

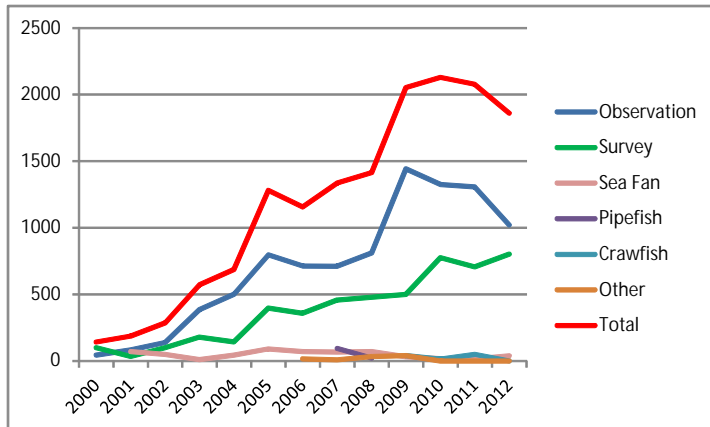
Annual Report 2012

This report summarises Seasearch activities throughout Britain and Ireland in 2012. It includes a summary of the main surveys undertaken (pages 2-5) and reports produced and a summary of the data collected. This includes records of Biodiversity Action Plan habitats and species records, locally important features and nationally scarce and rare species (pages 5-7). It also includes a summary of the training courses run for volunteer divers (page 8) and information on how Seasearch is organised and the data is managed and made available (page 9).

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.

Seasearch keeps up high levels of activity in 2012

Despite the poor weather conditions throughout the summer the amount of data collected by Seasearch volunteers in 2012 was similar to that in 2010 and 2011. The number of forms overall was down but the number of Survey Forms, which provide the most information, was the highest ever. The chart below shows the increases that have been made since the project was re-launched in 2003.



New species records made in 2012

Seasearch continues to focus on rare and unusual species in British and Irish waters and these records are summarized on pages 5 - 7. Divers into macro photography are good at spotting small species such as nudibranchs. This picture of *Cadlina pellucida* is thought to be the first sighting of this distinctive species with dark gills & rhinophores on the north side of the English Channel. It was previously known from Portugal and north-west Spain.



Focus on Marine Conservation Zones in England

Following from the stakeholder driven process, proposals were made in 2011 for 127 sites to become MCZs or Reference Areas (no take zones).

It was clear in early 2012 that lack of data was likely to be used as a reason for not designating sites and, with the support of the Marine Protected Areas Fighting Fund, a programme of dives was put together to gather more data in those areas which were within diving range.

Whilst poor weather limited the range of the surveys we did produce Reports of surveys in 13 of the rMCZs and these are referred to on pages 2-4 and can be downloaded from the Seasearch website. Data from these surveys and those carried out in other rMCZs was submitted to Defra as a part of the consultation process initiated late in 2012 on only 31 of the 127 sites. It was also used by the



Marine Conservation Society and the Wildlife Trusts to support their responses to the consultation.

In **Scotland** Seasearch data has helped to identify search areas and it has also been used by organisations, including MCS, to put forward third party MPA proposals.

In **Wales** Seasearch data been used by CCW in formulating its science-led proposals to the Welsh Assembly. Consultation took place on 10 Highly Protected Marine Reserves in 2012, but the process is currently under review.

In **Northern Ireland** legislation which will provide for the establishment of MCZs was going through the Assembly in 2012 and expected to be enacted in 2013. Seasearch data is available to help identify potential MCZs.

Seasearch is co-ordinated by the Marine Conservation Society on behalf of the Seasearch Steering Group which comprises the Marine Conservation Society, Wildlife Trusts, Joint Nature Conservation Committee, Natural England, Countryside Council for Wales, Scottish Natural Heritage, Northern Ireland Environment Agency, 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.

These pages summarise the main surveys undertaken in 2012. They were arranged by Seasearch Coordinators and other volunteers and in many cases Summary Reports ® can be downloaded from the Seasearch website.

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. An interactive map of all the 2012 records can be downloaded from the Seasearch website and opened using Google Earth. This shows the data and recorder for each record and a short summary of the contents.

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.



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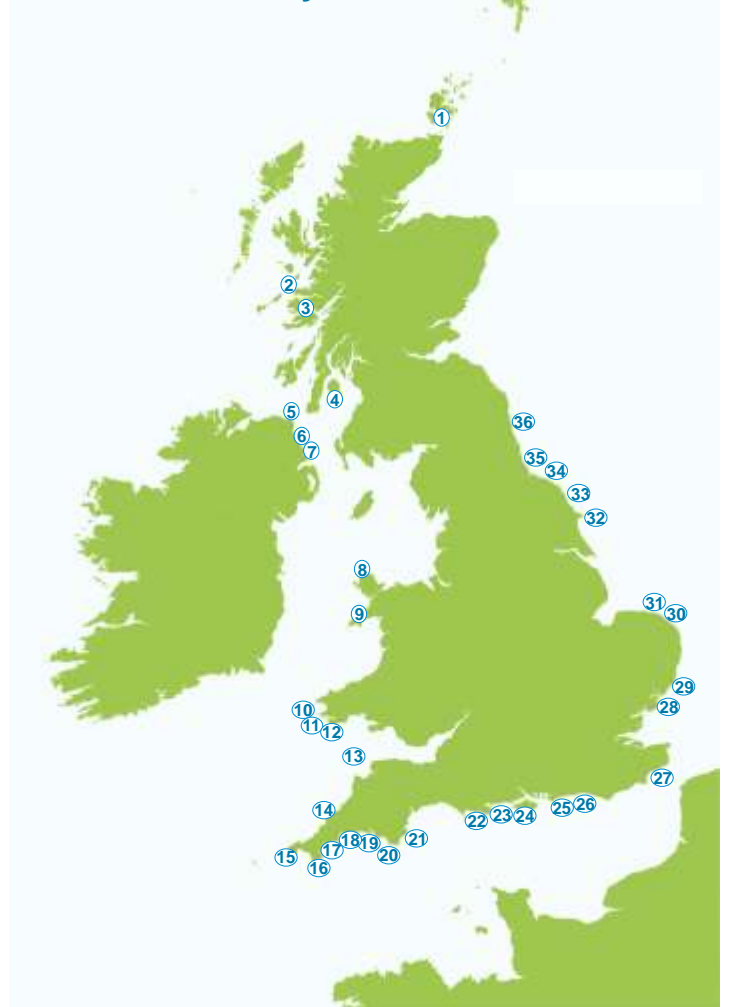
1 Scapa Flow wrecks: Seasearch divers have looked at the famous wrecks from the angle of the marine life they support. Features include horse mussel beds, queen scallops and sunstars surrounding and protected by the presence of the wrecks and, on the wreckage itself, dense turfs of hydroids, plumose anemones and dead men's fingers.

2 Muck: One of the Small Isles and, unlike Rum, Eigg and Canna, which have all had dedicated Seasearch surveys in previous years, was relatively un-surveyed. 13 sites were visited including coastal cliffs, rocky reefs, offshore pinnacles, boulders, maerl and a sandy bay. Picture above.

3 Ardnamurchan, Loch Linnhe & Sound of Mull: Less favourable weather limited the dive options but a rocky wall on North Ardnamurchan, Calve Island and the Morvern shore of Loch Linnhe were surveyed, some of which were new sites. Species highlights included staghorn bryozoan, Celtic featherstars, northern sea fans and a fireworks anemone.

4 Arran: this survey was intended to support the scientific base for the proposed South Arran Marine Protected Area. A dive on the un-surveyed south-west side of the island revealed rocky habitats and large waves of maerl gravel. Maerl gravel was also found in Lamlash Bay and seagrass in Whiting Bay. In Lamlash Bay there were encouraging signs of recovery in the no take zone.

Seasearch Surveys 2012



5 Hydroids and Bryozoans in Northern Ireland:

Some of the 2012 dives on the North Coast, Rathlin and at Strangford Lough were completed as part of a Hydroid and Bryozoan taxonomic workshop run by the Ulster Museum. Some sites were targeted as they were known to have high diversity of hydroids and bryozoans. Subsequent laboratory identification with assistance from expert tutors enabled a high level of recording to be achieved for those dives. ®



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6 Red Bay, Antrim:

Survey dives were carried out on the maerl and seagrass beds in this Special Area of Conservation. Garron Point was targeted as it had not been recently surveyed. Here the percentage of live maerl was 50-60%. ®

7 Muck and the Maidens:

Three new sites for Seasearch were surveyed around the Isle of Muck and one on The Maidens. The south-east of Muck Island proved to be rich in marine species with records including 3-bearded rockling, leopard-spotted gobies and sponges. Commercial species included crabs, lobsters and different species of fish, including Ling, a BAP species. A large number of sea-slugs were recorded, often with spiral ribbons of eggs. ®

8 North Anglesey: Most of Anglesey is not part of a SAC, but it is regularly dived because there are many gaps in knowledge, particularly around the cliffy north of the island. In 2012 we achieved 3 days of boat diving off Anglesey, 2 of shore diving and 14 additional sites were surveyed independently. Interesting records included the nationally scarce sponge *Tethyspira spinosa* and prawn cracker sponge *Axinella infundibuliformis*, as well as crawfish, knobbed crab *Eurynome aspersa*, rarely recorded nudibranchs *Caloria elegans* and *Cuthona caerulea* and the soft coral *Sarcodictyon catenatum*.®

9 The Llyn Peninsula: Seasearch dives around the Llyn Peninsula looked at some of the potential MCZs and also areas with little survey information. Habitats surveyed included infralittoral mud, tide swept sand scoured mixed stony reef, old oyster beds, vertical rocky reef, low lying reefs and seagrass.

Sediment sites contained auger shells, common pelican's foot shells, masked crabs, dog cockles and Icelandic cyprine. Rocky reefs were typically covered in a diverse hydroid/bryozoan turf and a variety of sea squirts. An unusual species sighting was a grey triggerfish.®



10 Skomer MNR: Whilst Skomer is well surveyed, it is necessary to update information on a regular basis and 4 sites were surveyed in 2012. Unusual species recorded included scarlet and gold star-corals, pink sea fans and a new species for Wales, the Diminutive Goby *Lebetus scorpiodes*.®

11 Skokholm: Seasearch dives were carried out here between 2004 and 2006 and 4 rocky reef sites were dived in 2012 to update and expand our records. There was a wide variety of massive sponges and dense hydroid and bryozoan turf. Other larger species included potato crisp bryozoan, a pink sea fan and curled octopus.®

12 St Ann's Head: St Anne's Head marks the entrance to Milford Haven and is well known for its strong tidal currents that create steep standing waves. SW winds cause constant wave action along the west side of the headland. On two weekends during 2012 the winds were from the east and we had a rare opportunity to dive along the west coast. Sponge records included the nationally scarce mashed potato and crumpled duster sponges as well as a single crawfish. There were also a number of unusual sea squirt records.®

13 Lundy sea fans and crawfish: We were only able to survey sea fans on the east coast due to high winds. Though there are signs of re-growth, the condition of the population remains poor following disease in the early 2000s (see Page 7). What was most heartening was to see 3 crawfish on one dive in the no take zone - surely an argument for more highly protected sites!



14 Cornwall North Coast Cornwall Wildlife Trust focused on increasing the number of records from proposed MCZs. The north coast is notoriously difficult to dive, with regular swells crashing against the reef and beaches. Records were received from within the Newquay MCZ and at Bawden Rocks in St Agnes VMCA.®

15 Porcupine Marine Natural History Society: Divers travelled from throughout the UK to take part in the Porcupine MNHS Autumn field meeting, which was hosted in Cornwall. National experts on a variety of marine taxa contributed to Seasearch, submitting 20 forms over the weekend. Sites surveyed included the Fal, Helford and Lizard area, west of Penzance and, on the north coast, Rock and Padstow.®

16 Non Native Species: Seasearch divers studied eight different sites in the Fal and Helford SAC. Non-natives were recorded along the length of the Fal from the upper reaches to the middle of Falmouth Bay. A total of 12 different non-native species were found, including Darwin's barnacle *Elminius modestus*, compass sea squirt *Asterocarpa humilis* and ruby bryozoan *Bugula neritina*. This information will be used to track and help minimise the spread of these species, by promoting best practice to boat owners and other water users.®

17 Maerl Beds: surveys were carried out in three maerl beds. One was in the Fal, which was a proposed highly protected Reference Area in the MCZ process and potentially affected by dredging to deepen the access to Falmouth harbour. The other sites were newly recorded beds in the Helford River and St Austell Bay.®®

18 Seafan Anemone Suvey: A survey has been carried out over a six year period on the Rosehill wreck in Whitsand Bay to record the numbers of the rare sea fan anemones, *Amphianthus dohrnii*, and the effect they have on the health of sea fans. The study shows that the presence of anemones does damage the living tissues of the sea fan and it may not recover. However, numbers of the anemones remain very small.®

19 Drake Island Eelgrass: A survey was undertaken of the seagrass bed on the north side of Drake's island in Plymouth Sound. With long blades and densities of up to 15 per m², parts of the bed were flourishing, though elsewhere there were dead rhizomes leading to bare patches, some of which had new shoots appearing. ®

20 Bolt Headland and Bigbury Bay: A mix of new and old sites were surveyed, highlights being crawfish, pink sea fans, the nationally scarce sponge *Adreus fascicularis* and increasing amounts of pink fingers on the Persier wreck. ®

21 Torbay and The Skerries rMCZs: a series of dives was made in both rMCZs and reports produced for each. The Skerries Bank is a highly mobile sand bank, not usual Seasearch diving by any means. Mobile species, especially rays (below) and flatfish predominated. The Skerries rMCZ also contains rocky areas, and in the Torbay rMCZ we also surveyed a variety of rock and sediment habitats, including a newly identified eelgrass bed near Hopes Nose. ®®



22 Dorset species highlights: Interesting species recorded in 2012 included Europe's smallest marine fish, Guillet's goby *Lebetus guilleti*, policeman anemone, false cowrie (both more commonly recorded further to the west) and Baillon's wrasse (a southerly species). One species quite commonly recorded in Dorset, but rarely elsewhere, was our largest sea squirt, *Phallusia mamillata*. ®

23 Poole Bay rMCZ: The site consists of several small patches of reef - exposed rugged sandstone bedrock surrounded by medium to large boulders at depths of 6-11m, rising to a height of 1-5m above the surrounding seabed of mixed sediment with cobbles and slipper limpets. Important species recorded included native oyster, Couch's goby and Baillon's wrasse. There were also more widespread species such as shoals of bib and lobsters taking advantage of the rugged habitat. ®

24 Hampshire and Isle of Wight Bioblitz: A week long survey and additional day dives enabled records to be made from 5 different rMCZs. Sadly none of them were among the 31 consulted on at the end of the year.

25 Selsey and The Hounds rMCZ: This area is characterised by clay reefs, including the well-known Mixon Hole. The Hounds had not been surveyed before and was also clay with piddocks and a rich algal turf on the upper surfaces. Native oysters, crabs and lobster, and a southerly visitor, grey triggerfish *Balistes caprisus*, were all recorded. ®

26 Worthing Lumps: This, northward facing, chalk cliff is within the Kingmere rMCZ and is the only one of a line of similar sites to be included in the proposals. The piddock bored chalk face provides a habitat for colonial worms, sponges, hydroids and bryozoans as well as larger species including lobster, and edible, spiny spider and velvet swimming crabs. ®



27 Kent: Sites were surveyed in 3 of the rMCZs. Habitats included chalk boulders, cobbles, pebbles, gravel and silty sand. At Crab Bay extensive rossworm, *Sabellaria spinulosa*, reefs were recorded. ®

28 Blackwater, Colne, Crouch and Roach rMCZ: This is an area of mud, sand and gravel seabeds, much of which is managed to promote the growth of farmed oysters. Prominent subtidal species include the invasive slipper limpet and non-native sea squirts. ®

29 Alde Ore Estuary rMCZ: Poor visibility limited this estuarine survey to mooring pontoons and a jetty. ®

30 North Norfolk Blue Mussel Bed: Almost all of the areas dived had evidence of trawling. Some were denuded of mussels, but still retained some areas of reef building rossworm, whilst others had lost all stabilising features and had become barren sand. ®

31 Cromer Shoal Chalk Beds rMCZ: This area has been extensively surveyed by Seasearch and additional dives were undertaken, mostly from the shore, during 2012. The chalk reef is at its most rugged between Sheringham and West Runton. Here the inshore chalk plain has gullies increasing with depth, eventually leading to 3m high walls 2-400m offshore. ®



32 Flamborough Head: Seasearch dives were undertaken in the Flamborough No Take Zone and in Selwicks Bay, a new site for Seasearch which is right on the tip of Flamborough Head with stunning chalk cliffs, caves, arches and stacks. ®

33 The Real Reefs Project and Castle Ground rMCZ: All of the records for the Castle Ground rMCZ, came from the Real Reefs Project organised by Scarborough Sub Aqua Club with the aim of carrying out Seasearch dives at 20 sites between Flamborough and Whitby. Over 60 divers from 9 different local dive clubs took part, recording over 200 species at 34 sites. The project won the Peter Small Jubilee Trust Award for the most worthwhile and ambitious BSAC project conducted in British Seas. ®

34 Runswick Bay rMCZ: The site extends three nautical miles out to sea, encompassing a mosaic of habitats and reaching depths of 30m. During 2012 we carried out 5 intertidal surveys but were only able to complete one diving survey. ®

35 Durham Heritage Coast: Two new sites just south of Sunderland were surveyed. Highlights included lesser-spotted catsharks and the rather bizarre tiny stalked sponge, *Guancha lacunosa*, for which there were previously only two east coast records on the NBN Gateway. Once again, our dives showed the amazing recovery that is taking place on the Durham Heritage Coast since the dumping of colliery spoil at sea ended some 20 years ago. ®



36 Coquet to St Marys rMCZ: A number of shore and boat dives were made in this long coastal rMCZ. The highlight was an arctic cushion star, *Hippasteria phrygiana* (left) found amongst boulders and gravel at 21m. This species is common in Greenland, Iceland and Scandinavia but is rarely reported in our waters. This is the first known record for the English coast! ®

Species recorded in 2012

The following table provides a summary of the species records made in 2012.

Biodiversity Action Plan species and habitats continue to be a particular 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.

Commonly recorded species (more than 200 records) **BAP, Scarce (S) and rare (R) species**

Foraminifera, (15 records from Northumberland, Pembrokeshire, Norfolk Hampshire, Dorset and Cornwall - 1 identified to species)

Porifera, Sponges (73 species)

<i>Cliona celata</i> , boring sponge (531)	<i>Stelletta grubii</i> (S) 3 records from Cornwall and Isles of Scilly
<i>Dysidea fragilis</i> , goosebump sponge (404)	<i>Stryphnus ponderosus</i> (R) 1 record from Cornwall
<i>Pachymatisma johnstonia</i> , elephant hide sponge (343)	<i>Thymosia guernei</i> , mashed potato sponge (S) 21 records from Devon and Pembrokeshire
<i>Amphilectus fucorum</i> , shredded carrot sponge (316)	<i>Adreus fascicularis</i> (R) 5 records from Devon and Dorset
<i>Halichondria panicea</i> , breadcrumb sponge (270)	<i>Axinella damicornis</i> , crumpled duster sponge (S), 30 records from Devon, Cornwall and Pembrokeshire
<i>Hemimycale columella</i> , crater sponge (266)	<i>Phakellia ventilabrum</i> (S), 1 record from W Scotland
<i>Tethya citrina</i> , golf ball sponge (211)	<i>Desmacidon fruiticosum</i> (R) 1 record from Cornwall
<i>Scyon ciliatum</i> (<i>Scypha ciliata</i>), purse sponge (209)	<i>Tethyspira spinuosa</i> (S) 4 records from Pembs, N Devon & Lyme Bay

Cnidaria, Jellyfish, hydroids, siphonophores, anemones and corals (102 species)

Jellyfish (8 species)

stalked jellyfish (BAP) 13 records from Scotland, Ireland, Cornwall & Isles of Scilly,

Hydroids (57 species)

Nemertesia antennina, antenna hydroid (440)
Obelia geniculata, kelp fur (310)
Tubularia indivisa, oaten pipes hydroid (215)

Aglaophenia kirchenpaueri (S) 5 records from North Wales, Pembrokeshire, Cornwall and Isles of Scilly

Anemones and corals (56 species)

Alcyonium digitatum, dead men's fingers (768)
Caryophyllia smithii, Devonshire cup-coral (597)
Urticina felina, dahlia anemone (501)
Sagartia elegans, elegant anemone (317)
Anemonia viridis, snakelocks anemone (302)
Metridium senile, plumose anemone (301)
Actinothoe sphyrodeta, white striped anemone (285)
Corynactis viridis, jewel anemone (282)

Alcyonium hibernicum, pink fingers (S) 8 records from W Scotland, W Ireland, S Cornwall & S Devon (photo left)
Swiftia pallida, northern sea fan (BAP) 10 records from W Scotland
Eunicella verrucosa, pink sea fan (BAP) 151 records from Cork, Wexford, Pembrokeshire, Lundy, Cornwall, S Devon, Lyme Bay, Dorset & Channel Islands
Funiculina quadrangularis, tall sea pen (BAP) 5 records from W Scotland
Pachycerianthus multiplicatus, fireworks anemone (S, BAP) 8 records from W Scotland
Pachycerianthus indet. (Dorothy) 1 record from Jersey
Parazoanthus anguicomus, white cluster anemone (S) 12 records from W Scotland, Northern Ireland, Lundy, S Devon
Parazoanthus axinellae, yellow cluster anemone (S) 23 records from Skye, Rathlin, Pembrokeshire, Lundy, S Devon and Cornwall, Sark
Antholpleura thallia, glaucus pimplet (S) 1 record from S Cornwall
Aiptasia mutabilis, trumpet anemone (S) 38 records from Lundy, S Devon & Cornwall, Lyme Bay, Dorset & Jersey
Amphianthus dohrnii, sea fan anemone (R, BAP) 4 records from S Devon and Cornwall
Mesacmaea mitchellii, Policeman anemone (S) 2 records, Lundy, Dorset
Caryophyllia inornata, southern cup-coral (R) 6 records from N Cornwall S Devon, Dorset and Sark
Hoplangia durotrix, Weymouth carpet coral (R) 3 records from Lundy, S Devon and W Sussex
Balanophyllia regia, scarlet and gold star coral (S) 6 records from Skomer, N Cornwall and Guernsey
Leptopsammia pruvoti, sunset cup-coral (R, BAP) 3 records Lundy & Sark



Commonly recorded species (no of records in brackets)

Ctenophora, Comb Jellies (3 species)
Platyhelminthes, Flat worms (2 species)
Nemertea, Ribbon Worms (4 species)
Nematoda, (4 species)
Echiura, Spoon worms (1 record)

Annelida, Segmented worms (72 species)

Pomatoceros lamarkii/triqueter, keel worms (650)
Lanice conchilega, sand mason worm (295)
Bispira volutacornis, double spiral worm (231)
 (picture above right)

BAP, Scarce (S) and rare (R) species

Sabella alveloata, (BAP Habitat in UK) 1 record from N Cornwall
Sabellaria spinulosa, rosworm (BAP Habitat - reefs) 14 records from N Wales, Northern Ireland, W Ireland, Northumberland, Durham, Yorkshire, Norfolk, Kent, Sussex, & Isle of Wight
Sabella spallanzanii, 1 record from Guernsey
Serpula vermicularis, organ pipe worm (BAP Habitat in UK) 41 records including reefs in Killary Harbour, Ireland

Crustacea, Barnacles, amphipods, isopods, crabs, lobsters and prawns (69 species)

Necora puber, velvet swimming crab (883)
Cancer pagurus, edible crab (873)
Homarus gammarus, lobster (479)
Pagurus bernhardus, common hermit crab (340)
Maja squinado, spiny spider crab (277)
Carcinus maenas, shore crab (225)

Periclimenes sagittifer, anemone prawn (southerly), 4 records from Dorset & W Sussex
Palinurus elephas, crawfish (BAP) 25 records from, Firth of Lorn, Northern Ireland, W Ireland, Cork, N Wales, Pembrokeshire, Lundy and S Devon
Dromia personata, sponge crab (S) 1 record from Lundy

Mollusca, shells, sea slugs, bivalves and cephalopods (135 species)

Calliostoma zizyphinum, painted topshell (539)
Gibbula cineraria, grey topshell (373)
Pecten maximus, great or king scallop (213)



Haliotis tuberculata, ormer (southerly) 14 records from Channel Islands
Tritonia nilsodhneri, sea fan sea slug (S) 17 records from Cornwall, S Devon & Lyme Bay
Okenia elegans, (S) 6 records Rathlin, N Devon, Torbay & S Cornwall
Trapania maculata, (R) 1 record from Poole Bay
Trapania pallida, (S) 7 records from Isles of Scilly, Dorset & Isle of Wight
Thecacera pennigera, orange specked sea slug (S) 1 record W Wales
Cadlina pellucida (First UK record) 1 record from Lizard, Cornwall
Doris sticta, sponge sea slug (S) 4 records from Arran & S Cornwall
Aeolidiella sanguinea (S) 1 record from Kerry
Modiolus modiolus, horse mussel (beds - BAP habitat) Orkney and Isle of Man + numerous records of smaller numbers elsewhere
Atrina fragilis, fan mussel (R), (BAP) 1 record from Scapa Flow, Orkney
Ostrea edulis, European oyster (BAP) 80 records from Milford Haven, Torbay, Poole Bay, Isle of Wight & Sussex (left with queen scallop)
Arctica islandica, Icelandic cyprine (BAP) 17 records from W & N Scotland, Shetland, Northern Ireland, Isle of Man, N Wales, Pembrokeshire and Northumberland

Brachipods, lamp shells (1 species)**Bryozoa, sea mats and sea mosses** (72 species)

Membranipora membranacea, sea mat (389)
Electra pilosa, kelp fur (370)
Flustra foliacea, hornwrack (318)
Alcyonidium diaphanum, finger bryozoan (309)

**Phoronida, horseshoe worms** (1 species)**Echinodermata, starfish, sea urchins and sea cucumbers** (43 species)

Asterias rubens, common starfish (914)
Echinus esculentus, common sea urchin (717)
Marthasterias glacialis, spiny starfish (449)

Hippasteria phrygiana (1st English record?) 1 record from Northumberland
Ophiopsila aranea, (R) 2 records from W Scotland and Plymouth

Tunicata, sea squirts (51 species)

Botryllus schlosseri, star sea squirt (317)
Clavelina lepadiformis, light bulb sea squirt (298)

Polysyncraton bilobatum (First UK records?) 8 records from Norfolk and Pembrokeshire
Polysyncraton lacazei (R) 1 record from Guernsey
Phallusia mamillata, giant sea squirt (S) 23 records from W Cork, S Devon, Lyme Bay, Dorset & Jersey

Pisces, fishes (97 species)

(fish are not included in the JNCC rare and scarce species lists)

Labrus bergylta, ballan wrasse (546)
Pollachius pollachius, pollack (382)
Ctenolabrus rupestris, goldsinny (379)
Labrus mixtus, cuckoo wrasse (289)
Taurulus bubalis, long spined sea scorpion (256)
Callionymus lyra, dragonet (249)
Gobiosculus flavescens, two-spot goby (241)
Scyliorhinus canicula, lesser spotted catshark (219)
Thorogobius ephippiatus, leopard spotted goby (218)
Trisopterus luscus, bib (202)

Cethorinus maximus, basking shark (BAP) 1 record from Donegal
Raja undulata, undulate ray (BAP) 4 records from Dorset and Jersey
Lophius piscatorius, angler fish (BAP) 10 records from Northumberland, Cork, Lundy & S Devon
Gadus morhua, cod (BAP) 17 records from SE Scotland, Northumberland, Yorkshire, Norfolk, W Scotland, Arran & Cork
Molva molva, ling (BAP) 39 records from Shetland, Orkney, W Scotland, Isle of Man, Northern Ireland, W Ireland, Cork, Anglesey, Pembrokeshire, Yorkshire, Norfolk & S Devon

Pisces, fishes (continued)



Hippocampus hippocampus, short snouted seahorse (BAP) 2 records from Torbay & W Sussex
Spondyliosoma cantharus, black bream (southerly) 6 records from Kent, Sussex and Jersey
Symphodus bailloni, Baillon's wrasse (southerly) 2 records Dorset and W Sussex
Parablennius ruber, red blenny (southerly) 15 records from W Ireland, W Scotland & S Cornwall
Tripterygion deleasi, black-face blenny (southerly) 6 records from Dorset, S Devon and S Cornwall
Gobius gasteveni, Steven's goby (R) 2 records from S Devon & Cornwall
Gobius couchi, Couch's goby (R) 1 record from Falmouth
Lebetus guilleti, Guillet's goby (R) 3 records from Shetland and Dorset
Trachurus trachurus, horse mackerel (BAP) 1 record from W Sussex
Pleuronectes platessa, plaice (BAP) 78 records, all coasts
Solea solea, sole (BAP) 9 records from Ilse of Man, N Wales, S Devon & Cornwall, Isle of Wight, W Sussex and Jersey
Balistoides capriscus (carolinensis), grey triggerfish (R) 5 records N Wales, Sussex & Dorset
Mola mola ocean sunfish (right), 3 records from Cork, S Cornwall & Jersey.

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

Algae, seaweeds

Rhodophycota, Red seaweeds (100 species)

Delessaria sanguinea, sea beech (410)
Plocamium cartilagineum (295)
Calliblepharis ciliata, red fringed weed (250)
Dilsea carnosa, red rags (210)

Lithothamnion coralloides, maerl (S, BAP habitat) 3 records from Falmouth and Helford River plus many records not identified to species
Gracilaria bursa-pastoris shepherd's purse wart weed (S) 3 records Dorset and W Sussex

Chromophycota, Brown seaweeds (40 species)

Laminaria hyperborea, cuvie or forest kelp (502)
Dictyota dichotoma, brown fan weed (259)

Zanardinia prototypus, pennyweed (S) 2 records from Kerry & Jersey
Carpomitra costata, tassel weed (S) 13 records from N Antrim, Pembrokeshire, Lundy, S Cornwall & Devon, and Jersey

Chlorophycota, Green seaweeds (14 species)

Angiospermae, flowering plants (1 species)

Zostera marina, eelgrass (BAP habitat) 82 records from Orkney, W Scotland, Arran, Isle of Man, Antrim, W Ireland, N Wales, S Cornwall, Plymouth Sound, Torbay, Dorset, Isle of Wight & Jersey

Total species recorded = 918

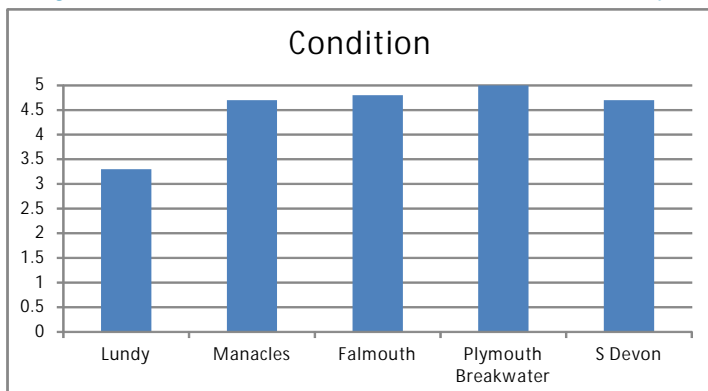
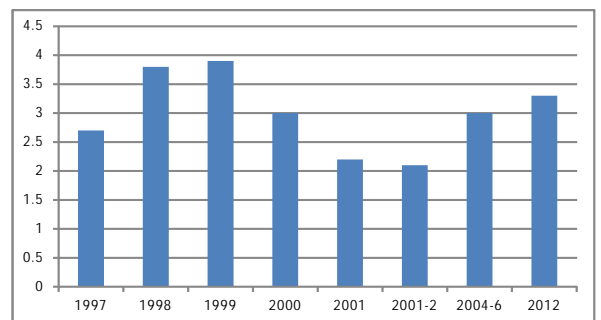
Pink Sea Fan Studies in 2012

Targeted studies of pink sea fans were made in 5 separate areas using the established Seasearch methodology which involves recording dimensions, colour, condition, fouling and the presence of selected predatory species on individual sea fan colonies. 555 colonies were recorded at Lundy (2 sites), The Manacles (6 sites), Falmouth (1 site), Plymouth Breakwater (1 site) and South Devon (4 sites).

The condition of each colony was recorded on a 0-5 scale in which 5 is a complete, undamaged, colony and 0 is a standing dead colony. The chart shows that in all areas except Lundy the sea fan population is in good condition with a condition score of in excess of 4.5.

The presence of sea fan sea slugs, *Tritonia nilsodhneri*, ranged from 16.4% at the Manacles to none at Lundy.

Seafans at Lundy suffered from disease in the early 2000s and the latest records show that there has been a gradual improvement in average condition since that time, though the Lundy population remains the poorest of any of those studied. This is shown below.



Diseased colony showing re-growth at its extremities.

Seasearch Training in 2012

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 survey dives with a tutor present to help with form completion and identifications.

There were 26 Observer courses in 2012 in England (16), Wales (4), Ireland (3), Scotland (2) and the Isle of Man (1). 295 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.

Four Surveyor Courses were held in 2012, taking place in Northern Ireland, North Wales, Pembrokeshire and Cornwall. There were 39 participants.

Seasearch **Specialist** courses are aimed at either teaching new survey skills or improving knowledge and identification of marine life. 14 courses were held in 2012 with 182 volunteers taking part. Subjects covered fish ID (Hull), anemones and corals (Plymouth), nudibranchs (St Abbs and Dover), ascidians (Falmouth), seaweeds (Norfolk), non native species (Falmouth) and general marine life ID (Menai Bridge, Sheringham, Bristol and Swanage), Techniques courses covered MCZ surveys (Torbay) and underwater photography (Portaferry & Swanage).



Seasearch Observer and Surveyor training courses are delivered by our team of tutors, all of whom are experienced Seasearch recorders and active divers. 22 of them taught on courses in 2012 including 2 new tutors, Charmaine Beer (Northern Ireland) and Nic Faulks (Durham). The Specialist courses are given by Seasearch tutors and visiting experts who in 2012 included Jim Anderson (nudibranchs), Bernard Picton (ascidians), Frances Dipper (Fish and general ID), Emma Wells (seaweeds), Jack Sewell and John Bishop (non-natives), Joanne Porter (bryozoans and hydroids), Jean-Luc Solandt (MCZs) and Nigel Motyer and Paul Naylor (photography).

Tutors and coordinators are seen above at our annual workshop day in Birmingham.

Seasearch qualifications are given to those completing the Seasearch Observer (course and 5 acceptable observation forms), or Surveyor (course, 6 acceptable survey forms and an ID test) programmes. In 2012 85 volunteers achieved the Observer qualification and 14 volunteers the Surveyor qualification. Both of these were record figures for a single year.



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.

In 2012 we produced a new guide to Bryozoans and Hydroids written by Dr Joanne Porter of Heriot-Watt University. It is significant that the number of species of bryozoa recorded in 2012 was 72 compared to 63 in 2011 and of hydroids was 57 compared to 46,

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. In 2012 we entered into an agreement with Wild Nature Press who will take over the design and publication of future guides and make them available more widely than we have been able to do to-date.



Data management and availability

Data Received in 2012

A total of 1,861 forms was received from dives in 2012, which was less than in 2011. However the number of Survey Forms, which provide significantly more data, was the highest ever, 801 forms or 43% of those received.

Of the forms received 47% come from sites in England, 19% from Wales, 14% from Ireland, 13% from Scotland, 4% from the Isle of Man and 3% from the Channel Islands.

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 individuals and organisations. They are responsible for the second stage of verification of the data. It 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 and any errors identified are returned to the data entry point for checking and amendment as appropriate.

Seasearch Coordination and Promotion

Seasearch is organised on behalf of a Steering Group which meets twice a year and on which all of the Seasearch partners are represented. The Steering Group sets the priorities and general direction for Seasearch.

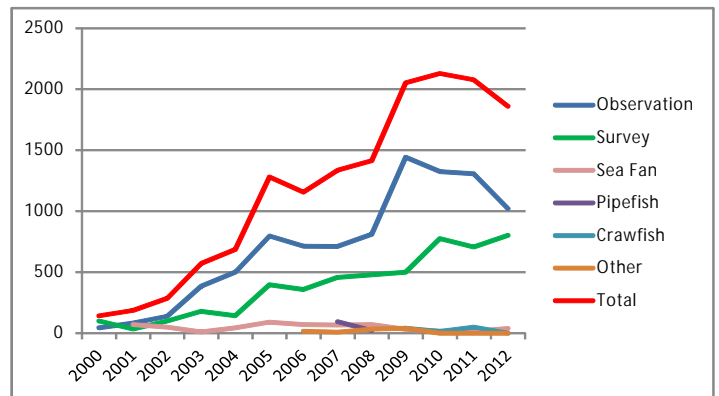
The day to day activities are organised by the National Coordinator and a team of local coordinators throughout the UK. At the end of 2012 the team was as follows:

National Coordinator	Chris Wood	MCS
Scotland	Calum Duncan	MCS
West Scotland	Owen Paisley	MCS
Northern Ireland	Charmaine Beer	MCS
Republic of Ireland	vacant	CFT
Isle of Man	Tony Glen	MCS
North Wales	Liz Morris	MCS
South & West Wales	Kate Lock	MCS
North East England	Paula Lightfoot	MCS
North West England	Mandy Knott	MCS
East Anglia	Dawn Watson	MCS
Kent	Becky Hitchin	Kent WT
Sussex	Chris Williams	Sussex Seasearch
Hants/Isle of Wight	Amy Dale	Hants WT
Dorset	Charlotte Bolton	Dorset WT
Devon	Sally Sharrock	MCS
Cornwall	Cat Wilding	Cornwall WT
Jersey	Kevin McIlwee	Jersey Seasearch

Thanks to all the Seasearch Tutors and coordinators for their enthusiasm, organising and teaching skills during 2012 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, Unit 3 Wolf Business Park, Alton Road, Ross-on-Wye, Herefordshire, HR9 5NB.

Text by Chris Wood with contributions from coordinators. Images by Rob Adams, Nic Faulks, David Kipling, Richard Morton, Rob Spray, Dawn Watson and Chris Wood. Maps and design by Chris Wood.



MNCR biotope codes are assigned to all Survey Form data at the data entry stage. The 2012 dataset contains 1,869 MNCR biotopes. Observation Form data contains Seasearch seabed cover types, a simpler format appropriate to this level of detail.

Data availability

The combined dataset is available to all Seasearch partners in Marine Recorder format or as a snapshot of the data in an Access database. The dataset is also passed to the National Biodiversity Network and is made available on the NBN Gateway website for all to use. A Google Earth map can be downloaded from the Seasearch website providing a summary of the data for each site.

The 2012 dataset comprises 105 surveys, including 1,439 'survey events' and contains 49,004 individual species records, covering 918 different species.

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.

During 2012 we were able to put Seasearch coordination in the Isle of Man on a firmer footing being able to support Tony Glen in the role thanks to a legacy to MCS.

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



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