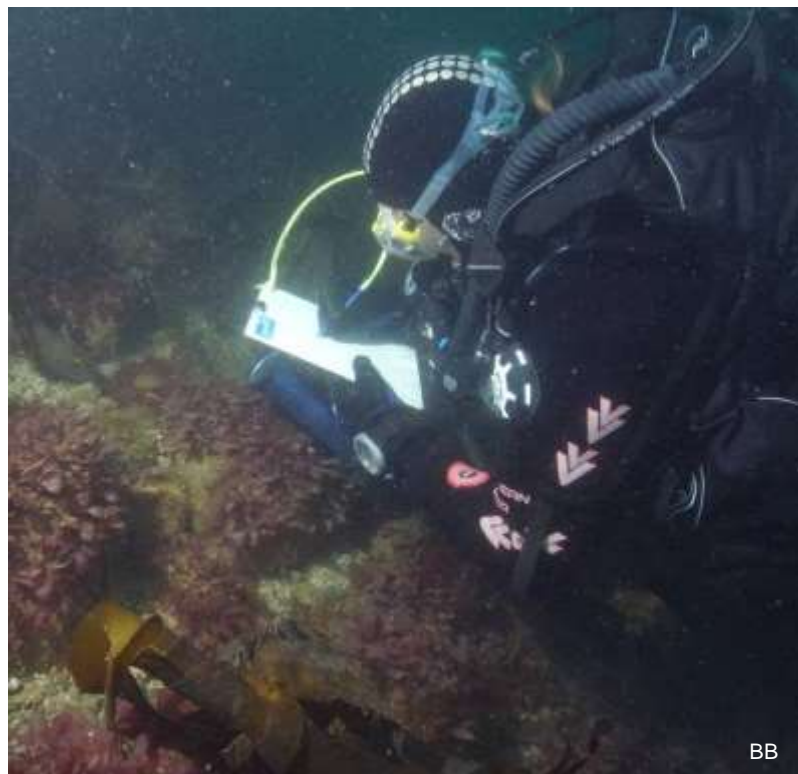




Seasearch Wales 2015 Summary Report



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Seasearch Wales 2015

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 2015. 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 2015 we continued to focus on priority species and habitats and on sites that had not been previously surveyed.

Data from Wales in 2015 comprised 55 Observation Forms and 85 Survey Forms and 12 crawfish record. The total of 152 represents 11% 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, Chris Wood.

Seasearch Cymru 2015

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 2014. 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 2015, 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 2015 yn cynnwys 55 o Ffurflenni Arsylwi, 85 o Ffurflenni Arolygu ac 12 cofnod o gimwch coch. Mae'r cyfanswm o 152 yn cynrychioli 11% 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 Chris Wood, Cydlynnydd Cenedlaethol *Seasearch*.

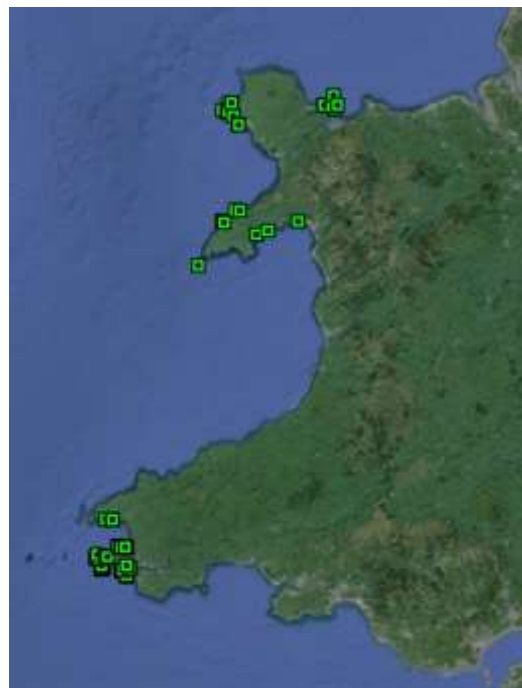
Summary of Data Received in 2015

The maps show the sites from which Seasearch forms were received during 2015. In the north records are concentrated around Anglesey and the Llŷn Peninsula, and in the south in Pembrokeshire. We did not receive any records from Cardigan Bay or South Wales in 2015. Because of the geographical split, much of the report is split by the two areas.

The composition of forms for the last 5 years is as follows:

	2011	2012	2013	2014	2015
Observation	198	192	69	55	55
Survey	125	154	132	150	85
Crawfish	43	0	0	1	12
Sea Fan	0	1	0	0	0
Total	366	347	201	206	152

The number of records received is significantly lower than in most recent years. This was partly due to uncertainties over funding which led to a lower number of organised surveys and partly due to a temporary reduction in coordination capacity. However it also coincided with a UK/Ireland wide reduction in activity, particularly new participants, possibly due to less people choosing to dive in our waters.



All data have been entered onto the Marine Recorder database and made available directly to participating organisations as well as to everybody through the National Biodiversity Network website. Data on a small number of species, including scallops, native oyster and crawfish is entered into Marine Recorder but is tagged as sensitive in accordance with NRW guidelines. Access to this data is therefore restricted.

Survey Planning and Priorities

A list of target dive areas was drawn up at the beginning of the year at meetings held with the Natural Resources Wales staff and local Seasearch tutors in both North and West Wales. A selection of high, medium and low priority sites were selected based on gap filling and re-visiting areas of suspected habitats of interest from previous drop down video and multibeam surveys. This included gap filling in St Brides Bay and the offshore islands.

Weekend dive plans were kept flexible so that sites could be selected based on the weather and tides.

In addition to organised survey events, a few Seasearchers also provided data from their own dives.

North Wales Summary

Five boat survey and three shore based training weekends were organised. We also had a change of Coordinator with Liz Morris-Webb returning to the role with the help of local tutors leading the boat surveys when she was unable to do so due to pregnancy and maternity leave.

The survey programme was badly affected by adverse weather and it only proved possible to run three shore based training events and three successful boat survey days. A total of nine sites were surveyed on organised Seasearch dives and these are described below. Seasearchers completing forms on their own



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independent dives, added another eleven sites, two around Anglesey and nine within Pen Llŷn a'r Sarnau SAC, although not usually at priority sites of interest. Two sites were surveyed keen and experienced Seasearchers in conjunction with the Conchological Society of Great Britain and Ireland, which gleaned some interesting results on the South Llŷn Peninsula. In addition North West England coordinator and tutor Wendy Northway hosted an additional day's shore diving for Observer trainees on Anglesey in August.



Survey dives were completed in the following areas:

1. Menai Strait and Conwy Bay SAC 4 sites
2. North and West Anglesey 7 sites
3. Pen Llŷn a'r Sarnau SAC 9 sites

Highlights of the 2015 surveys were:



Species of Principal Importance (Section 42):

- Juvenile Crawfish, *Palinurus elephas* (above mid left) off the North Llŷn Peninsula;
- subtidal Seagrass, *Zostera marina*, bed at Porth Dinllaen;
- patchy Seagrass up to 40 shoots per m² and 15cm long at Borthwen near Rhoscolyn;
- sparse Seagrass at Criccieth;
- Ocean Quahog, *Arctica islandica* (above right) amongst Porth Dinllaen and Rhoscolyn seagrasses;
- Thornback Ray, *Raja clavata*, off Gimlet Rock (South Llŷn peninsula)

Annex 2 species within N2K sites:

- Yellow Cluster Anemone, *Parazoanthus axinellae*, at Bardsey Island within Pen Llŷn a'r Sarnau SAC.
- Southern Rainbow Wrack, *Cystoseira nodicaulis*, (above mid right) common at Carreg y Defaid, Pen Llŷn a'r Sarnau SAC.

Non-native Species

- Leathery Sea Squirt, *Styela clava*, (above left) at Carreg y Defaid, and Gimlet Rock Pen Llŷn a'r Sarnau SAC

South and West Wales Summary

A total of 5 general survey weekends were completed in the following areas:

4. St Brides Bay 5 sites
5. Skomer MCZ 2 sites
6. Skokholm 4 sites
7. Entrance of Milford Haven 6 sites



An additional days diving was completed in September with the help of a new Seasearch recruit, Karl Mason. Karl has a small boat located in Solva harbour in the north of St Brides Bay and he has fantastic knowledge of the coastline in that area. A small team of four divers explored two sites and it is hoped that this can continue in 2016. .

All weekends were organised and run by Kate Lock. 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.

Highlights of the 2015 surveys were:



Section 42 species:

- Pink sea fan *Eunicella verrucosa*, at the Neck, Skokholm and High Court Reef, Skomer MCZ.
- Crawfish, *Palinurus elephas* at sites off Skokholm and Milford Haven entrances: Rat Island and Lindsway Reef;

Nationally or locally scarce species:

- Mashed Potato Sponge *Thymosia guernei*,
- Yellow Staghorn Sponge *Axinella dissimilis*,
- Crumpled Duster Sponge *Hymerhabdia damicornis*
- Prawn Cracker sponge *A. infundibiformis*
- Sponge *Tethyspira spinosa*;
- Scarlet and Gold cup coral, *Balanophyllia regia*, at the Wick, Skomer;
- nudibranchs: *Thecacera pennigera* and *Doris sticta*, at Peters Bay, Skokholm;
- Grey triggerfish, *Balistes carolinensis*, West of Solva and Stack Rocks, St Brides Bay;
- Sea Squirt *Didemnum fulgens*

Non-Native Species

- Leathery sea squirt, *Styela clava*, Rat Island and Watwick Bay.

Sites Surveyed

1. Menai Strait and 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 2015. However, we have a long list of priority survey sites in this Natura 2000 site, some of which are high priority such as searches for historic horse mussel, *Modiolus modiolus*, reefs around Puffin Island and searches for strange features within the Strait that have shown up on recent NRW multibeam surveys. In 2015 we managed to visit three priority sites within the SAC as part of organised Seasearch dives.

West of White Beach, South East corner of Anglesey

This was a survey to fill an un-surveyed area. The site was primarily large and very large boulders with sparse sugar kelp and oarweed (*Saccharina latissima* and *Laminaria digitata*) to 1m below chart datum. Due to the turbid waters the habitat quickly became a circalittoral faunal turf typical of the area, characterised by hydroids (*Abietinaria abietina*, *Halecium halecinum*), anemones (*Sagartia elegans* and *Metridium senile*), sponges (including the pinky peach papillate sponge *Hymeniacidon perlevis* and

mermaid's glove (*Haliclona oculata*) which are quite common locally) and an abundance of Dead Men's Fingers (*Alcyonium digitatum*) which is locally uncommon. The reef bottoms out onto muddy sand with brown shrimp (*Crangon crangon*) below left, sea potatoes (*Echinocardium cordatum*) and masked crabs (*Corystes cassivelaunus*) below centre, between 4.5-5.5m below chart datum (bcd).



Trwyn Dinmor, South East corner of Anglesey

This was another very scenic gap filling dive in the North Eastern end of the SAC. Bedrock and angular very large and large limestone boulders were covered in Dead Men's Fingers, (*Alcyonium digitatum*) below right, from 2.5m to approximately 6.5m bcd. Boulder tops in deeper water were dominated by the hydroids *Abietinaria abietina* and *Sertularia argentea* with ross worm (*Sabellaria spinulosa*) crusts. Corkwing Wrasse (*Symphodus melops*) below left, was observed 'harvesting' the hydroids in possible nest preparation behaviour.



Below the large boulder field was a muddy sand with cobbles and pebbles, supporting a diversity of sand scour tolerant species including hydroids, burrowing and dahlia anemones (*Cerianthus lloydii* and *Urticina felina*), with decreasing diversity moving towards a deeper habitat of unsurveyed rippled sand at approximately 6.5m bcd.

Puffin Island

This independent Seasearch surveyor form was completed between 5 and 7m bcd on the west side of Puffin Island by two experienced surveyors, in a habitat similar to that of Trwyn Dinmor described above. In the relative lee of the island there was a higher diversity of red algae and sponges recorded, but lower abundance of Dead Men's Fingers.

Approx 0.5km South of Penmon

This high priority site was chosen for an organised Seasearch dive as NRW was keen to confirm the habitat present. Three habitats were recorded: the first of fine rippled sand with *Arenicola* casts from 1m above to 1.5m bcd. The second habitat was from 1.5 to 5m bcd, and comprised fine sand with a higher proportion of dead shell and a small amount of mud supporting a diverse mix of cnidarians and bryozoans. There were groves of antenna hydroids (*Nemertesia* spp.) with abundant burrowing anemones, *Cerianthus lloydii*, and common bushy bryozoans, *Vesicularia spinosa*.

2. North and West Anglesey

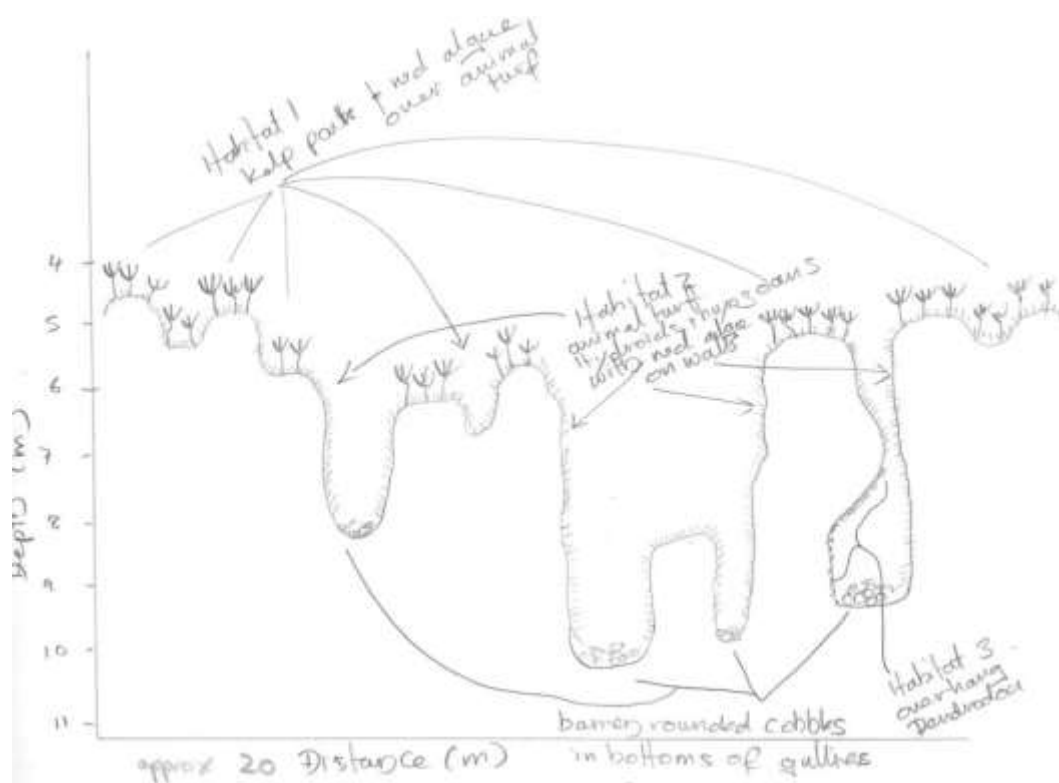
Most of Anglesey itself is not part of a Special Area of Conservation, but is regularly dived because it is easily accessible in most weather and has several boat operators. NRW and Seasearch have identified many gaps in knowledge, particularly around the clifly north of the island where access is often 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 Habitats of Principal Importance in Wales (Section 42 habitats)

Newry Beach

Newry Beach is a popular training site for Seasearch and other divers. In 2015 two training events were held here. Holyhead Breakwater affords protection to shallow infralittoral boulders with silted kelp and sea squirts (*Asciidiella aspersa*) amongst muddy mixed ground to 5.3m bcd. At 5.3m bcd the habitat becomes mud with signs of life, including the Slender Sea Pen (*Virgularia mirabilis*). This is the only place sea pens are found in Wales. The site contains non-native species due to the close proximity of a marina. This year there was one record of the Werther's Original seasquirt *Corella eumyota* as occasional. This little orange siphoned glossy squirt lives on shells, boulders and large seaweeds, and has spread prolifically since 2009, when it was only recorded on the south coasts of England and Ireland.

Scenic gullies near the Wreck of the Primrose Hill

This site is just south of South Stack on Holy Island. A beautiful site of bedrock walls and gullies from 4 to 10m bcd, supporting mixed faunal turf of hydroids and bryozoa (*Bugula* and *Crisia* spp.), colourful sponges (including *Cliona celata*, *Dysidea fragilis*, *Polymastia penicillus*, *P. boletiformis*, *Stelligera rigida*, *Tethya citrina*, *Dercitus bucklandi* and *Pachymatisma johnstonia*) and ascidians, topped with an abundant mix of filamentous foliose red algae. Feeding on this diverse turf were three species of nudibranch: Orange Clubbed Sea slug (*Limacia clavigera*), crystal Sea SluG (*Janolus cristatus*) and Lined Polycera (*Polycera quadralineata*). The top of the bedrock supports kelp park to a depth of approx. 4.5m bcd, whilst overhangs had a dense cover of Gooseberry Sea Squirt (*Dendrodoa grossularia*). The floor of gullies had scoured rounded cobbles with no signs of life, sloping into mixed coarse sediments to 11.5m bcd away from the reef. This site must also be popular with recreational anglers as it was littered with fishing weights and lines tangled on rocks, with one angling boat on site during dives.



Wreck of the Missouri

The wreck of the Missouri sits on rippled sand and mixed ground in 6.5 to 10.5m (bcd). in 2015 Seasearch surveyed the site with an organised boat due to some reports of live maerl in the area. No maerl was recorded. The area comprised scattered large metal plates amongst large and small boulders, with abundant animal turf of hydroids, spiral bryozoans, (*Bugula spp.*) and Hornwrack, (*Flustra foliacea*) and small filamentous red algae. A high number of sting winkle eggs were noted on the sides of boulders (right). Boulders and wreckage lay in rippled sand with numerous signs of life but very little mobile epifauna.



Porth Dafarch

Historically Seasearch has used Porth Dafarch as a training site for Observer courses, but it has not been surveyed in recent years. As part of Anglesey Scubafest one trainee Observer and tutor Wendy Northway undertook a dive in the low intertidal and sublittoral fringe (max depth 4m above chart datum (acd)). Bedrock was covered in a selection of fuocids (*Fucus serratus* and *F. vesiculosus*) and rarely Sea Oak (*Halidrys siliquosa*), whilst the central bay was sandy with lugworm casts.

Borthwen, Rhoscolyn

North Wales Seasearch chose Borthwen as the 2015 refresher day location, in order to confirm the continued presence of the small, patchy seagrass bed. High tide meant that many participants recorded the boulders and mixed ground dominated by intertidal seaweeds including Fucoids, Egg Wrack (*Ascophyllum nodosum*), Discoid Fork Weed (*Polyides rotundus*) and Punctured Ball Weed (*Leathesia difformis*), with occasional Wireweed (*Sargassum muticum*) below right.



Keen swimmers who ventured towards the moorings did record very patchy seagrass, suspected to be less abundant amongst the moorings than the shoots recorded in previous years. The densest areas had up to 50 *Zostera marina* shoots per m², with plant height up to 20cm in length at approximately 2.3m bcd. The Ocean Quahog (*Arctica islandica*), a Welsh Section 42 species of Principal Importance was also confirmed as occasional amongst seagrass at the site (below right).



Raven's Point, Trearddur Bay

This small bay was surveyed as part of Observer training in 2016. The shallow infralittoral bedrock reef steeply sloped from 2.5m acd to 2.3m bcd, into a sandy bay which provides shelter for one fixed mooring. Sea Oak (*H. siliquosa*) was again present in the sublittoral, whilst the intertidal was dominated by *F. serratus*, *F. vesiculosus* and barnacles on rock.

Wreck of the Mona

The Mona is the wreck of a metal hulled steam cargo ship lost off South West Anglesey in 1916. It still stands proud of undulating sand waves. Rising from approximately 20m bcd the wreck is covered in superabundant Plumose Anemones (*Metridium senile*) and occasional Peacock Worms (*Sabella pavonina*). Most notable around the wreck was the diversity of fish and crustaceans, including Flounder (*Platichthys flesus*), Pouting (*Trisopterus luscus*) and Poor Cod (*Trisopterus minutus*).

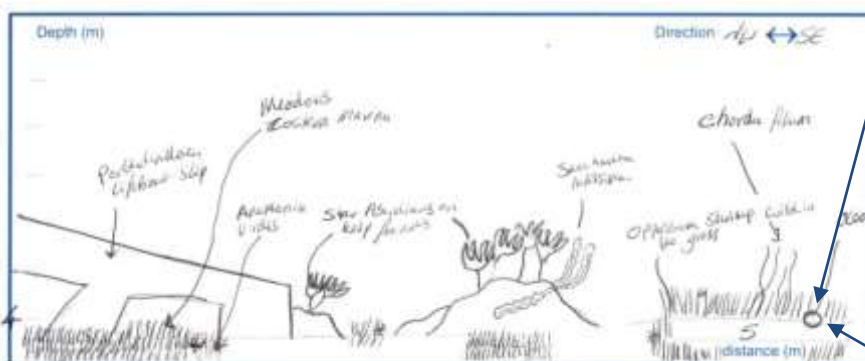


3. Pen Llŷn a'r Sarnau Special Area of Conservation

The Llŷn Peninsula is part of the Pen Llŷn a'r Sarnau Special Area of Conservation. Unfortunately a lack of diving boat charters in the area in 2015, meant that no Seasearch organised events took place. However, independent records came from eight sites across the SAC.

Porth Dinllaen Seagrass

Large beds of healthy *Zostera marina* were recorded off the end of Porth Dinllaen new lifeboat station launch (approx 3m bcd). Bootlace Weed (*Chorda filum*) was common and the bed was full of associated life including large bivalve, *Arctica islandica*, in sand. Kelps *Saccharina latissima* and *Laminaria hyperborea* were attached to bedrock outcrops near station slip. This seagrass bed has been surveyed in the past by Seasearch and it is good to record that it is still thriving.



Wreck of the Gwynfaen

This is the wreck of old cargo ship on mixed ground (19.25m bcd) covered with Hornwrack (*Flustra foliacea*) and Dead Men's Fingers (*Alcyonium digitatum*). Pollack (*Pollachius pollachius*), Bib (*Trisopterus luscus*) and Ballan Wrasse (*Labrus bergylta*) were all common. The sediment surrounding the wreck was a mixed ground comprising shale and old shells.

Porth Ysgaden inner reef

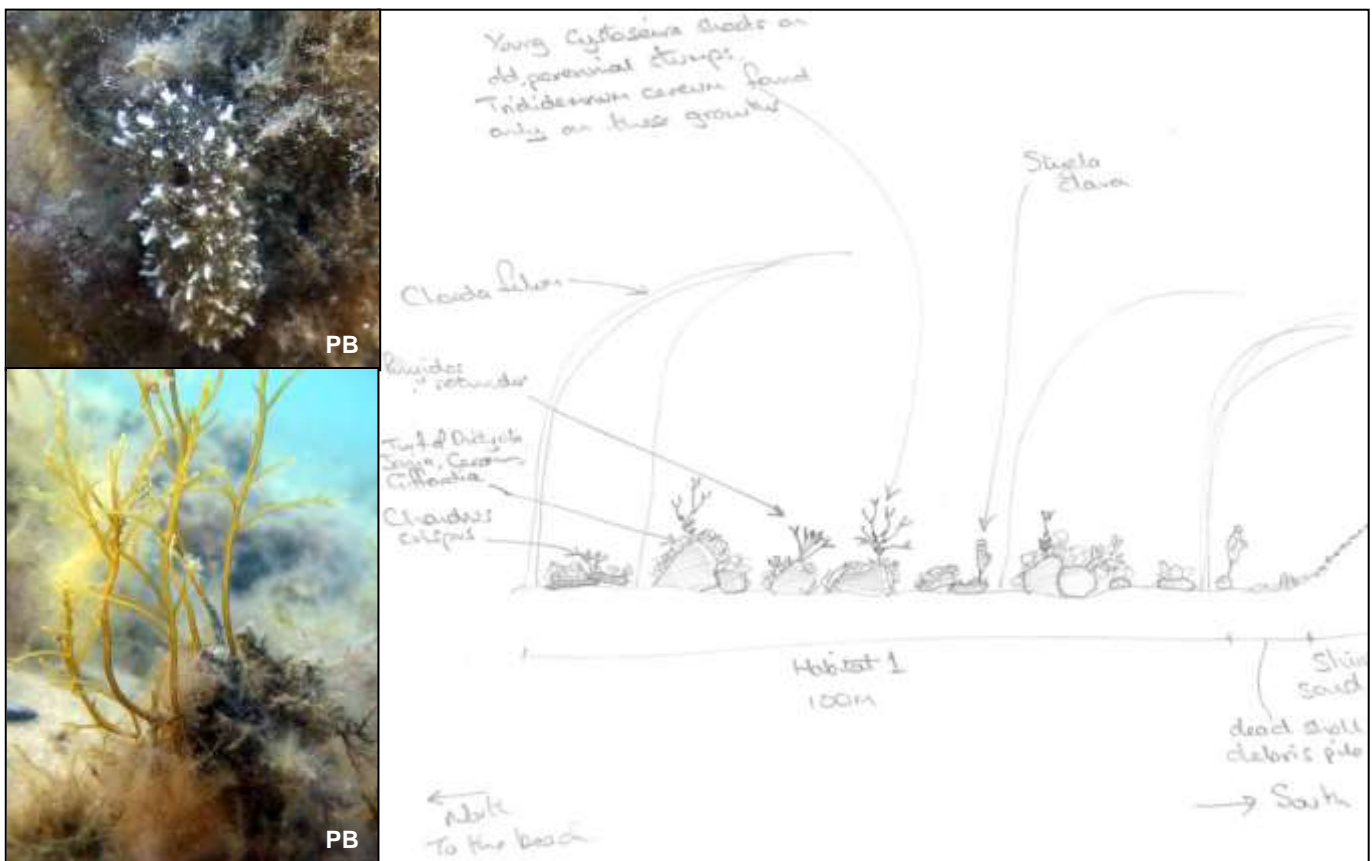
The inner reef at Porth Ysgaden was surveyed in 2015 on a night dive. Upper infralittoral bedrock was dominated by kelp forest (*Laminaria hyperborea* and *L. digitata*) with gullies on the edge of the bay, and sand and gravel with Bootlace Weed (*Chorda filum*) and lugworm casts, (*Arenicola* sp.) at approx 6m bcd.

Pen Cristin, Bardsey Island

This is a site of steeply sloping bedrock from the shallow sublittoral kelp forest at 2m bcd into kelp park, and then into animal dominated bedrock communities at 17m bcd. There was a diverse sponge, bryozoan and anemone community, including large patches of the Yellow Cluster anemone Anemone (*Parazoanthus axinellae*). At approximately 19-22m bcd the seabed became mixed sediment and boulders.

Carreg-y-Defaid

This site was surveyed by Seasearchers with the Conchological Society of Great Britain and Ireland, and repeats a Seasearch survey in 2011. It is a shallow (0.5-1.5m bcd) fine sand slope leading into boulders, cobbles, pebbles and sand which is well known locally for its diverse bivalve communities. The southern Rainbow Wrack (*Cystoseira nodicaulis*) was recorded as frequent, with a selection of other brown seaweeds dominating the rocky parts of mixed ground. Stalked jellyfish were observed as rare at the site, and the didemnid seasquirt *Trididemnum cereum*, pictured below, was also occasional in the weed community. Leathery seasquirt (*Styela clava*) was recorded as occasional.



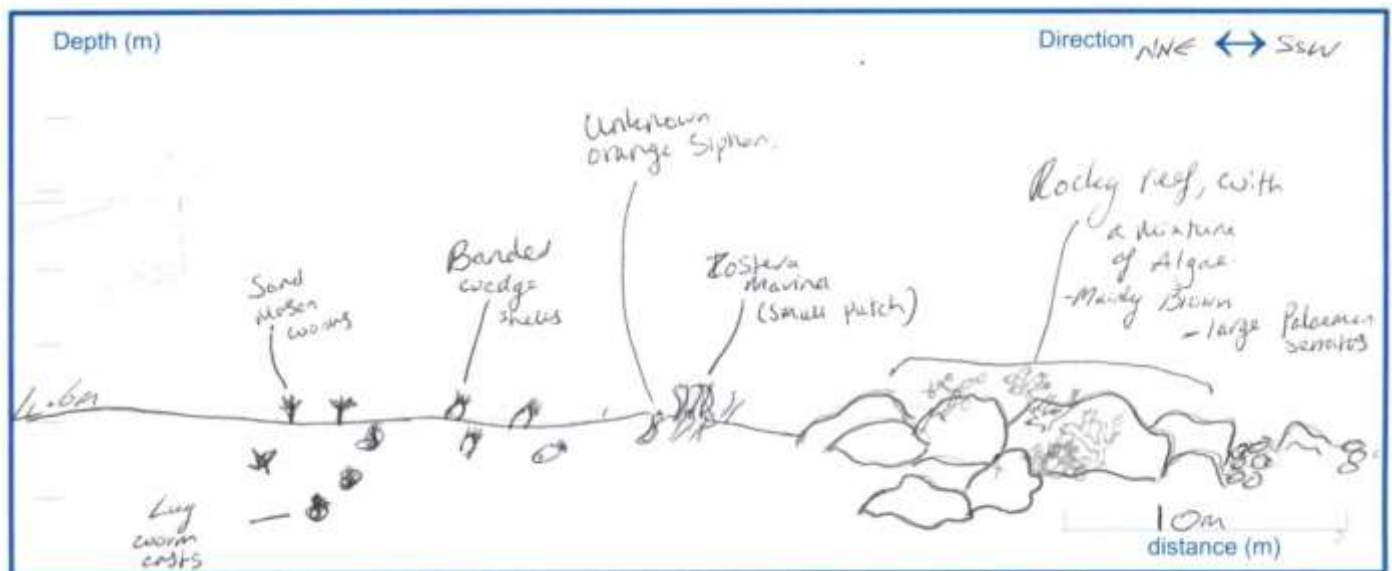
As a result of the Conchological interest in the site, a selection of molluscs was also recorded at the site and included the Venerid bivalves (typical clams): *Polititapes (Tapes) aureus*; *Venerupis corrugata* (both occasional); the keyhole limpet *Diodora graeca* (rare) and the tortoise limpet *Testudinalia testudinalis* (rare), amongst more commonly recorded molluscs.

Gimlet Rock, Pwllheli

A Seasearch form was completed after a night dive. The site comprised shallow sand and gravel (2.5m bcd) sloping into mud. The surface was dominated by a red algae turf and Bootlace Weed (*Chorda filum*), with many dead gastropod and bivalve shells. A Thornback Ray (*Raja clavata*) was recorded and is a species of Principal Importance under Section 42 in Wales. Also recorded was the non-native Leathery Sea Squirt (*Styela clava*).

Beneath Criccieth Castle

This site has been surveyed previously by Seasearch. In the light of some questioning of the Seasearch records of seagrass at this site it is good to confirm that *Zostera marina* is definitely still present at the site, albeit very sparse and patchy. It was also noted that the site also had a wide diversity of crustaceans and burrowing infauna, including the Banded Wedge Shell (*Donax vittatus*), razor clams (*Ensis spp.*) and sea potato (*Echinocardium cordatum*).



4. St Brides Bay

This deep bay is bounded by Ramsey Island in the north and Skomer Island in the south. The sediment seabed extends to 50m depth and it is used as a safe anchorage area for tankers waiting to enter Milford Haven Port. There are many islands in the bay, Green and Black Scar off Solva and Stack Rocks off Little Haven, there are also extensive offshore reefs and reefs found off the many headlands found in the bay. In 2015 Seasearch surveys were completed at five sites:

Pen Pleidiau

A small headland located off Caerfai Beach at the north end of the bay. Kelp forest was found in the shallows with a red algal turf below. The seabed was dominated by large boulders, the vertical faces will sparse Devonshire cup coral (*Caryophyllia smithii*), Boring Sponge (*Cliona celata*) and Elephant Hide Sponge (*Pachymatisma johnstonia*). Both Breadcrumb Sponge (*Halichondria panicea*) and Snowflake Sea Squirt (*Didemnum maculosum*) were common. Potato Crisp Bryozoans (*Pentapora foliacea*) were common on the mixed ground with a diverse selection of crustacean and fish species.

Loch Warren, Triceratops Rock

A reef located just west of Solva harbour at the north end of the bay. Kelp forest was found in the shallows with Breadcrumb Sponge (*Halichondria panicea*) and Shredded carrot sponge (*Amphilectus fucorum*) mixed with red algae. Star Sea Squirt (*Botryllus schlosseri*), Baked Bean Sea Squirt (*Distomus variolosus*) and White Striped Anemone (*Actinothoe sphyrodeta*) were all common. Vertical faces with deep ledges were found down to 12m depth and a series of gullies filled with boulders and mixed sediment. Hidden under a ledge in one gully was a shoal of six grey triggerfish (*Balistes capriscus*) below left. Two lost lobster pots were also found.





Borough Head

This headland is located close to Little Haven in the southern end of St Brides Bay. A moderately steep boulder slope from 9 to 11m depth led to a sandy sediment plain with mixed broken shells. Dense red algae were found on the upper surfaces of the boulders with short animal turf on the verticals. A wide range of sponges and anemone species were recorded but most were only occasional or rare. Pinhead Sea Squirts (*Pycnoclavella aurilucens*) were frequent and dense aggregations of Sting Winkles (*Ocenebra erinacea*) with eggs were found. In the sediment habitat both Dahlia Anemone (*Urticina felina*) and Burrowing Anemone (*Cerianthus lloydii*) were recorded along with hermit crabs, *Pagurus bernhardus*, Spiny Spider Crab (*Maja squinado*) both Greater Pipefish (*Syngnathus acus*) and Worm Pipefish, (*Nerophis lumbriciformis*) right. Nudibranch highlights were *Eubranthus farrani*, *Cuthona amoena* and *Ancula gibbosa*.



Stack Rock

This is a small island close to Little Haven. The seabed comprised of a steep, rugged reef descending from 6m to 18m depth. Kelp forest and red algae were found in the shallows with Blue Rayed Limpets (*Patella pellucida*) and large numbers of Pollack (*Pollachius pollachius*). The reef formed large steps with horizontal ledges and vertical faces mixed with large boulders and pockets of cobbles, pebbles and shell fragments. The animal turf present varied depending on which part of the reef was being surveyed. In the deeper areas a super-abundance of the Crenulated Acorn Barnacle (*Balanus crenatus*) was found smothered in amphipod tubes, *Jassa sp.* Dead Mens' fingers (*Alcyonium digitatum*) were common along with large Boring Sponges (*Cliona celata*). Patches of Jewel Anemone (*Corynactis viridis*) were frequent as were Devonshire Cup Corals (*Caryophyllia smithi*). Diverse sponge, sea squirt and bryozoan species were recorded, the most notable being Crumpled Duster Sponge (*Axinella damicornis*). At the edge of the reef, mixed sediment with coarse sand, cobbles and shell gravel was found. This habitat was rich in life with Gravel Sea Cucumber (*Neopentadactyla mixta*), below left, patches of Common Brittlestars (*Ophiothrix fragilis*) and Seven-Armed starfish (*Luidia ciliaris*), below right.



Hen and Chicks

These are a series of rocks exposed at high water between Little Haven and St Brides Haven. The area surveyed was the reef between 5 to 10m depth. The shallow areas were dominated by a kelp forest of

forest kelp (*Laminaria hyperborea*) and Furbellows (*Saccorhiza polyschides*) along with red seaweed. The rocky faces and boulders between 7 and 10m depth were covered in a mix of red algal and animal turf. Several anthozoan species were recorded with patches of Jewel Anemone (*Corynactis viridis*) below left, White Striped Anemone (*Actinothoe sphyrodeta*) and Dead Mens' Fingers (*Alcyonium digitatum*), with occasional sea squirts and bryozoans including Potato Crisp Bryozoan (*Pentapora foliacea*). At the bottom of the reef was a mix of sand, cobbles and broken shells. The cobbles were encrusted in pink algae and keel worms. There were aggregations of Common Whelks (*Buccinum undatum*), large numbers of Dahlia Anemones (*Urticina felina*) and occasional King Scallops (*Pecten maximus*). Fish species recorded on the reef included the Greater Pipefish (*Syngnathus acus*), butterfish (*Pholis gunnellus*) and Long Spined Scorpion Fish (*Taurulus bubalis*). Most notable was a small shoal of 6-8 Grey Trigger Fish (*Balistes Capriscus*) below right.



5. Skomer Marine Conservation Zone

Skomer MCZ (previously Skomer Marine Nature Reserve) is managed by Natural Resources Wales. Its 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, the management plan identifies that these need continued updating with new records. To assist with this Seasearch forms were completed at the Wick and High Court Reef.

The Wick

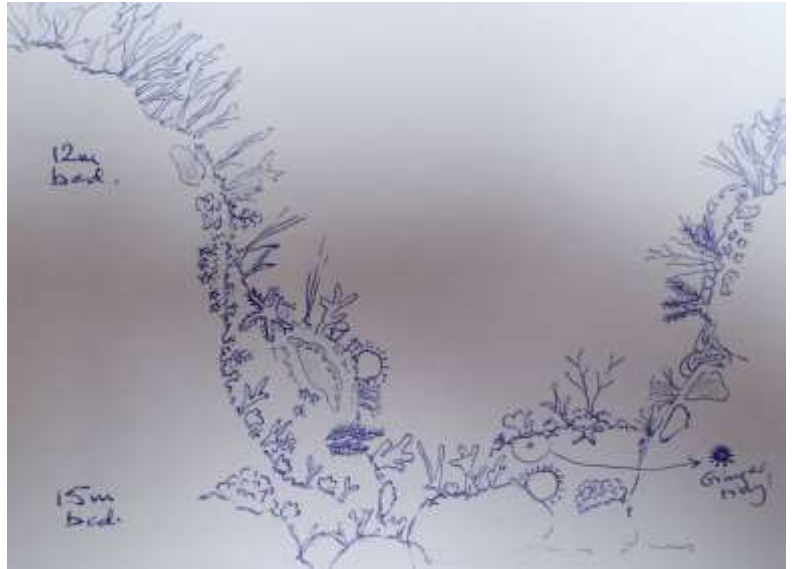
The inner area of the Wick is well surveyed. It is characterised by a steep wall down to 10m which then deeply overhangs at the base down to 16m depth. At the base of the overhang are large boulders covered in gold and scarlet cup corals which are monitored by the MCZ team. Less is known however about the outer areas of the Wick wall and these were targeted by Seasearch.

In the shallow areas to 12m depth rocks were covered in, Forest Kelp (*Laminaia hyperborea*) and dense seaweeds. Below this a steeply sloping wall was covered in a mix of brown and red seaweeds and animal turf to 15m. The steep wall then undercut to form an overhang before meeting a gravel mixed sediment seabed at 24m depth. In the deeper areas sponge diversity was high with over 20 species recorded. Mixed in with the sponges were patches of ascidians including Pinhead Sea Squirts (*Pycnoclavella sp.*) and Teapot Sea Squirts (*Polycarpa scuba*). Devonshire Cup Coral (*Caryophyllia smithi*) were abundant and small patches of Yellow Cluster Anemone (*Parazoanthus axinellae*), below left, were found along with Jewel Anemones (*Corynactis viridis*.) Hydroids and bryozoans also encrusted the rocks, including White Clawed Sea Moss (*Crisia spp.*) which was common and small potato crisp bryozoans (*Pentapora foliacea*).



High Court Reef

The seabed comprised of a series of steep rock pinnacle walls down to 20m depth with boulders at base. A kelp park with mixed seaweed was found on the tops of the pinnacles. The walls were festooned with sponge, hydroid and bryozoan turf with large Elephant Hide Sponge (*Pachymatisma johnstonia*) and Boring Sponge (*Cliona celata*). Other notable sponges included Yellow Staghorn Sponge (*Axinella dissimilis*, Crumpled Duster Sponge (*Axinella damicornis*) below, Prawn Cracker Sponge (*Axinella infundibuliformis*) and the spiky pink *Tethyspira spinosa*. The site was rich in



southern UK species, including Yellow Cluster Anemone (*Parazoanthus axinellae*), Peppercorn Anemone (*Isozoanthus sulcatus*), Red Fingers (*Alcyonium glomeratum*), Indian Feather Hydroids (*Gymnangium montagui*) and Pink Sea Fan (*Eunicella verrucosa*).

The most common bryozoans were White Clawed Sea Moss (*Crisia* sp.) twiggy bryozoans, *Cellaria* spp. and Finger Bryozoans (*Alcyonidium diaphanum*). Several large Potato Crisp Bryozoans (*Pentapora foliacea*) were also recorded. Fish species included Cuckoo Wrasse (*Labrus mixtus*) and Goldsinny (*Ctenolabrus rupestris*).

6. Skokholm

Skokholm is an old red sandstone island located two miles offshore. Seasearch dives have surveyed the area over the years and in 2015 dives were completed off the east end of the island.

Peters Bay

The seabed comprised of rocky ridges running in an east-west direction and sloping down at a 45° angle from 15 to 20m depth (below right). Large Boring and Elephant Hide sponges (*Cliona celata* and *Pachymatisma johnstonia*) dominated the upper parts of the ridges whilst erect sponges, including Yellow Staghorn Sponge (*Axinella dissimilis*) were more prominent in the deeper parts of the ridges. Echinoderms were frequent including Common Urchins (*Echinus esculentus*), Spiny Starfish (*Marthasterias glacialis*) and Cotton Spinner (*Holothuria forskali*). Hydroid and bryozoans species encrusted the reef. Antenna Hydroids (*Nemertesia antennina* and *N. ramosa*) were common, along with White Clawed Sea Moss (*Crisia* sp.) and spiral bryozoans (*Bugula* sp.). Nudibranch highlights were the nationally scarce *Doris sticta* and *Thecacera pennigera*, below left.



The Neck

The seabed comprised of bedrock ridges 3 to 4m in height with gullies 2 to 3 m wide thickly covered in silt. Deep fissures and crevices were found providing shelter for crustaceans like Blue Striped Squat Lobster, (*Galathea strigose*) and territorial fish. Animal turf varied around the reef with White Clawed Sea Moss (*Crisia sp*) and twiggy bryozonans (*Cellaria spp.*) dominating some faces, whilst others were covered in Antenna Hydroids (*Nemertesia antennina* and *N. ramosa*), Herringbone Hydroid (*Halecium halecinum*) and *Aglaophenia sp.* hydroids. A single Pink Sea Fan (*Eunicella verrucosa*) was recorded and dense patches of Horseshoe Worm (*Phoronis hippocrepi*) were locally common.

The Spit

This is a rocky reef with pinnacles and faces up to 3m in height. The reef tops were covered in kelp park and red seaweeds whilst the steep rock faces were dominated by hydroids and bryozoans. Gullies were filled with sand and gravel with little life apparent. Large patches of Indian Feather Hydroid (*Gymnangium montagui*), below left, were found along with Oaten Pipe Hydroid (*Tubularia indivisa*) on prominent edges. A single Pink Sea Fan (*Eunicella verrucosa*) was recorded and Potato Crisp Bryozoans (*Pentapora foliacea*) were frequent. Eleven species of nudibranch were recorded, including *Cadlina laevis* and *Rostanga rubra*. Twenty two species of sponges were found, the most notable being Prawn Cracker Sponge (*Axinella infundibuliformis*) below, Yellow Staghorn Sponge (*Axinella dissimilis*), right, and Chimney Sponge (*Polymastia penicillus*).



Skokholm SE reef

The seabed comprised of rugged bedrock ridges from 13 to 15m depth. The rock faces were pitted and fissured with deep clefts between bedding planes. Ridges were dominated by a diverse red algal turf mixed with Shredded Carrot and Elephant Hide sponges (*Amphilectus fucorum* and *Pachymatisma johnstonia*). Bryozoan turf species included White Claw Sea Moss (*Crisia sp.*), twiggy bryozoans, *Cellaria spp.* and Finger Bryozoans (*Alcyonidium diaphanum*) all recorded as common. Potato Crisp and monkey Puzzle Bryozoans (*Pentapora foliacea*, below left, and *Omalosecosa ramulosa*) were frequent. Fifteen sponge species were recorded including Yellow Staghorn Sponge (*Axinella dissimilis*) Crumpled Duster Sponge (*Axinella damicornis*) and a large patch of Mashed Potato Sponge (*Thymosia guernei*). A highlight was the finding of Crawfish (*Palinurus elephas*), below right, hidden in a deep crevice.



7. Milford Haven and Dau Cleddau

This is an active area with both commercial and recreation interest. Seasearch has completed many dives looking at BAP habitats and priority species: 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 a continuous need. In 2015, 6 sites were surveyed in the entrances of Milford Haven waterway.

Rat Island Bay

This bay lies between Rat and Sheep Island, low lying rocky reef ridges were separated by small areas of fine sand with occasional boulders and cobbles. The reef was covered in silt and dominated by red algae. Animal species recorded were diverse but most were in low numbers. 15 species of sponges were found. These included Yellow Staghorn Sponge (*Axinella dissimilis*), Prawn Cracker Sponge (*Axinella infundibuliformis*), Hedgehog Sponge (*Polymastia boletiformis*) and Mashed Potato Sponge (*Thymosia guernei*). Sea squirts included the rare *Didemnum fulgens* along with the non-native Leathery Sea Squirt (*Styela clava*). Dragonet (*Callionymus lyra*) and Tompot Blenny (*Parablennius gattorugine*), below right, were found in the gullies and both common Lobster (*Homarus gammarus*) and a Crawfish (*Palinurus elephas*) were recorded. Nudibranch highlight was the nationally scarce *Thecacera pennigera*.



Sheep Island

A shallow area of rocky reef and boulders was surveyed to 12m depth. The rocks were densely covered by mixed seaweeds and small patches of short animal turf, leading down to coarse wavy sand. The most notable sponge species was the Yellow Staghorn Sponge (*Axinella dissimilis*) and sea squirts included Star Sea Squirt (*Botryllus schlosseri*) and Teapot Sea Squirt (*Polycarpa scuba*). Occasional Potato Crisp Bryozoans (*Pentapora foliacea*) were found and a large Sea Lemon (*Doris pseudoargus*).

Stack Buoy wreck

The site comprised broken, flattened, wreckage with protruding spars and bars and a thick layer of silt. Sparse animal life on the silted plates included patches of Pinhead Sea Squirt (*Pycnoclavella sp.*) small erect bryozoans and Club Sea Squirt (*Aplidium punctum*). Other areas were dominated by amphipod *Jassa falcata* tubes, White Clawed Sea Moss (*Crisia sp.*) and Elegant Anemones (*Sagartia elegans*), below centre. On the high points of the wreckage were Dead Mens' Fingers (*Alcyonium digitatum*) and Oaten Pipe Hydroids (*Tubularia sp.*) below left. A conger eel (*Conger conger*) was found and there were four lost fishing pots with Lobster and Edible Crabs inside, below right.



Thor wreck

This wreckage was made up of largely broken plates covered in silt with remains of the hull on the sediment seabed at 20m depth. The prominent animals were Finger Bryozoans (*Alcyonidium diaphanum*), Antennae Hydroids, (*Nemertesia antennina*), Devonshire Cup Corals (*Caryophyllia smithi*) and small cushion and erect sponges, all recorded as occasional. On the overhangs and edges more tufty bryozoans such as Spiral Bryozoan (*Bugula* sp.), *Scrupocellaria* sp. and *Bicellariella* sp. were found, together with Elegant Anemone (*Sagartia elegans*). Notable nudibranch species were *Palio nothus* and *Ancula gibbosa*. Shoaling Bib (*Trisopterus luscus*) were recorded around the wreckage.

Lindsway Reef

This was a scattered boulder and cobble reef with sediments at 12m depth in Lindsway Bay dominated by scruffy red seaweeds heavily encrusted by bryozoans. Dense patches of Gooseberry Sea Squirt (*Dendrodoa grossularia*), Pinhead Sea Squirt (*Pycnoclavella* sp.), and Teapot Sea Squirt (*Polycarpa scuba*) were present along with occasional areas of Strawberry Sea Squirt (*Aplidium* sp.). Twenty species of sponges were recorded, mostly occasional or rare, including Mashed Potato Sponge (*Thymosia guernei*). Amongst the boulders were crustaceans, including a small juvenile Crawfish (*Palinurus elephas*).



Watwick Bay

The seabed was a low lying reef to 16m depth with medium boulders and interspersed with sand. The animal turf was a combination of hydroid, bryozoan, ascidian and sponge species with most species recorded as occasional. Orange Sea Squirt (*Stolonica socialis*) was common and Tea Pot Sea Squirt (*Polycarpa scuba*), Snowflake Sea Squirt (*Didemnum maculosum*) and Lightbulb Sea Squirt (*Clavelina lepadiformis*) were all frequent. The nationally rare sea squirt *Didemnum fulgens* was also found. Potato Crisp Bryozoan (*Pentapora foliacea*) was frequently recorded and the nudibranch highlight was the nationally scarce *Thecacera pennigera*. Fish species included Goldsinny (*Ctenolabrus rupestris*), Cuckoo Wrasse (*Labrus mixtus*) and Small Eyed Ray (*Raja microcellata*).



Training

An Observer course was run in Pembrokeshire in September by Kate Lock with five participants and shore dives at Martins Haven. Although a low in number the participants were all from the local area and three proceeded to complete their five qualifying dives for the Observer Qualification within two weeks of the course. These were Nicki Meharg, Karl Mason and Dimitris Xanthis.

In North Wales one Observer course was cancelled in April due to lack of interest. A second course was run in August by Liz Morris-Webb with four participants. Four other participants cancelled at the last minute. However one of the participants has already completed seven excellent Observer forms which need to be submitted for his qualification.

Yo Han Cha and Matthew Green completed their Observer Qualifications and Hayden Close completed his Surveyor Qualification with dives in both West and North Wales.

In North Wales three shore dive Seasearch training events were held. The first in April was a refresher event to resurvey the seagrass at Borthwen, Rhoscolyn, and was well attended by nine experienced and new Seasearchers, gleaning the first forms of the year. The second and third were held in conjunction with Anglesey Scubafest, along with the Observer course, in an attempt to inspire the many visitors who visited the island for the weekend to join Seasearch. However, despite good weather, only four people joined the Seasearch events. Seasearch's participation in Anglesey Scubafest did, however, involve a lot of external advertising for Seasearch and will hopefully pay back in the long term. In addition, Seasearch North West England also used Raven's Point, near Trearddur Bay, and Newry Beach for two training dives in August.

Promotion

Seasearch stand at Anglesey Scubafest – see above.

Regular Seasearch volunteer Kerry Lewis gave an evening presentation in November of her experiences of over 10 years of Seasearch diving to the South and West Wales Wildlife Trust in Aberystwyth.

Seasearch regional Facebook Groups were maintained in both North and West Wales



Acknowledgements

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Thanks also to our dive boat skippers Aubrey Diggle (SBS Charters) and Scott Waterman (Quest Divers) from North Wales and Alex Dilly and Mike (Overdale) and Andy Truelove (Atlantic Blue) in Pembrokeshire. Special mention also to Karl Mason, a newly qualified Seasearcher, who has volunteered to use his boat to help us explore areas in north St Brides Bay,

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