



## Devon Summary Report 2016



**By Chris Webb**

**Devon Seasearch Coordinator**

## Introduction

The volunteer support for Devon Seasearch activities remained excellent and we are very fortunate to have a dedicated, talented and keen team of Seasearchers who love exploring our varied habitats. Eleven organised survey days were achieved from fifteen planned ones, with lost days due to poor weather. All of the organised survey effort was targeted in Marine Protected Areas (MPAs) and 99% of Seasearch forms submitted came from them. A review of the Seasearch records since 2005 revealed gaps in the coverage which were targeted this year and many interesting new sites were discovered in Lyme Bay, around Dartmouth and Start Point, near Bolt Tail, in Plymouth Sound and offshore around the Eddystone. Keen individuals recorded new sites in Torbay and along the difficult-to-access North Devon coast. Devon Seasearchers regularly survey Cornish sites in the Start Point to Plymouth Sound and Eddystone SAC and the adjacent Whitsand and Looe Bay MCZ.

Seasearch data continues to play an important role in the designation and management of MPAs. The Devon ones that we typically dive are shown in the table below. We gained two more (along the North Devon coast) in the second tranche of Marine Conservation Zones designated in January 2016, with our data used in the process. Survey data from 2016 on crawfish and from Lyme Bay has been passed onto the Devon & Severn Inshore Fisheries and Conservation Authority (D&SIFCA).

MARINE CONSERVATION ZONES	SPECIAL AREAS OF CONSERVATION
Bideford to Foreland Point MCZ	Dartmouth SAC
Hartland Point to Tintagel MCZ	Lyme Bay & Torbay SAC
Lundy MCZ	Plymouth Sound & Estuaries SAC
Skerries Bank & Surrounds MCZ	Start Point to Plymouth Sound & Eddystone SAC
Torbay MCZ	



## Areas Surveyed

### Lyme Bay

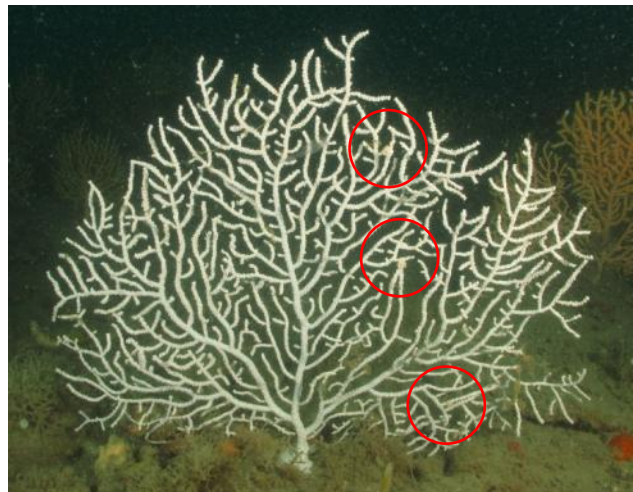
We continued to explore the lesser-known Devon part near Lyme Regis, in the Lyme Bay and Torbay SAC, and were well rewarded by this biodiversity “hotspot”. The DORIS bathymetric maps (courtesy of Dorset Wildlife Trust) suggested potential sites to explore followed up by patient echo sounding - the low-lying reefs look very similar to the extensive gravel and cobbles also present and our Seasearchers rose to the challenge of such exploratory diving. West Tennants is a large reef and a new site surveyed within it had low ledges supporting a very diverse sponge (14 species), bryozoan (10) and ascidian (16) fauna with common pink sea fans *Eunicella verrucosa* (photo below left by Lin Baldock), a priority species. Amongst the ledges, imperial anemones *Capnea sanguinea* lived in the sandy gravel (photo below right by Chris Wood).



Beer Ledge, in the Beer Home Grounds reefs, had a distinct, stepped north face with similar rich fauna (photo below left). The top of the ledge was flat and, in places, this appeared disturbed with broken potato crisp bryozoans *Pentapora foliacea*, broken bedrock and overturned cobbles suggesting bottom gear damage (photo below right by Mike Markey). The site is within, but near the boundary of, the no-trawl designated area. A site surveyed in 2015, just along the ridge to the west, showed no signs of damage.



Pink sea fans are a prominent feature of Lyme Bay reefs, often being common to superabundant, and this year's dives revealed interesting aspects of their biology (photos below). Often large and in excellent condition (top left), many others were fouled with didemnid ascidians (top right) at both sites (see also West Tennants reef view above). Successful recruitment was seen, with unbranched and small branched individuals (bottom left). Rare white individuals, with some bearing well-camouflaged white specimens of the fan nudibranch *Tritonia nilsodhneri* (bottom right, three individuals circled), were spotted.



## Torbay

The popular shore dives in the Torbay MCZ were well recorded but also a first record for Meadfoot Beach revealed boulders with varied life. At Babbacombe, living amongst the dense snakelocks anemone *Anemonia viridis* patches, were several snakelocks shrimps *Periclimenes sagittifer* (photo below left by Tony Reed). This shrimp was first recorded here in 2011. Another keen eyed observer spotted *Trapania pallida* amongst the red weeds at Brixham Breakwater Beach (photo below right by Anya Keatley), the first sighting here of this scarce nudibranch (JNCC Rare/Scarce List).



Adult cuttlefish *Sepia officinalis* were observed at Babbacombe and Brixham Breakwater Beach and it was encouraging to see their eggs (photo below left by Chris Wood) also. At the latter, a well camouflaged sole *Solea solea*, a priority species, was spotted (photo below right by David Dooley).



## Dartmouth Area

Just east of Dartmouth, numerous ridges and pinnacles form a complex system in the Dartmouth SAC with marine life benefiting from the nutrient-rich tidal streams. At the Eastern Blackstone Pinnacle it is anemones galore, with plumose anemones *Metridium dianthus* (photo below left; previously *Metridium senile*) on the walls and white-striped anemones *Actinothoe sphyrodeta* (photo below right) on the tops.



Another new site to Seasearch was Boatfield Rock and its surrounding boulders, bearing a mixed fauna with ascidians predominant, including *Pycnoclavella aurilucens* and orange sea squirts (photo below left). Pairs of the nudibranch *Acanthodoris pilosa* were spotted on its finger bryozoan *Alcyonidium diaphanum* prey (photo below right).



## Start Bay to Prawle Point Reefs

This area is a transition from more silty eastern areas to the clearer western waters and is within the Skerries Bank and Surrounds MCZ. The Beesands Reefs prove to be quite variable spatially (compared with nearby sections surveyed in recent years) but all boast a diverse mixed faunal turf and mobile fauna. A sea lemon *Doris pseudoargus* on its sponge prey *Hymeniacidon perlevis* was spotted (photo below left). Sand brittle stars *Ophiura albida* and burrowing brittle stars *Amphiura*

*sp.* (exposed arms circled) occurred on the fine sand amongst the bedrock ridges (photo below right). Other mobile fauna included various crabs, molluscs and small fish.

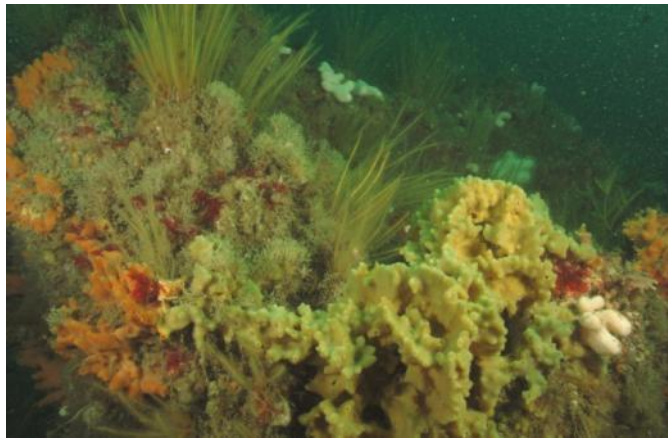
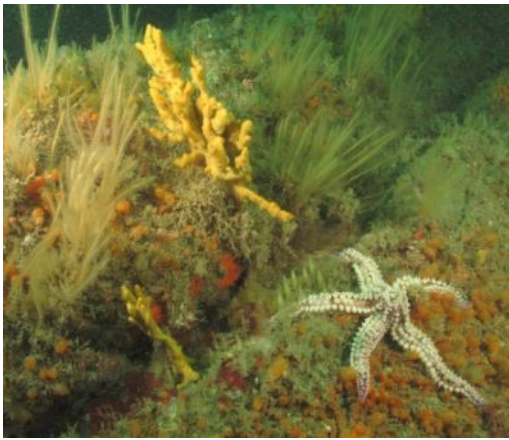


At Start Point, Golden Fields reef, so named for the lush (at least in June and before the abundant *Doto spp.* sea slugs nibbled away) diverse hydroid and bryozoan turf, was a treat. Abundant dahlia anemones *Urticina felina* and mainly purple didemnid ascidians (photos below) added to the colour. A spiny spider crab *Maja brachydactyla* is revealed its speed capability charging through the antenna hydroids *Nemertesia antennina*.



## The Bolt to Bigbury Bay Reefs

At Bolt Ridges, just west of Bolt Tail, numerous ridges tumble down to the west and have a fabulously thick cover of diverse sponges, hydroids, bryozoans and ascidians. The abundance and size of some branching and massive sponges (photos below, showing yellow staghorn *Axinella dissimilis*, shredded carrot *Amphilectus fucorum* and breadcrumb *Halichondria panicea* sponges) is notable along with the rare antler sponge *Adreus fascicularis* and scarce mashed potato sponge *Thymosia guernei*.



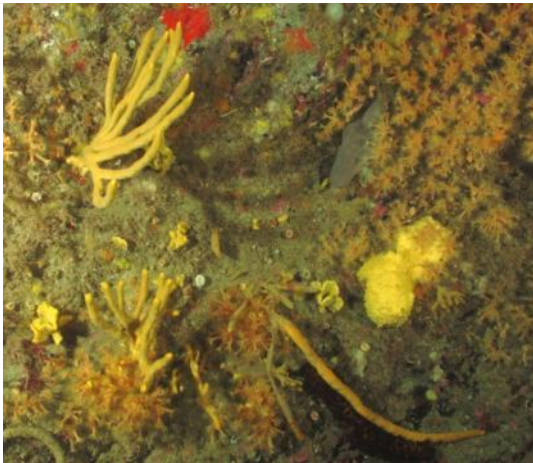
We continued to explore the Old Erme River Bed Wall and the yellow cluster anemones *Parazoanthus axinellae*, found in extensive patches further north along the wall in earlier years, continue to be a locally frequent feature (photo below left). The steeply inclined rock strata host a diverse and colourful fauna. At the new site Wrinklyfish Rocks, deep seaweed-lined gullies opened out to low bedrock ridges with numerous trumpet anemones *Aiptasia mutabilis* retiring impressively amongst the gully cobbles (photo below right). This scarce species is increasingly being recorded in Plymouth Sound as well.





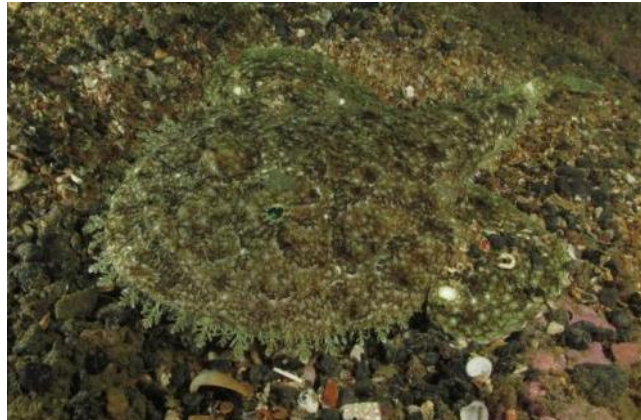
## Stoke Point to Plymouth Sound

In the Hilsea to Fairylands reefs, the sponge fauna is diverse and often abundant. Axinellid species are notably common, with crumple duster sponge *A. damicornis* often providing a starter home for yellow cluster anemones (photo below top left – lower corner of image). Other increasingly recorded sponges include the pink *Hexadella racovitzai* (photo top right), with surrounding pink sea fan juveniles, the yellow *Iophon* sp. (photo lower left) and the mashed potato sponge (photo lower right). These are now regularly spotted from Bigbury Bay westwards along this coast. The interesting sponge story continues from Mewstone Ledges around to the Jagged Edge and Alternative Mewstone sites, with their very dramatic scenery of high, steep-sided bedrock ridges. The high diversity continues, with sixteen species at the Mewstone, and *Ulosa stuposa*, *Homaxinella subdola*, *Endectyon delaubenfelsi* and antler sponges featuring. *A. damicornis* and *T. guernei* are nationally scarce species while *A. fascicularis* is rare. The rarely-recorded sea slug *Diaphorodoris alba* was spotted at Fairylands.



At Tinside and close to the Breakwater Fort occurred slender sea pens *Virgularia mirabilis* (photo below top left by Chris Wood). Cephalopods also feature in the Sound with cuttlefish and the little

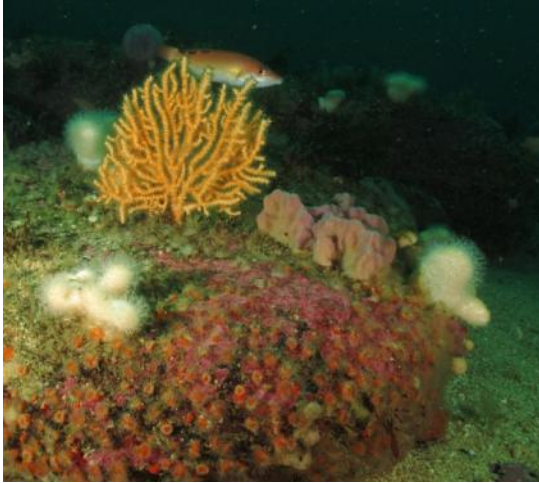
cuttle *Sepiolo atlantica* spotted off Penlee Point with anecdotal reports of curled octopus *Eledone cirrhosa* on the Mewstone side. On one Observer Course dive, a small humpback whale was spotted at the surface and provided a wonderful entry to the students' species lists. Interesting fish sightings in Plymouth Sound include a spotted ray *Raja montagui* at Tinker South (photo below top right) and Steven's goby *Gobius gasteveni* (photo lower left by Mike Markey) and anglerfish *Lophius piscatorius* (photo lower right) at the Inner Dropoff.



## Eddystone Reef Area

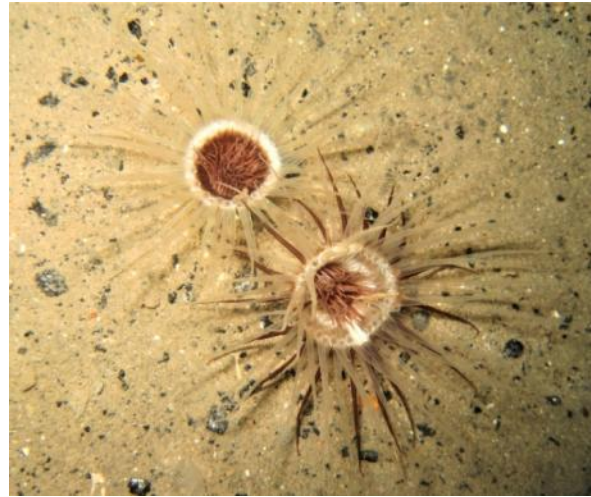
We continued exploring this very complex reef system, of ledges and dramatic pinnacles, with four new sites examined and other known sites further surveyed. Anthozoan-dominated walls deepen to ledges, blocky bedrock and boulders with coarse sand/gravel infill encroaching on the rock. Here, there is a general pinkness (photos below top) of encrusting pink algae, purple volcano sponge *Haliclona viscosa*, jewel anemones *Corynactis viridis* and common sea urchins *Echinus esculentus* along with yellow hedgehog sponges *Polymastia boletiformis*. Also, typically, pink sea fans are abundant on the deeper reef and many home their predators, the nudibranch *Tritonia nilsodhneri* and the false cowrie *Simnia hiscocki*, and also the sea fan anemone *Amphianthus dohrnii*. Another false cowrie species, *S. patula*, is usually found here on dead men's fingers *Alcyonium digitatum*, but one was curiously found on red fingers *A. glomeratum* with striking red camouflage (photo lower left

by Sally Sharrock). Diverse hydroids are found around the Eddystone and the nearby Mammaries Reef with notably large dense patches of *Schizotricha frutescens* (photo lower right) on the deeper ledges of the latter site. Priority fish species found include ling *Molva molva*, anglerfish and horse mackerel *Trachurus trachurus*.



## North Devon and Lundy

In the Lundy MCZ and Marine Nature Reserve, keen individuals revisited a good variety of known reefs and wrecks. At the Knoll Pins, the well known sunset cup corals *Leptopsammia pruvoti* remain present and a large false cowrie *S. hiscocki* was spotted on one of the pink sea fans (photo below left by Simon Loveday). The numerous wrecks, and their surrounding seabed, were well observed, with burrowing anemones *Cerianthus lloydii* by the Robert wreck (photo below right by David Dooley).



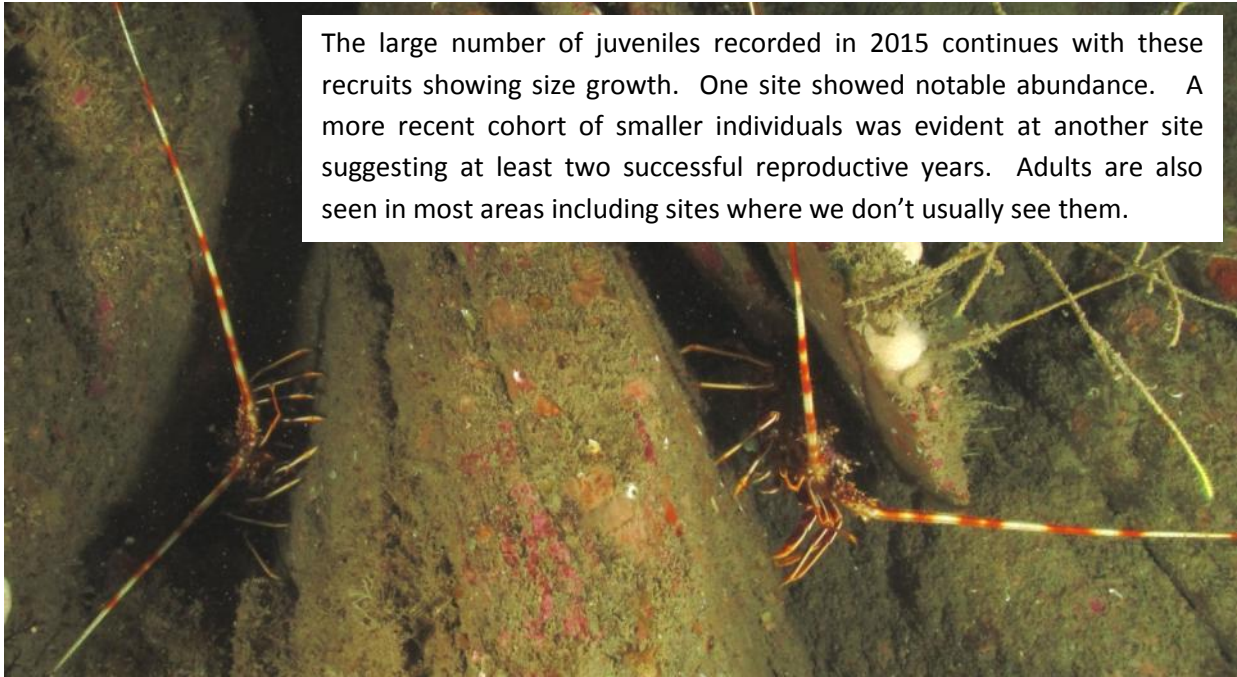
Along the North Devon coast, in the Bideford to Foreland Point MCZ, with challenging conditions of low visibility, strong tides and poor access, three sites were surveyed in detail. At Lee Bay deep bedrock gullies support a rich sponge, hydroid and ascidian fauna and the more low lying reefs at Rockham Bay and Combe Martin Bay reveal abundant and diverse sponges.

## Priority Species and Habitats

With its two coastlines, Devon has a great variety of priority species and habitats recorded and these are listed below:

PRIORITY SPECIES		AREAS WHERE RECORDED
<i>Amphianthus dohrnii</i>	sea fan anemone	Eddystone
<i>Eunicella verrucosa</i>	pink sea fan	Most areas
<i>Leptopsammia pruvoti</i>	sunset coral	Lundy
<i>Palinurus elephas</i>	crawfish	Most areas
<i>Lophius piscatorius</i>	anglerfish	Eddystone, Plymouth Sound
<i>Pleuronectes platessa</i>	plaice	Prawle Point to Start Point, Lyme Bay
<i>Molva molva</i>	ling	Eddystone, Plymouth Sound
<i>Solea solea</i>	sole	Torbay
<i>Trachurus trachurus</i>	horse mackerel	Eddystone
PRIORITY HABITATS		AREAS WHERE RECORDED
Seagrass Beds		Plymouth Sound, Salcombe, Torbay
Fragile Sponge & Anthozoan Communities on Subtidal Rock		Plymouth Sound to Stoke Point, Bolt, Lyme Bay

## Crawfish



The large number of juveniles recorded in 2015 continues with these recruits showing size growth. One site showed notable abundance. A more recent cohort of smaller individuals was evident at another site suggesting at least two successful reproductive years. Adults are also seen in most areas including sites where we don't usually see them.

## Seagrass Beds

These were observed at Cawsand Bay, Salcombe and around Torbay, at Hopes Nose and Beacon Cove. Their condition varied slightly, as did their litter levels, with the Torbay ones having the most. These records came from Seasearchers diving with the Community Seagrass Initiative program.

## Courses

Three well-subscribed Observer courses were run: at Severnside BSAC, at Discovery Divers Plymouth and at Plymouth University (run by Chris Wood). In all, thirty students participated. A Surveyor course was also run at Plymouth, with eleven students attending and at least four later qualifying. One student, Maya Plass, in her article in Coast magazine (September 2016) mentioned the Observer course and its important role in marine citizen science.

## Record Forms

The recording effort by our volunteers in 2016 was magnificent and showed a huge 41% increase from last year with a total of 166 forms: 75 Survey forms, 90 Observation forms and 1 Pink Sea Fan form have been received for Devon sites. The Observation and Survey forms have been entered into the Marine Recorder database by Sally Sharrock, whilst the Pink Sea Fan form goes into a separate database: both data sets are on the National Biodiversity Network website <https://data.nbn.org.uk>. The Survey form contains much more data and so it gives a more comprehensive view of the site, its habitats and allows a biotope code to be assigned to each habitat. In Devon, Survey forms represent

43 % of the forms which is pleasing as these require a greater effort by the Surveyor and generally more extensive species identification skills.



18 Surveyors and 28 Observers contributed and the majority of these came from Seasearch-organised trips and courses although a noticeable amount came from several independent enthusiastic people. Photo left, by Sally Sharrock, of our recently retired National Coordinator Chris Wood surveying pink sea fans.

## Acknowledgements

Huge thanks go to all those Seasearchers who have supported the trips and completed and returned forms. Their keen eye underwater, photography and dedication afterwards have made the survey activities a great success – Seasearch relies on the contributions of volunteer divers and I am most grateful to them all.

Our very helpful skippers also deserve much appreciation: Danny Daniels and Dave Handley from Discovery Divers Plymouth, Tony Hoile and Will Mason from Dartmouth and Rob King from Lyme Regis. Their extensive site knowledge and good humour have taken us to some fabulous sites and returned us safely - this is greatly appreciated, especially when echosounder hunting for new sites.

Thanks also to the Community Seagrass Initiative, a Heritage Lottery Fund-supported project for volunteer divers, and its project officers Rachel Cole and Mark Parry for providing boats for divers generating the seagrass site forms.

Chris Wood is well thanked for running and/or tutoring three courses and Maya Plass for her publicity of the Observer course.

Finally, big thanks to Sally Sharrock for data entry and biotoping of our numerous complex habitats.

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Seasearch in Devon has been supported financially in 2016 by MCS with the data entry to the Marine Recorder database funded by Natural England.

