseudamusium peslutrae*
- *Pseudarchaster parelii*
- *Rajella fyllae*
- *Reteporella* sp.
- *Rhizocrinus lofotensis*
- *Rossia glaucopsis*
- *Schizotricha frutescens*
- *Sebastes viviparus*
- *Serpula* sp.
- Serpulidae
- *Sertularella* sp.
- *Stryphnus fortis*
- *Terebratulina retusa*
- *Tetilla zelandica*
- *Trisopterus esmarki*

ROV 7							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	8:10	8:19	8:54	58° 25,223' N	5° 54,832' E	107	fine sand

IDENTIFIED SPECIES

- *Arctica islandica*
- *Cancer pagurus*
- *Diogenes pugilator*
- *Gadiculus argenteus*
- *Gadus morhua*
- *Galathea intermedia*
- *Galathea strigosa*
- *Hydroides* sp.
- *Lithodes maja*
- *Meganyctiphanes norvegica*
- *Molva molva*
- *Munida* sp.
- *Ophiothrix fragilis*
- *Ophiuroidea*
- *Pagurus* sp.
- Pandalidae
- *Pandalina* sp.
- *Pandalus borealis*
- Polychaeta
- *Pomatoceros triqueter*
- *Porania pulvillus*
- *Serpula* sp.

ROV 8							
Date	Time surface	Time bottom	Time end	Latitude	Longitude	Initial depth	Bottom description
28/07/2016	9:53	10:01	11:19	58° 26,334' N	5° 55,409' E	47	fine sand

IDENTIFIED SPECIES

- *Anapagurus chirocanthus*
- *Arctica islandica*
- *Arnoglossus thori*
- *Astacilla longicornis*
- *Asterias rubens*
- *Balanus balanus*
- Bivalvia
- *Cancer pagurus*
- *Caryophyllia smithii*
- *Crangon crangon*
- Cf. *Endectyon delaubenfelsi*
- *Gadus morhua*
- *Halichondria* sp.
- *Henricia sanguinolenta*
- *Henricis* sp.
- Hydrozoa
- *Leptasterias muelleri*
- *Melanogrammus aeglefinus*
- *Microstomus kitt*
- *Molva molva*
- *Ophiothrix fragilis*
- *Pecten maximus*
- *Phakellia ventilabrum*
- *Phrynorhombus norvegicus*
- *Polymastia boletiformis*
- *Porania pulvillus*
- *Porella compressa*
- Porifera
- Cf. *Quasilina brevis*
- *Serpulidae*
- *Spirorbis* sp.
- *Swiftia pallida*
- *Swiftia rosea*
- *Trisopterus esmarki*

GRAB 1			
Date	Latitude Start	Longitude Start	Bottom description
28/07/2016	57° 44,162' N	5° 29,530' E	Compact mud with stones

IDENTIFIED SPECIES

- *Abra longicallus*
- *Amphiura filiformis*
- *Antalis vulgaris*
- *Aporrhais pespelecani*
- *Arctica islandica*
- *Astarte sulcata*
- *Brissopsis lyrifera*
- *Euspira catena*
- *Limatula subauriculata*
- Cf. *Oenopota* sp.
- *Parvicardium minimum*
- Pectinidae
- *Tapes philippinarum*
- *Thyasira* sp.
- *Timoclea ovata*

GRAB 2			
Date	Latitude Start	Longitude Start	Bottom description
28/07/2016	57° 48,350' N	5° 39,657' E	Compact mud with stones

IDENTIFIED SPECIES

- *Amphiura filiformis*
- *Antalis* sp.
- *Arctica islandica*
- *Karnekampia sulcata*
- *Ophiura ophiura*
- *Saccamina sphaerica*
- *Thyasira* sp.

GRAB 3			
Date	Latitude Start	Longitude Start	Bottom description
28/07/2016	57° 53,815' N	5° 38,607' E	Compact mud/clay

IDENTIFIED SPECIES

- *Abra longicallus*
- *Amphiura filiformis*
- *Antalis* sp.
- *Astrorhiza arenaria*
- *Cardyomia striata*
- *Ditrupa arietina*
- *Golfingia vulgaris*
- *Pseudamussium peslutrae*
- *Timoclea ovata*

GRAB 4			
Date	Latitude Start	Longitude Start	Bottom description
28/07/2016	57° 50,862' N	5° 50,962' E	Compact mud/clay

IDENTIFIED SPECIES

- *Abra nitida*
- *Amphiura chiajei*
- *Astrorhiza arenaria*
- Cf. *Conidea*
- *Nucula hanleyi*
- *Pectinidae*
- *Thyasira obsoleta*
- *Thyasira* sp.

GRAB 5			
Date	Latitude Start	Longitude Start	Bottom description
29/07/2016	57° 59,228' N	6° 09,329' E	Compact mud with stones

IDENTIFIED SPECIES

- *Amphiura chiajei*
- *Bivalvia*
- *Bryozoa*
- Cf. *Saccamina sphaerica*

GRAB 6			
Date	Latitude Start	Longitude Start	Bottom description
29/07/2016	58° 04,026' N	6° 01,898' E	Compact mud /small stones

IDENTIFIED SPECIES

- *Abra longicallus*
- *Amphiura filiformis*
- *Antalis vulgaris*
- *Astarte montagui*
- *Astarte sulcata*
- Foraminifera
- *Parvicardium minimum*
- *Pseudamussium peslutrae*
- *Sipuncula* sp.

GRAB 7			
Date	Latitude Start	Longitude Start	Bottom description
29/07/2016	57° 59,280' N	5° 58,621' E	Compact mud

IDENTIFIED SPECIES

- *Abra longicallus*
- *Antalis entalis*
- *Antalis vulgaris*
- *Ennucula tenuis*
- *Euspira* sp.
- Foraminifera
- *Ophiura* sp.
- *Yoldiella lenticula*

GRAB 8			
Date	Latitude Start	Longitude Start	Bottom description
29/07/2016	58° 17,171' N	6° 08,607' E	Pebbles

IDENTIFIED SPECIES

- | | |
|--------------------------------------|----------------------------------|
| - <i>Abra longicallus</i> | - <i>Modiolus adriaticus</i> |
| - <i>Aequipecten opercularis</i> | - <i>Novocrania anomala</i> |
| - <i>Anomia ephippium</i> | - <i>Nucula minuta</i> |
| - <i>Antalis entalis</i> | - <i>Nucula nitidosa</i> |
| - <i>Antalis vulgaris</i> | - <i>Parvicardium exiguum</i> |
| - <i>Astarte elliptica</i> | - <i>Parvicardium minimum</i> |
| - <i>Astarte sulcata</i> | - <i>Parvicardium pinnulatum</i> |
| - <i>Cerithiopsidae</i> | - <i>Placostegus tridentatus</i> |
| - <i>Ctena decussata</i> | - <i>Pododesmus</i> sp. |
| - <i>Ennucula tenuis</i> | - <i>Pomatoceros triqueter</i> |
| - <i>Eulimella scillae</i> | - <i>Pseudamussium peslutrae</i> |
| - <i>Euspira</i> cf. <i>catenata</i> | - <i>Puncturella noachina</i> |

- *Hiatella arctica*
- *Macandrevia cranium*
- *Timoclea ovata*
- *Yoldiella lenticula*

GRAB 9			
Date	Latitude Start	Longitude Start	Bottom description
29/07/2016	58° 18,732' N	6° 00,153' E	Compact mud with pebbles

IDENTIFIED SPECIES

- *Antalis entalis*
- *Astarte elliptica*
- *Astarte sulcata*
- *Chlamys islandica*
- *Corbula gibba*
- *Exidmonea atlantica*
- *Hiatella arctica*
- *Munida rugosa*
- *Nucula* sp.
- *Pseudamussium peslutrae*
- *Tunicata (Styela/Pyura)*

GRAB 10			
Date	Latitude Start	Longitude Start	Bottom description
01/08/2016	58° 54,308' N	5° 32,871' E	Compact mud with pebbles

IDENTIFIED SPECIES

- *Acteon tornatilis*
- *Antalis cf.vulgare*
- *Antalis entalis*
- *Calliostoma cf.zizyphinum*
- *Cerithiopsis metula*
- *Chlamys islandica*
- *Corbula gibba*
- *Echinocyamus pusillus*
- *Eulimella acicula*
- *Euspira catena*
- *Gari fervensis*
- *Liomesus ovum*
- Mactridae
- *Oenopota turricula*
- *Parvicardium scabrum*
- *Pectinaria koreni*
- *Philine scabra*
- *Retusa truncatula*
- *Scaphopoda*
- Semelidae
- *Tellina minuta*
- *Thyasira biplicata*
- *Thyasira cf.flexuosa*
- *Thyasira cf.sarsi*
- *Thyasira gouldi*
- *Thyasira* sp.
- *Turritella communis*
- *Venus casina*

GRAB 11			
Date	Latitude Start	Longitude Start	Bottom description
01/08/2016	58° 52,105' N	5° 26,425' E	tbd

IDENTIFIED SPECIES

- *Arctica islandica*
- *Chlamys islandica*
- *Echinocyamus pusillus*
- *Gari tellinella*
- *Gouldia minima*
- *Mactra stultorum*
- *Palliolium incomparabile*
- *Parvicardium pinnulatum*
- *Spisula elliptica*
- *Tellina pygmaea*
- *Timoclea ovata*
- *Venus casina*

GRAB 12			
Date	Latitude Start	Longitude Start	Bottom description
02/08/2016	58° 55,879' N	5° 24,348' E	tbd

IDENTIFIED SPECIES

- | | |
|--------------------------------|------------------------------------|
| - <i>Anomia ephippium</i> | - <i>Palliolium incomparabile</i> |
| - <i>Astarte</i> sp. | - <i>Palliolium striatum</i> |
| - <i>Delectopecten vitreus</i> | - <i>Parvicardium scabrum</i> |
| - <i>Euspira catena</i> | - <i>Parvicardium</i> sp. |
| - <i>Iothia fulva</i> | - <i>Pectinaria koreni</i> |
| - <i>Karnekampia sulcata</i> | - <i>Pododoesmu patelliformis</i> |
| - <i>Macandrevia cranium</i> | - <i>Cf. Portlandia intermedia</i> |
| - <i>Modiolula phaseolina</i> | - <i>Pseudamussium peslutrae</i> |
| - <i>Nucula hanleyi</i> | - <i>Puncturella noachina</i> |
| - <i>Nuculana minuta</i> | - <i>Tectura virginea</i> |
| - <i>Oenopota</i> sp. | - <i>Timoclea ovata</i> |
| - <i>Oenopota turricula</i> | - <i>Volutomitra groenlandica</i> |

GRAB 13			
Date	Latitude Start	Longitude Start	Bottom description
02/08/2016	58° 55,913' N	5° 27,863' E	tbd

IDENTIFIED SPECIES

- | | |
|---------------------------|-----------------------------------|
| - <i>Abra longicallus</i> | - <i>Palliolium incomparabile</i> |
| - <i>Anomia ephippium</i> | - <i>Parvicardium pinnulatum</i> |

- *Astarte montagui*
- *Corbula gibba*
- *Echinocyamus pusillus*
- *Euspira catena*
- *Euspira* sp.
- *Gibbula cineraria*
- *Lothia fulva*
- *Limatula gwyni*
- *Mactra stultorum*
- *Modiolula phaseolina*
- Mytilidae
- *Nuculana minuta*
- *Parvicardium scabrum*
- *Pectinaria* sp.
- *Retusa truncatula*
- *Spisula elliptica*
- *Tectura virginea*
- *Tellina* cf. *pygmaea*
- *Thyasira sarsi*
- *Thyasira* sp.
- *Timoclea ovata*
- *Turritella communis*
- Veneridae

GRAB 14			
Date	Latitude Start	Longitude Start	Bottom description
03/08/2016	58° 54,007' N	5° 07,324' E	tbd

IDENTIFIED SPECIES

- *Anomia ephippium*
- *Chamaelea striatula*
- Mytilidae
- *Venus casina*

GRAB 15			
Date	Latitude Start	Longitude Start	Bottom description
03/08/2016	58° 53,238' N	5° 15,320' E	tbd

IDENTIFIED SPECIES

- *Astarte sulcata*
- *Bathyarca pectunculoides*
- *Cardyomia striata*
- *Echinocyamus pusillus*
- *Macandrevia cranium*
- *Modiolula phaseolina*
- *Palliolium incomparabile*
- *Parvicardium pinnulatum*
- *Parvicardium minimum*
- *Pododesmus patelliformis*
- *Retusa truncatula*
- *Timoclea ovata*
- *Yoldiella* sp.

GRAB 16			
Date	Latitude Start	Longitude Start	Bottom description
03/08/2016	58° 54,024' N	5° 23,116' E	tbd

IDENTIFIED SPECIES

- *Abra prismatica*
- *Ditrupa arietina*
- *Limatula gwyni*
- *Modiolula phaseolina*
- *Nucula cf. nitidosa*
- *Nuculana minuta*
- *Oenopota turricula*
- *Palliolium cf. striatum*
- *Palliolium incomparabile*
- *Parvicardium minimum*
- *Parvicardium scabrum*
- Pectinidae
- *Retusa truncatula*
- *Scabrotrophon fabricii*
- *Similipecten similis*
- *Thyasira biplicata*
- *Timoclea ovata*

GRAB 17			
Date	Latitude Start	Longitude Start	Bottom description
04/08/2016	58° 46,269' N	4° 59,264' E	tbd

NO SPECIES PRESENT

GRAB 18			
Date	Latitude Start	Longitude Start	Bottom description
04/08/2016	58° 50,998' N	5° 06,754' E	tbd

IDENTIFIED SPECIES

- *Aequipecten opercularis*
- *Astarte montagui*
- *Macandrevia cranium*
- *Palliolium striatum*

GRAB 19			
Date	Latitude Start	Longitude Start	Bottom description
04/08/2016	58° 50,867' N	5° 14,286' E	tbd

IDENTIFIED SPECIES

- *Aequipecten opercularis*
- *Astarte montagui*
- *Astarte* sp.
- *Bathyarca pectunculoides*
- *Ditrupa arientina*
- *Euspira* sp.
- Gastropoda
- *Hiatella arctica*
- *Karnekampia sulcata*
- *Limatula gwyni*
- *Limea crassa*
- *Macandrevia cranium*
- *Modiolula phaseolina*
- *Nuculana minuta*
- *Oenopota pyramidalis*
- *Palliolium striatum*
- *Parvicardium minimum*
- *Parvicardium pinnulatum*
- *Pleurotomella packardi*
- *Puncturella noachina*
- *Retusa* sp.
- *Retusa truncatula*
- *Timoclea ovata*
- *Trophonopsis muricata*
- *Venus casina*
- *Yoldiella* sp.

GRAB 20			
Date	Latitude Start	Longitude Start	Bottom description
04/08/2016	58° 54,977' N	5° 18,812' E	tbd

IDENTIFIED SPECIES

- *Abra* sp.
- *Asperarca nodulosa*
- *Bathyarca pectunculoides*
- *Cardiomya costellata*
- *Ditrupa arientina*
- *Euspira catena*
- *Karnekampia sulcata*
- *Limatula gwyni*
- *Macandrevia cranium*
- *Modiolula phaseolina*
- *Mytilus edulis*
- *Oenopota* sp.
- *Parvicardium pinnulatum*
- *Pectinaria* sp.
- *Puncturella noachina*
- *Retusa truncatula*
- *Thyasira biplicata*
- *Thyasira sarsi*
- *Timoclea ovata*
- *Typhlomangelia nivalis*
- *Venus casina*

GRAB 21			
Date	Latitude Start	Longitude Start	Bottom description
04/08/2016	58° 56,717' N	5° 13,217' E	tbd

NO SAMPLES

GRAB 22			
Date	Latitude Start	Longitude Start	Bottom description
07/08/2016	58° 25,223' N	5° 54,832' E	tbd

IDENTIFIED SPECIES

- *Anomia ephippium*
- *Astarte* sp.
- *Bivalvia*
- *Bryozoa*
- *Chlamys islandica*
- *Emarginula fissure*
- *Eunucula tenuis*
- *Euspira* sp.
- *Hemithiris psittacea*
- *Hiatella arctica*
- *Palliolium striatum*
- *Terebratulina retusa*
- *Timoclea ovata*
- *Venus casina*

GRAB 23			
Date	Latitude Start	Longitude Start	Bottom description
07/08/2016	58° 26,286' N	5° 55,317' E	tbd

IDENTIFIED SPECIES

- *Antalis entalis*
- *Astarte crebricostata*
- *Astarte montagui*
- *Chamaelea striatula*
- *Corbula gibba*
- *Ditrupa arietina*
- *Dosinia exoleta*
- *Euspira catena*
- *Gastropoda*
- *Heliccion pellucidum*
- *Liomesus ovum*
- *Lucinoma borealis*
- *Oenopota turricula*
- *Palliolium striatum*
- *Pleurotomella* sp.
- *Puncturella noachina*

- *Raphitoma aequalis*
- *Timoclea ovata*
- *Turritella communis*
- *Venus casina*

GRAB 24			
Date	Latitude Start	Longitude Start	Bottom description
07/08/2016	58° 25,697' N	5° 55,432' E	tbd

IDENTIFIED SPECIES

- *Acanthocardia paucicostata*
- *Antalis entails*
- *Antalis* sp.
- *Astarte montagui*
- *Balanomorpha*
- *Bathyarca pectunculoides*
- *Ditrupa arientina*
- *Emarginula fissure*
- *Epitonium* sp.
- *Euspira montagui*
- *Euspira* sp.
- *Gibbula cineraria*
- *Heliccion pellucidus*
- *Hiatella arctica*
- *Limatula gwyni*
- *Lucinoma borealis*
- *Nucella lapillus*
- *Nucula* cf. *tenuis*
- *Oenopota exarata*
- *Oenopota turricula*
- *Palliolum* cf. *incomparibilie*
- *Parvicardium pinnulatum*
- *Parvicardium* sp.
- *Pectinaria koreni*
- *Rissoa* sp.
- Scleractinia
- *Thyasira biplicata*
- *Thyasira sarsi*
- *Thyasira* sp.
- *Timoclea ovata*
- *Turritella communis*
- *Venus casina*
- *Yoldiella lenticula*

GRAB 25			
Date	Latitude Start	Longitude Start	Bottom description
07/08/2016	58° 25,244' N	5° 55,662' E	tbd

IDENTIFIED SPECIES

- *Abra prismatica*
- *Anomia ephippium*
- *Antalis entails*
- *Bathyarca pectunculoides*
- *Cardiomya costellata*
- *Dosinia lupinus*
- *Echinocyamus pusillus*
- *Hiatella arctica*
- *Iothia fulva*
- *Limatula subauriculata*
- *Oenopota* cf. *exarata*
- *Oenopota* cf. *ovalis*
- *Parvicardium minimum*
- *Parvicardium scabrum*
- *Patella pellucida*
- *Pectinaria* sp.
- *Roxania utriculus*
- *Thyasira biplicata*
- *Thyasira sarsi*
- *Thyasira* sp.

- Mytilidae
- *Mytilus* sp.
- *Nuculana pernula*
- *Timoclea ovata*
- *Turritella communis*
- *Venus casina*

SCUBA DIVES 1 AND 2		
Date	Latitude Start	Longitude Start
01/08/2016	58° 54, 677' N / 58° 54,774' N	5° 31,601' E/ 5° 33,978' E

IDENTIFIED SPECIES

- *Alcyonium digitatum*
- *Asterias rubens*
- *Buccinum undatum*
- *Calliostoma zizyphinum*
- *Cancer pagurus*
- *Crisia* sp.
- *Crossaster papposus*
- *Ctenolabrus rupestris*
- *Cyanea capillata*
- *Cyanea lamarckii*
- *Echinus esculentus*
- *Escharoides coccinea*
- *Gadus morhua*
- *Galathea strigose*
- *Gobiusculus flavescens*
- *Homarus gammarus*
- *Limacia clavigera*
- *Lophius piscatorius*
- *Membranipora membranacea*
- *Obelia geniculata*
- *Pomatoceros triqueter*
- *Pomatoschistus norvegicus*
- *Prothesceraeus vittatus*
- *Pycnoclavella aurilucens*
- *Spirorbis* sp.
- *Syngnathus acus*

SCUBA DIVES 3 AND 4		
Date	Latitude Start	Longitude Start
02/08/2016	58° 56,673' N / 58° 56,650' N	5° 29,656' E/5° 27,886' E

IDENTIFIED SPECIES

- *Alcyonium digitatum*
- *Asterias rubens*
- *Calliostoma zizyphinum*
- *Crossaster papposus*
- *Gobiusculus flavescens*
- *Halichondria panicea*
- *Hyas araneus*
- *Lepidochitona cinerea*
- *Limacia clavigera*
- *Marthasterias glacialis*
- *Membranipora membranacea*
- *Obelia geniculata*
- *Pagurus bernhardus*

- *Pecten maximus*
- *Pomastochistus norvegicus*
- *Trididemnum cereum*
- *Urticina felina*

SCUBA DIVE 5		
Date	Latitude Start	Longitude Start
03/08/2016	58° 53,311' N	5° 25,623' E

IDENTIFIED SPECIES

- *Actinia equine*
- *Alcyonium digitatum*
- *Asterias rubens*
- *Cancer pagurus*
- *Corella parallelogramma*
- *Cradoscrupocellaria reptans*
- *Crossaster papposus*
- *Cyanea capillata*
- *Doris pseudoargus*
- *Echinus esculentus*
- Gadid juvenile
- *Halychoerus gryphus*
- *Halychondria panacea*
- Hydrozoa
- *Jorunna tomentosa*
- *Myxilla incrustans*
- *Obelia geniculata*
- *Porania pulvillus*

SCUBA DIVE 6		
Date	Latitude Start	Longitude Start
07/08/2016	58° 26,577' N	5° 55,982' E

IDENTIFIED SPECIES

- | | |
|-------------------------------|-----------------------------------|
| - <i>Alcyonium digitatum</i> | - <i>Hyas araneus</i> |
| - <i>Ascidia mentula</i> | - <i>Labrus bergylta</i> |
| - <i>Asterias rubens</i> | - <i>Lophius piscatorius</i> |
| - <i>Balanomorpha</i> | - <i>Marthasterias glacialis</i> |
| - <i>Botryllus schlosseri</i> | - <i>Membranipora membranacea</i> |
| - <i>Cadlina laevis</i> | - <i>Metridium senile</i> |
| - <i>Cancer pagurus</i> | - <i>Myxilla incrustans</i> |
| - <i>Caryophyllia smithii</i> | - <i>Pollachius pollachius</i> |
| - <i>Clathrina clathrus</i> | - <i>Polymastia boletiformis</i> |

- *Cradoscrupocellaria reptans*
- *Crisia* sp.
- *Ctenolabrus rupestris*
- *Echinus esculentus*
- *Flabellina affinis*
- *Halichondria panacea*
- *Haliclona urceolus*
- *Polymastia mamillaris*
- *Sagartia elegans*
- *Spirorbis* sp.
- *Sycon ciliatum*
- *Tubularia larynx*
- *Urticina felina*

SCUBA DIVE 7		
Date	Latitude Start	Longitude Start
09/08/2016	58° 25,244' N	5° 59,167' E

IDENTIFIED SPECIES

- *Aequipecten opercularis*
- *Alcyonium* sp.
- *Aporrhais pespelecani*
- *Ascidella scabra*
- *Asterias rubens*
- *Astropecten irregularis*
- Bryozoa
- *Callionymus lyra*
- *Cancer pagurus*
- *Carcinus maenas*
- *Corella paralelograma*
- *Cradoscrupocellaria reptans*
- *Dendronotus lacteum*
- *Escharoides coccinea*
- *Gobius niger*
- *Gobiusculus flavescens*
- *Haliclona urceolus*
- *Hyas araneus*
- *Hydarctinia echinata*
- *Lepidochitona cinerea*
- *Membranipora membranacea*
- *Metridium senile*
- *Mytilus edulis*
- *Ophiothrix fragilis*
- *Pagurus bernhardus*
- *Pleuronectes platessa*
- *Pomatoschistus norvegicus*
- Porifera
- *Prostheceraeus vittatus*
- *Tonicella marmorata*
- *Urticina felina*

SCUBA DIVES 8 AND 9		
Date	Latitude Start	Longitude Start
10/08/2016	58° 25,820' N	5° 59,223' E

IDENTIFIED SPECIES

- *Aequipecten opercularis*
- *Alcyonium digitatum*
- *Asterias rubens*
- *Cancer pagurus*
- *Caryophyllia smithii*
- *Clupea harengus*
- *Ctenolabrus rupestris*
- *Cyclopterus lumpus*

- *Dendronotus lacteum*
- *Echinus esculentus*
- *Entelurus aequoreus*
- *Gobiusculus flavescens*
- *Homarus gammarus*
- Hydrozoa
- *Laminaria saccharina*
- *Lophius piscatorius*
- *Lucernaria quadricornis*
- *Membranipora membranacea*
- *Metridium senile*
- *Pagurus bernhardus*
- *Pleuronectes platessa*
- *Pollachius pollachius*
- *Sagartia elegans*
- *Sagartia troglodytes*
- *Sycon raphanus*
- *Urticina felina*

4. ANNEX – PHOTOS TAKEN IN NORWEGIAN WATERS



Entelurus aequoreus



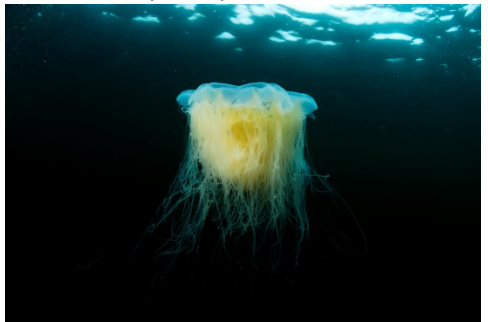
Lophius piscatorius



Gadus morhua



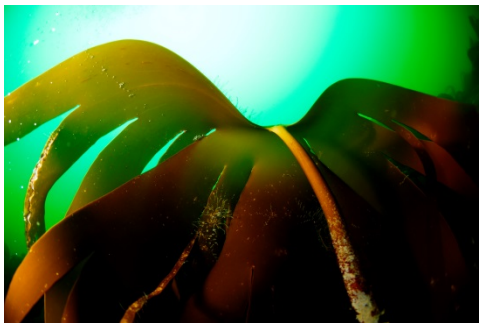
Asterians rubens



Cyanea capillata



Larus fuscus



Laminaria sp.



Cyclopterus lumpus



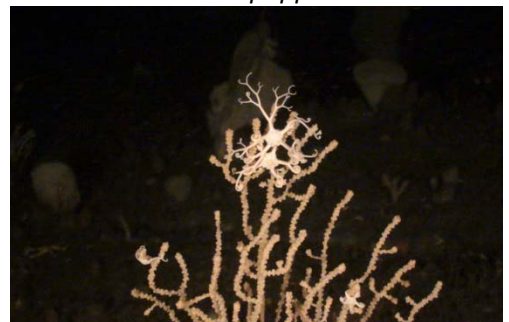
Crossaster papposus



Limagia clavigera



Hyas araneus



Gorgonocephalus sp.



Geodia sp.



Aporrhais pespelecani



Dendronotus frondosus