Red Bay Summary Report 2009

The table to the right shows how many species in each phylum were found and what the most common species were. Listed below are records of particular interest.

Sponges Sponges were not abundant in the seagrass or maerl habitats due to a lack of suitable substrate.

Bryozoans *Vesicularia spinosa* was recorded from Red Bay. This is not known from many sites in Northern Ireland.

Anemones, Corals, Hydroids and Jellyfish. The burrowing anemone *Cerianthus lloydi* was common in some areas of the seagrass bed.

Crustaceans A record was made of the spiny spider crab *Maja brachydactyla* from the seagrass bed. This is a southern species, one of the first NI records was from a Seasearch dive in 2006 and so far in Northern Ireland it has only been recorded near Portrush. It may be increasing in number due to climate change – the Red Bay record is the furthest north it has been recorded in the Irish Sea.

Phylum/sub-phylum	Common name	Total records	Number of Species	Common species (number of records in brackets)
Porifera	Sponges	8	6	*Haliclona oculata*– mermaid's glove sponge (2) *Sycon ciliatum* – purse sponge (2)
Cnidaria	Anemones, corals, hydroids, jellyfish	26	13	*Cerianthus lloydii* – burrowing anemone (5) *Nemertesia ramosa* – branching antenna hydroid(4)
Annelida	Segmented worms	21	5	*Chaetopterus variopedatus* – parchment worm (6) *Myxicola infundibulum* - burrowing worm (7)
Crustacea	Lobsters, crabs, barnacles	54	12	*Cancer pagurus* – edible crab (10) *Liocarcinus depurator* – harbour swimming crab (16)
Mollusca	Shells, sea slugs, cuttlefish, octopus	38	21	*Pecten maximus* – king scallop (6)
Bryozoa	Sea mats	36	11	*Securiflustra securifrons* – lesser Hornwrack (6) *Vesicularia spinosa* (5) – a bryozoan
Echinodermata	Starfish, urchins, sea cucumbers	82	14	*Echinus esculentus* – edible urchin (11) *Asterias rubens* – common starfish (14)
Tunicata	Sea squirts	1	1	*Corella parallelogramma* – gas mantle seasquirt (1)
Pisces	Fishes	62	22	*Scyliorhinus canicula* - lesser spotted catshark (9)
Algae and Seagrasses	Seaweeds and Seagrass	64	27	Maerl (11) *Zostera marina* - eelgrass (11)
Total		**418**	**138**	

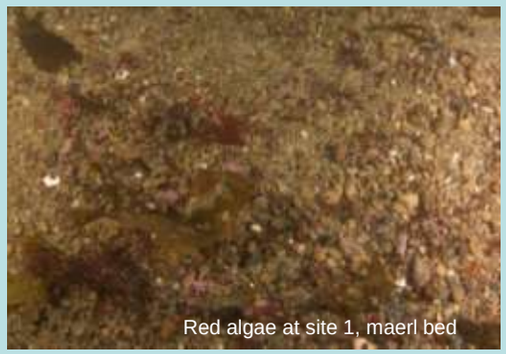
Molluscs the curled octopus *Eledone cirrhosa* was recorded from the maerl bed and the cuttlefish *Sepiola atlantica* from the seagrass bed. Juvenile queen and king scallops were common on the maerl bed, this habitat is an important nursery area for these species.

Echinoderms beds of brittlestars (*Ophithrix fragilis* and *Ophicomina nigra*) were recorded from the maerl bed. The seven armed starfish was seen on several dives – this species feeds on brittlestars. A goosefoot starfish *Anseropoda placenta* was recorded from the maerl bed. This is a Northern Ireland Conservation Priority Species, extremely vulnerable to damage by fishing gear.

Fish A large, very well camouflaged, Brill *Scophthalmus rhombus* was recorded from the seagrass bed. This is just one of the fish species which may be found hiding in this habitat. Juvenile flatfish were also common – seagrass beds are an important nursery area.

Seaweeds several red weeds were found in association with the maerl bed including *Stenogramme interrupta* (Site 1) which is a Northern Ireland Species of Conservation Concern and *Scinaia turgida* which has distinctive balloon-like leaves.


Spiny Spider Crab *Maja brachydactyla.* Image Dave Harrison.


Red algae at site 1, maerl bed

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Seasearch is a volunteer underwater survey project for recreational divers to actively contribute to the conservation of the marine environment (see www.seasearch.org.uk for more information). Financial support for the project was given by the Northern Ireland Environment Agency.
This report was written by Claire Goodwin (thanks to Chris Wood for editorial comments). Photos are by Claire Goodwin and Dave Harrison.

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Diver on Red Bay seagrass bed


Red Bay survey participants 2009


Seven armed starfish *Luidia ciliaris,* Red Bay maerl bed


Snake pipefish *Entelurus aequoreus,* in seagrass bed


Brill *Scophthalmus rhombus,* Red Bay Seagrass bed


Brittlestar bed on maerl, bed Red Bay

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Red Bay Maerl Bed

Maerl is a coralline seaweed, with an appearance a bit like pink twiglets (the crisp). It can form large beds which are important nursery habitats for species such as scallops. Many Northern Ireland priority species, such as the sand star *Astropecten irregularis* are associated with maerl beds. We did some survey work on fossil maerl beds in Red Bay in 2006.

In 2008/2009 we surveyed additional sites in Red Bay. Eleven survey dives took place over five days. The survey sites were situated offshore of Cushendun where maerl had been recorded by drop down video. Red Bay was recently (February 2010) selected as a European Special Area of Conservation because of its maerl habitat. As well as living maerl beds there are 'mega ripples' of fossil maerl present in deeper water. In these the dead maerl piles up to form waves over 1m high. We surveyed areas of live and fossil maerl. This data was used as evidence to help designate the SAC and will assist in its long term monitoring. Depths are given as Below Chart Datum (BCD).

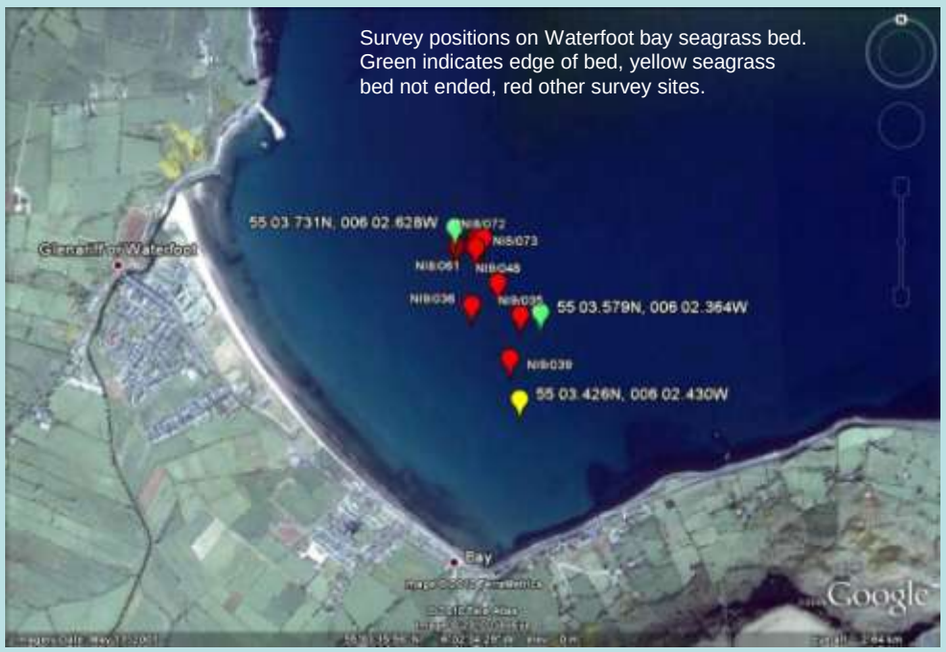
Diver on fossil maerl megaripple (Site 2), Red Bay

Live (pink) and dead (white) maerl, Red Bay maerl bed

Site 1, Dives NI8/076, NI8/074
Relatively flat seabed, depth from 15.8-17.1m BCD. Seabed composed of gravel, pebbles and occasional boulders. The boulders had some kelp and encrusting pink algae attached. There was very sparse maerl scattered over the seabed. (<5% coverage), mostly in large, flattened pieces. Characterising species the bryozoan *Vesicularia spinulosa* and red algae, including *Scinaia turgida* and *Stenogramme interrupta* (a NI species of Conservation Concern). A Thornback Ray *Raja clavata* was seen. Divers were searching for fan mussel as a shell had been found in a grab taken from the area, however none were found.

Site 2, Dives NI9/037, NI9/042 and NI9/043, NI9/066, NI9/072
Maerl bed, seabed composed of sand and about 70% maerl, of which between 50 and 85% was living. The maerl was formed into waves, height of larger waves up to 50cm, and small boulders and dead shell were present in wave troughs. Depth surveyed from approx 23-27m BCD. Maerl with 15-20% brittlestar coverage (*Opthiothrix fragilis and Ophicomina nigra).* Lots of life including frequent juvenile queen scallops *Aequipecten opercularis* and juvenile common sunstar *Crossaster papposus*.
Adjacent to the maerl was an area of undulating sand (24-27m BCD) with sparser maerl and a dense brittlestar bed. The goosefoot starfish *Anseropoda placenta* (a Northern Ireland priority species) was recorded.

Site 3, Dives NI9/033 and NI9/031 Sand and maerl seabed from 23.8-27.8m BCD. Some areas of large 'mega-ripples'. Whole seabed covered in maerl - approx 60% live and 20% dead (80% total cover). Brittlestars overlying maerl - mainly *Ophiothrix fragilis* but some *Ophicomina nigra.*



Seagrass in Waterfoot Bay.

This Seagrass bed had only previously been surveyed on spot dives and its extent was not known. Eleven survey dives took place over five days. On several dives volunteers swam to try and reach the edge of the seagrass bed. The seagrass was quite patchy and sometimes it was difficult to determine if the bed had stopped completely. The north-west edge of the bed (55° 03.731'N, 006° 02.628'W) and the deepest extent of the bed in 7m BCD (55° 03.579'N, 006° 02.364'W) were located. However, the south-east edge and inshore (south-west) edge could not be found despite divers swimming for over an hour. The furthest south-east divers reached was 55° 03.426'N, 006° 02.430'W and seagrass was still present at this site. This seagrass bed therefore measures over 650m in length by 250m width making it one of the biggest in Northern Ireland.
The substrate in the bay was fine sand. The *Zostera marina* seagrass formed large patches with areas of bare sand or mixed algae in between them (including *Porphyra, Hypoglossum hypoglossoides,* and sparse sugar kelp *Laminaria saccharina*). Cover of seagrass was dense in some places, up to 80%, but varied considerably across the bed. Juvenile flatfish were abundant and several other fish species including gurnard and brill were spotted. A spiny spider crab *Maja brachydactyla* was recorded. This species is a southern species and was first recorded in Northern Ireland in 2006 and formerly known only from the Skerries. This record is the most northerly in the Irish Sea and represents a considerable extension of this specie's range.