



Seasearch Wales 2014 Summary Report



Diver at Rat Island, Pembrokeshire

Report prepared by
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Seasearch Wales 2014

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 2014. 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 data is also available online through the National Biodiversity Network.

During 2014 we continued to focus on priority species and habitats and on sites that had not been previously surveyed.

Data from Wales in 2014 comprised 55 Observation Forms and 150 Survey Forms and 1 crawfish record. The total of 206 represents 13% 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. Tom Stamp 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 2014

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 2014, 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 2014 yn cynnwys 55 o Ffurflenni Arsylwi, 150 o Ffurflenni Arolygu ac 1 cofnod o gimwch coch. Mae'r cyfanswm o 206 yn cynrychioli 13% 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. Ton Stamp 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 2014

The map shows the sites from which Seasearch forms were received during 2014. In the north records are concentrated around Anglesey and the Llŷn Peninsula, and in the south around Pembrokeshire and Swansea. We did not receive any records from Aberystwyth or Cardigan Bay in 2014. 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:

	2010	2011	2012	2013	2014
Observation	153	198	192	69	55
Survey	141	125	154	132	150
Sea Fan	1	0	1	0	0
Crawfish	8	43	0	0	1
Total	303	366	347	201	206



The number of forms received in 2014 was similar to 2013 and less than in other recent years. There are two main reasons for this, both weather-related:

1. The number of Observation Forms decreased further largely due to the cancellation of training days following courses. These training days generate both large numbers of forms and also incentivise new participants into completing their Observer qualification.
2. Poor weather, especially in the early part of the year, led to a number of cancelled survey dives.

However the number of Survey Forms received is the second highest ever and represents 73% of all forms received from Wales. Survey Forms typically contain three times more information as Observation Forms and, because they are divided into different habitats, enable us to identify MNCR biotopes as well as recording species. The continued high percentage of Survey Forms reflects our efforts to prioritise Surveyor training and encourage volunteers to move up to this level of recording.

All data have been entered onto Marine Recorder 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

In both North and West Wales meetings were held between Seasearch coordinators, tutors, and Natural Resources Wales marine staff early in the year to identify priorities. In North Wales a list of dive sites was selected with the aim of filling knowledge gaps in local inshore marine habitats. These included sites within the Pen Llŷn a'r Sarnau and Conwy Bay and Menai Strait SACs where there was little previous information, for example potential bedrock reefs and muddy banks within Tremadog Bay. In West Wales It was agreed to continue information gap filling in St Brides Bay, south Pembrokeshire and the offshore islands.

Other targets included:

- diving in Tremadog Bay to provide seabed data for a partnership habitat mapping project with Bangor University, School of Ocean Sciences,
- a 'Nudibranch bioblitz' weekend at Martins Haven supporting the Skomer MCZ nudibranch survey,
- recording Invasive and Non-Native species at the Dragon LNG jetty in Milford Haven
- continuing the crawfish survey work in north Pembrokeshire started in 2011.

Individual weekend dive plans were kept as flexible as possible so that sites could be selected based on the weather and tides.

In addition to organised survey events, Seasearchers also provided data from their own dives, for example in Swansea Bay and the Gower.

North Wales Summary

Fifteen Seasearch boat days and four shore based training/refresher days were organised. Due to horrendously bad weather over a number of the planned survey dates, particularly at the start of the diving season, 9 boat and 3 shore dive days had to be cancelled. However, despite this, a total of 20 sites were surveyed over the 7 survey days that did go ahead. The survey weekends were organised by Tom Stamp assisted by Liz Morris, Kirsten Ramsay, Lucy Kay and Franki Perry.

Survey dives were completed in the following locations:

1. Anglesey - 11 sites
2. Menai Strait – 2 sites (independent surveys)
3. North Llŷn Peninsula – 2 sites
4. Tremadog Bay & South Llŷn Peninsula – 7 sites



Highlights of the surveys were:

- Confirmation that the Seagrass, *Zostera marina*, bed at Criccieth, Tremadog Bay (below left), is still present in its typical patchy form, following earlier Seasearch surveys of the seagrass in 2007 and 2013. Seagrass is a habitat of special conservation interest at a Wales, UK and NE Atlantic level. The seagrass at Criccieth is within the Pen Llyn a'r Sarnau SAC.
- Confirmation of the continued presence of the Seagrass, *Z. marina*, bed at Borthwen, Rhoscolyn Bay (below right), Anglesey, following earlier Seasearch surveys in 2012.
- A potential bed of the Echiuroid spoon worm *Maxmuelleria lankesteri* discovered in Tremadog Bay. (below centre). *M. lankesteri* has only rarely been recorded in Wales - it belongs to a group of marine species called echiurans and has an important role in turning over ('bioturbating') the sediment in which it lives.



West Wales Summary

A total of 6 out of 7 planned general survey weekends were completed. Additional activities were a 'Nudibranch bioblitz' weekend at Martins Haven supporting the Skomer MCZ nudibranch survey and a day of surveying the Dragon LNG jetty in Milford Haven to record Invasive and Non-Native species (INNS).

Two weekends were also planned with funding secured from Pembrokeshire Biodiversity Fund to continue the crawfish survey work in north Pembrokeshire started in 2011. Weather did not allow a repeat of the 2011 sites but 2 days diving at sites in the north of St Brides Bay were completed where there were historical Crawfish records and a survey report has been completed (Jones & Lock, 2014).

All weekends were organised and run by Kate Lock, with assistance on 1 by Steve Bound and Blaise Bullimore. A good combination of experienced Seasearch divers along with a number of new keen divers participated in 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 areas:

- 5 St Brides Bay – 10 sites
- 6 Skomer MCZ – 4 sites
- 7 Skokholm & Gateholm – 3 sites
- 8 Hats and Barrels – 1 site
- 9 Milford Haven waterway – 3 sites
- 10 South Pembrokeshire – 4 sites
- 11 Swansea Bay and Gower – 2 sites



A particular feature of diving throughout 2014 was the plumes of brown silty water all around the Pembrokeshire coast and the thick layers of silt covering all sites. These conditions were caused by large volumes of muddy freshwater runoff and deep sediments being dislodged during the violent and sustained storms during winter 2013/2014. Many species, in particular filter feeding animals, were smothered in a layer of silt (right).



Highlights of the surveys were:

- Nationally scarce sea slugs: *Okenia elegans* at East Gateholm reef and Martins Haven, and *Thecacera pennigera* at East Gateholm reef and Rat Island;
- Tidal rapid reef site at Barrel Rock covered in the reef building amphipod *Jassa falcata*;
- Pink Sea Fan, *Eunicella verrucosa*, at Pen Y Foel, south Ramsey Sound;
- Nationally scarce sponges: Mashed Potato Sponge, *Thymosia guernei* and Brain/Crumpled Duster Sponge, *Hymerhabdia damicornis*, together with locally unusual Yellow Staghorn Sponge, *Axinella dissimilis*, and Prawn Cracker Sponge *Axinella infundibiformis* at a selection of sites;
- Invasive and non-native ascidians and bivalves: Leathery Sea Squirt, *Styela clava*, Slipper Limpet, *Crepidula fornicata*, Orange Tipped Sea Squirt, *Corella eumyota* and *Asterocarpa humilis* at Dragon LNG jetty.
- Crawfish, *Palinurus elephas* recorded at a number of sites.
- New ascidian species record for Wales, *Lissoclinum weigelei*, (right) first recorded in the UK in Scotland during summer 2014 and subsequently found at Black Scar by Sarah Bowen. *Didemnum fulgens*, first recorded in Wales in 2012, was found at Rat Island and south Pembrokeshire sites. Un-named sea squirts were also found: 'Strawberry', 'Honeycomb' and 'Caramel two spot' *Aplidium* like species at several sites.



Description of Sites Surveyed

The following sections provide a brief description of the sites surveyed (both organised and independent) in each area. The habitats present are described together with characterising species and any other species and habitats of conservation importance (e.g. priority, scarce/rare, non-native or invasive).

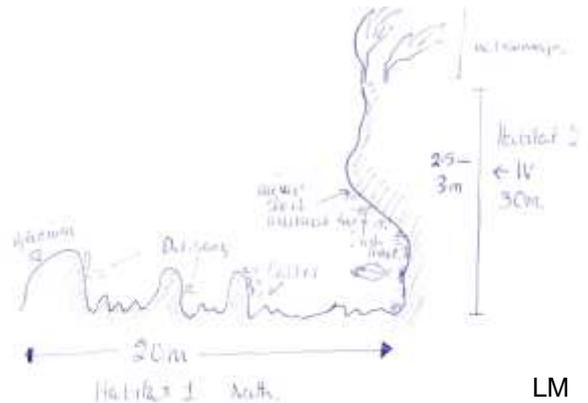
1 Anglesey

All of the sites surveyed were on the north-west of Anglesey on Holy Island.

Newry Beach, Holyhead is a small sandy beach within Holyhead Harbour. Due to the shelter awarded by the harbour walls the subtidal area is typified by predominantly muddy sediment or silted rock habitats.

Newry Beach is a site much surveyed by Seasearch but in 2014 only one independent survey was undertaken here. The Slender Sea Pen, *Virgularia mirabilis*, is often recorded in the mud here but was not observed on this dive. Its' absence probably reflects the search area rather than the lack of the species.

South Stack Gullies (diver sketch right) is on Holy Island just south of South Stack Lighthouse. The site was selected due to an interesting sponge community at a nearby site named Pen-las Rock. South Stack Gullies comprised a series of bedrock gullies and steep/vertical sided bedrock reefs which extended to 5.m BCD, surrounded by a seabed of cobbles, pebbles and boulders. The reefs were topped by a Cuvie, *Laminaria hyperborea*, kelp forest with an understory of mixed red seaweeds (photograph, below-top left). With increasing depth the vertical rock became dominated by an animal community, characterised by barnacles, *Balanus balanus*, bryozoans and hydroids (photograph, below-top right). Dense ascidians, *Dendrodoa grossularia* and *Polycarpa* spp., were also present in some areas (photograph, bottom left). Overhangs of the walls hosted abundant cover of the Elephant Hide Sponge, *Pachymatisma johnstonia*, in places, which had a notable percentage of decay in the sponge (photograph, below-bottom right). The surrounding seabed of cobbles, pebbles and boulders was typified by a sparse kelp park of *L. hyperborea*, red seaweed and barnacles, *B. balanus*.



Missouri Shipwreck is located 0.5km SW of Porth Dafach, Anglesey. The shipwreck is now mostly sheet metal lying on a seabed of well sorted sand and shell fragments, from about 10m-11m BCD. The wreckage was covered in a mixture of red seaweeds, erect bryozoans, including *Bugula flabellata* and *Flustriidae*. The surrounding sediments have a sparse biological community. A few fish were recorded, mainly wrasses, Goldsinny Wrasse, *Ctenolabrus rupestris*, and Rock Cook, *Centrolabrus exoletus*.

The Fangs is a bedrock reef approximately 3.5km NW of Trearddur Bay, Anglesey, which extends from 5-7.8m BCD. The reef is surrounded by other emergent bedrock reefs, large boulders and scattered cobbles and pebbles which extend from 8-11 m BCD. In the shallower areas, The Fangs supports a Cuvie, *Laminaria hyperborean*, kelp park, with mixed red seaweeds. In the deeper sections of reef, as well as on the surrounding boulders, the rock surfaces are dominated by a mixed faunal community of hydroids, bryozoans and sponges. On both the plant and animal dominated sections of the reef the nudibranch *Facelina auriculata* was recorded as common during July.

Ravens Point is a well-known dive site located on the south west entrance of Trearddur Bay, Holy Island. The site extends from about 2-6m BCD and has a series of terraced bedrock reefs and gullies surrounded by well sorted sand at their base. The reefs are topped by a Cuvie, *Laminaria hyperbroea*, kelp park interspersed with patches of mixed red seaweeds. Vertical bedrock walls are dominated by mixed faunal community dominated by hydroids, sponges and bryozoans. Of particular note in 2014 was Boring Sponge, *Cliona celata*, recorded as frequent but which looked decayed throughout the area.

Maen Piscar is approximately 3km SW of Trearddur Bay. The site was surveyed because historic side scan surveys in the area had recorded potential bedrock reefs around the popular dive site of Maen Piscar itself. The survey took place to ground truth these areas rather than the bedrock pinnacle itself. The site the seabed was composed predominantly of granite boulders and cobbles at 16-17m BCD. The rock surfaces were dominated by hydroids and bryozoans, specifically *Obelia spp.*, Finger Bryozoan, *Alcyonidium diaphanum*, (photograph, below-right), White Clawed Sea Moss, *Crisia spp.*, Hornwrack, *Flustra foliacea*, and other erect bryozoans including *Bugula spp.*, photograph, below-left).

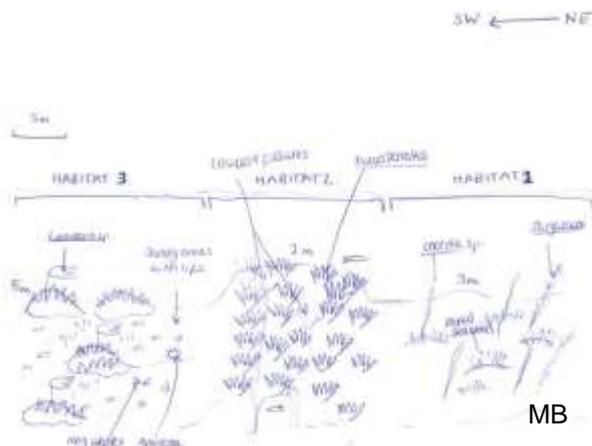


An independent survey was also carried at the nearby shipwreck of the **SS Havso**. The wreck lay at a depth of 9.6-12.7m BCD, on a predominantly bedrock seabed with occasional boulders. The wreck itself was colonised by a mixed faunal turf dominated by the soft coral Dead Men's Fingers, *Alcyonium digitatum*. The surrounding rocky reef was characterised by a Cuvie, *Laminaria hyperborean*, kelp park, and a variety of faunal species which included frequent Pin Head Sea Squirts, *Pycnoclavella stolonialis*).

Rhoscolyn Head is a rocky headland at the entrance to Rhoscolyn Bay. The site comprises a sloping bedrock wall which extends to a depth of 13m BCD. At the base of the wall is an area of boulders and cobbles which extends deeper to around 14m BCD. The bedrock wall was characterised by a Cuvie, *Laminaria hyperborea*, kelp forest and park in shallow water, approx. 9-10m BCD. The deeper sections of the wall either had a mixed red seaweed community, or a faunal turf dominated by hydroids, Finger Bryozoans, *Alcyonium diaphanum* and Hornwrack, *Flustra foliacea*. The boulders and cobbles at the base of the wall were characterised by a sparse epifaunal community dominated by barnacles.

Borthwen (Rhoscolyn Bay) is a sheltered bay on the south coast of the Holy Island. The bay is often used as a training site by Seasearch due to its' relative protection from swell and tide, as well the presence of interesting habitats, including a Seagrass bed, *Zostera marina*, and a small amount of exposed subtidal peat. Seven Seasearch Survey and six Observation forms were completed in June as part of a Seasearch surveyor course and an additional independent Survey form was completed in November.

The bay is surrounded by areas of bedrock reef that extend from the littoral into the intertidal/subtidal fringe. There are also boulders and exposed bedrock outcrops within the bay at a similar depth and hence with a similar community. The reefs and boulders are surrounded by cobbles and pebbles. The bedrock reefs (diver sketch, right) had a mixed seaweed community of red, green and brown seaweeds, notably Bootlace Weed, *Chorda filum*, and Serrated Wrack, *Fucus serratus*. The non-native Wireweed, *Sargassum muticum*, was also recorded in this habitat. In the centre of the bay the seabed is of fine well sorted sand with occasional burrows, mounds and tubes of burrowing infauna. Hermit Crabs, *Pagurus spp.*, were the main mobile species observed.

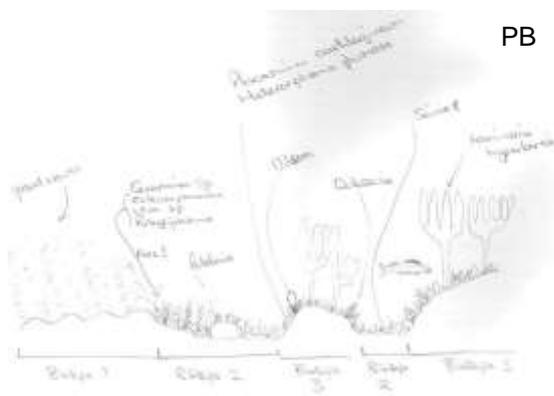


A dense seagrass, *Z. marina* bed, (photo page 4) was recorded in the south west of the bay. Reports from Seasearchers indicated that the bed appeared smaller previously, though this was not quantified., The seagrass was less dense amongst moorings, as observed by Seasearch in 2012, but with more luscious growth in the area sheltered by the south western rocky 'island'. A habitat of seaweed dominated peat exposure (without Piddocks) was also recorded on the east side of the bay.

Both seagrass and peat habitats are of special conservation interest at a UK level and neither is widely recorded in Wales. Both were previously recorded here in 2012 and these more recent records confirm the continued presence of these habitats.

East of Borthwen is a site located on the headland approx. 1km SE of Rhoscolyn Bay. It comprises shallow bedrock reef and gullies sloping steeply from close inshore to a flat seabed of silty boulders and cobbles. The shallow reef was dominated by a Cuvie, *Laminaria hyperborea*, kelp forest, with a dense understory of red seaweed, typified by Cocks Comb Weed, *Plocamium cartilagineum*. At greater depth there were less brown and red seaweeds and more bryozoans, *Scrupocellaria spp.* Fauna on the silted boulders was quite sparse and characterised by barnacles, *Semibalanus balanoides* and *Balanus crenatus*.

East of Pumphouse Bay (diver sketch–right) is east of Rhoscolyn Bay, on the south coast of Holy Island. At the site were low lying emergent bedrock reefs from 1.3-4.3m BCD, interspersed with patches of cobbles, gravel and sand. The bedrock reefs had a Cuvie, *Laminaria hyperborea*, kelp forest with an abundant and diverse understory of red seaweeds, Cocks Comb Weed, *Plocamium cartilagineum*, and Siphoned feather weed, *Heterosiphonia plumosa*, being particularly abundant. Juvenile fish were abundant here. The surrounding gravel and sand sediments were semi mobile, with a mixed community of ephemeral and more long lived algae, the most abundant of which was Banded Pincer Weed, *Ceramium nodosum*, and Elongate Siphon Weed, *Polysiphonia elongata*.



On several 2014 Anglesey surveys we were particularly fortunate to have two good algal identification specialists on the boat, so we have some particularly good seaweed records from these sites.

2 Menai Strait

The Nature Trail, Under Menai Suspension Bridge, comprises steeply sloping bedrock reef dominated by a Cuvie, *Laminaria hyperborea*, kelp park with a mixed understory of fauna and red seaweeds. At the base of the bedrock reef the seabed flattens and the habitat changes to emergent bedrock, boulders, cobbles and pebbles with abundant Dahlia and Elegant Anemones, *Urticina felina* & *Sagartia elegans*, as well as hydroids and sponges such as Shredded Carrot Sponge, *Amphilectus fucorum*, which can be seen in the photograph, right.



The Blue Hole is a deeper section of the Menai Strait located 1.2km west of Britannia Bridge. The seabed is composed of a gently sloping seabed of sand and gravel, from 6.6-15.6m BCD. The site was typified by a short faunal turf of hydroids and anemones with sponges including Shredded Carrot Sponge, *Amphilectus fucorum*, and Chocolate Finger Sponge, *Raspailia ramosa*.

3 North Llŷn Peninsula

The Llŷn Peninsula is part of the Pen Llŷn a'r Sarnau Special Area of Conservation (SAC).

Maen Mellt, Is a tidal exposed rocky pinnacle which rises out of the sea close to the North Llŷn coast approx. 8km SW of Porth Ysgaden. In 2014 three diver pairs surveyed the north side of the island and recorded steep/vertical bedrock cliffs extending from the surface to 16m BCD, with large boulders at the base of the cliffs. In shallow water to approx. 4m BCD the bedrock cliffs were dominated by a Cuvie, *Laminaria hyperborea*, kelp forest. The base of the cliffs and the surrounding boulders were dominated by an abundant and diverse array of attached animal life typified by erect bryozoans and hydroids, such as *Cellaria* and White Clawed Sea Moss, *Crisia* spp. (right). Also present were Devonshire Cup Corals, *Caryophyllia smithii*, (below left) and a large number of sponges including Hedgehog Sponge, *Polymastia boletiformis* (below right).

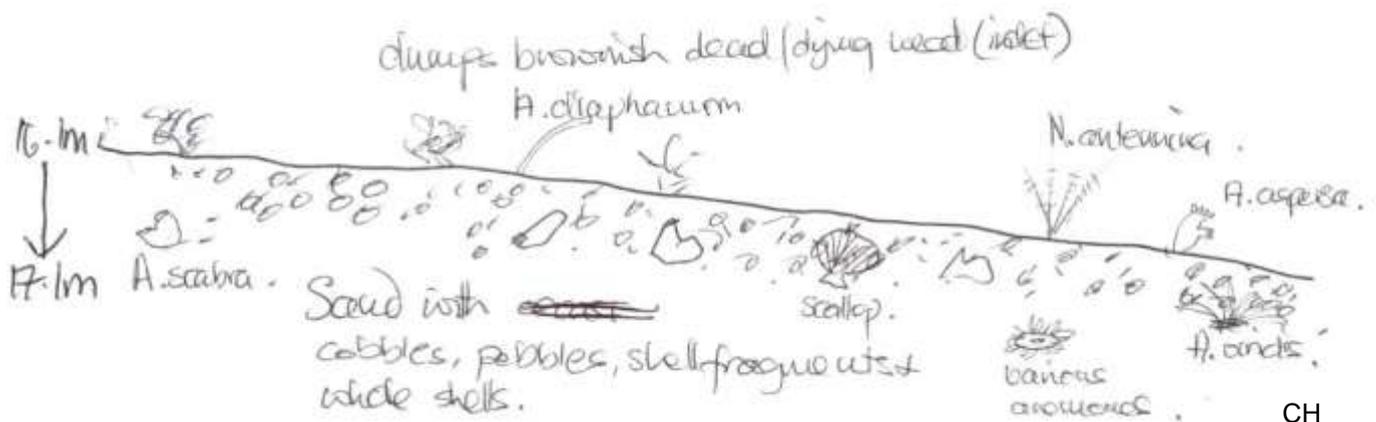


Carreg Allen is a bedrock reef located 10km SW of Porth Ysgaden. The reef comprises a gentle bedrock ridge, with a series of gullies and sheltered rock surfaces which were surrounded by a large expanse of shell/stone gravel and coarse sand. Due to the tidally exposed location of the reef and the surrounding sediment, the reef community was quite scoured, reminiscent of certain areas in the Menai Strait. The top of the reef was covered with a Cuvie, *Laminaria hyperborea*, kelp park, barnacles, *Balanus* spp. and occasional red algae. Within sheltered rock surfaces and gullies there was a mixed faunal turf of barnacles, ascidians, branching sponges and bryozoans.

4 South Llŷn Peninsula and Tremadog Bay

Rissoides (Mantis Shrimp) Hunt (diver sketch, below), approximately 0.5km NE of the St Tudwal's Island East is an area of muddy mixed sediment within which surveys by the Menai Sub-Aqua Club located an area of Mantis Shrimp (*Rissoides desmaresti*) burrows in 2000 – an unusual record of a species rarely recorded in the UK.

In 2014, two surveys were carried out to reconfirm the presence of the Mantis Shrimp. During a Seasearch organised survey in August no Mantis Shrimp were found but on a later independent survey in September three individuals were found, amongst many apparently empty burrow entrances. The biological community recorded at the site was generally quite sparse (probably due to the focus of the dive on looking for Mantis shrimp rather than exhaustive species recording). The mixed muddy sediments were typified by bryozoans, *Bowerbankia citrina*, and ascidians colonising occasional pebbles, Harbour Crabs, *Liocarcinus depurator*, and painted gobies, *Pomatoschistus pictus*, on the sediment. Individual maerl 'twiglets' (calcified red seaweed) were also common within the sediment, although only a very small proportion of this was live maerl (pink in colour rather than white).



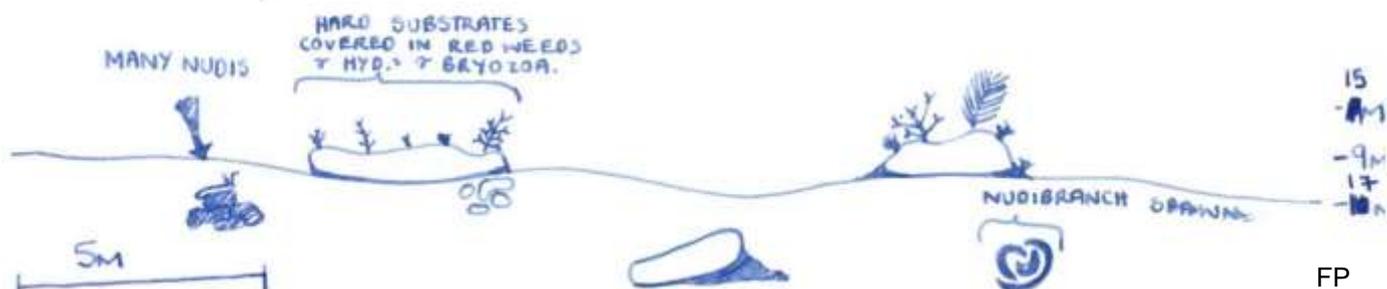
Llanbedrog Headland, The site was located approx. 1.2km SE of the headland and was a re-survey of a site initially surveyed in 2012, in order to confirm the habitat and species in the area. The site was a relatively flat seabed at approx. 4-5m BCD, composed of muddy sand with occasional pebbles and shell gravel. It was dominated by large swaths of drift weed typified by Brown Fan Weed, *Dictyota dichotoma*, Brongniart's Thread Weed, *Brongniartella byssoides*, and Finger Bryozoan (*Alcyonidium diaphanum*). A few of these species were also found attached to occasional pebbles. The drift weed also supported a number of sea squirts, in particular *Ascidella aspersa*. The sediment beneath the seaweed swaths contained Eyelash Worms, *Myxicola infundibulum*, occasional Painted Gobies, *Pomatoschistus pictus*, and scattered sponges. A noteworthy feature of the site was an abundance of juvenile fish swimming above the sediment, including Corkwing Wrasse, *Symphodus melops*, and Black Sea Bream, *Spondylus cantharus*, photograph, above right).



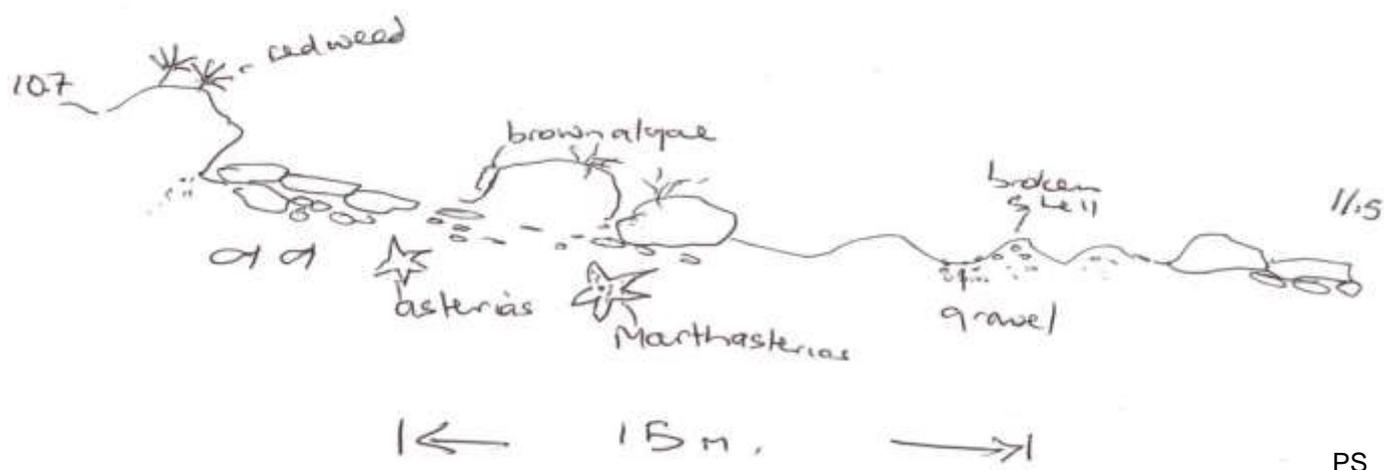
Tremadog Bay, South East of Pwllheli (sites 656, 61, 62, and 57, listed in geographic order) were surveyed because they had been highlighted as possible rocky outcrops and mixed sediment from multibeam data held by NRW. The sites had not been previously surveyed and information collected by Seasearch provides essential ground truthing information needed to create more accurate habitat maps.

Sites 656 and 61 (diver sketch, below), were located approx. 5.4km SE of Pwllheli. Both sites were in the same area about 100-200m apart. A similar habitat and community was found at both sites with mixed muddy sediment at a depth of 13-14m BCD, with occasional small boulders, pebbles and cobbles covered by a turf of red seaweed, hydroids and bryozoans. The seaweed community at the site was dominated by

Brongniart's Thread Weed, *Brongniartella byssoides*, Banded Pincer Weed, *Ceramium* spp., and other unidentified filamentous red seaweeds. A number of sponges, notably the Chocolate Finger Sponge, *Raspalia ramosa*, bryozoans and hydroids were also locally abundant at the site. A particular feature was the abundance of nudibranchs, *Flabellina pedata* & *F. brownii*, feeding on the faunal turf community and nudibranch eggs on the rock surfaces.



Site 62 (diver sketch below), located 5.3km SE of Pwllheli, had red seaweed dominated silted boulders, cobbles and pebbles lying on a seabed of broken shell gravel, at 9-10m BCD. The seaweed community was dominated by Brongniart's Thread Weed, *Brongniartella byssoides*, and Cocks Comb Weed, *Plocamium* spp., amongst a plethora of other algae. Barnacles and Shredded Carrot Sponge, *Amphilectus fucorum*, were frequently encountered on rock surfaces, as were Common Starfish, *Asterias rubens*, and Velvet Swimming Crabs, *Necora puber*, on the surrounding sediment.

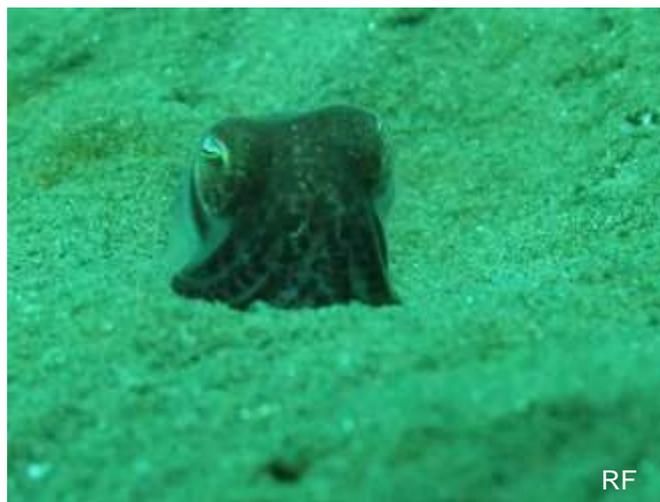


Site 57, located 7.8km SE of Pwllheli, was a flat seabed at 16-17m BCD, dominated by thick mud. The mud was pitted with numerous volcano like burrows which are a characteristic sign of the presence of the echiuran Spoon Worm *Maxmuelleria lankesteri* - photo page 4. Typically found in Scottish sea lochs, this was a great find for North Wales Seasearch as this species has only been recorded in one other location in Wales, further offshore near Muddy Hollow, Tremadog Bay. Part of an echiuran was sampled by NRW near the Seasearch survey site, but this has yet to be confirmed as *Maxmuelleria*. Other distinctive burrows were also observed, suggesting the site has an abundant infaunal community. Other epifauna were sparse, and limited to a few flatfish and occasional starfish. If confirmed this would be an OSPAR habitat of conservation importance - Sea pens and burrowing megafauna communities.

Criccieth Seagrass Bed. To the east of Criccieth Castle at Black Rock Sands, previous Seasearch survey records from 2007 and 2013 had reported the presence of a patchy eel grass, *Zostera marina*, bed (photograph, page 4), a habitat of conservation interest across the UK.

In 2014 surveys were conducted to re-confirm the presence of the bed after the 2013/14 winter storms. The surveys recorded a seagrass bed in muddy sand, at approx. 1.5m BCD. As found by previous surveys, the seagrass was patchy and the leaves were relatively short compared to other seagrass beds such as at Porth Dinllaen on the North Llyn coast. The density of seagrass at Criccieth was approximately 1-4 shoots/m², with an approximate shoot length of only 10cm. Pipefish and sand gobies were commonly sighted amongst the seagrass. Within the surrounding sediment there was evidence of infauna, including

burrowing sea cucumbers, *Oosteregrina digitata*, - below, left), sea potatoes, *Echinocardium cordatum*, and sea slugs, *Acteon torniatilis*, – below, left) plus their eggs which were all common. Little Cuttlefish, *Sepiolo* sp. (below, right) were also recorded, swimming close to the seabed.



5 St Brides Bay

St Brides Bay is located in west Pembrokeshire. Ramsey Island is at the northern end and Skomer Island at the southern end. It is a deep bay with sediment seabed down to 50m depth and is used as a safe anchorage area for tankers waiting to enter Milford Haven Port. There are many islands in the bay including Green and Black Scar off Solva and Stack Rocks off Little Haven. There are also extensive offshore reefs and reefs around the many headlands in the bay. In 2014 Seasearch surveys were completed at the following sites:

Pen Pleidian Point, east Porthclais. The seabed comprised boulder fields between 11-14m BSL dominated by red seaweeds and with a faunal turf of hydroids, bryozoans and sponges. There were dense patches of ascidians with Lightbulb Sea Squirt, *Clavelina lepadiformis*, Orange Sea Squirt, *Stolonica socialis*, and Club Sea Squirt, *Aplidium punctum*, all recorded as common. A diversity of fishes (10 species) and crustaceans (7 species) was found amongst the boulders. Shell gravel habitat was found in the deeper areas. This was sparse in life but included Gravel Sea Cucumber, *Neopentadactyla mixta*.

Half-tide rock, Porthclais. This is a rocky reef with large boulders from 14-19m BSL, covered in red seaweeds and mixed animal turf with no dominant species. A large Bull Huss, *Scylliorhinus stellaris* was found amongst the boulders.

Pen y Foel, south Ramsey Sound. This was a rocky reef with kelp forest in the shallow areas to 12m BSL, giving way to sloping rocks and boulders to 21m BSL. A diverse animal turf was found in which both Antenna Hydroids, *Nemertesia antennina*, and Finger Bryozoans, *Alcyonidium diaphanum*, were common. Potato Crisp Bryozoan, *Pentapora foliacea*, was occasionally recorded and a single Pink Sea Fan, *Eunicella verrucosa*, was found. Ten species of fish were recorded including very high numbers of Lesser Spotted Catshark, *Scylliorhinus canicula*.

Sylvia reef, south of Ramsey. This was a rugged bedrock reef from 12-15m BSL with gullies and irregular rock faces dominated by Crenulated Acorn Barnacles, *Balanus crenatus*, small erect bryozoans and abundant grazed Oaten Pipe Hydroid, *Tubularia* sp., stumps. Occasional sponges, patches of encrusting bryozoans and large congregations of large Dog Whelk, *Nucella lapillus*, were found in rock depressions often with dahlia anemone, *Urticina felina*, – right).



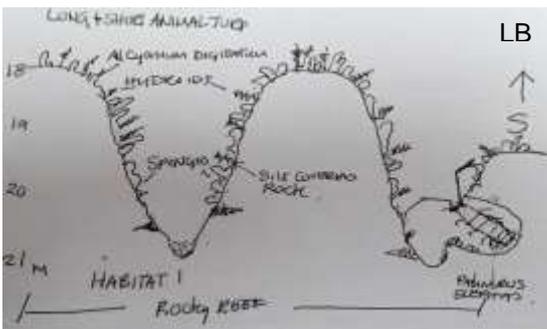
Black Scar and Green Scar are two islands off Solva on the north side of St Brides Bay. Fifteen dives were completed off the Scars during two days of survey. The dives were spread out around the south and

east sides of the islands. All of the sites were covered in silt. However, a variety of habitats were recorded. These included:

- Large boulders from 6-14m BSL with coarse sand between, sparse kelp park and red seaweed turf with covering of barnacles was recorded in areas with aggregations of Common Starfish, *Asterias rubens*, (right).
- Rugged bedrock reef with ridges from 17-20m BSL with silt filled gullies. Dense barnacle encrusted Blue Mussel, *Mytilus edulis*, beds grazed by large locally common Spiny Starfish, *Marthasterias glacialis*, and common starfish, *Asterias rubens*.
- Bedrock walls from 14-21m BSL forming steep gullies running west/east direction. Faces dominated by Dead Men's Fingers, *Alcyonium digitatum* mixed animal turf and encrusting sponges. The tops of the walls were covered in kelp park and red seaweed.



Hand Marks is an offshore reef located in the south end of St Brides Bay, 13 dives were completed over 2 survey days. It is a large varied site which ranges from jagged pinnacles from 12-18m to extensive rock platforms between 18 – 20m. Mixed sediment plains deeper than 20m are found at the edge of the reef.



The rocky reef is rugged with crevices, small walls and overhangs. The area is dominated in Orange Sea squirt, *Stolonica socialis*, Dead Men's fingers, *Alcyonium digitatum*, forests of Antenna Hydroids, *Nemertesia. antennina* and *N. ramosa*, massive boring sponge, *Cliona celata*, and Elephant Hide Sponge, *Pachymatisma johnstonia*. A very diverse site with 13 species of sea squirt including the un-named 'honey comb' and 'Strawberry' *Aplidium* species, and 13 species of sponges including Mashed Potato Sponge, *Thymosia guernei*.

Stack Rocks is a patch of small rocks located off Little Haven in the south of St Brides Bay. The north end of the rocks was surveyed. A rocky reef leads northwards from the rocks as a ridge from 8-16m with large boulders in the deeper areas. Dead Men's Fingers, *A. digitatum*, were common, with a thick turf of hydroid and bryozoan species. Notable were lush clumps of the hydroid *Kirchenpaueria similis* with the nudibranch, *Doto dunnei* feeding on them. Lobster, *Homarus gammarus*, and Curled Octopus, *Eledone cirrhosa*, (right) were both found amongst the boulders.



Nabs Head: a variety of habitats were surveyed off this headland. Rocky reef with kelp forest occurred in the shallows, followed by a vertical face with occasional overhangs down to 14m bsl. The steep faces were covered in Dead Men's Fingers, *Alcyonium digitatum*, and Orange Sea Squirt, *Stolonica socialis*. Horizontal surfaces were covered in red seaweeds with an understory of sea squirts (17 species recorded) forming a carpet over the rock. Below the reef, at 14m, a mixed gravel, sand and cobble area was found in which Sand Mason Worms, *Lanice conchilega*, Queen Scallop, *Aequipecten opercularis*, and Common Starfish, *Asterias rubens*, were recorded.

East St Brides Haven: the site was a boulder field with kelp park including both Forest Kelp, *Laminaria hyperborea*, and Sugar Kelp, *Saccharina latissima*, with lush red seaweeds beneath. Short animal turf was dominated by sea squirts with Orange Sea Squirt, *Stolonica socialis*, (right) commonly and Teapot Sea Squirt, *Polycarpa scuba*, frequently recorded. A diverse community of sponges, anemones and bryozoans was also recorded along with many fish and crustaceans amongst the boulders. Between the boulders was shell gravel with the occasional Sand Mason Worms, *Lanice conchilega*.



6 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 MCZ management plan states that these need continued updating with new records. To assist with this, Seasearch forms were completed at Junkos Wall, North Wall and North Haven Eelgrass bed.

During 2014 the Skomer MCZ team ran a 'Nudibranch Diversity Survey' over a 2 week period. To assist with this a 'Nudibranch Bioblitz' was organised with specialist Bernard Picton and Seasearch divers. The aim was to record as many nudibranch species as possible during a single weekend at Martins Haven. The results were impressive with a total of 33 species recorded in 2014 and these, along the 2010 records, are shown in the table below. The combined total is 40 Nudibranch species. The concentrated effort at a single site with volunteer divers has proven incredibly valuable.

Martins Haven Seasearch Nudibranch 'bioblitz' records 2010 and 2014

Species	2010	2014	Species	2010	2014
<i>Acanthodoris pilosa</i>	Y		<i>Facelina bostoniensis</i>		Y
<i>Aegires punctilucens</i>	Y		<i>Favorinus branchialis</i>	Y	Y
<i>Ancula gibbosa</i>		Y	<i>Flabellina browni</i>	Y	
<i>Crimora papillata</i>	Y	Y	<i>Flabellina gracilis</i>		Y
<i>Cuthona amoena</i>		Y	<i>Flabellina lineata</i>	Y	Y
<i>Cuthona rubescens</i>		Y	<i>Flabellina pedata</i>	Y	Y
<i>Diaphorodoris luteocincta</i>	Y	Y	<i>Goniodoris nodosa</i>	Y	Y
<i>Diaphorodoris luteocincta var alba</i>	Y		<i>Janolus cristatus</i>	Y	Y
<i>Doris pseudoargus</i>	Y	Y	<i>Jorunna tomentosa</i>	Y	Y
<i>Doto coronata</i>		Y	<i>Limacia clavigera</i>	Y	Y
<i>Doto dunnei</i>		Y	<i>Okenia elegans</i>	Y	Y
<i>Doto floridicola</i>		Y	<i>Onchidoris oblonga</i>	Y	Y
<i>Doto fragilis</i>	Y	Y	<i>Polycera faeroensis</i>	Y	Y
<i>Doto lemchei</i>	Y	Y	<i>Polycera quadrilineata</i>		Y
<i>Doto maculata</i>	Y		<i>Rostanga rubra</i>	Y	
<i>Doto pinnatifida</i>	Y	Y	<i>Thecacera pennigera</i>	Y	
<i>Doto tuberculata</i>	Y	Y	<i>Trapania pallida</i>	Y	
<i>Eubranchus doriae</i>		Y	<i>Tritonia lineata</i>	Y	Y
<i>Eubranchus exiguus</i>	Y	Y	<i>Tritonia hombergii</i>	Y	Y
<i>Eubranchus tricolor</i>	Y	Y		31	33
<i>Facelina annulicornis</i>	Y	Y	40 Species recorded at Martins Haven		
<i>Facelina auriculata</i>	Y	Y			

Nudibranch highlights included *Facelina bostoniensis* (below left) and the Elegant Sea Slug *Okenia elegans* (below right).



7 Skokholm and Gateholm

These islands are both of old red sandstone. Skokholm is located 2 miles off the coast whilst Gateholm is adjacent to the coast at the north end of Marloes Sands. Seasearch dives have been targeted around the islands the surrounding area over a number of years. In 2014 dives were completed on the east end of Skokholm, the east side of Gateholm and at Mill reef off Marloes Sands.

Neck Pinnacles, east Skokholm. This is a site with bedrock ridges 3-4m in height with gullies 2-3 m wide. At the time of the survey the reef was thickly covered in silt (right). Deep fissures and crevices were found providing shelter for crustaceans like Spiny Squat Lobsters, *Galathea strigose*, and territorial fish. Animal turf varied around the reef with White Claw Sea Moss, *Crisia spp.* and twiggy bryozoans, *Cellaria spp.*, dominating some faces. Others were covered in Antenna Hydroids, *Nemertesia antennina* and *N. ramosa*, Herring Bone Hydroid, *Halecium halecinum*, and *Aglaophenia spp.* hydroids. Dense patches of Horseshoe Worm, *Phoronis hippocrepia*, were locally common.



East reef, Gateholm: this site was a low lying rocky reef thickly covered in silt. The reef was interspersed with gullies containing bryozoan, hydroid, anemone and sponge communities including Staghorn Sponge, *Axinella dissimilis*, crumpled duster sponge, *Hymerhabdia damicornis*, and Chimney Sponge, *Polymastia penicillus*. Horizontal surfaces were carpeted by Light Bulb Sea Squirts, *Clavelina lepadiformis*, and 3 species of pin head sea squirts, *Pycnoclavella spp.* Nudibranch highlights were Elegant Sea Squirt, *Okenia elegans*, *Thecacera pinnigera* and *Doto lemchei*.



Mill Reef, Marloes Sands is a rocky pinnacle located off Marloes Sands. It extends from 8 to 20m bsl and the top is covered in kelp park and red seaweed. The steep sides of the pinnacle have large fissures. A Conger Eel, *Conger conger*, was spotted in one and Black Tar Sponge, *Dercitus bucklandi*, in others. Rich sponge and hydroid communities were found along with a diversity of sea squirts (17 species). Carpets of pin head sea squirts were abundant, *Pycnoclavella aurileucens*, *P. producta* and *P. stolonialis*. *Perophera listeri* was common and both *Didemnum fulgens* and the 'strawberry' *Aplidium* were recorded.

8 Hats and Barrels

These rocks are located midway between Grassholm and the Smalls, 18 miles offshore, and are only exposed at low water, The area is very exposed and has tidal streams up to 6 knots. It is an extensive area suitable for further exploration. On this visit a survey was completed at Barrel Rock.



Barrel Rock: here a low lying rocky reef from 8-12m was found with large amounts of broken wreckage including superstructure, chairs and plates. The whole reef was thickly encrusted in the reef building worm *Jassa falcata* tubes (right) and a super abundance of skeleton shrimps, *Caprella spp.* Beneath the silty surfaces a diverse community of animals was present, Oaten Pipe Hydroids, *Tubularia sp.*, were common, along with sponges and



bryozoans. Common Starfish, *Asterias rubens*, were locally common and 15 species of nudibranch were recorded including *Flabellina browni* and *Facelina bostoniensis*.

9 Dau Cleddau, Milford Haven

Milford Haven is a highly used area with both commercial and recreation interest. Seasearch has completed many dives here looking at priority habitats and species including tidal rapid reefs, Eelgrass, *Zostera marina*, beds and Native Oyster, *Ostrea edulis*. There are also high numbers of non-native species such as the invasive Slipper Limpet, *Crepidula fornicata*. Further exploration in the area is a continuous need and in 2014, 3 further sites were surveyed.

Dragon LNG Jetty

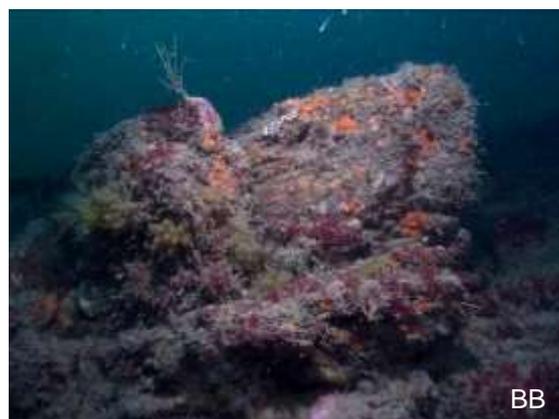
Invasive and non-native species (INNS) recording targeted on the jetty. Concrete posts 2m diameter and 15m deep support the jetty structure. The shallowest half metre band was covered in Forest Kelp, *Laminaria hyperborea*, and red seaweeds. Below this the posts had a thick carpet of feather stars, *Antedon bifida*, Plumose Anemones, *Metridium senile*, sponges (below centre) and both solitary and colonial sea squirts. INNS recorded were: Leathery Sea Squirt (*Styela clava* – below right), Slipper limpet, *Crepidula fornicata*, Orange Tipped Sea Squirt, *Corella eumyota*, and *Asterocarpa humilis* (below left). Colonial sea squirts were collected and sent to the Marine Biological Association (MBA) to confirm identification.



Milford Docks – Mackerel Stage. Here the concrete jetty posts were dominated by barnacles in the shallows and by a super abundance of Fluted Sea Squirt, *Ascidella aspersa*, in the deeper sections. Along the dock wall Common Prawns, *Palaemon serratus*, and Velvet Swimming Crabs, *Necora puber*, were found in cracks. Below the jetty posts and walls was a muddy sediment seabed, burrows were found with tiny Lobsters, *Homarus gammarus*, in residence.

Rat Island. The island is located on the south side of the Milford Haven entrance. Surveys were undertaken on the reefs close to the island to build on previous records.

The site contained rocky ridges running parallel to each other, 1-2m high and with cobbles in gullies between them. Mixed red seaweed and animal turf covered the rocks and sponge and sea squirt communities were particularly rich (right). Notable sponges were the Staghorn Sponge, *Axinella dissimilis*, Crumpled Duster Sponge, *Hymenhabdia damicornis*, Prawn Cracker Sponge, *A. infundibuliformis*, and Mashed Potato Sponge *Thymosia guernei*. Notable sea squirts were *Didemnum fulgens* and the pin head sea squirts, *Pynoclavella aurilucens* and *P. stolonialis*.



10 South Pembrokeshire

The south Pembrokeshire limestone coast has been a focus for Seasearch dives over the past few years and during 2014 four further sites were explored. These were Tope Reef and Strawberry Fields, 1-2 miles off St Govans Head, Moody Nose along the Castlemartin Range and Crow Sound off Linney Head.

Tope Reef is one mile off St Govans Head. It is named after the large numbers of Tope caught here by anglers. At 13m bsl a horizontal rock plateau was found which was rich in red algae and sea squirts. At the edge of the plateau a steep wall dropped down 4m to sand and occasional boulders. This was relatively sparse in life except for an abundance of Dahlia Anemones, *Urticina felina*. The vertical faces were densely packed with sponges and sea squirts along with abundant of the Oaten Pipe Hydroids, *Tubularia indivisa*,
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and Dead Men's Fingers, *Alcyonium digitatum*. The site was particularly rich in sea squirts with both the 'honeycomb' and 'strawberry' *Aplidium* species recorded. Crustaceans and fishes were present but scarce.

Strawberry Fields is named for the abundance of the 'Strawberry' *Aplidium* sea squirt (right). It is a low lying reef thickly encrusted with sea squirts, hydroids and bryozoans. An amazing 19 species of sea squirt were found with the 'strawberry' *Aplidium* particularly abundant.



Notable too was a nudibranch, *Doto fragilis* (left), with an unusual black colouration. Overall the reef did not look particularly lively due to the sheer amount of silt smothering everything. Shell gravel was found in patches between the rocks with occasional pebbles and Dahlia Anemones, *Urticina felina*.

Moody Nose is an undulating rugged rock reef with gullies around 2m wide and up to 4m height. The gullies were filled with gravel and shell fragments and were sparse in life except for the occasional Dahlia Anemone, *Urticina felina*. The horizontal ledges at 11m bsl were covered in kelp park and red algae with sponges, hydroids and sea squirts growing on the kelp stipes. Vertical faces were dominated by sponge and squirt communities, in particular dense patches of the Teapot Sea Squirt, *Polycarpa scuba*. Many patches of *Perophora listeri* were also found growing over red seaweeds. Both the 'honeycomb' and caramel 2-spot' *Aplidium* species were recorded. The gullies were filled with mobile pebbles and cobbles with little life.

Crow Sound: Limestone ridges 11-14m bsl with scoured cobbles below. Rock surfaces were dominated by the sea squirt *Synocium incrustatum* and Gooseberry Sea Squirt, *Dendrodoa grossularia*, with massive Elephant Hide Sponge, *Pachymatisma johnstonia*, dominating the deeper areas. Both crustaceans and fishes were sparse.

Gower

Four independent Observation Forms were completed in the Gower area. The sites were the Strombus Wreck in Swansea Bay and the east and west sides of Pwll Du Head.

North Pembrokeshire, Crawfish *Palinurus elephas* surveys.

Crawfish is a priority species due to declining numbers. In Wales, it is found around Llyn Peninsula and Pembrokeshire, although numbers are now very low. Commercial fishery (netting) still exists off the Pembrokeshire coast.

In 2011 a project was established in North Pembrokeshire which gathered gather baseline crawfish data at 6 sites in North Pembrokeshire. A repeat survey was planned in 2013, however weather prevented it taking place. Funding was again secured to repeat the survey in 2014 from the Pembrokeshire Biodiversity Fund.

Northerly winds once again prevented the 2011 survey sites being re-surveyed. However one weekend targeted sites south of Ramsey and north St Brides Bay where crawfish had been historically recorded. A survey report has been written for the survey and can be downloaded from the Seasearch website www.seasearch.org.uk.

Training and Publicity

Training Courses

Five Seasearch Courses took place as follows:

Month	Course Type	Location	Participants	Tutor(s)
March	Observer	Bangor, Gwynedd	7	Harry Goudge & Tom Stamp
April	Observer	Marloes, Pembrokeshire	16	Kate Lock
June	Surveyor	Holyhead, Anglesey	7	Liz Morris, Lucy Kay and Chris Wood
June	Sponge ID	Dale Fort, Pembrokeshire	11	Jen Jones
October	Observer	Menai Bridge, Anglesey	8	Tom Stamp and Chris Wood

Shore diving was planned following all of the Observer and Surveyor Courses however, due to high winds, the diving following the March and October courses had to be cancelled. However both Observer and Surveyor participants took part in shore diving during the Surveyor Course weekend.

Participants in all of the courses were encouraged to attend other Seasearch organised diving or to carry out independent surveys. In the case of the Pembrokeshire Observer course participants were from both Swansea and Aberystwyth Universities and also from local South Wales dive clubs. Many of them were enthusiastic and took part in Seasearch diving weekends or the Skomer MNR volunteer diving survey during the 2014 season.

Qualifications

Five volunteers achieved the Seasearch Observer Qualification during the year. They were: Frances Perry, Sally Gates, Dylan Davies, Alex Marquis and Geoff Marquis.

One Seasearcher completed the Seasearch Surveyor Qualification during the year, Thomas Stamp, the North Wales Coordinator. He also became an Observer tutor following the October course.

Congratulations to all of those achieving qualifications during the year.

Publicity

Seasearch continued to be publicised to diving clubs and universities. Seasearch Facebook Groups in both North and West Wales also continue to be used to publicise courses and surveys and for photo identification.

Talks were given during 2014 at Bangor University Endeavour Society and to MSc. students to encourage student participation in Seasearch. In early 2015 a talk was given at 'Scuba Talks' hosted by Swansea University and attended by dive clubs in South Wales.

Seasearch took part in the Stackpole Bioblitz, a public education event. A small group of Seasearchers dived the site, recorded their findings and brought back creatures to put in large tubs for public interest. There was also a tented area at the top of the beach with display panels and information about marine life in Pembrokeshire.

Presentations were also given at the Pembrokeshire Wildlife Sightings event hosted by the Pembrokeshire Coastal Forum in November 2014 and at the Dale Fort Marine Symposium in early 2015.

Acknowledgements

Many thanks to all the Seasearch volunteers who supported Seasearch during the 2014 season, particularly those helping out with organising.

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Assistance with survey dives: Steve Bounds, Blaise Bullimore, Harry Goudge, Lucy Kay, Liz Morris, Franki Perry and Kirsten Ramsay.

Boat skippers Paul Turkentine, Waterline, Auberry Diggle, SBS boat charters, Alun Lewis, Cleddau King and Andy Truelove, Volsung, Their seafaring skills and local knowledge helps the teams safely dive in locations that would not otherwise be possible.

Photo credits: Sarah Bowen, Blaise Bullimore, Hayden Close, Rob Fairweather, Lonn Landis, Kate Lock, Liz Morris, Ruth Sharratt and Richard Yorke.

Dive Site Sketch Credits: Louise Bebb, Matt Boa, Paul Brazier, Stephen Dorricott, Carol Horne, Lonn Landis, Liz Morris, Franki Perry and Pat Spencer.

Natural Resources Wales continued to support Seasearch in Wales during 2014-5 and also contributed to the national coordination of the project. We could not carry out the programme described in this report without their support.



Seasearch is co-ordinated by the Marine Conservation Society on behalf of the Seasearch Supporters Group which includes the Marine Conservation Society, The Wildlife Trusts, Joint Nature Conservation Committee, Natural England, Natural Resources Wales, Scottish Natural Heritage, Department of the Environment Northern Ireland, Environment Agency, Marine Biological Association, Nautical Archaeological Society, British Sub Aqua Club, Sub Aqua Association, Professional Association of Diving Instructors, Scottish Sub Aqua Club and Irish Underwater Council. Financial support at a National level, and support for local/regional coordination for 2014-5, has been given by the organisations with logos above and there are a number of other supporters at a local level.

Marine Conservation Society, Over Ross House, Ross Park, Ross on Wye, HR9 7QQ.