



Seasearch Wales 2016

Summary Report



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Seasearch Wales 2016

Seasearch is a volunteer marine habitat and species surveying scheme for recreational divers in Britain and Ireland. It is coordinated by the Marine Conservation Society.

This report summarises the Seasearch activity in Wales in 2016. It includes summaries of the sites surveyed and identifies rare or unusual species and habitats encountered. These include a number of priority habitats and species. It does not include all of the detailed data as this has been entered into the Marine Recorder database and supplied to Natural Resources Wales for use in its marine conservation activities. The species data is also available online through the National Biodiversity Network.

During 2016 we continued to focus on priority species and habitats and on sites that had not been previously surveyed.

Data from Wales in 2016 comprised 66 Observation Forms and 114 Survey Forms. The total of 180 represents 12% of the data for the whole of Britain and Ireland.

Seasearch in Wales is delivered by two Seasearch regional coordinators. Kate Lock coordinates the South and West Wales region which extends from the Severn estuary to Aberystwyth. Liz Morris-Webb coordinates the North Wales region which extends from Aberystwyth to the Dee. The two coordinators are assisted by a number of active Seasearch Tutors, Assistant Tutors and Dive Organisers. Overall guidance and support is provided by the National Seasearch Coordinator, Charlotte Bolton.

Seasearch Cymru 2016

Cynllun gwirfoddol sy'n arolygu rhywogaethau a chynefinoedd y môr yw *Seasearch* ar gyfer deifars sy'n deifio yn eu hamser hamdden ym Mhrydain ac Iwerddon. Caiff ei gydlynu gan y *Marine Conservation Society*.

Mae'r adroddiad hwn yn crynhoi gweithgareddau *Seasearch* yng Nghymru yn ystod 2016. Ynddo ceir crynodebau o'r safleoedd a arolygwyd, ac mae'n clustnodi'r rhywogaethau a'r cynefinoedd prin neu anarferol y daethpwyd o hyd iddynt. Mae'r rhain yn cynnwys nifer o gynefinoedd a rhywogaethau blaenoriaethol. Nid yw'r adroddiad yn cynnwys yr holl fanylion data, oherwydd cofnodwyd y rhain yn y gronfa ddata *Marine Recorder* a chawsant eu rhoi i Cyfoeth Naturiol Cymru i'w defnyddio yn ei waith ar warchod y môr. Mae'r data hefyd ar gael ar-lein trwy'r Rhwydwaith Bioamrywiaeth Cenedlaethol.

Yn ystod 2016, roeddem yn parhau i ganolbwyntio ar rywogaethau a chynefinoedd blaenoriaethol ac ar safleoedd nad oeddynt wedi'u harolygu o'r blaen.

Roedd y data a ddeilliodd o Gymru yn ystod 2016 yn cynnwys 66 o Ffurflenni Arsylwi ac 114 o Ffurflenni Arolygu. Mae'r cyfanswm o 180 yn cynrychioli 12% o'r data ar gyfer Prydain ac Iwerddon.

Caiff y prosiect *Seasearch* yng Nghymru ei gyflawni gan ddau gydlynnydd rhanbarthol. Kate Lock sy'n cydlynu'r gwaith yn Ne a Gorllewin Cymru, sef rhanbarth sy'n ymestyn o Fôr Hafren i Aberystwyth. Liz Morris-Webb sy'n gyfrifol am gydlynu'r gwaith yng Ngogledd Cymru, sef rhanbarth sy'n ymestyn o Aberystwyth i Afon Dyfrdwy. Caiff y ddau gydlynnydd eu cynorthwyo gan nifer gweithgar o Diwtoriaid *Seasearch*, Tiwtoriaid Cynorthwyol a Threfnwyr Deifio. Rhoddir cymorth a chanllawiau cyffredinol gan Charlotte Bolton, Cydlynnydd Cenedlaethol *Seasearch*.

South and West Wales Summary

2016 was an eventful year in South and West Wales. A list of target dive areas was drawn up at the beginning of the year in a meeting held with the Natural Resources Wales marine monitoring team leader. It was agreed when conditions allowed to aim for sites in St Brides Bay and the offshore islands. Weekend dive plans were kept flexible so that most sites could be selected based on the weather and tides

Four days of diving were planned to help the Pembrokeshire Marine SAC Officer with a native oyster survey in Milford Haven Waterway; this was supported with funding from Biodiversity Solutions.

A total of seven survey weekends were completed with no cancelled days. All weekends were organised and run by Kate Lock, with assistance on one by Richard West. A good combination of experienced Seasearch divers along with a number of new keen divers participated on the surveys. This allowed a good quality of survey data to be collected and the new divers to gain experience and complete qualifications.

Survey dives were completed in the following locations:

- South Pembrokeshire (3 sites)
- Milford Haven waterway (7 sites in total, 4 oyster survey sites)
- Skokholm/Gateholm (3 sites)
- Skomer MCZ (2 sites)
- Smalls (1 site)
- St Brides Bay (4 sites)
- Ramsey (1 site)



2016 Record highlights

Highlights include new UK and Welsh records, species listed on Section 7, Environment Act (Wales) 2016 and species considered as rare, scarce or unusual records.

New UK record: 'Pink' candy striped flat worm, *Prostheceraeus roseus* at Crow Rock



New Welsh record: Red blenny, *Parablennius ruber*, at the Smalls



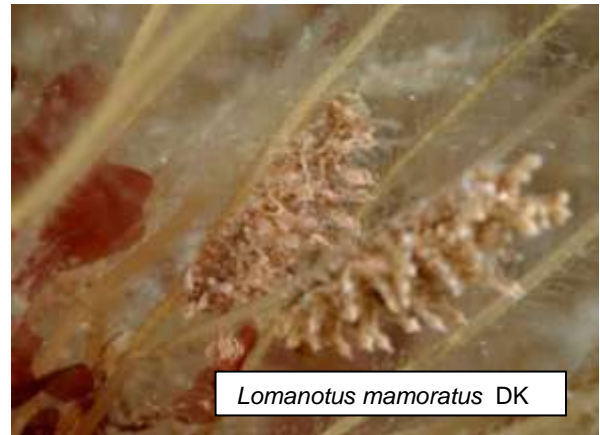
Nationally important species, Section 7 species, Wales Environment Act 2016

Native oyster, *Ostrea edulis* recorded at Milford Haven waterway sites during the Native oyster survey work.
Pink seafan, *Eunicella verrucosa* recorded at North-East Skokholm, North Middleholm, Pen y foel.
Crawfish, *Palinurus elephas* recorded at 3 sites within Pembrokeshire.



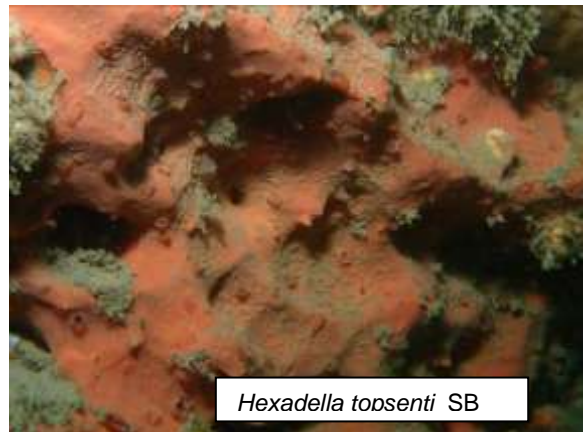
Nationally rare and scarce species, unusual records and those of limited geographic distribution

Nudibranch species : *Okenia elegans* at North Pinnacles and North-East Skokholm, *Thecacera pennigera* at North Pinnacles and *Lomanotus mamoratus* at Nabs Head, St Brides Bay.



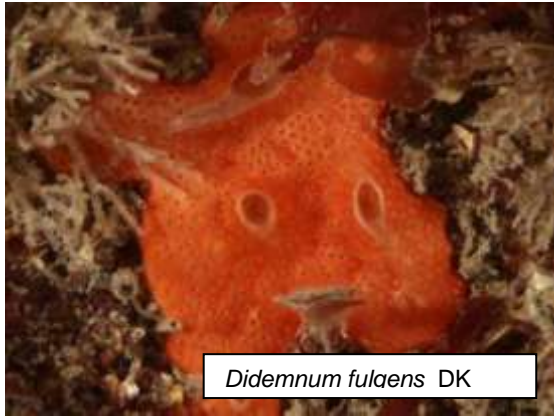
Sponge species: mashed potato sponge, *Thymosia gurnei*, yellow staghorn sponge, *Axinella dissimilis*, brain sponge, *Axinella damicornis* and prawn-cracker sponge, *Axinella infundibuliformis* at Rat Island, Pen y foel and Allt Felin Fawr

Hexadella topsenti, (previously known as *Hexadella racovitza*), was first recorded in the UK at Skomer in 2007. It has since been recorded at other sites in the UK and is locally common at some Pembrokeshire sites. In 2016 it was recorded at North Pinnacles.



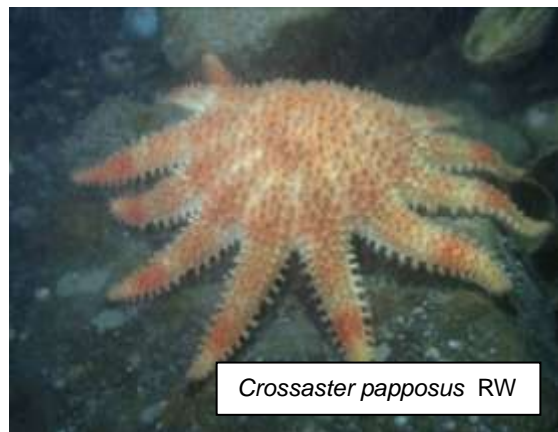
Sea squirt species: The first record in Wales for *Didemnum fulgens* was in 2012 at Long Point, Pembrokeshire but has since been recorded at other Pembrokeshire sites and in North Wales, in 2016 it was found at three sites: Dakotian, Church Rock and Rat Island.

Lissoclinum weigeli has only been recorded at Black and Green Scar in St Brides, Pembrokeshire, in the Isles of Scilly and in Scotland at Loch Sunart, all on Seasearch surveys. In 2016 it was found at Nabs Head located in St Brides Bay.



The 'strawberry' and 'two spot caramel' *Aplidium spp* are both regularly recorded at South Pembrokeshire sites and have been given temporary common names as they are still to be described and confirmed. In 2016 they were recorded at Rat Island and Crow Rock.

Sun star, *Crossaster papposus*, Jenkins Point, Cleddau river. The sun star is only occasionally recorded in the Pembrokeshire area where it is close to its Southern geographic distribution in the UK.



North Wales Summary

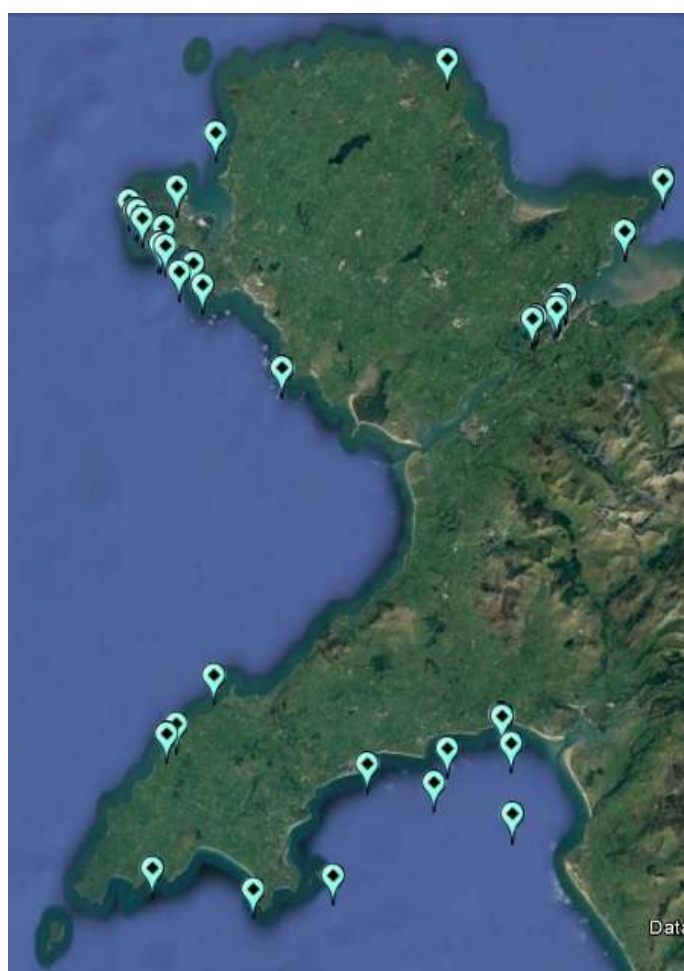
2016 saw another year of cancellations in North Wales, but this did not get in the way of some excellent recording and a record number of Surveyor forms being returned for some top priority sites, with 30% of returns from independent dives. As with South Wales, a list of target dive areas was drawn up at the beginning of the year in a meeting held with the Natural Resources Wales funders and local Special Area of Conservation Officers. A variety of sites were selected as priority survey points for reasons spanning to fill knowledge gaps, confirm video records, or revisit historical sites of interest.

Three organised Seasearch boat weekends and one shore training / refresher dive were successful in getting out in 2016, with two organised charter weekends cancelled due to poor weather, and four additional days aimed to engage local clubs with Seasearch also cancelled due to boat problems. All weekends were organised by Liz Morris-Webb with assistance on the boats from tutors Lucy Kay and Wendy Northway, experienced Seasearcher Ruth Sharratt, and general assistance with organising club dives from Llŷn BSAC club member and Student Representative Jake Davies. All boats had a mix of experienced surveyors and observers, enabling opportunities for new observers to build their skills and complete qualifying dives, but also ensuring that quality, biotopable records were returned from each dive site.

Organised Seasearch Survey dives were completed in the following locations:

- Pen Llŷn a'r Sarnau SAC: 6 sites (+6 sites from independent records)
- Menai Strait & Conwy Bay SAC: 7 sites (+2 sites from independent records)
- Other Anglesey: 4 sites (+9 sites from independent records)

In total 53 survey events were entered into Marine Recorder from 40 sites, with 1934 records of 403 taxa recorded in the North Wales area. This report focuses on the sites surveyed as part of organised Seasearch events.



2016 Record highlights

Highlights include species listed on Section 7, Environment Act (Wales) 2016, species considered as rare, scarce or unusual records, and Annex 1 species and habitats within marine Special Areas of Conservation.

Nationally important species, Section 7 species, Wales Environment Act 2016

The Icelandic cyprine or Ocean quahog, *Arctica islandica*, near Church in the Bay, West Anglesey.

Records of sand eels (Ammodytidae, not identified to species) at three sites around the South and North Llyn

Cod, *Gadus morhua*, off Trearddur Bay; whiting, *Merlangius merlangus*, off the North Llyn; ling, *Molva molva*, on the Wreck of the Gwynfaen, off the North Llyn; plaice, *Pleuronectes platessa*, recorded off Point Lynas and Point Lynas, Anglesey; thornback ray, *Raja clavata*, in Tremadog Bay and off West Anglesey and one record of crawfish, *Palinurus elephas*, off the North Llyn.



Plaice, *Pleuronectes platessa*, CG

Annex 1 species and habitats within marine Special Areas of Conservation (SAC):

An Observer training event at Criccieth confirmed sparse and patchy *Zostera marina* subtidal seagrass bed (SS.SMp.SSgr.Zmar) under the castle, within Pen Llyn a'r Sarnau SAC.



Sparse *Zostera marina*, PB



Honeycomb worm, *Sabellaria alveolata*, CG

Although not habitat forming at either site, the following species were recorded during surveys:

Sabellaria alveolata, the honeycomb reef forming worm, on intertidal boulders at Criccieth. This species is known to form Annex 1 notifiable reefs at the other end of the beach at Criccieth.

Sabellaria spinulosa was recorded at five sites, but of particular interest were where it was recorded as abundant but not reef forming at PD cracker, off the North Llyn, (Pen Llyn a'r Sarnau SAC), and frequent on cobbles and boulders at the Boulder and Brittlestar site off Trearddur Bay, Anglesey.

Interesting and Unusual biotopes, Nationally important (Section 7) habitats, Wales Environment Act 2016.

Circolittoral muddy sand was recorded in Tremadog Bay at 'Dark Mud' and 'Turret City', and Mud and Boulders, off Trearddur Bay on Anglesey.

A highlight of our year in North Wales were muddy gravels in the Menai Strait and Conwy Bay SAC, particularly the unusual biotope *Sabella pavonina* with sponges and anemones on infralittoral mixed sediment (SS.SMx.IMx.SpavSpAn, where *Sabella pavonina* was abundant and characterising) at the Admiralty Moorings, the East and South sides of Ynys Gaint and at 'Peacock Paradise' off Fryar's Bay. Also recorded at these



sites was the biotope *Cerianthus lloydii* and other burrowing anemones in

circolittoral muddy mixed sediment (SS.SMx.CMx.CIlloMx). Subtidal muddy gravel habitats within SAC are also important Annex 1 habitats.



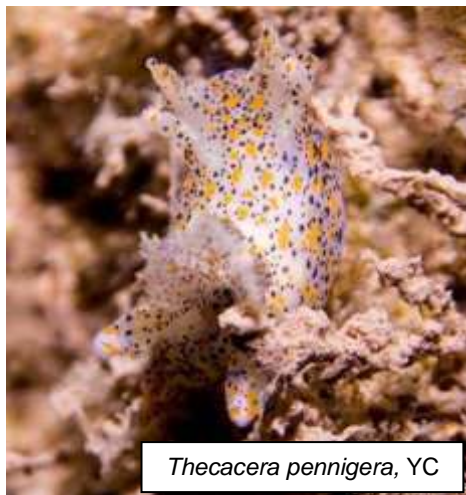
Sabella pavonina habitat, CH

Very tide swept faunal communities (CR.HCR.FaT) were recorded under the Britannia Bridge, in the tidal channel of the Menai Strait and within the Menai Strait and Conwy Bay SAC. Several other tide swept biotopes and sub-biotopes were also recorded within sites of the same SAC and around West and North Anglesey. An unusual tide swept biotope recorded was cushion sponges, hydroids and ascidians on turbid tide-swept sheltered circalittoral rock (CR.MCR.CFaVS.CuSpH.As) on the slate cliff surveyed near Coleg Normal, West of the Gorad Goch and on the South side of Ynys Gaint, all within the Menai Strait. This biotope rarely occurs in fully marine environments, but has previously been noted to be present within the Menai Strait.

idge, CG

Nationally rare and scarce species, unusual records and those of limited geographic distribution

Nudibranch species : *Thecacera pennigera* at Primrose Hill Bay (left) and potential *Okenia aspersa* eggs frequently recorded at Abraham's Bosom (right), both sites off West Anglesey.



Thecacera pennigera, YC



Potential *Okenia aspersa* eggs, LM

Unusual sponge species: The prawn-cracker sponge, *Axinella infundbuliformis* at Bolivar Rock, off North West Anglesey.

South and West Wales dive sites

South Pembrokeshire

The South Pembrokeshire limestone coast has been a focus for Seasearch dives over the past few years and during 2016 three sites were explored. Surveys were completed at Church Rock, a shallow site located off Broad Haven South beach, St Govans shoals three miles off St Govan's Head and Crow Rock were revisited as they are particularly rich in sea squirt species, to gain further photographs of unusual and rare sea squirts for the new Seasearch

Church Rock is a shallow site between 8 to 12m depth and is positioned in the sandy bay of Broad Haven South beach. Rocky reef with steep sided gullies 3 to 4m high were found. The tops of the reef were covered in kelp park and red seaweed whilst vertical walls were festooned in animal turf of sponges, bryozoan and sea squirts. Notable were the large expanses of black tar sponge, *Dercitus bucklandi* and an abundance of the spiral bryozoan, *Bugula plumosa*, along with a high diversity of sea squirt species including the unusual *Didemnum fulgens*. The site was also notable for the huge expanses of horseshoe worms, *Phoronis hippocrepi*, on the upward facing surfaces in the gullies and boulders. A large group of grey sea slugs, *Aeolidia papillosa*, were found having a feeding frenzy on a snakelocks anemone, *Anemonia viridis*.



Aeolidia papillosa feeding on *Anemonia viridis* KeL

St Govans shoals is three miles off St Govans Head. It is an exposed current swept site with a limestone reef found between 12 to 19m depth. The reef is rugged with steep walls, gullies and overhangs. Dive conditions were dark and visibility low which limited recording. At the top edges of the walls was an abundance of oaten pipe hydroid, *Ectopleura* (was *Tubularia*) *larynx* and dead man's fingers, *Alcyonium digitatum* whilst in the deeper areas was a dominance of the pinhead sea squirts, *Pycnoclavella* spp and huge numbers of juvenile common starfish, *Asterias rubens*. The site merits a return in better conditions.

Crow Rock is an islet just off Linney head. Rocky reefs of low lying bedrock interspersed with sediment areas and gullies with boulders and pebbles. Kelp park was found in the shallows with rich red seaweed meadows and on the vertical surfaces were dense areas of sponges and sea squirts mixed with bryozoan and hydroid species. 28 species of sea squirt were recorded with the orange sea squirt, *Stolonica socialis* abundant and the teapot seasquirt, *Polycarpa scuba*, pinhead sea squirt, *Pycnoclavella aurilucens* and *Archidistoma aggregatum* all common. Both the unnamed 'strawberry' *Aplidium* and 'honeycomb' *Aplidium* were found. The site was also diverse in sponge species with 20 species recorded. Notable were the mashed potato sponge, *Thymosia gurnei* and the chimney sponge, *Polymastia penicillus*.



Sea squirt turf and *Henricia oculata* SB

The highlight of the day however was a 'pink' candy striped flatworm which has been identified as *Prostheceraeus roseus*, a species common further South in Europe but this is the first record in the UK. This was spotted by Stephanie Eccles and photographed by Hayden Close.

Milford Haven Waterway

The Milford Haven waterway is a very active area with both commercial and recreation interest. Seasearch has completed many dives in the area looking at habitats and species of national importance - tidal rapid reefs, eelgrass *Zostera marina* beds and the native oyster *Ostrea edulis*. There are also high numbers of non- native species like the invasive slipper limpet *Crepidula fornicata*. Further exploration in the area is an ongoing need.

In 2016 a native oyster, *Ostrea edulis*, survey was completed by Seasearch to support the Milford Haven Oyster Regeneration Project co-ordinated by West Wales Shellfisherman's Association Ltd and Pembrokeshire Marine Conservation Area Relevant Authorities Group. Seasearch was approached by the SAC Officer and methods were selected to complement the projects ongoing work, including oyster density data, habitat and species data and photography. Biodiversity Solutions, a Pembrokeshire based environmental consultancy, provided funding to support this work and a full survey report (Lock K, 2017) has been produced. Seasearch survey forms were completed for four sites, Rudders moorings, Jenkins Point moorings, Beggars Reach and Rudders. In addition,

three sites were surveyed within the entrances of Milford Haven: West Angle lifeboat station, Dakotian wreck and Rat Island reefs.

Rudders moorings Visibility was poor so limited recording. A muddy shell and gravel mixed sediment flat river bed with occasional cobbles. Shells were dominated by slipper limpets, *Crepidula fornicata*. Horse anemones, *Urticina eques*, shore crabs, *Carcinus maenas* were recorded and encrusting sponges were found on cobbles. Native Oysters, *Ostrea edulis*, were rarely recorded.



Muddy cobbles and *Crepidula fornicata* BB

Jenkins Point moorings Tide swept pebbles and cobbles amongst mooring chains and occasional small boulders. An abundance of slipper limpets, *Crepidula fornicata*, was recorded with up to 20-30 clumps in 1m² area. Occasional shore crabs, *Carcinus maenas* and dahlia anemones, *Urticina felina* were recorded. Native oyster *Ostrea edulis*, were rarely recorded.

Notable was a record of the sunstar *Crossaster papposus*, an unusual record for Pembrokeshire.

Beggars Reach Soft mixed muddy gravel with pebbles, shells and shell fragments. Occasional cobbles and a covering of thick silt. Super abundance of slipper limpets, *Crepidula fornicata*, were recorded with shell chains of 8 or more individuals found together. Occasional hydroids and bryozoans were found on the larger stones along with dahlia anemones, *Urticina felina*, and erect and encrusting sponges, *Halichondria spp.* A drift dive was completed covering a large area, native oysters, *Ostrea edulis*, were patchy in distribution with records from rare to occasional.

Rudders area (outside of moorings) A relatively flat area of seabed characterised by a poorly sorted mix of small boulders, cobbles, pebbles and broken shell overlying muddy sediment. Slipper limpets, *Crepidula fornicata*, were abundant but patchy in areas. Native oysters, *Ostrea edulis*, were found with a patchy distribution that varied from rare to frequent, and quantities of empty shell were found. The small boulders and cobbles provided attachment for a variety of filter feeding animals. 12 species of sponges were identified including frequent records of goose bump sponge, *Dysidea fragilis*, and *Halichondria bowerbanki* and encrusting orange sponge were common. Seven species of sea squirts were found with frequent records of *Diplosoma listerianum*. Burrowing anemone were found in the soft sediments with daisy anemone, *Cereus pedunculatus*, common and horse anemone, *Urticina eques*, frequent. A variety of small crabs were found scuttling about along with numerous black goby, *Gobius niger*, and painted goby, *Pomatoschistus pictus*. The silty conditions and turbid waters are not ideal conditions for algae growth but a few species were found with both *Stenogramme interrupta* and *Pterothamnion plumula* recorded as common.



Sagartia troglodytes DK



Ostrea edulis DK

West angle lifeboat station A sediment area made up of silty mud and broken shell, pebbles and occasional boulders. Slipper limpets, *Crepidula fornicata*, were frequently recorded along with occasional king scallop, *Pecten maximus*. The sediments were rich in life with sand mason worm, *Lanice conchilega* and eyelash worm *Myxicola infundibulum*. Crustaceans and fish were active with frequent records of hermit crabs, *Pagarus bernhardus* and sand goby *Pomatoschistus minutus*, along with the black goby, *Gobius niger*, and circular crab *Atelecyclus rotundatus*. A sea mouse (*Aphrodita aculeata*) was recorded and unusual worm mounds that could not be identified. The small boulders supported large clusters of whelk eggs, sea squirts and occasional plumose anemone, *Metridium dianthus* (was *M. senile*).



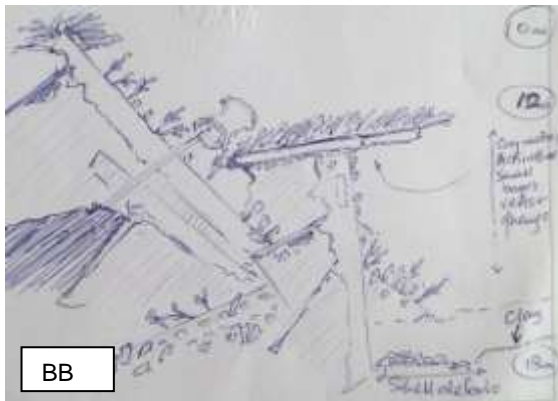
Unidentified worm SB



Aphrodita aculeata SB

Dakotian is a large wreck found West of Dale Point. The wreckage is heavily silted, it is broken but has extensive plates and structures with overhanging and vertical surfaces. It is a popular recreational dive and angling site; lots of angling debris, lures, traces and line were found snagged on the wreckage. The wreckage sits on a sediment seabed. Immediately adjacent were areas of shell debris then fine sand- silt over clay with a few burrows.

The top horizontal plates were covered in thick algae meadow with brown fan weed *Dictyota polypodioides*, red fringe weed *Calliblepharis ciliata* and *Phyllophora crispa* all recorded as frequent. The vertical faces up to 6m height had dense patches of transparent sea squirt *Ciona intestinalis* and finger bryozoan, *Alcyonidium diaphanum*. Also were smaller patches of colourful jewel anemone, *Corynactis viridis* and a scattering of Devonshire cup corals, *Caryophyllia smithii*. Around some of the plate holes were dense patches of the snowflake form of a *Didemnum maculosum*, an encrusting white sea squirt and a small patch of the rare, bright red *Didemnum fulgens*. Fish species included shoals of poor cod and whiting, *Trisopterus luscus* and *T.minutus*. Occasional edible crab, *Cancer pagarus* were found along.

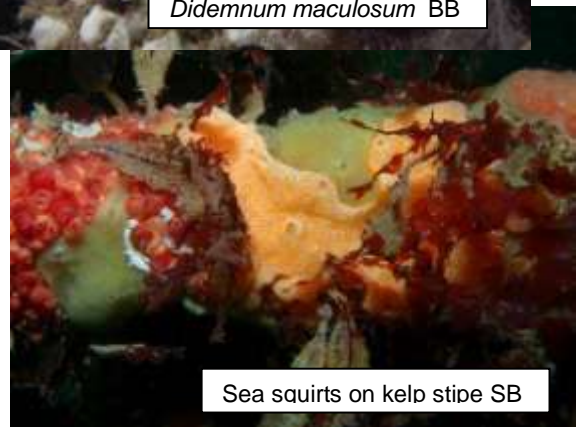


BB



Didemnum maculosum BB

Rat Island The island and surrounding cliffs are made up of old red sandstone. A bedrock reef was found down to 16m with ridges interspersed with gullies up to 2m width with boulders and coarse sand. The tops of the ridges were thickly forested in kelp and divers red seaweed species. The sides of the rock were mainly clothed in sea squirts with 19 species recorded and sponges. Notable were numerous specimens of the rare, bright red sea squirt, *Didemnum fulgens*, along with the 'strawberry' and 'honeycomb' *Aplidium* species of sea squirt, species which are still to be confirmed and named. Nudibranch highlights were *Cadlina laevis* and *Diaphorodoris alba*.



Sea squirts on kelp stipe SB

Skokholm is an old red sandstone island located two miles off the Pembrokeshire coast. Seasearch dives are regularly completed at sites around the island. In 2016 both the North Pinnacles and the North East corner of the island were surveyed.

North Pinnacles are located off the North East side of the island. Low mounds of rock up to 2m in height were found with coarse sand and gravel between. The rock areas were heavily silted and although a high diversity of animal species were recorded they were all in low numbers except an abundance of pinhead seasquirt, *Pycnoclavella producta* sprinkled across the reef. Notable sponges were the yellow staghorn sponge, *Axinella dissimilis*, brain sponge *Axinella damicornis*, tapered chimney sponge *Ciocalyptra penicillus* and mashed potato sponge *Thymosia guernei*. Highlights were records of the curled octopus *Eledone cirrhosa* and nudibranchs *Okenia elegans* and *Thecacera pennigera*.



Eledone cirrhosa KeL



Thecacera pennigera SB

North East Skokholm. The reef was made up of slanted bedrock slabs creating steep rock walls, large boulders and expanses of pebbles and cobbles all covered in a thick layer of silt. The tops of the reef at 14m depth were covered in kelp forest and red seaweed. The vertical faces were dominated in bryozoan turf, in particular spiral bryozoans *Bugula plumosa* and *B. turbinatum* and white claw sea moss, *Crisia sp*, encrusting sponges and Devonshire cup coral, *Caryophyllia smithi*. Highlights were records of an anglerfish, *Lophius piscatorius*, pink seafan, *Eunicella verrucosa* and the nationally scarce nudibranch *Okenia elegans*.



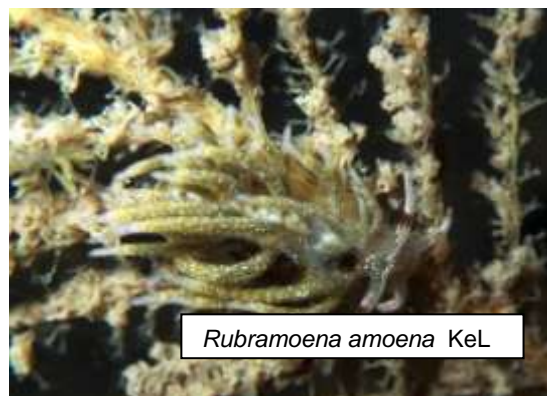
Skomer Marine Conservation Zone Skomer MCZ is managed by Natural Resources Wales whose dedicated team of marine scientists have established a programme of littoral, sublittoral and oceanographic monitoring. Although habitat and species records are considerable for the MCZ, it has been identified by the MCZ management plan that these need continued updating with new records. In 2016 a volunteer diving survey of king scallop, *Pecten maximus* was completed. To support the survey Seasearch targeted two of the survey sites, the sediment areas next to Junkos reef and West Hook, recording the habitat and species. Seasearch also surveyed the reef on the North side of Middleholm Island.

Junkos reef is located in Wooltack Bay on the North Marloes Peninsula. Surrounding the rock reef are mixed sediments and this area was surveyed. The ground formed a coarse sand, broken shell, pebble and cobble slope with many surfaces encrusted in bryozoans, hydroids and barnacles. King scallop, *Pecten maximus* were found and these were also encrusted in other life. Hydroids included *Kirchenpaueria pinnata*, antenna hydroids *Nemertisia antennina*, *N. ramosa* and herringbone hydroid, *Halecium halecinum*. Many of the hydroids were

covered in nudibranch eggs and were being grazed by nudibranchs *Rubramoena amoena*, *Doto fragilis*, *Doto coronata*, *Doto dunnei* and *Eubranthus vittatus*; a total of 11 nudibranch species were recorded. Burrowing in the sediments were eyelash worm, *Myxicola infundibulum*, peacock worm *Sabella pavonina* and gravel sea cucumber *Neopentadactyla mixta*. Anemones included the daisy anemone *Cereus pedunculatus* and clockface anemone *Peachia cylindrica* and notable were several large potato crisp bryozoan *Pentapora foliacea* colonies. Dragonet, *Callionymus lyra* and lesser spotted cat shark *Scyliorhinus canicula* were found perched amongst the pebbles.



Callionymus lyra KeL



Rubramoena amoena KeL

West Hook A shallow mixed sediment slope leads away from the rocky reef from 19 to 21m depth. The sediments were made up of coarse sand, shell gravel and pebbles. King scallop *Pecten maximus* were frequent and the area is rich in life. At the rock sediment interface a conger eel, *Conger conger* was found in a deep hole. Hydroids were attached to the scallop shells and other pebble surfaces, these included *Kirchenpaueria pinnata*, antennae hydroids *Nemertisia antennina*, *N. ramosa* and herringbone hydroid, *Halecium halecinum*. Seven species of nudibranch were found, the most notable being *Doto dunnei*, *Eubranthus vittatus* and *Diaphorodoris alba*. The area was active in both crustaceans and fish species including painted goby *Pomatoschistus pictus* and hermit crabs, *Pagarus prideaux* along with two curled octopus *Eledone cirrhosa* being spotted.



Conger conger KeL



Pecten maximus BB

North Middleholm A rugged reef with ridges leading down to a sandy area at 17m depth. A dense kelp forest made up of both forest kelp, *Laminaria hyperborea* and furbelows, *Saccorhiza polyschides* was found on top of the reef with thick red algae turf. In the deeper areas the rocks and boulders supported a dense turf of bryozoans and hydroids with twig bryozoan, *Cellaria spp*, white claw sea moss, *Crisia spp* and spiral bryozoan, *Bugula spp* all frequently recorded along with antenna hydroid, *Nemertisia antennina* and *Serturella gayi*. Fouled up pink seafan, *Eunicella verrucosa* were found and potato crisp bryozoan, *Pentapora foliacea* were frequently found. A curled octopus, *Eledone cirronosa* was recorded and on the deeper sandy areas king scallops, *Pecten maximus* were frequent each hosting a mini ecosystem of hydroids and nudibranchs in an area that was otherwise barren.



Rock community KeL

The Smalls is located 20 miles off the Marloes Peninsula

and is a group of wave-washed basalt and dolerite rocks. The site is exposed to both strong currents and wave action so can only be dived on calm days with neap tides. On this visit diving was targeted on the South side of the rock complex.

Bedrock ridges with gullies formed 'fingers' of rock amongst large expanses of boulders from 12 to 22m depth. Kelp park was found with red seaweed and all surfaces were covered in a super-abundance of amphipods, *Jassa falcata* and *Caprellids*. These animals or their 'crud' smothered most of the mixed animal turf making it difficult to identify. On the low lying bedrock and boulders spiny starfish, *Marthasterias glacialis* were abundant and crabs and fish hid amongst the boulders. Tompot blenny, *Parablennius gattorugine* were common and amongst them a red blenny, *Parablennius ruber* was photographed by Kerry Lewis, a first confirmed record for Wales. On the vertical walls deadman's fingers, *Alcyonium digitatum*, dahlia anemone *Urticina felina* and jewel anemone *Corynactis viridis* were frequently recorded. Grey seals were seen before, during and after the dive and common dolphin were seen on the surface.



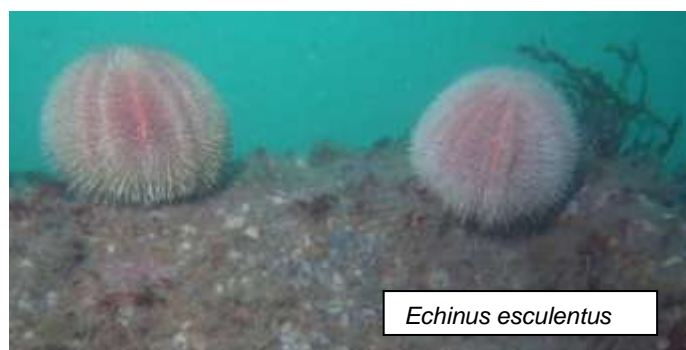
Parablennius gattorugine KeL



Kelp park KL

St Brides Bay sites were targeted at the North end of St Brides with Pental Aderyn Head on the South West point of St Davids Head and Pen y foel on the Western side of Porth lyski bay. Off shore Mare Rock was dived, a small rock located East of Green Scar just south of Solva.

Pental Aderyn Head. A rugged rocky reef and large boulders were dominated in bryozoan and hydroid species along with super large boring sponge *Cliona celata*. Large numbers of common sea urchin, *Echinus esculentus* were found grazing. The hydroids included herringbone hydroid, *Halecium halecinum* and the antenna hydroids *Nemertisia antenina* and *N.ramosa*. On the vertical faces deadman's fingers *Alcyonium digitatum* were common. White claw sea moss, *Crisia spp*, twig bryozoan, *Cellaria spp* and spiral bryozoan *Bugula plumosa* made up most of the bryozoan turf along with frequent records of potato crisp bryozoan *Pentapora foliacea*. Crustaceans and fish were recorded but only in very low numbers. Fish potting was observed and a lost pot was found along with lost angling gear.

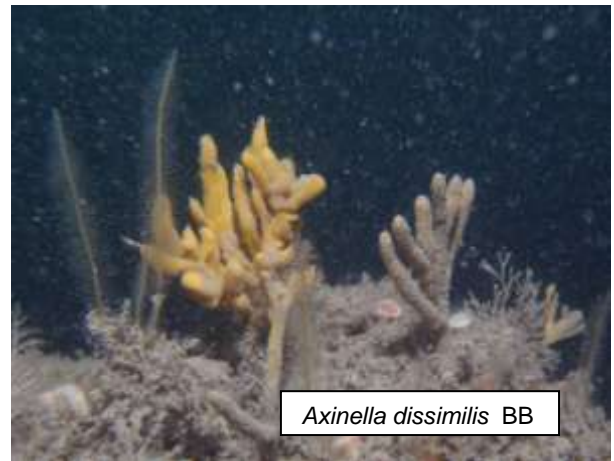
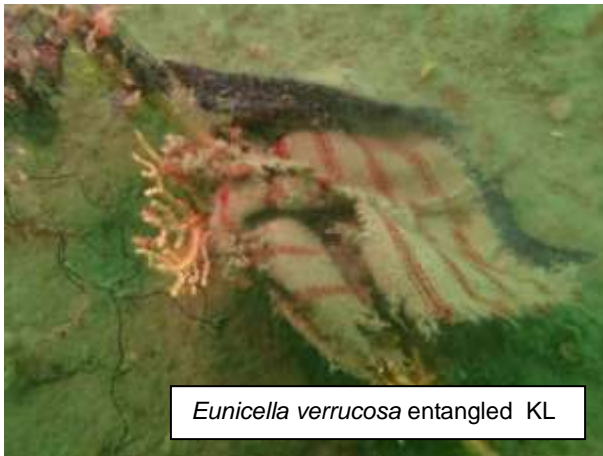


Echinus esculentus



Sponge and pink algae encrusted boulders BB

Pen y foel. A shallow bedrock and boulder site with cobbles and pebbles in gullies. In the shallow areas 6-10m depth kelp park and red algae meadows were found with common sea urchin *Echinus esculentus* grazing. In the deeper areas 10-16m bryozoan and hydroid turf were mixed with encrusting and erect sponge species. Notable sponges included the yellow staghorn sponge, *Axinella dissimilis*, brain sponge, *Axinella damicornis*, the prawn-cracker sponge *Axinella infunduliformis* and mashed potato sponge, *Thymosia gurnei*. The pink seafan *Eunicella verrucosa* was found but each colony was in poor condition, one colony was wrapped in cloth debris. The numbers of crustaceans were generally low.



Mare Rock. A boulder slope was found at 8m covered in a dense kelp forest, from 10m the boulders were sparsely covered in red algae with high numbers of common urchin, *Echinus esculentus* and common starfish, *Asterias rubens*. From 12 to 18 m a steep rocky reef with vertical walls were found with a super abundance of Deadmans fingers, *Alcyonium digitatum*. Other animals turf species were found in low numbers with both Devonshire cup corals *Caryophyllia smithii* and jewel anemones, *Corynactis viridis*, recorded as frequent, along with light bulb sea squirts, *Clavelina lepadiformis*.

Ramsey Island is located off the coast of the St David's peninsula on the northern side of St Brides bay. Seasearch has been completed around the island in previous years but the exposed west coast has always been a challenge and unusually calm conditions were used to dive the south west point.

Allt Felin Fawr. A very wave exposed site located on the south west point of Ramsey Island. Low lying bedrock and boulders up to 2m height with sparse kelp park and large areas of encrusting pink algae and barnacles, *Balanus crenatus*. Twenty species of sponge were recorded not including at least three species that could not be identified. All were in low numbers but notable was yellow staghorn sponge *Axinella dissimilis*, brain sponge, *Axinella damicornis*, the prawn-cracker sponge *Axinella infundibuliformis* and mashed potato sponge, *Thymosia guernei*. In addition there were regular patches of chimney sponge *Polymastia penicillus*. In some areas Devonshire cup coral, *Caryophyllia smithii* was common and frequent patches of jewel anemone *Corynactis viridis* were found. Hiding in crevices and between boulders were common lobster, *Homarus gammarus* and squat lobster, *Galathea strigosa*. Overall both crustacean and fish were sparse.

North Wales dive sites

Pen Llŷn a'r Sarnau Special Area of Conservation

The Llŷn Peninsula is part of the Pen Llŷn a'r Sarnau Special Area of Conservation, and was the focus of our North Wales shore based training in 2016. The Criccieth training event resulted in records from the subtidal sand, confirming the presence of a sparse and patchy seagrass bed, and intertidal reefs near the old pier. Bad weather and technical boat problems meant that, for the second year in a row, no official Seasearch boat dives took place in the area. However, one private Seasearch weekend was run by surveyor and boat owner Carol Horne with tutors on board, targeting four priority search sites in Tremadog Bay, for which we are very grateful to receive records. Additional independent records came from six sites across the SAC.

Turret City was a high priority site targeted as suspected muddy gravels by NRW. Approximately 5 miles south of Criccieth this was surveyed as a sandy mud site which was full of signs of life between 15.5m and 16m Below Chart Datum (BCD). Burrowing anemones *Cerianthus lloydii*, auger shells *Turritella communis* and brittle stars *Ophiura ophiura* littered the surface, with a selection of crustaceans including the harbour crab *Liocarcinus*, spindly spider crab *Macropodia* and hermit crabs. One Thornback Ray *Raja clavata* was also seen at the site. There were also many signs of life on the surface, including tentacles and worm casts amongst a plethora of empty shells and *Echinocardium* tests.



Liocarcinus in fine sand at Turret City, CH



Asterias and brittlestars at Dark Mud, LM

Dark Mud was a medium priority site, approximately 1.5 miles South West of Criccieth, identified as suspected mud habitat by NRW. It proved to be another sandy mud site between 13-13.7m BCD, with a potential hard sub-surface layer approximately 10cm below the sediment surface. This site had more species rich and dense than Turret City, with sand brittlestars *Ophiura ophiura* recorded as common, auger shells *Turritella communis* frequent and sand mason worms *Lanice conchilega* occasional. Shells on and below the surface hosted a range of animal life including the silted sponge *Suberites carnosus*, ascidians including *Molgula* and rare bryozoan crusts. The mobile epifauna included harbour crabs *Liocarcinus*, sponge spider crab *Inachus* and hermit crabs, plaice *Pleuronectes platessa* and sand gobies of the genus *Pomatoschistus*. Many signs of life were recorded, including bivalve siphons and tracks.

Criccieth is a beachside resort on the South Llyn peninsula, fringing the northern end of Tremadog Bay, and it was the focus of our North Wales observer training event in 2016 in order to confirm the presence of the sparse subtidal seagrass bed, *Zostera marina*, which has previously been surveyed by Seasearch during boat surveys. The area near the old pier, under the castle, was split into two shore based dives: the intertidal boulders, fucoids & *Sabellaria alveolata* and the subtidal sands and seagrass bed.



Sabellaria alveolata crust, CG



Intertidal boulders with seaweed and *Sabellaria* crust, PB

Criccieth sublittoral fringe boulders were surveyed by new and experienced Seasearchers. Boulders topped with serrated wrack, *Fucus serratus* were recorded in the sublittoral fringe, with honeycomb worm *Sabellaria alveolata* forming crusts around the boulder base. *S. alveolata* is known to form intertidal biogenic reefs locally, but this was not observed in the area of shore diving near the castle. Shallow sublittoral forest kelp *Laminaria hyperborea*, forkweed *Polyides rotundus*, siphoned feather weed, *Heterosiphonia plumosa* and other red seaweed with limpets and barnacles on the true sublittoral boulders to 0.8m BCD. A variety of mobile species were recorded, including the 15 spined stickleback, *Spinachia spinachia*, and the great spider crab *Hyas araneus*. The rocky reef rested on cobbles and coarse sand.

Criccieth subtidal sand and gravel was recorded to approximately 1.5m BCD, containing the sand mason worm *Lanice conchilega*, brown shrimp *Crangon crangon* and the harbour crab *Liocarcinus*. Moving offshore, the sands became less gravelly, giving way to sparse, patchy clumps of seagrass *Zostera marina*, recorded with a variety of mobile and infaunal species to 3m BCD. The burrowing sea cucumber *Oosteregronia* (previously *Labidoplax*) *digitata* seems to characterise this site (recorded as common), together with the presence of sea potatoes *Echinocardium cordatum*, masked crabs *Corystes cassivelaunus*, necklace shells *Euspira catena*, sea mice *Aphrodita aculeata*, and the sea snail *Acteon tornatilis* with its distinctive 'balloon' egg sacs attached to shell debris.



Sparse *Zostera marina*, PB



Corystes cassivelaunus, PB

Ruddy Reef, approximately 1.77miles South of Pen-y-chain, was targeted as a medium priority search area to fill a knowledge gap. The site was found to be shallow mixed ground comprising a relatively flat seabed of cobble, pebble, gravel and sand with occasional boulders (7.43m - 8.93m BCD), which typifies this area of Tremadog Bay. Mixed red and brown seaweeds including common records of eyelash weed *Calliblepharis ciliata* and siphoned feather weed *Heterosiphonia plumosa* dominating the stony reef. The reef also supported a variety of faunal turf, mainly sponges (grated carrot *Amphilectus fucorum*, goosebump *Dysidea fragilis*, crater *Hemimycale columella*, in addition to unidentified sponge crusts) with some hydroids and ascidians. Sand mason worms *Lanice conchilega* were present in the sediment, with a variety of mobile fish, starfish and crustaceans across the site.



Mixed red seaweed topped boulders at Ruddy Reef, CH



Abundance of small fish at *Heterosiphonia* Heaven, CH

Heterosiphonia Heaven is another red seaweed rich site approximately 1.1 miles East of Pen-y-chain, in Tremadog Bay from 7.1m - 8.2m BCD. Medium, large and very large boulders were topped with eyelash weed *Calliblepharis jubata* (common), abundant siphoned feather weed *Heterosiphonia plumosa*, with occasional sea beach *Halidrys siliquosa* on cobbles between boulders. In addition, another 12 species of seaweed were recorded on the site. More impressive than the striking diversity and density of seaweed on boulder tops was the species rich sides and overhangs of larger boulders. Sides were covered in the bryozoan *Bowerbankia pustulosa* and a diversity of nine sponge species that could be named with confidence, including *Haliclona simulans*, *H. viscosa*, *H. fistulosa*, *Hemimycale columella* and *Hymeniacion perlevis*. There were also notably high numbers of crustaceans and fish in undercuts under boulders, and small fry abundant around boulder tops. In total 48 individual taxa were recorded from this site, and the high number of corkwing wrasse, *Crenilabrus melops*, gathering and 'gardening' around large boulders was an indication that this could be an important nesting site for the species.



Rich seaweed communities topping boulders, LM



Boulder sides rich in sponge diversity, LM

Sites with the SAC also recorded from independent Seasearch records, but not detailed in this report, include: Porth Ysgaden, Trwyn Carreg y Tir, Gimblet Rock, Porth Ysgo, PD Cracker (offshore from Porth Dinllaen) and the Wreck of the Gwynfaen.

Menai Strait & Conwy Bay Special Area of Conservation

The Menai Strait is of great interest to conservationists and divers alike. It is also an excellent place to seek shelter when the wind is blowing, which it certainly was in 2016. However, we have a long list of priority survey sites in this Natura 2000 site, many of which are high priority such as searches for mixed muddy sediments, revisiting MNCR survey sites to confirm biotopes and searches for strange features within the Strait that have shown up on recent multibeam surveys. In 2016 we managed to visit four priority sites and three additional sites within the SAC as part of organised Seasearch dives. Two additional sites were surveyed as independent dives, but are not presented in this report.

Fryar's Peacock Paradise is a site off Fryar's Road at the North Eastern end of the Menai Strait, targeted as an area of potential interesting mixed muddy sediments, from 4m - 5.2m BCD. This site was the highlight of diving in the Menai Strait for Seasearch in 2016 with the discovery of an unusual biotope 'Sabella pavonina with sponges and anemones on infralittoral mixed sediment' (SS.SMx.IMx.SpavSpAn), photographed beautifully in terrible visibility by Yo-Han Cha, Catherine Gras and Carol Horne. Dense aggregations of the peacock worm *Sabella pavonina* dominated the seascape, which was otherwise a flat seabed of mainly slightly muddy sand and gravel with some pebbles forming a mosaic of sediment and rock habitat. Faunal turf of the larger rocks was dominated by hydroids (*Hydrallmania falcata* frequent), whilst the muddy sand and gravel was dominated by *S. pavonina*, the burrowing anemone *Cerianthus lloydii*, and anemone *Sagartia troglodytes*, all recorded as frequent. The gravelly surface provided a habitat for small crustaceans and both *Pisidia longicornis* and juvenile *Liocarcinus depurator* were recorded as present. Also recorded was the cryptic nudibranch, *Dendronotus frondosus*, a nice spot from Yo-Han.



Nudibranch *Dendronotus frondosus*, YC.



Asterias and *Sabella pavonina*, CG



Sabella pavonina, YC.

The Admiralty Moorings, between Bangor and Menai Bridge, were chosen to be surveyed for gap filling during bad weather. The site was a sandy mud slope with occasional cobbles and pebbles extending from the lower infralittoral to the circalittoral (0.5m - 5.6m BCD), with very little epifauna with the exception of hermit crabs and the common sea star, *Asterias rubens*. Mud sloped into a muddy gravel seabed with pebbles and cobbles to 7.5m BCD where the burrowing anemone *Cerianthus lloydii* was frequent and anemone *Sagartia troglodytes* occasional, with the sand mason worm *Lanice conchilega* also present in the muddy gravel.

A slate cliff near Coleg Normal was confirmed as present following multibeam surveys. The slate bedrock cliff was approximately 1-2 m high at 12m BCD. It was mainly bare rock but with patches of sponge, barnacles, keelworms and hydroids. Above the cliff was an area of boulders and cobbles with patches of shell gravel (5.41m BCD - 8.81m BCD) dominated by sponges, hydroids and barnacles, where the mermaid's glove branching sponge *Haliclona oculata* recorded as frequent. Below the cliff was an area of boulders dominated by encrusting bryozoans, although this was not surveyed in full.



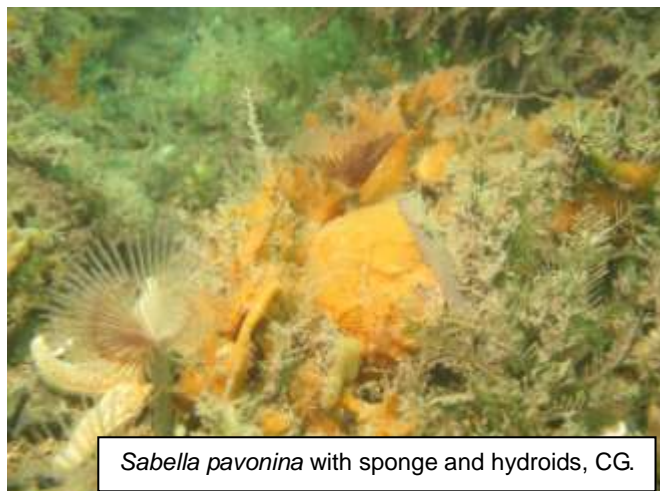
Slate cliff with *Necora puber* and hydroids, CG.



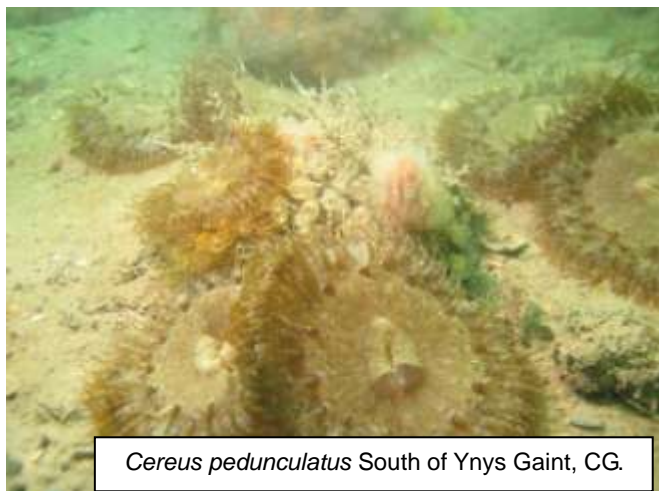
A bottle of life, CH.

East side of Ynys Gaint was a site near Menai Bridge chosen to confirm the presence of muddy gravel habitats, in the vicinity of historical Marine Nature Conservation Review (MNCR) surveys. It was found to be a flat, very gentle gravelly pebble and cobble mixed sediment shelving with occasional small boulders. The peacock worm *Sabella pavonina*, burrowing anemone *Cerianthus lloydii* and hydroids (*Hydrallmania falcata* and *Sertularia argentea*) were all commonly observed, making this the unusual biotope of *Sabella pavonina* with sponges and anemones on infralittoral mixed sediment (SS.SMx.IMx.SpavSpAn). Bottles were observed on the site, full of life, as photographed by surveyor Carol Horne.

South side of Ynys Gaint was another site chosen to confirm the presence of muddy gravel habitats, in the vicinity of historical Marine Nature Conservation Review (MNCR) surveys. Found to be more species and biotope diverse than the East side of the same island (Ynys Gaint), this site was found to have four biotopes, all of which were surveyed by experienced surveyors. The same *Sabella* habitat was observed and photographed, in addition to cushion sponges, hydroids and ascidians on turbid tide-swept sheltered circalittoral rock, burrowing anemones in circalittoral mixed sediments (including the daisy anemone *Cereus pedunculatus* photographed below), and a mixed faunal turf more typical to the Menai Strait, including frequent records of the mermaid's glove sponge *Haliclona oculata*. In total 70 species were recorded from this site, compared to 55 species on the East side of the island by the same surveyors, indicating that the south side of Ynys Gaint is a richer site.



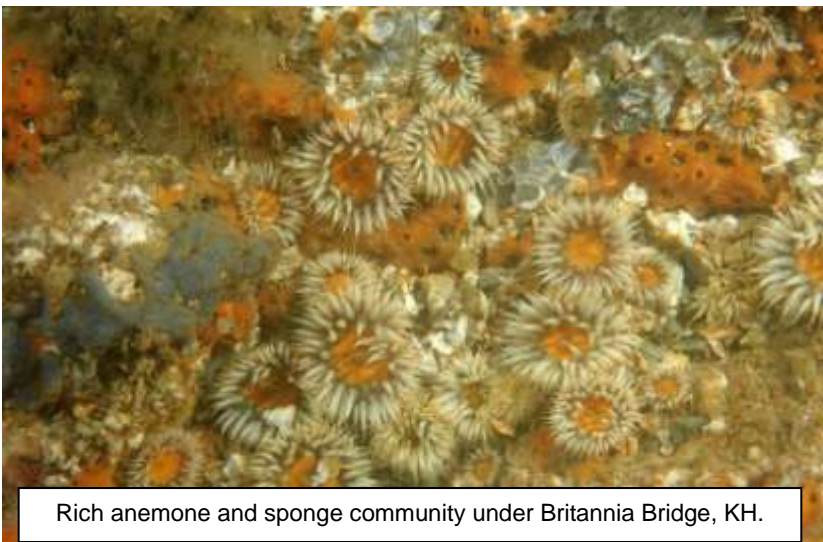
Sabella pavonina with sponge and hydroids, CG.



Cereus pedunculatus South of Ynys Gaint, CG.

The West side of Ynys Gorad Goch was another site dived to seek shelter from the wind. However, it was an interesting record of the unusual cushion sponges, hydroids and ascidians on turbid tide-swept sheltered circalittoral rock biotope and a mixed faunal turf more typical to the Menai Strait. Small boulders, cobbles and shell gravel patches (from 2m -6m BCD) were characterised by barnacles *Balanus crenatus* and sponges with frequent red algae (*Schottera nicaeensis* and red algal crusts). Deeper parts of this habitat also supported hydroids (*Abietinaria abietina*, *Hydrallmania falcata*) and the club sea squirt *Morchellium argus*. The deeper tide-swept boulder, cobble and pebble reef with patches of shell gravel (at 6m - 7.5m BCD), supported short animal turf dominated by sponges, hydroids and bryozoans. Anemones (including the burrowing anemone *Cerianthus lloydii* and daisy anemone *Cereus pedunculatus*) and peacock worms *Sabella pavonina* were present in shell gravel patches between the rock.

The central island under Britannia Bridge was surveyed when seeking shelter from high winds, but it was a welcome treat for all surveyors, with its rich very tide swept anemone and sponge communities. Kelp park (*Laminaria hyperborea*) topped bedrock reef steeply sloped from 1.1m BCD to 2.8m bcd with dense patches of the red veined weed *Cryptopleura ramosa*, pink coralline crust algae and other red algae. The reef was dominated by the breadcrumb sponge *Halichondria panicea*, barnacles *Balanus crenatus* and the oaten pipe hydroid *Ectopleura* (was *Tubularia*) *indivisa*. Beneath the kelp park, the reef comprised broken bedrock, boulders and cobbles (from 5.9m - 7.4m BCD) dominated by sponges (breadcrumb *Halichondria panicea* and grated carrot *Amphilectus fucorum* both of which were common), the elegant anemone *Sagartia elegans*, barnacles *Balanus crenatus* and clumps of hydroid *Sertularia cupressina*. Amphipod tubes, possibly *Jassa falcata*, and ghost skeleton shrimps (Caprellids) smothered seaweeds and other life at the site. The reef bottomed out on cobbles with barnacles with scarce hydroids and sponge at approximately 7.4m BCD, but this part of the site was not surveyed in full.



Rich anemone and sponge community under Britannia Bridge, KH.

Sites with the SAC also recorded from independent Seasearch records, but not detailed in this report, include: Perch Rock, the South Side of Puffin Island and Seal Cove (also Puffin Island).

North and West Anglesey

Most of Anglesey itself is not part of a Special Area of Conservation, but is regularly dived because it is easily accessible in most weather and has several boat operators. NRW and Seasearch have identified many gaps in knowledge, particularly around the cliffl north of the island where access is often difficult and there have been anecdotal reports and historical records of the Ross Worm (*Sabellaria spinulosa*), Carpet Mussels (*Musculus discors*) and Horse Mussel (*Modiolus*) reefs, all of which are nationally important species, Section 7 species, Wales Environment Act 2016. Unfortunately in 2016 the weather scuppered our plans to dive North Anglesey as an organised Seasearch event, but we focussed our attentions on gap filling wherever possible off West Anglesey and managed to dive four unusual and interesting sites not recorded from previously.

Boulders and Brittlestars / Mud and Boulders was a site chosen to fill data gaps approximately 1.5 miles West of Trearddur Bay. The site moved from muddy gravels dominated by brittlestars *Ophiothrix fragilis*, into a rippled muddy sand habitat with burrowing sea cucumbers *Neopentadactyla mixta*. Heavily silted boulders in both substrates were coated in crusts of the worm *Sabellaria spinulosa*, barnacles *Balanus crenatus*, and the seasquirts *Molgula* and *Asciidiella scabra*. A juvenile tub gurnard *Chelidonichthys lucernus* was also spotted on these dives.



Abraham's Bosom is a site previously visited by Seasearch, but on this occasion divers were dropped into gullies reaching out of the bay to fill data gaps during bad weather. These gullies host a spectacular diversity of life, with a species count of 77 taxa on this survey alone, 25 of which were seaweeds. Very large boulder tops and bedrock topped with silted *Laminaria hyperborea* kelp park stretched from sea level to 1.49m BCD, followed by diverse red algal communities, including *Palmaria palmata*, *Delesseria sanguinea*, *Heterosiphonia plumosa*, the non native *Dasysiphonia* (formerly *Heterosiphonia*) *japonica* and *Nitophyllum* sp. amongst others. The silted reef hosted an abundance of baked bean seasquirts *Dendrodoa grossularia*, with spiral nudibranch eggs were present on silted reef tops, probably from rarely sighted *Okenia aspersa*. *D. grossularia* continued to dominate vertical bedrock and boulder walls, with a diverse sponge community and *Sarcodictyon roseum* in gullies exposed to stronger currents and wave action, where the bay opened out to the open sea. Lots of fissures with silt overlying the rock made great homes for leopard spot gobies *Thorogobius ephippiatus* and the sponge *Dercitus bucklandi*.



Red seaweeds *Calliblepharis* and *Meredithia*, LM.



Red seaweeds, hydroids and bryozoan turfs, LM.

Offshore from Borthwen / Near Church in the Bay were dives targeted to gap fill along the West Anglesey coast. Flat sand seabed was recorded from 9.9m to 11.9m BCD, with signs of life including rare worm casts and sparse mobile fauna. The Icelandic cyprine, or Ocean quahog, *Arctica islandica* was recorded here and a thornback ray *Raja clavata*, in addition to the flatfish and squid eggs photographed below.



Flatfish watching from below, YC.



Squid eggs, CG.

South of Lee Caravan Park is a site approximately 1.25miles South East of Trearddur Bay chosen to fill a data gap out of the wind. It is a bedrock and boulder reef extending from the kelp park and red algae dominated shallows, into more spectacular walls, silted gullies and overhangs playing host to a plethora of small red seaweeds, hydroids, spiral bryozoans and ascidians with some sponges to 7.5m BCD. Horizontal shallow surfaces were dominated by barnacles and *Heterosiphonia plumosa*, *Halidrys siliquosa*, and *Laminaria hyperborea* (all common), with hydroids *Halecium* (frequent) and *Nemertesia* (common) whilst the walls were characterised by the small red seaweed *Schottera nicaeensis*, spiral bryozoans *Bugula flabellata* and *B. turbinata*, the lightbulb seasquirt *Clavelina lepadiformis*, club seasquirts *Morchellium argus* and *Aplidium punctum*. With 59 taxa recorded, it is possible that these gullies are less diverse than their northern counterparts at Abraham's Bosom, but it is also possible that conditions on the day meant fewer taxa were recorded by different surveyors.



Spiral bryozoan *Bugula turbinata*, YC.



Double spiral worm, *Bispira voluntacornis*, YC.

Sites with the SAC also recorded from independent Seasearch records, but not detailed in this report, include: The Chasms, Maen Piscar, Primrose Hill Bay, Porth Dafarch, the North Side of South Stack, Pen Las Rock (near North Stack), Newry Beach, Bolivar rock and Porth Eilian (Point Lynas).

Training and data

Training and qualifications

An Observer course was run in March at Swansea University by Kate Lock with eight participants. This was followed with training dives organised in April at Martins Haven. Most of the participants were from Swansea University, four participants attended dive weekends during the season and two completed their Observer qualifications. Two further divers that had attended courses in 2015 also completed their Observer qualifications.

Another very successful Observer course was run in April by Liz Morris-Webb and Lucy Kay at Porth Dinllaen RNL station for a further 15 enthusiastic new Seasearchers. Participants travelled from as far as Nottingham, Northampton and Manchester to join the day and, for the first time ever, two additional people turned up expecting to join on the day but had to be turned away due to lack of space! Most of these divers managed to get in the water as part of the training shore dives on a sunny day at Criccieth Beach. They were joined by tutors and experienced Seasearchers too. Two of these new Observers were signed off in 2016, one of whom then went on to undertake a surveyor course in Scotland.



In total nine Seasearch Observers completed their qualifications in Wales in 2016. Congratulations to Barry Holmes, Catherine Gras, Eddie Rickard, Ged McKenna, Jake Davies, James Nash, Liz Spiby, Niina Bastaki and Will Kay.

In June a specialist 'seaweed' identification course was organised with tutor Anne Bunker. It was well attended with 20 participants coming from all over the country. Many Seasearch divers find seaweed identification in the field tricky and the course helped everyone to have confidence to record the common species. Participants were taught how to press seaweeds to make their own collections and to use keys to help with identification.



Forms

In 2016 103 forms were completed in South and West Wales, the total comprising 26 observation and 77 survey forms. The high percentage of survey forms is due to the excellent number of trained divers that have completed the surveyor level training in the area. This helps ensure a high quality level of recording for the dives. These divers also regularly buddy up with new divers training for their observer and surveyor qualifications and provide their experience and help.

North Wales saw 75 completed Seasearch forms returned for 2016, 38 observation forms and 36 survey forms. Of these a massive 22 forms were from independent Seasearch dives, from club and individual dives. We have been actively encouraging independent records from volunteers to augment the organised Seasearch dives over the past few years and we are very happy to have received over double the number of forms in only one year. Largely this is due to four keen Seasearchers (one of whom is a tutor), but over 30% of our North Wales forms were independent records and these records included some high priority sites that we were very keen to get records from. In addition, a call for any old forms to be returned added five historical forms for 2013 and 2015. Although some of these were incomplete, the broad habitat information and species lists are still valuable records.

In North Wales we saw an increase in number of survey forms, but not always an increase in quality, with some old surveyors surprisingly forgetting substrate composition information or species abundance scales, in addition to omitting some characterising species, making biotoping of forms more tricky than usual. It is suspected that an increased interest in photography resulted in surveyors focussing on more unusual or characteristic sightings, completing forms from images, rather than ensuring the habitat data was collected *in situ*. After more than ten years' of Surveyor training in North Wales this unusual return strengthens the need for more close guidance from tutors and more advanced training and refresher days for surveyors, as well as observers. In 2017 we are planning a move towards more focussed surveyor skills development in North Wales.

All data has been entered onto Marine Recorder and available on the JNCC National Biodiversity Network Atlas. Native oyster and crawfish (of which there were a small number of sightings) data is entered onto Marine Recorder but is tagged as sensitive data following NRW guidelines; access to this data is therefore restricted.

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Photo credits

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