

Shetland

Area summaries

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1999

Series editor: David Connor

30

Whale Firth and Yell (north-west)

Location

<i>Position (centre)</i>	HP 475 030	60°42.4'N 01°07.7'W
<i>Administrative area</i>	Shetland Islands	
<i>Conservation agency/area</i>	Scottish Natural Heritage	North Areas (Northern Isles)

Physical features

<i>Physiographic type</i>	Voes, open coast
<i>Length of coast</i>	69.2 km
<i>Area of inlet</i>	Whale Firth: 3.2 km ² ; Gloop Voe: 0.8 km ²
<i>Bathymetry</i>	50 m contour within 100 m of north-west Yell, 1.5 km on north coast and south of Whale Firth. Maximum depth of 27 m in Whale Firth, 30+ m in Gloop Voe
<i>Wave exposure</i>	Extremely exposed on open coast to extremely sheltered in Whale Firth
<i>Tidal streams</i>	Strong on open coast; negligible in Whale Firth
<i>Tidal range</i>	2 m (mean springs); 0.9 m (mean neaps)
<i>Salinity</i>	Fully marine

Introduction

Area 30 covers the north-west corner of Yell and includes Whale Firth, one of the longest voes in Shetland, and the smaller Gloop Voe. It lies between the northern entrances to Bluemull Sound (*Area summary* 3) and Yell Sound (*Area summary* 26) and thus much of the open coast is subject to strong tidal streams. This is a scenic rocky coast, much of which comprises cliffs with geos, arches, caves and stacks, and it is extremely exposed to wave action from the north and west. Whale Firth, locally known as Whal Firth, reaches a maximum depth of 27 m at its entrance, shallowing gradually towards its head and much of the voe is shallower than 10 m. The outer part of the voe runs north to south and is thus exposed to wave action from the north. However, the narrow configuration moderates wave action and, from the point where the voe bends to the east, it becomes extremely sheltered. The area is fully marine.

Much of the coastline consists of steep or vertical rock with sand and shingle beaches in embayments including Wick of Breckon and Gloop Voe. Most of Whale Firth is fringed by bedrock although there is boulder and some shingle in the inner part of the voe. In Whale Firth the bedrock slope continues into the sublittoral to a depth of at least 21 m at the voe entrance and 6 m at the bend in the voe with only scattered boulders on sand or isolated rock outcrops further in. At the base of the rock slope, clean sand at the voe entrance grades to muddy sand and gravel at the head. There is no information for sublittoral substrata on the open coast but, in the north-west of the area, bedrock is likely to continue to 40-50 m depth.

This is a remote moorland area with few roads and housing concentrated in the north of the area between Gloop Voe and Bluemull Sound. The houses have septic tanks and water quality is excellent. The surrounding land is primarily rough grazing with some improved grassland along the south side of Whale Firth and in the north of Area 30. Adjacent coastal habitats include a dune and machair system at the Sands of Breckon. There are mussel *Mytilus edulis* and scallop farms on Whale Firth.

Marine biology

Marine biological surveys

	<i>Survey methods</i>	<i>No. of sites</i>	<i>Date(s) of survey</i>	<i>Source</i>
<i>Littoral</i>	Recording	9	1982	Williams, Cohen & Boyce (1983)
<i>Sublittoral</i>	Phase I mapping/recording	-	1981	Berryman & Young (1979)

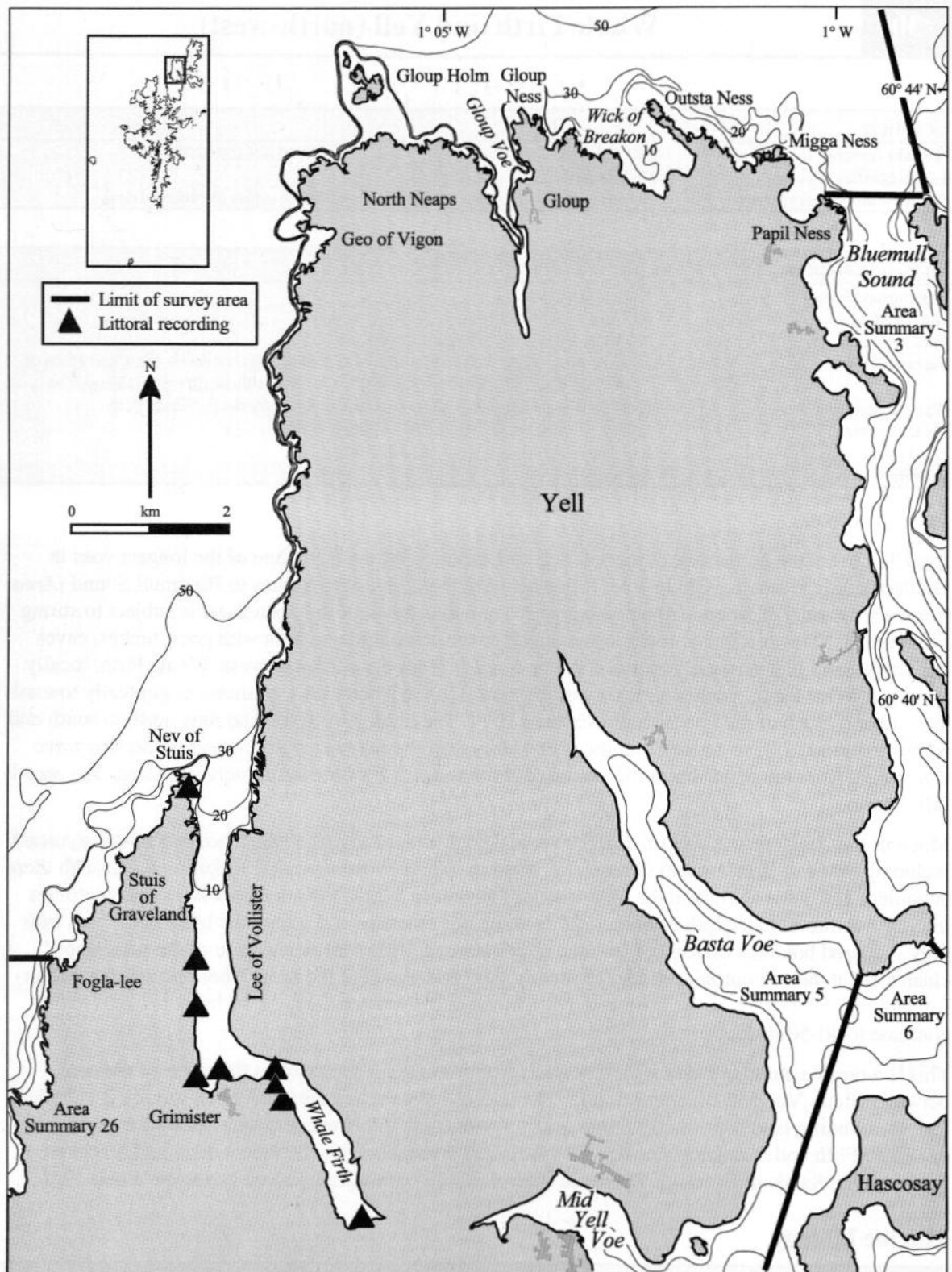


Figure 30.1 Main features of the area, showing sites surveyed.

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Littoral

The littoral zone on the open coast consists largely of steep or vertical rock. There are clean sand beaches in the Wick of Breckon, Gloup Voe and Geo of Vigon and shingle beaches at Breckon, Bay of Brough and the entrance to Gloup Voe. In Whale Firth, there are steep bedrock shores along the outer part of the voe with more gradually-sloping rock and boulder shores in the inner part of the voe. At the head of the voe, sand and shingle are found beneath the boulders. Biological information on the littoral zone in this area is all from Whale Firth.

Biotope zonation on the rocky shores in Whale Firth demonstrates clearly the transition from wave-exposed to wave-sheltered conditions. In the exposed outer part of the voe, yellow and grey lichens dominate the supralittoral (YG) whilst the littoral fringe has a wide band of the black lichen *Verrucaria maura* (Ver.Ver). Below this, the mid-eulittoral is animal dominated with a zone of small mussels *Mytilus edulis* mixed with the barnacle *Semibalanus balanoides* (MytB) followed by barnacles and the limpet *Patella vulgata* (BPat.Sem). A mat of the red alga *Porphyra umbilicalis* covers the barnacles and mussels in the upper part of the mid-eulittoral. Algae such as *Corallina officinalis* and *Mastocarpus stellatus* are found in the lower eulittoral and kelp *Alaria esculenta* with *Laminaria digitata* and *M. edulis* dominates the sublittoral fringe (Ala.Ldig). About half-way down this outer section, red algae are more abundant in the lower eulittoral with a turf of *M. stellatus* (Mas). Shelter from wave action increases towards the bend in the voe and, a short distance to the north of the bend, some fucoid algae appear, with *Fucus spiralis* present in the upper eulittoral (Fspi) and *Fucus serratus* in the lower eulittoral (Fser.Fser). Barnacles and mussels continue to dominate the mid-eulittoral but *L. digitata* replaces *A. esculenta* as the dominant kelp in the sublittoral fringe.

From the bend to the head of the voe, fucoids dominate littoral rock. In the bay at Grimister, yellow and grey lichens and then *V. maura* cover the supralittoral and littoral fringe whilst there are bands of fucoids *Pelvetia canaliculata* and then *F. spiralis* in the upper eulittoral (Pel; Fspi). The mid-eulittoral of the more exposed site here has barnacles and limpets dominant, as in the outer sites, whilst a nearby more sheltered site has a narrow band of barnacles and limpets but also has zones of the fucoids *Ascophyllum nodosum* and *Fucus vesiculosus*. *F. serratus* dominates the lower eulittoral at both sites. In the inner arm, *A. nodosum* is the dominant species in the mid-eulittoral, forming a dense blanket with some *F. vesiculosus* mixed in with it (Asc.Asc). Here, although the littoral zone still consists of bedrock with some boulders, there is some muddy sand in the sublittoral fringe and *L. digitata* and the brown alga *Halidrys siliquosa* characterise the biotope with clumps of foliose red algae such as *Furcellaria lumbricalis*, *M. stellatus* and *Chondrus crispus*. At the head of the voe, bedrock and boulders are adjacent to sand and shingle; the shore is dominated by *V. maura* and *A. nodosum*.

Sublittoral

The following descriptions of the sublittoral in Whale Firth are based on a series of surveys carried out by Leicester Polytechnic (Berryman 1981, 1983; Berryman & Clark 1982; Berryman & Young 1979) which are not included in the MNCR database.

In the sublittoral within Whale Firth, the bedrock slope continues into the sublittoral to a depth of at least 21 m at the voe entrance, with a cliff to 13 m and boulders beyond this. There are surge gullies and caves in this outer part of the voe. The voe shallows rapidly, with depths greater than 10 m restricted to the outer 1.5 km of the voe, and thus hard substrata are restricted to shallow water inside the voe. The boulder-sand boundary occurs at 9 m at the Lee of Vollister and 6 m at the bend in the voe with only scattered boulders on sand or isolated rock outcrops further in. At the base of the rock slope, clean sand at the voe entrance grades to muddy sand, gravel and mud at the head. There is no information for sublittoral substrata on the open coast but, in the north-west of Area 30, bedrock probably continues to 40-50 m depth.

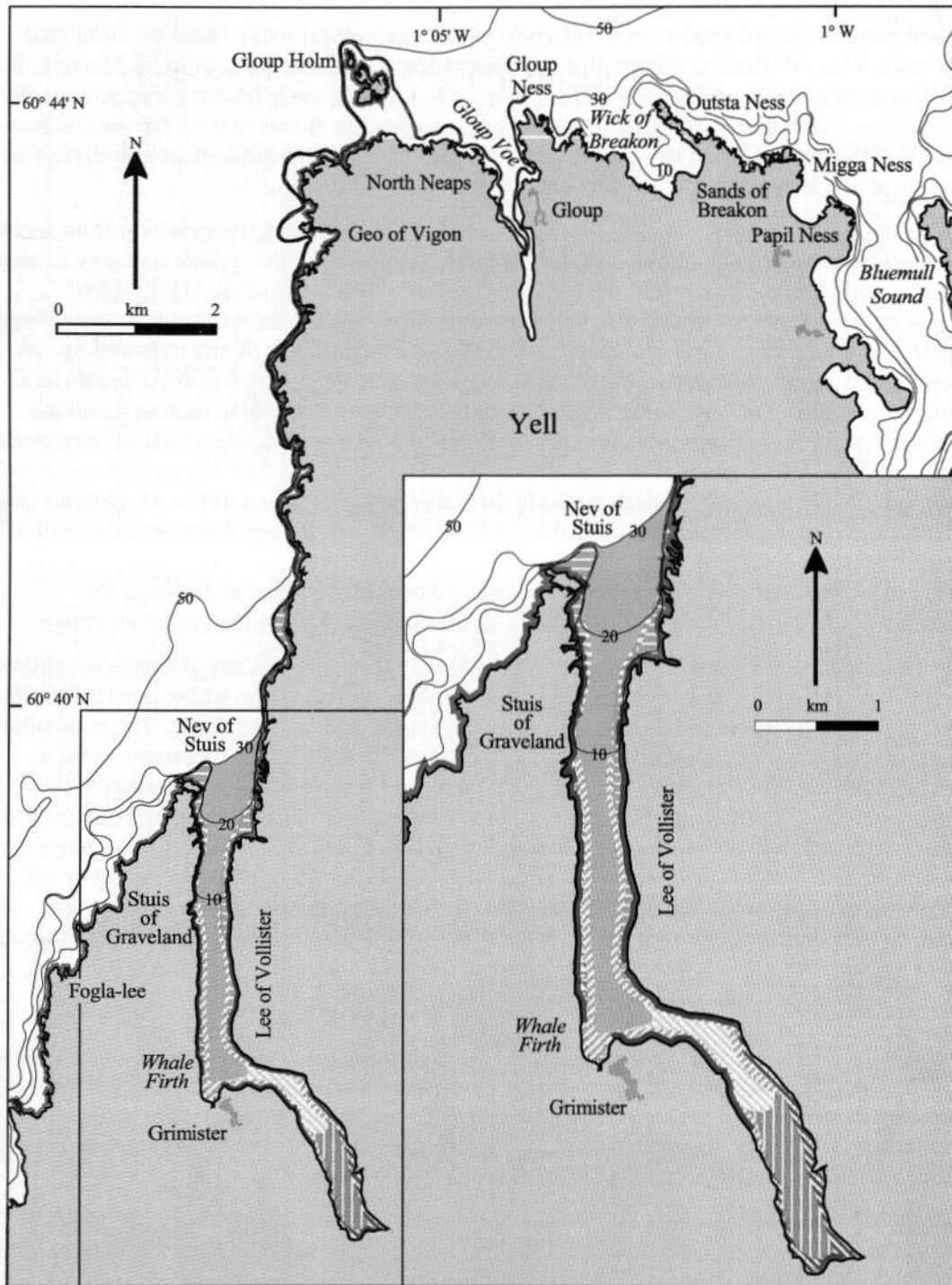















Figure 30.2 Indicative distribution of the main biotopes in the area (based on data from survey sites shown in Figure 30.1, cited literature and additional field observations). (Key to biotopes symbols on next page.)
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 Littoral rock with mussels and barnacles (MytB; Ala.Myt)	 Grazed kelp <i>Laminaria hyperborea</i> (LhypGz.Ft)
 Littoral rock with barnacles, fucoids and red algae (MytB; BPat; BPat.Sem; Fser.Fser; Ala.Ldig)	 Mixed kelps <i>Laminaria hyperborea</i> and <i>Laminaria saccharina</i> (LhypLsac.Ft)
 Littoral rock with dense fucoid algae (Pel; Fspi; BPat; BPat.Sem; Fves; Asc.Asc; Fser.Fser; Ldig.Ldig)	 Circalittoral rock or mixed substrata with solitary ascidians and anemones (Aasp)
 } Littoral boulders and cobbles on mixed sediments (FvesX; FserX)	 Infralittoral gravels and sands (IGS)
 Kelp <i>Laminaria hyperborea</i> with faunal turf and dense red algae (LhypFa)	 Infralittoral muddy sands (IMS)
 Mixed kelps <i>Laminaria saccharina</i> and <i>Saccorhiza polyschides</i> (LsacSac)	 Sublittoral soft, stable mud with seapens (PhiVir)
	 Sublittoral mixed sediment with <i>Laminaria saccharina</i> (LsacX)

At the entrance to the voe, *Laminaria hyperborea* kelp forest extends to a depth of 10 m and, despite large numbers of urchins *Echinus esculentus*, it has a reasonably diverse sub-flora of red and brown algae, including species such as *Odonthalia dentata*, *Delesseria sanguinea*, *Dictyota dichotoma* and *Desmarestia ligulata* (LhypFa). This is replaced by a more heavily grazed mixed kelp forest of both *Laminaria saccharina* and *L. hyperborea* by the bend in the voe (LhypGz.Ft), with species such as horse mussels *Modiolus modiolus*, dead-man's fingers *Alcyonium digitatum*, featherstars *Antedon bifida* and dahlia anemones *Urticina felina* on rock beneath the kelp. *L. saccharina* is the dominant kelp in the inner part of the voe, often mixed with the brown alga *Chorda filum* (LhypLsac.Ft). Associated species here include *A. bifida*, ascidians *Clavelina lepadiformis* and *Botryllus schlosseri*, the shore crab *Carcinus maenas* and the starfish *Asterias rubens*.

A surge gully at the entrance to Whale Firth supports a rich sponge and ascidian community on its walls with species such as the ascidians *Polyclinum aurantium*, *Dendrodoa grossularia* and *B. schlosseri*, sponges *Clathrina coriacea* and *Halichondria panicea* and the anemone *U. felina*. Squat lobsters *Galathea strigosa* are numerous in crevices and *L. hyperborea* kelp forest covers upward-facing rock surfaces. The gully has a sand and cobble floor. There is little information available for the circalittoral rock at the voe entrance although large numbers of urchins and *M. modiolus* have been noted as present and lobsters *Homarus gammarus* have been found.

Sublittoral sediments are sandy in the outer part of Whale Firth; sand and stones beyond the kelp forest in a depth of 9-10 m in the outer part of voe support *L. saccharina* with the red alga *Cystoclonium purpureum*, the whelk *Buccinum undatum*, *A. rubens* and *M. modiolus*. The sand itself has razor clams *Ensis* sp. (IGS). Further in, boulders and muddy sand in shallow water have *L. saccharina*, the brown algae *C. filum* and *Halidrys siliquosa*, the red alga *Dilsea carnosa*, *A. digitatum* and *A. bifida* (LsacX). The ascidians *Asciidiella aspersa* and *Corella parallelogramma* and the anemone *Metridium senile* become increasingly common on silty boulders towards the head of the voe (Aasp). The sediment becomes muddier with distance into the voe and species such as *M. modiolus*, burrowing brittlestars *Amphiura* spp. and the queen scallop *Aequipecten opercularis* are common. A plain of mud in the inner arm supports in addition a large population of the anemone *Sagartiogeton laceratus* with smaller numbers of the anemone *Cerianthus lloydii*, and the tube-dwelling polychaete *Myxicola infundibulum* (PhiVir).

Nature conservation

Conservation sites		
Site name	Status	Main features
Breckon	SSSI	Botanical
Shetland Islands	ESA	Agri-environmental scheme
Lumbister	RSPB	Ornithology

Human influences

Coastal developments and uses

This is a remote, moorland area with few roads, and housing concentrated in the north of the area between Gloup Voe and Bluemull Sound. The houses have septic tanks and water quality is excellent. The surrounding land is primarily rough grazing with some improved grassland along the south side of Whale Firth and in the north of Area 30. Adjacent coastal habitats include a dune and machair system at the Sands of Breckon.

There is a pier at head of Whale Firth.

Marine developments and uses

Potting for crustaceans is carried out in the rocky inshore areas and there are mussel *Mytilus edulis* and scallop farms on Whale Firth.

References and further reading

- Berryman, J. 1981. Part 2: Diving report, 1980. *In: Ecological studies in the maritime approaches to the Shetland Oil Terminal*, ed. by J.A. Fowler. Leicester, Leicester Polytechnic, School of Life Sciences.
- Berryman, J. 1983. Diving report. *In: Ecological studies in the maritime approaches to the Shetland Oil Terminal, Part 2, 1982*, ed. by J.A. Fowler. Leicester, Leicester Polytechnic, School of Life Sciences.
- Berryman, J., & Clark, D. 1982. Part 2: 1981 diving report. *In: Ecological studies in the maritime approaches to the Shetland Oil Terminal, 1982*, ed. by J.A. Fowler. Leicester, Leicester Polytechnic, School of Life Sciences.
- Berryman, J., & Young, J. 1979. Part 3: Diving report. *In: Ecological studies in the maritime approaches to the Shetland Oil Terminal*, ed. by J.A. Fowler. Leicester, Leicester Polytechnic, School of Life Sciences.
- Williams, J., Cohen, S., & Boyce, J. 1983. *Ecological studies in the maritime approaches to the Shetland Oil Terminal 1982 part 1. Littoral studies*. Unpublished, Leicester Polytechnic, School of Life Sciences.

Sites surveyed

- Survey 376: 1982 Leicester Polytechnic littoral survey of the approaches to the Shetland Oil Terminal (Williams, Cohen & Boyce 1983).

Littoral sites

<i>Survey</i>	<i>Site</i>	<i>Site name</i>	<i>Grid reference</i>	<i>Latitude/longitude</i>	<i>Biotopes recorded</i>
376	4	Easter Tammy's Hole, Whale Firth.	HU 463 972	60°39.3'N 01°09.1'W	YG; Ver.Ver; MytB; BPat; BPat.Sem; Ala.Ldig
376	8	Graveland, Whale Firth.	HU 464 944	60°37.8'N 01°09.1'W	YG; Ver.Ver; Fspi; MytB; BPat; BPat.Sem; Fser.Fser
376	12	S Birka Lees, Whale Firth.	HU 464 950	60°38.1'N 01°09.1'W	Ver.Ver; MytB; BPat.Sem; BPat; Mas
376	19	Poita, Whale Firth.	HU 467 936	60°37.4'N 01°08.7'W	YG; Ver; Ver.Ver; Pel; Fspi; BPat.Sem; Fser.Fser
376	23	Staney Pund, Whale Firth.	HU 475 932	60°37.1'N 01°07.9'W	YG; Ver.Ver; Pel; Fspi; BPat; Asc.Asc
376	26	Scarva Taing, Whale Firth.	HU 474 936	60°37.4'N 01°08.0'W	YG; Pel; Fspi; BPat.Sem; Fves; Asc.Asc; Fser.Fser
376	27	North Grommond, Whale Firth.	HU 464 935	60°37.3'N 01°09.1'W	Ver.Ver; Pel; Fspi; Asc.Asc; Fser.Fser
376	28	N of Staney Pund, Whale Firth.	HU 474 934	60°37.3'N 01°08.0'W	YG; Ver.Ver; Pel; Fspi; Asc.Asc
376	29	SE Whale Firth Head.	HU 485 917	60°36.3'N 01°06.8'W	Ver; Ver.Ver; Asc.Asc

Compiled by:

Christine Howson

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Foula

Location

Position (centre)	HT 960 380	60°07.6'N 02°04.3'W
Administrative area	Shetland Islands	
Conservation agency/area	Scottish Natural Heritage	North Areas (Northern Isles)

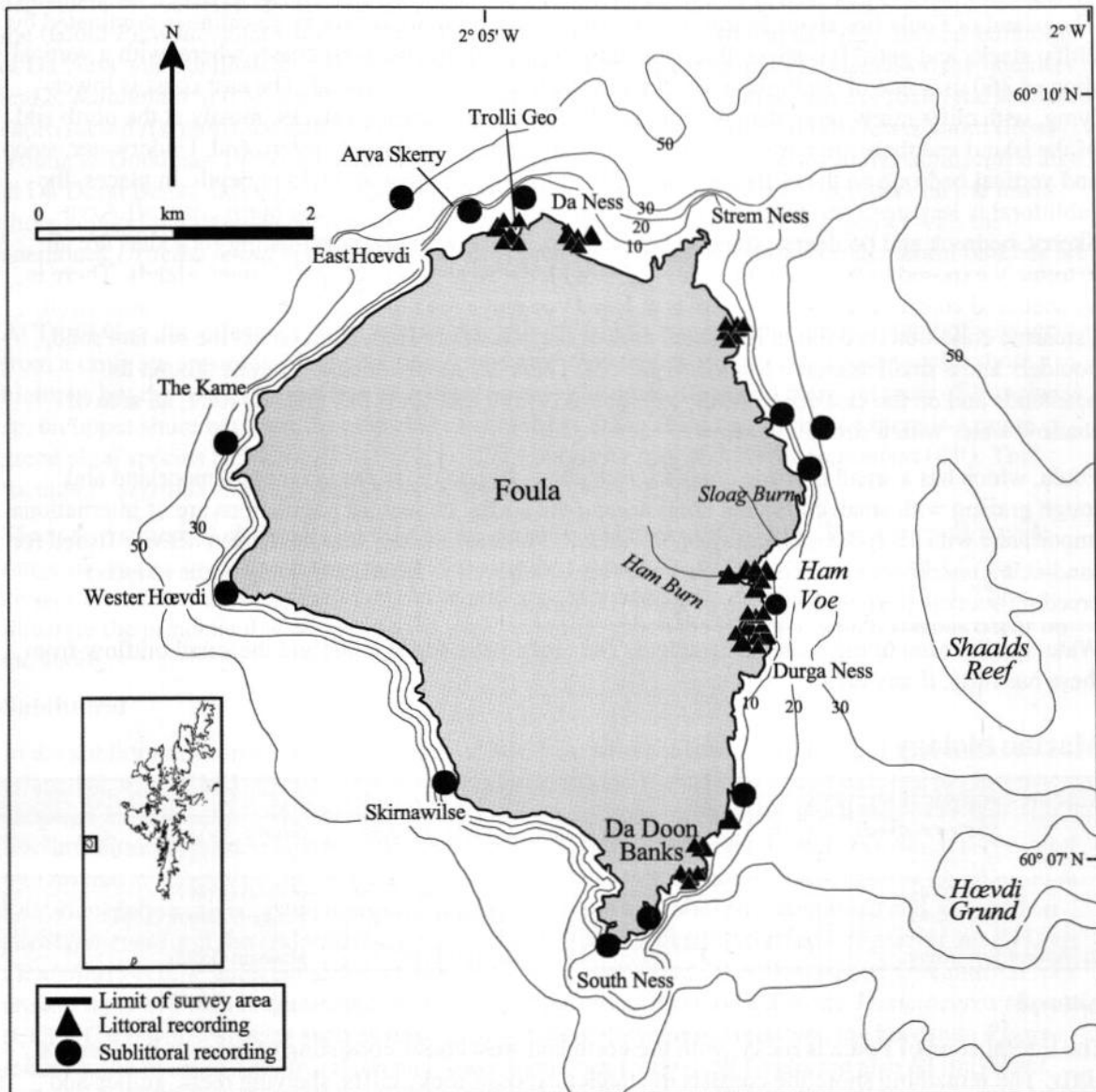


Figure 31.1 Main features of the area, showing sites surveyed.

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Physical features

<i>Physiographic type</i>	Island (open coast)
<i>Length of coast</i>	21.3 km
<i>Bathymetry</i>	50 m contour comes within 500 m of coast around much of island; shallower platform on east coast
<i>Wave exposure</i>	Extremely exposed – exposed. Localised shelter within Ham Voe and behind islets
<i>Tidal streams</i>	Negligible to strong around headlands and on east coast
<i>Tidal range</i>	2 m (mean springs); 0.7 m (mean neaps)
<i>Salinity</i>	Fully marine

Introduction

The island of Foula lies about 20 km west of Shetland. Its impressive rocky coastline is dominated by cliffs, stacks and geos. It is sheer along the most exposed north and west coasts where, with a vertical drop of 360 m, some of the highest sea cliffs in the British Isles are found. The east coast is lower-lying, with cliffs rarely more than 40 m in height. There are numerous stacks, mostly at the north end of the island and there are caves and geos around the south-eastern and eastern end. Underwater, steep and vertical bedrock on the cliffs and stacks falls to a boulder floor at 30-35 m depth. In places, the sublittoral is less steep and there are massive boulders close inshore. On the north coast off Arva Skerry, bedrock and boulders extend to below 50 m. These west and north-facing rock sites are all extremely exposed to wave action, comparable with the west-facing coasts of other islands. There is no sheltered coastline as the only inlet is at Ham Voe and even this is subject to considerable swell. Estuarine conditions are found in a small area of the voe where Ham Burn enters the sea and sand, boulders and a small amount of mud are present. There are moderate tidal streams around the headlands and on the east coast. A few kilometres off the east coast lies Shaalds Reef, an area of shallow water with a strong tidal flow.

Foula, which has a small crofting population of about 40 people, is predominantly moorland and rough grazing with small cultivated areas around the crofts. Its seabird populations are of international importance with 18 species breeding on the island. The surrounding seas have been heavily fished for sand-eels *Ammodytes* sp. in recent years and this is believed to have contributed to the reduced breeding success of several species of seabird (Furness 1989).

Water quality around the island is excellent. The crofts have septic tanks and the small outflow from these has little, if any effect.

Marine biology**Marine biological surveys**

	<i>Survey methods</i>	<i>No. of sites</i>	<i>Date(s) of survey</i>	<i>Source</i>
<i>Littoral</i>	Recording	4	August 1987	Howson (1988)
	Recording	12	July-August 1980	Wilson (1980)
	Recording	25	July-August 1981	Penny & Brook (1981)
<i>Sublittoral</i>	Recording	13	August 1987	Howson (1988)

Littoral

The littoral zone of Foula is rocky, with the north and west coasts consisting of inaccessible vertical cliffs. The remaining shoreline consists of smaller exposed rocky cliffs, shelving reefs, gullies and boulder beaches, with a small estuarine area at the head of Ham Voe. The littoral is mostly extremely exposed to wave action although there are areas of localised shelter behind stacks and in the small inlets creating small-scale patchy biotopes in places. However, exposed littoral biotopes predominate around most of the island.

The black lichen *Verrucaria maura* and the rough periwinkle *Littorina saxatilis* extend well up into the splash zone with a band of blue-green algae at some sites in the littoral fringe (Ver.Ver). The upper eulittoral usually supports a band of the red alga *Porphyra umbilicalis* (Ver.Por), often with the barnacles *Semibalanus balanoides* and *Chthamalus stellatus*, the limpet *Patella vulgata* and the green alga *Cladophora rupestris*. There is normally a distinct zone of *S. balanoides*, mussels *Mytilus edulis*

and *P. vulgata* in the mid-eulittoral (MytB), although biotopes can be patchy and dense stands of the red algae *Palmaria palmata*, *P. umbilicalis* and *Mastocarpus stellatus* often occur (Pal; Mas). Littorinids and dogwhelk *Nucella lapillus* are found in crevices. The sublittoral fringe is dominated by the kelp *Alaria esculenta*, the erect coralline alga *Corallina officinalis*, encrusting coralline algae and *M. edulis* (Ala.Myt). Thongweed *Himantalia elongata* is often present in the lower eulittoral (Him), although it is absent in the extremes of wave exposure. In less exposed areas, the kelp *Laminaria digitata* sometimes replaces or is mixed with the *A. esculenta* (Ala.Ldig).

The boulder beaches at Da Ness in the north-east and Da Doon Banks in the south-east both support furoids across most of the mid-shore, although the composition of the sublittoral fringe is very dependent on localised shelter. Splash zone boulders hold a variety of lichens and scattered patches of the furoid *Pelvetia canaliculata* grow in the upper eulittoral (Pel), whilst, in 1987, the mid-eulittoral at Da Ness was dominated by the exposed shore furoid *Fucus vesiculosus* f. *linearis* on the boulders and *S. balanoides* and *M. edulis* on adjacent bedrock (BPat.Fvesl). Earlier surveys found the sheltered shore furoid *Ascophyllum nodosum* on the mid-shore and *Fucus serratus* on the lower shore (Penny, Young & Goodman 1982). Kelps *L. digitata* and *Laminaria saccharina* grow in the sublittoral fringe at Da Doon Banks although *A. esculenta* is dominant a short distance away. Boulders on the lower shore support the sponges *Halichondria panicea* and *Hymeniacidon perleve* together with the anemones *Urticina felina* and *Actinia equina*. It seems that biotopes on the boulder storm beaches are prone to damage in winter and so may be variable from year-to-year.

At Trolli Geo, the effects of some fresh-water run-off from a marsh and a small amount of sewage from a croft are apparent. The sublittoral fringe and lower shore are typical exposed rocky shore biotopes but the mid-eulittoral has an extensive cover of green algae and there are mats of *Vaucheria* sp. on upper shore boulders. In estuarine conditions at Sloag Burn and Ham Voe there is a range of green algal species including *Ulothrix* spp., *Enteromorpha* spp. and *Blidingia minima* (Bli). The furoids *F. serratus* and *F. spiralis* f. *nana* are present at Sloag Burn.

There are numerous rockpools on the shores, some of which are quite large. These support a wide range of species including three-spined sticklebacks *Gasterosteus aculeatus*, conger eels *Conger conger* and common eel *Anguilla anguilla*, and are often lined with coralline crusts (Cor). They illustrate the principle that an increase in wave exposure raises the height at which species occur on the shore.

Sublittoral

In the sublittoral, bedrock reaches a depth of 30-35 m, where it is replaced by boulders; inshore on the east coast, the sea bed consists of shelving bedrock ridges. There is very little sediment inshore although indications are that there is coarse sediment offshore, and this is illustrated in Figure 31.2. The infralittoral is dominated by kelp *Laminaria hyperborea* (LhypFa; LhypR.Ft) which is replaced by *Laminaria saccharina* in the lower infralittoral (LsacSac), the kelps extending to a depth of 30 m. Luxuriant foliose algae, particularly *Kallymenia reniformis*, *Delesseria sanguinea* and *Plocamium cartilagineum* form the understorey, reaching 26 m at which depth the effects of grazing by *Echinus esculentus* become apparent and crustose algal species dominate the rock surfaces. Circalittoral rock around most of Foula is dominated by these coralline crusts and the keel worm *Pomatoceros triqueter* (CCParCar), whilst species such as dead-man's fingers *Alcyonium digitatum*, the bryozoan *Flustra foliacea*, the hydroid *Thuiaria thuja* and jewel anemones *Corynactis viridis* are also all important, with the last-mentioned characteristic of circalittoral rock walls on the north and west coasts (AlcC).

Massive, house-sized boulders are found at several sites. These provide horizontal and vertical surfaces, gullies, overhangs and tunnels, and vertical faces obtain some shelter from adjacent boulders. A distinct zonation is seen on these boulders with laminarians on the horizontal surfaces whilst the boulder sides are animal-dominated. In depths down to 27 m, several species of sponge, encrusting bryozoans and tubeworms are found together with the dahlia anemone *Urticina felina* in crevices. Below this depth, species such as *A. digitatum*, the bryozoans *F. foliacea* and *Bugula plumosa*, the hydroid *Nemertesia* spp. and the amphipod *Dyopodos porrectus* are frequent, and a great variety of echinoderms is found (AlcC).

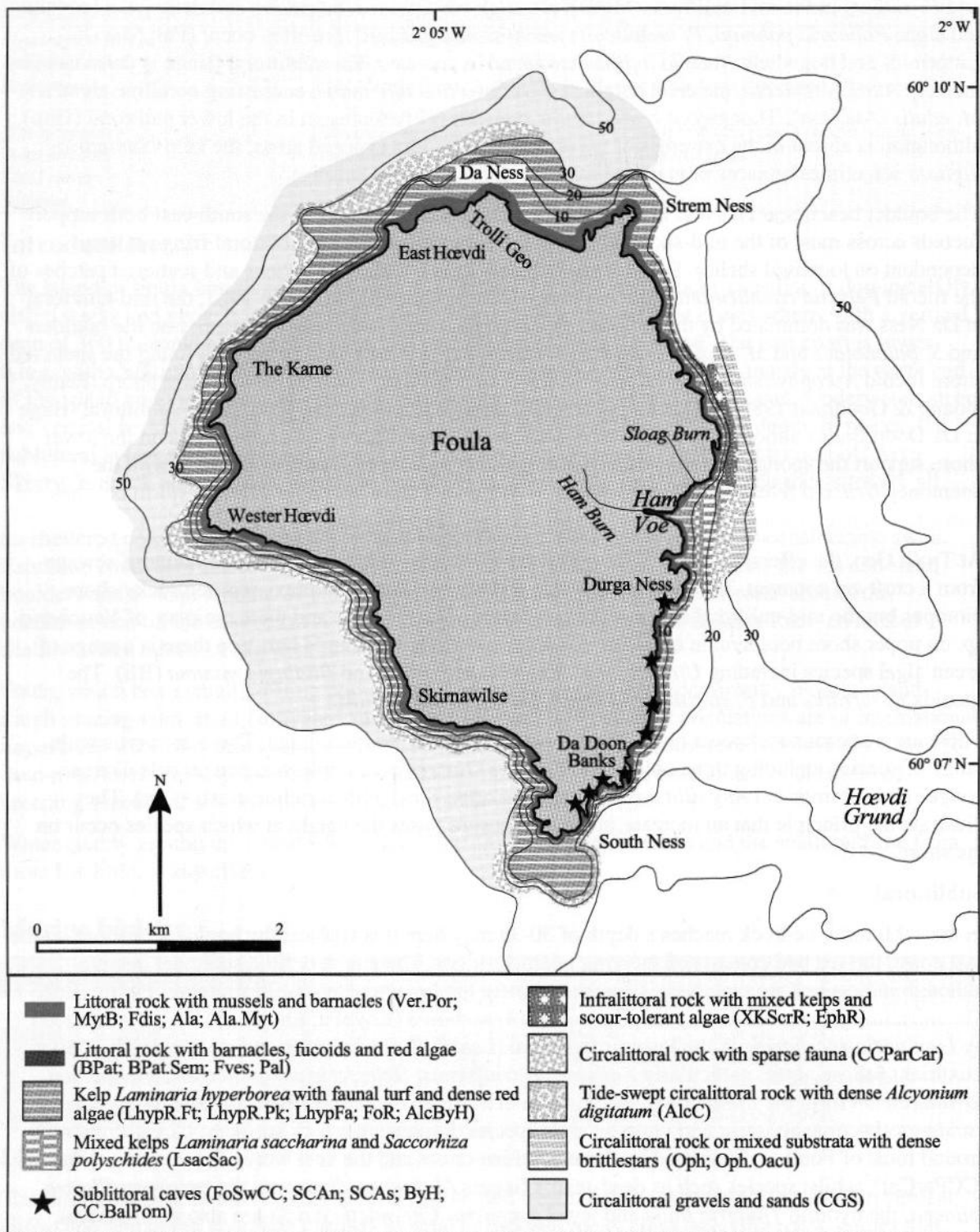


Figure 31.2 Indicative distribution of the main biotopes in the area (based on data from survey sites shown in Figure 31.1, cited literature and additional field observations).

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Caves and gullies support biotopes characteristic of surge conditions with caves showing both horizontal and vertical zonation. The walls have algae and the barnacle *Balanus crenatus* in shallow

water (CC.BalPom), *A. digitatum* and dwarf plumose anemones *Metridium senile* deeper (SCAs.ByH), and below this a rich turf with sponges such as *Clathrina coriacea*, ascidians including didemnids and *Dendrodoa grossularia* and the anemones *Phellia gausapata* and *C. viridis*. The abraded lowest part of the wall is dominated by bryozoan crusts, particularly *Parasmittina trispinosa* and *Escharoides coccinea* whilst the boulder floors of gullies usually support a dense *L. hyperborea* kelp forest (FoSwCC).

Extensive pebble, cobble and gravel beds on the east coast of Foula are tide-swept and very rich in species, being dominated by echinoderms but with *L. saccharina* present on the mobile substratum (EphR). Several interesting species occur here including brittlestars *Amphiura securigera* and *Ophiura robusta*, the holothurian *Neopentadactyla mixta* and the mollusc *Melanella alba*. A sand plain with bedrock outcrops is found beyond these gravel beds. This is fairly barren but there are sand-eels *Ammodytes* sp. present which are fished commercially. Where boulders are mixed with patches of shell-gravel, sparse beds of brittlestars *Ophiocoma nigrum* occur and scour-tolerant species such as the hydroid *Abietinaria abietina* and the bryozoans *Securiflustra securifrons* and *F. foliacea* are common (Oph).

Nature conservation

Conservation sites		
Site name	Status	Main features
Foula	SSSI; GCR; SPA	Botanical; ornithological; geological
Shetland: Foula	NSA	Landscape
Shetland Islands	ESA	Agri-environmental scheme

Human influences

Coastal developments and uses

There is a small crofting population concentrated on the lower-lying east side of Foula and a small harbour and pier in Ham Voe for the ferry from Walls. The houses have septic tanks and water quality is excellent.

Marine developments and uses

Some potting for crustaceans takes place around the rocky inshore areas. The offshore areas have been extensively fished for sand-eels *Ammodytes* sp.

References and further reading

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- Graham, P., Langley, P., & Wallace, D. 1974. A survey of Ham Voe in Foula, 1973. In: *Field Studies in Foula, 1973*. Ambleside, Brathay Exploration Group (Field Studies Report, No. 27.)
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- Wilson, H. 1980. *Foula II. Brathay Exploration Group Field Study. Account of expeditions in 1980: 24 - 27*. (Contractor: Brathay Exploration Group, Ambleside.) Unpublished report to Brathay Hall Trust.

Sites surveyed

Survey 261: 1987 OPRU/MNCR survey of Shetland, Foula and Fair Isle (Howson 1988).

Survey 383: 1980 Brathay Exploration Group littoral survey of the Isle of Foula, Shetland (Wilson 1980).

Survey 389: 1981 Brathay Exploration Group littoral survey of the Isle of Foula, Shetland (Penny & Brook 1981).

Littoral sites					
Survey	Site	Site name	Grid reference	Latitude/longitude	Biotores recorded
261	164	Da Ness, Foula.	HT 963 413	60°09.4'N 02°04.0'W	YG; Ver.Ver; MytB; BPat.Fvesl; Ala.Ldig
261	167	Hedd o' da Baa, Foula.	HT 975 387	60°08.0'N 02°02.7'W	Ver.Ver; MytB; BPat.Sem; Pal; Him; SR; G; Cor; FK; Ala.Myt
261	168	S of the Fishhead, Foula.	HT 975 388	60°08.0'N 02°02.7'W	Cor
261	169	Ham Voc, Foula.	HT 973 388	60°08.0'N 02°02.9'W	Fves; Pal
383	1	Da Rigs site 1, Foula, Shetland.	HT 957 414	60°09.4'N 02°04.6'W	Ver.Por; MytB; BPat.Sem; Ala.Myt; Ala.Ldig
383	2	S Da Rigs site 2, Foula, Shetland.	HT 957 414	60°09.4'N 02°04.6'W	Ver.Ver; Fdis; FvesB; Fves; Asc.Asc; Pal; Lsac.Ft
383	3	N Boulder Beach site 1, Foula, Shetland.	HT 962 413	60°09.4'N 02°04.1'W	Ver; Ver.Ver; MytB; BPat; Fves; Asc.Asc; Fser.Fser; XR; Ldig.Ldig
383	4	N Boulder Beach site 2, Foula, Shetland.	HT 962 413	60°09.4'N 02°04.1'W	Ver.Ver; Ver.Por; BPat; EntPor; MytFves; Pal; Him; Fser.R; Fser.Fser; Ldig.Ldig
383	5	Ruscar site 1, Foula, Shetland.	HT 973 406	60°09.0'N 02°02.9'W	Ver; Ver.Ver; Ver.Por; MytB; Ent; BPat.Sem; Ala.Myt
383	6	Ruscar site 2, Foula, Shetland.	HT 973 406	60°09.0'N 02°02.9'W	Ver.Ver; Ent; MytB; BPat; Ala.Myt
383	7	Ruscar site 3, Foula, Shetland.	HT 973 406	60°09.0'N 02°02.9'W	YG; Ver; Ver.Ver; Ver.Por; MytB; BPat.Sem; Ala.Myt
383	8	Ruscar site 4, Foula, Shetland.	HT 973 406	60°09.0'N 02°02.9'W	Ver.Ver; Ver.Por; MytB; BPat; BPat.Sem; Ala.Myt
383	9	Hedd o' da Taing site 1, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	YG; Ver; Ver.Ver; Ver.Por; MytB; BPat; Ala.Myt
383	10	Hedd o' da Taing site 2, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	Ver.B; MytB; BPat; BPat.Sem; Him; Ala.Myt
383	11	The Fishheads site 1, Foula, Shetland.	HT 975 388	60°08.0'N 02°02.7'W	Ver.Ver; Ver.Por; MytB; BPat.Sem; Ala.Myt
383	12	The Fishheads site 2, Foula, Shetland.	HT 975 388	60°08.0'N 02°02.7'W	YG; Ver; Ver.Ver; Ver.Por; MytB; BPat; BPat.Sem; XR; Ala.Myt
389	1	Trolli Geo site 1, Foula, Shetland.	HT 957 413	60°09.4'N 02°04.6'W	Ver.Ver; Fspi; Ent; Mas; Pal; XR; Ala.Myt; Ala.Ldig

Littoral sites continued

Survey	Site	Site name	Grid reference	Latitude/longitude	Biotores recorded
389	2	Trolli Geo site 2, Foula, Shetland.	HT 957 413	60°09.4'N 02°04.6'W	Ver.Ver; Ver.Por; Ent; MytB; BPat; BPat.Sem; Mas; Ala.Myt; Ala.Ldig
389	3	Trolli Geo site 3, Foula, Shetland.	HT 957 413	60°09.4'N 02°04.6'W	YG; Ver.Ver; Ver.Por; Bli; Ent; Pal; Ala; Ala.Myt
389	4	Da Rigs site 3, Foula, Shetland.	HT 957 414	60°09.4'N 02°04.6'W	YG; Ver; Ver.Ver; BPat; BPat.Sem; XR; Ldig.Ldig
389	5	North Boulder Beach site 3, Foula, Shetland.	HT 962 413	60°09.4'N 02°04.1'W	YG; Ver; Ver.Ver; Ent; MytB; BPat; Lsac.Ldig
389	6	North Boulder Beach site 4, Foula, Shetland.	HT 962 413	60°09.4'N 02°04.1'W	YG; Ver; Ver.B; Ver.Ver; Ver.Por; MytB; BPat; XR; Ldig.Ldig; Lsac.Ldig
389	7	Ruscar site 5, Foula, Shetland.	HT 973 406	60°09.0'N 02°02.9'W	YG; Ver; Ver.Ver; Ent; MytB; BPat; BPat.Sem; Ala.Myt
389	8	Ruscar site 6, Foula, Shetland.	HT 973 406	60°09.0'N 02°02.9'W	YG; Ver.Ver; Ent; Ent; MytB; BPat; BPat.Sem; Ala.Myt
389	9	Hedd o' da Taing site 1, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	YG; Ver; Ver.Ver; Ent; MytB; BPat.Sem; Ala.Myt
389	10	Hedd o' da Taing site 2, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	YG; Ver; Ver.B; Ver.Ver; Ver.Por; MytB; BPat.Sem; Ala.Myt
389	11	Hedd o' da Taing site 3, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	YG; Pra; Ver.Ver; Ver.Por; Ent; MytB; BPat; Ala.Myt
389	12	Hedd o' da Taing site 4, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	Ver.Por; Ent; MytB; BPat.Sem; Ala.Myt
389	13	Hedd o' da Taing site 5, Foula, Shetland.	HT 975 384	60°07.8'N 02°02.7'W	YG; Ver; Ver.Ver; Ver.Por
389	14	The Fishheads site 3, Foula, Shetland.	HT 975 388	60°08.0'N 02°02.7'W	YG; Ver; Ver.B; Ver.Ver; Ver.Por; Ent; MytB; BPat; Ala.Myt
389	15	The Fishheads site 4, Foula, Shetland.	HT 975 388	60°08.0'N 02°02.7'W	Ver.Ver; MytB; BPat; BPat.Sem; Ala.Myt
389	16	Head o' da Baa site 1, Foula, Shetland.	HT 975 385	60°07.8'N 02°02.7'W	YG; Ver; Ver.Ver; MytB; BPat; Pal; XR; Ala.Myt
389	17	Head o' da Baa site 2, Foula, Shetland.	HT 975 385	60°07.8'N 02°02.7'W	YG; Ver; Ver.B; Ver.Ver; MytB; BPat; BPat.Sem; Pal; Him; Ala.Myt
389	18	Head o' da Baa site 3, Foula, Shetland.	HT 975 385	60°07.8'N 02°02.7'W	YG; Ver; Ver.B; Ver.Ver; Ent; MytB; BPat; BPat.Sem; Ala.Myt
389	19	Dog Geo, Foula, Shetland.	HT 973 370	60°07.0'N 02°02.9'W	YG; Pra; Ver; Ver.Ver; MytB; BPat; Ldig.Ldig
389	20	Da Doon Banks site 1, Foula, Shetland.	HT 971 368	60°06.9'N 02°03.1'W	YG; Pra; Ver.Ver; MytB; BPat.Sem; Mas; Ldig.Ldig
389	21	Da Doon Banks site 2, Foula, Shetland.	HT 971 368	60°06.9'N 02°03.1'W	YG; Ver.Ver; Pel; Fspi; Ent; EntPor; Fser.Fser; Ala.Ldig
389	22	Surpeidle site 1, Foula, Shetland.	HT 970 366	60°06.8'N 02°03.2'W	YG; Ver; Ver.B; Ver.Ver; MytB; BPat; Ala.Ldig

Littoral sites continued

<i>Survey</i>	<i>Site</i>	<i>Site name</i>	<i>Grid reference</i>	<i>Latitude/longitude</i>	<i>Biotopes recorded</i>
389	23	Surpeidle site 2, Foula, Shetland.	HT 970 366	60°06.8'N 02°03.2'W	YG; Ver.Por; MytB; BPat; BPat.Sem; Ala.Myt
389	24	Surpeidle site 3, Foula, Shetland.	HT 970 366	60°06.8'N 02°03.2'W	YG; Pra; Ver.Ver; Ent; MytB; BPat; BPat.Sem; Ala.Myt
389	25	Surpeidle site 4, Foula, Shetland.	HT 970 366	60°06.8'N 02°03.2'W	Ver; Ver.Ver; Ent; Ent; MytB; BPat; Pal; XR; Ala; Ala.Myt

Sublittoral sites

<i>Survey</i>	<i>Site</i>	<i>Site name</i>	<i>Grid reference</i>	<i>Latitude/longitude</i>	<i>Biotopes recorded</i>
261	160	Gaada Stack, Foula.	HT 958 416	60°09.5'N 02°04.5'W	FoR; CCParCar; AlcC
261	161	Scarva Skerry, Foula.	HT 979 396	60°08.4'N 02°02.2'W	EphR
261	162	Rokness Skerries, Foula.	HT 936 398	60°08.5'N 02°06.9'W	FoR; AlcC
261	163	Skirnawilse, Foula.	HT 952 373	60°07.2'N 02°05.1'W	LhypR.Ft; AlcC; CCParCar
261	165	Wester Høevdi, Foula.	HT 936 387	60°08.0'N 02°06.9'W	MytB; Ala.Myt; LhypR.Ft; LhypR.Pk; SCAs.ByH; CCParCar
261	166	South Ness, Foula.	HT 964 361	60°06.6'N 02°03.8'W	LhypR.Ft; FoR; SCAs.ByH; AlcC
261	167	Hedd o' da Baa, Foula.	HT 975 387	60°08.0'N 02°02.7'W	LhypFa; LsacSac; LhypR.Ft; EphR; CCParCar; Oph; Oph.Oacu
261	170	E of Kinglia, Foula.	HT 980 399	60°08.6'N 02°02.1'W	Oph; CGS
261	171	Stack of da Gaads, Foula.	HT 977 400	60°08.7'N 02°02.4'W	LhypR.Ft; XKScrR; AlcByH
261	172	NW East Høevdi, Foula.	HT 949 416	60°09.5'N 02°05.5'W	CGS; AlcC
261	173	Arva Skerry, Foula.	HT 954 415	60°09.5'N 02°04.9'W	Ala.Myt; LhypFa; LhypR.Pk; AlcC
261	174	Middle Cave, Geo of Scarratong, Foula.	HT 967 363	60°06.7'N 02°03.5'W	FoSwCC; SCAs; SCAn
261	175	Southern Cave, S Geo o' da Høevdi, Foula.	HT 974 372	60°07.1'N 02°02.8'W	LhypR.Ft; Ala.Myt; SCAs; LhypFa; CC.BalPom

Compiled by:

Christine Howson

Location

<i>Position (centre)</i>	HZ 210 720	59° 32.0'N 01° 37.7'W
<i>Administrative area</i>	Shetland Islands	
<i>Conservation agency/area</i>	Scottish Natural Heritage	North Areas (Northern Isles)

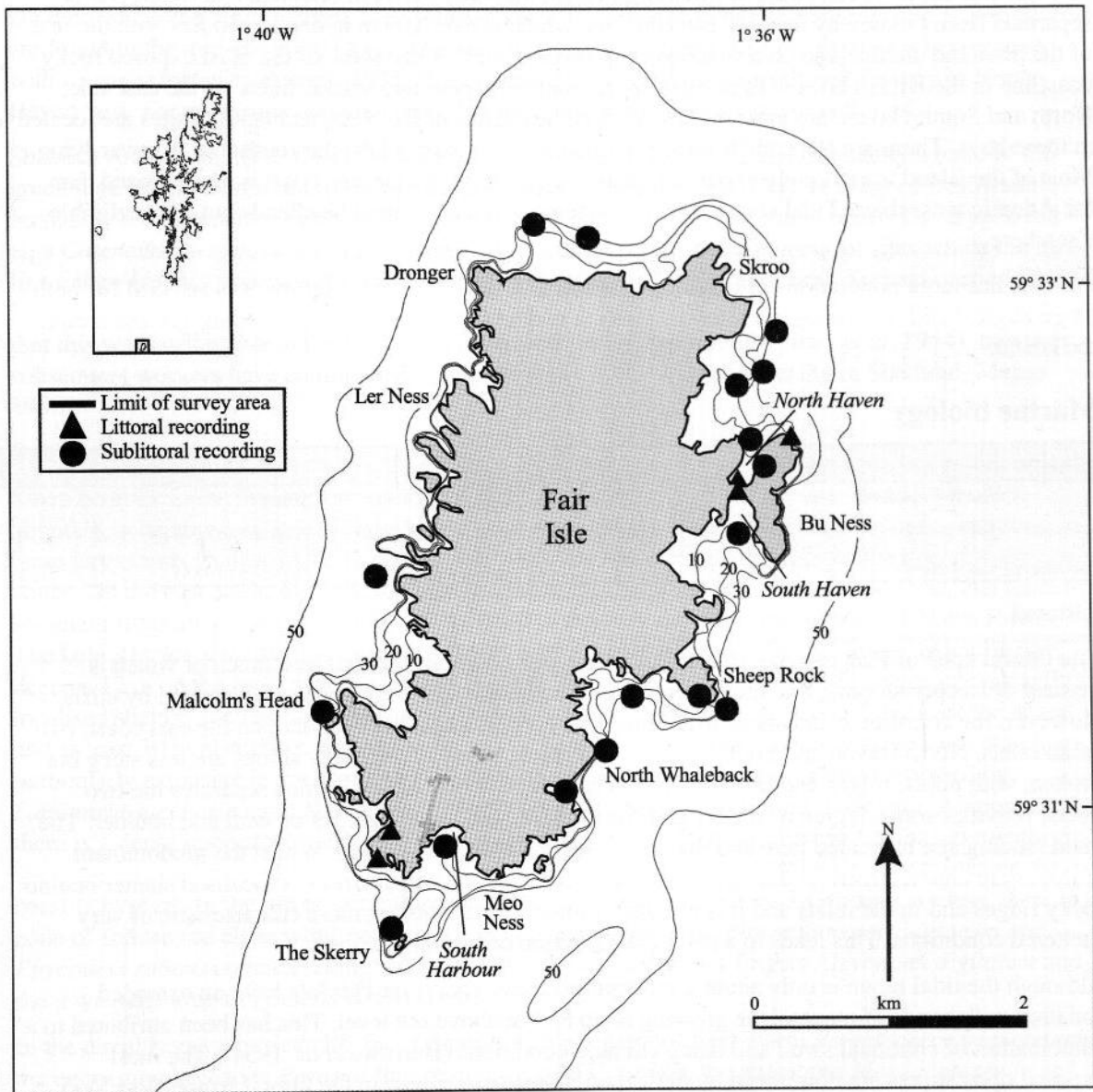


Figure 32.1 Main features of the area, showing sites surveyed.

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Physical features	
<i>Physiographic type</i>	Island (open coast)
<i>Length of coast</i>	32.0 km
<i>Bathymetry</i>	50 m contour is 500 m offshore on east and west coasts; 2.5 km off south coast
<i>Wave exposure</i>	Extremely exposed open coast; sheltered conditions in North Haven.
<i>Tidal streams</i>	Negligible—moderate
<i>Tidal range</i>	1.9 m (mean spring range); 0.8 m (mean neaps)
<i>Salinity</i>	Fully marine

Introduction

Fair Isle lies about 40 km south of Sumburgh Head, mid-way between Shetland and Orkney. It is separated from Orkney by the Fair Isle Channel, which is over 100 m in depth, and lies with the rest of the Shetland archipelago on a shallower platform of rock. It has some of the most exposed rocky coastline in the British Isles with numerous promontories, geos and stacks. Inlets on the east side, North and South Haven, are protected by the dual headlands of Bu Ness, and landing sites are located in these bays. There are steep cliffs on the north and west coasts whilst the south-east is lower-lying. Most of the island is extremely exposed to wave action although the east coast is less exposed than the Atlantic west coast. Tidal streams are of moderate strength around headlands but are negligible elsewhere.

Fair Isle has large populations of breeding seabirds and has a bird observatory. It is an SSSI for both its geological and ornithological interest. There is a sand-eel *Ammodytes* spp. fishing-ground around the island.

Marine biology

Marine biological surveys				
	<i>Survey methods</i>	<i>No. of sites</i>	<i>Date(s) of survey</i>	<i>Source</i>
<i>Littoral</i>	Recording	5	July-August 1987	Howson (1988)
<i>Sublittoral</i>	Recording	17	July-August 1987	Howson (1988)

Littoral

The littoral zone of Fair Isle consists almost entirely of bedrock and boulders, much of which is vertical or steeply-sloping, and the extremely exposed north and west coasts are bounded by cliffs. However, the coastline is indented, with numerous geos, stacks and caves and, on the east coast, two small inlets, North Haven and South Haven. As a result, many of the rocky shores are less steep but broken, with pools, ridges and promontories. The headland of Bu Ness, which separates the two inlets, provides some degree of shelter and North Haven has small beaches of sand and boulder. The main landing site is located here and there is a pier and concrete slipway. Whilst the predominant biotopes are characteristic of extreme wave exposure, there are many areas of localised shelter behind rocky ridges and in the inlets and it is not uncommon to find biotopes more characteristic of very sheltered conditions. This leads to a patchy distribution of littoral biotopes.

Although the tidal range is only about 2 m, exposed rocky shores on Fair Isle have an extended zonation with bands of macroalgae growing at up to 8 m above sea level. This has been attributed to a combination of continual swell and damp climatic conditions (Burrows *et al.* 1954). The most exposed open shores are dominated by the lichen *Verrucaria maura* in the littoral fringe (Ver.Ver). *V. maura* continues downwards into the upper eulittoral where it is overlain by a blanket of the red alga *Porphyra umbilicalis* with a narrow band of scattered barnacles *Semibalanus balanoides* (Ver.Por). Scattered *Chthamalus stellatus*, another barnacle species, are also found here; these and other records in Shetland represent the northern limits of the species known range (Powell 1954; Howson 1988). At some of these exposed sites, there is a zone of the northern fucoid *Fucus distichus* in the upper eulittoral but no other fucoids are present (Fdis). The mid-eulittoral is dominated by *S. balanoides* and limpets *Patella vulgata* with clumps of small mussels *Mytilus edulis* (MytB) whilst in the lower eulittoral there is a turf of red algae such as *Mastocarpus stellatus* (Mas). Kelp *Alaria*

esculenta dominates the sublittoral fringe with large numbers of *M. edulis* and this zone extends to depths as great as 12 m (Ala.Myt).

In slightly less exposed conditions, fucoids are more frequent on the shore and both *Fucus spiralis* f. *nana* and *Pelvetia canaliculata* may be present in the upper eulittoral. The mid-eulittoral has a band of barnacles and limpets and, slightly lower on the shore, these species form a mosaic with the fucoid *Fucus vesiculosus* f. *linearis*, an exposed shore form of the species (BPat.Fvesl). The fucoid *Fucus serratus*, thongweed *Himantalia elongata* and red algae grow in the lower eulittoral (Him) whilst the sublittoral fringe has a kelp forest of either *Laminaria digitata* or *A. esculenta*.

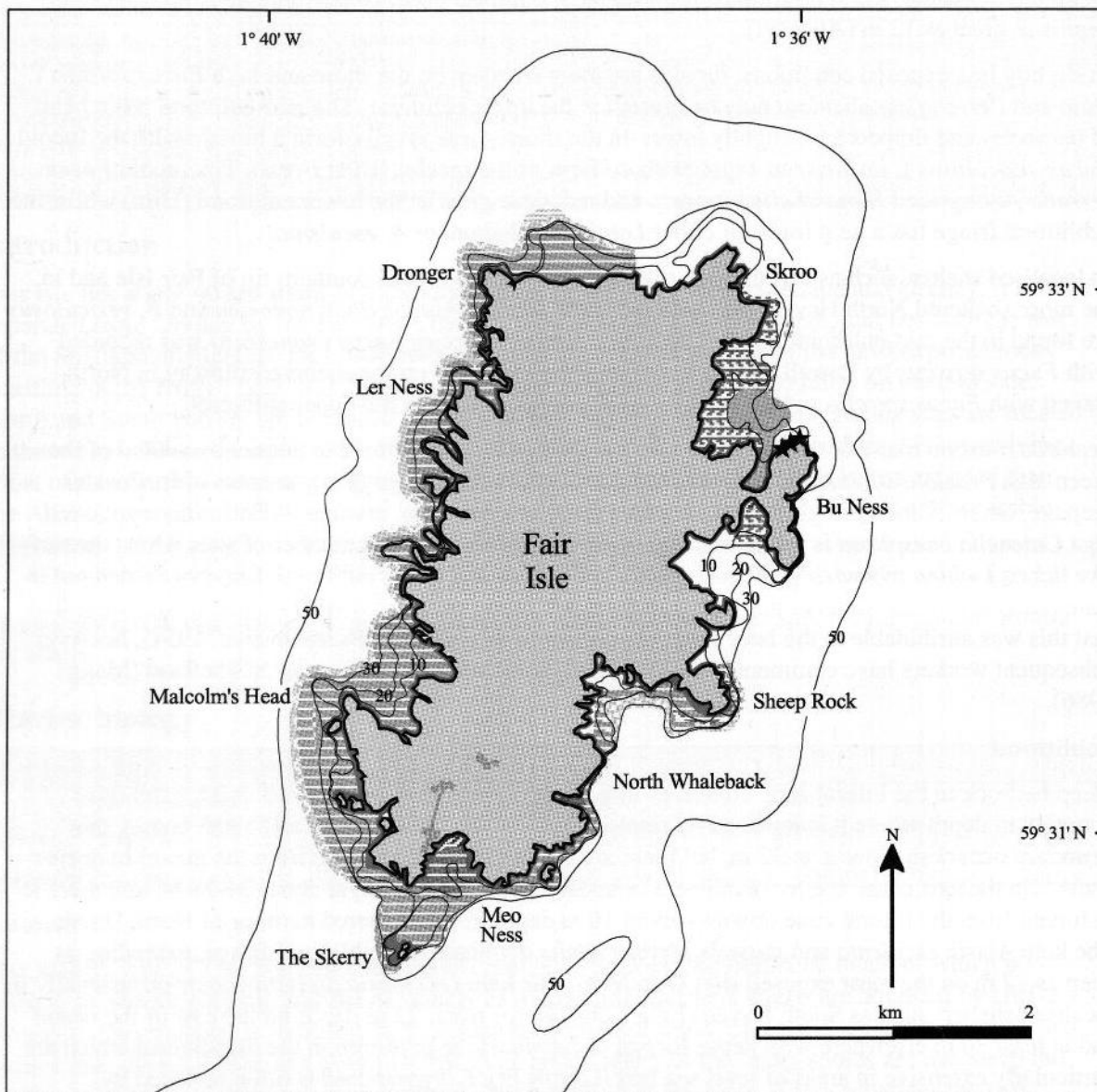
In localised shelter, such as behind rock ridges on the wave-exposed southern tip of Fair Isle and in the more sheltered North Haven, the sheltered shore fucoids *Ascophyllum nodosum* and *F. vesiculosus* are found in the mid-eulittoral (Asc). The scarce northern species *Fucus evanescens* was recorded with *Fucus serratus* by Powell (1975) from the lower eulittoral on the sheltered slipway in North Haven with *Fucus spiralis* and the green alga *Blidingia minima* in the upper eulittoral.















Seabirds roost on many of the rocky shores, and where this occurs there is frequently a band of the green alga *Prasiola stipitata* in the upper eulittoral and littoral fringe (Pra). In areas of freshwater seepage, other filamentous green algae such as *Enteromorpha* spp. are found (Ent). The cryptic red alga *Catenella caespitosa* is found in damp upper littoral crevices at a number of sites whilst the turf-like lichen *Lichina pygmaea* is often common in the mid- and upper eulittoral. Surveys carried out in June noted few of the summer annual algae normally found on other British shores; it was suggested that this was attributable to the later onset of summer at this latitude (Burrows *et al.* 1954), however subsequent workers have commented on the generally lower species diversity in Shetland (Maggs 1986).

Sublittoral

Steep bedrock in the littoral zone continues into the sublittoral and, on the west coast, extends to about 38 m depth where it is replaced by rippled shell-gravel. On the north and south coasts, this boundary occurs shallower, at 32 m, but there are numerous rock outcrops from the gravel in deeper water. On the east coast, the rock/sediment boundary is shallower still, at about 24-28 m, and there is sediment from the littoral zone down to about 10 m depth in the sheltered harbour of North Haven. The kelp *Alaria esculenta* and mussels *Mytilus edulis* dominate the sublittoral fringe, extending as deep as 12 m on the most exposed sites (Ala.Myt). The kelp *Laminaria digitata* occurs occasionally in localised shelter, such as South Haven (Ldig.Ldig). Kelps reach 22 m depth on the east of the island and at least 30 m elsewhere with dense forests of *Laminaria hyperborea* in the infralittoral which are particularly extensive in areas of level sea bed (LhypR.Ft). *L. hyperborea* is often replaced by *Laminaria saccharina* and *Saccorhiza polyschides* in the lower infralittoral (LsacSac). At most sites, there is a dense understorey and stipe flora with little grazing by the sea urchin *Echinus esculentus* in the exposed conditions although grazing is evident at some of the slightly less exposed sites on the east coast (LhypGz). In the lower infralittoral, at those sites where the effects of grazing are less, there is a zone of foliose red algae with species such as *Odonthalia dentata*, *Plocamium cartilagineum* and *Phycodrys rubens* common along with animals such as dead-man's fingers *Alcyonium digitatum* and the jewel anemone *Corynactis viridis* (FoR).

In the circalittoral, exposed cliff faces support *A. digitatum*, the keel worm *Pomatoceros triqueter* and the encrusting bryozoan *Parasmittina trispinosa* with *C. viridis*, the anemones *Metridium senile* and *Sagartia elegans* and clumps of the tubeworm *Salmacina dysteri*, particularly on overhangs and gully walls (AlcC; CorMetAlc). The northern spider crab *Lithodes maia* is also found in this situation. Sheets of *C. viridis* and the erect bryozoan *Flustra foliacea* are found amongst *A. digitatum* on tide-swept bedrock outcrops on the north coast. Heavily-grazed biotopes are more prevalent in the lower circalittoral than shallower and where rock gives way to boulders, notably on the south-east side of the island, these are dominated by encrusting algae, the urchin *E. esculentus* and brittlestars (CCParCar). Scoured boulders amongst sand on the east coast support a similar community with brittlestars *Ophiothrix fragilis* and *Ophiocomina nigra*, encrusting algae, the featherstar *Antedon bifida*, *A. digitatum* and *P. triqueter* (Oph).



 Littoral rock with mussels and barnacles (MytB; Ala.Myt)	 Grazed kelp <i>Laminaria hyperborea</i> (LhypGz.Ft; LhypGz.Pk)
 Littoral rock with barnacles, fucoids and red algae (Pel; Fspi; Ldig.Ldig)	 Circalittoral rock with sparse fauna (CCParCar)
 Littoral rock with dense fucoid algae (Fspi; BPat; BPat.Sem; Fser; Ldig)	 Tide-swept circalittoral cobbles and pebbles with sparse fauna (PomByC)
 Kelp <i>Laminaria hyperborea</i> with faunal turf and dense red algae (LhypR.Ft; LhypR.Pk; FoR)	 Tide-swept circalittoral rock with dense <i>Alcyonium digitatum</i> (AlcC)
 Mixed kelps <i>Laminaria saccharina</i> and <i>Saccorhiza polyschides</i> (LsacSac)	 Circalittoral rock or mixed substrata with dense brittlestars (Oph)
 Sublittoral caves (FoSwCC; SCAn.Tub; SCAs; SCAs.DenCla; SCAs.ByH; CC.BalPom)	 Infralittoral gravels and sands (IGS)
 Kelp <i>Laminaria hyperborea</i> with dense red algae (AlcByH; Lhyp.Pk; LhypLsac.Pk; Lhyp.Ft)	 Sublittoral mixed sediment with <i>Laminaria saccharina</i> (LsacX)

< **Figure 32.2** Indicative distribution of the main biotopes in the area (based on data from survey sites shown in Figure 32.1, cited literature and additional field observations).

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Caves, arches, gullies and geos are a particular feature of the shallow sublittoral around Fair Isle and these support a range of surge-tolerant biotopes. Dense algae are usually found on boulders at the cave entrances where there is adequate light, with species such as *Polysiphonia stricta*, *O. dentata*, *P. cartilagineum*, *Desmarestia aculeata* and *Desmarestia ligulata* common (FoSwCC). The walls support the barnacle *Balanus crenatus*, *A. digitatum* and *M. senile* (SCAs.ByH). Further in, there is a dense sponge, bryozoan and ascidian turf on the upper parts of the walls whilst the lower parts are abraded clean (CC.BalPom). Geos are similar in many respects to caves although there is no horizontal zonation and boulders in the gully floor usually hold a forest of *L. hyperborea*. The sponge and ascidian turf on the walls of these gullies includes such species as the sponges *Myxilla incrustans* and *Amphilectus fucorum*, *C. viridis* and *Phellia gausapata*, a surge-tolerant anemone with a northern distribution.

There is little variety of sediments, with rather barren coarse shell-gravel predominating, often formed into dunes even in relatively deep water. In shallow water in North Haven, an area of fine sand holds lugworm *Arenicola marina* and sand mason worm *Lanice conchilega* in depths of 2-12 m (IGS). Mobile cobbles bordering the sand support *L. saccharina* and the green alga *Ulva* sp. (LsacX). Where mixed sand and stones are found shallow enough for kelp, *L. saccharina* grows on the stones along with much smaller foliose red and brown algae. The brown alga *Cutleria multifida* occurs in this highly abraded environment and the anemone *Cerianthus lloydii* is found occasionally in the sand. In deeper water, cobbles in a similar habitat support *P. triqueter* with *B. crenatus* (PomByC).

Nature conservation

Conservation sites		
Site name	Status	Main features
Fair Isle	SSSI; GCR; SPA	Geological; ornithological
Fair Isle	NTS	Island
Shetland: Fair Isle	NSA	Landscape
Shetland Islands	ESA	Agri-environmental scheme

Human influences

Coastal developments and uses

One of the most isolated inhabited islands in Britain, Fair Isle has a small population of crofters and craftspeople scattered along its length, with a road running from the northern tip to South Harbour at the southern end. North Haven has a pier and small harbour, used by the ferries from Grutness and Lerwick and a few fishing boats.

The crofts have septic tanks and water quality is excellent.

There has been a bird observatory on Fair Isle since 1948, providing hostel-style accommodation for visitors who come to the island for bird-watching and walking. Environmentally sustainable development, management and tourism is promoted by the Fair Isle Marine Environment and Tourism Initiative, a partnership of the Fair Isle community, Fair Isle Bird Observatory Trust and the island's owner, the National Trust for Scotland.

Marine developments and uses

Some potting for crustaceans takes place around the rocky inshore areas. The offshore areas have been extensively fished for sand-eels *Ammodytes* spp. In 1999 the Fair Isle Marine Partnership was launched to establish the long-term protection and sustainable management of the marine environment around the island, including proposals for the management of fisheries and the establishment of a marine protected area (Riddiford 1998).

References and further reading

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Sites surveyed

Survey 261: 1987 OPRU/MNCR survey of Shetland, Foula and Fair Isle (Howson 1988).

Littoral sites					
Survey	Site	Site name	Grid reference	Latitude/longitude	Biotopes recorded
261	177	South Haven, Fair Isle.	HZ 224 724	59°32.2'N 01°36.2'W	Fspi; Ent; BPat; BPat.Fvesl; Fser; G; Cor; Ldig.Ldig; Lhyp
261	193	Tail of Uran, Fair Isle.	HZ 197 697	59°30.7'N 01°39.1'W	Ver.Por; Pel; Fspi; Fdis; Asc; Fser; Mas; Pal; Him; Cor; FK; Ala.Myt
261	195	North Gavell, Fair Isle.	HZ 228 728	59°32.4'N 01°35.8'W	Ver.Por; Ver.B; MytB; BPat; Fdis; Cor; Ala.Myt
261	196	Smirri Geo, Fair Isle.	HZ 198 699	59°30.9'N 01°39.0'W	Ver; Ver.Ver; Pel; Fspi; G; FK
261	185	W of North Haven, Fair Isle.	HZ 224 725	59°32.2'N 01°36.2'W	Pra; Fspi; BPat.Sem; Him; G; FK

Sublittoral sites					
<i>Survey</i>	<i>Site</i>	<i>Site name</i>	<i>Grid reference</i>	<i>Latitude/longitude</i>	<i>Biotopes recorded</i>
261	176	Stacks of Wirrvie, Fair Isle.	HZ 226 733	59°32.7'N 01°36.0'W	XKScrR; AlcByH; LsacX
261	178	W Fogli Stack, Fair Isle.	HZ 193 708	59°31.3'N 01°39.5'W	Ala.Myt; LhypR.Ft; LsacSac; FoR; CorMetAlc; AlcC
261	179	W of the Skerry, Fair Isle.	HZ 198 692	59°30.5'N 01°39.0'W	Ala.Myt; LhypR.Ft; LsacSac; EphR; XKScrR; FoR; AlcByH
261	180	W of Kista Stack, Fair Isle.	HZ 197 718	59°31.9'N 01°39.1'W	LhypR.Pk; AlcByH; AlcC
261	181	Stacks of Skroo, Fair Isle.	HZ 209 744	59°33.3'N 01°37.8'W	LhypR.Pk; AlcC; PomByC
261	182	Cubbi Skerry, Fair Isle.	HZ 227 736	59°32.8'N 01°35.9'W	Oph
261	183	N of Saaversteen, Fair Isle.	HZ 213 743	59°33.2'N 01°37.3'W	AlcC; CGS
261	184	North Haven, Fair Isle.	HZ 226 726	59°32.3'N 01°36.0'W	IGS
261	186	Sheep Rock, Fair Isle.	HZ 223 708	59°31.3'N 01°36.3'W	LhypR.Ft; LsacSac; LhypGz.Pk; AlcC; FaAlc
261	187	Ravin Roo, Fair Isle.	HZ 216 709	59°31.4'N 01°37.0'W	Ala.Myt; LhypGz.Ft; FoR; CCParCar
261	188	The Heelors, Fair Isle.	HZ 221 709	59°31.4'N 01°36.5'W	MytB; Ala.Myt; SCAn.Tub; SCAs.ByH
261	189	Swartz Geo, Fair Isle.	HZ 211 702	59°31.0'N 01°37.6'W	Lhyp.Pk; LhypLsac.Pk; FoR; IGS
261	190	North Whaleback, Fair Isle.	HZ 214 705	59°31.2'N 01°37.3'W	Ala.Myt; LhypR.Ft; LsacSac; CCParCar
261	191	Entrance to South Haven, Fair Isle.	HZ 224 721	59°32.0'N 01°36.2'W	LhypGz.Ft; LhypGz.Pk
261	192	South Harbour, Fair Isle.	HZ 202 698	59°30.8'N 01°38.5'W	Ldig.Ldig; Lhyp.Ft
261	194	North Haven, Fair Isle.	HZ 225 728	59°32.4'N 01°36.1'W	FoSwCC; SCAs; SCAs.DenCla; SCAs.ByH; CC.BalPom
261	197	Wick of Furse, Fair Isle.	HZ 224 732	59°32.6'N 01°36.2'W	LhypGz.Ft; IGS

Appendix A

Biotopes classification

A hierarchical classification of the biotopes recorded in MNCR Sector 1 (Shetland) during the surveys given in Table 1, together with their higher types, is given below. The biotopes listed are derived from the MNCR national biotope classification version 97.06 (Connor *et al.* 1997a, b). Records of biotopes noted in the text but not shown here come from additional published sources cited in the individual area summaries. Species nomenclature follows Howson & Picton (1997).

Higher code	Biotope code	Biotope
LR		LITTORAL ROCK (and other hard substrata)
LR.L		Lichens or algal crusts
LR.L	YG	Yellow and grey lichens on supralittoral rock
LR.L	Pra	<i>Prasiola stipitata</i> on nitrate-enriched supralittoral or littoral fringe rock
LR.L	Ver	<i>Verrucaria maura</i> on littoral fringe rock
LR.L	Ver.Por	<i>Verrucaria maura</i> and <i>Porphyra umbilicalis</i> on very exposed littoral fringe rock
LR.L	Ver.B	<i>Verrucaria maura</i> and sparse barnacles on exposed littoral fringe rock
LR.L	Ver.Ver	<i>Verrucaria maura</i> on moderately exposed to very sheltered upper littoral fringe rock
LR.L	Bli	<i>Blidingia</i> spp. on vertical littoral fringe soft rock
ELR		Exposed littoral rock (mussel/barnacle shores)
ELR.MB		Mytilus (mussels) and barnacles
ELR.MB	MytB	<i>Mytilus edulis</i> and barnacles on very exposed eulittoral rock
ELR.MB	BPat	Barnacles and <i>Patella</i> spp. on exposed or moderately exposed, or vertical sheltered, eulittoral rock
ELR.MB	BPat.Fvesl	Barnacles, <i>Patella</i> spp. and <i>Fucus vesiculosus</i> f. <i>linearis</i> on exposed eulittoral rock
ELR.MB	BPat.Sem	<i>Semibalanus balanoides</i> on exposed or moderately exposed, or vertical sheltered, eulittoral rock
ELR.FR		Robust furoids or red seaweeds
ELR.FR	Fdis	<i>Fucus distichus</i> subsp. <i>anceps</i> and <i>Fucus spiralis</i> f. <i>nana</i> on extremely exposed upper eulittoral rock
ELR.FR	Coff	<i>Corallina officinalis</i> on very exposed lower eulittoral rock
ELR.FR	Him	<i>Himanthalia elongata</i> and red seaweeds on exposed lower eulittoral rock
MLR		Moderately exposed littoral rock (barnacle/fucoid shores)
MLR.BF		Barnacles and furoids (moderately exposed shores)

<i>Biotope code</i>		<i>Biotope</i>
MLR.BF	PelB	<i>Pelvetia canaliculata</i> and barnacles on moderately exposed littoral fringe rock
MLR.BF	FvesB	<i>Fucus vesiculosus</i> and barnacle mosaics on moderately exposed mid-eulittoral rock
MLR.BF	Fser	<i>Fucus serratus</i> on moderately exposed lower eulittoral rock
MLR.BF	Fser.R	<i>Fucus serratus</i> and red seaweeds on moderately exposed lower eulittoral rock
MLR.BF	Fser.Fser	Dense <i>Fucus serratus</i> on moderately exposed to very sheltered lower eulittoral rock
MLR.BF	Fser.Fser.Bo	<i>Fucus serratus</i> and under-boulder fauna on lower eulittoral boulders
MLR.R		Red seaweeds (moderately exposed shores)
MLR.R	XR	Mixed red seaweeds on moderately exposed lower eulittoral rock
MLR.R	Pal	<i>Palmaria palmata</i> on very to moderately exposed lower eulittoral rock
MLR.R	Mas	<i>Mastocarpus stellatus</i> and <i>Chondrus crispus</i> on very to moderately exposed lower eulittoral rock
MLR.R	Osm	<i>Osmundea (Laurencia) pinnatifida</i> and <i>Gelidium pusillum</i> on moderately exposed mid-eulittoral rock
MLR.Eph		Ephemeral green or red seaweeds (freshwater or sand-influenced)
MLR.Eph	Ent	<i>Enteromorpha</i> spp. on freshwater-influenced or unstable upper eulittoral rock
MLR.Eph	EntPor	<i>Porphyra purpurea</i> or <i>Enteromorpha</i> spp. on sand-scoured mid- or lower eulittoral rock
MLR.Eph	Rho	<i>Rhodothamniella floridula</i> on sand-scoured lower eulittoral rock
MLR.MF		<i>Mytilus</i> (mussels) and furoids (moderately exposed shores)
MLR.MF	MytFves	<i>Mytilus edulis</i> and <i>Fucus vesiculosus</i> on moderately exposed mid-eulittoral rock
MLR.MF	MytFR	<i>Mytilus edulis</i> , <i>Fucus serratus</i> and red seaweeds on moderately exposed lower eulittoral rock
SLR		Sheltered littoral rock (furoid shores)
SLR.F		Dense furoids (stable rock)
SLR.F	Pel	<i>Pelvetia canaliculata</i> on sheltered littoral fringe rock
SLR.F	Fspi	<i>Fucus spiralis</i> on moderately exposed to very sheltered upper eulittoral rock
SLR.F	Fves	<i>Fucus vesiculosus</i> on sheltered mid-eulittoral rock
SLR.F	Asc	<i>Ascophyllum nodosum</i> on very sheltered mid-eulittoral rock
SLR.F	Asc.Asc	<i>Ascophyllum nodosum</i> on full salinity mid-eulittoral rock

Higher code		Biotope code	Biotope
SLR.F	Asc.VS		<i>Ascophyllum nodosum</i> and <i>Fucus vesiculosus</i> on variable salinity mid-eulittoral rock
SLR.F	Fserr		<i>Fucus serratus</i> on sheltered lower eulittoral rock
SLR.F	Fserr.T		<i>Fucus serratus</i> , sponges and ascidians on tide-swept lower eulittoral rock
SLR.F	Fserr.VS		<i>Fucus serratus</i> and large <i>Mytilus edulis</i> on variable salinity lower eulittoral rock
SLR.FX			Fucoids, barnacles or ephemeral seaweeds (mixed substrata)
SLR.FX	BLit		Barnacles and <i>Littorina littorea</i> on unstable eulittoral mixed substrata
SLR.FX	FvesX		<i>Fucus vesiculosus</i> on mid-eulittoral mixed substrata
SLR.FX	AscX		<i>Ascophyllum nodosum</i> on mid-eulittoral mixed substrata
SLR.FX	FserX		<i>Fucus serratus</i> on lower eulittoral mixed substrata
SLR.FX	EphX		Ephemeral green and red seaweeds on variable salinity or disturbed eulittoral mixed substrata
SLR.FX	FcerX		<i>Fucus ceranoides</i> on reduced salinity eulittoral mixed substrata
SLR.MX			Mytilus (mussel) beds (mixed substrata)
SLR.MX	MytX		<i>Mytilus edulis</i> beds on eulittoral mixed substrata
			Littoral rock (other)
LR.Rkp			Rockpools
LR.Rkp	G		Green seaweeds (<i>Enteromorpha</i> spp. and <i>Cladophora</i> spp.) in upper shore rockpools
LR.Rkp	Cor		<i>Corallina officinalis</i> and coralline crusts in shallow eulittoral rockpools
LR.Rkp	FK		Fucoids and kelps in deep eulittoral rockpools
LR.Rkp	SwSed		Seaweeds in sediment (sand or gravel)-floored eulittoral rockpools
LR.Ov			Overhangs and caves
LR.Ov	SR		Sponges and shade-tolerant red seaweeds on overhanging lower eulittoral bedrock
LR.Ov	SByAs		Sponges, bryozoans and ascidians on deeply overhanging lower shore bedrock
LS			LITTORAL SEDIMENTS
LGS			Littoral gravels and sands
LGS.Sh			Shingle (pebble) and gravel shores
LGS.Sh	BarSh		Barren shingle or gravel shores
LGS.S			Sand shores

<i>Biotope code</i>		<i>Biotope</i>
LGS.S	BarSnd	Barren coarse sand shores
LGS.S	AEur	Burrowing amphipods and <i>Eurydice pulchra</i> in well-drained clean sand shores
LGS.S	AP	Burrowing amphipods and polychaetes in clean sand shores
LGS.S	AP.P	Burrowing amphipods and polychaetes (often with <i>Arenicola marina</i>) in clean sand shores
LMS	Littoral muddy sands	
LMS.MS	Muddy sand shores	
LMS.MS	PCer	Polychaetes and <i>Cerastoderma edule</i> in fine sand and muddy sand shores
LMS.MS	MacAre	<i>Macoma balthica</i> and <i>Arenicola marina</i> in muddy sand shores
LMS.MS	MacAre.Mare	<i>Arenicola marina</i> , <i>Macoma balthica</i> and <i>Mya arenaria</i> in muddy sand shores
LMX	Littoral mixed sediments	
IR	INFRALITTORAL ROCK (and other hard substrata)	
EIR	Exposed infralittoral rock	
EIR.KFaR	Kelp with cushion fauna, foliose red seaweeds or coralline crusts (exposed rock)	
EIR.KFaR	Ala	<i>Alaria esculenta</i> on sublittoral fringe bedrock
EIR.KFaR	Ala.Myt	<i>Alaria esculenta</i> , <i>Mytilus edulis</i> and coralline crusts on very exposed sublittoral fringe bedrock
EIR.KFaR	Ala.Ldig	<i>Alaria esculenta</i> and <i>Laminaria digitata</i> on exposed sublittoral fringe bedrock
EIR.KFaR	LhypFa	<i>Laminaria hyperborea</i> forest with a faunal cushion (sponges and polyclinids) and foliose red seaweeds on very exposed infralittoral rock
EIR.KFaR	LhypR	<i>Laminaria hyperborea</i> with dense foliose red seaweeds on exposed infralittoral rock
EIR.KFaR	LhypR.Ft	<i>Laminaria hyperborea</i> forest with dense foliose red seaweeds on exposed upper infralittoral rock
EIR.KFaR	LhypR.Pk	<i>Laminaria hyperborea</i> park with dense foliose red seaweeds on exposed lower infralittoral rock
EIR.KFaR	LsacSac	<i>Laminaria saccharina</i> and/or <i>Saccorhiza polyschides</i> infralittoral rock
EIR.KFaR	FoR	Foliose red seaweeds on exposed or moderately exposed lower infralittoral rock
EIR.SG	Robust faunal cushions and crusts (surge gullies & caves)	
EIR.SG	FoSwCC	Foliose seaweeds and coralline crusts in surge gully entrances

Higher code Biotope code		Biotope
EIR.SG	SCAn	Sponge crusts and anemones on wave-surged vertical infralittoral rock
EIR.SG	SCAn.Tub	Sponge crusts, anemones and <i>Tubularia indivisa</i> in shallow infralittoral surge gullies
EIR.SG	SCAs	Sponge crusts and colonial ascidians on wave-surged vertical infralittoral rock
EIR.SG	SCAs.DenCla	<i>Dendrodoa grossularia</i> and <i>Clathrina coriacea</i> on wave-surged vertical infralittoral rock
EIR.SG	SCAs.ByH	Sponge crusts, colonial (polyclinid) ascidians and a bryozoan/hydroid turf on wave-surged vertical or overhanging infralittoral rock
EIR.SG	CC	<i>Balanus crenatus</i> and/or <i>Pomatoceros triqueter</i> with spirorbid worms and coralline crusts on severely scoured infralittoral rock
EIR.SG	CC.BalPom	<i>Balanus crenatus</i> and/or <i>Pomatoceros triqueter</i> with spirorbid worms and coralline crusts on severely scoured vertical infralittoral rock
EIR.SG	CC.Mob	Coralline crusts and crustaceans on mobile boulders or cobbles in surge gullies
MIR		Moderately exposed infralittoral rock
MIR.KR		Kelp with red seaweeds (moderately exposed rock)
MIR.KR	Ldig	<i>Laminaria digitata</i> on moderately exposed or tide-swept sublittoral fringe rock
MIR.KR	Ldig.Ldig	<i>Laminaria digitata</i> on moderately exposed sublittoral fringe rock
MIR.KR	Ldig.Ldig.Bo	<i>Laminaria digitata</i> and under-boulder fauna on sublittoral fringe boulders
MIR.KR	Lhyp	<i>Laminaria hyperborea</i> and foliose red seaweeds on moderately exposed infralittoral rock
MIR.KR	Lhyp.Ft	<i>Laminaria hyperborea</i> forest and foliose red seaweeds on moderately exposed upper infralittoral rock
MIR.KR	Lhyp.Pk	<i>Laminaria hyperborea</i> park and foliose red seaweeds on moderately exposed lower infralittoral rock
MIR.KR	Lhyp.TFt	<i>Laminaria hyperborea</i> forest, foliose red seaweeds and a diverse fauna on tide-swept upper infralittoral rock
MIR.KR	Lhyp.TPk	<i>Laminaria hyperborea</i> park with hydroids, bryozoans and sponges on tide-swept lower infralittoral rock
MIR.GzK		Grazed kelp with algal crusts
MIR.GzK	LhypGz	Grazed <i>Laminaria hyperborea</i> with coralline crusts on infralittoral rock
MIR.GzK	LhypGz.Ft	Grazed <i>Laminaria hyperborea</i> forest with coralline crusts on upper infralittoral rock
MIR.GzK	LhypGz.Pk	Grazed <i>Laminaria hyperborea</i> park with coralline crusts on lower infralittoral rock
MIR.SedK		Sand or gravel-affected or disturbed kelp and seaweed communities
MIR.SedK	XKScrR	Mixed kelps with scour-tolerant and opportunistic foliose red seaweeds on scoured or sand-covered infralittoral rock

<i>Biotope code</i>		<i>Biotope</i>
MIR.SedK	EphR	Ephemeral red seaweeds and kelps on tide-swept mobile infralittoral cobbles
MIR.SedK	HalXK	<i>Halidrys siliquosa</i> and mixed kelps on tide-swept infralittoral rock with coarse sediment
MIR.SedK	PolAhn	<i>Polyides rotundus</i> , <i>Ahnfeltia plicata</i> and <i>Chondrus crispus</i> on sand-covered infralittoral rock
SIR	Sheltered infralittoral rock	
SIR.K	Silted kelp (stable rock)	
SIR.K	LhypLsac	Mixed <i>Laminaria hyperborea</i> and <i>Laminaria saccharina</i> on sheltered infralittoral rock
SIR.K	LhypLsac.Ft	Mixed <i>Laminaria hyperborea</i> and <i>Laminaria saccharina</i> forest on sheltered upper infralittoral rock
SIR.K	LhypLsac.Pk	Mixed <i>Laminaria hyperborea</i> and <i>Laminaria saccharina</i> park on sheltered lower infralittoral rock
SIR.K	Lsac	<i>Laminaria saccharina</i> on very sheltered infralittoral rock
SIR.K	Lsac.Ldig	<i>Laminaria saccharina</i> and <i>Laminaria digitata</i> on sheltered sublittoral fringe rock
SIR.K	Lsac.Ft	<i>Laminaria saccharina</i> forest on very sheltered upper infralittoral rock
SIR.K	Lsac.Pk	<i>Laminaria saccharina</i> park on very sheltered lower infralittoral rock
SIR.K	Lsac.T	<i>Laminaria saccharina</i> , foliose red seaweeds, sponges & ascidians on tide-swept infralittoral rock
SIR.K	EchBriCC	<i>Echinus</i> , brittlestars and coralline crusts on grazed lower infralittoral rock
Infralittoral rock (other)		
IR.FaSwV	Fauna and seaweeds (shallow vertical rock)	
IR.FaSwV	CorMetAlc	<i>Corynactis viridis</i> , <i>Metridium senile</i> and <i>Alcyonium digitatum</i> on exposed or moderately exposed vertical infralittoral rock
IR.FaSwV	AlcByH	<i>Alcyonium digitatum</i> and a bryozoan, hydroid and ascidian turf on moderately exposed vertical infralittoral rock
CR	CIRCALITTORAL ROCK (and other hard substrata)	
ECR	Exposed circalittoral rock	
ECR.EFa	Faunal crusts or short turfs (wave-exposed rock)	
ECR.EFa	CCParCar	Coralline crusts, <i>Parasmittina trispinosa</i> , <i>Caryophyllia smithii</i> , <i>Haliclona viscosa</i> , polyclinids and sparse <i>Corynactis viridis</i> on very exposed circalittoral rock
ECR.EFa	PomByC	<i>Pomatoceros triqueter</i> , <i>Balanus crenatus</i> and bryozoan crusts on mobile circalittoral cobbles and pebbles
ECR.Alc	<i>Alcyonium</i>-dominated communities (tide-swept/vertical)	

Higher code	Biotope code	Biotope
ECR.Alc	AlcC	<i>Alcyonium digitatum</i> , <i>Pomatoceros triqueter</i> , algal and bryozoan crusts on vertical exposed circalittoral rock
MCR		Moderately exposed circalittoral rock
MCR.ByH		Bryozoan/hydroid turfs (sand-influenced)
MCR.ByH	Flu	<i>Flustra foliacea</i> and other hydroid/bryozoan turf species on slightly scoured circalittoral rock or mixed substrata
MCR.ByH	Flu.HByS	<i>Flustra foliacea</i> with hydroids, bryozoans and sponges on slightly tide-swept circalittoral mixed substrata
MCR.ByH	Flu.SerHyd	<i>Sertularia argentea</i> , <i>S. cupressina</i> and <i>Hydrallmania falcata</i> on tide-swept circalittoral cobbles and pebbles
MCR.M		Mussel beds (open coast circalittoral rock/mixed substrata)
MCR.M	ModT	<i>Modiolus modiolus</i> beds with hydroids and red seaweeds on tide-swept circalittoral mixed substrata
MCR.Bri		Brittlestar beds
MCR.Bri	Oph	<i>Ophiothrix fragilis</i> and/or <i>Ophiocomina nigra</i> beds on slightly tide-swept circalittoral rock or mixed substrata
MCR.Bri	Oph.Oacu	<i>Ophiopholis aculeata</i> beds on slightly tide-swept circalittoral rock or mixed substrata
MCR.GzFa		Grazed fauna (moderately exposed or sheltered rock)
MCR.GzFa	FaAIC	Faunal and algal crusts, <i>Echinus esculentus</i> , sparse <i>Alcyonium digitatum</i> and grazing-tolerant fauna on moderately exposed circalittoral rock
MCR.GzFa	FaAIC.Abi	Faunal and algal crusts, <i>Echinus esculentus</i> , sparse <i>Alcyonium digitatum</i> , <i>Abietinaria abietina</i> and other grazing-tolerant fauna on moderately exposed circalittoral rock
SCR		Sheltered circalittoral rock
SCR.BrAs		Brachiopod and solitary ascidian communities (sheltered rock)
SCR.BrAs	AntAsH	<i>Antedon</i> spp., solitary ascidians and fine hydroids on sheltered circalittoral rock
SCR.BrAs	AmenCio	Solitary ascidians, including <i>Ascidia mentula</i> and <i>Ciona intestinalis</i> , on very sheltered circalittoral rock
SCR.BrAs	AmenCio.Met	Large <i>Metridium senile</i> and solitary ascidians on grazed very sheltered circalittoral rock
SCR.BrAs	Aasp	<i>Ascidrella aspersa</i> on sheltered circalittoral rocks on muddy sediment
SCR.Mod		Sheltered <i>Modiolus</i> (horse-mussel) beds
SCR.Mod	ModHAs	<i>Modiolus modiolus</i> beds with fine hydroids and large solitary ascidians on very sheltered circalittoral mixed substrata

<i>Biotope code</i>	<i>Biotope</i>
Circalittoral rock (other)	
CR.FaV	Faunal turfs (deep vertical rock)
CR.FaV	Ant <i>Antedon bifida</i> and a bryozoan/hydroid turf on steep or vertical circalittoral rock
SS	Sublittoral sediments
IGS	Infralittoral gravels and sands
IGS.Mrl	Maerl beds (open coast/clean sediments)
IGS.Mrl	Phy <i>Phymatolithon calcareum</i> maerl beds in infralittoral clean gravel or coarse sand
IGS.Mrl	Phy.R <i>Phymatolithon calcareum</i> maerl beds with red seaweeds in shallow infralittoral clean gravel or coarse sand
IGS.Mrl	Phy.HEc <i>Phymatolithon calcareum</i> maerl beds with hydroids and echinoderms in deeper infralittoral clean gravel or coarse sand
IGS.Mrl	Lgla <i>Lithothamnion glaciale</i> maerl beds in tide-swept variable salinity infralittoral gravel
IGS.FaG	Shallow gravel faunal communities
IGS.FaG	Sell <i>Spisula elliptica</i> and venerid bivalves in infralittoral clean sand or shell-gravel
IGS.FaS	Shallow sand faunal communities
IGS.FaS	Mob Sparse fauna in marine infralittoral mobile clean sand
IGS.FaS	FabMag <i>Fabulina fabula</i> and <i>Magelona mirabilis</i> with venerid bivalves in infralittoral compacted fine sand
IMS	Infralittoral muddy sands
IMS.Sgr	Seagrass beds (sublittoral/lower shore)
IMS.Sgr	Zmar <i>Zostera marina/angustifolia</i> beds in lower shore or infralittoral clean or muddy sand
IMS.Sgr	Rup <i>Ruppia maritima</i> in reduced salinity infralittoral muddy sand
IMS.FaMS	Shallow muddy sand faunal communities
IMS.FaMS	EcorEns <i>Echinocardium cordatum</i> and <i>Ensis</i> sp. in lower shore or shallow sublittoral muddy fine sand
IMS.FaMS	SpiSpi <i>Spio filicornis</i> and <i>Spiophanes bombyx</i> in infralittoral clean or muddy sand
IMS.FaMS	MacAbr <i>Macoma balthica</i> and <i>Abra alba</i> in infralittoral muddy sand or mud
IMS.FaMS	Cap <i>Capitella capitata</i> in enriched sublittoral muddy sediments

Higher code	Biotope code	Biotope
CMS		Circolittoral muddy sands
CMS	AbrNucCor	<i>Abra alba</i> , <i>Nucula nitida</i> and <i>Corbula gibba</i> in circolittoral muddy sand or slightly mixed sediment
CMS	AfilEcor	<i>Amphiura filiformis</i> and <i>Echinocardium cordatum</i> in circolittoral clean or slightly muddy sand
IMU		Infralittoral muds
IMU.MarMu		Shallow marine mud communities
IMU.MarMu	TubeAP	Semi-permanent tube-building amphipods and polychaetes in sublittoral mud or muddy sand
IMU.MarMu	AreSyn	<i>Arenicola marina</i> and synaptid holothurians in extremely shallow soft mud
IMU.MarMu	PhiVir	<i>Philine aperta</i> and <i>Virgularia mirabilis</i> in soft stable infralittoral mud
CMU		Circolittoral muds
CMU	SpMeg	Seapens and burrowing megafauna in circolittoral soft mud
CMU	Beg	<i>Beggiatoa</i> spp. on anoxic sublittoral mud
IMX		Infralittoral mixed sediments
IMX.KSw		<i>Laminaria saccharina</i> (sugar kelp) and filamentous seaweeds (mixed sediment)
IMX.KSw	LsacX	<i>Laminaria saccharina</i> , <i>Chorda filum</i> and filamentous red seaweeds on sheltered infralittoral sediment
IMX.KSw	Tra	Mats of <i>Trailliella</i> on infralittoral muddy gravel
IMX.KSw	Pcri	Loose-lying mats of <i>Phyllophora crispa</i> on infralittoral muddy sediment
IMX.KSw	FiG	Filamentous green seaweeds on low salinity infralittoral mixed sediment or rock
IMX.FaMx		Shallow mixed sediment faunal communities
IMX.FaMx	VsenMtru	<i>Venerupis senegalensis</i> and <i>Mya truncata</i> in lower shore or infralittoral muddy gravel
CMX		Circolittoral mixed sediments
CMX	ModMx	<i>Modiolus modiolus</i> beds on circolittoral mixed sediment
CMX	ModHo	Sparse <i>Modiolus modiolus</i> , dense <i>Cerianthus lloydii</i> and burrowing holothurians on sheltered circolittoral stones and mixed sediment
COS		CIRCALITTORAL OFFSHORE SEDIMENTS

References

- Connor, D.W., Brazier, D.P., Hill, T.O., & Northen, K.O. 1997a. Marine Nature Conservation Review: marine biotope classification for Britain and Ireland. Volume 1. Littoral biotopes. Version 97.06. *JNCC Report*, No. 229.
- Connor, D.W., Dalkin, M.J., Hill, T.O., Holt, R.H.F., & Sanderson, W.G. 1997b. Marine Nature Conservation Review: marine biotope classification for Britain and Ireland. Volume 2. Sublittoral biotopes. Version 97.06. *JNCC Report*, No. 230.
- Howson, C.M., & Picton, B.E. eds. 1997. *The species directory of the marine fauna and flora of the British Isles and surrounding seas*. Belfast/Ross-on-Wye, Ulster Museum and Marine Conservation Society. (Ulster Museum Publication, No. 276)

Appendix B

Biotopes recorded in each area

The biotopes recorded in each area, using the data listed in Table 1, are summarised below. Biotope codes are given according to MNCR classification version 97.06 (Connor *et al.* 1997a, b).

Numbers refer to the *area summaries* as follows:

- | | | |
|---|---|--|
| 1. Unst (north and west) | 13. Bressay and Isle of Noss | 24. Brindister Voe, Swarbacks Minn, Busta Voe, Olna Firth and Aith Voe |
| 2. Unst (east and south) | 14. Lerwick to Wick of Sandsayre | 25. North-west Mainland and Ronas Voe |
| 3. Bluemull Sound | 15. Mousa | 26. Yell Sound (north) |
| 4. Fetlar | 16. No Ness to Sumburgh Head | 27. Yell Sound (south) |
| 5. Basta Voe and Mid Yell Voe | 17. Sumburgh Head to South Havra | 28. Dales Voe, Colla Firth and Swining Voe |
| 6. Yell (east) | 18. East and West Burra | 29. Sullom Voe |
| 7. Lunna Ness (east) and Vidlin Voe | 19. Whiteness, Stromness, Weisdale and Sandsound Voes | 30. Whale Firth and Yell (north-west) |
| 8. Out Skerries | 20. Reawick to Quilva Taing | 31. Foula |
| 9. Whalsay | 21. Gruting Voe and Vailla Sound | 32. Fair Isle |
| 10. Dury Voe | 22. Papa Stour | |
| 11. Nesting, Mainland | 23. St Magnus Bay | |
| 12. Cat Firth, Wadbister Voe, Lax Firth and Dales Voe | | |

Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32											
Littoral rock (and other hard substrata)																																											
YG	•																																										
Pra			•																																								
Ver																																											
Ver.Por																																											
Ver.B																																											
Ver.Ver																																											
Bli																																											
Exposed littoral rock (mussel/barnacle shores)																																											
MytB																																											
BPat																																											
BPat.Fvesl																																											
BPat.Sem																																											
Fdis																																											
Coff																																											
Htm																																											

Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32							
Moderately exposed littoral rock (barnacle/fucoid shores)																																							
PelB																																							
FvesB																																							
Fscr																																							
Fscr.R																																							
Fscr.Fscr																																							
Fscr.Fscr.Bo																																							
XR																																							
Pal																																							
Mas																																							
Osm																																							
Ent																																							
EntPor																																							
Rho																																							
MytFves																																							
MytFR																																							
Sheltered littoral rock (fucoid shores)																																							
Pel																																							
Fspi																																							
Fves																																							
Asc																																							
Asc. Asc																																							
Asc. VS																																							
Fserr.T																																							
Fserr.VS																																							
FvesX																																							
AscX																																							
FscrX																																							
EphX																																							
FscrX																																							
MytX																																							
Littoral rock (rockpools and overhangs)																																							
G																																							
Cor																																							
FK																																							
SwSed																																							
SR																																							
SByAs																																							
Rkp																																							
Littoral gravels and sands																																							
BarSh																																							
BarSnd																																							
AEur																																							
AP.P																																							

Appendix C

Species recorded

All taxa recorded during the surveys given in Table 1 are listed below; records of species noted in the text but not shown here come from additional published sources noted in the individual area summaries. Marine species nomenclature follows Howson & Picton (1996); that for higher plants follows Stace (1991), and that for lichens follows Purvis *et al.* (1992).

Numbers refer to the *area summaries* as follows:

- | | |
|---|--|
| 1. Unst (north and west) | 19. Whiteness, Stromness, Weisdale and Sandsound Voes |
| 2. Unst (east and south) | 20. Reawick to Quilva Taing |
| 3. Bluemull Sound | 21. Gruting Voe and Vaila Sound |
| 4. Fetlar | 22. Papa Stour |
| 5. Basta Voe and mid Yell Voe | 23. St Magnus Bay |
| 6. Yell (east) | 24. Brindister Voe, Swarbacks Minn, Busta Voe, Olna Firth and Aith Voe |
| 7. Lunna Ness (east) and Vidlin Voe | 25. North-west Mainland and Ronas Voe |
| 8. Out Skerries | 26. Yell Sound (north) |
| 9. Whalsay | 27. Yell Sound (south) |
| 10. Dury Voe | 28. Dales Voe, Colla Firth and Swining Voe |
| 11. North-east Mainland | 29. Sullom Voe |
| 12. Cat Firth, Wadbister Voe, Lax Firth and Dales Voe | 30. Whale Firth and Yell (north-west) |
| 13. Bressay and Isle of Noss | 31. Foula |
| 14. Lerwick to Wick of Sandsayre | 32. Fair Isle |
| 15. Mousa | |
| 16. No Ness to Sumburgh Head | |
| 17. Sumburgh Head to South Havra | |
| 18. East and West Burra | |

Porifera

<i>Clathrina coriacea</i>	1, 3, 4, 7, 8, 11, 13, 17, 18, 20, 22, 23, 31, 32
<i>Leucosolenia</i> sp.	2, 3, 7, 8, 14, 17, 18, 19, 24, 25, 29, 32
<i>Leucosolenia botryoides</i>	1, 3, 13, 15, 18, 19, 22, 23, 24, 25, 31, 32
<i>Leucosolenia complicata</i>	13, 14, 20, 23
<i>Scypha ciliata</i>	8, 9, 13, 17, 18, 19, 22, 23, 24, 31, 32
<i>Leuconia</i> sp.	22
<i>Leuconia nivea</i>	22, 31
<i>Grantia compressa</i>	1, 3, 7, 13, 15, 17, 18, 22, 23, 27, 29, 31, 32
<i>Oscarella lobularis</i>	17, 18, 22, 31, 32
<i>Pachymatisma johnstonia</i>	1, 3, 9, 22, 23, 24, 31, 32
<i>Suberites</i> sp.	25
<i>Suberites carnosus</i>	24
<i>Suberites ficus</i>	4, 19, 24, 25
<i>Spinularia spinularia</i>	3
<i>Cliona celata</i>	3, 7, 13, 19, 24, 27, 29, 32
<i>Halichondria</i> sp.	11, 13, 18, 20, 22, 24
<i>Halichondria bowerbanki</i>	18, 19, 25

<i>Halichondria panicea</i>	1, 2, 3, 7, 8, 12, 13, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 27, 29, 31, 32
<i>Hymeniacion perleve</i>	17
<i>Mycale</i> sp.	12, 19, 22, 24, 25
<i>Mycale contarenii</i>	24
<i>Mycale rotalis</i>	22
<i>Mycale similis</i>	19, 25
<i>Esperiopsis fucorum</i>	1, 3, 18, 19, 22, 24, 31, 32
<i>Myxilla</i> sp.	24, 31
<i>Myxilla fimbriata</i>	22, 31, 32
<i>Myxilla incrustans</i>	1, 3, 7, 8, 11, 13, 14, 17, 18, 19, 22, 23, 24, 27, 31, 32
<i>Myxilla rosacea</i>	22, 31
<i>Hymedesmia</i> sp.	31
<i>Phorbas fictitius</i>	17
<i>Hemimycale columella</i>	22
<i>Ophlitaspongia seriata</i>	31
<i>Haliclona</i> sp.	1, 3, 22, 25, 31, 32
<i>Haliclona oculata</i>	8
<i>Haliclona viscosa</i>	1, 8, 17, 20, 22, 26, 32
<i>Dysidea fragilis</i>	31, 32
<i>Spongionella pulchella</i>	32
<i>Aplysilla rosea</i>	22
<i>Aplysilla sulfurea</i>	22, 31
<i>Halisarca dujardini</i>	2, 29, 31

Porifera indet. (crusts)	11, 17, 19, 20, 22, 24, 26	<i>Diphasia rosacea</i>	15, 22
Cnidaria		<i>Dynamena pumila</i>	2, 3, 7, 8, 15, 19, 22, 23, 24, 26, 27, 29, 32
<i>Craterolophus</i> sp.	24	<i>Hydrallmania falcata</i>	6, 13, 15, 22, 25, 27, 32
Eleutherocarpidae indet.	18	<i>Thuiaria articulata</i>	26
<i>Haliclystus</i> sp.	22	<i>Thuiaria thuja</i>	6, 18, 22, 23, 26, 31, 32
<i>Haliclystus auricula</i>	8, 24	<i>Sertularella gayi</i>	17, 26
<i>Lucernaria</i> sp.	23, 31	<i>Sertularella polyzonias</i>	7, 13, 14, 19
<i>Lucernaria quadricornis</i>	22, 23	<i>Sertularia</i> sp.	3, 24, 26
<i>Cyanea capillata</i>	9, 18, 19, 23, 24, 29	<i>Sertularia argentea</i>	1, 3, 6, 7, 11, 13, 18, 22, 27, 31, 32
<i>Cyanea lamarckii</i>	11, 18, 26	<i>Campanularia</i> sp.	13
<i>Aurelia aurita</i>	7, 9, 17, 18, 19, 23, 24, 25, 29	<i>Clytia hemisphaerica</i>	1, 27
<i>Corymorpha nutans</i>	2	<i>Laomedea flexuosa</i>	2, 13, 18, 22, 27
<i>Tubularia</i> sp.	13, 22, 26	<i>Obelia</i> sp.	1, 3, 6, 8, 12, 13, 15, 17, 18, 19, 23, 24, 25, 27, 29, 32
<i>Tubularia indivisa</i>	1, 3, 13, 15, 22, 31, 32	<i>Obelia dichotoma</i>	1, 3, 4, 5, 7, 13, 14, 15, 19, 24
<i>Tubularia larynx</i>	1, 3, 17	<i>Obelia geniculata</i>	1, 3, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 31, 32
<i>Coryne</i> sp.	15, 22	<i>Obelia longissima</i>	11, 29
<i>Coryne muscoides</i>	27	<i>Orthopyxis integra</i>	1, 25, 31
<i>Sarsia</i> sp.	31	<i>Rhizocaulus verticillatus</i>	11
<i>Sarsia eximia</i>	15	<i>Alcyonium digitatum</i>	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Eudendrium</i> sp.	14, 19, 22, 24, 25, 29	<i>Virgularia mirabilis</i>	5, 7, 10, 18, 19, 21, 24, 26, 27, 29
<i>Eudendrium capillare</i>	3	<i>Pennatula phosphorea</i>	7, 26
<i>Eudendrium rameum</i>	29	<i>Cerianthus lloydii</i>	1, 3, 6, 7, 8, 7, 12, 18, 19, 21, 23, 24, 25, 26, 29, 32
<i>Eudendrium ramosum</i>	32	<i>Parazoanthus anguicomus</i>	22
<i>Bougainvillia</i> sp.	13, 22, 24	<i>Gonactinia prolifera</i>	4
<i>Bougainvillia pyramidata</i>	29	<i>Actinia</i> sp.	4, 19, 21, 32
<i>Bougainvillia ramosa</i>	19, 24, 25, 32	<i>Actinia equina</i>	1, 3, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 29, 31, 32
Hydractiniidae indet.	19, 29	<i>Urticina felina</i>	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 31, 32
<i>Hydractinia echinata</i>	5, 7, 8, 9, 12, 15, 17, 18, 19, 21, 23, 24, 25, 26, 28, 29	<i>Urticina eques</i>	3, 11, 26, 29, 32
<i>Clava</i> sp.	15, 32	<i>Aulactinia verrucosa</i>	3
<i>Clava multicornis</i>	27	<i>Stomphia coccinea</i>	22
<i>Phialella quadrata</i>	21	<i>Metridium senile</i>	1, 2, 3, 4, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 31, 32
<i>Halecium</i> sp.	3, 8, 24	<i>Sagartia</i> sp.	18, 23
<i>Halecium beanii</i>	3, 6, 19	<i>Sagartia elegans</i>	1, 3, 8, 13, 14, 15, 17, 20, 22, 23, 25, 29, 31, 32
<i>Halecium halecinum</i>	1, 2, 6, 7, 8, 9, 11, 12, 13, 14, 18, 19, 20, 22, 24, 25, 27, 31	<i>Sagartia troglodytes</i>	1, 13, 14, 15, 19, 22, 23, 31
<i>Halecium muricatum</i>	13	<i>Cereus pedunculatus</i>	1, 3, 18, 25, 27, 32
<i>Halecium undulatum</i>	1, 17		
<i>Halopteris catharina</i>	8, 9, 14, 19, 24, 27		
<i>Kirchenpaueria</i> sp.	7, 13, 19		
<i>Kirchenpaueria pinnata</i>	2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 31, 32		
<i>Kirchenpaueria similis</i>	29		
<i>Nemertesia</i> sp.	31		
<i>Nemertesia antennina</i>	1, 6, 7, 8, 9, 11, 13, 15, 18, 19, 22, 23, 24, 25, 26, 27, 29, 31		
<i>Nemertesia ramosa</i>	3, 6, 8, 9, 13, 22, 25, 26, 28, 29, 31		
<i>Plumularia</i> sp.	7, 13		
<i>Plumularia setacea</i>	1, 3, 7, 8, 13, 16, 19, 22, 24, 25, 26, 27, 31		
<i>Polyplumaria frutescens</i>	8		
<i>Abietinaria abietina</i>	1, 3, 6, 8, 9, 11, 13, 17, 18, 19, 20, 22, 26, 27, 31		
<i>Abietinaria filicula</i>	3, 23		

<i>Sagartiogeton</i> sp.	26	<i>Alentia gelatinosa</i>	1, 2, 3, 4, 6, 11, 14, 17, 29, 32
<i>Sagartiogeton laceratus</i>	25, 26, 29	<i>Eunoe nodosa</i>	27
<i>Sagartiogeton undatus</i>	12, 24	<i>Gattyana cirrosa</i>	18, 26, 29
<i>Phellia gausapata</i>	1, 17, 22, 31	<i>Harmothoe</i> sp.	2, 3, 4, 6, 12, 18, 19, 23, 24, 26, 27, 28, 29
<i>Hormathia coronata</i>	31	<i>Harmothoe extenuata</i>	3, 19
<i>Adamsia carciniopados</i>	3, 4, 6, 7, 12, 13, 14, 18, 19, 21, 25, 26	<i>Harmothoe imbricata</i>	2, 19, 27
<i>Peachia cylindrica</i>	7	<i>Harmothoe impar</i>	26, 27
<i>Edwardsiella carnea</i>	18, 19	<i>Harmothoe ljunmani</i>	23
<i>Edwardsia</i> sp.	26, 29	<i>Harmothoe glabra</i>	29
<i>Edwardsia claparedii</i>	2, 19, 24	<i>Harmothoe lunulata</i>	10, 26, 27, 29
<i>Corynactis viridis</i>	1, 3, 4, 7, 8, 13, 14, 15, 17, 22, 23, 31, 32	<i>Lepidonotus squamatus</i>	6, 19, 26, 27, 29, 31
<i>Caryophyllia smithii</i>	1, 2, 3, 4, 6, 7, 8, 9, 13, 14, 16, 17, 19, 20, 22, 23, 24, 25, 26, 31, 32	<i>Pholoe inornata</i>	3, 4, 5, 6, 10, 12, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29
Ctenophora		<i>Sigalion mathildae</i>	14
<i>Bolinopsis infundibulum</i>	9	<i>Sthenelais</i> sp.	4, 29
Platyhelminthes		<i>Sthenelais boa</i>	4, 29
Platyhelminthes indet.	4, 6, 19, 21, 24, 29	<i>Sthenelais limicola</i>	14, 18, 29
<i>Turbellaria</i> indet.	18, 19, 27, 29, 32	<i>Sthenelais zetlandica</i>	31
Nemertea		Phyllodoceidae indet.	1, 29
Nemertean indet.	2, 4, 5, 6, 12, 13, 14, 15, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31	Eteoninae indet.	26
<i>Anopla</i> sp.	18, 19	<i>Eteone</i> sp.	4, 5, 12, 14, 21, 26, 27, 28, 29
<i>Tubulanus</i> sp.	4	<i>Eteone flava</i>	18, 23, 24, 29
<i>Tubulanus annulatus</i>	19, 26	<i>Hypereteone foliosa</i>	18, 19
<i>Tubulanus superbus</i>	11, 24, 25	<i>Eteone longa</i>	2, 3, 4, 6, 18, 19, 21, 24, 25, 26, 27, 28, 29
<i>Cerebratulus</i> sp.	4, 5, 6, 24, 26, 27, 29	<i>Eteone suecica</i>	26
<i>Cerebratulus fuscus</i>	16	<i>Hypereteone lactea</i>	29
<i>Lineus</i> sp.	14, 23	<i>Mysta</i> sp.	12
<i>Lineus longissimus</i>	3, 7, 9, 11, 12, 14, 17, 18, 23, 24, 32	<i>Mystides borealis</i>	19
<i>Lineus ruber</i>	19, 24	<i>Pseudomystides limbata</i>	4, 18, 19, 26, 27
Nematoda		<i>Protomystides</i> sp.	23, 29
Nematoda indet.	1, 2, 4, 5, 6, 12, 14, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29, 32	Phyllodoceinae indet.	2, 14, 26, 27, 28, 29
<i>Priapulius caudatus</i>	18, 19, 24, 25, 26, 28, 29, 5	<i>Anaitides</i> sp.	2, 4, 6, 18, 21, 26, 27, 29
<i>Barentsia</i> sp.	25	<i>Anaitides groenlandica</i>	26, 28, 29
Sipuncula		<i>Anaitides maculata</i>	6
Sipunculidae indet.	5, 6, 10, 12, 18, 19, 23, 24, 26, 28, 29	<i>Anaitides mucosa</i>	18, 19, 21, 26, 27, 29
<i>Sipunculus</i> sp.	2	<i>Anaitides subulifera</i>	4
<i>Golfingia</i> sp.	19, 24, 26, 27, 29	<i>Eulalia</i> sp.	12, 18, 23, 29
<i>Golfingia vulgaris vulgaris</i>	27, 29	<i>Eulalia viridis</i>	17, 18, 19, 22, 24, 28, 29
<i>Phascolion strombus strombus</i>	2, 18, 19, 21, 24, 26, 27, 29	<i>Eulalia mustela</i>	27
Annelida		<i>Eumida</i> sp.	18, 21, 24, 26, 27
Polychaeta indet.	17, 18, 19, 24	<i>Eumida bahusiensis</i>	24
<i>Chrysopetalum debile</i>	23, 27	<i>Eumida sanguinea</i>	4, 6, 10, 12, 13, 14, 23, 24, 26, 27, 29
<i>Pisione remota</i>	2, 4, 23, 27	<i>Notophyllum foliosum</i>	26, 29
Aphroditidae indet.	5, 12, 23	<i>Phyllodoce</i> sp.	4, 10, 12, 13, 14, 18, 19, 21, 26, 28
<i>Aphrodita aculeata</i>	12, 19, 24, 26, 28, 29	<i>Phyllodoce laminosa</i>	4
Polynoidae indet.	3, 4, 15, 23, 27, 29	<i>Lacydonia</i> sp.	23
<i>Adyte assimilis</i>	6	<i>Glycera</i> sp.	12, 14, 18, 19, 21, 23, 27, 29
		<i>Glycera alba</i>	4, 18, 24, 25, 26, 27, 28, 29
		<i>Glycera lapidum</i>	2, 3, 4, 6, 12, 13, 19, 23, 26, 27, 29
		<i>Glycera rouxii</i>	12, 23, 25, 28, 29
		<i>Glycera tridactyla</i>	18, 19

<i>Goniadidae</i> indet.	4	<i>Sphaerosyllis ovigera</i>	5
<i>Glycinde nordmanni</i>	2, 4, 18, 19, 21, 26, 27, 29	<i>Sphaerosyllis tetralix</i>	26, 27
<i>Goniada maculata</i>	12, 18, 19, 21, 23, 24, 26, 27, 28, 29	<i>Autolytus</i> sp.	26, 27
<i>Goniadella ?gracilis</i>	27	<i>Nereididae</i> indet.	4, 12, 13, 18, 23, 26, 27, 29
<i>Sphaerodoridae</i> indet.	6	<i>Hediste diversicolor</i>	27
<i>Ephesiella abyssorum</i>	18, 26, 27, 29	<i>Nereis</i> sp.	10, 18, 29
<i>Sphaerodoridium</i>	26, 29	<i>Nereis longissima</i>	21, 26, 27, 29
<i>claparedii</i>		<i>Platynereis dumerilii</i>	18, 19, 24
<i>Commensodorum</i>	26	<i>Websterinereis glauca</i>	3, 26, 27, 28, 29
<i>commensalis</i>		<i>Aglaophamus</i> sp.	4
<i>Sphaerodoropsis balticum</i>	27	<i>Aglaophamus rubella</i>	27
<i>Sphaerodoropsis minuta</i>	6, 18, 27	<i>Nephtys</i> sp.	2, 3, 6, 12, 18, 19, 24, 26, 27, 28, 29
<i>Sphaerodorum</i> sp.	29	<i>Nephtys caeca</i>	2, 3, 6, 12, 24, 26, 27, 29
<i>Sphaerodorum gracilis</i>	3, 24, 26, 27, 28, 29	<i>Nephtys ciliata</i>	4, 6, 26, 29
<i>Hesionidae</i> indet.	12, 14, 23, 26	<i>Nephtys cirrosa</i>	4, 13, 14, 18, 27
<i>Gyptis</i> sp.	19	<i>Nephtys hombergii</i>	2, 4, 5, 10, 12, 18, 19, 21, 24, 26, 27, 28, 29
<i>Podarkeopsis capensis</i>	19, 23, 26, 29	<i>Nephtys kersivalensis</i>	18, 19, 24, 29
<i>Gyptis rosea</i>	26, 29	<i>Nephtys hystericis</i>	5, 23, 24, 26, 28, 29
<i>Kefersteinia cirrata</i>	4, 6, 13, 18, 19, 23, 24, 26, 27, 28, 29	<i>Nephtys incisa</i>	26, 29
<i>Nereimyra</i> sp.	28	<i>Nephtys longosetosa</i>	4, 12, 13, 14, 18
<i>Nereimyra punctata</i>	6, 23, 24, 26, 27, 28, 29	<i>Nephtys pente</i>	26, 29
<i>Ophiodromus flexuosus</i>	5, 18, 19, 21, 24, 25, 26, 27, 28, 29	<i>Amphinomidae</i> indet.	23
<i>Podarke pallida</i>	18, 19, 24, 26, 29	<i>Paramphinome jeffreysii</i>	29
<i>Syllidia armata</i>	12, 19, 27	<i>Pareurythoe borealis</i>	27
<i>Microphthalmus</i> sp.	19, 29	<i>Aponuphis bilineata</i>	3, 23
<i>Microphthalmus aberrans</i>	27	<i>Hyalinoecia</i> sp.	12
<i>Microphthalmus listensis</i>	27	<i>Nothria conchylega</i>	18, 29
<i>Pilargidae</i> indet.	23	<i>Eunice pennata</i>	29
<i>Syllidae</i> indet.	2, 3, 4, 10, 27, 29	<i>Lumbrineris</i> sp.	6, 12, 18, 21, 24, 26, 28, 29
<i>Eurysyllis tuberculata</i>	27	<i>Lumbrineris gracilis</i>	4, 6, 12, 18, 19, 23, 26, 27, 29
<i>Ehlersia</i> sp.	2, 3, 12	<i>Lumbrineris hibernica</i>	5, 12, 24, 25, 28
<i>Ehlersia cornuta</i>	5, 18, 23, 27, 29	<i>Lumbrineris tetraura</i>	26
<i>Syllis</i> sp.	19, 23, 24, 26, 27, 28, 29	<i>Notocirrus scoticus</i>	26, 29
<i>Syllis amica</i>	23, 29	<i>Dorvillea</i> sp.	29
<i>Syllis gracilis</i>	24	<i>Ophryotrocha</i> sp.	19, 21, 26
<i>Trypanosyllis coeliaca</i>	18, 19, 26, 27, 29	<i>Ophryotrocha hartmanni</i>	18
<i>Typosyllis</i> sp.	2, 3, 4, 19, 31	<i>Ougia subaequalis</i>	26
<i>Typosyllis armillaris</i>	26, 28, 29	<i>Parougia caeca</i>	18
<i>Typosyllis hyalina</i>	5, 26	<i>Parougia eliasoni</i>	18, 26
<i>Typosyllis variegata</i>	5	<i>Protodorvillea</i> sp.	12, 23
<i>Eusyllis</i> sp.	6	<i>Protodorvillea kefersteini</i>	4, 5, 13, 18, 19, 21, 24, 26, 27, 28, 29
<i>Eusyllis blomstrandii</i>	26, 27	<i>Schistomeringos neglecta</i>	26, 27
<i>Odontosyllis fulgurans</i>	26, 27	<i>Orbiniidae</i> indet.	4
<i>Odontosyllis gibba</i>	26, 27	<i>Leitoscoloplos</i> sp.	24
<i>Streptosyllis</i> sp.	4	<i>Nainereis</i> sp.	19
<i>Streptosyllis websteri</i>	2, 18, 19, 26, 27	<i>Orbinia</i> sp.	2
<i>Syllides longocirrata</i>	26, 27	<i>Orbinia sertulata</i>	23, 27
<i>Exogoninae</i> indet.	14, 6	<i>Scoloplos armiger</i>	2, 4, 5, 6, 12, 13, 14, 16, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29
<i>Exogone</i> sp.	12, 13, 21, 26, 29	<i>Paraonidae</i> indet.	10, 29
<i>Exogone hebes</i>	3, 4, 5, 6, 12, 13, 18, 19, 21, 26, 27, 28, 29	<i>Aricidea</i> sp.	4, 12, 13, 14, 23, 24, 26, 27, 28, 29
<i>Exogone naidina</i>	2, 18, 19, 21, 23, 24, 26, 27, 29	<i>Aricidea minuta</i>	18, 19, 24
<i>Exogone verugera</i>	12, 13, 18, 19, 26, 27, 29	<i>Aricidea catherinae</i>	18, 26, 27, 29
<i>Sphaerosyllis</i> sp.	6, 18, 21, 27, 28, 29	<i>Aricidea cerrutii</i>	26, 27, 29
<i>Sphaerosyllis bulbosa</i>	19, 23, 26, 27, 29		
<i>Sphaerosyllis erinaceus</i>	18		
<i>Sphaerosyllis hystrix</i>	18, 19, 26, 27, 29		

<i>Aricidea simonae</i>	2	<i>Spiochaetopterus typicus</i>	24
<i>Levinsenia gracilis</i>	18, 19, 26, 29	Cirratulidae indet.	2, 3, 4, 6, 10, 13, 19, 21, 24, 26, 27, 28, 29, 31, 32
<i>Paradoneis</i> sp.	23	<i>Caulleriella</i> sp.	5, 19, 26, 27, 29
<i>Paradoneis lyra</i>	5, 12, 18, 19, 21, 24, 26, 27, 28, 29	<i>Caulleriella alata</i>	19, 26, 27
<i>Paraonis fulgens</i>	6, 12, 23, 29	<i>Caulleriella bioculata</i>	12
<i>Apistobranchnus</i> sp.	24	<i>Caulleriella caputesocis</i>	4
<i>Apistobranchnus tenuis</i>	26, 27	<i>Caulleriella zetlandica</i>	4, 12, 26, 27, 29
<i>Apistobranchnus tullbergi</i>	18, 19, 26, 27, 29	<i>Tharyx killariensis</i>	26, 27
<i>Poecilochaetus serpens</i>	12, 13, 18, 23, 26, 27, 29	<i>Chaetozone setosa</i>	2, 4, 12, 13, 14, 18, 19, 21, 24, 25, 26, 27, 28, 29
Spionidae indet.	4, 5, 6, 11, 17, 19, 29	<i>Cirratulus</i> sp.	7, 24, 25, 26, 28, 29
<i>Aonides</i> sp.	4	<i>Cirratulus cirratus</i>	4, 5, 18, 19, 21, 24, 25, 26, 27, 28, 29
<i>Aonides oxycephala</i>	4, 19, 27	<i>Cirratulus filiformis</i>	24
<i>Aonides paucibranchiata</i>	2, 3, 4, 6, 12, 18, 19, 23, 24, 26, 27, 29	<i>Cirriformia tentaculata</i>	4, 10, 23, 26, 27, 29
<i>Laonice bahusiensis</i>	27	<i>Dodecaceria caulleryi</i>	6
<i>Laonice cirrata</i>	23, 26, 29	<i>Dodecaceria concharum</i>	5, 12, 21, 24, 26, 28, 29
<i>Laonice sarsi</i>	26	<i>Tharyx</i> sp.	24
<i>Malacoceros</i> sp.	19	<i>Aphelochaeta marioni</i>	5, 10, 12, 14, 19, 24, 26, 27, 29
<i>Malacoceros fuliginosus</i>	12, 19, 21, 26, 29	<i>Brada</i> sp.	29
<i>Malacoceros tetracerus</i>	26, 27, 28, 29	<i>Brada villosa</i>	24
<i>Malacoceros vulgaris</i>	26	<i>Diplocirrus glaucus</i>	12, 18, 19, 23, 24, 25, 26, 28, 29
<i>Minuspio cirrifera</i>	12, 13, 18, 19, 23, 26, 27, 29	<i>Flabelligera affinis</i>	29
<i>Polydora</i> sp.	4, 5, 6, 10, 12, 18, 19, 21, 23, 24, 26, 29, 32	<i>Pherusa</i> sp.	5, 23
<i>Polydora caeca</i>	26, 27, 29	<i>Pherusa plumosa</i>	12, 18, 19, 24, 26, 28, 29
<i>Polydora caulleryi</i>	18, 19, 26, 27, 29	<i>Macrochaeta clavicornis</i>	18, 19, 23, 24, 26, 27, 28, 29
<i>Polydora ciliata</i>	18, 21	Capitellidae indet.	14, 23, 28
<i>Polydora flava</i>	26, 27	<i>Capitella</i> sp.	5
<i>Polydora giardi</i>	26	<i>Capitella capitata</i>	4, 18, 19, 21, 24, 26, 27, 28, 29
<i>Polydora socialis</i>	18, 19	<i>Capitellides giardi</i>	4, 18
<i>Polydora quadrilobata</i>	5, 12, 26, 28, 29	<i>Capitomastus minimus</i>	2, 6, 18, 21, 23, 24, 28, 29
<i>Prionospio</i> sp.	23, 26, 27, 29	<i>Heteromastus filiformis</i>	26, 28
<i>Prionospio fallax</i>	12, 18, 19, 21, 24, 25, 26, 27, 28, 29	<i>Mediomastus fragilis</i>	2, 5, 6, 18, 19, 24, 26, 27, 28, 29
<i>Prionospio ehlersi</i>	18, 19, 24	<i>Notomastus</i> sp.	5, 12, 21, 23, 24, 25, 28, 29
<i>Pseudopolydora antennata</i>	19, 26, 27	<i>Notomastus latericeus</i>	4, 12, 18, 19, 21, 24, 25, 26, 27, 28, 29
<i>Pseudopolydora pulchra</i>	2, 3, 18, 26, 27, 29	<i>Peresiella clymenoides</i>	26
<i>Pygospio elegans</i>	2, 12, 19, 21, 26, 28	<i>Arenicola marina</i>	1, 2, 3, 5, 7, 8, 10, 11, 12, 13, 14, 15, 16, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29, 32
<i>Scolelepis</i> sp.	3, 19	Maldanidae indet.	12, 21, 24, 26, 27, 29
<i>Scolelepis bonnieri</i>	14	Lumbriclymeninae indet.	18
<i>Scolelepis squamata</i>	4	<i>Lumbriclymene</i> sp.	18
<i>Scolelepis cantabra</i>	24	<i>Praxillura longissima</i>	26, 29
<i>Scolelepis tridentata</i>	21, 26, 27, 29	Euclymeninae indet.	12, 18, 23, 26, 29
<i>Spio</i> sp.	18, 26, 27	<i>Clymenura</i> sp.	24
<i>Spio armata</i>	26, 27	<i>Clymenura borealis</i>	27
<i>Spio decorata</i>	18, 19	<i>Euclymene</i> sp.	19, 26
<i>Spio filicornis</i>	2, 4, 5, 6, 12, 13, 14, 18, 19, 21, 24, 26, 27, 28, 29	<i>Euclymene oerstedii</i>	2
<i>Spio martinensis</i>	2, 3, 4, 6, 27, 29	<i>Praxillella</i> sp.	5, 27
<i>Spiophanes bombyx</i>	2, 4, 6, 12, 13, 14, 18, 19, 21, 23, 24, 26, 27, 29	<i>Praxillella affinis</i>	24, 26
<i>Spiophanes kroyeri</i>	4, 18, 23, 26, 29	<i>Praxillella praetermissa</i>	5, 10, 26, 27, 29
<i>Magelona</i> sp.	6, 18		
<i>Magelona alleni</i>	18, 19, 29		
<i>Magelona minuta</i>	4, 19		
<i>Magelona mirabilis</i>	4, 13, 14, 18		
<i>Chaetopterus</i> sp.	19, 26		
<i>Chaetopterus variopedatus</i>	3, 4, 5, 12, 18, 19, 21, 22, 23, 24, 29, 31		

<i>Nicomachinae</i> indet.	4, 5	<i>Neoamphitrite figulus</i>	27
<i>Nicomache</i> sp.	5, 12, 18, 21	<i>Nicolea</i> sp.	26, 27
<i>Rhodiniinae</i> indet.	28	<i>Nicolea venustula</i>	27
<i>Rhodine</i> sp.	5	<i>Paramphitrite</i>	19
<i>Rhodine gracilior</i>	18, 19, 26, 28, 29	<i>tetrabanchia</i>	
<i>Rhodine loveni</i>	5, 12, 24, 29	<i>Phisidia aurea</i>	26
<i>Ophelia neglecta</i>	4, 23	<i>Pista cristata</i>	5, 18, 19, 24, 26, 27, 28, 29
<i>Travisia forbesii</i>	4, 12, 13, 18, 24, 26, 28	<i>Pista lornensis</i>	28, 29
<i>Ophelina acuminata</i>	2, 12, 19, 21, 26, 27, 28, 29	<i>Polycirrinae</i> indet.	2, 4, 12
<i>Ophelina modesta</i>	18, 26	<i>Amaeana trilobata</i>	24, 28, 29
<i>Asclerocheilus intermedius</i>	27	<i>Hauchiella</i> sp.	4
<i>Scalibregma inflatum</i>	5, 12, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29	<i>Lysilla loveni</i>	26
<i>Polygordius appendiculatus</i>	4, 27	<i>Polycirrus</i> sp.	4, 12, 19, 23, 24, 26, 27, 28, 29
<i>Oweniidae</i> indet.	27	<i>Polycirrus norvegicus</i>	18
<i>Myriochele</i> sp.	26, 29	<i>Polycirrus plumosus</i>	26
<i>Myriochele heeri</i>	5, 12, 24, 28, 29	<i>Thelepodinae</i> indet.	26
<i>Galathowenia oculata</i>	18, 19, 21, 24	<i>Streblosoma</i> sp.	26
<i>Owenia fusiformis</i>	4, 5, 6, 12, 14, 18, 19, 23, 24, 26, 27, 28, 29	<i>Streblosoma bairdi</i>	27, 29
<i>Amphictene auricoma</i>	12, 18, 19, 23, 24, 26, 29	<i>Streblosoma intestinalis</i>	26, 27, 29
<i>Lagis koreni</i>	4, 10, 12, 18, 19, 21, 24, 25, 26, 28, 29	<i>Thelepus cincinnatus</i>	23, 29
<i>Pectinaria belgica</i>	24	<i>Sabellidae</i> indet.	2, 3, 4, 6, 18, 19, 23, 24, 27, 28, 29
<i>Petta pusilla</i>	26	<i>Branchiomma bombyx</i>	19
<i>Sabellaria spinulosa</i>	18	<i>Chone</i> sp.	18, 19, 26, 29
<i>Ampharetidae</i> indet.	4	<i>Chone collaris</i>	18
<i>Melinninae</i> indet.	14	<i>Chone duneri</i>	4, 5, 12, 13, 19, 26, 27, 29
<i>Melinna palmata</i>	29	<i>Chone filicaudata</i>	19, 26, 27, 29
<i>Ampharetinae</i> indet.	4, 29	<i>Chone infundibuliformis</i>	12, 18, 19, 26, 29
<i>Ampharete</i> sp.	18, 21, 23, 26	<i>Demonax branchyona</i>	29
<i>Ampharete baltica</i>	2, 18, 19	<i>Euchone</i> sp.	19
<i>Ampharete falcata</i>	26	<i>Euchone rubrocincta</i>	5, 18, 19, 23, 26, 29
<i>Ampharete finmarchica</i>	21, 26	<i>Euchone southerni</i>	23, 28
<i>Ampharete grubei</i>	12, 26, 28	<i>Fabricia sabella</i>	18, 19, 21, 28
<i>Ampharete lindstroemi</i>	21, 26, 29	<i>Jasmineira</i> sp.	26, 27
<i>Amphicteis gunneri</i>	26, 28	<i>Jasmineira caudata</i>	18, 19, 21, 23, 26, 27, 29
<i>Anobothrus gracilis</i>	12, 25, 26, 29	<i>Laonome kroyeri</i>	12, 23, 29
<i>Sosane sulcata</i>	18, 19, 24, 26, 29	<i>Megalomma vesiculosum</i>	24, 29
<i>Terebellides stroemi</i>	2, 5, 12, 18, 19, 21, 23, 24, 26, 27, 28, 29	<i>Myxicola</i> sp.	24, 29
<i>Trichobranchus</i> sp.	26, 28	<i>Myxicola aesthetica</i>	19, 24, 25
<i>Trichobranchus glacialis</i>	19, 24, 26, 27, 29	<i>Myxicola infundibulum</i>	9, 11, 19, 24, 25, 26
<i>Terebellidae</i> indet.	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32	<i>Potamilla</i> sp.	5
<i>Amphitritinae</i> indet.	21	<i>Potamilla neglecta</i>	18
<i>Amphitrite</i> sp.	14, 19, 23, 24	<i>Potamilla torelli</i>	23
<i>Axionice maculata</i>	26	<i>Sabella</i> sp.	18
<i>Eupolymnia</i> sp.	18	<i>Sabella pavonina</i>	23, 24
<i>Eupolymnia nebulosa</i>	14, 18, 19, 23, 24, 25, 29	<i>Serpulidae</i> indet.	5, 12, 18, 19, 23, 27, 29
<i>Eupolymnia nesidensis</i>	26, 29	<i>Ditrupa arietina</i>	23
<i>Janice conchilega</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29, 31, 32	<i>Hydroides</i> sp.	29, 9
<i>Neoamphitrite affinis</i>	26	<i>Hydroides norvegica</i>	6, 12, 18, 19, 23, 26, 27, 29
		<i>Pomatoceros</i> sp.	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32
		<i>Pomatoceros triqueter</i>	1, 2, 3, 4, 6, 7, 10, 12, 14, 16, 17, 18, 19, 21, 22, 24, 25, 26, 27, 28, 29
		<i>Serpula</i> sp.	29

<i>Serpula vermicularis</i>	4, 7, 12, 26, 27	Copepoda indet.	5, 12, 13, 18, 19, 26, 27, 29
<i>Filograna implexa</i>	1, 3, 5, 8, 9, 13, 15, 18, 20, 22, 23, 24, 26, 32	Calanoida indet.	4, 10
<i>Protula tubularia</i>	12, 24, 25, 28	Harpacticoida indet.	19
<i>Salmacina dysteri</i>	1, 2, 3, 13, 17, 22, 25, 31, 32	Ostracoda indet.	18, 19, 25, 29
Spirorbidae indet.	1, 2, 3, 5, 7, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 27, 29, 31, 32	<i>Asterope norvegica</i>	3, 6, 26, 27
<i>Circeis spirillum</i>	27	<i>Cylindroleberis mariae</i>	26, 27, 29
<i>Spirorbis</i> sp.	1, 2, 3, 7, 10, 11, 12, 14, 16, 18, 19, 20, 21, 24, 25, 26, 27, 29, 30, 31, 32	<i>Philomedes</i> sp.	2, 3, 5, 6, 24, 28, 29
<i>Spirorbis corallinae</i>	17, 32	<i>Philomedes lilljeborgii</i>	26, 27, 29
<i>Spirorbis spirorbis</i>	32	Cytheridae indet.	26
Oligochaeta indet.	1, 2, 12, 13, 16, 18, 19, 21, 24, 26, 27, 29	<i>Loxoconcha multifora</i>	13, 14, 18, 24
<i>Tubificoides</i> sp.	2, 18, 19	Malacostraca indet.	12
<i>Tubificoides amplivasatus</i>	24	<i>Nebalia bipes</i>	4, 6, 19, 21, 26, 27, 29
<i>Tubificoides benedii</i>	19, 28, 29	Mysidae indet.	1, 3, 4, 7, 8, 9, 11, 13, 14, 16, 17, 18, 19, 22, 24, 27, 29, 32
<i>Grania</i> sp.	2, 27	<i>Praunus inermis</i>	19
<i>Grania maricola</i>	4, 23	Amphipoda indet.	1, 3, 4, 10, 12, 13, 17, 18, 19, 22, 23, 24, 25, 27, 28, 29, 31, 32
<i>Lumbricillus semifuscus</i>	32	Gammaridea indet.	5, 14, 18, 19, 21, 29, 32
Chelicerata		Calliopiidae indet.	4
Pycnogonida indet.	4, 13, 23, 29, 31, 32	<i>Apherusa</i> sp.	29
Nymphonidae indet.	24	<i>Apherusa bispinosa</i>	26, 27, 29
<i>Nymphon</i> sp.	29	<i>Eusirus longipes</i>	27
<i>Nymphon brevisrostre</i>	3	Oedicerotidae indet.	4, 24, 29
<i>Endeis spinosa</i>	23	<i>Monoculodes carinatus</i>	2, 13,
<i>Callipallene brevisrostris</i>	26	<i>Perioculodes longimanus</i>	2, 4, 12, 14, 19, 21, 26, 27, 29
<i>Anoplodactylus petiolatus</i>	19, 26, 27, 29	<i>Pontocrates arenarius</i>	6, 21, 27
Pycnogonidae indet.	15, 22, 27	<i>Synchelidium haplocheles</i>	26, 27
Acari indet.	29	<i>Synchelidium maculatum</i>	6, 26, 27, 29
Halacaridae indet.	18, 19, 29, 32	<i>Westwoodilla caecula</i>	26, 29
Crustacea		<i>Parapleustes bicuspis</i>	3
Cirripedia indet.	2, 7, 8, 11, 13, 14, 16, 18, 19, 20, 21, 24, 27, 28, 29, 32	<i>Amphilochooides boeckii</i>	26
<i>Verruca stroemia</i>	2, 19, 22, 24, 27, 29, 32	<i>Amphilochooides serratipes</i>	26, 27
<i>Chthamalus</i> sp.	19	<i>Amphilocheus neapolitanus</i>	27, 29
<i>Chthamalus montagu</i>	22	<i>Gitana sarsi</i>	26, 27
<i>Chthamalus stellatus</i>	1, 2, 3, 10, 11, 14, 15, 17, 22, 31, 32	<i>Paramphilochooides</i> <i>odontonyx</i>	26
<i>Balanus</i> sp.	1, 2, 7, 8, 9, 13, 14, 19, 21, 23, 24, 29, 32	<i>Peltocoxa brevisrostris</i>	27
<i>Semibalanus balanoides</i>	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32	<i>Leucothoe</i> sp.	12
<i>Balanus balanus</i>	1, 2, 3, 4, 5, 6, 7, 11, 12, 13, 14, 18, 19, 20, 21, 23, 24, 25, 29, 31, 32	<i>Leucothoe incisa</i>	6, 21, 26, 27
<i>Balanus crenatus</i>	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Leucothoe lilljeborgii</i>	6, 12, 26, 27, 29
<i>Elminius modestus</i>	29	<i>Leucothoe spinicarpa</i>	23
<i>Sacculina carcini</i>	19	<i>Metopa</i> sp.	27
		<i>Metopa propinqua</i>	26
		<i>Stenothoe marina</i>	26, 27
		<i>Hyale prevostii</i>	15, 22, 31, 32
		<i>Orchestia cavimana</i>	31
		<i>Talitrus saltator</i>	17
		<i>Urothoe</i> sp.	12, 26
		<i>Urothoe brevicornis</i>	12
		<i>Urothoe elegans</i>	3, 4, 6, 12, 18, 21, 26, 27
		<i>Urothoe marina</i>	3, 6, 12, 21, 27
		Phoxocephalidae indet.	18, 21
		<i>Harpinia</i> sp.	21
		<i>Harpinia antennaria</i>	4, 12, 18, 21, 26, 27, 29
		<i>Harpinia crenulata</i>	2, 6, 26, 29
		<i>Parametaphoxus fultoni</i>	3, 6, 24, 26, 27, 29
		<i>Phoxocephalus holbolli</i>	21, 27, 28
		Lysianassidae indet.	4, 5, 12, 13, 24
		<i>Acidostoma nodiferum</i>	26

<i>Anonyx lilljeborgi</i>	4	<i>Aora gracilis</i>	3, 6, 19, 24
<i>Hippomedon denticulatus</i>	4, 18, 27	<i>Autonoe longipes</i>	6, 27, 29
<i>Lysianassa ceratina</i>	18	<i>Lembos websteri</i>	27
<i>Lysianassa plumosa</i>	26, 27, 29	<i>Leptocheirus hirsutimanus</i>	4, 12, 26, 27, 29
<i>Scopelocheirus hopei</i>	29	<i>Leptocheirus pectinatus</i>	26
<i>Socarnes crenulatus</i>	27	<i>Leptocheirus pilosus</i>	12
<i>Socarnes erythrophthalmus</i>	6, 26, 27	<i>Corophium</i> sp.	12
<i>Tmetonyx similis</i>	26, 27	<i>Corophium acherusicum</i>	19, 29
<i>Tryphosella nanoides</i>	6	<i>Corophium bonnellii</i>	2, 5, 6, 12, 21, 24, 27
<i>Tryphosella sarsi</i>	27	<i>Corophium crassicorne</i>	5, 6, 21, 26, 27, 28
<i>Austrosyrrhoe fimbriatus</i>	27	<i>Corophium sextonae</i>	19
<i>Argissa hamatipes</i>	4, 26	<i>Siphonoecetes kroyeranus</i>	4
<i>Stegocephalidae</i> indet.	27	<i>Podoceridae</i> indet.	11, 23, 24, 27, 32
<i>Acanthonotozomatidae</i> indet.	18, 31	<i>Dyopedos</i> sp.	31
<i>Iphimedia obesa</i>	8, 18, 19, 24, 26, 27, 31	<i>Dyopedos porrectus</i>	1, 13, 18, 20, 23, 26, 31
<i>Liljeborgia kinahani</i>	4	<i>Caprellidae</i> indet.	1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 18, 19, 20, 22, 23, 24, 25, 27, 29, 31, 32
<i>Atylus falcatus</i>	2, 4	<i>Caprella acanthifera</i>	19, 23
<i>Atylus swammerdamei</i>	3, 6, 18, 19	<i>Caprella linearis</i>	1, 3
<i>Atylus vedlomensis</i>	3, 12, 23, 26, 27, 29	<i>Caprella septentrionalis</i>	3
<i>Dexamine spinosa</i>	3, 19, 21, 27	<i>Pariambus typicus</i>	12, 13, 21, 26, 27
<i>Dexamine thea</i>	19, 26, 29	<i>Parvipalpus</i> sp.	26
<i>Guerneia coalita</i>	19, 27	<i>Phtisica marina</i>	19, 21, 24, 26, 27, 29
<i>Ampelisca</i> sp.	5, 11, 12, 18, 21, 29	<i>Pseudoprotella phasma</i>	1, 3, 7, 12, 24, 26, 29, 31
<i>Ampelisca brevicornis</i>	2, 4, 12, 13, 14, 16, 19, 21, 24, 27	<i>Hyperiididae</i> indet.	27
<i>Ampelisca diadema</i>	4, 6, 12, 24, 29	<i>Isopoda</i> indet.	12, 18, 21, 32
<i>Ampelisca macrocephala</i>	21	<i>Gnathia</i> sp.	18, 26, 27, 29
<i>Ampelisca spinipes</i>	18, 21, 27, 29	<i>Gnathia dentata</i>	26
<i>Ampelisca tenuicornis</i>	5, 6, 12, 13, 14, 19, 21, 23, 24, 26, 27, 29	<i>Gnathia maxillaris</i>	12
<i>Ampelisca typica</i>	3, 4, 6, 26, 27	<i>Gnathia oxyuraea</i>	18, 26, 27, 29
<i>Bathyporeia</i> sp.	2, 4, 14, 27	<i>Anthura gracilis</i>	27
<i>Bathyporeia elegans</i>	4, 6, 27	<i>Cirolaninae</i> indet.	6
<i>Bathyporeia pelagica</i>	4, 13, 21	<i>Cirolana borealis</i>	4, 6, 26, 27, 29
<i>Bathyporeia tenuipes</i>	18	<i>Eurydice affinis</i>	18
<i>Haustoriidae</i> indet.	19	<i>Eurydice pulchra</i>	17, 18, 26, 27
<i>Haustorius</i> sp.	19	<i>Janiridae</i> indet.	6
<i>Gammaridae</i> indet.	2, 3, 32	<i>Jaera</i> sp.	32
<i>Echinogammarus pirloti</i>	17	<i>Janira maculosa</i>	27
<i>Gammarus</i> sp.	13	<i>Paramunna bilobata</i>	26
<i>Megaluropus agilis</i>	27	<i>Pleurogonium rubicundum</i>	18, 26
<i>Ceradocus semiserratus</i>	3, 27	<i>Pseudarachna hirsuta</i>	26
<i>Cheirocratus</i> sp.	6, 12, 24, 26, 27, 29	<i>Idotea</i> sp.	15, 17, 22, 26, 27, 29, 31, 32
<i>Cheirocratus assimilis</i>	12, 27	<i>Idotea emarginata</i>	32
<i>Cheirocratus intermedius</i>	2, 29	<i>Idotea granulosa</i>	17
<i>Cheirocratus sundevallii</i>	12, 21, 26, 27, 29	<i>Idotea linearis</i>	18
<i>Maera othonis</i>	2, 3, 4, 6, 26, 27, 29	<i>Idotea neglecta</i>	18
<i>Ampithoe</i> sp.	23	<i>Arcturella</i> sp.	18
<i>Isaeidae</i> indet.	24	<i>Arcturella dilatata</i>	26, 29
<i>Gammaropsis maculata</i>	6, 26, 27, 29	<i>Astacilla longicornis</i>	18, 26
<i>Gammaropsis palmata</i>	26, 27, 29	<i>Ligia oceanica</i>	3, 10, 27, 32
<i>Isaea</i> sp.	27	<i>Oniscus</i> sp.	27
<i>Gammaropsis cornuta</i>	6, 13, 21, 26, 27, 29	<i>Tanaidacea</i> indet.	5, 12, 18, 19, 23, 24, 26, 27, 29
<i>Photis</i> sp.	4, 12, 27, 29	<i>Araphura brevimana</i>	26, 27
<i>Photis longicaudata</i>	6, 21, 26, 29	<i>Leptognathia</i> sp.	26
<i>Ischyroceridae</i> indet.	6, 7, 8, 18, 25, 31	<i>Leptognathia gracilis</i>	26, 27
<i>Erichthonius</i>	19, 23	<i>Tanaopsis graciloides</i>	4, 18, 21, 26
<i>Erichthonius rubricornis</i>	3, 31	<i>Tanaissus lilljeborgi</i>	26
<i>Ischyrocerus anguipes</i>	3, 27	<i>Cumacea</i> indet.	13, 24, 25, 26, 28, 29
<i>Jassa</i> sp.	25	<i>Vaunthompsoniinae</i> indet.	6
<i>Jassa falcata</i>	3, 17, 20, 31, 32	<i>Bodotria arenosa arenosa</i>	18
<i>Microjassa cumbrensis</i>	26		
<i>Aoridae</i> indet.	8, 19, 26, 27		
<i>Aora</i> sp.	18, 27		

<i>Bodotria pulchella</i>	18	<i>Galathea intermedia</i>	9, 11, 13, 18, 19, 23, 24, 25, 26, 27
<i>Iphinoe</i> sp.	29	<i>Galathea nexa</i>	1, 2, 3, 4, 7, 9, 15, 17, 22, 24, 27, 32
<i>Iphinoe serrata</i>	18, 26, 29	<i>Galathea squamifera</i>	14, 16, 18, 19, 20, 24, 25
<i>Eudorella emarginata</i>	12	<i>Galathea strigosa</i>	1, 2, 3, 7, 8, 11, 13, 14, 17, 18, 19, 22, 23, 24, 25, 31, 32
<i>Eudorella truncatula</i>	2, 12, 18, 19, 21, 26, 29	<i>Munida rugosa</i>	6, 7, 8, 9, 17, 19, 23, 24, 26, 27, 32
<i>Eudorellopsis deformis</i>	18	<i>Pisidia longicornis</i>	17, 24
<i>Leucon nasica</i>	18	<i>Brachyura</i> indet.	29
<i>Campylaspis glabra</i>	26	<i>Ebalia</i> sp.	11
<i>Cumella pygmaea</i>	18, 26	<i>Ebalia tuberosa</i>	3, 4, 6, 23, 24
<i>Nannastacus unguiculatus</i>	18	<i>Hyas</i> sp.	1, 3, 19, 23, 24, 25
<i>Pseudocuma longicornis</i>	19	<i>Hyas araneus</i>	1, 3, 4, 6, 7, 8, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 31, 32
<i>Pseudocuma similis</i>	4	<i>Hyas coarctatus</i>	1, 3, 4, 9, 11, 13, 18, 19, 22, 24, 31
<i>Diastylis</i> sp.	12	<i>Inachus</i> sp.	1, 19, 22, 24
<i>Diastylis bradyi</i>	18	<i>Inachus dorsettensis</i>	18, 19, 23, 24, 25
<i>Diastylis cornuta</i>	18	<i>Inachus phalangium</i>	11, 22
<i>Diastylis laevis</i>	21, 26	<i>Macropodia</i> sp.	11, 18, 19, 23, 25
<i>Diastylis rugosa</i>	12, 26, 29	<i>Macropodia rostrata</i>	7, 18, 19, 23, 24, 25, 26, 28, 29
<i>Diastylis tumida</i>	18	<i>Macropodia tenuirostris</i>	7, 19
<i>Euphausiidae</i> indet.	12	<i>Eurynome</i> sp.	19
<i>Penaeidae</i> indet.	19	<i>Atelecyclus rotundatus</i>	3, 4, 7, 12, 26, 31
<i>Caridea</i> indet.	1, 7, 8, 9, 11, 13, 14, 18, 19, 20, 23, 24, 25, 26, 29	<i>Cancer pagurus</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 31, 32
<i>Palaemoninae</i> indet.	6	<i>Portunidae</i> indet.	12, 18, 19
<i>Palaemon</i> sp.	8, 18	<i>Liocarcinus</i> sp.	19, 24, 29
<i>Palaemon serratus</i>	1, 13, 18, 19, 24, 25, 32	<i>Liocarcinus depurator</i>	1, 2, 3, 4, 5, 6, 7, 9, 12, 14, 15, 18, 19, 21, 22, 23, 24, 25, 26, 28, 31, 32
<i>Eualus pusiolus</i>	4, 6, 27	<i>Liocarcinus pusillus</i>	26, 27, 29
<i>Hippolyte varians</i>	3, 19, 32	<i>Necora puber</i>	1, 3, 4, 5, 7, 8, 11, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 31, 32
<i>Thoralus cranchii</i>	19	<i>Carcinus maenas</i>	1, 2, 3, 5, 7, 8, 10, 11, 13, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 28, 29, 31, 32
<i>Pandalina brevisrostris</i>	19, 29		
<i>Pandalus</i> sp.	19, 21		
<i>Pandalus montagui</i>	3, 7, 9, 11, 12, 13, 14, 15, 17, 18, 19, 23, 24, 27, 31, 32		
<i>Pandalus propinquus</i>	19		
<i>Crangon allmanni</i>	21, 29		
<i>Crangon crangon</i>	3, 18, 19, 21, 24, 28		
<i>Philoceras bispinosus</i>	19, 29		
<i>neglecta</i>			
<i>Homarus gammarus</i>	1, 17, 24, 31		
<i>Nephrops norvegicus</i>	24, 25		
<i>Calocaris macandreae</i>	24		
<i>Lithodes maia</i>	1, 8, 13, 14, 18, 19, 20, 23, 26, 31, 32		
<i>Paguridae</i> indet.	1, 3, 4, 5, 7, 8, 9, 11, 13, 14, 15, 18, 19, 20, 23, 24, 25, 26, 29, 32		
<i>Anapagurus hyndmanni</i>	1, 3, 4, 12, 18, 19, 21, 23, 31, 32		
<i>Pagurus</i> sp.	4, 12, 13, 19, 24, 26, 27, 29		
<i>Pagurus bernhardus</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 27, 28, 29, 31, 32		
<i>Pagurus cuanensis</i>	12, 24		
<i>Pagurus prideaux</i>	3, 4, 6, 7, 14, 19, 21, 23, 25, 26, 31		
<i>Pagurus pubescens</i>	1, 3, 4, 24, 27, 31		
<i>Galathea</i> sp.	1, 2, 3, 4, 7, 8, 9, 12, 13, 14, 17, 18, 19, 20, 23, 26, 31		
<i>Galathea dispersa</i>	24		

Insecta

<i>Petrobius maritimus</i>	24
<i>Anurida maritima</i>	15, 17, 27, 29, 32

Mollusca

<i>Chaetoderma nitidulum</i>	18, 26, 29
<i>Solenogastres</i> indet.	23, 24, 28, 29
<i>Polyplacophora</i> indet.	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32

<i>Leptochiton asellus</i>	4, 7, 9, 11, 18, 19, 24, 25, 26, 27, 28, 29, 31	<i>Lacuna vincta</i>	3, 6, 7, 8, 11, 13, 14, 18, 19, 21, 22, 23, 31, 32
<i>Lepidochitona cinerea</i>	3, 15, 18	<i>Littorina littorea</i>	2, 3, 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32
<i>Tonicella</i> sp.	19	<i>Littorina mariae</i>	3, 32
<i>Tonicella marmorea</i>	4, 6, 7, 11, 13, 19, 22, 23, 24, 31, 32	<i>Littorina obtusata</i>	6, 8, 11, 12, 17, 19, 22, 24, 26, 27, 29, 30, 31, 32
<i>Tonicella rubra</i>	2, 3, 4, 7, 8, 13, 14, 16, 18, 19, 24, 25	<i>Littorina neglecta</i>	1, 2, 3, 6, 7, 10, 11, 13, 14, 16, 17, 18, 19, 20, 22, 24, 25, 26, 27, 29, 30, 31, 32
<i>Acanthochitona crinita</i>	13, 14, 32	<i>Littorina saxatilis</i>	3, 6, 8, 12, 16, 17, 18, 24, 26, 27, 29, 30, 31, 32
Archaeogastropoda indet.	18	<i>Littorina saxatilis</i> var. <i>rudis</i>	1, 2, 3, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29
<i>Emarginula</i> sp.	15	<i>Littorina obtusatalmariae</i>	2, 3, 7, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 29
<i>Emarginula fissura</i>	1, 3, 4, 11, 19, 32	<i>Melarhaphe neritoides</i>	3, 7, 11, 14, 16, 17, 18, 19, 20, 22, 27, 29, 31, 32
<i>Puncturella noachina</i>	29	<i>Hydrobia ulvae</i>	19, 26, 28
<i>Diodora</i> sp.	31	Rissoidae indet.	15, 19, 21, 24
Lottiidae indet.	13, 17	<i>Rissoa</i> sp.	2, 7, 14, 16, 18, 19, 20, 26, 27, 29
<i>Tectura</i> sp.	1, 3, 6, 7, 13, 14, 15, 17, 19, 22, 23, 24, 25, 31, 32	<i>Rissoa parva</i>	7, 10, 17
<i>Tectura testudinalis</i>	2, 3, 4, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 31, 32	<i>Rissoa membranacea</i>	18, 19
<i>Tectura virginea</i>	1, 2, 3, 4, 6, 13, 17, 18, 19, 22, 24, 25, 26, 27, 29, 31, 32	<i>Onoba</i> sp.	21
<i>Patella</i> sp.	6, 7, 8, 11, 13, 14, 15, 22, 26, 27, 29, 30, 32	<i>Onoba aculeus</i>	2, 19
<i>Patella ulyssiponensis</i>	16, 31	<i>Onoba semicostata</i>	19
<i>Patella vulgata</i>	1, 2, 3, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 31, 32	<i>Skeneopsis planorbis</i>	22, 26, 27, 29, 31, 32
<i>Helcion pellucidum</i>	1, 2, 3, 6, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32	<i>Rissoella</i> sp.	28
<i>Margarites helycinus</i>	3, 7, 11, 17, 18, 19, 29, 31, 32	<i>Turritella communis</i>	5, 10, 12, 18, 19, 21, 24, 25, 26, 28, 29
<i>Margarites striatus</i>	2, 28	Pyramidellidae indet.	26
<i>Gibbula</i> sp.	1, 7, 11, 12, 13, 18, 19, 23, 24, 25, 27, 29	<i>Odostomia</i> sp.	18, 26, 27
<i>Gibbula magus</i>	3, 7, 9, 18, 19, 23, 24, 26, 28	<i>Brachystomia</i> sp.	29
<i>Gibbula tumida</i>	1, 2, 3, 4, 7, 9, 11, 18, 19, 23, 24, 31, 32	<i>Eulimella</i> sp.	29
<i>Gibbula cineraria</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Eulima bilineata</i>	26
<i>Gibbula umbilicalis</i>	29	<i>Melanella alba</i>	31
<i>Calliostoma zizyphinum</i>	1, 2, 3, 4, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 31, 32	<i>Aporrhais pespelecani</i>	7, 12, 19, 24, 26
<i>Lacuna</i> sp.	17	<i>Capulus ungaricus</i>	31
<i>Lacuna pallidula</i>	32	<i>Trivia</i> sp.	16
<i>Lacuna parva</i>	16, 21	<i>Trivia arctica</i>	1, 2, 3, 4, 9, 13, 18, 22, 23, 29, 31, 32
		<i>Trivia monacha</i>	1, 4, 7, 13, 15, 20, 22, 23, 24, 25, 31, 32
		<i>Velutina plicatilis</i>	4
		<i>Velutina velutina</i>	9
		Naticidae indet.	31
		<i>Polinices</i> sp.	12
		<i>Polinices montagui</i>	27, 31
		<i>Polinices pulchellus</i>	1, 4, 6, 9, 14, 18, 24, 26, 27, 29, 31, 32

<i>Nucella lapillus</i>	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32	<i>Ancula gibbosa</i>	7, 18, 26
<i>Ocenebra erinacea</i>	22	<i>Acanthodoris pilosa</i>	1, 31
Buccinidae indet.	4, 6, 29	<i>Adalaria</i> sp.	25
<i>Buccinum</i> sp.	19, 24	<i>Onchidoris</i> sp.	27
<i>Buccinum undatum</i>	1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 23, 24, 25, 26, 27, 29, 31, 32	<i>Onchidoris bilamellata</i>	13, 14, 19, 23, 25
<i>Neptunea</i> sp.	18, 19, 24, 26	<i>Diaphorodoris luteocincta</i>	7, 24
<i>Neptunea antiqua</i>	1, 3, 4, 5, 6, 7, 8, 11, 12, 15, 18, 19, 24, 25, 26, 29, 31	<i>Aegires punctilucens</i>	18, 23
<i>Colus</i> sp.	12	<i>Limacia clavigera</i>	1, 2, 3, 4, 7, 8, 9, 11, 13, 14, 15, 18, 19, 22, 23, 24, 25, 26, 31, 32
<i>Colus gracilis</i>	19	<i>Polycera</i> sp.	23
<i>Colus islandicus</i>	7	<i>Polycera faeroensis</i>	1, 6, 7, 8, 9, 13, 14, 17, 19, 24, 25, 26, 31, 32
<i>Hinia</i> sp.	17	<i>Polycera quadrilineata</i>	1, 3, 6, 7, 8, 11, 12, 13, 14, 15, 18, 19, 22, 23, 24, 25, 26, 27, 31, 32
<i>Hinia incrassata</i>	2, 3, 6, 7, 8, 9, 11, 16, 18, 19, 21, 22, 23, 24, 27, 31, 32	Doridacea indet.	14, 20, 26, 27
<i>Hinia pygmaea</i>	12, 24	<i>Cadlina laevis</i>	12, 14, 17, 20, 23, 24
<i>Hinia reticulata</i>	24	<i>Rostanga</i> sp.	22
<i>Raphitoma boothii</i>	19	<i>Rostanga rubra</i>	1, 8, 23
<i>Raphitoma linearis</i>	27	<i>Doris</i> sp.	22
Opisthobranchia indet.	26, 28, 29	<i>Archidoris pseudoargus</i>	1, 3, 7, 13, 14, 18, 20, 22, 23, 32
<i>Scaphander lignarius</i>	19	<i>Jorunna tomentosa</i>	1, 23, 25, 29, 31
<i>Cylichna</i> sp.	4, 5	<i>Janolus</i> sp.	13
<i>Cylichna cylindracea</i>	4, 12, 18, 24, 26, 27, 29	<i>Janolus cristatus</i>	7, 8, 13, 22, 31
<i>Roxania utriculus</i>	19	Aeolidiacea indet.	27
<i>Philine</i> sp.	4, 7, 18, 19, 26, 27, 29	<i>Coryphella</i> sp.	19, 29
<i>Philine aperta</i>	24	<i>Coryphella lineata</i>	25
<i>Philine scabra</i>	4, 29	<i>Coryphella verrucosa</i>	18
<i>Diaphana minuta</i>	19, 29	<i>Flabellina pedata</i>	3, 27
<i>Colpodaspis pusilla</i>	7	<i>Cuthona amoena</i>	8, 13
<i>Haminoea hydatis</i>	24	<i>Cuthona nana</i>	19
<i>Retusa</i> sp.	18, 19, 26	<i>Embletonia pulchra</i>	18
<i>Retusa truncatula</i>	19	<i>Eubranchus</i> sp.	13
<i>Runcina coronata</i>	32	<i>Eubranchus exiguus</i>	25
<i>Elysia viridis</i>	8, 18, 23, 24, 25	<i>Eubranchus farrani</i>	8, 18, 19, 25, 31
<i>Hermaea bifida</i>	24	<i>Eubranchus pallidus</i>	26
<i>Akera bullata</i>	8, 18, 19, 24, 28	<i>Eubranchus tricolor</i>	17, 24
<i>Aplysia punctata</i>	1, 2, 3, 5, 8, 13, 14, 19, 21	<i>Eubranchus vittatus</i>	19, 26
<i>Pleurobranchus</i>	25	<i>Facelina</i> sp.	19, 31
<i>membranaceus</i>		<i>Facelina auriculata</i>	22
Nudibranchia indet.	18, 21, 24, 29	<i>Favorinus branchialis</i>	13
<i>Tritonia</i> sp.	11, 13, 14, 19, 23	<i>Aeolidia papillosa</i>	13
<i>Tritonia hombergii</i>	1, 3, 7, 8, 13, 15, 17, 18, 20, 22, 23, 31, 32	Dentaliidae indet.	26
<i>Tritonia manicata</i>	13	<i>Antalis</i> sp.	23
<i>Tritonia plebeia</i>	14	<i>Antalis entalis</i>	23, 26
<i>Lomanotus genei</i>	24	<i>Nucula nitidosa</i>	10, 12, 23, 24, 26, 29
<i>Dendronotus frondosus</i>	14, 18, 19, 22, 23, 24, 26, 27, 31, 32	<i>Nucula nucleus</i>	24, 26
<i>Doto</i> sp.	8, 9, 31	<i>Nucula sulcata</i>	18, 19, 21, 24, 28, 29
<i>Doto coronata</i>	18, 19, 24, 25, 26	<i>Nuculoma tenuis</i>	18, 24, 28
<i>Doto dunnei</i>	18, 26	Mytilacea indet.	21, 26, 27
<i>Doto fragilis</i>	3	<i>Mytilus</i> sp.	22, 32
<i>Goniodoris nodosa</i>	25, 31	<i>Mytilus edulis</i>	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32
<i>Okenia</i> sp.	7	<i>Crenella decussata</i>	2, 4, 6, 18, 19, 21, 24, 26, 27, 29
		<i>Musculus</i> sp.	18, 19

<i>Musculus costulatus</i>	19	<i>Parvicardium minimum</i>	4, 5, 19
<i>Musculus discors</i>	18, 19, 29	<i>Parvicardium ovale</i>	6, 18, 24, 26, 27, 28, 29
<i>Modiolarca tumida</i>	3, 18, 19, 21, 24, 25, 29	<i>Parvicardium scabrum</i>	12, 13, 21, 26, 27, 29
<i>Modiolus</i> sp.	7, 8, 11, 13, 14, 17, 18, 19, 21, 24, 25, 26, 27, 28, 29	<i>Laevicardium crassum</i>	26
<i>Modiolus modiolus</i>	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 14, 15, 18, 19, 20, 21, 23, 24, 25, 26, 27, 29, 31, 32	<i>Cerastoderma</i> sp.	18, 19
<i>Modiolula phaseolina</i>	23	<i>Cerastoderma edule</i>	2, 10, 16, 19, 24, 26, 28
<i>Arca tetragona</i>	8, 13	<i>Spisula</i> sp.	14
<i>Glycymeris glycymeris</i>	27	<i>Spisula elliptica</i>	2, 3, 4, 6, 18, 19, 25, 26, 27, 28, 29
<i>Limatula subauriculata</i>	27	<i>Spisula solida</i>	13, 17, 18
<i>Ostrea edulis</i>	21, 24	<i>Spisula subtruncata</i>	12, 18
Pectinidae indet.	7, 19	<i>Lutraria</i> sp.	7, 12, 29
<i>Palliolium tigrinum</i>	25, 9	<i>Lutraria lutraria</i>	24, 26
<i>Similipecten similis</i>	27	<i>Lutraria magna</i>	4, 5
<i>Chlamys</i> sp.	16, 18, 19, 23, 24, 26	Solenacea indet.	19
<i>Chlamys distorta</i>	2, 4, 9, 11, 19, 22, 24, 31	<i>Ensis</i> sp.	3, 4, 5, 6, 7, 12, 13, 14, 17, 18, 19, 23, 24, 25
<i>Chlamys varia</i>	3, 4, 6, 13, 18, 19, 24	<i>Ensis arcuatus</i>	2, 3, 5, 6, 7, 12, 15, 18, 19, 21, 23, 24, 25, 26, 27, 28
<i>Aequipecten opercularis</i>	3, 4, 5, 7, 8, 9, 10, 11, 12, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29	<i>Ensis ensis</i>	19
<i>Pecten maximus</i>	3, 5, 7, 8, 9, 12, 18, 19, 24, 25, 26, 28	<i>Phaxas pellucidus</i>	12, 18, 19, 21, 24, 25, 26, 27, 28, 29
Anomiidae indet.	1, 7, 13, 14, 19, 20, 22, 23, 26, 27, 29	Tellinidae indet.	26, 29
<i>Anomia</i> sp.	29	<i>Angulus tenuis</i>	19, 21, 24, 26
<i>Anomia ehippium</i>	3, 5, 7, 8, 13, 18, 19, 21, 22, 23, 24, 25, 27, 28, 29, 31, 32	<i>Fabulina fabula</i>	4, 5, 10, 12, 13, 14, 18, 19, 21, 24, 25, 27, 28, 29
<i>Pododesmus patelliformis</i>	1, 2, 3, 4, 6, 13, 16, 17, 22, 24	<i>Moerella</i> sp.	13
<i>Heteranomia squamula</i>	7, 11, 12, 18, 24, 27, 29, 32	<i>Moerella donacina</i>	19, 29
Lucinacea indet.	24	<i>Moerella pygmaea</i>	2, 3, 4, 6, 12, 13, 18, 27
<i>Myrtea spinifera</i>	10, 12, 18, 19, 21, 24, 26, 29	<i>Macoma balthica</i>	24, 28
<i>Lucinoma borealis</i>	4, 19, 23, 24, 26, 27, 29	<i>Gari</i> sp.	26
<i>Thyasira</i> sp.	12, 24, 25, 28, 29	<i>Gari fervensis</i>	4, 6, 14, 18, 21, 26, 27, 29
<i>Thyasira flexuosa</i>	5, 10, 12, 18, 19, 21, 24, 26, 27, 28, 29	<i>Gari tellinella</i>	2, 3, 4, 26, 27
<i>Thyasira gouldi</i>	26, 29	<i>Abra</i> sp.	2, 4, 6, 12, 18, 19, 21, 24, 25, 28, 29
Lasacinae indet.	26, 27	<i>Abra alba</i>	5, 10, 12, 19, 21, 24, 25, 26, 27, 28, 29
<i>Lasaea adansoni</i>	15, 32	<i>Abra nitida</i>	12, 18, 19, 21, 24, 26, 29
<i>Montacuta substriata</i>	27	<i>Abra prismatica</i>	13, 14, 18, 21, 23, 26, 27
<i>Devonia perrieri</i>	26	<i>Arctica islandica</i>	4, 12, 18, 26, 27, 29
<i>Mysella bidentata</i>	4, 5, 10, 12, 13, 18, 19, 21, 24, 25, 26, 27, 28, 29	Veneridae indet.	7
<i>Tellimya ferruginosa</i>	24, 29	<i>Venus</i> sp.	3, 13, 26
<i>Astarte</i> sp.	12	<i>Venus verrucosa</i>	7
<i>Astarte sulcata</i>	19, 23	<i>Circomphalus casina</i>	3, 19, 22, 24
<i>Goodallia triangularis</i>	2, 18, 27	<i>Dosinia</i> sp.	4, 18, 19, 23, 24
<i>Tridonta elliptica</i>	4, 7, 19, 26, 27, 29	<i>Dosinia lupinus</i>	2, 4, 6, 13, 14, 18, 19, 21, 23, 24, 26, 27, 29
<i>Tridonta montagui</i>	4	<i>Dosinia exoleta</i>	2, 3, 7, 18, 19, 26
Cardiidae indet.	4, 12, 23, 29	<i>Tapes decussatus</i>	29
<i>Acanthocardia</i> sp.	4	<i>Tapes rhomboides</i>	2, 3, 5, 6, 19, 26, 27, 29
<i>Acanthocardia echinata</i>	19, 26	<i>Venerupis</i> sp.	3, 7
<i>Parvicardium</i> sp.	25, 29	<i>Venerupis senegalensis</i>	1, 3, 6, 12, 18, 19, 25
<i>Parvicardium exiguum</i>	2, 19	<i>Chamelea gallina</i>	4, 5, 6, 12, 13, 14, 16, 18, 19, 21, 24, 26, 27, 28, 29
		<i>Clausinella fasciata</i>	2, 3, 4, 15, 17, 18, 19, 21, 26, 27

<i>Timoclea ovata</i>	2, 3, 4, 5, 12, 18, 19, 21, 23, 24, 26, 27, 28, 29	<i>Parasmittina trispinosa</i>	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Petricola pholadiformis</i>	20, 26	<i>Porella compressa</i>	26, 27
<i>Mysia undata</i>	4, 18, 24, 26, 28, 29	<i>Porella concinna</i>	26, 27
<i>Turtonia minuta</i>	28	<i>Porella minuta</i>	26
Myidae indet.	2	<i>Escharella immersa</i>	26, 27
<i>Mya</i> sp.	5, 12, 19, 26, 27	<i>Escharella ventricosa</i>	27
<i>Mya truncata</i>	2, 3, 4, 6, 12, 18, 19, 23, 24, 25, 26, 27, 28, 29	<i>Phylactella labrosa</i>	26, 27
<i>Mya arenaria</i>	3, 5, 10, 12, 18, 19, 21, 24, 25, 28, 29	<i>Neolagenipora collaris</i>	27
<i>Sphenia binghami</i>	28, 29	<i>Schizomavella</i> sp.	18
<i>Corbula gibba</i>	10, 12, 18, 19, 21, 24, 25, 26, 28, 29	<i>Schizomavella linearis</i>	23, 24, 25, 26, 27, 31
Hiatellacea indet.	29	<i>Microporella ciliata</i>	26, 27
<i>Hiatella arctica</i>	2, 4, 6, 11, 13, 15, 18, 19, 21, 22, 24, 25, 26, 27, 28, 29	<i>Fenestulina malusii</i>	26, 27
<i>Saxicavella jeffreysi</i>	24	<i>Haplopoma graniferum</i>	26, 27
Thraciidae indet.	24, 25, 28	<i>Chorizopora brongniartii</i>	27
<i>Thracia</i> sp.	4, 12, 24, 26	<i>Cylindroporella tubulosa</i>	26, 27
<i>Thracia convexa</i>	27, 29	<i>Cellepora pumicosa</i>	3, 6, 8, 14, 15, 17, 18, 22, 23, 24, 25, 31, 32
<i>Thracia phaseolina</i>	2, 4, 12, 13, 14, 23, 24, 26, 27, 29	<i>Celleporina hassallii</i>	7, 18, 27
<i>Thracia pubescens</i>	12, 28	<i>Turbicellepora avicularis</i>	22
<i>Thracia villosiuscula</i>	18	<i>Omalosecosa ramulosa</i>	8, 9, 27
<i>Cochlodesma praetenuae</i>	2, 4, 6, 18, 19, 21, 26, 27	<i>Buskea dichotoma</i>	31
<i>Sepia officinalis</i>	11	<i>Aetea sica</i>	26, 27
<i>Sepiola atlantica</i>	3, 32	<i>Scruparia chelata</i>	29
<i>Eledone cirrhosa</i>	3, 7, 11, 15, 31	<i>Eucratea loricata</i>	1, 13
Brachiopoda		<i>Membranipora</i>	1, 2, 3, 6, 7, 8, 11, 13, 14, 15, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 31, 32
<i>Neocrania anomala</i>	2, 3	<i>membranacea</i>	
Bryozoa		<i>Electra</i> sp.	24
Crisiidae indet.	1, 13, 22, 24, 27, 31, 32	<i>Electra pilosa</i>	1, 2, 3, 5, 6, 7, 8, 9, 11, 13, 14, 17, 18, 19, 21, 22, 23, 24, 25, 27, 29, 31, 32
<i>Crisidia cornuta</i>	22	<i>Pyripora catenularia</i>	26, 27
<i>Crisia aculeata</i>	22	<i>Flustra foliacea</i>	1, 3, 8, 17, 31, 32
<i>Crisia denticulata</i>	27	<i>Securiflustra securifrons</i>	13, 14, 19, 31
<i>Crisia eburnea</i>	1, 32	<i>Amphiblestrum auritum</i>	26, 27
<i>Oncousoecia diastoporides</i>	26, 27	<i>Callopora craticula</i>	27
<i>Oncousoecia dilatans</i>	26, 27	<i>Callopora dumerilii</i>	26, 27
<i>Tubulipora liliacea</i>	22, 31	<i>Callopora lineata</i>	26, 27
<i>Tubulipora phalangea</i>	26, 27	<i>Crassimarginatella solidula</i>	26, 27
<i>Alcyonidium</i> sp.	1, 2	<i>Tegella unicornis</i>	27
<i>Alcyonidium albidum</i>	17	<i>Amphiblestrum flemingii</i>	26, 27
<i>Alcyonidium diaphanum</i>	1, 3, 6, 7, 9, 7, 13	<i>Ramphonotus minax</i>	26, 27
<i>Alcyonidium gelatinosum</i>	19, 26, 27, 29	<i>Amphiblestrum solidum</i>	26, 27
<i>Alcyonidium hirsutum</i>	2, 3, 13, 18, 23	<i>Membraniporella nitida</i>	25
<i>Alcyonidium mytili</i>	22, 24	<i>Cellaria</i> sp.	19
<i>Flustrellidra hispida</i>	22, 24, 27, 29, 32	<i>Cellaria sinuosa</i>	26
<i>Cribrilina annulata</i>	26, 27	<i>Notoplites jeffreysii</i>	26
<i>Cribrilina punctata</i>	26, 27	<i>Scrupocellaria</i> sp.	1, 3, 9, 13, 14, 17, 18, 19, 24, 31, 32
<i>Puellina venusta</i>	27	<i>Scrupocellaria reptans</i>	3, 13, 15, 22, 32
<i>Umbonula littoralis</i>	1, 2, 3, 6, 7, 13, 22, 25, 31, 32	<i>Scrupocellaria scruposa</i>	13, 19, 21, 22, 24, 25, 29
<i>Escharoides coccinea</i>	22, 24, 26, 27	<i>Tricellaria ternata</i>	13
<i>Hippoporina pertusa</i>	26, 27	<i>Bicellariella ciliata</i>	1, 13, 22, 31, 32
<i>Smittoidea reticulata</i>	26	<i>Bugula</i> sp.	8, 9, 13, 29, 31, 32
		<i>Bugula flabellata</i>	1, 7, 9, 13, 17, 22, 31, 32
		<i>Bugula turbinata</i>	29

<i>Dendrobeatia murrayana</i>	7, 19	<i>Leptasterias muelleri</i>	1, 2, 3, 4, 7, 8, 9, 11, 13, 14, 17, 19, 20, 22, 23, 26, 27, 31, 32
Bryozoa indet. (crusts)	1, 2, 7, 8, 9, 12, 13, 14, 15, 13, 16, 18, 19, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Marthasterias glacialis</i>	1, 4, 18, 22, 23, 24, 31, 32
Phoronida		Ophiuroidea indet.	1, 2, 3, 4, 5, 8, 9, 12, 13, 14, 18, 19, 20, 21, 23, 25, 26, 28, 29
<i>Phoronis</i> sp.	5, 12, 18, 19, 24, 26, 28, 29	<i>Ophioscolex</i> sp.	28
<i>Phoronis muelleri</i>	26	<i>Ophiothrix fragilis</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32
Echinodermata		<i>Ophiocomina nigra</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Antedon</i> sp.	6, 7, 8, 13, 17, 19, 23, 26	<i>Ophiactis balli</i>	1, 21, 31
<i>Antedon bifida</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 31, 32	<i>Ophiopholis</i> sp.	5
<i>Antedon petasus</i>	2, 3, 6, 7, 9, 11, 22, 26, 31	<i>Ophiopholis aculeata</i>	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 31, 32
Asteroidea indet.	3, 4, 26	Amphiuridae indet.	29
<i>Astropecten irregularis</i>	7, 12, 18, 19, 21, 23, 24, 25, 26, 27, 28, 29	<i>Amphiura</i> sp.	4, 5, 12, 19, 26, 27, 29
<i>Luidia</i> sp.	7	<i>Amphiura brachiata</i>	6, 15, 19, 25, 26
<i>Luidia ciliaris</i>	1, 3, 4, 6, 7, 8, 9, 13, 14, 16, 18, 19, 22, 24, 25, 26, 31, 32	<i>Amphiura chiajei</i>	18, 24
<i>Luidia sarsi</i>	7	<i>Amphiura filiformis</i>	18, 21, 24, 26, 27, 28, 29
<i>Hippasteria phrygiana</i>	8, 13	<i>Amphiura securigera</i>	27, 31
<i>Porania pulvillus</i>	1, 2, 3, 6, 7, 8, 9, 13, 14, 16, 18, 22, 23, 24, 26, 27, 31, 32	<i>Amphipholis squamata</i>	19, 22, 23, 24, 27, 31
<i>Asterina gibbosa</i>	24	<i>Ophiura</i> sp.	1, 3, 4, 6, 18, 19, 21, 22, 23, 24, 26, 27, 28, 29
<i>Solaster endeca</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Ophiura affinis</i>	2, 6, 9, 11, 18, 19, 24, 26, 27, 29, 32
<i>Crossaster papposus</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32	<i>Ophiura albida</i>	1, 2, 3, 4, 6, 7, 9, 11, 12, 13, 14, 15, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32
<i>Henricia</i> sp.	1, 3, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32	<i>Ophiura ophiura</i>	4, 6, 7, 8, 12, 18, 19, 20, 23, 24, 25, 26, 29
<i>Henricia oculata</i>	17, 19	<i>Ophiura robusta</i>	3, 29, 31
<i>Henricia sanguinolenta</i>	1, 2, 3, 4, 6, 7, 8, 9, 11, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Ophiura sarsi</i>	8
<i>Stichastrella rosea</i>	18, 23, 7, 8	<i>Ophiocten scutatum</i>	13
<i>Asterias rubens</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32	Echinoidea indet.	27, 29
		<i>Psammechinus miliaris</i>	2, 3, 6, 7, 8, 11, 13, 14, 15, 18, 19, 24, 25, 27, 29, 31, 32
		<i>Echinus esculentus</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32

<i>Strongylocentrotus droebachiensis</i>	1, 2, 3, 4, 9, 11, 14,	<i>Ciona intestinalis</i>	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Echinocyamus pusillus</i>	2, 4, 18, 19, 23, 26, 27, 29	<i>Corella parallelogramma</i>	3, 4, 6, 7, 9, 11, 12, 13, 14, 18, 19, 20, 23, 24, 25, 26, 28, 29, 31
<i>Spatangoida</i> indet.	26	Asciidiidae indet.	18
<i>Spatangus purpureus</i>	10	<i>Asciidiella</i> sp.	19, 24
<i>Echinocardium</i> sp.	2, 3, 4, 14, 23, 24	<i>Asciidiella</i> sp. (Shetland variety)	19, 24
<i>Echinocardium cordatum</i>	8, 24, 25, 26	<i>Asciidiella aspersa</i>	5, 12, 18, 19, 20, 21, 24, 25, 29
<i>Echinocardium flavescens</i>	6, 21, 26, 27, 29	<i>Asciidiella scabra</i>	2, 7, 12, 13, 14, 18, 19, 23, 24, 25, 29, 31
<i>Echinocardium pennatifidum</i>	27	<i>Ascidia</i> sp.	18, 19, 24, 25, 29
<i>Holothurioidea</i> indet.	8, 9, 14, 18, 20, 23, 24, 26	<i>Ascidia conchilega</i>	3, 4, 7, 11, 12, 18, 19, 23, 24, 25
<i>Holothuria</i> sp.	18, 24, 28, 29	<i>Ascidia mentula</i>	2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 18, 19, 21, 23, 24, 25, 26, 27, 29
Cucumariidae indet.	13, 21, 24, 26, 29	<i>Ascidia virginea</i>	4, 7, 9, 11, 12, 13, 15, 18, 22, 23, 24, 26
<i>Cucumaria frondosa</i>	1, 3, 6, 9, 11, 19, 20, 21, 24, 26	Pleurogona indet.	29
<i>Leptopentacta elongata</i>	12, 19, 24, 26, 29	Stolidobranchiata indet.	22
<i>Pawsonia saxicola</i>	1, 2, 3, 4, 7, 11, 12, 14, 18, 21, 22, 23, 24, 25, 31	Styelidae indet.	4
<i>Aslia lefevrei</i>	7, 8, 14, 22, 24, 25	<i>Polycarpa pomaria</i>	24
<i>Ocnus lacteus</i>	18	<i>Polycarpa scuba</i>	32
<i>Thyone</i> sp.	26, 28	<i>Dendrodoa grossularia</i>	1, 2, 3, 5, 6, 7, 11, 12, 13, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Thyone fusus</i>	13, 14, 19, 24, 29	<i>Botryllus schlosseri</i>	1, 2, 3, 4, 7, 8, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32
<i>Thyone roscovita</i>	2, 23	<i>Botrylloides leachi</i>	1, 3, 6, 8, 11, 13, 14, 15, 16, 17, 19, 22, 23, 24, 25, 32
<i>Neopentadactyla mixta</i>	3, 31	<i>Boltenia echinata</i>	7, 19
<i>Thyonidium drummondii</i>	24	<i>Pyura</i> sp.	2
<i>Leptosynapta</i> sp.	19, 23, 24	<i>Pyura squamulosa</i>	13, 19, 24
<i>Leptosynapta inhaerens</i>	4, 12, 19, 24, 26, 27, 29	<i>Pyura tessellata</i>	4
<i>Leptosynapta minuta</i>	21	Molgulidae indet.	22
<i>Labidoplax</i> sp.	18	<i>Molgula</i> sp.	2, 7, 24
<i>Labidoplax buskii</i>	26, 29	<i>Molgula citrina</i>	19, 32
Tunicata		<i>Molgula complanata</i>	23, 26, 27
Asciacea indet.	6, 12, 19, 22, 28, 29	<i>Molgula oculata</i>	7, 9
<i>Clavelina lepadiformis</i>	1, 2, 3, 4, 7, 8, 9, 7, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 31, 32	Pisces	
Polyclinidae indet.	13, 18	<i>Scyliorhinus</i> sp.	1, 7, 9, 12, 13, 20, 23, 24
<i>Polyclinum</i> sp.	22	<i>Scyliorhinus canicula</i>	1, 2, 3, 6, 7, 9, 11, 12, 13, 14, 18, 19, 24, 26, 29, 31, 32
<i>Polyclinum aurantium</i>	1, 3, 13, 17, 22, 23, 31, 32	<i>Scyliorhinus stellaris</i>	8
<i>Synoicum pulmonaria</i>	1	<i>Raja naevus</i>	4
<i>Morchellium argus</i>	1, 31	<i>Conger conger</i>	2
<i>Sidnyum</i> sp.	1, 2, 17, 22	<i>Diplecogaster bimaculata</i>	11, 12, 19, 24, 25
<i>Sidnyum turbinatum</i>	1, 2, 3, 11, 13, 14, 15, 18, 19, 21, 22, 23, 24, 25, 31, 32	<i>Lepadogaster</i> sp.	7, 24
<i>Aplidium</i> sp.	1	<i>Lophius piscatorius</i>	13, 15, 23, 24, 28, 31
<i>Aplidium nordmanni</i>	13, 22, 31, 32		
<i>Aplidium pallidum</i>	25		
<i>Aplidium proliferum</i>	13		
<i>Aplidium punctum</i>	1, 2, 4, 13, 22, 32		
Didemnidae indet.	1, 3, 8, 13, 16, 18, 22, 23, 24, 31		
<i>Didemnum maculosum</i>	1		
<i>Diplosoma</i> sp.	16		
<i>Diplosoma listerianum</i>	5, 13, 14, 15, 19, 22, 23, 24, 25, 31		
<i>Diplosoma spongiforme</i>	1, 3, 17		
<i>Lissoclinum perforatum</i>	17, 20, 22, 23, 25, 31, 32		

<i>Gadidae</i> indet.	1, 3, 7, 14, 15, 18, 19, 23, 24, 25, 32	<i>Pomatoschistus pictus</i>	2, 4, 7, 19, 24, 25, 32
<i>Ciliata</i> sp.	26	<i>Scomber scombrus</i>	9, 18
<i>Gadus morhua</i>	13, 15, 26	<i>Phrynorhombus</i> sp.	16
<i>Molva molva</i>	1, 6, 7, 9, 11, 13, 14, 15, 18, 23, 32	<i>Phrynorhombus norvegicus</i>	16
<i>Pollachius</i> sp.	22, 24	<i>Scophthalmus rhombus</i>	1
<i>Pollachius pollachius</i>	1, 3, 6, 7, 9, 11, 13, 14, 15, 16, 17, 19, 21, 22, 23, 24, 25, 27, 31, 32	<i>Zeugopterus punctatus</i>	1, 3, 6, 7, 9, 11, 13, 17, 19, 22, 24, 26, 31
<i>Pollachius virens</i>	2, 3, 4, 8, 12, 13, 14, 17, 18, 19, 20, 23, 24, 29	<i>Pleuronectidae</i> indet.	1, 3, 7, 11, 13, 15, 17, 18, 19, 22, 23, 24, 29, 31, 32
<i>Trisopterus luscus</i>	6, 7, 11, 32	<i>Limanda limanda</i>	21
<i>Trisopterus minutus</i>	13, 29	<i>Platichthys flesus</i>	3
<i>Gasterosteidae</i> indet.	32	<i>Pleuronectes platessa</i>	3, 5, 7, 9, 12, 13, 15, 18, 19, 23, 25, 31
<i>Gasterosteus aculeatus</i>	8, 15, 19, 31, 32	Cyanophycota	
<i>Spinachia spinachia</i>	8, 19, 23, 24	<i>Cyanophycota</i> indet.	24, 25, 32
<i>Nerophis lumbriciformis</i>	12	<i>Oscillatoria rosea</i>	31
<i>Syngnathus acus</i>	24	<i>Beggiatoa</i> sp.	18, 19, 21, 23, 24
<i>Scorpaena</i> sp.	19	Rhodophycota	
<i>Scorpaena porcus</i>	29	<i>Rhodophycota</i> indet.	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Scorpaena scrofa</i>	13, 20, 23, 24, 26, 29	<i>Porphyropsis coccinea</i>	18, 22, 27, 31
<i>Triglidae</i> indet.	19	<i>Porphyra</i> sp.	1, 2, 3, 4, 6, 7, 8, 10, 11, 13, 14, 15, 17, 18, 19, 20, 22, 24, 26, 27, 29, 30, 31, 32
<i>Eutrigla gurnardus</i>	18	<i>Porphyra linearis</i>	17
<i>Cottidae</i> indet.	23	<i>Porphyra miniata</i>	22, 23, 31
<i>Myxocephalus scorpius</i>	1, 3, 7, 9, 12, 13, 14, 18, 19, 21, 23, 24, 25, 27	<i>Porphyra umbilicalis</i>	3, 13, 17, 31, 32
<i>Taurulus bubalis</i>	1, 2, 3, 4, 7, 8, 13, 15, 18, 19, 22, 23, 24, 25, 31, 32	<i>Audouinella</i> sp.	2, 3, 13, 15, 16, 17, 19, 22, 29, 32
<i>Agonus cataphractus</i>	15, 19	<i>Rhodothamniella floridula</i>	26
<i>Cyclopterus lumpus</i>	2, 13, 15, 32	<i>Scinaia trigona</i>	3, 6, 9, 23, 24
<i>Ctenolabrus rupestris</i>	6	<i>Bonnemaisonia</i>	9, 22
<i>Labrus bergylta</i>	1, 3, 4, 6, 7, 9, 11, 13, 22, 23, 31, 32	<i>asparagoides</i>	
<i>Labrus mixtus</i>	7, 23, 24, 25, 29	<i>Bonnemaisonia hamifera</i>	3, 5, 7, 11, 13, 14, 15, 17, 18, 19, 21, 23, 24, 25, 27, 32
<i>Blenniidae</i> indet.	24	<i>Trailiella intricata</i>	14, 18, 19, 23, 24
<i>Parablennius gattorugine</i>	18, 24	<i>Gelidium</i> sp.	29
<i>Anarhichas lupus</i>	13, 15, 29	<i>Gelidium latifolium</i>	16, 29
<i>Chirolophis ascanii</i>	11, 13, 14, 23, 32	<i>Palmaria</i> sp.	32
<i>Leptoclinus maculatus</i>	18	<i>Palmaria palmata</i>	1, 2, 3, 7, 8, 15, 17, 18, 19, 21, 22, 23, 25, 26, 29, 31, 32
<i>Lumpenus lumpretaeformis</i>	5, 12, 17, 18, 19, 24, 29	<i>Rhodophysema georgii</i>	29
<i>Zoarces viviparus</i>	26	<i>Dilsea carnosus</i>	1, 2, 3, 5, 13, 19, 22, 23, 24, 29, 31
<i>Pholis gunnellus</i>	1, 3, 5, 6, 7, 11, 13, 14, 18, 19, 20, 23, 24, 25, 29	<i>Dumontia contorta</i>	3, 6, 7, 8, 10, 11, 14, 16, 18, 19, 26, 27, 29, 30, 32
<i>Ammodytes</i> sp.	2, 4, 13, 15, 31	<i>Callophyllis cristata</i>	2, 3, 4, 6, 9, 14, 18, 19, 22, 24, 25
<i>Ammodytes tobianus</i>	29	<i>Callophyllis laciniata</i>	1, 2, 3, 4, 6, 7, 8, 9, 13, 14, 15, 17, 18, 19, 22, 23, 24, 25, 27, 31, 32
<i>Callionymus</i> sp.	18	<i>Kallymenia reniformis</i>	1, 2, 3, 4, 8, 9, 13, 14, 17, 22, 23, 27, 31, 32
<i>Callionymus lyra</i>	1, 3, 5, 7, 9, 12, 19, 24, 25		
<i>Gobiidae</i> indet.	18, 19, 21, 24, 25, 29		
<i>Crystallogobius linearis</i>	4		
<i>Gobius</i> sp.	19		
<i>Gobius niger</i>	24		
<i>Gobiusculus flavescens</i>	3, 8, 12, 18, 19, 25, 29, 31		
<i>Pomatoschistus</i> sp.	3, 18, 19, 24, 27		
<i>Pomatoschistus microps</i>	19		
<i>Pomatoschistus minutus</i>	3, 4, 5, 7, 8, 9, 11, 12, 14, 15, 18, 19, 21, 23, 24, 25, 28, 29		

<i>Gloiosiphonia</i> sp.	19	<i>Rhodophyllis</i> sp.	5, 6, 9
<i>Peyssonnelia</i> sp.	19, 24	<i>Rhodophyllis divaricata</i>	5, 6, 9, 14, 18, 19, 22, 23, 24
<i>Hildenbrandia</i> sp.	27, 29	<i>Cruoria</i> sp.	25
<i>Hildenbrandia rubra</i>	17, 18, 26, 27, 31, 32	<i>Cruoria pellita</i>	13, 31
Corallinaceae indet. (crusts)	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Cruoria cruoriaeformis</i>	3, 13, 14, 32
<i>Corallina officinalis</i>	1, 2, 3, 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32	<i>Rhodymenia</i> sp.	1, 2, 3, 7, 11, 18, 20, 26
<i>Lithophyllum</i> sp.	26, 30	<i>Rhodymenia delicatula</i>	18, 24, 25
<i>Lithophyllum orbiculatum</i>	17, 18	<i>Chylocladia verticillata</i>	3, 18, 22, 23
<i>Lithothamnion</i> sp.	1, 2, 3, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 20, 21, 24, 25, 26, 27, 29, 30, 31	<i>Lomentaria</i> sp.	1
<i>Lithothamnion corallioides</i>	24	<i>Lomentaria articulata</i>	2, 3, 7, 10, 11, 14, 24, 26, 27, 29, 31, 32
<i>Lithothamnion glaciale</i>	3, 4, 6, 8, 14, 17, 18, 19, 23, 24, 25, 32	<i>Lomentaria clavellosa</i>	1, 2, 3, 9, 15, 17, 18, 19, 22, 24, 25, 31
<i>Mesophyllum lichenoides</i>	22	<i>Lomentaria orcadensis</i>	1, 4, 13, 15, 18, 22, 27, 32
<i>Phymatolithon calcareum</i>	3, 4, 6, 9, 12	<i>Antithamnion</i> sp.	24, 31, 32
<i>Phymatolithon lenormandii</i>	17, 18	<i>Antithamnionella</i>	24, 32
<i>Titanoderma pustulatum</i>	17	<i>spirographidis</i>	
<i>Titanoderma litorale</i>	6	<i>Callithamnion</i> sp.	6, 15, 17, 19, 22, 24, 26, 27, 29, 30, 31, 32
Gracilariaceae indet.	19	<i>Callithamnion tetragonum</i>	1, 7, 8, 14, 17, 22, 23, 27, 32
<i>Gracilaria</i> sp.	19	<i>Ceramium</i> sp.	2, 3, 7, 11, 12, 13, 14, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Gracilaria gracilis</i>	19, 24	<i>Ceramium deslongchampii</i>	32
<i>Schmitzia hiscockiana</i>	22, 23	<i>Ceramium diaphanum</i>	29
<i>Ahnfeltia plicata</i>	3, 13, 17, 22	<i>Ceramium nodulosum</i>	1, 2, 3, 8, 11, 13, 14, 15, 17, 19, 22, 23, 25, 26, 27, 30, 32
<i>Phyllophora</i> sp.	19	<i>Ceramium</i>	17
<i>Phyllophora crispa</i>	1, 5, 9, 13, 18, 19, 21, 22, 23, 24, 25, 28, 31	<i>shuttleworthianum</i>	
<i>Phyllophora</i>	1, 19, 24	<i>Ceramium strictum</i>	24
<i>pseudoceranoides</i>		<i>Compsothamnion thuyoides</i>	9, 18, 23, 24, 25, 32
<i>Erythrodermis traillii</i>	22, 24	<i>Griffithsia corallinoides</i>	5, 19, 24, 25
<i>Coccotylus truncata</i>	13, 14, 19, 23	<i>Halurus flosculosus</i>	18, 19, 24, 25
<i>Schottera nicaeensis</i>	22	<i>Plumaria plumosa</i>	1, 9, 16, 22, 26, 27, 29, 30
<i>Mastocarpus stellatus</i>	1, 2, 3, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 26, 27, 29, 30, 31, 32	<i>Pterothamnion plumula</i>	1, 14, 15, 19, 22, 23, 24, 27, 31, 32
<i>Chondrus crispus</i>	1, 3, 7, 11, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 31, 32	<i>Ptilota gunneri</i>	1, 2, 3, 4, 13, 14, 15, 18, 19, 22, 23, 24, 25, 31, 32
<i>Gigartina</i> sp.	14, 22, 25, 32	<i>Scagelia pusilla</i>	29
<i>Polyides rotundus</i>	2, 3, 5, 13, 17, 18, 19, 23, 24	<i>Acrosorium reptans</i>	1, 2, 18, 22, 23
<i>Plocamium cartilagineum</i>	1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 15, 17, 18, 19, 22, 23, 24, 25, 27, 31, 32	<i>Acrosorium venulosum</i>	9
<i>Furcellaria lumbricalis</i>	11, 13, 15, 17, 18, 19, 23, 24, 27	<i>Apoglossum ruscifolium</i>	3, 25
<i>Halarachnion ligulatum</i>	1, 3, 4, 9, 19, 24	<i>Cryptopleura ramosa</i>	1, 2, 3, 4, 7, 9, 13, 14, 15, 17, 18, 19, 22, 23, 24, 25, 27, 29, 31, 32
<i>Catenella caespitosa</i>	24, 31, 32	<i>Delesseria sanguinea</i>	1, 2, 3, 4, 6, 7, 11, 12, 13, 14, 17, 18, 19, 22, 23, 24, 25, 27, 29, 31, 32
<i>Cystoclonium purpureum</i>	1, 2, 5, 13, 14, 16, 19, 23, 24	<i>Hypoglossum</i>	1, 2, 3, 4, 13, 14, 15, 16, 18, 19, 22, 23, 24, 25, 31, 32
		<i>hypoglossoides</i>	
		<i>Membranoptera alata</i>	1, 2, 3, 4, 7, 13, 14, 16, 17, 18, 19, 22, 23, 25, 26, 27, 29, 31, 32

<i>Haraldiophyllum bonnemaisonii</i>	1, 4, 13, 15, 18, 22, 31	<i>Leathesia difformis</i>	2, 3, 7, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 26, 27, 29, 32
<i>Nitophyllum punctatum</i>	1, 2, 3, 4, 13, 14, 15, 19, 22, 23, 24, 25, 27, 31, 32	<i>Spermatocnus paradoxus</i>	29
<i>Phycodryus rubens</i>	1, 2, 3, 4, 6, 7, 8, 11, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Stilophora tenella</i>	18, 19, 21, 24, 24
<i>Heterosiphonia plumosa</i>	2, 3, 4, 12, 18, 19, 22, 24, 25, 31	<i>Acrothrix gracilis</i>	29
<i>Brongniartella byssoides</i>	4, 14, 19, 22, 24, 25, 27, 31	<i>Chordaria flagelliformis</i>	13, 16, 17, 18, 20, 21
<i>Laurencia obtusa</i>	19	<i>Eudesme virescens</i>	13, 19, 24
<i>Osmundea hybrida</i>	18, 19, 23, 27, 29, 32	<i>Cutleria multifida</i>	1, 7, 8, 11, 13, 14, 15, 18, 19, 21, 22, 23, 24, 25, 27, 31, 32
<i>Osmundea pinnatifida</i>	1, 2, 3, 7, 10, 11, 14, 16, 17, 18, 19, 20, 21, 26, 27, 29, 30, 31, 32	<i>Aglaozonia (asexual Cutleria)</i>	1, 2, 3, 4, 7, 9, 14, 16, 17, 18, 20, 22, 24, 31
<i>Odonthalia dentata</i>	1, 3, 9, 13, 17, 22, 23, 24, 25, 31, 32	<i>Sphacelaria</i> sp.	19, 27
<i>Polysiphonia</i> sp.	1, 2, 3, 6, 7, 12, 14, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32	<i>Sphacelaria plumosa</i>	19, 21, 23, 24, 25
<i>Polysiphonia brodiei</i>	17, 18	<i>Halopteris filicina</i>	19
<i>Polysiphonia elongata</i>	3, 5, 12, 14, 15, 18, 19, 22, 23, 24, 25, 29	<i>Dictyota dichotoma</i>	1, 2, 3, 4, 8, 9, 11, 13, 19, 21, 22, 23, 24, 25, 31, 32
<i>Polysiphonia lanosa</i>	3, 11, 12, 16, 18, 24, 29, 31, 32	<i>Desmarestia</i> sp.	14, 17, 26, 32
<i>Polysiphonia nigra</i>	15	<i>Desmarestia aculeata</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 17, 18, 19, 21, 22, 23, 24, 25, 27, 31, 32
<i>Polysiphonia fucoides</i>	16, 24	<i>Desmarestia ligulata</i>	1, 17, 18, 19, 22, 23, 31, 32
<i>Polysiphonia spiralis</i>	8	<i>Desmarestia viridis</i>	1, 2, 3, 4, 5, 7, 10, 11, 13, 14, 15, 18, 19, 21, 22, 23, 24, 25, 27, 31, 32
<i>Polysiphonia stricta</i>	1, 2, 3, 4, 13, 15, 19, 31, 32	<i>Asperococcus</i> sp.	3, 5, 8, 16, 17, 18, 19, 21, 23, 24, 27, 29
<i>Pterosiphonia parasitica</i>	1, 2, 3, 4, 19, 22, 24, 25, 27, 31, 32	<i>Asperococcus compressus</i>	19
<i>Rhodomela</i> sp.	24	<i>Asperococcus fistulosus</i>	19, 24
<i>Rhodomela confervoides</i>	1, 3, 13, 18, 23, 24, 27	<i>Asperococcus bullosus</i>	7, 11, 19, 24, 29
<i>Rhodomela lycopodioides</i>	14, 22, 23, 24	<i>Dictyosiphon</i> sp.	3, 9, 14, 15, 19, 23, 24, 26, 32
Filamentous red algae indet.	17, 19, 22, 27	<i>Dictyosiphon foeniculaceus</i>	3, 24
Rhodophycota indet. (non-calc. crusts)	1, 2, 3, 8, 9, 11, 13, 17, 18, 19, 20, 22, 23, 24, 26, 31, 32	<i>Colpomenia peregrina</i>	19, 31, 32
Chrysophycota		<i>Petalonia</i> sp.	25, 32
Chrysophycota indet.	1, 5, 15, 18, 19, 24, 25	<i>Petalonia fascia</i>	17
Diatoms - colonial	3, 17, 21	<i>Petalonia zosterifolia</i>	17
Diatoms - film	17, 18, 19, 24	<i>Scytosiphon lomentaria</i>	3, 19, 27, 31, 32
Chromophycota		<i>Chorda</i> sp.	18, 19, 24, 27, 29
Chromophycota indet.	1, 2, 3, 6, 7, 11, 12, 13, 14, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 29, 31, 32	<i>Chorda filum</i>	2, 3, 5, 8, 10, 11, 12, 14, 15, 16, 18, 19, 21, 23, 24, 25, 26, 29, 31, 32
Ectocarpaceae indet.	2, 3, 4, 8, 10, 13, 16, 17, 18, 19, 22, 24, 26, 27, 29, 31, 32	<i>Laminaria</i> sp.	1, 7, 8, 11, 14, 17, 18, 19, 22, 23, 24, 25, 31, 32
<i>Pilayella</i> sp.	18	<i>Laminaria digitata</i>	1, 2, 3, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32
<i>Pseudolithoderma extensum</i>	29	<i>Laminaria hyperborea</i>	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 31, 32
<i>Ralfsia</i> sp.	17		
<i>Elachista</i> sp.	17, 25, 32		
<i>Elachista fucicola</i>	27, 29		

<i>Laminaria saccharina</i>	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32	<i>Ulva</i> sp.	1, 2, 3, 4, 5, 8, 13, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 29, 31, 32
<i>Saccorhiza polyschides</i>	2, 3, 6, 8, 9, 11, 13, 14, 17, 18, 19, 21, 22, 23, 24, 25, 26, 31, 32	<i>Ulva lactuca</i>	1, 2, 3, 7, 10, 11, 14, 16, 17, 18, 19, 20, 26, 27, 31
<i>Alaria esculenta</i>	1, 2, 3, 4, 7, 8, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 29, 30, 31, 32	<i>Blidingia</i> sp.	17
<i>Ascophyllum nodosum</i>	2, 3, 7, 8, 10, 11, 12, 14, 16, 18, 19, 21, 22, 24, 26, 27, 29, 30, 31, 32	<i>Blidingia minima</i>	17, 31, 32
<i>Fucus</i> sp.	19, 27, 29	<i>Prasiola stipitata</i>	6, 26, 27, 31, 32
<i>Fucus ceranoides</i>	10, 12, 19	<i>Rosenvingiella polyrhiza</i>	17, 31
<i>Fucus distichus</i>	22, 31, 32	<i>Spongomorpha</i> sp.	17, 18
<i>Fucus cottonii</i>	12, 27	<i>Chaetomorpha</i> sp.	2, 15, 17, 18, 19, 27, 29
<i>Fucus serratus</i>	2, 3, 6, 7, 8, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32	<i>Chaetomorpha linum</i>	22, 31
<i>Fucus spiralis</i>	2, 3, 6, 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32	<i>Chaetomorpha melagonium</i>	13, 22
<i>Fucus vesiculosus</i>	2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32	<i>Cladophora</i> sp.	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32
<i>Pelvetia canaliculata</i>	2, 3, 6, 7, 10, 11, 12, 14, 16, 17, 18, 19, 21, 22, 24, 25, 26, 27, 29, 30, 31, 32	<i>Cladophora pellucida</i>	17
<i>Himantalia elongata</i>	2, 3, 8, 10, 11, 14, 15, 16, 17, 18, 19, 20, 22, 24, 26, 27, 29, 30, 31, 32	<i>Cladophora rupestris</i>	2, 3, 8, 13, 15, 17, 18, 21, 31, 32
<i>Halidrys siliquosa</i>	2, 8, 11, 13, 14, 18, 19, 21, 24, 31, 32	<i>Rhizoclonium riparium</i>	19
Filamentous brown algae indet.	21, 27	Chaetosiphonaceae indet.	24
Chromophycota indet. (crusts)	1, 2, 3, 7, 13, 14, 16, 17, 18, 19, 23, 24, 25, 26	<i>Bryopsis</i> sp.	13
Foliose brown algae indet.	1, 19	<i>Bryopsis plumosa</i>	19, 25, 29
Chlorophycota		<i>Derbesia</i> sp.	15
Chlorophycota indet.	7, 11, 15, 16, 17, 19, 22, 24, 26, 27, 29, 31	<i>Derbesia marina</i>	19
<i>Enteromorpha</i> sp.	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32	<i>Codium</i> sp.	2, 8, 32
<i>Enteromorpha intestinalis</i>	24, 27	<i>Codium fragile</i>	17, 31
		<i>Codium fragile</i> subsp. <i>atlanticum</i>	15, 17, 19, 22, 23, 24, 25, 31, 32
		Filamentous green algae indet.	18, 19, 24, 32
		Xanthophyta	
		<i>Vaucheria</i> sp.	31
		Angiospermae	
		<i>Zostera</i> sp.	19
		<i>Zostera marina</i>	18, 19
		<i>Ruppia</i> sp.	21
		<i>Armeria maritima</i>	3, 11, 14, 16, 18, 19, 21
		Lichens	
		<i>Anaptychia fusca</i>	6, 7, 11, 14, 17, 24, 26, 27
		<i>Caloplaca</i> sp.	1, 2, 3, 6, 7, 10, 11, 14, 18, 20, 20, 21, 22, 24, 26, 27, 30
		<i>Caloplaca marina</i>	3, 24, 27, 29, 32
		<i>Caloplaca thallicola</i>	3, 24, 29
		<i>Lecanora</i> sp.	6, 26, 27, 30
		<i>Lecanora atra</i>	1, 3, 7, 10, 11, 12, 14, 17, 18, 21, 24, 25, 26, 27, 29
		<i>Lichina</i> sp.	11, 14, 20, 24, 31
		<i>Lichina confinis</i>	27, 29, 31
		<i>Lichina pygmaea</i>	10, 12, 14, 19, 26, 27, 30, 32
		<i>Ochrolechia parella</i>	7, 10, 12, 14, 17, 18, 24, 26, 27, 30
		<i>Ramalina</i> sp.	3, 6, 22, 24, 26, 27, 29, 30

<i>Ramalina siliquosa</i>	3, 7, 10, 11, 14, 16, 18, 19, 20, 21, 24, 29	<i>Xanthoria parietina</i>	1, 3, 6, 7, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 24, 26, 27, 29, 30, 32
<i>Rhizocarpon</i> sp.	11, 27	Grey lichens indet.	11, 14, 16, 17, 18, 19, 20, 24, 31
<i>Verrucaria</i> sp.	1, 2, 3, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 24, 25, 26, 27, 29		
<i>Verrucaria maura</i>	3, 6, 17, 18, 22, 24, 26, 27, 29, 30, 31, 32		
<i>Verrucaria mucosa</i>	6, 17, 26, 27, 29, 30, 31, 32		

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