



# Devon Summary Report 2020



**By Chris Webb**

**Devon Seasearch Coordinator**

## Overview

We are truly fortunate to have a dedicated, talented and keen team of Seasearchers who love exploring our varied Devon habitats. The Coronavirus situation led to the cancellation of all face-to-face Seasearch courses and the dives. Those volunteers that were able to dive independently picked up the baton and lived up to the 'any dive can be a Seasearch dive' motto – it was a great effort. Additionally, some responded to coordinator-suggested 'missions' concerning the spread of cross-channel hopping species, following up the crawfish recovery and filling gaps in site coverage.

The recording effort by our volunteers was excellent for 2020 with a grand total of 68 forms for Devon sites and represents well over 50 hours underwater surveying by the buddy pairs. It consisted of 27 Survey forms, 31 Observation forms and 10 Crawfish forms. The Observation and Survey forms have been entered into the Marine Recorder database by Chris Wood, whilst the Crawfish forms go into a separate database thanks to Angus Jackson and Charlotte Bolton: all data sets are on the National Biodiversity Network website <https://nbnatlas.org/>. 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 47 % of the forms which is pleasing as these require a greater effort by the Surveyor and generally more extensive species identification skills. Seven Surveyors and six Observers contributed.

The Devon Marine Protected Areas (MPAs) that we typically dive are shown in the table below and nearly all Devon Seasearch forms came from them. Locations were skewed towards the popular and accessible sites in Lyme Bay & Torbay SAC and Start Point to Plymouth Sound & Eddystone SAC, but a great variety of habitats were surveyed.

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	

Seasearch data has played an important role in the designation of MPAs, moving into monitoring and management, and now analysis of trends. A current example is the crawfish recovery, analysed by Seasearch Data Officer Angus Jackson using occupancy modelling statistics, showing it as a significant trend in Devon and that Seasearch data has the necessary quality for such analyses. The Crawfish forms reveal that adults of 10 cm carapace-length (cover photo) are increasingly seen while the recorded numbers of juveniles are much lower and berried females are yet to be recorded.



## Areas Surveyed

### Lyme Bay

In the area from south of Beer Head along towards Dorset, the many variations on the fascinating 'Lyme Bay Reef' theme have been surveyed over the last seven years. This year, known features were further explored, guided by the DORIS<sup>1</sup> multibeam side scan maps (courtesy of Dorset Wildlife Trust) and fuelled by volunteer enthusiasm.

Beer Fans West has a varied fauna dominated by sponges, especially *Polymastia* species, dead men's fingers *Alcyonium digitatum* and pink sea fans *Eunicella verrucosa*. This year it had an abundance of the tiny sea cucumber *Ocnus planci* (photo upper right, showing at least fifteen individuals with their fine tentacles) which experiences periodic boom years in the bay. Also, unusually frequent for this reef area, were green sea urchins *Psammechinus miliaris*. All the echinoderm classes were represented, including common featherstars *Antedon bifida* (perched on an antler sponge *Adreus fascicularis*, photo lower left by Nick Owen) which are rarely seen this far east. Abundant in the coarse sediment veneer, so typical of the Beer Fans area, were sand brittlestars *Ophiura albida* (photo lower right, foreground). Seen alongside them in the photo, the tubes of the rock-boring bivalve *Rocellaria dubia* are well above the present veneer level, indicating a previous higher level and the mobility of this veneer (Nick Owen, pers. comm.) – scour-tolerant sponges, including chimney and antler sponges, further suggest this.



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<sup>1</sup> DORIS (DORset Integrated Seabed survey), a collaborative project involving Dorset Wildlife Trust, The Maritime and Coastguard Agency, Channel Coastal Observatory and the Royal Navy, with major funding from Viridor Credits Environmental Company. Other partners include Natural England, Dorset Strategic Partnership, the National Oceanography Centre and University of Southampton.



Tescos Reef 2 is a long ridge topped with a diverse red and brown seaweed flora – skilfully surveyed by Lin Baldock with thirty species recorded. The stepped edge was sponge and bryozoan turfed and decorated with abundant trumpet anemones *Aiptasia mutabilis* (photo left). Undisturbed boulders and cobbles at Pinhay Settle 2 home a rich turf (photo right) of intermingled hydroids, bryozoans, sponges, ascidians, tube worms, sandy creeplets *Epizoanthus couchii* and horseshoe worms *Phoronis hippocrepi*. A varied mobile fauna of molluscs and crabs was also recorded with small spider crabs (*Macropodia* sp., *Inachus* spp.) sheltering amongst the boulders and cobbles.



Another West Tennants site, on one of the higher ridges, was enjoyed for the sheer spectacle of the fabulous dense forest of huge pink sea fans in healthy condition - even better when varied wrasse and other fish swam between them. Diverse erect sponges, amongst large tufts of *Cellaria* and the orange pumice bryozoan *Cellepora pumicosa*, covered the intervening reef. Over the southern edge, a complex array of fallen rock and sediments create great faunal diversity.

An outlier of this reef area, just to the north, was the curious Nigel's Hill site, discovered following up a fisherman's tip. It's a short ridge with a sloping top, bearing a varied turf, and a distinct wall on one side, carpeted by jewel anemones *Corynactis viridis* and square-end hornwrack *Chartella papyracea*. It ran down to silty sand with shell fragments, homing some policeman anemones *Mesacmaea mitchellii* (photo right by Lin Baldock) along with burrowing worms, holothurians, brittlestars and the anemone *Halcampa chrysanthellum*.



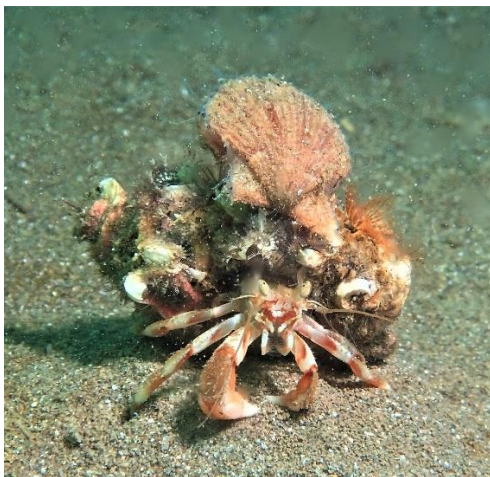
## Torbay MCZ

The area continues to attract keen independent observers with popular shore sites revisited. This year more off lying rocks and lesser visited reefs were also recorded, largely due to the magnificent efforts of Tamsyn Mann – all the images in this section are her superb photographs. These sites include the Lead Stone, with its fabulous assemblage of anemones (including dahlia *Urticina felina* and daisy *Cereus pedunculatus* in abundance) amongst a diverse turf (photo upper left), the Ore Stone, Morris Rogue and the East Shag Rock. Blue mussel *Mytilus edulis* spat was recorded in abundance at several locations in this area of the bay, such as Meadfoot, here providing an uncomfortable perch for a long-spined sea scorpion *Taurulus bubalis* (photo lower right).

Babbacombe continues to reveal the unusual, including octopus and juvenile black sea bream *Spondyliosoma cantharus* (photo upper right). Existing channel-hoppers maintain their presence in the cove, such as the snakelocks shrimp *Periclimenes sagittifer* (front cover photo, upper left, by Tamsyn Mann), the nudibranchs *Pruvotfolia pselliotes* and *Trapania tartanella* and the variable (ringneck) blenny *Parablennius pilicornis* (photo lower left, with a tompot blenny *P. gattorugine* on image right for comparison). The variable blenny has extended its range throughout the cove (with sightings from May to November) and beyond, now in the Meadfoot area. Similarly spreading, *P. pselliotes* is now recorded at the Ore Stone, East Shag Rock and Shoalstone Reef, on the south side of Torbay.



Beacon Cove highlights the important role of eelgrass in hosting many species and here clingfish and stalked jellyfish were observed (upper photos). Beyond Torbay, just around Berry Head, lies St. Mary's Bay, whose shallow silty sands (lower photos) home the worm-like holothurian *Labidoplax digitata*, seen here feeding on surface detritus. Nearby, a hermit crab *Pagurus bernhardus* with home decoration that's gone just a little too far although the attached tube worms would disagree.



These generally shallow dives afford the keen-eyed observer plenty of time to enjoy a fabulous display of nudibranchs as celebrated on the following page. From upper left clockwise: yellow skirt sea slug *Okenia elegans* (from Shoalstone, nationally scarce species), sea lemon *Doris pseudoargus* (Shoalstone), lined polycera *Polycera quadrilineata* laying eggs (Shoalstone), *Pruvotfolia pselliotes* (The Ore Stone), *Rostanga rubra* (Morris Rogue) and *Crimora papillata* laying eggs (East Shag Rock).

Twenty-six nudibranch species were recorded throughout the MCZ with hotspots at the East Shag Rock and Shoalstone Reef. At the latter, the tiny *Capellinia fustifera* was found and is the first record (NBN Atlas) for Devon waters. Another tiny species, the sacoglossan *Calliopaea bellula* was also spotted here and is the first record for the MCZ. The spotting and identification skills of Seasearchers are indeed a great asset.





## Dartmouth Reefs, Bigbury Bay along to Mewstone and the Eddystone Area

The pink sea fans on the Cat Stone, just west of the Dartmouth Mewstone, home the false cowrie *Simnia hiscocki* (photo by Tamsyn Mann) while the nearby Pudcombe Cove kelp park reveals another sighting of *Pruvotfolia pselliotes* – both are new records that fill in the gaps in their ranges. This area mainly receives forms from Seasearch organised trips (that have been focussing on the Dartmouth Pinnacles) so it's good to see such independent exploratories here. Further west, exploratory dives on interesting charted bathymetric features (at Stoke Point and the Plymouth Mewstone) as well as revisits to popular sites featured in this area accessible from Plymouth. A new site in the Eddystone North Ridge area, was an extensive plateau with kelp park and large amounts of dark red encrusting algae, setting off one tompot blenny poser beautifully (photo by Mark Harrison).



## Plymouth Sound

An evening dive off Penlee Point revealed the curious behaviour of many snakelocks anemones *Anemonia viridis* with their tentacles all tucked away, leaving loitering sponge spider crabs *Inachus* spp. on the loose (photos below and front cover by Allen Murray). Here dense blue mussel spat settlement was also recorded along with Torbay.



At Eastern Kings, the establishment, breeding and increase in numbers of the variable blenny has been closely followed (over five years) and recorded by Malcolm Nimmo, his charming photo below showing a pair and their eggs (on the overlying rock). A great site with many habitats that can be accessed from the shore – these include the seagrass bed, mixed ground and bedrock deepening to the dramatic walls, bottoming out to a mixed sediment. The walls are covered in varied and dense sponges and ascidians, amongst antenna hydroids and jewel anemones, and home numerous bib *Trisopterus luscus* and the occasional John Dory *Zeus faber* (photo by Eddie Rickard). A little further up the Tamar, the bedrock, boulders and concrete blocks just below the Royal William Yard yielded an interesting dive for a blown-out day, with particularly dense shredded carrot sponge *Amphilectus fucorum* recorded by Mark Harrison, along with varied decapods and fish.



On the east side of the Sound, Andurn Point, with its bedrock ridges and gullies, and the shallow sands of Crownhill Bay, just to the north, have been repeatedly surveyed over the last two years by Eddie Rickard. Spotted rays *Raja montagui* have been regularly seen on the sands and occasionally in small groups. He has also recorded high levels of infection by ectoparasitic isopods on the wrasse and bib - approximately a quarter of these fish carried at least one isopod (two on the bib shown, both photos by Eddie Rickard).



## Acknowledgements

As always, my huge thanks go to all our Seasearchers who have kept the 'flag flying underwater' and returned forms, a great contribution of time, effort and, indeed, money. Their keen eyes underwater, photography, identification skills and dedication afterwards have made the survey activities a great success – Seasearch relies on the contributions of such volunteer divers and I am most grateful to them all. They are Chris Wood, Christine Grosart, David Dooley, Eddie Rickard, Fiona Hampton-Matthews, Lin Baldock, Malcolm Nimmo, Mark Harrison, Mike Markey, Nick Owen, Sue Watson-Bate, Tamsyn Mann and Chris Webb. I hope I haven't missed anyone out. Particularly prolific were Mark and Tamsyn, great job.

Our immensely helpful skippers also deserve much appreciation: Danny Daniels (from Discovery Divers, Plymouth) and Rob King (Blue Turtle Diving Charters, 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, which can take a bit of time!

Club organisers Mark Harrison (Cotswold BSAC), Allen Murray (Plymouth Evening Bubblers), Lin Baldock and Chris Webb (Lyme Bay Irregulars) pushed the boat out, enabling exploration of sites off the beaten fin track and supporting our great skippers, so many thanks to them.

Thanks to Malcolm Nimmo and Eddie Rickard for sharing their fish observations and Nick Owen, for comments about veneers.

Finally, big thanks to Chris Wood for data entry and the biotoping of our numerous complex habitats.

All photographs by Chris Webb unless otherwise indicated and copyright remains with original photographer. My particular thanks go to Tamsyn Mann for the generous use of her Torbay photographs.

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