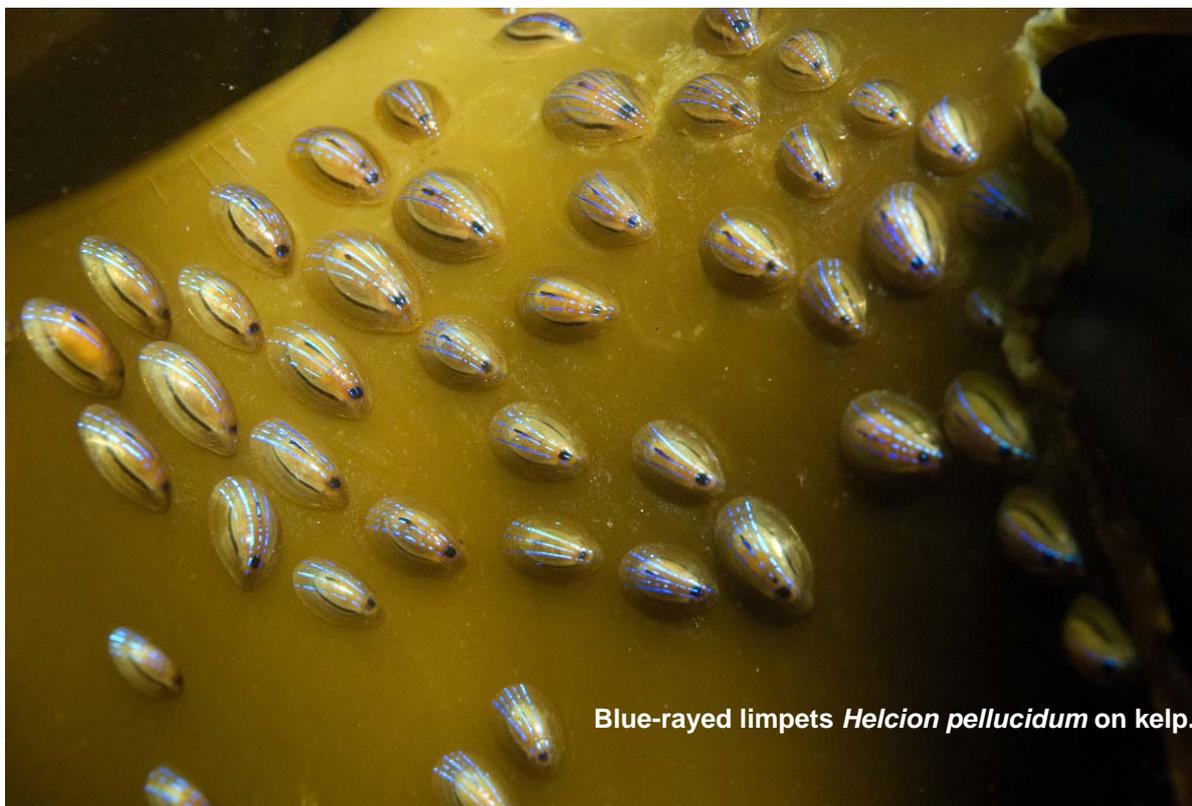


Devon 2009 Summary Report



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Introduction

2009 was another successful year in Devon with many established Seasearch divers submitting forms and a number of new keen divers coming on courses and completing qualifications.

As agreed, attention was focussed on information gap filling, BAP species and training of volunteers. 2009 saw the designation of several proposed Special Areas of Conservation (pSAC) within the Devon area and many of the dives have been within these areas.

A total of 23 full days and 12 evening dives were run by Devon Seasearch with many forms also being submitted from other groups and individuals. Cancelled dives were rare - two evening dives out of Teignmouth and one Sunday morning dive within the river Dart were cancelled due to bad weather plus one weekend in Lyme Bay due to the boat being unavailable at short notice. Most dives were organised by the Devon coordinator but some dives from Plymouth and Torbay and those on the north coast were run by other volunteers which is very welcome.

Divers taking part were from Devon and also from further afield. There is a growing number from the Bristol area regularly taking part in Seasearch and visiting divers from further afield are frequently booked on the dives. A higher proportion of 'unsolicited' forms were received this year from divers on club and individual trips.

Talks and presentations were given to those clubs and organisations that requested them and Devon Seasearch was represented at various other events, committee meetings and recently on the Devon County MCZ advisory group. In conjunction with the Marine Biological Association and the Natural History Museum Seasearch took part in the Wembury Bioblitz, with night and dawn dives.

The Devon website set up last year has been a useful source for those requiring information on local activities, dive bookings etc.

Surveys were carried out along the south Devon coast - Lyme Bay in the east of the region, in and around Torbay, out of Dartmouth, around Salcombe and off Bolt Tail, within Bigbury Bay, on offshore reefs including the Eddystone and at a number of sites in the Plymouth area. On the north Devon coast one dive was managed in the very challenging area off Hartland Point and several survey dives took place around Lundy Island.

2009 Specials

- Sunset cup corals on Plymouth Drop off
- Maerl bed and organ pipe worms *Serpula vermicularis* in Lyme Bay
- Steven's Goby *Gobius gasteveni* positively identified at several sites
- Wembury eelgrass surveyed using floating GPS
- Stalked jellyfish on eelgrass
- Crawfish recorded on both the south coast and Lundy
- Records of pink sea fans including many new recruits and sea fan anemones

The Dive Sites

• Lyme Bay

Two full weekends were planned but the dive boat was unfortunately unavailable for one of those so surveys were limited to two days in September. Four sites were surveyed, three of which were new to Devon Seasearch and all were within the designated no bottom trawling area and pSAC.

Two sites to the south-east of Lyme Regis – Cod Ledge and The Silvas – had good populations of pink sea fans *Eunicella verrucosa*. There was evidence of past trawling (probably before the trawling ban) with some of the fans under boulders and flattened but many of these were still live and some producing new vertical growth from flattened horizontal branches. Young sea fans from 5cm upwards were also recorded in good numbers appearing to indicate a recent successful settlement period for the larvae.



Flattened sea fan regrowing vertically – Lin Baldock

shelves and ledges, recorded a healthy crustacean population and a single edible oyster *Ostrea edulis*. The fourth site, to the south-east of Lyme Regis, was a flat sediment seabed which contained maerl. This was an incredibly species rich site with colonies of organ pipe worm *Serpula vermicularis* being visually dominant, although not yet forming reefs, many

An inshore site to the west of Lyme Regis – Tescos reef – with north facing



Maerl bed - Sally Sharrock



Serpula vermicularis colonies – Sally Sharrock

tunicates, scallops and small spider crabs. The maerl was patchy but in places gave an estimated 5% live cover. This area has been trawled in

the past but indications were that it was recovering well and a very varied fauna developing.

• Torbay

Torbay is a popular diving destination, especially as it has many shore diving sites. It also contains extensive eelgrass beds, rare sea caves and many reef sites which although regularly dived appear to have few recent Seasearch records. Most of the sites surveyed were within the pSAC.

The eelgrass *Zostera marina* beds have been surveyed in the past but this year were dived as part of the CRESH (Cephalopod Recruitment from English Channel Spawning Habitats) project to record cuttlefish eggs on eelgrass. Local divers have been asked to contribute information relating to sightings, eggs etc. to build up a picture of which areas are particularly important for this species.

In previous years the Torbay cliff caves have been surveyed and reported on. This year the Orestone cave (a fully underwater swim-through cave under a detached limestone sea pinnacle) was surveyed and found to have dense mussel beds throughout, whilst the outside reef had a varied and profuse faunal turf especially rich in dahlia *Urticina felina* and daisy *Cereus pedunculatus* anemones but also including the rarer (in this area) Imperial anemone *Aureliania heterocera*.

Another site, Hope's Nose, was previously a sewage outlet site. It now appears to have a healthy algal cover with rich faunal turf beneath and many featherstars *Antedon bifida* on the rocky gully sides.

A random site in the middle of the bay, not within the pSAC, was also surveyed. The centre of the bay is flat fine silty sand and often used for anchoring large ships and rarely, if ever, previously dived. The sediment supports a fauna of mainly of burrowing species of anemones, worms and molluscs together with crustacea including the square crab *Goneplax rhomboides*.

Forms were also received from dives at Babbacombe Bay, some due to concern over recently installed moorings (concrete filled tyres with heavy chains), to record settlement growth and bottom effect. A set of forms from Oddicombe recorded a cleaning station where groups of John Dory *Zeus faber* were being cleaned by spider crabs, a previously unknown event.



John Dory being cleaned – Dan Bolt

• Dartmouth

Four sites to the north of the Dart estuary were surveyed. The Dartmouth Mewstone was chosen to monitor the pink sea fans which were found to be mostly fouled with hydroid and bryozoan turf and many greater spotted dogfish *Scyliorhinus stellaris* eggs. However this appeared no different from previous years.

Two underwater pinnacles were surveyed. The Bull was a deep pinnacle rising only to 24m below sea level and as such not often dived. Current-swept and silty the fauna was very scenic with mainly profuse dead men's fingers *Alcyonium digitatum*, plumose anemones *Metridium senile* and abundant Devon cup corals *Caryophyllia smithii*. Middle Blackstone was shallower but again dominated by plumose anemones with large patches of jewel anemones *Corynactis viridis*, beds of mussels *Mytilus edulis* on the shallower rock and brittlestar beds of both *Ophiothrix fragilis* and *Ophiura albida* at the base. These sites are heavily potted and none recorded more than the occasional crustacean.

The last dive was further north, a shallow inshore site at Druid's Mare. Dominated by furbelows kelp *Saccorhiza polyschides* the rock crevices here had many very large edible crabs *Cancer pagurus*.

• Plymouth

Many of the dives out of Plymouth were for Seasearch training purposes, the local reefs providing a good range of habitats and species.

A special project was run to survey BAP species on the drop off sites - pink sea fans, sea fan anemones *Amphianthus dohrnii* and sunset cup coral *Leptopsammia pruvoti*. Crawfish *Palinurus elephas* were also recorded, one being a large berried female. A full report, 'Plymouth Drop off Survey 2006 – 2009', has already been published and is available on the Seasearch website on the 'Achievements' page www.seasearch.org.uk

Surveys were carried out within the pSAC at the East Rutts reef where the rare sponge *Adreus fascicularis* was found together with other varied sponges and many pink sea fans. A large discarded net with many dead and dying crabs was retrieved and disposed of.

Within Bigbury Bay the Persier reef was surveyed and found to have a continuing good population of Steven's goby *Gobius gasteveni*, both adults and juveniles. On the wreck of the Persier both pink sea fans and sea fan anemones were recorded together with a number of small sea fan recruits, the football sea squirt *Diazona violacea* and the tiny pink fingers *Alcyonium hibernicum*.



Lost net ghost fishing, East Rutts - Keith Hiscock

Sites on the offshore Eddystone reef were surveyed and confirmed a healthy population of pink sea fans.

Two eelgrass beds within the estuary of the Yealm are known, mapped, and have been surveyed in past years. A third bed, the Tomb eelgrass lies outside the sandbar at the entrance to the Yealm estuary, in Wembury Bay itself and was recorded in 2008. This year Seasearch surveyed it using floating GPS to try and ascertain the extent and health.



Tomb eelgrass bed known extent

The northern edge appears to run roughly along the 1m below chart datum contour. The southern and south-western edges were not reached despite the divers surfacing roughly in the centre of the estuary. From the data so far an approximate map can be drawn for part of the bed. The eelgrass itself appeared healthy although patchy, thickest in the centre and the clumps often in lines along the sand waves. The BAP

species of stalked jellyfish *Haliclystus auricula* and *Lucernariopsis campanulata* were both recorded plus a thornback ray *Raja clavata*, cuttlefish *Sepia officinalis* and the little cuttle *Sepiolo atlantica* together with the non-natives, wireweed *Sargassum muticum* and harpoon weed *Asparagopsis armata*.

• Hartland Point

The north coast of Devon is a very challenging dive area due to a combination of tides, weather and visibility. However a group of Seasearch divers carried out a survey dive on a

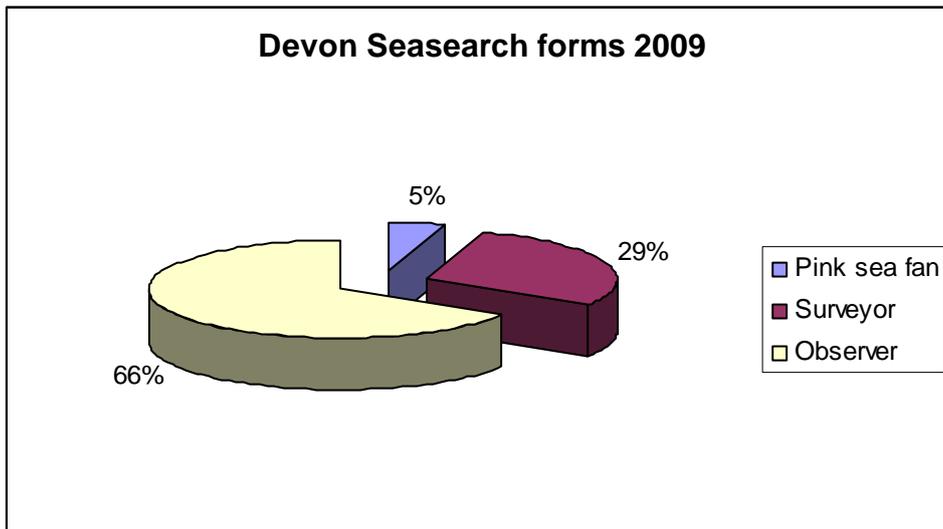
reef to the west of Knapp Head which had previously been unsurveyed. The results show a low tide-swept faunal turf of varied sponges with pink sea fans recorded as rare. There are undoubtedly other rocky reefs in this area with similar 'fragile sponge and anthozoan turf' cover and a series of dives are planned in this area for 2010.

• **Lundy Island**

The organised Devon Seasearch trips to Lundy were supplemented by forms from several other groups and individuals. A particular effort was made to survey a site on the west side where sunset cup corals had been reported in the past but never verified – unfortunately the divers again drew a blank but did record two juvenile crawfish. Sunset cup corals were recorded on the east side at the Knoll Pins as two reasonable sized patches with several dispersed single individuals together with Weymouth carpet coral *Hoplangia durotrix* and the uncommon nudibranch *Lomanotus genei*.

Forms

All Devon forms, 63 Surveyor forms and 142 Observer forms, have been input to Marine Recorder. This represents a much higher proportion of Observer forms than in 2008 and reflects the effort put into training and qualifying new Seasearch divers.



There were also 10 pink sea fan recording forms received, although there is now an online recording scheme in place for sea fans and crawfish.

Biotopes (habitats) have been added to all the Surveyor forms using JNCC's Marine Habitat Classification resulting in 11 infralittoral, 15 circalittoral and 13 sediment biotopes, a total of 39 different biotopes recorded which reflects both the diversity of sites dived and the variety of habitats present in the Devon area.

The biotopes within CR.HCR.XFa, mixed faunal turf communities, were by far the most commonly recorded with the specific CR.HCR.XFa.ByErSp.Eun, *Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock, being the most common. This reflects the recording effort on the Plymouth drop off sites.

The biotope CR.HCR.XFa.SpAnVt, sponges and anemones on vertical circalittoral rock was the second most commonly recorded. Both these habitats could also be interpreted as the BAP habitat 'fragile sponge and anthozoan communities on subtidal rocky habitats'.

Mussel beds, CR.MCR.CMus.CMyt, *Mytilus edulis* beds with hydroids and ascidians on tide-swept exposed to moderately wave-exposed circalittoral rock, were recorded out of Dartmouth.

The much less common biotope CR.FCR.Cv.SpCup, sponges, cup corals and anthozoans on shaded or overhanging circalittoral rock, was recorded out of Plymouth, in Lyme Bay and at Lundy.

As would be expected, kelp park and kelp forest dominated the infralittoral biotopes with both *Laminaria hyperborea* and furbelows *Saccorhiza polyschides* featuring.

Many of the sediment biotopes are more difficult to place past levels 3 or 4 but of the more unusual ones SS.SMp.Mrl, maerl beds, was allocated to a site in Lyme Bay, SS.SMp.SSgr.Zmar, *Zostera marina*, to sites in Torbay and Wembury Bay, the biotope SS.SMxCMx.OphMx, brittlestar beds on mixed sediment, was found at Dartmouth sites and gravel cucumbers SS.SCS.CCS.NMix, *Neopentadactyla mixta* in circalittoral shell gravel or coarse sand, recorded in Bigbury Bay.

BAP Species

BAP species were a particular target this year. The table below details those species recorded and where they were recorded.

Species name	Common name	Where recorded in 2009
<i>Eunicella verrucosa</i>	Pink sea fan	Lyme Bay Dartmouth Torbay Bigbury Bay Plymouth inshore & offshore Hartland Point Lundy
<i>Amphianthus dohrnii</i>	Sea fan anemone	Bigbury Bay Plymouth
<i>Leptopsammia pruvoti</i>	Sunset cup coral	Plymouth Lundy
<i>Haliclystus auricula</i>	Stalked jellyfish	Wembury
<i>Lucernariopsis campanulata</i>	Stalked jellyfish	Wembury
<i>Palinurus elephas</i>	Crawfish/spiny lobster	Plymouth Lundy
<i>Ostrea edulis</i>	Edible oyster	Lyme Bay
<i>Pleuronectes platessa</i>	Plaice	Start Bay
Maerl indet	Maerl	Lyme Bay
<i>Zostera marina</i>	Eelgrass	Torbay Wembury

Training

An Observer course for 10 divers was held in Plymouth in April with a further training weekend later in the month with 17 divers attending. This enabled those on the course and others from elsewhere in the country to complete their qualifications and gain recording experience with two tutors on hand.

A second Observer course was held in November at Plymouth University for 11 students who are on marine related courses. One of the university diving tutors, Kat Brown, also qualified as a Seasearch tutor on this course and it is hoped this will facilitate easier access to Seasearch courses and dives for the university students in the future.

A specialist nudibranch workshop weekend was held in Plymouth in May with Bernard Picton as the tutor. This was very well supported and the 18 participants found it most worthwhile.

Other projects

Scylla settlement monitoring has been ongoing and a full report on colonisation by joint authors Keith Hiscock, Sally Sharrock, James Highfield and Deborah Snelling has been accepted for publication in the JMBA.

Wembury Bioblitz in conjunction with the Natural History Museum & the Marine Biological Association took place for a 24 hour period in August. Various projects were organised which included both the general public and experts and a species count was collected from below sea level to the top of the cliffs. Devon Seasearch was involved with a display for the public and in a night dive and a dawn dive on a site in Wembury Bay, and also assisted with plankton collection. Seasearch added 64 underwater species to the total collection including ten species of sponge, red mullet *Mullus surmuletus*, bass *Dicentrarchus labrax*, and spotted ray *Raja montagui*. A report can be found at www.marlin.ac.uk/bioblitz



Red mullet, night dive – Paul Naylor

Devon County MCZ group has been set up to advise the Finding Sanctuary Steering Group on the siting of MCZs in Devon. Devon Seasearch is represented on this group and will be actively inputting knowledge of known and recorded species and habitats and recommending areas for protection.

SeaTorbay was set up in 2008 as a local initiative to increase the profile of the marine environment in and around Torbay for both economic, tourism and conservation reasons. Devon Seasearch is represented on the conservation side and is assisting in supplying information where possible to help with conservation and education issues.

Acknowledgements

Devon Seasearch is successful because a large number of people give their time and expertise freely. Thanks go to all those Seasearchers who have completed and sent in forms. Especial thanks go to Dr Keith Hiscock, Discovery Divers at Fort Bovisand, Rick Parker in Torbay, Chris Webb, Rob Adams & Dominic Flint for their particular input and to all the skippers who have put us in the right places for our dives and, more importantly, picked us up afterwards!

Photographs by Sally Sharrock, Lin Baldock, Keith Hiscock, Paul Naylor and Dan Bolt.

Seasearch is a volunteer underwater survey project for recreational divers to contribute to the conservation of the marine environment. Financial support for the project in England during 2009 has been given by Natural England and The Environment Agency.

