

# ANNUAL REPORT 2017



This report summarises Seasearch activities throughout Britain and Ireland in 2017. It includes a summary of the main surveys undertaken (pages 2-8), 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 9-12) and habitats (pages 12-15). It also includes a summary of the training courses run for volunteer divers (page 16) and information on how Seasearch is organised and the data is managed and made available (page 17).

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 Surveys 2017

Seasearch continued to target much of its survey activity in existing and proposed marine protected areas. In England survey dives particularly concentrated on recommended and potential sites for Marine Conservation Zone (MCZ) designation, the third tranche of which was due to be consulted upon in 2018. In Scotland and Wales the priority species and habitat lists provided a focus for survey activity, as well as the ongoing 'gap-filling' on the map. The Channel Island of Jersey gained protected areas where trawling and dredging are banned, based largely on Seasearch data, and the Isle of Man consulted on its network of ten inshore MPAs (covering over 10% of Manx waters) to improve protection and management. Volunteer activity in Ireland was stimulated by encouraging clubs and individuals to 'Adopt A Site' and undertake monitoring dives throughout the year.

The following pages summarise the main surveys undertaken in 2017. They were arranged by Seasearch Coordinators and other volunteers; 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 (right) shows the location of all the 2017 dives. 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](http://www.nbn.org.uk). In addition to this, there are separate datasets for crawfish and pink sea fan survey forms. In some cases, Summary Reports (denoted ®) can be downloaded from the Seasearch website.



Seasearch is co-ordinated by the Marine Conservation Society (MCS) 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 2017 at a national level was given by the partners on the right in addition to the MCS.



Seasearch is coordinated and delivered locally in England by Wildlife Trust and MCS coordinators, in Scotland, Wales, Northern Ireland, Jersey and the Isle of Man by MCS coordinators and in the Republic of Ireland by the Irish Underwater Council/Comhairle Fo-Thuinn.

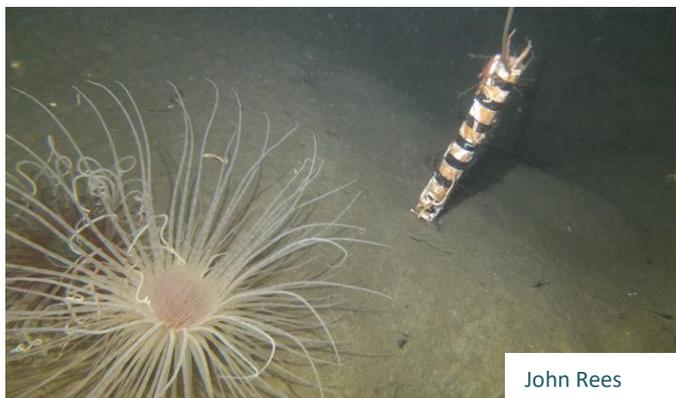
## SCOTLAND ®

**1 Orkney:** There was a departure from the Seasearch diving norm at the end of July, with volunteers involved in paleo-archaeology surveys with St Andrews University, including hammering pipes into the seabed to collect sediment peat cores (below).



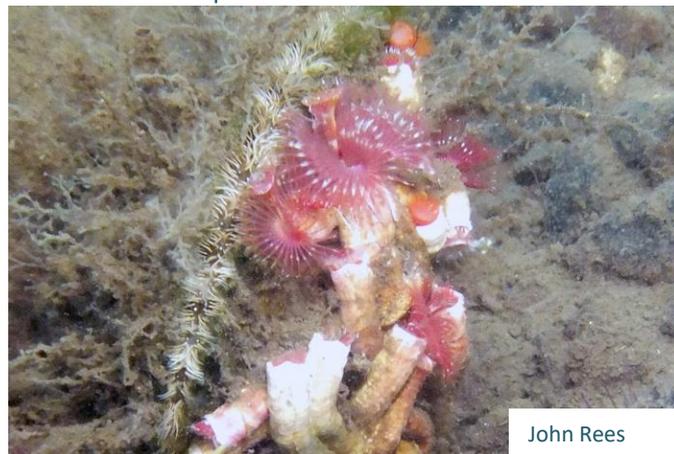
**2 Outer Hebrides liveaboard:** Poor Easter weather confined the planned expedition to the Outer Hebrides to the Sound of Mull and surrounding area. There was some satisfaction in recording numerous PMFs at more than 1 dive site, particularly dense in Loch Sunart of Fireworks anemones, all three seapen species and *Limaria* flameshell beds, as well as interesting Northern species such as the Goosefoot starfish (*Anseropoda placenta*).

**3 Argyll:** 2017 activities included ongoing monitoring of priority marine features, confirming the presence of fireworks anemones (*Pachycerianthus multiplicatus* (monitoring station in Loch Shira, below), large areas of horse mussels (*Modiolus modiolus*) at Greenock in the Clyde and regeneration of serpulid reefs in Loch Creran (the focus of a joint expedition with Seasearch Ireland in July) and West Loch Tarbert.



**4 Loch Creran serpulid reefs:** A joint expedition with Seasearch Ireland in June found a mixture of healthy and

collapsed reefs but fortunately no signs of the invasive non-native sea squirt *Didemnum vexillum*.



**5 Loch Carron ncMPA:** Seasearch-trained divers mobilised by concerned locals documented scallop dredge damage to a flameshell bed in Loch Carron in April, provided the data and evidence to Scottish Natural Heritage and the site was rapidly designated as an MPA under emergency powers in May.

**6 Wester Ross ncMPA and the Summer Isles:** Repeated trips to the Summer Isles by Inverness Sub Aqua Club and other divers provided valuable data to the local community group Sea Change. An exciting find was the anemone *Anthopleura ballii* 200 miles further north than any previous record of this species.

## WALES ®

**7 Crawfish (*Palinurus elephas*):** This priority species was the focus of targeted surveys in Pembrokeshire in 2017 and was also recorded on 'normal' Seasearch dives in both North and South Wales. This is good news for a species that was commercially and recreationally collected almost to the point of extinction in previous years but now seems to be making a comeback.

**8 North & West Anglesey:** This area was a particular focus in 2017, collecting data from previously undived sites. Two new (to Wales) sponge species were recorded: *Hexadella racovitzaei* (at Porth Namarch and East of North Stack) and the Maroon-coloured sponge *Chelonaplysilla noevus* (at the sites East of North Stack and North of Black Arch (Porth y Garan)). The distribution of the sponge *Thymosia guernei* was also extended northwards.



It wasn't all about sponges though, as there was a new record for Anglesey of the probably under-recorded red seaweed *Radicilingua thysanorhizans*; the brown seaweed *Taonia atomaria*, a species more frequently recorded in more southerly areas of the UK, was also recorded here.

**10 Llyn Peninsula:** Seasearch divers were heavily involved in the 'Dive into Monitoring: Seagrass 2017' project at Porthdinllaen (funded through Sea-Changers), establishing the extent and condition of this priority (Section 7) habitat. A relative lack of dive boat resources didn't prevent visits to six other sites, a couple of which were notable for sightings of *Echinus esculentus* (rare in this area).

**11 Menai Strait:** Five sites within this area were visited in 2017, with the highlight being a new record for North Wales of the red seaweed *Xiphosiphonia* (previously *Pterosiphonia*) *pennata* identified by the visiting Dorset Seasearch Co-ordinator (Lin Baldock), a very experienced phycologist, at Carreg Gorad Goch. This provided the first record north of Skomer in Pembrokeshire for the species (with the exception of one record on the west coast of Scotland).

**12 Milford Haven ®:** In addition to the 'usual' Seasearch dives in this area, additional surveys took place concentrating on native oyster (*Ostrea edulis*) to support the Milford Haven Oyster Regeneration Project (separate report available to download).

**14 The Smalls:** More good weather in 2017 allowed a repeat visit and further exploration of The Smalls, and once again the red blenny was recorded at this exposed offshore site.

## ENGLAND

**15 North Devon:** Good weather in August allowed sites on all coasts to be surveyed one weekend. Lundy

continues as a hotspot for independent dives and records (thanks to those who send in forms from there!) A very large assemblage of spiny spider crabs (*Maja brachydactyla*) was recorded as well as some fantastic sponge-rich sites.

Chris Webb



**16 Cornwall/Isles of Scilly:** A record number of forms was received for Cornwall/Isles of Scilly in 2017, bolstered by both Observer and Surveyor courses and lots of new keen volunteers – excellent work! Cornwall also saw the first Seasearch/NBN record of a nudibranch species (*Felimida krohni*) more usually found on the Atlantic and Mediterranean coasts of Southern Europe. Only a day later the same species was spotted on a dive in South Devon... (see below)

**17 Lizard Peninsula®:** Unusually settled conditions in mid-May allowed the first ever Seasearch dives to take place at the very exposed southernmost point of mainland UK, at Lizard Point within the SAC. Typically high-energy habitats were encountered, with deep canyons thick with *Tubularia indivisa* (oaten pipe hydroids) and enormous numbers of nudibranchs taking advantage of the riches.

Chris Wood



**18 The Manacles ®:** The area directly to the south of the existing MCZ was the focus for dives throughout the summer with the aim of gathering data to support an extension of the MCZ boundary. Crawfish (*Palinurus*

*elephas*), a feature of the MCZ, were sighted both within and on the southern reefs in good numbers. Separate reports for these surveys are available to download.

**19 South Devon:** The second Seasearch record of *Felimida krohni* occurred just a day after the first from Cornwall, a beautiful animal spotted at Hilsea Pinnacle.



The tide-swept reefs of South Devon are well-protected by SAC and MCZ designations but are very different in their marine life according to the local conditions. Organised dives continued to 'fill the gaps' and crawfish were regularly sighted. Another exciting crustacean, a slipper lobster (Scyllaridae; no photo unfortunately) was recorded at the Eddystone reefs as well as the first record for the pink fingers soft coral (*Alcyonium hibernicum*) in this area.

**20 Lyme Bay – Devon & Dorset:** Devon Seasearch continue to explore low-lying reefs on the Devon side of Lyme Bay (turn right out of Lyme Regis!) chosen from the DORIS multibeam bathymetric map. New sites on the West Tennants, Beer Ledge (Beer Home Grounds), Beer Fans and Beer Head Circular reefs supported diverse sponge, hydroid, anthozoan and bryozoan faunas with pink seafans *Eunicella verrucosa* in great abundance (frequent to abundant). Many large specimens as well as juveniles were recorded in a variety of condition from generally healthy to scoured to death, tangled with angling line (becoming sea fangles) and hosting fan anemones *Amphianthus dorhnii*.

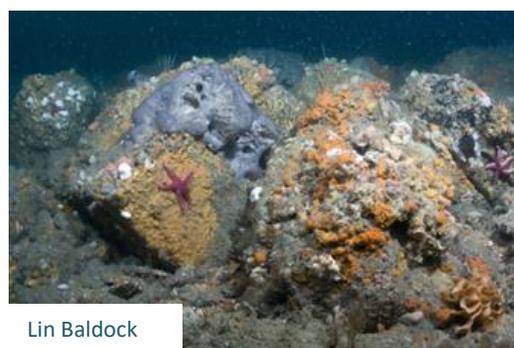
Two weekends of surveys book-ended the season on the Dorset side of the Bay, focusing on sites with low-lying reef and surrounding mobile sediment veneers (an important and under-recorded interesting habitat which is common in Dorset and has been submitted to the JNCC habitat classification review). Dense and diverse tunicate turf with many branching sponges were common, with large *Pentapora foliacea* colonies and notably very many juvenile pink seafans from short single stems 5cm high to slightly larger colonies with one or two branches.

The nationally scarce Trumpet Anemone (*Aiptasia couchii*, previously *A. mutabilis*) is commonly recorded here - Lyme Bay appears to be a stronghold for the species.

**21 Chesil Beach and Stennis Ledges MCZ:** No organised surveys visited this MPA in 2017, with planned days being lost to strong winds. The diving hotspot of Chesil Cove continues to contribute the majority of records in the close inshore area, though intrepid exploring from a couple of visiting Seasearch East divers resulted in finds of a very large anglerfish (*Lophius piscatorius*) and an unusual 'night anemone' *Halcampoides abyssorum* under a plank of wood, a nationally scarce species with only 43 records in total on the NBN Atlas (the first Seasearch record of this species occurred just one month previous to this sighting, in Jersey).



**22 South Dorset ®:** Many of the 2017 surveys in Dorset were focused on collecting evidence for recommended and potential MCZs expected to be included in the 2018 consultation. The sites included Purbeck Coast pMCZ which encompassed the tide-swept reefs near Durdle Door (live maerl and coarse sediments, as well as bream nests), Southbourne Rough pMCZ in Poole Bay which hosts the easternmost pink seafans in the UK and patch reefs just to the east of the Poole Rocks MCZ. More 'gap-filling' dives within the Studland to Portland Special Area of Conservation (SAC) surveyed some fabulous sponge- and seasquirt-covered reefs such as that shown below:



**24 Alderney snorkelling:** A grant from Sea-Changers enabled Alderney Wildlife Trust to setup a snorkelling

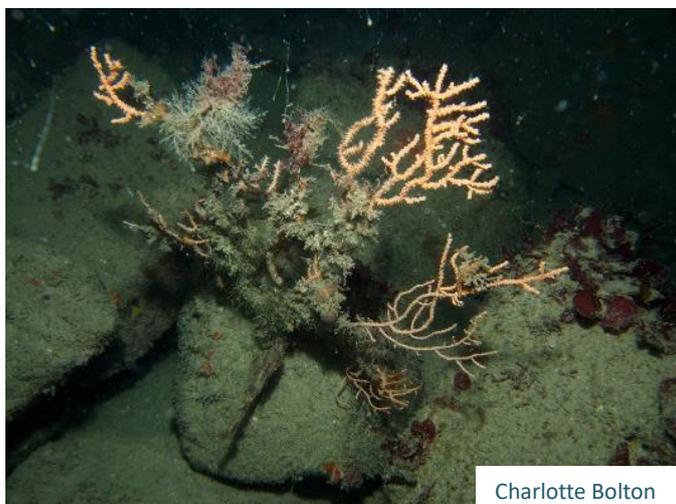
group and run an Observer course with the intention of mapping their seagrass beds and associated marine life.

**25 Guernsey expedition** ®: A short visit to Guernsey in June put some more points on the map there (including the fabulous Foreign pinnacle just outside St Peter Port Harbour) and discovered a previously-unsurveyed seagrass bed, as well as adding more crawfish records.



Charlotte Bolton

Many of the pink seafans around the island appeared to be in fairly poor condition and heavily fouled, which will bear further monitoring.



Charlotte Bolton

**26 Jersey:** The annual reef survey continued the investigation of the high-energy Sauvage Reef as well as other remote sites. The result was a much more expanded database of the Minquiers Reef and the first survey of the heavily dredged seabed south of the Violet bank. A highlight was when the team disturbed several Stingrays.

For the first time, tides allowed a survey of the Rock Barge, located just east of Corbière. This box-like vessel, with vertical sides and a flat deck potentially could provide an ideal artificial reef. On the 3 visits so far, this site has lived up to expectations producing some exciting finds including a white seafan and resident nudibranch

(*Tritonia nilsodhneri*) and the rare sunset cup coral *Leptopsammia pruvoti*. Seafans (*Eunicella verrucosa*) will be a priority for monitoring in 2018.

**27 Solent and Isle of Wight** ®: Survey effort in Hampshire and around the Isle of Wight in 2017 was again hampered by a lack of resources and bad weather which forced the cancellation of a planned day hunting for maerl in Sandown Bay. A day out in the East Solent with fabulous conditions in late August allowed local Seasearchers to put another point on the map in the Utopia MCZ and enjoy a spoonworm-filled drift across the mud in the Bembridge rMCZ. The population of these Echiuran worms appears to be persisting despite its location adjacent to the large ship anchorage. Dives organised by the National Oceanography Centre surveyed Yarmouth Pier on the north coast of the Isle of Wight and the seagrass beds in Colwell and Totland Bays.

**28 Kent Marine Conservation Zones** ®: Kent currently has 3 Marine Conservation Zones (MCZs) around Dover – Dover to Deal MCZ, Dover to Folkestone MCZ (both designated in 2016) and Folkestone Pomerania MCZ (designated in 2013), all of which were visited over the course of 11 diving days in 2017. All surveys focused on finding evidence of Marine Conservation Zone Features – either previously-recorded habitat (biogenic *Sabellaria* reefs) or evidence of the on-going presence of certain features (blue mussels, sub-tidal chalk etc.) that were left out of the original designation due to a technicality.



Will Martin



Will Martin

The recommended MCZ at Hythe Bay was dived to gather evidence of the presence of spoon worms *Maxmuelleria lankesteri* (a key species in the community proposed for protection) and to visit an area of the site that is believed not to be trawled, to investigate whether the community differed from a trawled area previously surveyed.

**29 East Anglia ®:** Seasearch East started 2017 with three main aims; exploring sites with little previous diving, returning to sites first explored in 2016 to consolidate baseline data and to train and support new Seasearch Observers who could go on to be useful long-term members of the team.

Very long transects (up to 800m) were mapped at Overstrand, Salthouse, Weybourne and Sheringham, revealing interesting new habitats to explore more fully in 2018. Sites at Lowestoft in Suffolk, the Blackwater estuary and in the centre of the Wash were returned to and seasonal changes recorded.

**30 East Anglia – Essex:** One site on the Blackwater estuary was visited with the help of Colchester BSAC in their new RHIB. The nationally rare sponge *Suberites massa* was locally common and was subsequently recorded as frequent at several chalk sites in Norfolk. An adult *Raja clavata* was seen and had to be photographed as a mosaic, as the camera was set up for macro! Lots of *Aplysia punctata* spawn was present, but no adults seen.

**31 East Anglia – Suffolk:** An opportunistic dive was done at the mouth of the River Deben, collecting samples to examine as the visibility was 0m. The seabed was mobile barren mud with no life present, but the mooring chain was home to *Tubularia indivisa*, *Jassa* amphipods and several algae species.



Dawn Watson

Two surveys a month apart were done at 'Childrens Corner' in Lowestoft, with additional angling records from the same spot. *Parablennius gattorugine*, *Gobius paganellus*, *Raniceps raninus*, *Chartella papyracea* and *Phoronis hippocrepi* were all recorded. The *Chartella papyracea* is common on the outer harbour wall, but to

date not been recorded from any other sites in East Anglia.

**32 East Anglia - North Norfolk:** Efforts were made to push the boundaries of known sites in North Norfolk by using neap slacks to get further out and along from entry points than previously managed. Several new habitats and species were recorded, including the remains of a huge wreck and reef of soft boulders at Salthouse, *Ampelisca* beds and two 4m high isolated chalk outcrops off Overstrand and a possible new *Haliclona* (sponge) species on the flint plain off Sheringham. All new areas were mapped using towed GPS buoys.



Dawn Watson

**33 Lincolnshire and The Wash:** Two days of diving were conducted with the Eastern IFCA on their survey boat, doing drifts in three areas under consideration for a shrimp fishing trial and returning to a colonisation plate array on the SONDE buoy.

The burrowing sea cucumber *Paracucumaria hyndmani* was recorded by Michael Southwood on the second of the three drifts, a new species for East Anglia! Large numbers of *Echinocardium cordatum* tests had been revealed and collected by sediment movements, suggesting that the animals occur quite frequently in the local seabed, though no live individuals have been seen.

Michael Southwood



### 34 Yorkshire

Despite cancellation of several planned dives due to bad weather, Seasearchers managed to survey 5 sites in Yorkshire, thanks again to support from Scarborough dive club South Bay Scuba. A resurvey of Calf Allen Rocks showed that the edible mussels (*Mytilus edulis*) which had completely covered the reef the previous year had largely vanished, no doubt due to the large numbers of common starfish (*Asterias rubens*) observed preying on them. Interesting species observed on Yorkshire dives this year included the colourful nudibranch *Tenellia caerulea*, squid *Alloteuthis* sp. and such large numbers of *Pycnogonida* that one dive site was named 'Spider Reef'! A night dive in Scarborough's North Bay revealed the nocturnal foraging of large numbers of crustaceans and flat fish.

### 35 Durham Heritage Coast

With support from the Durham Heritage Coast Partnership, Seasearch dives and snorkels were carried out at 13 sites on the Tyne to Tees coast, an area which was formerly heavily polluted by coal mining but is now recovering and thriving. Highlights included a young John Dory (*Zeus faber*) and curled octopus (*Eledone cirrhosa*) seen on wreckage, and the first record for the English East Coast of the nudibranch *Favorinus blianus* which preys on the eggs of other sea slugs. Towards the end of 2017 we heard the fantastic news that the Heritage Coast Partnership had secured £2.9m from the Heritage Lottery Fund to develop and deliver projects to benefit coastal heritage in this area. Seasearch looks forward to supporting delivery of this wonderful initiative!

### 36 Coquet to St Mary's MCZ

Seasearch dives and snorkels were carried out at 12 sites within Coquet to St Mary's MCZ and a further 7 sites on the Tyne and Wear coast outside the MCZ. Financial support for these dives was provided by the North Sea Wildlife Trusts. One of the most striking features of this year's dives was the presence of large numbers of spawning sea hares, *Aplysia punctata*. These were seen at several sites throughout summer and autumn, often forming mating chains of 5-6 individuals! Snorkelling generated records of several species for which there were no previous records on the NBN Atlas for this stretch of coast, including the solar-powered sea slug *Elysia viridis* and the stalked jellyfish *Craterolophus convolvulus* and *Haliclystus octoradiatus*. A shore dive for the Porcupine Marine Natural History Society field trip in September revealed the tiny transparent goby *Aphia minuta* – a species with only 30 records on the NBN Atlas for the whole of the UK!

### 37 Berwickshire and North Northumberland Coast SAC

Four Seasearch dives were carried out at the Farne Islands as part of the Porcupine Marine Natural History

Society field trip. In addition to the usual inquisitive seals, divers recorded a wide range of flora and fauna, including Yarrell's blenny (*Chirolophis ascanii*), conger eels (*Conger conger*), pin-head sea squirts (*Pycnoclavella stolonialis*) and tiny *Sarcodictyon* sp., a stoloniferan octocoral. Seasearch snorkels were carried out at a further three sites within the SAC, where one of the most exciting discoveries was a population of the stalked jellyfish *Calvadosia cruxmelitensis*, a priority species for which there are no previous records on the English East coast.

### 37 North-west England ®: This region, from Liverpool

Bay in the south to Morecombe Bay in the north, is a very challenging with strong currents, no shelter or lee from wind, no charter boats and a fairly flat seabed. Despite these barriers, West Lancs SAC, based in Blackpool, were keen to get involved in Seasearch and put some points on the map.

**38 NW England – Dukes Dock, Liverpool:** Since the opening of The Albert Dock complex for leisure purposes in 1986, the marine life is flourishing and appears very healthy. Water quality is paramount as this is a public place and the marine life is very important in helping to achieve this. Litter is present as one would expect with a heavy footfall but a lot of this provides shelter for crabs and fish plus growth opportunities for algae and squirts. All of the training dives for this region take place in the dock.

The main features are silty seabed and stone dock walls. *Mytilus edulis* is the predominant mollusc recorded with very large specimens observed, thriving in the absence of its main predator, *Asterias rubens*. Cockles were also seen which is very encouraging as these are an indicator of good water quality. Fish life in the docks is spectacular. Shoals of *Trisopterus luscus* (bib) and *Gobiusculus flavescens* (2 spot gobies) were common, while European eels (*Anguilla anguilla*) were recorded along with black gobies, *Gasterosteus aculeatus* (3 spined sticklebacks), *Taurulus bubalis* (scorpion fish) and the snake pipefish, *Entelurus aequoreus*. *Aurelia aurita* scyphysta were common on the dock walls which lead to quite an explosion of moon jellies in the summer months.

**39 NW-England – Liverpool Bay:** With the help of West Lancs SAC, two wrecks were surveyed in the area off Blackpool. Echinoderms were the dominant phyla around the Crusader wreck but *Pomatoschistus* sp. and rays were also common along with hermit crabs, *Janice conchilega* (sand mason worms) and *Inachus* sp. The wreck of the Stone Barge approximately 1.5 km west of Blackpool Pleasure Beach was quite spectacular. It is believed that the barge was carrying stones for the construction of the pier when it sank. *Metridium dianthus* (plumose anemones) and *Alcyonium digitatum*

(dead men's fingers) covered the wreck and crustacean and fish life was prolific.

## Species recorded in 2017

A total of 52,754 taxon records were made during 2017. 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.

Phyla and commonly recorded species (> 200 records)	Priority (P), Scarce (S), Rare (R) & Non-native (NN) species
<p><b>FORAMINIFERA</b>, (35 records - 2 taxa)</p>	
<p><b>BACTERIA</b>, (13 records, 2 taxa)</p>	
<p><b>ENTOPROCTA</b>, (14 records, 1 taxon)</p>	
<p><b>PORIFERA</b>, Sponges (5406 records, 100 taxa)</p> <p><i>Cliona celata</i> (477 records), crusts (not identified to species) (412), <i>Amphilectus fucorum</i> (354), <i>Dysidea fragilis</i> (323), <i>Sycon ciliatum</i> (297), <i>Hemimycale columella</i> (268), <i>Pachymatisma johnstoni</i> (226), <i>Halichondria panicea</i> (203)</p>	<p><i>Desmacidon fruticosum</i> (R, 2 records from Isles of Scilly and Sound of Mull)</p> <p><i>Dysidea pallescens</i> (R, 10 records in Dorset and Norfolk)</p> <p><i>Suberites massa</i> (R, 24 records in Devon, Essex and Norfolk)</p> <p><i>Adreus fascicularis</i> (S, 15 records in Dorset, Devon and Jersey)</p> <p><i>Axinella damicornis</i> (S, 49 records in Isle of Man, North Wales, Pembrokeshire, Isles of Scilly, Devon and Channel Islands)</p> <p><i>Tethyspira spinosa</i> (S, 1 record from Cornwall)</p>
<p><b>CNIDARIA</b>, Jellyfish, hydroids, siphonophores, anemones and corals (7766 records, 164 taxa)</p>	
<p><b>Jellyfish</b> (218 records, 16 taxa)</p>	<p><i>Lucernariopsis campanulata</i> (P, 7 records in Skye, Sound of Jura Norfolk and Dorset)</p> <p><i>Lucernariopsis cruxmelitensis</i> (P, 5 records in Skye, Co. Down, Northumberland and Dorset)</p> <p><i>Halicyclustus auricula</i> (P, 1 record in Co. Antrim)</p>
<p><b>Hydroids</b> (3004 records, 75 taxa)</p>	<p><i>Aglaophenia kirchenpaueri</i> (S, 19 records from Pembrokeshire, Isle of Man, Cornwall, Isles of Scilly and Devon)</p> <p><i>Laomedea angulata</i> (S, 9 records in Jersey, Dorset, Cornwall and Isles of Scilly)</p> <p><i>Tamarisca tamarisca</i> (S, 1 record in Loch Linnhe)</p>
<p><b>Anemones and corals</b> (4540 records, 71 taxa)</p>	<p><i>Amphianthus dohrnii</i> (P/R, 25 records from Sound of Mull, Devon and Cornwall)</p> <p><i>Eunicella verrucosa</i> (P, 226 records from Channel Islands, Dorset, Devon, Cornwall, Isles of Scilly and Co. Donegal)</p> <p><i>Swiftia pallida</i> (P, 19 records from Outer Hebrides, Small Isles, Sound of Mull, Loch Sunart)</p> <p><i>Pachycerianthus multiplicatus</i> (P, 27 records from West Scotland and Co. Galway (<b>photo left</b>))</p> <p><i>Funiculina quadrangularis</i> (P, 25 records from West Scotland)</p> <p><i>Leptopsammia pruvoti</i> (P, 4 records from South Devon, Isles of Scilly and Jersey)</p> <p><i>Hoplanguia durotrix</i> (R, 1 record from South Devon)</p> <p><i>Scolanthis callimorphus</i> (R, 1 record in Co. Galway)</p> <p><i>Aiptasia couchii</i> (was <i>A. mutabilis</i>) (S, 45 records from Dorset, South Devon, Cornwall, Lundy and Jersey)</p> <p><i>Parazoanthus anguicomus</i> (S, 11 records from West Scotland and Outer Hebrides)</p>
 <p>Charlotte Bolton</p>	

**Phyla and commonly recorded species (> 200 records)**

**Priority (P), Scarce (S), Rare (R) & Non-native (NN) species**

**CTENOPHORA**, Comb Jellies (28 records, 6 taxa)

**PLATYHELMINTHES**, Flat worms (79 records, 3 taxa)

**NEMERTEA**, Ribbon Worms (59 records, 4 taxa)

**ECHIURA**, Spoon Worms (20 records, 3 taxa)

**ANNELIDA**, Segmented worms (2673 records, 70 taxa)

*Spirobranchus* (579 records), *Lanice conchilega* (337), *Bispira voluticornis* (237), *Sabella pavonina* (228; **photo below**)

Lin Baldock



*Sabellaria spinulosa* (Priority habitat when reef-forming, 61 records from North Wales (Anglesey, Menai Strait), Devon, Dorset, East Solent, Sussex, Suffolk, Norfolk, Yorkshire, Durham Heritage Coast, Tyne & Wear; most not reef-forming)

*Serpula vermicularis* (Priority habitat when reef-forming, 133 records from Orkney, West Scotland, Co. Galway, Co. Mayo, Anglesey, Cornwall, South Devon, Dorset and Jersey; most not reef-forming)

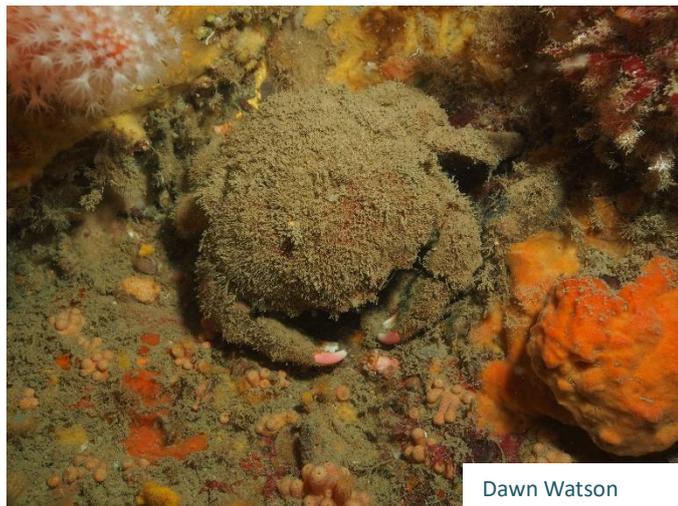
*Sabella spallanzani* (southerly) – 1 record from Jersey

**PYCONOGONIDA**, Sea spiders (39 records, 3 taxa)

**BRACHIOPODA**, Brachiopods (10 records, 2 taxa)

**CRUSTACEA**, Barnacles, amphipods, isopods, crabs, lobsters and prawns (5758 records, 111 taxa)

*Necora puber* (666 records), *Cancer pagurus* (664), *Cirripedia* (405), *Homarus gammarus* (331), *Pagurus bernhardus* (328), *Carcinus maenas* (289), *Maja brachydactyla/squinado* (289), *Macropodia* (214), *Inachus* (230)



Dawn Watson

*Palinurus elephas* (P, 93 records in Co. Donegal, Co. Cork, Co. Antrim, Rathlin, Cornwall, Devon, Lundy, Pembrokeshire, North Wales, Outer Hebrides, Jersey and Guernsey)

*Dromia personata* (S, 3 records in Lundy, Pembrokeshire and Guernsey (**photo left**))

*Austrominius modestus* (NN, 2 records in Dorset, Cornwall & N. Wales)

*Periclimenes sagittifer* (southerly) – 13 records in Dorset, Devon and Jersey

**MOLLUSCA**, shells, sea slugs, bivalves and cephalopods (5005 records, 247 taxa)

*Calliostoma zizyphinum* (462 records), *Gibbula cineraria* (275), *Pecten maximus* (240), *Buccinum undatum* (222), *Aequipecten opercularis* (221)



Hayden Close

*Ostrea edulis* (P, 34 records from Jersey, Cornwall, Devon, Dorset, Isle of Wight, Sussex, West Scotland and Co. Galway)

*Arctica islandica* (P in Wales (1 record of an empty shell))

*Facelina annulicornis* (P in Scotland (1 record))

*Limaria hians* (Priority habitat, 10 records from West Scotland and Orkney)

*Modiolus modiolus* (Priority habitat, 77 records from Northern Ireland, North Wales, Isle of Man, West Scotland, Orkney and Northumberland)

*Acanthocardia aculeata* (R, 2 records from Dorset and Devon)

*Okenia elegans* (R, 6 records from Cornwall, Isles of Scilly, Pembrokeshire, Isle of Man and Loch Sunart)

*Trapania maculata* (R, 1 record from Isle of Wight)

*Tritonia nilsodhneri* (S, 89 records from Channel Islands, Dorset, Devon and Cornwall)

*Trapania pallida*, (S, 2 records from Dorset and Isles of Scilly)

*Doris sticta* (S, 1 record from Pembrokeshire; **photo left**)

<b>Phyla and commonly recorded species (&gt; 200 records)</b>	<b>Priority (P), Scarce (S), Rare (R) &amp; Non-native (NN) species</b>
	<p><i>Crepidula fornicata</i> (NN, 169 records from Cornwall, Devon, Dorset, Hampshire/IOW, Sussex, Kent, East Anglia, Pembrokeshire and Jersey)</p> <p>Southerly species: <i>Haliotis tuberculata</i> (6 records in Guernsey and Jersey)</p>
<b>BRYOZOA</b> , sea mats and sea mosses (3729 records, 88 taxa)	<p><i>Schizobrachiella sanguinea</i> (R, 2 (uncertain) records in Dorset) <i>Bugula neritina</i> (NN, 1 record in Dorset) <i>Tricellaria inopinata</i> (NN, 4 records in Devon, Dorset, Hampshire/IOW and Loch Long) <i>Watersipora subatra</i> (was <i>W. subtorquata</i>) (NN, 4 records in Dorset)</p>
<b>PHORONIDA</b> , horseshoe worms (64 records, 3 taxa)	
<b>ECHINODERMATA</b> , starfish, sea urchins and sea cucumbers (4185 records, 61 taxa)	
<p><i>Asterias rubens</i> (717 records), <i>Echinus esculentus</i> (601), <i>Marthasterias glacialis</i> (511), <i>Henricia</i> (386), <i>Antedon bifida</i> (245), <i>Crossaster papposus</i> (211)</p>	<p><i>Ophiopsila aranea</i> (R, 4 records from South Devon)</p> <p><i>Polysyncraton lacazei</i> (R, 13 records from Jersey and Guernsey) <i>Pycnoclavella aurilucens</i> (S, 63 records from Sussex, Channel Islands, Dorset, Devon, Lundy, Cornwall, Pembrokeshire, North Wales, Isle of Man, Co. Kerry) <i>Phallusia mammillata</i> (S, 57 records from Jersey, Dorset and Devon) <i>Corella eumyota</i> (NN, 7 records in Anglesey, Dorset, Devon, Norfolk, Yorkshire, Tyne &amp; Wear and Orkney), <i>Perophora japonica</i> (NN, 9 records in Norfolk and Jersey), <i>Botrylloides diegensis</i> (NN, 7 records in Co. Clare, Dorset and Jersey), <i>Botrylloides violaceus</i> (NN, 3 records in Devon), <i>Styela clava</i> (NN, 47 records in Dorset, Jersey, North Wales, Co. Galway, Cornwall, South Devon, West Scotland, Hampshire/IOW, Sussex and Suffolk)</p>
<b>TUNICATA</b> , sea squirts (3970 records, 75 taxa)	<p><i>Clavelina lepadiformis</i> (394 records), <i>Botryllus schlosseri</i> (308), <i>Ascidia mentula</i> (266)</p>
<b>PISCES</b> , fishes (4995 records, 146 taxa) (fish are not included in the JNCC rare and scarce species lists)	<p><i>Labrus bergylta</i> (411 records), <i>Ctenolabrus rupestris</i> (340), <i>Labrus mixtus</i> (279), <i>Pollachius pollachius</i> (267), <i>Pomatoschistus</i> (230), <i>Parablennius gattorugine</i> (223), <i>Gobiusculus flavescens</i> (220), <i>Scyliorhinus canicula</i> (208), <i>Taurulus bubalis</i> (202)</p> <p><i>Anguilla anguilla</i> (P, 3 records in Sussex and Norfolk) <i>Gadus morhua</i> (P, 29 records in Orkney, Arran, West Scotland, Norfolk, Durham Heritage Coast, Northumberland, Co. Cork, Co. Down and Isle of Man) <i>Merlangius merlangus</i> (P, 4 records from Co. Cork and North Wales) <i>Molva molva</i> (P, 16 records from Arran, Orkney, West Scotland, South Devon, Co Donegal, Co. Cork, Co. Galway, Co. Antrim, Isle of Man, Cornwall and Dorset) <i>Lophius piscatorius</i> (P, 9 records from St Abbs, West Scotland, Durham Heritage Coast, Tyne &amp; Wear, South Devon, Dorset and Cornwall) <i>Ammodytes tobianus</i> (P, 4 records from Dorset, Guernsey, Jersey and Isle of Man) <i>Pleuronectes platessa</i> (P, 47 records from all coasts) <i>Solea solea</i> (P, 8 records from Jersey, Co. Down, Dorset, Sussex and Norfolk) <i>Dipturus batis</i> (P, 2 records from Outer Hebrides) <i>Raja undulata</i> (P, 6 records from Devon, Dorset and Jersey) <i>Raja clavata</i> (P in Wales (1 records) and Scotland (13 records))</p> <p>Southerly species: <i>Tripterygion delaisi</i> (11 records) <i>Parablennius ruber</i> (5 records) <i>Parablennius pilicornis</i> (2 records; <b>photo left</b>) <i>Symphodus ballioni</i> (10 records) <i>Balistes capriscus</i> (1 record) <i>Spondylosoma cantharus</i> (8 records)</p>
 <p>Cath Quick</p>	
<b>AVES &amp; MAMMALIA</b> , birds & mammals (27 records of birds, seals and dolphins, 5 taxa)	
<b>ALGAE</b> , seaweeds (8878 records, 265 taxa)	
<b>Rhodophycota</b> , Red seaweeds (5099 records, 168 taxa)	

<b>Phyla and commonly recorded species (&gt; 200 records)</b>	<b>Priority (P), Scarce (S), Rare (R) &amp; Non-native (NN) species</b>
<p>Rhodophyta (400 records), <i>Delessaria sanguinea</i> (358), <i>Heterosiphonia plumosa</i> (264), Corallinaceae (256), <i>Calliblepharis ciliata</i> (247), <i>Plocamium</i> (232)</p>  <p style="text-align: right;">Charlotte Bolton</p>	<p><i>Gelidiella calcicola</i> (R, 1 record from Rhum)  <i>Gracilaria bursa-pastoris</i> (S, 10 records from Dorset and Hampshire/IOW)  <i>Gracilaria multipartita</i> (S, 6 records from Dorset)  <i>Asparagopsis armata</i> (NN, 53 records from Jersey, Guernsey, Hampshire/IOW, Dorset, Devon, Cornwall, Isles of Scilly and Isle of Man; <b>photo left</b>),  <i>Bonnemaisonia hamifera</i> (NN, 12 records from Northern Ireland and Dorset)  <i>Antithamnionella ternifolia</i> (NN, 12 records from Northern Ireland, Dorset and Isle of Man)  <i>Dasysiphonia (was Heterosiphonia) japonica</i> (NN, 53 records from West Scotland, Co. Mayo, Co. Galway, Isle of Man and Dorset),  <i>Anotrichium furcellatum</i> (NN, 2 records from Jersey)  <i>Solieria chordalis</i> (NN, 19 records from Jersey, Cornwall and Dorset)  <i>Grateloupia turuturu</i> (NN, 2 records from Dorset)  Maerl (Priority habitat, 82 records, most not identified to species, from Channel Islands to Orkney on south/western coasts; high abundances (maerl beds in <b>Jersey, Ireland, Isle of Man, Falmouth and West Scotland</b>)</p>
<b>Phaeophyceae, Brown seaweeds (2646 records, 67 taxa)</b> <i>Laminaria hyperborea</i> (429 records), <i>Dictyota dichotoma</i> (356), <i>Saccharina latissima</i> (226)	<p><i>Carpomitra costata</i> (S, 15 records from Guernsey, Devon, Cornwall, Isle of Man and West Scotland)  <i>Sargassum muticum</i> (NN, 73 records from Jersey, Guernsey, Devon, Cornwall, Isles of Scilly, Ireland, West Scotland, Isle of Man, Essex, Kent, Sussex, Hampshire/IOW and Dorset)  <i>Undaria pinnatifida</i> (NN, 12 records from Dorset and South Devon)  <i>Colpomenia peregrina</i> (NN, 31 records from Jersey, Guernsey, Dorset, Devon, Isles of Scilly, Co. Galway, Isle of Man, West Scotland, Tyne and Wear and Hampshire/IOW)</p>
<b>Chlorophycota, Green seaweeds (508 records, 26 taxa)</b>	
<b>ANGIOSPERMAE, flowering plants (57 records, 1 taxon)</b>	<p><i>Zostera marina</i> (Priority habitat, 57 records from Scotland, Isle of Man, North Wales, Ireland, Isles of Scilly, Cornwall, Devon, Dorset, Hampshire/IOW and Channel Islands)</p>

**TOTAL TAXA RECORDED = 1350**

### 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<sup>1</sup>. This is carried out by a post survey assessor rather than the recorder themselves as it requires specialist knowledge of the biotope system.

During 2017 3428 SCTs and Biotopes were identified, of which 64% (2199) were MNCR Biotopes & 36% (1229) SCTs.

### Seabed Cover Types

The 1229 SCTs recorded were divided as follows:

- Kelp forest and kelp park 213
- Mixed seaweeds 288
- Encrusting pink algae 53
- Short animal turf on rock 315
- Tall animal turf on rock 190
- Animal beds (*e.g.* mussels, brittlestars) 6
- Sediment with life apparent 144
- Barren sediment 20

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.

<sup>1</sup> JNCC (2015) The Marine Habitat Classification for Britain and Ireland Version 15.03 [Online]. [Accessed 2018-08-08]. Available from: [jncc.defra.gov.uk/MarineHabitatClassification](http://jncc.defra.gov.uk/MarineHabitatClassification)

## MNCR 15.03 Biotopes

The 2199 biotopes assigned were divided by main habitat as follows:

- Littoral rock/sediment 24
- Infralittoral rock 662
- Circalittoral rock 788
- Sublittoral sediment 725

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<sup>2</sup>. 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.SfR: Soft rock communities; 4 records from Norfolk and Sussex

CR.MCR.SfR.Hia: *Hiatella*-bored vertical sublittoral rock; 2 records from Kent and Yorkshire

CR.MCR.SfR.Pid: Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay; 17 records (not all on chalk) from Kent, Devon and Norfolk

CR.MCR.SfR.Pol: *Polydora* sp. tubes on moderately exposed sublittoral soft rock: 24 records from Norfolk

### Tide-swept channels

CR.HCR.FaT: Very tide-swept faunal communities: 1 record from Grassholm, Pembrokeshire

CR.HCR.FaT.CTub: *Tubularia indivisa* on tide-swept circalittoral rock: 9 records from Cornwall, Devon, Pembrokeshire and Norfolk

CR.HCR.FaT.CTub.Adig: *Alcyonium digitatum* with dense *Tubularia indivisa* and anemones on strongly tide-swept circalittoral rock: 1 records from Grassholm, Pembrokeshire

CR.HCR.FaT.CTub.CuSp: *Tubularia indivisa* and cushion sponges on tide-swept turbid circalittoral rock: 2 records from Grassholm, Pembrokeshire

IR.MIR.KR.LhypT: *Laminaria hyperborea* on tide-swept, infralittoral rock: 2 records from Dorset and West Scotland

IR.MIR.KR.LhypT.Ft: *Laminaria hyperborea* forest, foliose red seaweeds and a diverse fauna on tide-swept upper infralittoral rock: 7 records from Cornwall, Dorset, Anglesey, West Scotland and Guernsey

IR.MIR.KR.LhypT.Pk: *Laminaria hyperborea* park with hydroids, bryozoans and sponges on tide-swept lower infralittoral rock; 3 records from Jersey, Cornwall and West Scotland

IR.MIR.LhypTX.Ft: *Laminaria hyperborea* forest and foliose red seaweeds on tide-swept upper infralittoral mixed substrata: 4 records from West Scotland

IR.MIR.LhypTX.Pk: *Laminaria hyperborea* park and foliose red seaweeds on tide-swept upper infralittoral mixed substrata: 4 records from West Scotland and Isle of Man

IR.MIR.KT: Kelp and seaweed communities in tide-swept sheltered conditions: 4 records from Isles of Scilly, Menai Strait and Skye

IR.MIR.KT.LdigT: *Laminaria digitata*, ascidians and bryozoans on tide-swept sublittoral fringe rock: 3 records from Loch Creran and Kylesku

IR.MIR.KT.LsacT: *Laminaria saccharina* with foliose red seaweeds and ascidians on sheltered tide-swept infralittoral rock: 4 records from West Scotland

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<sup>2</sup> See <http://jncc.defra.gov.uk/page-5706> and links therein

IR.MIR.KT.XKT: Mixed kelp with foliose red seaweeds, sponges and ascidians on sheltered tide-swept infralittoral rock: 1 record from West Scotland (Kerrera)

### **Fragile Sponge and Anthozoan Communities**

CR.HCR.XFa.ByErSp.DysAct: Mixed turf of bryozoans and erect sponges with *Dysidea fragilis* and *Actinothoe sphyrodeta* on tide-swept wave-exposed circalittoral rock: 3 records from Jersey, Dorset and Anglesey

CR.HCR.XFa.ByErSp.Eun: *Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock: 45 records from Cornwall, Devon & Dorset

CR.HCR.XFa.ByErSp.Sag: Mixed turf of bryozoans and erect sponges with *Sagartia elegans* on tide-swept circalittoral rock: 3 records from Norfolk and Devon

CR.HCR.XFa.SwiLgAs: Mixed turf of hydroids and large ascidians with *Swiftia pallida* and *Caryophyllia smithii* on weakly tide-swept circalittoral rock: 1 record from the Small Isles (West Scotland)

CR.MCR.EcCr.CarSwi: *Caryophyllia smithii* and *Swiftia pallida* on circalittoral rock; 5 records from West Scotland and the Outer Hebrides

CR.MCR.EcCr.CarSwi.Aglo: *Caryophyllia smithii*, *Swiftia pallida* and *Alcyonium glomeratum* on wave-sheltered circalittoral rock: 7 records from West Scotland (Kerrera)

### ***Sabellaria spinulosa* reefs**

CR.MCR.CSab.Sspi: *Sabellaria spinulosa* encrusted circalittoral rock: 3 records from Yorkshire, Anglesey and Dorset

CR.MCR.CSab.Sspi.ByB: *Sabellaria spinulosa* with a bryozoan turf and barnacles on silty turbid circalittoral rock; 3 records from Poole Bay (Dorset)

### **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: 108 records

SS.SCS.ICS: Infralittoral coarse sediment 60 records

SS.SSa: Sublittoral sands and muddy sands: 12 records

SS.SSa.CFiSa: Circalittoral fine sand: 8 records

SS.SSa.CMuSa: Circalittoral muddy sand: 7 records

SS.SSa.IFiSa: Infralittoral fine sand: 25 records

SS.SSa.IMuSa: Infralittoral muddy sand: 3 records

### **Horse mussel beds**

SS.SBR.SMus.ModHAs: *Modiolus modiolus* beds with fine hydroids and large solitary ascidians on very sheltered circalittoral mixed substrata: 15 records from West Scotland and Orkney

### **Mud Habitats in deep water**

SS.SMu.CFiMu: Circalittoral fine mud: 20 records from West Scotland, Co. Mayo, Co. Galway, Dorset and South Devon

SS.SMu.CFiMu.BlyrAchi: *Brissopsis lyrifera* and *Amphiura chiajei* in circalittoral mud: 1 record from Loch Nevis

SS.SMu.CFiMu.MegMax: Burrowing megafauna and *Maxmuellaria lankesteri* in circalittoral mud: 10 records from West Scotland, East Solent and Kent

SS.SMu.CFiMu.SpnMeg: Seapens and burrowing megafauna in circalittoral fine mud: 17 records from West Scotland and Dorset

### **Maerl beds**

SS.SMp.Mrl: Maerl beds: 6 records from Jersey, Small Isles, Co. Galway and Cornwall (Falmouth)

SS.SMp.Mrl.Lgla: *Lithothamnion glaciale* maerl beds in tide-swept variable salinity infralittoral gravel: 5 records from Loch Sween (Argyll)

SS.SMp.Mrl.Pcal.R: *Phymatolithon calcareum* maerl beds with red seaweeds in shallow infralittoral clean gravel or coarse sand: 1 record from Arran

### **Serpulid reefs**

SS.SBR.PoR.Ser: *Serpula vermicularis* reefs on very sheltered circalittoral muddy sand: 22 records from Loch Creran, Co. Mayo and Co. Galway

### **Seagrass beds**

SS.SMp.SSgr: Sublittoral seagrass beds: 2 records from Ringstead (Dorset) and Jersey

SS.SMp.SSgr.Zmar: *Zostera marina/angustifolia* beds on lower shore or infralittoral clean or muddy sand: 41 records from Jersey, Guernsey, Dorset, Hampshire/IOW, Devon, Cornwall, Isles of Scilly, Arran, West Scotland, Co. Cork, Northern Ireland, Isle of Man, Llyn Peninsula.

## Seasearch Training in 2017

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 32 Observer (34 scheduled but two cancelled due to lack of numbers) courses held in 2017 in England (18), Scotland (3), Ireland (all) (3), Channel Islands (3), Wales (2) and Isle of Man (1). Over 230 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 2017, taking place in England (Cornwall), Scotland (Millport), Wales (Pembrokeshire) and Ireland (Belfast). There were 23 participants in total.

Seasearch **Specialist** courses are aimed at either teaching new survey skills or improving knowledge and identification of marine life.

Four courses were held in 2017. Subjects covered fish ID (Newcastle and Galway), ascidians (Cornwall) and 'turf' (sponges/bryozoans/hydroids) in Kent.

Seasearch Observer and Surveyor training courses are delivered by our team of tutors, all of whom are experienced Seasearch recorders and active divers. Matt Slater (Cornwall) was qualified as an Observer tutor while Natalie Hirst (Scotland) became a Surveyor tutor.

**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 2017 31 volunteers achieved the Observer qualification and 6 volunteers the Surveyor qualification.

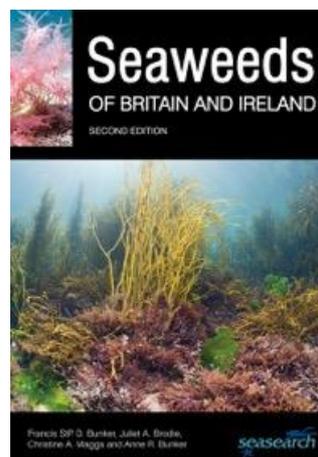
The qualification process not only acts as a reward to participants but is also an official recognition of the skills available within the Seasearch community of volunteer divers and thus the validity of their observations.

## 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 field identification guides. We now 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.



The second edition of the seaweeds guide was published in June 2017.

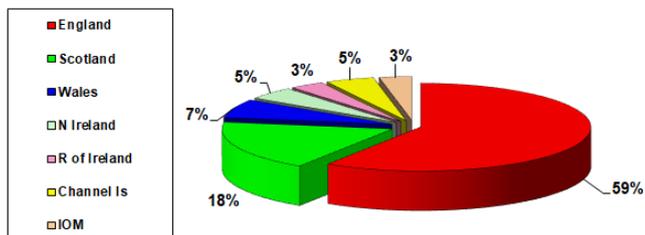
The Guide to Sea Squirts and Sponges is in the final stages of preparation and will be published in 2018.

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, through regional co-ordinators and can also be purchased online via the MCS shop.

## Seasearch Data

A total of 1,619 forms were received from dives in 2017, which was the highest total since 2013. The number of data-rich Survey forms was the highest total ever and formed the majority (56%) of the returned forms which is extremely encouraging.

The pie chart shows the origin of each form.



The 2017 dataset comprises 101 surveys with 1152 survey events, and contains 52,754 taxon records and 3,428 biotopes. All of the data is made available on the National Biodiversity Network Atlas, where Seasearch is now the second-largest provider of marine data. Additional data on pink sea fans and crawfish is entered into separate databases.

## Seasearch Co-ordination and Promotion

The day to day activities are organised by the National Co-ordinator and a team of Local Co-ordinators throughout Britain & Ireland. At the end of 2017 the team was as follows:

National Co-ordinator	Charlotte Bolton MCS
Scotland	Natalie Hirst MCS
West Scotland	Owen Paisley MCS
Northern Ireland	Charmaine Beer/Sally Stewart-Moore MCS
Republic of Ireland	Tony O'Callaghan IUC/CFT
Isle of Man	Tony Glen MCS
North Wales	Holly Date 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	Sarah Ward Sussex WT
Hants/Isle of Wight	Cathryn Quick
Dorset	Lin Baldock Dorset WT
Devon	Chris Webb MCS
Cornwall	Matt Slater Cornwall WT
Jersey	Kevin McIlwee MCS

Thanks to all the Seasearch Tutors and co-ordinators for their enthusiasm, organising and teaching skills during 2017, especially Liz Morris-Webb who retired as North Wales Co-ordinator to concentrate on family and PhD. Thanks also to all of the volunteer divers who have participated in Seasearch training, recording and promotion – without your contributions Seasearch would not exist.

Text by Charlotte Bolton with contributions from co-ordinators. Images by James Lynott, Kerry Lewis, Hayden Close, Rob Spray/Dawn Watson, Tom Clarke, Rik Girdler, Lin Baldock, Hugh Waite, Paula Lightfoot and Charlotte Bolton. Original design by Chris Wood.

## Data validation and management

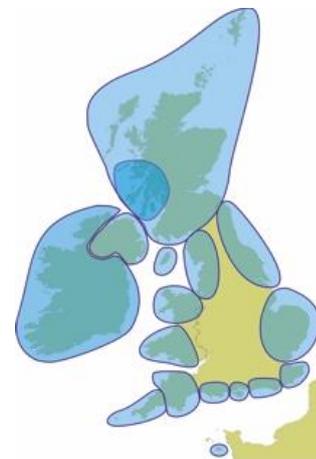
On receipt of a Seasearch form, summary information is recorded in a database and the position mapped in Google Earth. This data is available to download from the Seasearch website. Clicking a record displays the date, type, recorder and any significant findings. This also acts as the first stage in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

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.

The National Co-ordinator 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 Co-ordinators are responsible for Seasearch activities within their own areas (see map right). This includes promotion to local dive clubs and other groups, communication with local volunteers and arranging training courses and surveys.



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

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