

Annual Report 2010



This report summarises Seasearch activities throughout Britain and Ireland in 2010. It includes a summary of the main surveys undertaken 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. It also includes information on how the data is managed and made available and a summary of the training courses run for volunteer divers. 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.

Another record year for Seasearch in 2010

More Seasearch records were made by volunteer divers in 2010 than ever before, with 2,140 forms received. These included a 55% increase in Survey Forms, which typically provide three times as much data as Observation Forms. We also involved over 600 volunteers in marine recording.

Areas that posted their highest ever number of records were Scotland, Republic of Ireland, Eastern England, Hants/IOW, Dorset, Devon, Cornwall and Isles of Scilly

The Observation and Survey form data (2,110 forms) has been entered into the Marine Recorder database and is available to use and download from the National Biodiversity Network website.

A map of all of the sites surveyed in 2010 can be downloaded from the Seasearch website and used in Google Earth. This shows the location, date, surveyor and a brief summary of the data.

A summary of the main surveys carried out in each area is shown on pages 2 to 5 of this report. Summary or full reports for many of these surveys are available to download in PDF format from the Seasearch website. The surveys for which a detailed report is available are marked ®

Pages 6 to 8 contain a summary of the species recorded, listing both commonly recorded species and Biodiversity Action Plan, scarce and rare species.

Page 8 summarises the training programme and the final page concentrates on data and organisation.

Seasearch data informs marine conservation zones

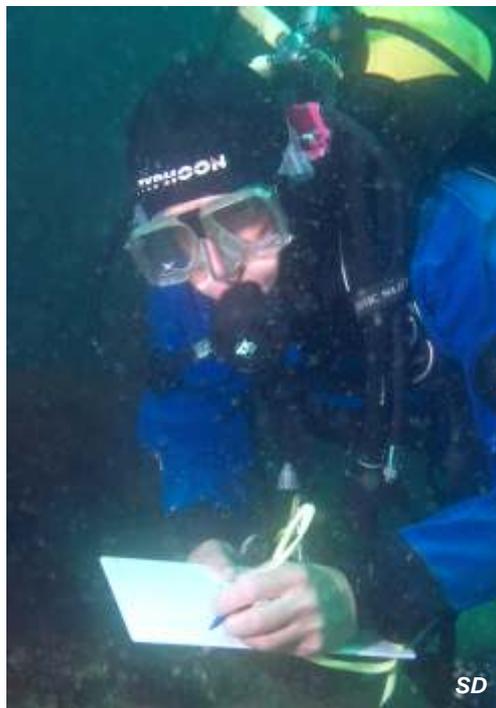
In England, Scotland and Wales the process of identifying marine conservation areas is well under way and Seasearch data is a significant contributor to the work taking place.

In **England** four regional projects are tasked with recommending marine conservation zones to Defra. This has involved a large data gathering process to inform discussions and Seasearch data has been provided directly to three of the four areas, Eastern England (Net Gain), South East England (Balanced Seas) and South West England (Finding Sanctuary). Seasearch divers have also been promoting protection for the best sites by sitting on advisory groups. Unfortunately we have so little data from the North West that we have not been able to contribute to their work. Elsewhere Seasearch data has helped the groups understand the locations and extent of priority habitats and species.

In **Scotland** marine protected areas are to be established in 2012. A Marine Atlas of Scotland has been produced, which contains Seasearch data and this will be used as one of the sources for the MPA programme which is being drawn up by Scottish Natural Heritage and the JNCC.

In **Wales** the intention is to designate a small number of highly protected MCZs to complement the extensive Special Areas of Conservation (SACs) already designated. Seasearch has been one of the datasets used by CCW and a Technical Advisory Group to identify focus sites. Public consultation on potential sites is anticipated in autumn 2011.

2012 is the target for having the new conservation zones in place in all three countries. The focus will then switch to monitoring and enforcement of the new sites and we hope Seasearch will be able to focus on those areas where volunteer divers can play a part in ensuring that all of the talk leads to real protection of the important habitats and features.



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, Irish Underwater Council and independent marine life experts. Financial support in 2010 at a national level has been given by the partners whose logos are shown above.

These pages summarise the main surveys undertaken in 2010. These were all arranged by Seasearch Coordinators and in many cases Summary Reports [®] can be downloaded from the Seasearch website.

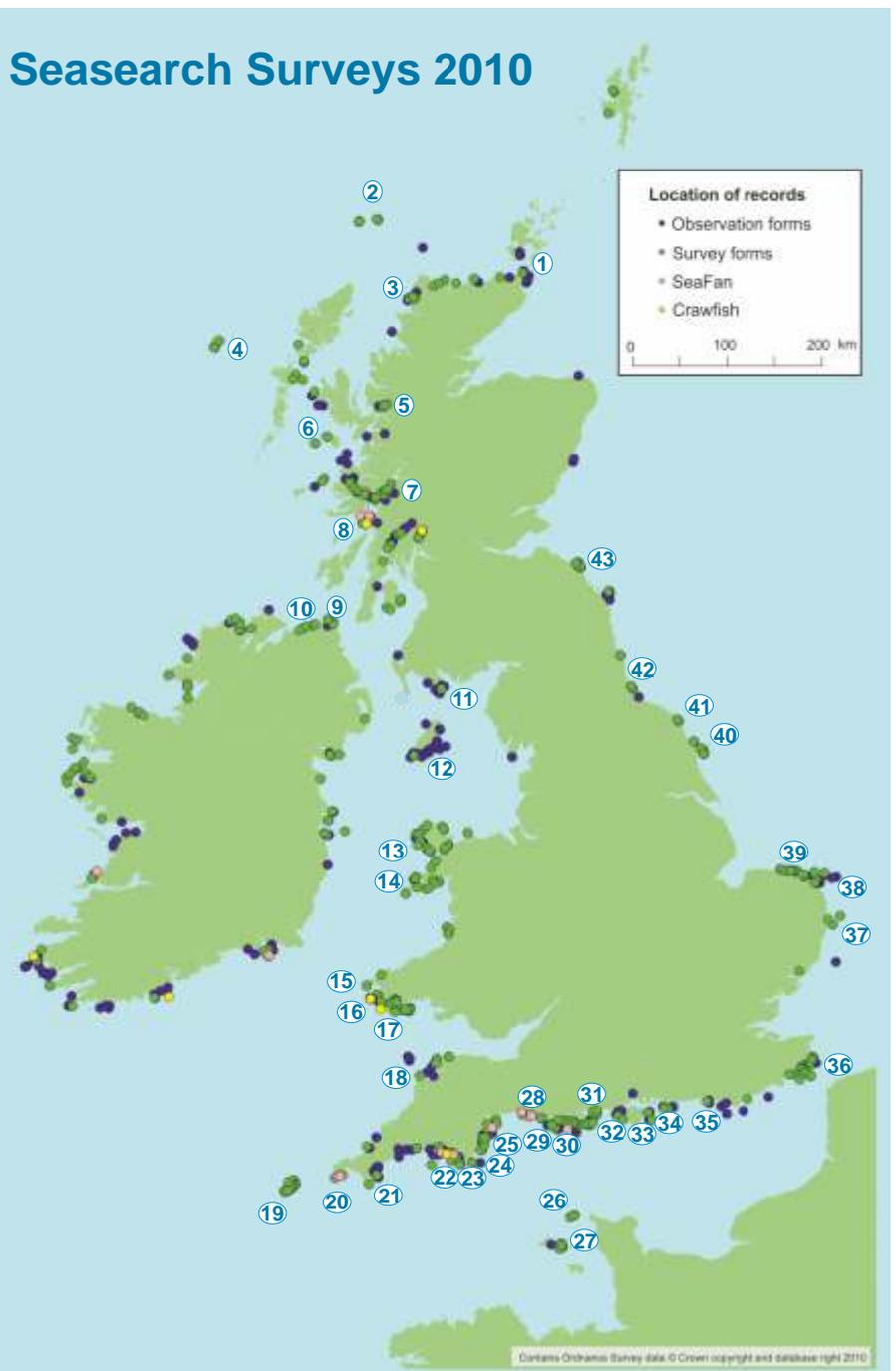
In addition to the surveys outlined here there were many other dives both organised by Seasearch coordinators and undertaken by individual divers.

There are also area based summary reports for Scotland, Wales, Northern Ireland, Cornwall, Devon, Dorset, Hants/IOW, Kent, East Anglia and North East England on the Seasearch website.

The map shows the sites from which the records were received, in many cases there were overlapping records and the Survey Forms, as the most detailed records, are placed on top of others. An interactive map of the 2010 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.

Seasearch Surveys 2010



RS

1 John O'Groats: two new sites surveyed on Stroma Island and at Skirza Head and two geos (cave systems) re-visited.

2 North Rona, Sula Sgeir and Nun Rock: 4 days of surveys around these isolated and un-recorded islands. Dramatic walls, gullies and caves with life typical of exposed locations including dabberlocks, sheets of jewel and elegant anemones and the rarely recorded warted corklet anemone *Phellia gausapata* (below - also seen at John O'Groats).



CW

3 Handa Island and Lochs Laxford and Inchard: a variety of sites surveyed including deep kelp forest, rock walls and sheltered silty seabed. Notable for abundant compass jellyfish, deep northern sea fans and a northerly sighting of a John Dory, *Zeus faber*.

4 St Kilda: visited by two separate liveaboard expeditions. Notable records included kelp as deep as 33m, both forms of cluster anemones, and large numbers of cuckoo wrasse.

5 Lochcarron: RIB survey targeting lesser known sites. Included mud habitats with tall and phosphorescent sea pens, the pink-spotted sea cucumber *Psolus phantapus*, and the darker *Thyonidium drummondii*. A flame shell bed south of Strome slip was also re-recorded.

6 Uist, Skye and the Small Isles: a variety of sites were recorded by a number of surveyors. Records included northern sea fans at a number of the sites.

7 Lismore and Loch Linnhe: surveys of little recorded limestone rocky sites and silted sea loch habitats. Significant species recorded included northern sea fans, Celtic featherstars, flames shells, horse mussels and the nationally rare sea slug *Okenia elegans*.

8 Firth of Lorn: Northern sea fan, *Swiftia pallida*, surveys at Insh Island and maintenance of the fixed monitoring transect at Conger Reef, both in the Firth of Lorn SAC.



JK

9 Rathlin: survey targeted both new and previously recorded sites. Highlight was the record of the nationally rare burrowing anemone *Aracnanthus sarsi* (above).

10 Giants Causeway and Bengore Head: Ground truthing bathymetric survey data at previously un-recorded sites.

11 Luce and Wigtown Bays: exploratory surveys by Newton Stewart Sub Aqua Club of rocky sites with rich animal turfs and better known wreck sites. Another example of Seasearch divers identifying and recording in new, un-recorded areas.

12 Isle of Man: Targeted surveys looking at areas of sediment seabed which have been badly impacted by scallop dredging but which are likely to become no take zones. Hopefully future surveys will show increases in biodiversity.

13 Anglesey: 18 sites outside existing Special Areas of Conservation were surveyed. They were chosen to fill gaps in records and included a tide-swept pinnacle, reefs and silty habitats on the east side of the island.

14 Mussel beds on the Llyn Peninsula: The carpet mussel *Mucsolus discors* (below), is a Welsh priority species and targeted surveys were undertaken at 4 sites, chosen because of previous records or predicted by the CCW HABMAP model. Two of the sites contained carpet mussel beds, with the density estimated at up to 63,200 individuals per square metre. There were also many juvenile blue mussels, *Mytilus edulis* at a number of sites. Only time will tell if these become established as long term mussel beds.



LM

15 Skomer Marine Nature Reserve: surveys to contribute to the MNR monitoring programme. During a nudibranch course a list of species was drawn up for Martins Haven containing some scarce/rare species.

16 Native oyster surveys: Sites in with historical records of native oysters were surveyed. Only old dead shells were found in South Pembrokeshire but there were records of live oysters at sites in the Dau Cleddau, Milford Haven.

17 South Pembrokeshire: Limestone and sandstone reefs were surveyed. Limestone creates sculptured rock formations with a variety of micro habitats. There was a huge aggregation of spiny spider crabs at one site, and mussels bed were frequently recorded.

18 North Devon: 11 new sites surveyed in this poorly recorded area. Included tide-swept reefs off Hartland and Baggy Points and more sheltered sites near Combe Martin. Important species and habitats seen included mussel beds, pink sea fans and crawfish.



KH

19 Isles of Scilly: There were 4 week-long surveys two concentrating on seaweeds and sponges, one including experts from the Porcupine MNHS and the annual general Seasearch week. The culmination was a large number of new species records and many sites surveyed for the first time. Southerly species which are rarely recorded in Britain included the boar fish, *Capros aper* (above). ®

20 Lands End: 4 new sites were surveyed, as well as re-visiting the anemone covered Runnel Stone pinnacle (below). Significant records included pink sea fans, sea fan anemones and crawfish as well as a large school of horse mackerel at the Runnel Stone.



CW

21 The Lizard: Although most records from the Lizard came from well known sites around the Manacles we surveyed Craggan Rock near Lizard Point for the first time. Sadly it was not nearly as diverse as other sites on the east side of the Lizard.

22 Wembury Mewstone to Stoke Point: A variety of sites in the candidate SAC were surveyed, including investigating a report from a shellfish collector of ormer, *Haliotis tuberculata*, which has not been recorded on the northern side of the English Channel. None were found though the habitat was appropriate and they are notoriously difficult to spot.

23 Mothecombe Bioblitz: In conjunction with the Marine Biological Association and the Natural History Museum, Seasearch took part in the Mothecombe Bioblitz day recording 84 marine species on a dive from a shallow rocky reef to add to the grand total from land.

24 Start Point: Previously un-recorded reefs in the extended SAC were surveyed. Both were low lying reefs with sand and gravel patches and subject to strong tidal streams. Notable were the large colonies of the nationally scarce sponge *Adreus fascicularis* (below).



25 Exmouth: Four new sites were surveyed at the western end of Lyme Bay. One site showed signs of regular trawling and contained broken shells and 95% dead maerl. Another is potted and not subject to trawling and included pink sea fans. Ground truthing at two other sites failed to find the predicted seagrass beds.

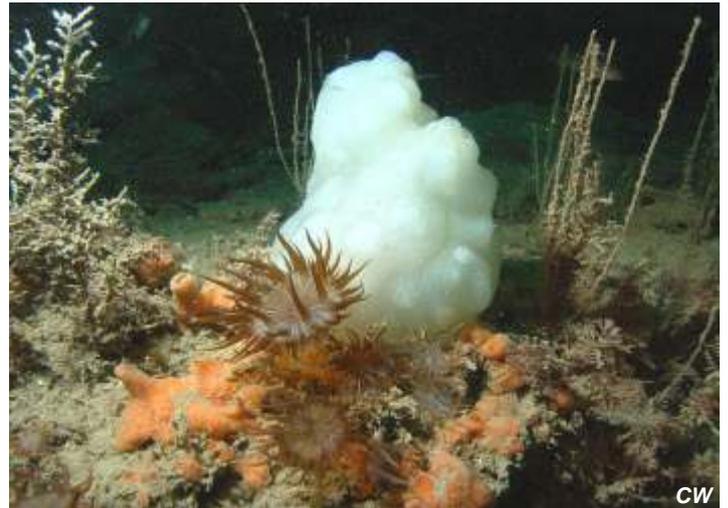
26 Alderney: Surveys concentrated on shallow areas selected as potential sites for cabling to an offshore tidal turbine. They included dense eelgrass beds (below) which we have recommended should be avoided.®



27 Sark: 2 weeks of surveys took place on Sark, visiting a number of new sites and recording a number of southerly species such as ormers, the starfish *Echinaster sepositus*, the spiral worm *Sabella spallanzanii* and a large *Pachycerianthus* burrowing anemone. Surveys were also carried out in an area closed to scalloping and of the anemone prawns, *Periclimenes sagittifer* in their host anemones.®®

28 Central Lyme Bay: Surveys 2 years after the ban on bottom trawling in most of the Bay. Two of the sites visited were ones which had escaped the main brunt of the trawling. Here there was the typical range of fauna for the area seen at its best. Forests of sea fans, all in good condition, tall branching sponges and two Lyme Bay signature species, huge *Phallusia* sea-squirts and trumpet anemones (below).

The other two sites were known to have been badly damaged by scallop trawling three years ago. Here what was noticeable was the number of small sessile animals, branching sponges, young sea fans and potato crisp bryozoans. These offer evidence that, once the pressure is taken off, the sea bed is capable of recovery.



29 East Lyme Bay: Abbotsbury and Stennis Ledges were also surveyed and had high numbers of pink sea fans, branching sponges and other tall fauna.

30 Purbeck: Organised surveys here concentrated on ground truthing of remote sampled features including textured rocky features, an old cliff line and seagrass beds.

31 Boscombe Surf Reef: Seasearch is contributing to the monitoring programme at this shallow reef. It's still biologically very young and is showing rapid changes in biota from visit to visit. A number of non-native species are already established there.

32 Totland Bay seagrass; survey of a known seagrass bed using quadrat counts for density recording. Notable for the large number of sea hares, *Aplysia punctata*.

33 Bembridge mud: dives to search for spoon worms, *Maxuelleria lankesteri*, previously reported from the east of the Isle of Wight. These were successfully located and there is only one other known population in south-east England. Other typical mud habitat species included the angular crab and eyelash worms.

34 East Isle of Wight sand and gravel: surveys in an aggregate extraction zone as part of an ongoing survey programme. This is a stable and diverse area of sand and gravel containing sponges, crustaceans, molluscs, anthozoa, bryozoa and fishes.

35 South-West Rocks: this chalk reef was first surveyed by MCS/Seasearch in the 1980s. A report has been put together by Natural England combining all of the data available from a range of surveys as part of the case for its protection. Seasearch has established fixed monitoring points along the reef.

36 Kent: Many of the surveys recorded diversity on two special Kent habitats - the formations of subtidal chalk and rosworm, *Sabellaria spinulosa*, and the fragile sponge and anemone communities in the seabed bowls off Folkestone. Each of these important habitats is specifically highlighted for protection in the MCZ network, and knowledge of their distribution has been greatly aided by data from Seasearch. Other features surveyed included greensand reef (Ross Coral Escarpment/Hole), sandbank (Varne Bank) and mud with burrowing fauna including spoonworms (Hythe).

37 Suffolk and Norfolk wrecks: Artificial substrata are important in an area of soft sediments. Five wrecks and two marinas were dived off Suffolk and East Norfolk.

38 Sea Palling mussel bed: further survey of a mussel bed first identified in 2009. Outer limits identified but further study needed of the southerly and inner extent

39 North Norfolk chalk reef: further surveys to identify the full extent of the chalk reef which is now known to extend 30km from Cley to Trimmingham. There was considerable press interest in this survey with the reef dubbed the Great Barrier Reef of Norfolk by the Daily Mail. It is another area that has been put forward as a potential marine conservation zone as a result of the Seasearch survey work.



40 Flamborough Head: Four days of surveying around this chalk headland. Blue mussel beds were a feature.

41 Filey Brigg: the first Seasearch surveys for this area. A logistically difficult site to dive, but which will repay further visits in the future.



42 Durham Heritage Coast: despite cancellations due to bad weather and poor visibility further dives were carried out in the southern section of the Heritage Coast building on surveys made in 2009. Large areas of Blackhall Rocks were covered in a mussel bed (above), whilst a drift dive off Crimdon Beck was mostly over rippled sand with sparse mobile fauna. Small amounts of coal were recorded, reflecting the mining past of the area.

43 St Abbs and Eyemouth: The majority of records from this area followed Observer, Surveyor and Specialist courses all held at Eyemouth. Records included a group form with a list of 14 bryozoan species recorded as a part of a hydroids and bryozoans course. Also recorded were deeplet sea anemones, *Bolocera tuediae*, an Arctic species rarely seen in British waters except in the north-east.

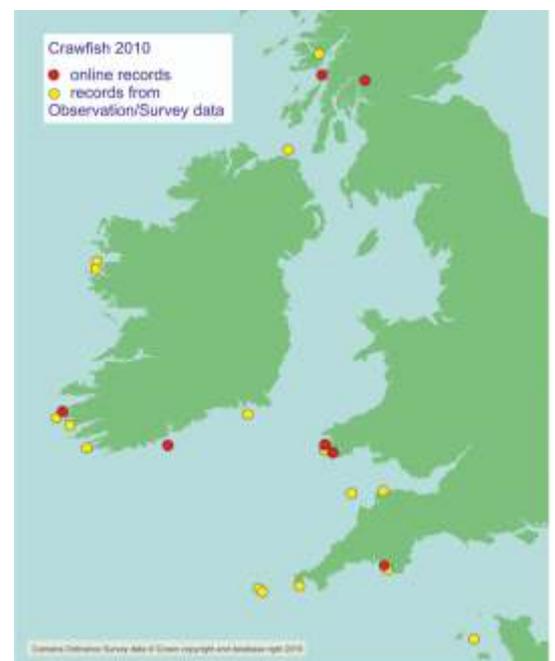
For further information on all of the surveys summarised here visit the Seasearch website which contains more detailed reports that can be viewed and downloaded.

Crawfish Records in 2010

Two projects focussed on the crawfish, crayfish or spiny lobster *Palinurus elephas* in 2010. One was a general recording project, which included an online recording facility, and the other a historical records project in Wales.

As a Biodiversity Action Plan species in the UK, crawfish are of particular interest because of the huge decline in populations in recent years. Once reasonably common on west coasts of England, Wales, Scotland and Ireland, numbers now seen by divers are very low indeed. Our online recording facility produced only 13 records in 2010 and there were 28 records from Seasearch Observation and Survey forms. The locations of the 2010 records are shown in the map to the right. Whilst they range from the Sound of Mull in the north to Sark in the south, they are nowhere common, with Mayo, Kerry, Skomer and the Isles of Scilly the only places with multiple records.

The historical records project in Wales, funded by the Wales Biodiversity Partnership, gathered records from divers going back to the 1970s. A report is available on the Seasearch website which shows how numbers recorded have dropped in the succeeding years. It identifies potential sites for monitoring and restoration projects and Seasearch is undertaking follow up studies of crawfish in North Pembrokeshire in 2011.



Species recorded in 2010

The following table provides a summary of the species records made in 2010.

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 records also include some nationally scarce and rare fishes which are not in the JNCC list and records of other southerly species..

Commonly recorded species (no. of records in brackets) **BAP, Scarce (S) and rare @ species**

Foraminifera, (8 records from sites in west coast of Scotland - cannot be identified to species)

Porifera, Sponges (85 species)

| | |
|---|---|
| <i>Cliona celata</i> , boring sponge (692) | <i>Stelletta grubii</i> , (S) 2 records from Mull and Isles of Scilly |
| <i>Pachymatisma johnstonia</i> , elephant hide sponge (435) | <i>Stryphnus ponderosus</i> @ 2 records from North Devon and South Devon |
| <i>Dysidea fragilis</i> , goosebump sponge (373) | <i>Thymosia guernei</i> , mashed potato sponge (S), 6 records from Donegal, Mayo, Galway, N Pembrokeshire & S Devon |
| <i>Hemimycale columella</i> , crater sponge (351) | <i>Suberites massa</i> @ 1 record from Dorset |
| <i>Amphilectus fucorum</i> , shredded carrot sponge (298) | <i>Adreus fascicularis</i> @ 21 records from Isles of Scilly, N & S Devon, Dorset Sark & Alderney |
| <i>Tethya citrina (aurantium)</i> , golf ball sponge (216) | <i>Axinella damicornis</i> , crumpled duster sponge (S), 64 records from Pembrokeshire, Isles of Scilly, S Devon, Sark & Alderney |
| <i>Axinella dissimilis</i> , yellow staghorn sponge (216) | <i>Phakellia ventilabrum</i> (S) 4 records from W Scotland and Outer Hebrides |
| <i>Polymastia penicillus</i> , chimney sponge (213) | <i>Desmacidon fruticosum</i> , @ 14 records from Isles of Scilly |
| <i>Raspailia ramosa</i> , chocolate finger sponge (201) | <i>Endectyon delaubenfelsi</i> 3 records from Alderney and Sark |
| | <i>Stylostichon dives</i> (S) 4 records from Isles of Scilly |
| | <i>Dysidea pallidescens</i> @ 1 record from Carlingford Lough, N Ireland |
| | <i>Tethyspira spinuosa</i> (S) 4 records from Pembs, N Devon & Lyme Bay |
| | <i>Hexadella racovitzai</i> 17 records from Isles of Scilly, Alderney and Sark |

Cnidaria, Jellyfish, hydroids, siphonophores, anemones and corals (120 species)

Jellyfish (10 species)

stalked jellyfish not identified to species 12 records from W Scotland, Donegal, Galway, Kerry, S Pembrokeshire, Scilly, N & S Devon
Haliclystus auricula (BAP), 15 records from Donegal, Galway, Scilly, S Cornwall, N & S Devon, Dorset
Lucernaria quadricornis (BAP), 7 records from Isles of Scilly
Lucernariopsis cruxmelitensis (BAP) 11 records, from Scilly & S Devon

Hydroids (50 species)

Nemertesia antennina, antenna hydroid (568)
Tubularia indivisa, oaten pipes hydroid (300)

Diphasia alata (S) 4 records from Rathlin (NI) & Isles of Scilly
Aglaophenia kirchenpaueri (S) 4 records from Mayo, Scilly & Dover
Lytocarpia myriophyllum (S) 18 records N Uist, Argyll & Isles of Scilly

Siphonophores (2 records, not identified to species) from N Rona

Anemones and corals (49 species)

Caryophyllia smithii, Devonshire cup-coral (745)
Urticina felina, dahlia anemone (610)
Alcyonium digitatum, dead men's fingers (599)
Corynactis viridis, jewel anemone (504)
Sagartia elegans, elegant anemone (504)
Metridium senile, plumose anemone (399)
Actinothoe sphyrodeta, white striped anemone (347)
Anemonia viridis, snakelocks anemone (317)

Alcyonium hibernicum, pink fingers (S) 14 records from Argyll, Donegal, Isles of Scilly, S. Devon & Sark
Swiftia pallida, northern sea fan (BAP) 24 records from Sutherland, Outer Hebrides, Skye, & Argyll
Eunicella verrucosa, pink sea fan (BAP) 154 records + dedicated survey records. Most from Devon & Cornwall but also Donegal, Sligo, Clare, Kerry, Waterford, Pembrokeshire, N Devon, Lundy, Isles of Scilly, Dorset, Alderney & Sark
Funiculina quadrangularis, tall sea pen (BAP) 8 records from Loch Carron Loch Linnhe and Sound of Mull



CW



CW

Pachycerianthus multiplicatus, fireworks anemone (S, BAP) 3 records from Loch Fyne & Loch Aline
Pachycerianthus indet. (Dorothy) 2 records from Sark
Aracnanthus sarsi @, (BAP) 1 record from Rathlin (NI)
Parazoanthus anguicomus, white cluster anemone (S) 16 records from St Kilda, Small isles, Argyll, Rathlin & Isles of Scilly (photo left)
Parazoanthus axinellae, yellow cluster anemone (S) 64 records from St Kilda, Small isles, Rathlin, Donegal, Mayo, Pembrokeshire, Isles of Scilly, S Devon, Lyme Bay, Alderney & Sark (photo left)
Anthropleura thallia, glaucous pimplet (S) 2 records from Isles of Scilly
Aiptasia mutabilis, trumpet anemone (S) 43 records from Pembrokeshire, Lundy, Isles of Scilly, Lands End, S. Devon, Lyme Bay & Dorset
Cataphellia brodrickii (S) 1 record from Isles of Scilly
Amphianthus dohrnii, sea fan anemone @, (BAP) 8 records from Isles of Scilly & Lands End
Mesacmaea mitchelli, policeman anemone (S) 4 records from North Devon, Isles of Scilly & Sark
Caryophyllia inornata, southern cup-coral @ 12 records from N & S Devon, Isles of Scilly, Lyme Bay, Dorset & Sark
Hoplantzia durotrix, Weymouth carpet coral @ 2 records from Dorset
Balanophyllia regia, scarlet and gold star coral (S) 5 records from Isles of Scilly & Sark
Leptopsammia pruvoti, sunset cup-coral @, (BAP) 11 records from Isles of Scilly, Lyme Bay & Sark

Ctenophora, Comb Jellies (2 species)

Platyhelminthes, Flat worms and Ribbon Worms (3 species)

Echiura, Spoon worms (2 species)

Commonly recorded species (no of records in brackets) **BAP, Scarce (S) and rare ® species**

Annelida, Segmented worms (34 species)

Pomatoceros triqueter/lamarckii, keelworm (492)
Bispira volutacornis, double spiral worm (305)
Lanice conchilega, sand mason worm (235)

Sabella alveloata, (BAP Habitat) 1 record from Torbay, Devon
Sabellaria spinulosa, ross worm (BAP Habitat - reefs) 15 records from Galway, Yorkshire, Norfolk and Kent
Sabella spallanzanii, 1 record from Sark

Pycnogonida, Sea spiders (32 records, most not identified to species)

Crustacea, Barnacles, amphipods, isopods, crabs, lobsters and prawns (64 species)

Cancer pagurus, edible crab (964)
Necora puber, velvet swimming crab (864)
Homarus gammarus, lobster (265)
Maja squinado, spiny spider crab (256)
Pagurus bernhardus, common hermit crab (240)
Galathea strigosa, spiny squat lobster (227)

Rissoides desmaresti, mantis shrimp, 1 record from N Devon
Periclimenes sagittifer, anemone prawn, 7 records from Dorset & Sark
Palinurus elephas, crawfish (BAP) 41 see text on page 5
Dromia personata, sponge crab (S) 3 records from Pembrokeshire & Isle of Wight
Ebalia granulosa, (S) 1 record from Loch Linnhe

Mollusca, shells, seaslugs, bivalves and cephalopods (139 species)

Calliostoma zizyphinum, painted topshell (623)
Gibbula cineraria, grey topshell (310)
Buccinum undatum, common whelk (200)
Pecten maximus, great or king scallop (200)



Haliotis tuberculata, ormer 2 records from Sark
Tritonia nilsodhneri, sea fan sea slug (S) 26 records from Donegal, Sligo, Isles of Scilly, Lands End, S Devon, Lyme Bay & Sark
Okenia elegans, (S) 6 records from Argyll, Isles of Scilly & Sark
Trapania maculata, (R) 3 records from Lyme Bay, Dorset & Sark
Trapania pallida, a sea slug (S) 11 records from Argyll, Pembrokeshire, Isles of Scilly, Lyme Bay, W Sussex, Sark
Thecacera pennigera, orange specked sea slug (S) 7 records from s Pembrokeshire, Isles of Scilly & Sark
Doris sticta, sponge sea slug (S) 37 records from Scilly, S Devon & Sark
Modiolus modiolus, horse mussel (reefs are BAP habitat) 28 records from western Scotland, Kerry & Norfolk
Limaria hians, flame shell (BAP hab) 8 records, W Scotland & Donegal
Ostrea edulis, European oyster (BAP) 42 records from Milford Haven, S Devon, Dorset, Isle of Wight & W Sussex
Arctica islandica, Icelandic cyprine (BAP) 13 records W Scotland, Cardigan Bay, Milford Haven, & Poole Bay

Brachiopoda, lamp shells (2 species)

Bryozoa, sea mats and sea mosses (57 species)

Membranipora membranacea, sea mat (397)
Alcyonidium diaphanum, finger bryozoan (385)
Flustra foliacea, hornwrack (323)
Pentapora foliacea, potato crisp bryozoan (310)
Electra pilosa, kelp fur (259)

Bugula purpurotincta, (S) 6 records from Norfolk and Suffolk
Turbicellepora magnicostata, ® 3 records from Isles of Scilly

Phoronida, horseshoe worms (1 species)

Echinodermata, starfish, sea urchins and sea cucumbers (48 species)

Asterias rubens, common starfish (969)
Echinus esculentus, common sea urchin (881)
Marthasterias glacialis, spiny starfish (651)
Holothuria forskali, cotton spinner (332)
Luidia ciliaris, seven-armed starfish (283)
Antedon bifida, common brittlestar (235)

Echinaster sepositus, red starfish, 1 record Sark
Ophiopsila aranea, ® 3 records from S. Devon

Tunicata, sea squirts (45 species)

Clavelina lepadiformis, light bulb sea squirt (463)
Botryllus schlosseri, star sea squirt (315)

Polysyncraton lacazei, ® 2 records from Sark
Phallusia mammillata, giant sea squirt (S) 21 records from Kerry, Lyme Bay & Dorset

Pisces, fishes (94 species)

(fish are not included in the JNCC rare and scarce species lists. Rarity below is based on records in the NBN)

Labrus bergylta, ballan wrasse (614)
Ctenolabrus rupestris, goldsinny (465)
Pollachius pollachius, pollack (440)
Labrus mixtus, cuckoo wrasse (355)
Scyliorhinus canicula, lesser spotted catshark (287)
Thorogobius ephippiatus, leopard spotted goby (255)
Parablennius gattorugine, tompot blenny (249)
Taurulus bubalis, long spined sea scorpion (244)
Trisopterus luscus, bib (241)
Callionymus lyra, dragonet (240)
Gobiosculus flavescens, two-spot goby (213)

Cethorinus maximus, basking shark (BAP) 1 record Isles of Scilly
Torpedo mamorata, electric ray ® 2 records Sark
Lophius piscatorius, angler fish (BAP) 15 records from Isle of Man, Mayo, S Pembrokeshire, Isles of Scilly, N & S Devon, Dorset, Sark, Flamborough, St Abbs
Molva molva, ling (BAP) 37 records N & W Scotland, Isle of Man, Northern Ireland, W, S & E Ireland
Capros aper, boar fish (R) 1 record, Isles of Scilly
Trachurus trachurus, horse mackerel (BAP) 1 record from Land's End
Crenilabrus (Symphodus) bailloni, Baillon's wrasse. ®) 3 records Dorset
Parablennius ruber, red blenny ® 18 records from W Ireland & Scilly
Tripterygion deleasi, black faced blenny ® 21 records from S Devon, Dorset, Alderney & Sark
Pleuronectes platessa, plaice (BAP) 67 records, all coasts
Balistoides carolinensis, grey triggerfish (R) 6 records Donegal & S Pems

Aves & Mammalia, birds & mammals (6 species of birds, seals, dolphin and porpoise)

Algae, seaweeds (171 species)

Laminaria hyperborea, cuvie or forest kelp (545)
encrusting algae, not identified to species (534)
Delessaria sanguinea, sea beech (410)
Dictyota dichotoma, brown fan weed (249)
Laminaria saccharina, sugar kelp (246)
Dilsea carnosa, red rags (207)
Calliblepharis ciliata, red fringed weed (201)

Gracilaria bursa-pastoris shepherd's purse wart weed (S) 1 record from Alderney
Gracilaria multipartita cleaved wart weed (S), 1 record from Dorset
Zanardinia prototypus, pennyweed (S) 8 records from Dorset
Carpomitra costata, tassel weed (S) 32 records from Isles of Scilly, S Devon, Alderney & Sark

Angiospermae, flowering plants (2 species)

Zostera marina, eelgrass (BAP habitat) 56 records from Loch Nevis, Loch Sunart, Isle of Man, Galway, Clare, W Wales, Isles of Scilly, Helford River (Cornwall), S Devon, Dorset, Isle of Wight & Alderney

Total species recorded = 885

Seasearch Training in 2010

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 33 Observer courses in 2010 from New locations for courses included Carlisle and Kilkenny. About 350 divers took part in the Observer courses, the great majority of whom were new to Seasearch.

The **Surveyor** level training is aimed at surveyors 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 and completion of 6 survey dives.

Seven Surveyor Courses were held in 2010, taking place in Devon, Kent, Anglesey, Pembrokeshire, St Abbs (Borders), Donegal and Kilkee. The last two were the first Surveyor courses held in the Republic of Ireland.

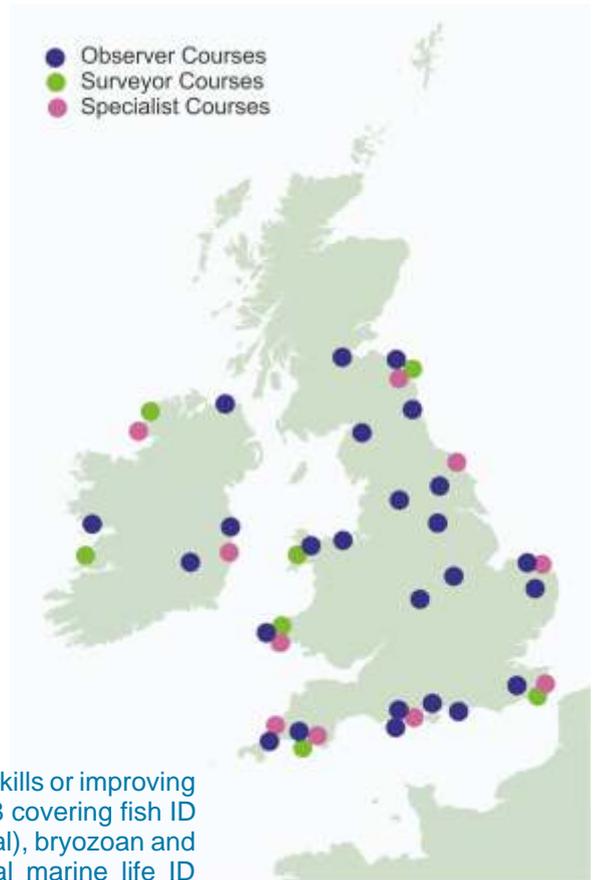
Seasearch **Specialist** courses are aimed at either teaching new survey skills or improving knowledge and identification of marine life. 11 courses were held in 2008 covering fish ID (Wicklow), sponge ID (Dover) nudibranch ID (Pembrokeshire and Donegal), bryozoan and hydroid ID (St Abbs), seaweed ID (Dorset and Cornwall) and general marine life ID (Plymouth, Norfolk, Menai Bridge and Yorkshire).

Seasearch training courses are delivered by our team of tutors, all of whom are experienced Seasearch recorders and active divers. 29 of them, taught on courses in 2010, 21 current tutors, 2 newly qualifying tutors, 2 tutors under training and 3 visiting experts.

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 2010 81 volunteers achieved the Observer qualification and 7 volunteers the Surveyor qualification.



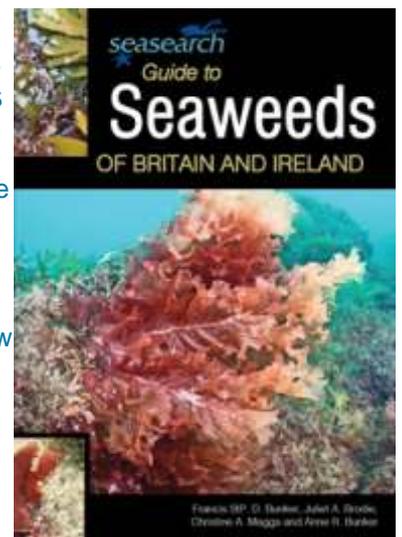
participants in the Surveyor Course in Eyemouth



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 2010 we produced a new guide to Seaweeds which has already proved very popular both with Seasearchers and shore based recorders.



We also have a general Guide to Marine Life and a guide to Anemones and Corals. A Guide to Hydroids and Bryozoans is in preparation.

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

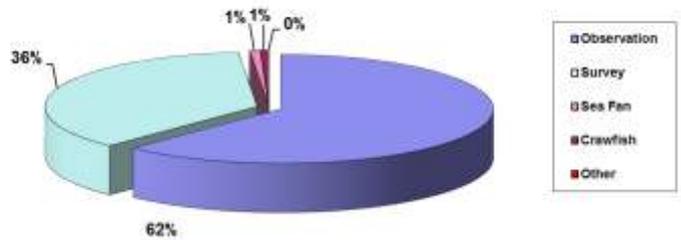
Data management and availability

A total of 2,140 forms were received from dives in 2010, with more continuing to trickle in during early 2011. The diagram to the right shows that well over half were Observation forms. However the number of Survey forms, which provide the most detailed information, was the highest ever recorded at 774 forms making 36% of the total. This is a positive development and shows that the recording skills of the volunteer divers are increasing with time. There were relatively few, detailed sea fan survey reports and few online crawfish records.

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.



MNCR biotope codes are assigned to all Survey Form data at the data entry stage. The 2010 dataset contains 1,663 MNCR biotopes. Observation Form data contains Seasearch seabed cover types, a simpler form of biotope coding appropriate to this level of details. 2,743 Seasearch seabed cover types have been assigned.

Data availability

The combined dataset is available to all Seasearch partners in Marine Recorder format or as a snapshot of the data in Microsoft Access. The dataset is also passed to the National Biodiversity Network and is made available on the NBN Gateway website for all to use. A second Google Earth map is made available to download from the Seasearch website providing a summary of the information that has gone into Marine Recorder.

The 2010 dataset comprises 89 surveys, including 1,513 'survey events' and contains 50,487 individual species records, covering 885 different species.

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. During 2010 the team has been as follows:

| | | |
|----------------------|------------------|-----------------|
| National Coordinator | Chris Wood | MCS |
| Scotland | Calum Duncan | MCS |
| North Scotland | Chris Rickard | MCS |
| West Scotland | Owen Paisley | MCS |
| Northern Ireland | Charmaine Beer | MCS |
| Republic of Ireland | Adrienne Mockler | CFT |
| Isle of Man | Tony Glen | |
| North Wales | Liz Morris | MCS |
| South & West Wales | Kate Lock | MCS |
| North East England | Carrie Pillow | MCS |
| East Anglia | Dawn Watson | MCS |
| Kent | Becky Hitchin | Kent WT |
| Sussex | Chris Williams | Natural England |
| Hants/Isle of Wight | Amy Dale | Hants WT |
| Dorset | Kathryn Dawson | Dorset WT |
| Devon | Sally Sharrock | MCS |
| Cornwall | Angie Gall | Cornwall WT |

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 organisations, communication with local volunteers, arranging training courses and surveys and representing Seasearch on local biodiversity groups.

Thanks to all the Seasearch Tutors and coordinators for their enthusiasm, organising and teaching skills during 2010 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.

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