

Annual Report 2015



This report summarises Seasearch activities throughout Britain and Ireland in 2015. It includes a summary of the main surveys undertaken (pages 1-4), reports produced and a summary of the data collected. This includes records of Priority habitats and species, locally important features and nationally scarce and rare species (pages 4-6) and habitats (pages 7-8). It also includes a summary of the training courses run for volunteer divers (page 9) and information on how Seasearch is organised and the data is managed and made available (page 10).

All of the reports referred to may be downloaded from the Seasearch website and the species data may be accessed through the National Biodiversity Network website. More detailed datasets are available on request.

Seasearch Targets Marine Protected Areas

Seasearch continues to target much of its survey activity in existing and proposed marine protected areas.

In England 23 new Marine Conservation Zones (MCZs) were designated in January 2016. Eleven of these were sites which Seasearch had surveyed in recent years, including 2015. They were Coquet to St Marys (Northumberland), Runswick Bay/Boulby (Yorkshire), Cromer Shoal Chalk Beds (Norfolk), Dover to Deal and Dover to Folkestone (Kent), Utopia (Sussex/Hants), The Needles (Isle of Wight), Lands End (Cornwall), Newquay and The Gannel (Cornwall), Hartland Point to Tintagel (Cornwall/Devon) and Bideford to Foreland Point (Devon).

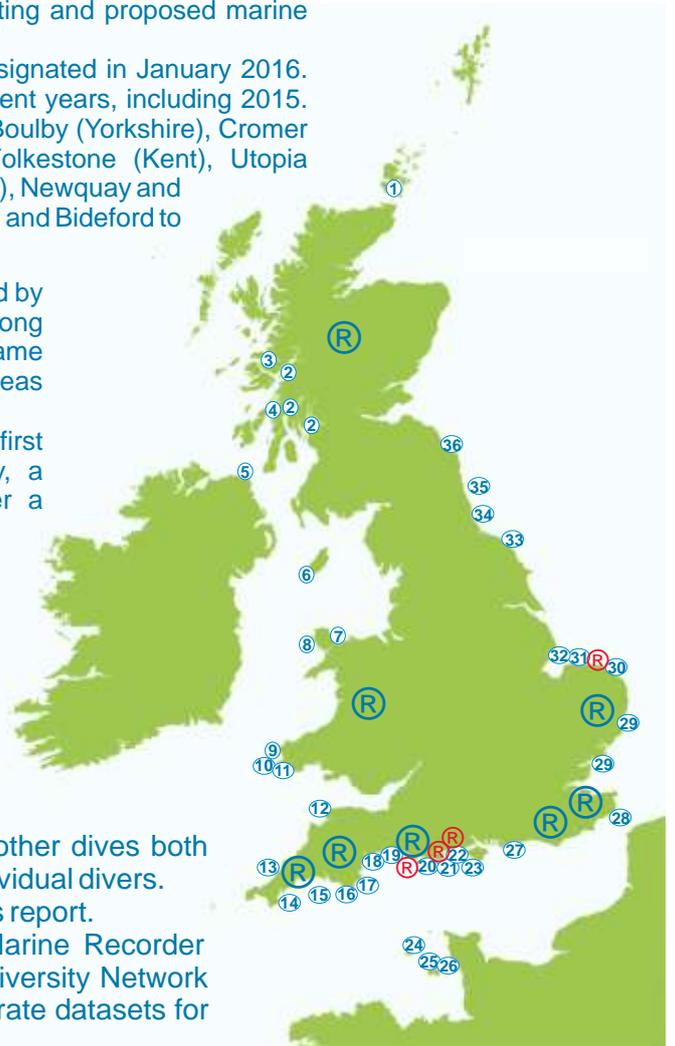
In Scotland, 30 MPAs designated in 2014 included four put forward by MCS; Loch Fyne, Loch Sween, Loch Sunart and Lochs Duich, Long and Alsh, the latter containing what may be the world's biggest flame shell bed. In 2015 the focus was on effective protection for these areas but Seasearch continued to gather new data from them.

In Northern Ireland consultation took place in early 2016 on a first tranche of 4 potential MCZs. These included Waterfoot Bay, a seagrass bed proposed by Seasearch following surveys over a number of years.

Seasearch Surveys 2015

The following pages summarise the main surveys undertaken in 2015. They were arranged by Seasearch Coordinators and other volunteers and in some cases Summary Reports ® can be downloaded from the Seasearch website. We would like to thank all of the organisations who supported survey activity at a local level.

In addition to the surveys outlined here there were many other dives both organised by Seasearch coordinators and undertaken by individual divers. The map shows the location of the surveys summarised in this report. Data from all of the surveys has been entered into the Marine Recorder database and can be freely accessed on the National Biodiversity Network website www.nbn.org.uk. In addition to this, there are separate datasets for crawfish and pink sea fan survey forms.



Seasearch is co-ordinated by the Marine Conservation Society on behalf of the Seasearch Supporters which comprise the Marine Conservation Society, Wildlife Trusts, Joint Nature Conservation Committee, Natural England, Natural Resources Wales, Scottish Natural Heritage, Department of the Environment Northern Ireland, Environment Agency, Marine Biological Association, Nautical Archaeological Society, British Sub Aqua Club, Sub Aqua Association, Professional Association of Diving Instructors, Scottish Sub Aqua Club and Irish Underwater Council.

Financial support in 2015 at a national level was given by the partners on the right.



Seasearch is coordinated and delivered locally in England by Wildlife Trust and MCS local coordinators, in Scotland, Wales, Northern Ireland and the Isle of Man by MCS Coordinators and in the Republic of Ireland by the Irish Underwater Council.

Scotland ®

1 Orkney: a liveboard survey was organised with a focus on priority marine habitats including flame shell, *Limaria hians*, beds and Maerl. We added records of species in these habitats and the knowledge of their extent through repeat dives on sites at the Hurdles (maerl) and at Lyness (*Limaria*). The trip was joined by seaslug expert Jim Anderson with 42 species recorded for Scapa Flow during the week, some of which were new records for the area (*Lomanotus*).



2 Horse Mussels in Argyll: Twelve sites where horse mussels, *Modiolus modiolus*, had been recorded in the past were re-visited with mussels relocated in eight sites but none found in the other four. Large healthy beds of mussels were found in Loch Goil, Loch Creran and off Greenock. At Greenock they were particularly abundant. A surprising finding was scattered mussels and native oysters in shallow water in Tarbert Harbour Loch Fyne.

3 Priority species in Loch Sunart: A weekend survey in Loch Sunart produced records of a number of priority species including organ pipe worm, *Serpula vermicularis*, northern sea fan, *Swiftia pallida*, fireworks anemone, *Pachycerianthus multiplicatus*, tall sea pen, *Funiculina quadrangularis*, northern featherstar, *Leptometra celtica*, flame shell, *Limaria hians*, horse mussel, *Modiolus modiolus*, and ocean quahog, *Arctia islandica*.

4 New anemone records in the Sound of Jura :

Following a sighting of the rare anemone *Arachnanthus sarsi* at the mouth of Loch Crinan by an independent Seasearcher, we organised a survey in August to see if there were more of this or other interesting anemones in the same area. Four sites were dived at Ardnoc Point and on the eastern side of the Sound of Jura. Priority species northern sea fan, *Swiftia pallida*, was recorded at all four sites. At Ardnoc Point both slender sea pens, *Virgularia mirabilis* and white cluster anemones, *Parazoanthus anguicomus* were recorded. *Arachnanthus sarsi* was not seen but we found a single fireworks anemone, *Pachycerianthus multiplicatus*.

This priority species is much more common in the inner sea lochs and this was the first Seasearch record from the Sound of Jura. The nationally scarce nudibranch, *Okenia elegans*, was also seen.



Northern Ireland

5 Rathlin: Three groups of divers surveyed 8 different sites around Rathlin - two visiting from England and the third a mixed Northern and Republic of Ireland group. Sites visited included dramatic drops off on the North Wall, HMS Drake and an 'anomaly' picked up from bathymetric surveys which did not turn out to be more than cobbly sediment.

Isle of Man

6 Porcupine MNHS surveys: A group of divers from the Porcupine Marine Natural History Society carried out Seasearch surveys in the southern part of the island and amassed a considerable body of data.



Wales ®

7 South East Anglesey: Three sites were surveyed to fill gaps in knowledge of sites in south east Anglesey. Habitats included boulders and muddy sediment.

8 West Anglesey: Sites surveyed on one day of organised Seasearch diving were scenic gullies south of Holy Island and the wreck of the Missouri in an unsuccessful search for live maerl following reports of its presence.

9 New sites in St Brides Bay: Availability of a local boat at Solva in the north of the bay enabled us to survey two sites for the first time. Pen Pleidau is a rocky site with kelp and algal turf on upward facing surfaces and a faunal turf of sponges, sea squirts and cup corals on vertical ones. Triceratops Rock was similar but the main feature here was a shoal of six grey triggerfish (below).



10 Skokholm: surveys were carried out at 4 sites on the eastern side of the island. Species highlights included two nationally scarce nudibranchs, *Doris sticta* and *Thecacera pennigera*, a single pink sea fan and a juvenile crawfish.

11 Entrances to Milford Haven: 6 sites were surveyed in this busy commercial and recreational area. *Thecacera pennigera* and crawfish were also recorded here, as was the scarce mashed potato sponge, *Thymosia guernei*.

England

12 Bideford to Foreland Point MCZ: two sites in this now designated MCZ were surveyed with the support of North Devon BSAC. Conditions for recording were challenging with poor visibility and strong tides and it was not surprising to find pinnacles dominated by oaten pipe hydroids with amphipods and barnacles .

13 Snorkel Surveys in Cornwall: snorkel surveys were held at Fistral Beach, Newquay, Talland Bay near Looe and at Dean Quarry. At Talland Bay snorkellers recorded large numbers of stalked jellyfish, a good diversity of seaweeds and bryozoans. They were also privileged to watch the fascinating behaviour of a nest building corkwing wrasse displaying vivid colouration.

14 Dean Quarry and the Manacles: A proposal for a large breakwater and jetty in a new MCZ led to a summer-long survey of the area supported by Porthkerris Divers and seeing Seasearch working with the University of Exeter. Priority species and habitats were recorded close to the proposed works and a report containing all of the Seasearch data for the Manacles is in preparation. Pink sea fans (below) and their associated anemones, nudibranch and false cowries are a feature of the area. ®



15 The Eddystone: we continued to survey sites around the Eddystone reef complex and other sites in this offshore SAC. The dramatic walls usually reach 25-30m below CD and are typically dominated by jewel anemones, *Corynactis viridis*, and elegant anemones, *Sagartia elegans*, with dead men's fingers and sponges, notably purple volcano sponge *Haliclona viscosa*.

16 Skerries Bank and Surrounds MCZ: this MCZ includes the rocky coastline from Start Point to Prawle Point which is a fascinating, current swept transition from the more sedimented areas to the east to clearer waters to the west. The antenna hydroid and orange sea squirt turf with large potato crisp bryozoans shown right is typical of the area.



17 Dartmouth SAC: sites surveyed included a previously un-recorded pinnacle, Nimble Rock, dominated by plumose and jewel anemones and Sharkham Pinnacle where we found native oyster, *Ostrea edulis*, a priority species.

18 Lyme Bay: Surveys took place on both the Devon and Dorset sides of Lyme Bay. It was good to find both extensive sea fan forests and juvenile sea fans and potato crisp bryozoans reflecting the continuing recovery from past scallop dredging.

19 Chesil Beach and Stennis Ledges: Surveys continued in this designated MCZ and included further exploring the clay feature originally found in 2014. We also received the first record of stalked jellyfish from Chesil Cove. ®



20 South Dorset brittlestars and nudibranchs: further surveys were carried out of the extent of brittlestar beds south of Kimmeridge (above) and in the same area we made the first Seasearch record ever of the southerly nudibranch *Trapania manicata* (photo p5).

21 Studland Bay rMCZ: remains un-designated. Seasearch in 2015 provided further evidence of the seagrass habitat and the presence of seahorses. ®

22 Poole Rocks MCZ: further surveys were carried out in this small designated MCZ. After the storms of winter 2013/4 the silting was noticeably heavier than usual, but by 2015 the reefs appeared more 'normal' as the silt continued to consolidate. ®

23 Isle of Wight; Most sites surveyed around the Isle of Wight were in the recently designated Needles MCZ or the South Wight Special Area of Conservation (SAC), Interesting sightings were of *Lucernariopsis campanulata*, a stalked jellyfish (Colwell Bay), and native oyster, *Ostrea edulis* (Totland Bay), both priority species. Surveys of the priority habitat, eelgrass continued at Totland Bay.

24 Guernsey: Local divers continued to bring back new data from the island, which has seen very little Seasearch activity in the past. In 2015 this included sightings of crawfish and an unconfirmed record of sunset corals, *Leptopsammia pruvoti*.

25 Jersey Reefs: a survey week in June visited 10 sites concentrating on new and relatively inaccessible sites.

26 Jersey Maerl; we continued to survey maerl beds in Les Echrehous obtaining more transect data from undredged areas.

27 Selsey Life Boat Station: a few 'new' species to the area were seen, a stalked jelly fish *Haliclystus auricula*, the tunicates *Distomus variolosus* and *Lissoclinum perforatum*. Another rare and unusual find was the almost complete tibia of a Pleistocene hippo (?). These records show just how significant this site is and it will be sadly missed when it is demolished.

28 Kent MCZs: Seven sites in three different MCZs were surveyed. These were a wooden wreck in the Dover to Deal rMCZ, four boulder, cobble and pebble sites in the Dover to Folkestone rMCZ and two chalk reef sites in the Folkestone Pomerania MCZ.



29 Non Natives in the East: marinas and mooring areas are often the first places to find non native species. Surveys from Kings Lynn to Essex included sightings of Wakame, *Undaria pinnatifida*, an invasive worm species, *Ficopomatus enigmaticus*, the bryozoan *Bugula neritina*, and sea squirts *Styela clava*, *Perephora japonica* and *Botrylloides violaceus* and *B diegensis*. Some are in the under pontoon image above.

30 Cromer Shoal rMCZ; following years of research, which continued in 2015, this MCZ was finally designated in January 2016.©

31 Cley; as well as the Vera wreck, Cley also has an area of compressed peat, fallen trees and glacial clay. Work continued to record more of this flooded forest.

Crawfish, *Palinurus elephas*, records 2015

Seasearch has recorded fluctuations in numbers of species over the years, for instance there was a rapid population increase of snake pipefish followed by an equally dramatic return to previous levels.

As a priority species (because of overfishing and subsequent decline) and one which is easily recognised by any diver, Seasearch has prioritised collecting records of crawfish for a number of years. In addition to normal records during other Seasearch activities we ran a historic crawfish project and a monitoring scheme in Pembrokeshire and have had a simple online recording form available since 2010.



95 Lincolnshire: with support from Eastern IFCA colonisation plates were deployed in The Wash (picture right) and a drift in very low visibility found healthy beds of both *Sabella pavonina* and *Sabellaria spinulosa*.



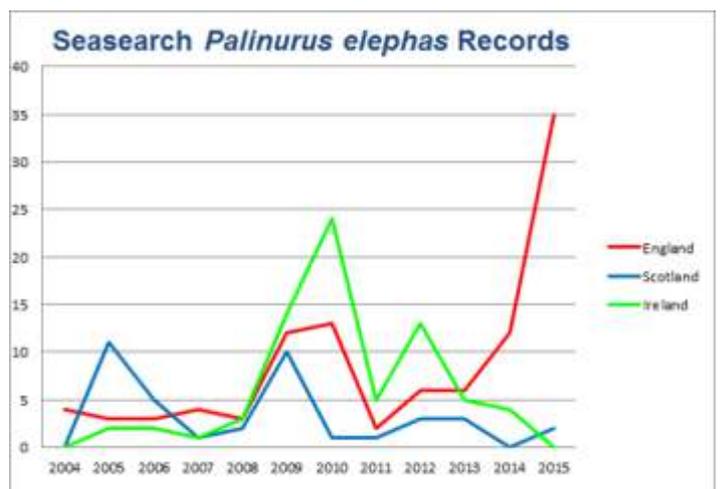
97 Durham Heritage Coast: with funding from the Durham Heritage Coast Partnership, Seasearch surveyed two more sites between Sunderland and Seaham. The dives continue to show how well the seabed and species are recovering from decades of pollution from coal mining and provide data and photos to support the Heritage Coast Partnership.

98 Bioblitzing with the National Trust: Seasearch contributed to the National Trust's coastal bioblitzes organised in celebration of the 50th anniversary of the Neptune Coastline Campaign. We carried out three dives at Low Newton in Northumberland and three at Souter and the Leas, Tyne and Wear, adding over 160 species to the bioblitz total and exploring sites that were completely new to Seasearch.

99 Coquet to St Mary's MCZ: dives were carried out at seven sites in this subsequently designated MCZ. The highlight was a series of gullies north of St Mary's Island, whose walls support a rich turf of hydroids, sponges and sea squirts.

99 Diving on the English/Scottish border

Seasearch divers visited Hilton Bay in Berwick and the wreck of the SS Shadwan which lies between Berwick and Lindisfarne, as part of an ongoing project to fill the large data gap between the Farnes and Eyemouth.



The graph shows that whilst numbers have fluctuated over the years they have been at a low level until 2015 when there was a dramatic increase in crawfish sightings in southern England. Many of these were juveniles and it remains to be seen if the increase in numbers will be sustained as they grow. The picture shows a juvenile crawfish at Hilsea Point, South Devon.

There does not seem to have been a similar increase in either Wales or Scotland

Species recorded in 2015

A total of 47,200 species records were made during 2015. The following table provides a summary of the species recorded and identifies both the most commonly recorded species and those of special interest.

Priority (formerly Biodiversity Action Plan) species and habitats continue to be a major focus for our surveys and are highlighted in the table as are occurrences of nationally **scarce and rare** species as defined by the JNCC. The JNCC list has not been revised for some years and the records also include some nationally scarce and rare fishes which are not in the JNCC list and records of other southerly species which have only been recently recorded in our area. The list also identifies **non-native species**, based on the Marine Biological Association guide.

Commonly recorded species (more than 200 records)

Priority (P), Scarce (S), rare (R) non-native (NN) species

Foraminifera, (42 records - 1 identified to species)

Porifera, Sponges (75 species)

Cliona celata, boring sponge (451)
Amphilectus fucorum, shredded carrot sponge (330)
Dysidea fragilis, goosebump sponge (300)
Scyon ciliatum (*Scypha ciliata*), purse sponge (286)
Hemimycale columella, crater sponge (256)
Pachymatisma johnstonia, elephant hide sponge (236)

Thymosia guernei, mashed potato sponge (S) 24 records from Pembrokeshire, S Cornwall & S Devon
Dysidea pallescens (R) 5 records from Norfolk
Adreus fascicularis (R) 11 records S Cornwall & Devon, Dorset, Channel Is
Suberites massa (R) 1 record from Dorset
Axinella damicornis, crumpled duster sponge (S), 54 records from W Scotland, Pembrokeshire, Isles of Scilly, S Devon & Channel Is
Tethyspira spinuosa (S) 2 records from Isle of Man and Dorset

Cnidaria, Jellyfish, hydroids, siphonophores, anemones and corals (126 species)

Jellyfish (11 species)

stalked jellyfishes (P) *Craterolophus convolvulus* - 1 record from Norfolk, *Lucernariopsis campanulata* - 6 records, W Scotland, Cornwall & Dorset
L. cruxmelitensis - 2 records from Cornwall & Dorset
Haliclystus spp. - 7 records, Pembrokeshire, Cornwall, Dorset & Sussex

Hydroids (55 species)

Nemertesia antennina, antenna hydroid (483)
Tubularia indivisa, oaten pipes hydroid (249)

Aglaophenia kirchenpaueri (S) 23 records from Pembrokeshire, Isles of Scilly, S Cornwall, S Devon & Dorset
Lytocarpia myriophyllum (S) 8 records from W Scotland & Isles of Scilly
Hartlaubella gelatinosa (S) 11 records from Norfolk & Essex

Anemones and corals (54 species)

Alcyonium digitatum, dead men's fingers (654)
Caryophyllia smithii, Devonshire cup-coral (483)
Urticina felina, dahlia anemone (437)
Sagartia elegans, elegant anemone (282)
Metridium senile, plumose anemone (277)
Corynactis viridis, jewel anemone (268)
Anemonia viridis, snakelocks anemone (225)
Eunicella verrucosa, pink sea fan (213)

Alcyonium hibernicum, pink fingers (S) 14 records from Isle of Man, Northern Ireland, S Cornwall & S Devon
Swiftia pallida, northern sea fan (P) 16 records from W Scotland
Eunicella verrucosa, pink sea fan (P) 213 records from Ireland, Pembrokeshire, N Devon & Cornwall, Isles of Scilly, S Devon & Cornwall, Dorset, Channel Islands
Funiculina quadrangularis, tall sea pen (P) 8 records from W Scotland
Pachycerianthus multiplicatus, fireworks anemone (P, S) 17 records from W Scotland and W Ireland
Pachycerianthus indet. (southerly) 6 records from Channel Islands
Parazoanthus anguicomus, white cluster anemone (S) 10 records from Orkney, W Scotland, Northern Ireland & Isles of Scilly
Parazoanthus axinellae, yellow cluster anemone (S) 39 records from Northern Ireland, N Wales, Pembrokeshire, Isles of Scilly, Cornwall, S Devon & Channel Islands
Aiptasia mutabilis, trumpet anemone (S) 28 records from S Devon, Dorset & Channel Islands
Amphianthus dohrnii, sea fan anemone (P, R) 25 records from Isles of Scilly, Cornwall & S Devon
Anemonactis mazeli (S) 1 record from Loch Duich (W Scotland) left
Mesacmaea mitchellii, policeman anemone (S) 1 record from Channel Is
Arachnanthus sarsi (P, R) 1 record from Sound of Jura (W Scotland)
Caryophyllia inornata, southern cup-coral (R) 31 records from Isles of Scilly, S Cornwall, S Devon, Dorset and Channel Islands
Hoplangia durotrix, Weymouth carpet coral (R) 4 records from S Cornwall & Channel Islands
Balanophyllia regia, scarlet and gold star coral (S) 4 records from Pembrokeshire, Isles of Scilly & N Cornwall
Leptopsammia pruvoti, sunset cup-coral (P, R) 9 records from Lundy, Isles of Scilly, and Channel Islands



Ctenophora, Comb Jellies (3 species)

Platyhelminthes, Flat worms (5 species)

Nemertea, Ribbon Worms (4 species)

Echiura, Spoon Worms (1 species)

Amalosoma eddystonense (S) 5 records from W Scotland

Annelida, Segmented worms (44 species)

Spirobranchus lamarkii/triqueter, keel worms (518)
Lanice conchilega, sand mason worm (397)
Bispira volutacornis, double spiral worm (240)

Sabellaria spinulosa, rosworm (Priority Habitat - reefs) 53 records from N Wales, Northumberland, Norfolk, Dorset & N Devon most not reefs
Sabella spallanzanii, (southerly) 2 records from Jersey
Serpula vermicularis, organ pipe worm (Priority Habitat) 30 widely distributed records, most not reef forming
Ficopomatus enigmaticus (NN) 1 record from Norfolk

Commonly recorded species (no of records in brackets)

Priority (P), Scarce (S), rare (R) non-native (NN) species

Pycnogonida, Sea spiders (1 species)

Crustacea, Barnacles, amphipods, isopods, crabs, lobsters and prawns (83 species)

Cancer pagurus, edible crab (7351)
Necora puber, velvet swimming crab (628)
Homarus gammarus, lobster (378)
Carcinus maenas, shore crab (287)
Pagurus bernhardus, common hermit crab (212)
Maja squinado/brachydactyla, spiny spider crab (210)

Periclimenes sagittifer, anemone prawn (southerly), 5 records from Dorset & Channel Islands
Palinurus elephas, crawfish (P) 23 records N Wales, Pembrokeshire, Cornwall, S Devon & Channel Islands
Dromia personata, sponge crab (S) 4 records from Jersey
Lithodites maja, stone crab (N) 1 record from Loch Fyne (W Scotland)

Mollusca, shells, sea slugs, bivalves and cephalopods (183 species)

Calliostoma zizyphinum, painted topshell (465)
Gibbula cineraria, grey topshell (243)

Haliotis tuberculata, ormer (southerly) 1 record from Jersey
Crepidula fornicata, slipper limpet (NN) 138 records Norfolk to Dorset
Tritonia nilsodhneri, sea fan sea slug (S) 16 records Dorset, S Devon & S Cornwall
Okenia elegans, (S) 12 records W Scotland, Northern Ireland, Pembrokeshire Cornwall, Devon & Dorset
Trapania maculata, (R) 1 record from Jersey
Trapania manicata (southerly) 1 record from Dorset (left)
Trapania pallida, (S) 4 records from Dorset
Thecacera pennigera, orange speckled sea slug (S) 17 records from Pembrokeshire, S Cornwall, S Devon, Dorset, Sussex & Channel Is
Doris sticta, sponge sea slug (S) 1 record from Pembrokeshire
Limaria hians, flame shell (beds - Priority habitat) 14 records W Scotland and Ireland - beds in Loch Duich and Loch Sunart
Modiolus modiolus, horse mussel (beds - Priority habitat) 50 records from Orkney, West Scotland & Northumberland
Ostrea edulis, European oyster (P) 52 records from W Scotland, W Ireland, Cornwall, Devon, Dorset, Hampshire & Channel Islands
Crassostrea gigas, Pacific oyster (NN) 7 records East Anglia, Sussex & CI
Arctica islandica, Icelandic cyprine (P) 1 record from Dorset
Atrina fragilis, fan mussel (P,R) 1 unconfirmed record from Dorset



Brachipods, lamp shells (1 species)

Bryozoa, sea mats and sea mosses (57 species)

Alcyonidium diaphanum, finger bryozoan (354)
Flustra foliacea, hornwrack (290)
Pentapora foliacea, potato crisp bryozoan (237)
Electra pilosa, kelp fur (232)
Membranipora membranacea, sea mat (206)

Bugula neritina (NN) 2 records Suffolk & Dorset

Phoronida, horseshoe worms (1 species)

Echinodermata, starfish, sea urchins and sea cucumbers (40 species)

Asterias rubens, common starfish (795)
Echinus esculentus, common sea urchin (566)
Marthasterias glacialis, spiny starfish (448)
Henricia oculata/sanguinolenta, bloody Henry (376)
Crossaster papposus, sunstar (220)

Leptometra celtica, celtic featherstar (P) 13 records from W Scotland

Tunicata, sea squirts (56 species)

Clavelina lepadiformis, light bulb sea squirt (359)
Botryllus schlosseri, star sea squirt (260)

Polysyncraton bilobatum (R) 13 records from Norfolk
Polysyncraton lacazei (R) 5 records from Channel Islands
Perophora japonica (NN) 9 records from Norfolk & Channel Islands
Corella eumyota, orange tipped sea squirt (NN) 6 records from E Scotland, Northern Ireland, Anglesey, Suffolk & Kent
Styela clava, leathery sea squirt (NN) 61 records widely distributed
Bolteniopsis prenanti (R) 1 record from Isles of Scilly

Pisces, fishes (103 species) (fish are not included in the JNCC rare and scarce species lists)

Labrus bergylta, ballan wrasse (425)
Ctenolabrus rupestris, goldsinny (340)
Pollachius pollachius, pollack (317)
Taurulus bubalis, long spined sea scorpion (212)
Trisopterus luscus, bib (208)

Torpedo mamorata/nobliana, electric ray (southerly) 1 record from Jersey
Raja undulata, undulate ray (P) 10 records from Dorset, Isle of Wight & CI
Lophius piscatorius, anglerfish/monkfish (P) 7 records from SE Ireland, Northumberland, Cornwall, Devon and Channel Islands
Gadus morhua, cod (P) 32 records mostly from Scotland & Ireland
Molva molva, ling (P) 17 records widely distributed Orkney to Channel Is
Hippocampus guttulatus, long snouted seahorse (P) 5 records from Dorset
Spondylusoma cantharus, black bream (southerly) 15 records from Dorset, Sussex & Channel Islands
Symphodus bailloni, Baillon's wrasse (southerly) 20 records from Dorset & Channel Islands
Balistes capriscus, triggerfish (southerly) 2 records from Pembrokeshire
Parablennius ruber, red blenny (southerly) 4 records IO Scilly & S Cornwall
Tripterygion delaisi, black-face blenny (southerly) 16 records from Dorset, S Devon and Cornwall & Channel Islands
Gobius couchii, Couch's goby (R) 6 records from Dorset & Cork
Pleuronectes platessa, plaice (P) (left) 66 records widely distributed
Solea solea, sole (P) 9 records N Wales, Cornwall, Devon, Dorset & CI



Aves & Mammalia, birds & mammals (4 species of birds, seals and dolphins)

Algae, seaweeds

Rhodophycota, Red seaweeds (124 species)

Delessaria sanguinea, sea beech (299)

Calliblepharis ciliata, red fringed weed (207)



Asparagopsis armata, harpoon weed (NN), 19 records Cork, Cornwall, Dorset & Channel Islands (photo left)

Dasysiphonia japonica, siphoned Japan weed (NN), 16 records from W Scotland, Pembrokeshire, Cornwall and Dorset

Maerl (Priority habitat) 51 records. most not identified to species, from Orkney to Channel Islands. high abundances (maerl beds) in Orkney, Loch Sween, Dorset and Jersey

Gracilaria bursa-pastoris, shepherd's purse wart weed (S), 3 records from Dorset & Jersey

Phaeophyceae, Brown seaweeds (42 species)

Laminaria hyperborea, cuvie or forest kelp (322)

Dictyota dichotoma, brown fan weed (282)

Zanardinia typus, pennyweed (S) 4 records from Dorset & Channel Is

Carpomitra costata, tassel weed (S) 5 records Is of Scilly, Cornwall, Devon

Undaria pinnatifida, wakame (NN) 4 records from Suffolk, Dorset & Devon

Sargassum muticum, wireweed (NN) 75 records north to Isle of Cumbrae

Chlorophycota, Green seaweeds (12 species)

Angiospermae, flowering plants (1 species)

Zostera marina, eelgrass (Priority habitat) 46 records from Orkney, W Scotland, Isle of Man, North Wales, Pembrokeshire, Cork, Cornwall, Dorset, Isle of Wight & Channel Islands

Total Species Recorded = 965

Habitats and Biotopes

Seasearch records habitats and animal and plant communities in two ways.

For the Observation Form data the recorder identifies one or more Seabed Cover Types (SCT) for the whole of their record from a list of nine options. For the Survey Forms the data is separated into a number of different Samples and each sample is given a Biotope Code using the MNCR 15.03 suite devised by the Joint Nature Conservation Committee. This is carried out by a post survey assessor rather than the recorder themselves as it requires a specialist knowledge of the biotope system. During 2015 3,361 SCTs and Biotopes were identified. 55% (1,844) were MNCR Biotopes & 45% (1,517) SCTs.

Seabed Cover Types

The 1,517 SCTs recorded were divided as follows:

Kelp forest and kelp park	270
Mixed seaweeds	327
Encrusting pink algae	47
Short animal turf on rock	418
Tall animal turf on rock	238
Animal beds (mussels, brittlestars)	19
Sediment with life apparent	175
Barren sediment	23

This data provides a broad indication of the habitats and communities present at the site. In some cases it is apparent that the level of detail on the record is sufficient to assign a MNCR Biotope to an Observation Form.

MNCR 04.05 Biotopes

The 1,844 biotopes assigned were divided by main habitat as follows:

Littoral rock	27
Infralittoral rock	552
Circalittoral rock	704
Sublittoral sediment	561

In almost all cases more detailed biotopes were assigned within these broad categories. These are based on variations in the type of physical habitat, and different communities of plants and animals.

Some habitats have been assessed as priority habitats for conservation in the UK. Whilst these are not identified in the same way in Ireland, Irish records have been included below. Priority habitat records were as follows:

Subtidal chalk

CR.MCR.Sf: Soft rock communities; 22 records from Norfolk, Kent, Sussex and Isle of Wight

CR.MCR.SfR.Pid: Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay; 28 records (not all on chalk) from Norfolk, Kent, Sussex and Isle of Wight

CR.MCR.SfR.Pol: *Polydora sp.* tubes on moderately exposed sublittoral soft rock: 18 records from Norfolk and Kent

Tide-swept channels

CR.HCR.FaT.BalTub: *Balanus crenatus* and *Tubularia indivisa* on extremely tide-swept circalittoral rock; 2 records, The Burroo (Calf of Man) and Sylvia Rock (Ramsey Sound)

CR.HCR.FaT.CTub: *Tubularia indivisa* on tide-swept circalittoral rock 4 records, Calf of Man (2 sites), Barrel Rock (Pembrokeshire), Raglans (Cornwall)

CR.HCR.FaT.CTub.Adig: *Alcyonium digitatum* with dense *Tubularia indivisa* and anemones on strongly tide-swept circalittoral rock: 5 records Waternish Point (Skye), North Cuan Sound, Burroo (Calf of Man), Prawle Point (Devon)

IR.MIR.KR.LhypT: *Laminaria hyperborea* on tide-swept, infralittoral rock: 3 records from Newquay (Cornwall) & Jersey

IR.MIR.KR.LhypT.Ft: *Laminaria hyperborea* forest, foliose red seaweeds and a diverse fauna on tide-swept upper infralittoral rock: 13 records from N Uist, Small Isles (Eigg & Muck, Sound of Mull, Kenmare River (Ireland), Rhoscolyn Head (Anglesey), Farne Islands, Lizard (Cornwall) and Jersey

Tide-swept channels (continued)

- IR.MIR.KR.LhypT.Pk: *Laminaria hyperborea* park with hydroids, bryozoans and sponges on tide-swept lower infralittoral rock; 14 records from Loch Hourn, Barra, Rathlin and Isle of Muck (Northern Ireland), Calf of Man, St Brides Bay, Milford Haven and Crow Sound (Pembrokeshire), Farne Islands, Nare Head and the Lizard (Cornwall) and Jersey
- IR.MIR.KT.FilRVS: Filamentous red seaweeds, sponges and *Balanus crenatus* on tide-swept variable-salinity infralittoral rock: 1 record Milford Haven (Pembrokeshire)
- IR.MIR.KT.XKT: Mixed kelp with foliose red seaweeds, sponges and ascidians on sheltered tide-swept infralittoral rock: 1 record from Eigg (Small Isles)
- IR.MIR.KT.XKTX: Mixed kelp and red seaweeds on infralittoral boulders, cobbles and gravel in tidal rapids: 1 record from Fleet Narrows (Dorset)

Fragile Sponge and Anthozoan communities

- CR.HCR.XFa.ByErSp.Eun: *Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock; 24 records from Newquay (Cornwall), Isles of Scilly, Lizard, Plymouth, Bigbury Bay (Devon), Lyme Bay (Devon & Dorset)
- CR.HCR.XFa.ByErSp.Sag: Mixed turf of bryozoans and erect sponges with *Sagartia elegans* on tide-swept circalittoral rock: 2 records from Maxwell Bank (Eigg) and St Agnes (Cornwall)
- CR.HCR.XFa.SwiLgAs: Mixed turf of hydroids and large ascidians with *Swiftia pallida* and *Caryophyllia smithii* on weakly tide-swept circalittoral rock: 8 records from Uist and Small Isles
- CR.MCR.EcCr.CarSwi: *Caryophyllia smithii* and *Swiftia pallida* on circalittoral rock; 1 record from N Uist
- CR.MCR.EcCr.CarSwi.Aglo: *Caryophyllia smithii*, *Swiftia pallida* and *Alcyonium glomeratum* on wave-sheltered circalittoral rock: 1 record from Kenmare River (Ireland)

Sabellaria spinulosa reefs

- CR.MCR.CSab: Circalittoral *Sabellaria* reefs (on rock): 1 record from Lyme Bay (Dorset)
- CR.MCR.CSab.Sspi: *Sabellaria spinulosa* encrusted circalittoral rock: 1 record from Lyme Bay (Dorset)
- CR.MCR.CSab.Sspi.ByB: *Sabellaria spinulosa* with a bryozoan turf and barnacles on silty turbid circalittoral rock; 1 record from Lyme Bay (Dorset)
- SS.SBR.PoR.SspiMx: *Sabellaria spinulosa* on stable circalittoral mixed sediment: 1 record from Norfolk

Subtidal sands and gravels This habitat has a broad definition and many biotopes are included. The following are all broad scale habitats and in many cases there are more detailed biotopes in our records.

- SS.SCS.CCS: Circalittoral coarse sediment: 110 records
- SS.SCS.ICS: Infralittoral coarse sediment 78 records
- SS.SSa: Sublittoral sands and muddy sands: 8 records
- SS.SSa.CFiSa: Circalittoral fine sand: 21 records
- SS.SSa.CMuSa: Circalittoral muddy sand: 1 record
- SS.SSa.IFiSa: Infralittoral fine sand: 40 records
- SS.SSa.IMuSa: Infralittoral muddy sand: 49 records

Horse mussel beds

- SS.SBR.SMus.ModCvar: *Modiolus modiolus* beds with *Chlamys varia*, sponges, hydroids and bryozoans on slightly tide-swept very sheltered circalittoral mixed substrata: 2 records from Loch Creran
- SS.SBR.SMus.ModHAs: *Modiolus modiolus* beds with fine hydroids and large solitary ascidians on very sheltered circalittoral mixed substrata: 4 records from Scapa Flow and Loch Creran

Mud Habitats in deep water

- SS.SMu.CFiMu: Circalittoral fine mud: 8 records from Sound of Mull, Tremadog Bay (N Wales), Kenmare River (Ireland), Plymouth Sound, Lyme Bay (Devon)
- SS.SMu.CFiMu.SpnMeg: Seapens and burrowing megafauna in circalittoral fine mud: 2 records from Scapa Flow and Loch Fyne
- SS.SMu.CFiMu.SpnMeg.Fun: Seapens, including *Funiculina quadrangularis*, and burrowing megafauna in undisturbed circalittoral fine mud: 2 records from North Uist and Loch Sunart (Argyll)

Maerl beds

- SS.SMp.Mrl: Maerl beds: 22 records from Scapa Flow, Kenmare River (Cork), Falmouth (right) and Jersey
- SS.SMp.Mrl.Lgla: *Lithothamnion glaciale* maerl beds in tide-swept variable salinity infralittoral gravel: 1 record from Loch Sween (Argyll)
- SS.SMp.Mrl.Pca:; *Phymatolithon calcareum* maerl beds in infralittoral clean gravel or coarse sand: 1 record from Sound of Harris

Serpulid reefs

- SS.SBR.PoR.Ser: *Serpula vermicularis* reefs on very sheltered circalittoral muddy sand: 3 records from Loch Ailort and Loch Creran

Blue mussel beds on sediment

- SS.SBR.SMus.MytSS: *Mytilus edulis* beds on sublittoral sediment: 1 record from Nab Head (Pembrokeshire)

Seagrass beds

- SS.SMp.SSgr: Sublittoral seagrass beds: 1 record, Swanage (Dorset)
- SS.SMp.SSgr.Rup: *Ruppia maritima* in reduced salinity infralittoral muddy sand: 2 records, Orfordness, Suffolk
- SS.SMp.SSgr.Zmar: *Zostera marina/angustifolia* beds on lower shore or infralittoral clean or muddy sand: 27 records from Isle of Man, Rhoscolyn (Anglesey), Criccieth (Gwynedd), Skomer (Pembrokeshire), Helford River (Cornwall), Torbay (Devon), Studland Bay (Dorset) and Totland (Isle of Wight).



Seasearch Training in 2015

The Seasearch training programme provides courses and survey skills at three levels, Observer, Surveyor and Specialist.

The **Observer** level training consists of a one-day course for divers without previous survey experience. This covers an introduction to Seasearch, identifying marine habitats and species, and a series of practical skills from position fixing to recording from filmed surveys. The aim is to equip participants to complete the Seasearch Observation Form. Dives are arranged where participants can undertake surveys with a tutor present to help with form completion and identifications. The Observer qualification involves participation in the course and completion of 5 Observation Forms.

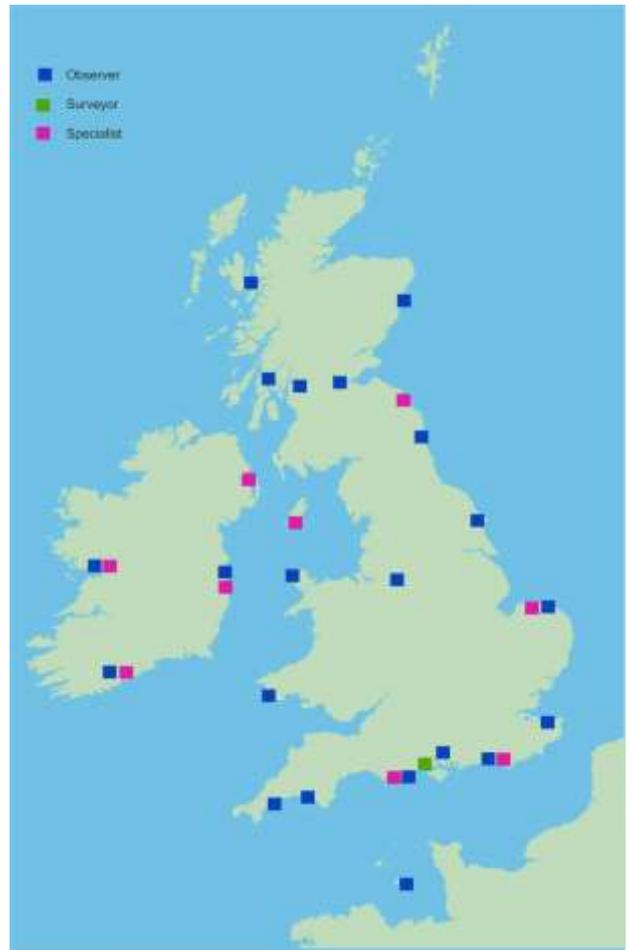
There were 24 Observer courses held in 2015 in England (12), Scotland (6), Ireland (3), Wales (2) and the Channel Islands (1). Over 200 divers took part in the Observer courses, the great majority of whom were new to Seasearch.

The **Surveyor** level training is aimed at volunteers with some existing experience of marine recording, whether as a Seasearch Observer or elsewhere, and aims to equip them to successfully complete the Seasearch Survey Form. It involves a weekend course, completion of 6 survey dives and an ID test.

One Surveyor Course was held in 2015, taking place in Hampshire with diving in Dorset. There were 8 participants.

Seasearch **Specialist** courses are aimed at either teaching new survey skills or improving knowledge and identification of marine life. Eight courses were held in 2015. Subjects covered fish ID (Sussex), Sponges and ascidians (Norfolk & Ireland), nudibranchs (Isle of Man & Ireland) and general marine life ID (Ireland & Dorset)

Seasearch Observer and Surveyor training courses are delivered by our team of **tutors**, all of whom are experienced Seasearch recorders and active divers. We had 5 new Observer Tutors in 2015, Tm Butter (Ireland), Chris Webb (Devon), Trudy Russell (Cornwall), Wendy Northway (Cheshire) and Nick Owen (Dorset). Charlotte Bolton became a Surveyor Tutor. The Specialist courses are given by Seasearch tutors and visiting experts who in 2015 included Frances Dipper (fish), David Kipling (ascidians), Jen Jones (sponges), Bernard Picton (nudibranchs) and Paul Biggin and Tony O'Callaghan (general marine life ID).



Seasearch Identification Guides and survey materials

As a part of our aim to improve the identification skills of volunteer divers we produce a range of illustrated identification guides. We currently have four titles in the series. The general Marine Life Guide is popular as an introductory guide and sells primarily on Observer Courses. We have three more specialised Guides covering Seaweeds, Bryozoans and Hydroids and Sea Anemones and Corals. A fifth guide, covering Sponges and Ascidians, is in preparation.

In addition to the guides, Seasearch also produces writing slates in two sizes and recycled plastic pencils to aid the recording of information underwater.

Guides and recording materials are available at Seasearch courses and events and can also be purchased online via the MCS shop.

Seasearch qualifications are awarded to those completing the Seasearch Observer (course and 5 acceptable observation forms), or Surveyor (course, 6 acceptable survey forms & an ID test) programmes. In 2015 37 volunteers achieved the Observer qualification and 14 volunteers the Surveyor qualification.

The qualification process not only acts as a reward to participants but is also a recognition of the skills available within the Seasearch community of volunteer divers and thus the validity of their observations.

Seasearch Data

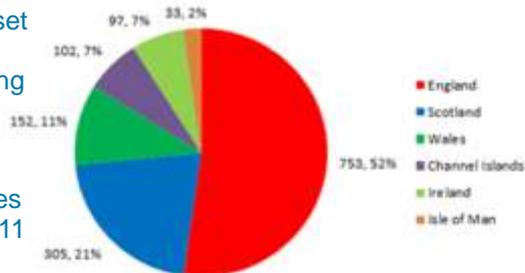
Data Received in 2015

A total of 1,442 forms was received from dives in 2015, which was less than in recent years. This may be a result of falling numbers of divers in British and Irish waters.

The pie chart shows the origin of each form. The percentage from England and Wales were less than in recent years but there was a higher percentage in both Scotland and the Channel Islands.

The data is entered into the Marine Recorder database and is made available to all Seasearch partners in Marine Recorder format. The dataset is also passed to the National Biodiversity Network and is made available on the NBN Gateway website for all to use.

The 2015 dataset comprises 83 surveys, including 1,047 survey events and contains 48,221 individual species records and 2,811 biotopes.



Data validation and management

On receipt of a Seasearch form, summary information is recorded in a database and the position mapped in Google Earth. This data is available to download from the Seasearch website. Clicking a record displays the date, type, recorder and any significant findings. This also acts as the first stage in the validation process for the data which is carried out by the local coordinator, national coordinator or a Seasearch tutor.

All Observation and Survey Form data is entered into the Marine Recorder database by a variety of experienced individuals and organisations. They are responsible for the second stage of verification of the data and for the assignment of MNCR biotopes. The data is retained locally and also passed on and merged with all the other data to produce a single Seasearch dataset for the year. At this stage the third validation check is carried out by the National Seasearch Coordinator.

Additional data on pink sea fans and crawfish is entered into separate databases.

In addition to the annual update the data is managed on an ongoing basis and amendments, updates and corrections are made to earlier data as required.

All of the data is made available on the National Biodiversity Network Gateway.

Seasearch Coordination and Promotion

Seasearch is organised on behalf of the Seasearch supporters and supported by a Technical Steering Group, and the Tutors/Coordinators each of which meet on an, at least, annual basis.

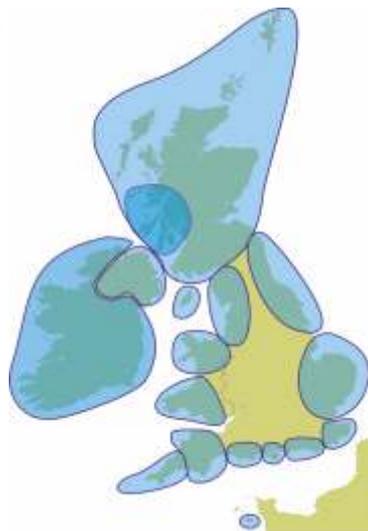
The day to day activities are organised by the National Coordinator and a team of Local Coordinators throughout Britain & Ireland. At the end of 2015 the team was as follows:

National Coordinator	Chris Wood	MCS
Scotland	Georgia Conolly	MCS
West Scotland	Owen Paisley	MCS
Northern Ireland	Claire Goodwin	MCS
Republic of Ireland	Tony O' Callaghan	CFT
Isle of Man	Tony Glen	MCS
North Wales	Liz Morris-Webb	MCS
South & West Wales	Kate Lock	MCS
North East England	Paula Lightfoot	MCS
North West England	Wendy Northway	MCS
East Anglia	Dawn Watson	MCS
Kent	Fiona White	Kent WT
Sussex	Olle Akesson	Sussex WT
Hants/Isle of Wight	Amy Marsden	Hants WT
Dorset	Charlotte Bolton	Dorset WT
Devon	Chris Webb	MCS
Cornwall	Matt Slater	Cornwall WT
Jersey	Kevin McIlwee	Jersey Seasearch

The picture to the right shows coordinators, tutors and Seasearchers at the annual Seasearch Workshop, this year held at the Natural History Museum in London.

The National Coordinator is responsible for publicity and promotion at a national level, managing the training programme, budgetary control and development of Seasearch activities in new locations.

Local Coordinators are responsible for Seasearch activities within their own areas (see map). This includes promotion to local dive clubs and other groups, communication with local volunteers and arranging training courses and surveys.



RS

Thanks to all the Seasearch Tutors and coordinators for their enthusiasm, organising and teaching skills during 2015 and to all of the volunteer divers who have participated in Seasearch training, recording and promotion.

This report has been produced on behalf of Seasearch by the Marine Conservation Society, Over Ross House, Ross Park, Ross-on-Wye, Herefordshire, HR9 7US.

Text by Chris Wood with contributions from coordinators. Images by Blaise Bullimore, Chris Webb, Chris Wood, Dawn Watson, Fiona Crouch, Matt Doggett, Peter Bardsley and Rob Spray. Maps and design by Chris Wood.



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