

# Northern Ireland Annual Report 2013



Volunteer Seasearch divers at Portaferry Harbour, Co. Down.

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## 1. Introduction

The aim of Seasearch is to gather information on Seabed habitats and associated marine wildlife in Britain and Ireland through the participation of volunteer recreational divers. The scheme is coordinated by the Marine Conservation Society (MCS) and organized regionally by a number of coordinators. As well as recording marine life and habitats, volunteers record litter or any other man-made impacts that are apparent.

The objectives of Seasearch are:

- ✓ To encourage the participation of volunteer recreational divers in marine conservation through gathering data, particularly for areas where little data exists or where there is a conservation need.
- ✓ To provide training in recording skills to enable volunteer recreational divers to participate in Seasearch.
- ✓ To make quality assured Seasearch data available to partner organizations and general public.
- ✓ To raise public awareness of the diversity of marine life and habitats in Britain and Ireland through the dissemination of information gathered and the identification of issues arising from it.

Through training and organized dives, Seasearch recreational scuba divers are able to survey large areas of the seabed which would otherwise be inaccessible for monitoring authorities. All Seasearch Northern Ireland data is deposited at the regional recording center, CeDAR, at the Ulster Museum (<http://www.nmni.com/cedar>). The data is also validated and available free through the NBN gateway <http://data.nbn.org.uk/>.



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## 2. Training Activities

### 2.1. Observer Course, Lisburn, 18th May 2013

An Observer course was organized during 2013. The course was taught by Charmaine Beer and Deirdre Greer (trainee tutor from Dublin).

### 2.2. Seasearch Qualifications

Two volunteers who attended Seasearch Observer Courses have completed the Qualification. They are Anne Cummings (Killowen O.E.C. Observer course 2011) and Chris Campbell (Lisburn Observer course 2013).

One volunteer who attended the Seasearch Surveyor Course in Crossgar in 2012 has completed the Qualification. He is Tony O'Callaghan.

## 3. Diving Activities and Recording

Recording forms have been received from a range of organized Seasearch dives in target areas and also from dives that volunteer divers have completed independently, a total of 80 for 2013. These comprise 48 Observation Forms and 32 Survey Forms. The percentage of Survey Forms, which provide a much greater volume of data, is the highest for Northern Ireland. Most of these records were made during the Strangford Bioblitz.

### Seasearch Organised Survey Dives

#### 3.1. Ardglass, South Down Area (19/05/13)

Two sites were surveyed, Gunns Island and Golf Course Gully, by a mix of volunteers including Observer Course participants from the previous day and an experienced Surveyor. They completed 3 Observation and 2 Survey Forms.

Both sites consisted of rocky gullies subject to surge and with rock mills at their closed ends. The gully walls had a variety of animal turfs dominated by gooseberry sea squirts *Dendrodoa grossularia* (Golf Course gully) or dead men's fingers *Alcyonium digitatum* (Gunns Island). Notable records were of the nationally scarce southern cup-coral *Caryophyllia inornata* (Golf Course Gully), and of dabberlocks *Alaria esculenta* (Gunns Island), amongst *Laminaria hyperborea* kelp forest. *Alaria esculenta* is a species more commonly associated with very exposed locations.



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## List of Species Recorded:

### Sponges:

*Hemimycale columella*, *Pachymatisma johnstonia*, *Myxilla incrustans*

### Cnidarians: Hydroids, anemones, corals

*Alcyonium digitatum*, *Caryophyllia inornata*, *Caryophyllia smithii*, *Corynactis viridis*, *Leuckartiara octona*, *Obelia geniculata*, *Urticina felina*

### Crustaceans:

*Cancer pagurus*, *Galathea strigosa*, *Necora puber*

### Molluscs:

*Calliostoma zizyphinum*, *Eledone cirrhosa*, *Gibbula cineraria*, *Helcion pellucidum*, *Patella pellucida*, *Trivia monacha*

### Bryozoans:

*Bicellaria ciliata*, *Membranipora membranacea*

### Echinoderms:

*Asterias rubens*, *Crossaster papposus*, *Echinus esculentus*, *Henricia sp.*, *Leptasterias muelleri*, *Ophiopholis aculeata*

### Sea squirts:

*Aplidium nordmanni*, *Aplidium punctum*, *Botryllus schlosseri*, *Clavelina lepadiformis*, *Dendrodoa grossularia*

### Fishes:

*Chirolophis ascanii*, *Taurulus bubalis*

### Seaweeds:

*Alaria esculenta*, *Delesseria sanguinea*, *Desmarestia aculeata*, *Hypoglossum hypoglossoides*, *Laminaria hyperborea*, *Membranoptera alata*, *Meredithia microphylla*, *Odonthalia dentata*, *Phycodrys ruben*, *Plocamium cartilagineum*



*Caryophyllia smithii* by David Kipling

## 3.2. Island Magee & Muck (02/06/13)

Two sites were surveyed; the proposed Brine discharge point off Island Magee and the southern tip of Muck Island. The volunteers completed 3 Observation Forms.

Both sites contained predominantly sediment habitats. Dominant species at the brine discharge site were finger bryozoan, *Alcyonidium diaphanum* and many juvenile sunstars, *Crossaster papposus*. Two Northern Ireland priority species were recorded, the goosefoot starfish *Anseropoda placenta*, and Icelandic cyprine (ocean quahog), *Arctica islandica*.

The south tip of the Isle of Muck was a mixed boulder and sediment habitat notable for the numbers of nudibranchs including *Polycera faeroensis* (c), *Acanthodoris pilosa* (o) and *Flabellina pellucida* (r).



## List of Species Recorded:

### Sponges:

*Axinella infundibuliformis*, *Polymastia penicillus*

### Cnidarians: Hydroids, anemones, corals

*Actinothoe sphyrodeta*, *Alcyonium digitatum*, *Caryophyllia smithii*, *Cerianthus lloydii*  
*Clavelina lepadiformis*, *Tubularia indivisa*, *Urticina felina*

### Worms:

*Myxicola infundibulum*

### Crustaceans:

*Cancer pagurus*, *Macropodia sp.*, *Necora púber*, *Pagurus bernhardus*

### Molluscs:

*Acanthodoris pilosa*, *Aequipecten opercularis*, *Flabellina pedata*, *Pecten maximus*, *Polycera faeroensis*

### Bryozoans:

*Alcyonidium diaphanum*

### Echinoderms:

*Anseropoda placenta*, *Asterias rubens*, *Crossaster papposus*, *Echinus esculentus*, *Henricia oculata*, *Marthasterias glacialis*, *Ophiothris fragilis*, *Ophiura albida*, *Pecten maximus*

### Sea Squirts:

*Clavelina lepadiformis*, *Corella parallelogramma*

## 3.3. Mouth of Belfast Lough (20/07/13)

Two sites were surveyed – the Rose Wreck and Orlock horse mussel beds. The volunteers completed 6 Observation and 2 Survey Forms.

The Orlock site was a drift dive over a flat seabed at 11m bcd with ample evidence of horse mussels and the seabed dominated by broken shells. However there was little evidence of live mussels and the predominant sessile life was anemones, short red algae, finger bryozoan and hornwrack with abundant mobile fauna of crustaceans and echinoderms.

The wreck of the Rose was dived in a current and visibility was poor. The wreck exhibited a typical community of abundant *Alcyonium digitatum* and *Metridium senile* with bib, *Trisopterus luscus* and poor cod, *Trisopterus minutus*.

## List of Species Recorded:

### Sponges:

*Polymastia penicillus*,

### Cnidarians: Hydroids, anemones, corals

*Actinothoe sphyrodeta*, *Alcyonium digitatum*, *Aurelia aurita*, *Caryophyllia smithii*, *Cyanea capillata*, *Metridium senile*, *Obelia geniculata*, *Sagartiogeton undatus*, *Tubularia indivisa*, *Urticina felina*,



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Worms:

*Myxicola infundibulum*

Crustaceans:

*Cancer pagurus, Galathea squamifera, Inachus phalangium, Necora puber, Pagurus bernhardus, Palaemon serratus*

Molluscs:

*Buccinum undatum, Gibbula cinerea, Modiolus modiolus, Pecten maximus*

Bryozoans:

*Bugula plumosa, Alcyonidium diaphanum, Electra pilosa, Flustra foliacea*

Echinoderms:

*Asterias rubens, Crossaster papposus, Echinus esculentus, Henricia oculata, Leptasterias muelleri, Neopentadactyla mixta, Ophiocomina nigra*

Sea squirts:

*Asciadiella aspersa, Clavelina lepadiformis*

Fishes:

*Callionymus lyra, Gadus morhua, Merlangius merlangus, Pholis gunnellus, Taurulus bubalis, Trisopterus luscus, Trisopterus minutus*

Algae:

*Laminaria sp.*, Encrusting pink



*Leptasterias muelleri* by Sarah Bowen

### 3.4. Strangford Lough Bioblitz (19<sup>th</sup>-26<sup>th</sup> August 2013)

Seasearch provided the diving component of this 6 day event. 14 Observation and 23 Survey Forms were completed from 13 sites within the Lough. The surveys included both boat and shore dives and sites were chosen to sample as many different habitats as possible in order to maximise the number of species. We were not granted permission to dive in the closed area and for this reason no *Modiolus modiolus* bed habitat was sampled. The Marine laboratory was available to enable identification of a greater range of species than would not normally be possible *in situ*.



## Summary of sites surveyed:

- Inner Lees Wreck – Ballyhenry Point. Metal wreckage in two parts with abundant *Ascidella aspersa*. Inside, sheltered side of wreck affected by mussel shell debris deposited from aquaculture operations creating an anoxic mud habitat with 50% mussel shell debris cover.
- Holm Bay (North) – west side of Lough – tide-swept sea bed of shelly gravel with occasional boulders and abundant *Ascidella aspersa*.
- Zara Shoal – Tide-swept location close to Strangford narrows. Infralittoral boulders pebbles and gravel with kelp forest on boulders and abundant red seaweeds on kelp stipes.
- Ringhaddy – wreckage and sediment seabed.
- Sketrick/Rainey Channel – tide-swept channel on west side of lough with many boat moorings. Infralittoral sediment seabed of dead maerl, shell gravel, sand and some boulders.
- Skate Rock, SE Strangford Lough – Shallow soft mud slope leading to flat fine sand seabed. Many dead crabs which may have been fishing discards.
- Channel between Dunyneil and Long Rock – tide-swept channel with mixed sediment seabed with sugar kelp and abundant *Ascidella aspersa*.
- Ballyhenry Drop-Off - sloping mixed boulder field with abundant *Actinothoe sphyrodeta*, *Alcyonium digitatum*, *Nemertesia* spp. and *Sertularia*.
- Marfiled Bay – east side of Lough – mixed sediment seabed with small boulders, cobbles, pebbles, shell gravel and muddy sand
- Neill's Reef – infralittoral rocky reef with surrounding sand/gravel seabed
- Holm Bay (south) – west side of Lough – mud slope with *Nephrops* burrows and occasional slender sea pens. Some litter present
- Castleward Bay – south Strangford Lough – muddy sand with seagrass, *Zostera marina*, in shallow water, leading to featureless sloping mud seabed.
- Bay North of Audley's Point, west side of Strangford Narrows – tide-swept infralittoral bedrock and boulders with *Laminaria hyperborea* kelp forest, leading to circalittoral boulders with shelly gravel

## List of Species Recorded:

### Sponges:

*Amphilectus fucorum*, *Clathrina* sp., *Cliona celata*, *Dysidea fragilis*, *Esperiopsis fucorum*, *Grantia compressa*, *Guancha lacunosa*, *Halichondria panicea*, *Haliclona viscosa*, *Hemimycale columella*, *Leuconia nivea*, *Oscarella* sp., *Pachymatisma johnstonia*, *Polymastia* sp., *Raspailia ramosa*, *Scypha ciliata*, *Stelligera stuposa*, *Suberites carnosus*, *Suberites ficus*, *Terpios gelatinosa*

### Cnidarians: Hydroids, anemones, corals

*Abietinaria abietina*, *Actinothoe sphyrodeta*, *Adamsia palliata*, *Aglaophenia* sp, *Alcyonium digitatum*, *Amphisbetia operculata*, *Anemonia viridis*,



*Halcampa chrysanthellum* by Paula Lightfoot



*Antenella secundaria, Aurelia aurita, Caryophyllia smithii, Cerianthus lloydii, Epizoanthus couchii, Eudendrium sp., Halcampa chrysanthellum, Halecium halecinum, Halecium plumosum, Halopteris catharina, Hydractinia echinata, Kirchenpaueria pinnata, Kirchenpaueria similis, Metridium senile, Nemertesia antennina, Nemertesia ramosa, Plumularia setacea, Sagartia elegans, Sagartiogeton laceratus, Schizotricha frutescens, Sertularia sp., Stomphia coccinea, Tubularia indivisa, Urticina eques, Urticina felina, Virgularia mirabilis*



Baby moon jellies on the Inner Lees wreck by Paula Lightfoot

Worms:

*Chaetopterus variopedatus, Eupolymnia nebulosa, Filograna implexa, Lanice conchilega, Myxicola infundibulum, Pomatoceros lamarcki, Phoronis hippocrepia, Prostheceraeus vittatus, Protula tubularia, Sabella pavonina, Serpula vermicularis, Serpulid sp., Spiroboris sp.*

Crustaceans:

*Balanus balanus, Balanus crenatus, Cancer pagurus, Crangon crangon, Carcinus maenas, Galathea strigosa, Inachus sp., Liocarcinus depurator, Macropodia sp., Munida rugosa, Necora püber, Nephrops norvegicus, Paguridae sp., Pagurus bernhardus, Pagurus prideaux, Palaemon serratus, Parapodia sp., Pisidia longicornis*

Molluscs:

*Acanthodoris pilosa, Aequipecten opercularis, Ancula gibbosa, Anomia ephippium, Archidoris pseudoargus, Buccinum undatum, Cadlina laevis, Calliostoma zizyphinum, Calyptraea chinensis, Chlamys varia, Circomphalus casina, Corbula gibba, Coryphella browni, Coryphella lineata, Diaphorodoris luteocincta, Doto pinnatifida, Doto fragilis, Eubranchus doriae, Eubranchus farrani, Eubranchus vittatus, Facelina auriculata, Facelina bostoniensis, Flavelina pedata, Gibbula cineraria, Gibbula magus, Goniodoris nodosa, Hinia reticulata, Helcion pellucidum, Heteranomia squamula, Hiatella sp., Lacuna crassior, Lacuna vincta, Lepidochitona cinerea, Leptochiton asellus, Limacia clavigera, Musculus discors, Nucella lapillus, Nucula nucleus, Onchidoris bilamellata, Ostrea edulis, Pecten maximus, Polycera faeroensis, Polycera quadrilineata, Rissoa parva, Tectura virginea, Tricolia pullus, Trivia arctica, Trivia monacha, Turritella communis, Venerupis senegalensis,*



*Eubranchus farrani* by David Kipling

Bryozoans:

*Alcyonidium diaphanum, Bicellaria ciliata, Bowerbankia pustulosa, Bugula flabellata, Bugula plumosa, Bugula turbinata, Electra pilosa, Encrusting orange, Eucratea loricata, Cellepora pumicosa, Crisia denticulata, Flustra foliacea, Membranipora membranacea, Parasmittina trispinosa, Scrupocellaria scruposa, Securiflustra securifrons, Tubulipora sp.*

#### Echinoderms:

*Antedon bifida*, *Asterias rubens*, *Crossaster papposus*, *Echinus esculentus*, *Henricia* sp., *Luidia ciliaris*, *Marthasterias glacialis*, *Neopentadactyla mixta*, *Ophiothrix fragilis*, *Ophiura albida*, *Ophiura ophiura*

#### Sea squirts:

*Aplidium nordmanni*, *Aplidium punctum*, *Ascidia mentula*, *Ascidia virgínea*, *Ascidella aspersa*, *Botrylloides* sp., *Botryllus schlosseri*, *Ciona intestinalis*, *Clavelina lepadiformis*, *Corella eumyota*, *Corella parallelogramma*, *Dendrodoa grossularia*, *Didemnum bostoniensis*, *Didemnum fulgens*, *Didemnum maculosum*, *Diplosoma spongiforme*, *Diplosoma listerianum*, *Diplosoma* sp., *Lissoclinum perforatum*, *Morchellium argus*, *Ocnus lacteus*, *Pycnoclavella stolonialis*, *Polycarpa pomaria*, *Polycarpa scuba*, *Polyclinum aurantium*, *Pycnoclavella stolonialis*, *Pyura microcosmus*, *Sidnyum elegans*, *Trididemnum cereum*

#### Fishes:

*Ammodytes* sp., *Callionymus lyra*, *Callionymus reticulatus*, *Chirolophis ascanii*, *Conger conger*, *Centrolabrus exoletus*, *Ctenolabrus rupestris*, *Eutrigla gurnardus*, *Gadus morhua*, *Gobiusculus flavescens*, *Gobiidae* sp., *Gobius niger*, *Labrus bergylta*, *Labrus mixtus*, *Limanda limanda*, *Lipophrys polis*, *Melanogrammus aeglefinus*, *Parablennius gattorugine*, *Pholis gunnellus*, *Phrynorhombus norvegicus*, *Pleuronectes platessa*, *Pomatoschistus minutus*, *Pomatoschistus pictus*, *Pollachius pollachius*, *Spinachia spinachia*, *Syngnathus acus*, *Taurulus bubalis*, *Thorogobius ephippiatus*, *Trisopterus minutus*, *Zeugopterus punctatus*



Goby by David Kipling

#### Seaweeds:

*Alaria esculenta*, *Aplidium punctum*, *Aplidium* sp., *Ascidia conchilega*, *Ascidia virgínea*, *Ascophyllum nodosum*, *Bonnemaisonia asparagoides*, *Bryopsis plumosa*, *Calliblepharis ciliata*, *Calliblepharis jubata*, *Callophyllis laciniata*, *Chondria dasyphylla*, *Chondrus crispus*, *Chorda filum*, *Cryptopleura ramosa*, *Cystoclonium purpureum*, *Delesseria sanguínea*, *Desmarestia aculeata*, *Desmarestia ligulata*, *Desmarestia viridis*, *Didemnum maculosum*, *Dictyota dichotoma*, *Dilsea carnosa*, *Distaplia rosea*, *Encrusting pink*, *Gracilaria gracilis*, *Laminaria digitata*, *Laminaria hyperborea*, *Lithothamnion* sp., *Membranoptera alata*, *Odontologia dentata*, *Phycodrys rubens*, *Phyllophora crispa*, *Plocamium cartilagineum*, *Saccharina latissima*, *Saccorhiza polyschides*, *Sargassum muticum*, *Stenogramma interruptum*, *Ulva lactuca*

### 3.5. Ballylumford and Glenarm (05/10/13)

Two sites were surveyed, the State of Louisiana wreck off Ballylumford, and Glenarm Bay. The volunteers completed 5 Observation Forms.

The State of Louisiana lies on its port side in a depth of 20-25m below sea level. The metal surfaces were dominated by anothozoans - dead men's fingers and plumose anemones with a variety of other anemones present, including *Actinothoe spyrodeta*, *Sagartia elegans*, *Corynactis viridis* and *Caryophyllia smithii*. Hydroids were also common including *Tubularia indivisa*. Algae, including sea beech, *Delessaria sanguinea* was present on upper surfaces. The wreck experiences strong tidal streams.

The site at Gelnarm Bay contained boulders, cobbles, sand and gravel in a depth of 10-14m bsl. Kelp forest/park was present at 10m with the sediment surfaces characterised by brittle stars, *Ophiura ophiura* and burrowing eyelash worms, *Myxicola infundibulum*.



### List of Species Recorded:

#### Sponges:

*Cliona celata*, *Terpios* sp.

#### Cnidarians: Hydroids, anemones, corals

*Actinothoe sphyrodeta*, *Alcyonium digitatum*, *Caryophyllia smithii*, *Corynactis viridis*, *Metridium senile*, *Obelia geniculata*, *Sagartia elegans*, *Tubularia indivisa*

#### Worms:

*Myxicola infundibulum*, *Sabella* sp.

Volunteers getting ready to dive

#### Crustaceans:

*Cancer pagurus*, *Crangon crangon*, *Homarus gammarus*, *Hyas araneus*, *Necora puber*, *Pagurus bernhardus*, *Pandalus montagui*

#### Molluscs:

*Aequipecten opercularis*, *Calliostoma zizyphinum*, *Eledone cirrhosa*, *Helcion pellucidum*, *Pecten maximus*

#### Bryozoans:

*Electra pilosa*, *Flustra foliacea*, *Membranipora membranacea*, *Securiflustra securifrons*

#### Echinoderms:

*Echinus esculentus*, *Crossaster papposus*, *Henricia* sp., *Luidia ciliaris*, *Marthasterias glacialis*, *Ophiura ophiura*

#### Sea squirts:

*Botryllus schlosseri*

#### Fishes:

*Centrolabrus exoletus*, *Ctenolabrus rupestris*, *Labrus mixtus*, *Pollachius pollachius*, *Trisopterus luscus*

#### Seaweeds:

*Delesseria sanguinea*, *Laminaria hyperborea*, *Saccorhiza polyschides*

## 3.6 Independently organised survey dives

Records were received from independently organised dives in four areas. In most cases these are well known sites which have been previously recorded but additional records may add detail or record changes and are always encouraged.

### Rathlin and North Antrim Coast

Three sites surveyed around Rathlin: North Wall Pinnacles, Black Rocks and wreck of the Lochgarry.



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One sites surveyed on North Antrim Coast: Carrick-a-Rede.  
No priority species were recoded on these dives, but there were many fishing lines and hooks snagged on the Lochgarry wreck.

### Islandmagee Area

Records were received from three sites: Port Muck, Skernaghan Point and the wreck of the Albia on The Maidens. These sites included a number of rock and sand hábitats, but again there were no priority species recorded.

### Strangford Lough

In addition to the records made during the Bioblitz, six sites were surveyed independently. They were Strangford Pier, Ballyhenry Drop Off, Inner Lees wreck, Alastor Wreck (Ringhaddy), The Pins wreck and Rainey Sound.

### Carlingford

A single survey record was made at Vidal Rock. Here there was a stepped rocky reef with a diverse faunal turf comprising sponges, seasquirts,hydroids and dead men's fingers.

## 4. Biotopes Recorded

JNCC Marine Habitat Classification for Britain & Ireland (v04.05) Biotopes have been assigned to all of the Survey Form data by an experienced data analyser, Jennifer Jones. The broader Seasearch Seabed Cover types are recorded by the individual volunteers as a part of their record.

Biotope Code	Description	Site
<b>Infralittoral Rock Biotopes</b>		
IR.LIR.K.LhypLsac.Ft	Mixed Laminaria hyperborea and Laminaria saccharina forest on sheltered upper infralittoral rock	Bay north of Aldleys Point, Strangford Narrows
IR.LIR.K.Lsac.Pk	Laminaria saccharina park on very sheltered lower infralittoral rock	Neils Reef, Strangford Lough
IR.MIR	Moderate energy infralittoral rock	Ardglass Golf Course Gullies, Ardglass
IR.MIR.KR.Lhyp.Ft	Laminaria hyperborea forest and foliose red seaweeds on moderately exposed upper infralittoral rock	Zara Shoal, Strangford Lough
IR.MIR.KR.Lhyp.GzPk	Grazed Laminaria hyperborea park with coralline crusts on lower infralittoral rock	Strangford Drop Off, Ballyhenry Point, & Zara Shoal, Strangford Lough
IR.MIR.KR.Lhyp.Pk	Laminaria hyperborea park and foliose red seaweeds on moderately exposed lower infralittoral rock	Bay north of Audleys Point, Strangford Lough
IR.MIR.KR.XFoR	Dense foliose red seaweeds on silty moderately exposed infralittoral rock	Zara Shoal, Strangford Lough
IR.MIR.KT.LsacT	Laminaria saccharina with foliose	Channel between



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	red seaweeds and ascidians on sheltered tide-swept infralittoral rock	Dunnyneil and Long Rock
IR.HIR.KFaR.FoR	Foliose red seaweeds on exposed lower infralittoral rock	Skernaghan Point, nr Ballylumford, Islandmagee
IR.HIR.KFaR.LhypR.Ft	Laminaria hyperborea forest with dense foliose red seaweeds on exposed upper infralittoral rock	Gunns Island, Ardglass and Wreck of the Alba, The Maidens
IR.FIR.IFou	Infralittoral fouling seaweed communities	Inner Lees wreck, Strangford Lough
IR.FIR.SG	Infralittoral surge gullies and caves	Gunns Island, Ardglass
IR.FIR.SG.CrSpAsAn	Anemones, including Corynactis viridis, crustose sponges and colonial ascidians on very exposed or wave surged vertical infralittoral rock	Gunns Island, Ardglass
IR.FIR.SG.CrSpAsDenB	Crustose sponges and colonial ascidians with Dendrodoa grossularia or barnacles on wave-surfed infralittoral rock	Ardglass Golf Course Gullies, Ardglass
<b>Circalittoral Rock Biotopes</b>		
CR.LCR.BrAs.AmenCio.Ant	Solitary ascidians, including Ascidia mentula and Ciona intestinalis, with Antedon spp. on wave-sheltered circalittoral rock	Site of Alastor wreck, Ringhaddy, Strangford Lough
CR.MCR.CFaVS.CuSpH	Cushion sponges and hydroids on turbid tide-swept sheltered circalittoral rock	Ballyhenry Dropoff, Strangford Lough
CR.MCR.CFaVS.CuSpH.As	Cushion sponges, hydroids and ascidians on turbid tide-swept sheltered circalittoral rock	Holm Bay, Marfield Bay and Bay North of Audleys Point, Strangford Lough
CR.MCR.EcCr	Echinoderms and crustose communities	Bay north of Audleys Point, Strangford Lough
CR.MCR.EcCr.AdigVt	Alcyonium digitatum and faunal crust communities on vertical circalittoral bedrock	Strangford Drop Off, Ballyhenry Point, Strangford Narrows
CR.MCR.EcCr.FaAlCr.Pom	Faunal and algal crusts with Pomatoceros triqueter and sparse Alcyonium digitatum on exposed to moderately wave-exposed circalittoral rock	Zara Shoal, Strangford Lough
CR.HCR.XFa	Mixed faunal turf communities	Gunns Island, Ardglass and Skernaghan Point, nr Ballylumford, Islandmagee
CR.FCR.FouFa	Circalittoral fouling faunal communities	Ringhaddy, Strangford Lough
CR.FCR.FouFa.Aasp	Ascidiella aspersa on circalittoral artificial substrata	Wreck of the Alastor, Ringhaddy Sound, and Inner Lees wreck,

		Strangford Lough
CR.FCR.FouFa.AdigMsen	Alcyonium digitatum and Metridium senile on moderately wave-exposed circalittoral steel wrecks	Wreck of the Alastor, Ringhaddy Sound, Strangford Lough and Wreck of The Rose, Belfast Lough
<b>Sublittoral Sediment Biotopes</b>		
SS.SCS	Sublittoral coarse sediment (unstable cobbles and pebbles, gravels and coarse sands)	Rainey Sound, Skettrick Island, Strangford Lough
SS.SCS.CCS	Circalittoral coarse sediment	Holm Bay, and Ringhaddy, Strangford Lough
SS.SCS.ICS	Infralittoral coarse sediment	Rainey Sound, Bay North of Audleys Point and Zara Shoal, Strangford Lough
SS.SMp.KSwSS.LsacCho	Laminaria saccharina and Chorda filum on sheltered upper infralittoral muddy sediment	Inner Lees wreck, Ballyhenry Point, and Skettrick Channel, Strangford Lough
SS.SMp.Mrl	Maerl beds	Rainey Sound, Skettrick Island, Strangford Lough
SS.SMp.SSgr.Zmar	Zostera marina/angustifolia beds on lower shore or infralittoral clean or muddy sand	Castleward Bay, Strangford Lough
SS.SMu.CFiMu	Circalittoral fine mud	Wreck of the Alastor, Ringhaddy Sound, Strangford Lough
SS.SMu.CFiMu.SpnMeg	Seapens and burrowing megafauna in circalittoral fine mud	Holm Bay, west side Strangford Lough
SS.SMu.IFiMu	Infralittoral fine mud	Skate Rock, Strangford Lough
SS.SMx.CMx	Circalittoral mixed sediment	Wreck of the Alastor, Ringhaddy Sound, and Marfield Bay, Strangford Lough
SS.SMx.CMx.ClloMx	Cerianthus lloydii and other burrowing anemones in circalittoral muddy mixed sediment	Holm Bay and Skate Rock, Strangford Lough
SS.SMx.CMx.ClloMx.Nem	Cerianthus lloydii with Nemertesia spp. and other hydroids in circalittoral muddy mixed sediment	Inner Lees wreck, Strangford Lough
SS.SSa	Sublittoral sands and muddy sands	Skernaghan Point, nr Ballylumford, Islandmagee
SS.SSa.CMuSa	Circalittoral muddy sand	Marfield Bay, Strangford Lough
SS.SSa.IMuSa	Infralittoral muddy sand	Castleward Bay, Strangford Lough

<b>Seasearch Seabed Cover Types</b>		
ABM	Animal bed: mussels	Orlock, near Copeland Islands, Donaghadee
ABS	Animal bed: scallops	Neils Reef, Strangford Lough
EPA	Encrusting pink algae	Strangford Drop Off, Ballyhenry Point, The Pins, Ballyhenry Bay, Rainey Sound, Zara Shoal and Holm Bay, Strangford Lough
KF	Kelp forest	Glenarm Bay, Gunns Island , Carrick-a-Rede, North Wall and Pinnacle, Rathlin Island, Port Muck, Islandmagee and Neils Reef, Strangford Lough
KP	Kelp park	Gunns Island Ardglass, Vidal Rock Carlingford Lough, Strangford Pier, The Pins Ballyhenry Bay, Rainey Sound and Channel between Dunnyneil and Long Rock, Strangford Lough
MS	Mixed seaweeds	Rathlin Island – North Wall, Black Rocks and wreck of Lochgarry, Carrick-a-Rede, Ballintoy, Skernaghan Point nr Ballylumford, Port Muck, Islandmagee , Gunns Island, Ardglass , Vidal Rock Carlingford Lough Strangford Lough - Strangford Pier, The Pins Ballyhenry Bay, Wreck of the Alastor, Ringhaddy Sound, Channel between Dunnyneil and Long Rock, Castleward Bay, Inner Lees wreck, Ballyhenry Point, Skettrick Channel
SAT	Short animal turf on rocks	Rathlin Island - North Wall, Black Rocks and wreck of Lochgarry, Carrick-a-Rede, Ballintoy, State of Louisiana wreck, Skernaghan Point Ballylumford, Proposed Brine discharge point Islandmagee, Muck Island - south tip, Port Muck Wreck of The Rose, Belfast Lough, Strangford Lough - Strangford Pier, Inner Lees wreck, Strangford Drop Off, The Pins, Wreck of Alastor Ringhaddy Sound, Channel between Dunnyneil and Long Rock, Skettrick Channel, Holm Bay, Marfield Bay, Gunns Island, Ardglass, Vidal Rock, Killowen, Carlingford Lough
TAT	Tall animal turf on rocks	Rathlin Island - North Wall, Black Rocks and wreck of Lochgarry, Carrick-a-Rede, Ballintoy, State of Louisiana wreck and Skernaghan Point Ballylumford and Proposed Brine discharge point, Islandmagee, Wreck of The Rose, Belfast Lough Strangford Lough - Strangford Pier, Inner Lees wreck, Strangford Drop Off, Wreck of Alastor Ringhaddy Sound, Holm Bay, Marfield Bay, Gunns Island, Ardglass, Vidal Rock, Killowen, Carlingford Lough
SLA	Sediment with life apparent	Glenarm Bay, Co Antrim, Proposed Brine discharge point, and Muck Island, South Tip Islandmagee, Orlock, near Copeland Islands, Donaghadee Strangford Lough - Ringhaddy, Castleward Bay, Neils Reef, Marfield Bay, Skate Rock, Bay north of Audleys Point, Inner Lees wreck, Skettrick Channel

## 5. Seasearch Northern Ireland Programme for 2014

Continued funding by Department of the Environment Northern Ireland (Marine Division) is secured until spring 2015 which will enable the survey programme to continue during 2014. Potential search areas for Marine Conservation Zones will be a priority. There will also be a programme of Observer and ID training. Seasearch Northern Ireland will celebrate its 10<sup>th</sup> year of foundation in 2014.

## 6. Acknowledgments

Thanks to all volunteers and the dive community who have contributed to the Seasearch scheme for Northern Ireland in 2013. Thanks to Claire Goodwin who marshaled dives and provided taxonomic expertise to support the programme. Additional thanks to Charmaine Beer for providing her knowledge, teaching the Observer course and her support throughout the year. Friends Meeting House in Lisburn kindly provided their centre for a Seasearch Observer course in May 2013. Dolphin Sub Aqua Club, DV Diving and North Irish Divers have supplied boat charter and local knowledge which assisted us in surveying new dive sites. We thank the Ulster Wildlife for financial support towards boat costs for the Maidens and Muck survey 2013. Many thanks to Jade Berman who also marshaled dives and provided taxonomic expertise to support the programme and the volunteers. Many thanks to Ronnie Snijder for marshaling the Copelands dives. We thank all those who took part in the Marine BioBlitz in Strangford Lough in August and look forward to seeing them again soon. A special thanks to all the people from the Ulster Museum for their hard work and dedication.

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*dive into conservation*

