



Marine
Conservation
Society



Seasearch Wales/Cymru 2009 Summary Report



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Seasearch Wales 2009

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 on behalf of the Seasearch Steering Group.

There are two Seasearch regional coordinators in Wales. Kate Lock coordinates the South and West Wales region which extends from the Severn estuary to Aberystwyth. Liz Morris coordinates the North Wales region which extends from Aberystwyth to the Dee. In addition to the two coordinators, there are four other active Seasearch Tutors in North Wales, Harry Goudge, Kirsten Ramsay, Lucy Kay and Rohan Holt; and two in South and West Wales, Jen Jones and Vicky Swales. Overall guidance is provided by the National Seasearch Coordinator, Chris Wood.

This report summarises all of the Seasearch activity in Wales in 2009. It includes summaries of the sites surveyed and identifies rare or unusual species and habitats encountered. These include a number of UK Biodiversity Action Plan habitats and species. It does not include all of the data as this has been entered into the Marine Recorder database and supplied to the Countryside Council for Wales for use in its marine conservation activities. The data is also available on-line through the National Biodiversity Network.

Data from Wales in 2009 comprised 228 Observation Forms, 129 Survey Forms, 17 Eggcase Forms, 22 online crawfish records and 1 online sea fan record. The total of 397 represents 19% of the data for the whole of Britain and Ireland, a much higher proportion than the coastline. The proportion of higher level Survey Forms (32.5%) is also higher than for the Britain and Ireland dataset as a whole (25%). The number of forms from Wales increased by 21% over the previous year.

Overall 2009 was a very successful year for Seasearch in Wales, both in terms of the quantity and quality of records received.

Seasearch Cymru 2009

Cynllun gwirfoddol sy'n gwneud arolwg o rywogaethau a chynefinoedd morol yw Seasearch ac a luniwyd ar gyfer plymwyr amser hamdden ym Mhrydain ac Iwerddon. Mae'n cael ei gydlynu gan y Gymdeithas Gadwraeth Forol ar ran Grŵp Llywio Seasearch.

Mae gan Seasearch ddau gydgyssylltydd ardal yng Nghymru. Mae Kate Lock yn cydgysylltu ardal De a Gorllewin Cymru, ardal sy'n ymestyn o aber Afon Hafren i Aberystwyth. Liz Morris yw cydgysylltydd ardal Gogledd Cymru sy'n ymestyn o Aberystwyth hyd at Afon Dyfrdwy. Yn ogystal â'r ddwy gydgyssylltydd ceir pedwar Tiwtor Seasearch gweithredol arall yng Ngogledd Cymru, sef Harry Goudge, Kristen Ramsay, Lucy Kay a Rohan Holt a cheir dau yn Ne a Gorllewin Cymru, sef Jen Jones a Vicky Swales. Rhoddir arweiniad cyffredinol gan Gydgyssylltydd Cenedlaethol Seasearch, Chris Wood.

Mae'r adroddiad yma yn crynhoi holl weithgaredd Seasearch yng Nghymru yn ystod 2009. Mae'n cynnwys crynodebau o'r safleoedd y gwnaethpwyd arolwg ohonynt ac mae'n nodi rhywogaethau a chynefinoedd prin neu anghyffredin a welwyd. Mae'r rhain yn cynnwys nifer o gynefinoedd a rhywogaethau Cynlluniau Gweithredu Bioamrywiaeth y DU. Nid yw'n cynnwys yr holl ddata gan fod cofnod ohono yng nghronfa ddata'r Cofnod Morol a gyflwynwyd i Gyngor Cefn Gwlad Cymru i'w ddefnyddio yn ei weithgareddau cadwraeth morol. Mae'r data ar gael hefyd ar lein trwy'r Rhwydwaith Bioamrywiaeth Cenedlaethol.

Roedd y Data o Gymru yn 2009 yn cynnwys 228 o Ffurflenni Arsylwi, 129 o Ffurflenni Gwneud Arolwg, 17 o Ffurflenni Chwilerod, 22 o gofnodion cimychiaid ar lein ac 1 wyntyll fôr.

Mae'r cyfanswm o 397 yn cynrychioli 19% o'r data ar gyfer Prydain ac Iwerddon gyfan, canran llawer uwch na'r arfordir. Mae canran y Ffurflenni Gwneud Arolwg ar lefel uwch (32.5%) hefyd yn uwch nag ar gyfer set ddata gyfan Prydain ac Iwerddon (25%). Roedd cynnydd o 21% yn y ffurflenni o Gymru o'i gymharu â'r flwyddyn flaenorol.

Roedd 2009 ar y cyfan yn flwyddyn lwyddiannus iawn i Seasearch yng Nghymru, yn nhermau niferoedd yn ogystal ag ansawdd y cofnodion a dderbyniwyd.

South and West Wales Summary

2009 was a successful year in South and West Wales. 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 some of the new divers to complete qualifications.

At the beginning of the year a meeting was held with the Countryside Council for Wales Senior Marine Conservation Officer and Marine Biodiversity Officer. It was agreed that a focus on information gap filling in the areas of Ramsey Island and south Pembrokeshire coast should be targeted along with BAP species recording. An additional focus was to support other marine research projects, these were collaborative projects with Cardigan Bay Marine Wildlife Centre; cetacean research; Skomer Marine Nature Reserve territorial fish survey and Emma Kenyon's triggerfish project Gower.

Seven Seasearch survey weekends were completed organised by the co-ordinator and many forms were also submitted by individuals organising their own dives. Despite challenging weather, only three scheduled day were cancelled; a dive from Newquay and a weekend targeting Sker Point, Bridgend. Three other days were relocated to more sheltered locations and used as training dives. In addition the Skomer MNR organised two volunteer diver weekends for their territorial fish survey for which Seasearch forms were completed for each survey site.

Surveys were completed at Abercastle (north Pembrokeshire), Ramsey island, Aberporth (south Cardigan bay), Castlemartin Ranges (south Pembrokeshire), Skomer and North Marloes peninsula, and Gower. Training dives were completed at Martins Haven, St Brides Haven and entrances of Milford Haven.

Links with Universities continue with talks and presentations at both Glamorgan and Aberystwyth Universities. The Seasearch display was also present at the Pembrokeshire Coastal Forum wildlife evening. Publicity was gained when Jan Morgan, writer for Dive Magazine dived with Seasearch in North Pembrokeshire and wrote an article for the October 2009 edition.

An end of season workshop gathering was organised at the end of October. A short presentation on the years achievements and highlights was given, however the event is primarily a chance for the divers to socialise and share stories.

2009 Specials

- Elegant nudibranch *Okenia elegans*, Ramsey Sound;
- Seafan nudibranch *Tritonia nilsodhneri*, two records on pink sea fan *Eunicella verrucosa* in Skomer MNR;
- Pink sea fan *Eunicella verrucosa* at North Pembrokeshire site;
- *Trapania tartenella* a new nudibranch record for Wales, Skomer MNR;
- *Dromia personata* at Skomer MNR and North Pembrokeshire sites;
- Crawfish *Palinurus elephas* records at several Pembrokeshire sites;
- Triggerfish shoal on Oxwich wreck, Gower;
- Nationally scarce sponges: *Axinella damicornis*, *Tethyspira spinosa* and *Thymosia guernei*, at Skomer MNR, Ramsey and North Pembrokeshire sites
- *Mytilus edulis* mussel beds found at North Pembrokeshire sites where not previously located.
- Limestone reefs dense in ascidian and sponge communities in South Pembrokeshire sites.



North Wales Summary

2009 was another successful year in North Wales, despite several cancellations due to weather, boats and people. Time has been spent nurturing experienced Seasearchers and encouraging them to complete Surveyor forms and improve their marine ID. Although the number of Surveyor forms has remained similar to 2008, the number of people completing the forms has increased, whilst some tutors have not completed as many forms as in previous years for various reasons including concentrating their efforts on nurturing new surveyors. In North Wales we now have a good core of 'experienced' Seasearch observers and surveyors who are repeatedly coming on survey whilst also encouraging and maintaining the enthusiasm of new Seasearchers too. This is increasing the quality and number of records from new Seasearchers on independent dives, both of which has seen a marked increase (particularly with respect to the use of profile diagrams) in 2009.

At the beginning of the year two meetings were held with the Countryside Council for Wales Seasearch Project Officer, the Pen Llŷn a'r Sarnau officer, the National Seasearch Co-ordinator (Chris Wood) and local Seasearch tutors. It was agreed that the major focus of efforts in North Wales in 2009 should be:

- to focus tutor time on the development of new Seasearchers, with the aim of increasing good surveyor records
- to fill gaps in knowledge along the North Wales coast, particularly around Colwyn Bay.
- to verify records of Biodiversity Action Plan species and habitats in the area, particularly *Musculus discors* beds off the North Llŷn, and suspected *Modiolus* reefs off Ynys Moelfre.

2009 was kick started by a two day training event on North Anglesey, where observers and surveyors, old and new, got together with tutors at Newry Beach and Porth Dafarch on Anglesey. 26 keen people came along and between them completed 46 training records. After that, four normal Seasearch survey weekends were completed organised by the co-ordinator and many forms also being submitted by individuals organising their own independent, or club, dives. Two weekends were also spent looking specifically for skate and ray breeding grounds (funded by The Shark Trust). Two CCW volunteer diving projects were co-ordinated, although not organised by Seasearch, and resulted in additional Seasearch forms for the Porth Dinllaen Seagrass bed. In total 18 successful days were spent by volunteers on organised Seasearch boat and training events, the CCW seagrass project, and the Shark Trust skates and rays project. Four scheduled Seasearch days were also cancelled due to poor weather, and a fifth day was moved to a shore day (September 12th) due to last minute cancellations.

Organised Seasearch surveys were completed on the North and South Llŷn Peninsula looking for suspected seagrass beds off Pwllheli, and as part of a Seasearch search for live skate and ray eggcases. Seasearch weekends were also hosted for the Menai Strait, the Ormes and looking for suspected *Modiolus* beds off East Anglesey. Despite a last ditch attempt at the end of September, unfortunately all attempts to get to the North Wales coast east of the Ormes failed due to poor weather, and dives were instead redirected to the Menai Strait or East Anglesey.

The first weekend of September saw North Wales' Seasearch Big Weekend carried forward from previous years. This was a camping weekend hosted by Penrallt Campsite in Tudweiliog on the Llŷn Peninsula. On Saturday 7 participants partook in a Seasearch Observer course whilst other new Seasearchers undertook training dives with tutors and existing Seasearchers at Porth Ysgadon. In the evening everyone got together to discuss their summer's diving over a BBQ. On Sunday the training dives continued at Porth Ysgadon whilst qualified Seasearchers boarded RIB Waterline to explore some under-recorded sites on the South Llŷn.

Outside of advertising to BSAC clubs, little active advertising was undertaken in North Wales in 2009. Seasearch North Wales did produce a 2008 newsletter and gave talks to Bangor University BSAC Club and the Abyss Club in Stockport. Seasearch is also in discussion with a local production company which has asked for Welsh speaking Seasearchers to be filmed for a focus on the Menai Strait in 2010.

2009 Specials

- A new site for subtidal seagrass, *Zostera marina*, off Pen y Chain (although not bed forming), South Llŷn
- *Ebalia granulosa*, a new nut crab record for North Wales, off Llanbedrog Head, South Llŷn Peninsula
- Elegant nudibranch *Okenia elegans*, Porth Ysgadon Outer Reef, off the North Llŷn Peninsula
- The ocean Quahog, or Icelandic cyprine (*Arctica islandica*) a Welsh Biodiversity Action Plan species off Hell's Mouth and Ynys Moelfre.

South and West Wales dive sites

Gower

In September a diving weekend was organised in conjunction with long standing Seasearch volunteer Emma Kenyon. Emma is completing a project on grey triggerfish *Balistes carolinensis* based in Gower. With the help of local anglers she is running a catch and release project on grey triggerfish, targeting sites where they are regularly caught. Dives were completed at some of the sites to help collect supporting habitat data and to photograph the grey triggerfish.



The weekends diving was run by volunteers Glyn Powell who brought the Abergavenny SAC boat and Jim Bull. On the first day sites were targeted approximately 1 mile west of Port Eynon, here a shallow series of limestone rocky ridges interspersed either with sand or pebbles and boulders. On the tops of the reef were carpets of mussel beds *Mytilus edulis* and an abundance of red algae. The sides of the rocks were clothed in sponges and seasquirts and large numbers of sea lemon *Archidoris pseudoargus*. Further offshore large expanses of daisy anemone *Ceris pedunculatus* and groups of common starfish *Asterias rubens* were present.

On the Sunday Pwlldu Head and Oxwich wreck were both dived and both sites had shoals of grey triggerfish. At Pwlldu Head was the characteristic limestone beadrock with shallow gullies and deep overhangs in places. In the base of the gullies boulders, cobbles, gravel and sand were all found. The rocks were covered in short animal turf dominated in sponges and red algae. A shoal of grey triggerfish was spotted at 10m bsl and two were observed remaining in one small area concealing themselves within small rock crevices. Oxwich wreck sits on a sandy seabed with broken shell at 10m bsl. In the sandy area common starfish *Asterias rubens*, snakelocks anemones *Anemonia viridis* were found along with numerous dragonet *Callionymus lyra*. The wreckage was heavily encrusted with bryozoans, seasquirts and hydroids. Numbers of sea hare *Aplysia punctata* were found and large numbers of shoaling fish including 12+ grey triggerfish.



South Pembrokeshire – Freshwater west to St Govans Head



Two weekends diving in 2009 explored sites along the Castlemartin Ranges from the east end of Freshwater west to St Govan's Head. This area of the Pembrokeshire coast has impressive limestone cliffs 30-40m in height with many interesting geological features: stacks, caves and the famous arch – Green Bridge of Wales.

Dives were completed at: Brimstone rock (east Freshwater West), Green Bridge of Wales, west The Castle, Mewsford Point, and the east and south sides of St Govans Head.

The main characteristic of the sites were shallow limestone rock

platforms (8-12m bcd) with lush red seaweed meadows covering the tops. A network of gullies between the platforms provided vertical faces around 2 – 4 m high allowing the divers to tuck out of the current and explore. The vertical faces were festooned in rich dense colonies of ascidians and sponge fauna (above left). Typical of limestone were the carved out pits and holes which provided homes for large numbers of crustaceans and fish species. These sites provided spectacular dives with a rich and diverse life. In some areas large congregations of lined sea slugs *Polycera quadrilineata* (above right) were found and one site was called Sea Hare rock after the huge numbers of sea hare *Aplysia punctata* found.



An additional day of diving was also organised by Dave Bell, Rhonda SAC launching from Lystep and diving Lydstep head and Woolhouse rock. Poor visibility, however, restricted recording and photography. In 2010 further diving is being planned in this area and around Caldey Island.

Skomer Marine Nature Reserve

The Skomer MNR is managed by the Countryside Council for Wales, and its dedicated team of marine scientists have established a programme of littoral, sublittoral and oceanographic monitoring. Included in the programme is an annual volunteer diving project, in 2009 this was the 'Territorial fish survey' and to support the survey Seasearch forms were completed for the following sites: North Castle, Rye Rocks, High Point, and East Hook.

Although habitat and species records are considerable for the MNR, it has been identified by the MNR management plan that these need continued updating with new records. To assist with this Seasearch forms were completed for West Waybench, East Martins Haven Point and West Hook sites on organised Seasearch dives.



In 2009 Skomer highlights:

- Sea fan sea slug *Tritonia nilsodhneri* at two sites on Pink sea fan *Eunicella verrucosa*
- Mashed potato sponge *Thymosia guernei*
- Sponge crab *Dromia personata*
- Crawfish *Palinurus elephas*
- *Trapania tartanella* a new nudibranch record for Wales

(Photographed by David Kipling and record confirmed by Bernard Picton - left).

It was also interesting to find a derelict scallop dredge rammed up against the rocks at East Martins Haven Point, it was very encrusted and obviously been there some time (photo right).

A survey summary report has been completed for Skomer MNR Seasearch 2009 (available on the Seasearch website).



Ramsey

Ramsey island is located at the north end of St Brides Bay. It is well known for its strong tidal rapids called the 'Bitches' which occur in Ramsey Sound between the east side of the island and the mainland along with the Islands exposed west coast. Ramsey is thus a challenging area to organise Seasearch diving. Some Seasearch had been completed during 2000 and it was decided to try and explore further in 2009.

In early May southwesterly winds forced the team to tuck into sites on the north side: Trwyn Sion Owen and Bay Ogof Hen. These sites revealed craggy rocky reefs with kelp forest in the shallows and thick red algae cover, deep gullies were found up to 4m deep that were easy to swim through and evidence of scouring from waves was recorded. Tall and short faunal turf dominated the walls and a diverse range of crustacean species were found. The second dive was on the north east corners of the island: Trewyn Ogof Hen and Ogof Tarw Reef. A relatively flat seabed was found covered in large cobbles and some pebbles and gravel. Large numbers of the double spiral worm *Bispira volutacornis* were found, spiny spider crab *Maja squinado* and common starfish *Asterias rubens* were both common.

A second day of survey was completed in July but once again the shelter of the east coast was sought. The first dive was at Carreg Gafeiliog, a small islet located on the mainland side at the north end of Ramsey Sound. Low lying rocky reef with boulders was found covered in kelp forest and a thick red algae understory. Sand and cobble was found in gullies between and at 12mbsl the reef gave way to a sandy seabed. Large numbers of common sea urchins *Echinus esculentus* were recorded. In the afternoon the conditions were perfect for a drift dive on the Bitches and along the south east coast.

These were high energy sites, cobble slopes from 9m down to 15m covered in lush red algae. Clusters of the shredded carrot sponge *Amphilectus fucorum*, bloody Henry *Henricia oculata* and the double spiral worm *Bispira volutacornis* were common. At the Bitches rocks, bedrocks and boulders rose from 12m up to 3m. On the tops a kelp forest of *Laminaria hyperborea* and *L. digitata* was abundant and encrusting fauna covered the vertical surfaces. A nice surprise was a record of the elegant seaslug *Okenia elegans* (right).



Ramsey highlights:

- Mashed potato sponges *Thymosia guernei* and brain sponge *Axinella damicornis*;
- Elegant seaslug *Okenia elegans*;
- Crawfish *Palinurus elephas*

North Pembrokeshire coast – Porthgain to Strumble Head



Offshore and cliff reefs habitats dominate the area, ranging in depth from 8-30 metres. Steep walls, drop offs, deep gullies and extensive low-lying reefs are all found in the area.

The sponge rich communities that dominate the reef habitats in this area are unique in Wales. This, coupled with the impressive list of WBAP and UK nationally scarce species, makes this a highly important area of marine biodiversity in Wales.

Seasearch surveys have been completed at many sites in the area since 2002 and it is also used for training dives. In 2009 a day of training dives was completed at Huws reef and the Leysian

close to Abercastle. During the year many forms were also received by individuals that had organised their own dives at the following sites: Calburga off Strumble Head, the Gramsbergen and Vendome wrecks, Finger reef, Pwll Deri, Long Island, Abercastle island (Observation forms), Pwll Arian and Carreg Buch (Survey forms).

In August a survey weekend was led by Jen Jones, although the plan was to target new sites, the weather and sea conditions restricted the diving to sites close to Abercastle and those that had been previously surveyed. Sites included: Ynys Devlyn, Crab Island, West of Abercastle harbour, Huws reef and Anderson reef. One notable feature not previously recorded was the new mussel beds that had established at many sites, this observation was also found at Skomer MNR sites and other reefs in St Brides Bay.

North Pembrokeshire highlights:

- Mashed potato sponge *Thymosia guernei* and brain sponge *Axinella damicornis*.
- Pink sea fan *Eunicella verrucosa*,
- Yellow cluster anemone *Parazoanthus axinellae*.
- Nudibranchs: *Aegieres punctilucens* and *Trapania pallida*
- Sponge crab *Dromia personata* (above left)
- Crawfish *Palinurus elephas*
- Mussel beds *Mytilus edulis*

South Cardigan Bay – Newquay to Aberporth

In May Seasearch teamed up with the Cardigan Bay Wildlife Centre team in Newquay. Since 2007 sites have been targeted with the aim of ground truthing sites where high numbers of bottle nosed dolphins are observed. Despite rough sea conditions Steve Hartley safely skippered the team to Aberporth Head. Sadly visibility was very poor, a sandy bottom was recorded in all areas greater than 5m depth and very little life was spotted. The second day was aborted due to the deteriorating conditions.

Six divers in Newquay have now completed their Seasearch training and their plan for 2009 was to organise and complete Seasearch dives at local sites. Despite 2-3 dates being set the weather and visibility did not allow any of the dives to be completed.

North Wales dive sites

Pen Llŷn a'r Sarnau Special Area of Conservation and surrounds

Pen Llŷn a'r Sarnau Special Area of Conservation (SAC) is recognised for its rich diversity of life, from large shallow inlets and bays (most notably Tremadog Bay) to rocky reefs. In 2009 Seasearch volunteers surveyed 21 sites in and around the SAC, mainly exploring previously unsurveyed sites to add new information for the area or searching for live skate / ray eggcases in suspected breeding areas. Five days were spent on dedicated Seasearch weekends, four days specifically searching for skate and ray eggcases with Lucy Kay, whilst Seasearchers submitted additional records from 5 days of independent diving.

12 sites were surveyed off the South Llŷn Peninsula in Tremadog Bay – an area characterised by exposed rocky reefs and large areas of varying types of mixed ground. As many of these sites were offshore and had not previously been named, Seasearchers have imaginatively named some of the sites to reflect what they saw ... or at least hoped to see. Highlights included:

- watching large numbers of spiny spider crabs (*Maja squinado*) - right aggregating off gravel and boulder reefs at Trwyn yr Wylfa in early summer
- unconfirmed sightings of the ocean Quahog, or Icelandic cyprine (*Arctica islandica*) a very long lived bivalve which is a species of principal importance for the purpose of conserving biodiversity in Wales (Welsh Biodiversity Action Plan) off Hell's Mouth
- recognising the 'strawberries and cream' biotope of the white lace sponge, *Clathrina coriacea*, and gooseberry or baked bean seasquirt, *Dendrodoa grossularia*, in surge gullies at 'Paul's Magic Mountain', near Hell's Mouth
- spotting potential wrasse nests on the rocky outcrops named 'One Lump or Two' near Llanbedrog
- finding and photographing the first record of the Nut Crab *Ebalia granulosa* in the area, 3 miles south south east of Llanbedrog Head. At the same site Seasearchers also found a Butterfly blenny (*Blennius ocellaris*) which is a southern species at the limit of its extent in North Wales and the Isle of Man.
- discovering large numbers of Pelican's Foot (*Aporrhais pespelecani*)- left and Auger, or Tower (*Turritella communis*), shells in muddy fine sand at the aptly named 'Pelican Deep', approximately 2.5miles south east of Pwllheli
- spotting blades of seagrass, *Zostera marina*, off Pen y Chain, when searching for seagrass beds. Unfortunately no seagrass beds were confirmed, but there is definitely seagrass in the area.



When Seasearchers were searching for suspected eggcase-laying grounds for skates and rays within Tremadog Bay they discovered an area of seabed that had been heavily disturbed. Instead of being randomly distributed on the seabed, the cobbles and other stones of this mixed seabed habitat had been moved into clear lines on the seabed, and the disturbed area was notably impoverished in terms of number and variety of mobile species and seaweed cover compared to undisturbed areas of seabed that were also found. It is likely that this disturbance was due to scallop dredging (even though Tremadog Bay was officially closed to scallop dredging), because on stony ground this type of fishing leaves a characteristic 'tramlines - effect' on the seabed surface, where stones are pushed to the side of the dredges.



Disturbed area of seabed in Tremadog Bay with 'tramlines-effect' of stones clearly visible., June 2009.

Image © Paul Kay

The disturbed area of seabed is very close to where an empty, but attached, thornback ray eggcase was recorded in 2008.

This was subsequently the subject of a complaint to the European Commission for lack of secure safeguards to protect the SAC. The Welsh Assembly Government has since brought out new legislation to improve management of scallop fishing in Welsh Waters (the Scallop Fishing (2010) Order) and this prohibits all scallop dredging within 1nm of the coast, and limits the use of some scallop fishing gears, amongst other things. It is hoped that improved enforcement measures will also be introduced in order to prevent illegal fishing and damage to SACs in Wales.

9 further sites were surveyed off the North Llŷn Peninsula

– an area characterised by moderately exposed rocky reefs with high tides and an abundance of diverse seasquirts, bryozoan and hydroid turfs. Unfortunately, more scallop dredge marks were seen outside of the SAC at ‘Dolphin Dip’, north east of Porth Dinllaen, again causing a noticeable change in the sediment composition in distinctive ‘tramlines’ and a resulting absence of infauna such as gravel sea cucumbers (*Neopentadactyla mixta*) and sessile epifauna. On a more positive note, highlights of the North Llŷn Peninsula surveys included:

- records of the southern chimney sponge *Ciocalypta penicillus* at two sites near Porth Dinllaen
- the elegant seaslug *Okenia elegans* on the outer reef at Porth Ysgadon, spotted by keen observer Wendy Northway
- the nudibranch *Crimora papillata*, spotted by Mandy Knott, which until recently was thought to be a warm water species, and relatively uncommon around the UK. However, in recent years this little slug has been a regular in North Wales, and spotted as far North as St Kilda.
- Sparse unconsolidated horse mussel (*Modiolus modiolus*) shell gravel was found at 27m below chart datum, close to a known live horse mussel reef. Although suspected to be dead, the shell was still covered in common starfish (*Asterias rubens*), whelks (*Buccinum undatum*), sea squirts (*Ciona intestinalis*) and fried egg anemones (*Actinothoe sphyrodeta*), all of which are common on live reefs too and so hints that maybe there are still live mussels in the area. Horse mussel beds are long lived and provide a valuable habitat for lots of other animals, and as such are protected as a UK BAP habitat, so keep your eyes peeled for near by live mussels. Visit You Tube to see videos of *Modiolus* reefs on the North Llŷn Peninsula.



Off the South Llŷn Peninsula dives were completed at: Hell’s Mouth (2 sites including ‘Paul’s Magic Mountain’), Ynys Gwylan Fawr, Trwyn yr Wylfa, St Tudwal’s West island, ‘Pelican Deep’ (2.5m SE of Pwllheli), Pen y Chain, 5 sites around Llanbedrog (‘One Lump or Two’, ‘Lumpy Bottom’, ‘Dwarffish Plain’, ‘3miles SSE of Llanbedrog Head’ and ‘Frustration Fumble’).

Off the North Llŷn Peninsula dives were completed at: Porth Colmon, Maen Mellt, Penrhyn Cwmnistr, offshore from Porth Towyn, Porth Ysgadon (inner and outer reef), north east of Porth Dinllaen (‘Tope Hope’ and ‘Dolphin Dip’) and Trefor Pier.

The Menai Strait and Anglesey



The aim of 2009 Seasearch weekends in this area was either to survey beyond the Menai Strait to the north east Wales coast, off Colwyn Bay, or resurvey parts of the Strait for which there were few recent records, if any at all. 5 organised Seasearch days were spent in this area, and 12 days were spent Seasearching independent of organised events.

On 2 dedicated Seasearch days, the weather meant we were restricted to the Menai Strait, but useful records were still collected. Divers started the diving south west of Plas Newydd, on gently sloping, heavily silted cobble and pebble reef with small boulders, near an old wreck. The site was dominated by sponge and bryozoans, but soft limestone meant that horseshoe worms (Phoronids pictured left) were frequent. Clay outcrops were exposed

at the foot of some boulders, containing dead piddocks, which does tell us that there were piddocks in clay (a UK BAP habitat) present at the site recently if not at present.

Divers also undertook a fast drift to groundtruth areas of mobile sand between the Foryd Bay and Caernarfon. *Sargassum muticum* was present at both of these sites. The second day's diving took place on south east Anglesey, where Phoronids were occasional at both the stepped limestone bedrock north west of White Beach, and on large boulders at Puffin Island amongst dense sponge, bryozoan and sea squirt cover.



The third day's diving was spent on east Anglesey aiming to confirm recent trawl records of a suspected horse mussel (*Modiolus modiolus*) bed off Ynys Moelfre. Four dives were spent north east and south east of the island, amongst flat sand and gravel, and mixed sediment with cobbles and small boulders. Rare individual live horse mussels were seen scattered amongst the flat sand and gravel, north east of Ynys Moelfre, but not in densities high enough to be considered a UK Biodiversity Action Plan (BAP) horse mussel reef. The ocean quahog *Arctica islandica*, another UK BAP species, was also spotted at the same site. There was also an unconfirmed sighting of a live attached ray eggcase, but unfortunately with no photograph to confirm it.

At Ynys Dulas a vertical limestone wall covered in dense sponge and anemone communities was surveyed, where the well camouflaged nudibranch *Aeolidiella glauca* was spotted. The reef was surrounded in undulating mixed ground, with no signs of horse mussels.

Seasearchers also spent two days at training events at the well surveyed sites of Porth Dafarch and Newry Beach, both on north Anglesey. Stalked jellyfish, another national BAP species, were spotted for the second year in a row at Porth Dafarch.

In the Menai Strait and Conwy Bay SAC dives were completed at: Caernarfon Drift, Plas Newydd, the Telegraph Cable, St. George's Pier, Puffin Island, NW of White Beach, Ynys Moelfre

Dives completed around Anglesey: Broad Beach (Rhosneigr), Rhoscolyn Beacon, Craig y Môr (Trearddur Bay), Porth Dafarch, South Stack, Newry Beach, Cemlyn Bay, Ynys Dulas,

Colwyn Bay and the North Wales Coastline

Two organised Seasearch weekends attempted to get out to areas east of the Ormes on the North Welsh coast. Three days of these were blown into the Menai Strait. An additional skate and ray eggcase hunt weekend in August was cancelled altogether due to bad weather, which was aiming to target suspected skate and ray breeding grounds off Colwyn Bay. Despite this, one day of successful Seasearching was undertaken in late September. Divers surveyed Carreg Uffern, a steep limestone reef on the west side of the Great Orme. The wall was dense with colourful Dahlia anemones, *Urticina felina*, whilst large boulders at its base hosted an array of hydroids, sponges including the mermaids glove sponge, *Haliclona oculata*, and dead men's fingers, *Alcyonium digitatum*. A large overhang (or small cave) was embedded in the cliff, which was covered in barnacles, yellow sponge crusts and the breadcrumb sponge, *Halichondria panicea*. The boulder and bedrock reef met a seabed of scoured cobbles dominated by Hornwrack, *Flustra foliacea*, at 9m bcd.

A second site was also surveyed at Pen Trwyn on the east side of the Great Orme. The limestone cliff here was again dominated by colourful sponges (*Haliclona oculata*, *Halichondria panicea*, the shredded carrot sponge *Amphilectus fucorum* and the boring sponge *Cliona celata*). Large boulders, cobbles and pebbles lined the base of the near vertical rockface, where horizontal surfaces were dominated by dense *Polydora* worm tubes. Cracks and crevices around boulders also make nice hiding places for octopus, *Eledone* sp.

Beady eyed Seasearchers also spotted five species of nudibranch between the two Orme dives, including the difficult to spot *Dendronotus frondosus*, a cryptic froned sea slug, which feeds on a variety of hydroids.

Dives completed around Colwyn Bay: Carreg Uffern (west side of the Great Orme) and Pen Trwyn (east Great Orme)

Special Projects

Wales Crawfish Project



Crawfish has been identified as a species that needs protection and is on the UK Biodiversity Action Plan species list. During the 5th quinquennial review of the Wildlife & Countryside Act, this species was proposed by Countryside Council for Wales as candidate species for inclusion on Schedule 5 of the Wildlife & Countryside Act, 1981 where it would have full protection. Seasearch has instituted an online recording scheme to help map current distribution throughout Britain and Ireland.

In Wales, crawfish are found around Llŷn Peninsula and Pembrokeshire, although numbers are now very low.

Commercial fishery (netting) still exists off the Pembrokeshire coast.

Kate Lock was invited by the CCW Wales marine biodiversity officer to attend the Wales Biodiversity Partnership (WBP) meeting in February 2009 and put forward a Seasearch project to increase knowledge of the distribution of Crawfish in Welsh waters. WBP agreed to fund the project which aims to collect current and historical records from divers in two ways:

1. Enter crawfish records directly on an online database on the Seasearch website.
2. Provide historical records from diver log books.

These logbook records are very valuable in building up the picture of where crawfish have been seen in the past and how often they were seen, they will help to track how both distribution and abundance has changed at sites around our coast.

In January 2010, 50 Crawfish packs including information sheets, posters and recording sheets were distributed to dive clubs, centres and individuals in Wales. Posters and forms have also been sent to dive charters and dive schools. A press release generated publicity in local newspapers, local radio, BBC website and BBC radio and an article was published in Fishing News encouraging fishermen to also send in their records. The project has also been advertised through the Wales BSAC Google group which has a substantial network of divers in Wales.

Records have been received from data as far back as the 1970's and sites from Anglesey to Pembrokeshire. The data will be collated in early summer 2010, however it has been stressed in all publicity that the data is 'sensitive' so site information will only be provided on a 20km square area grid following CCW guidelines on sensitive data.

CCW Volunteer Diving Project

Since 2007 Seasearch volunteers have been joining other volunteers as part of a pilot project assisting the Countryside Council for Wales with their marine monitoring of Special Areas of Conservation. Following successful trials in 2008, two surveys took place in June and July 2009 of seagrass beds in Porth Dinllaen, part of the Pen Llŷn a'r Sarnau Special Area of Conservation (SAC). The seagrass bed was found to be over 1km long and 650m wide in places, and very dense and healthy, with densities reaching over 214 shoots per m². Seasearch volunteers completed 9 Seasearch Observer forms and 4 surveyor forms in and around the seagrass beds, contributing valuable habitat information in addition to the standard CCW recording of seagrass density and indicators of health. Despite some hard searching no seahorses were seen! Summary reports have been written for the CCW volunteer seagrass project 2008 & 2009, available from CCW directly by quoting:

Morris, E.S., Goudge, H. & Irving, R. 2008. *Summary of 2008 Seagrass Surveys in Milford Haven and Porth Dinllaen.* CCW Marine Monitoring Interim Report.

Morris, E.S., Hirst, N. & Easter, J. 2009. *Summary of 2009 Seagrass Surveys in Porth Dinllaen.* CCW Marine Monitoring Interim Report.



Skate and Ray Eggcase Hunt

The identification and protection of habitats used by skates / rays for eggcase laying is an essential component of effective conservation of these species. Currently very little is known about the habitat requirements for skate/ ray eggcase laying. For 3 years Seasearch volunteers in North Wales have been subsidised by the Shark Trust's Welsh Skate and Ray project to see if skate/ ray eggcases can be seen in situ on the seabed and recorded by divers, in order to try to identify the seabed habitat types and the locations used by different skate/ ray species to lay their eggcases. The project has been led by North Wales tutor, Lucy Kay, with initial searches undertaken in areas suspected by recreational anglers to be skate / ray breeding grounds within the Pen Llyn a'r Sarnau SAC, close to areas where large numbers of eggcases are also found washed up on the shore.



In 2009 fourteen divers took part in the recording, with the total survey effort equating to 25 diver days for North Wales. A total of 17 eggcase forms were completed in 2009 for 8 different sites within the Pen Llyn a'r Sarnau SAC, and a further 3 forms were submitted for dives in England and Scotland. The seabed habitats surveyed included reef (boulders, cobble, pebble), mixed ground (larger rocks, gravel and sediment), as well as sand and muddy sediment, thereby covering the range of habitat types where skates/ rays may be expected to lay their eggcases based on existing information.



Over the 3 years of the project (2007-9) there were no confirmed records of live skate/ ray eggcases from any of the sites surveyed in the Pen Llyn a'r Sarnau SAC despite many of the seabed habitats appearing suitable based on previous field observations. Worryingly a record of illegal scallop dredging in Tremadog Bay was recorded on one of the 2009 dives in an area where an empty, but attached thornback ray eggcase was recorded in 2008. It is also in the same area of an unconfirmed live thornback ray eggcase record in 2007. The dredging activity (detailed above in Pen Llŷn a'r Sarnau dive sites) has subsequently been the subject of a complaint to the European Commission for lack of secure safeguards to protect the SAC. The Welsh

Assembly Government has since brought out new legislation to improve management of scallop fishing in Welsh Waters (the Scallop Fishing (2010) Order).

Records of live eggcases of small spotted catshark, *Scyliorhinus canicula*, (also known as a lesser spotted dogfish, common dogfish, sandy dog and rough hound) and the nursehound, *Scyliorhinus stellaris*, (also known as greater spotted dogfish and bull huss) have been frequently observed by divers in the SAC. Although cat sharks and nursehounds and their eggcases are currently considered to be a relatively common sight underwater in the UK, there may come a time when the observational records made by divers of the habitat and species used by catsharks to attach their eggcases provides information that may help safeguard breeding areas for these species.

Consistent observations by Seasearchers of small rays in shallow, sandy areas seems to indicate some sort of a preference for this type of habitat as a nursery area (the example explored most on the eggcase survey dives has been Tremadog Bay), and it would seem logical that the egg-laying ground would not be that far away. Although 2009 was the final year of the pilot project funded by the Shark Trust, observations for skate/ ray eggcases will continue into 2010.

Training and Data

Training and qualifications

In total four Observer Courses were run in Wales, the first in March by Vicky Swales at Glamorgan University in South Wales (16 participants) and the second in April by Kate Lock in Marloes, Pembrokeshire (13 participants). The North Wales courses were less well subscribed, with one in Bangor by Harry Goudge (6 participants) and one on the North Llŷn by Kirsten Ramsay (7 participants), possibly because many divers in the North Wales area actually live in north and west England. A fifth Observer course was run by Liz Morris in Oldham with 17 participants, most of whom consider North Wales their local dive site. Most trainees completed their first qualifying dives as part of the courses, or at organised training events.

A Surveyor Course was run by Jen Jones in Mathry, Pembrokeshire in April for three divers.

During the season twelve divers completed their Observer qualification and four divers their Surveyor qualification.

In addition a Fish ID course with Francis Dipper and Paul Kay was organised at Anglesey Sea Zoo. 14 participants attended this course and were kept on the edge of their seats with blenny and goby id features!

In 2009 North Wales focused on training up existing Seasearchers. Two training days on Anglesey in April saw 26 observers, existing Seasearchers and tutors get together for free Seasearch training shore dives. 45 training and verifying forms were completed on these days.

An intermediate marine ID course was planned on Anglesey to increase people's taxonomic opportunity, but had to be cancelled due to low numbers. A cheaper option is planned for 2010.

Forms

In 2009 114 Observation and 97 Survey Forms were completed in South and West Wales. The high number of Survey Forms is due to the number of trained divers that have completed the Surveyors level qualification in the area. This helps ensure a high quality level of recording for the dives. These divers also regularly buddy up with new divers training for their Observer qualification and provide their experience and help. Many of the Observation Forms were from training dives.

In North Wales 114 Observation, 32 Survey and 17 Eggcase Forms were completed. That is a similar number to 2008, but the quality of records has definitely increased. The focus in 2009 was increasing the quality of forms, often with both members of a buddy pair focussing their efforts on one form. This has resulted in a very noticeable increase in quality of forms, particularly by new surveyors and existing observers.

All Observation and Survey Form data is entered into the Marine Recorder database and is available on the National Biodiversity Network website www.searchnbn.net. The data is also supplied to the Countryside Council for Wales.

The Seasearch website now has an online facility for entering both seafan and crawfish records. There were 22 records of crawfish in 2009 entered in this way, 21 of which were from Pembrokeshire. Although pink sea fans were recorded at some sites in West Wales only one online record was made. .

Biotopes

All of the 2008 and 2009 Survey Form data has had JNCC biotopes assigned to it as a part of the data entry process. This makes the data much more useful for habitat identification and is likely to be important in the identification of sites as Marine Conservation Zones.

During 2009 a project was undertaken to assign biotopes to pre 2008 Survey Form data. This involved assigning biotopes to 400 Survey Forms from 2002-2007 and was undertaken by Seasearch tutor Jen Jones. The assigned biotopes have been added to the records in Marine Recorder and an updated dataset has been provided to the Countryside Council for Wales and the Joint Nature Conservation Committee.

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Photo credits: Leon Hopkins (front picture: Gower diving, dahlia anemone, triggerfish) Kate Lock (sponge crab and abandoned dredger), David Bowen (mussel beds and lobsters, nudibranchs species : *Okenia elegans*, *Trapania tartenella* and *Polycera quadlineata*, elephant ear sponge), Tim Theobalds (crawfish), Paul Kay (scallop dredge tramlines, thornback ray eggcase), Alice Lawrence (spiny spider crab and sponge, *Ciocalypa penicillus*), Liz Morris (nudibranch *Crimora papillata*), Ruth Sharratt (Pelican's foot shell, Phoronids in the Menai Strait), Richard Yorke (tompot blenny amongst typical Menai Strait cobbles) Rohan Holt (CCW seagrass surveys).

Seasearch is a volunteer underwater survey project for recreational divers who wish to contribute to conserving the marine environment.

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