



Devon Summary Report 2022



By Chris Webb

Devon Seasearch Coordinator

Introduction

We are very fortunate to have a dedicated, talented and keen team of Seasearchers who love exploring our varied Devon habitats. Nine survey days were achieved from fifteen planned ones, with days lost due to bad weather and boat problems. All the organised survey effort was targeted in Marine Protected Areas (MPAs) and the ones that we typically dive are shown in the table below - nearly all Devon Seasearch forms came from them.

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	

The recording effort by our super volunteers was excellent for 2022 with a grand total of 116 forms for Devon sites and represents well over 90 hours underwater surveying by the buddy pairs. It consisted of 59 Survey forms, 50 Observation forms and 7 Crawfish forms. The Observation and Survey forms have been entered into the Marine Recorder database, whilst the Crawfish forms go into a separate database thanks to Angus Jackson, Seasearch Data Officer, 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 51 % of the forms which is excellent as these require a greater effort by the Surveyor and generally more extensive species identification skills. Thirteen Surveyors and fourteen Observers contributed.

The LIFE Recreation ReMEDIES Project successfully continued with four days of partly subsidised diving on seagrass beds within the Plymouth Sound & Estuaries SAC, recording their species, habitat, condition and any human impact. Additional sites with a seagrass presence were found also. Lots of skilful surveying (photo below left by Keith Hiscock) and dedicated recording occurred.



Areas Surveyed

Eddystone Reef Area

The east and west sides of the reef complex have provided more tidal shelter opportunities, compared to the other sides, and so numerous dramatic pinnacles have been discovered and surveyed there over the years. Revisits this year included the Eddystone Spires and Eddystone West Pinnacle 2 with their typical kelpy tops, bearing varied kelp species, falling away to walls dominated by jewel anemones *Corynactis viridis* with other anthozoans and hydrozoans, with deeper ledges beyond (photos below by Mike Markey).

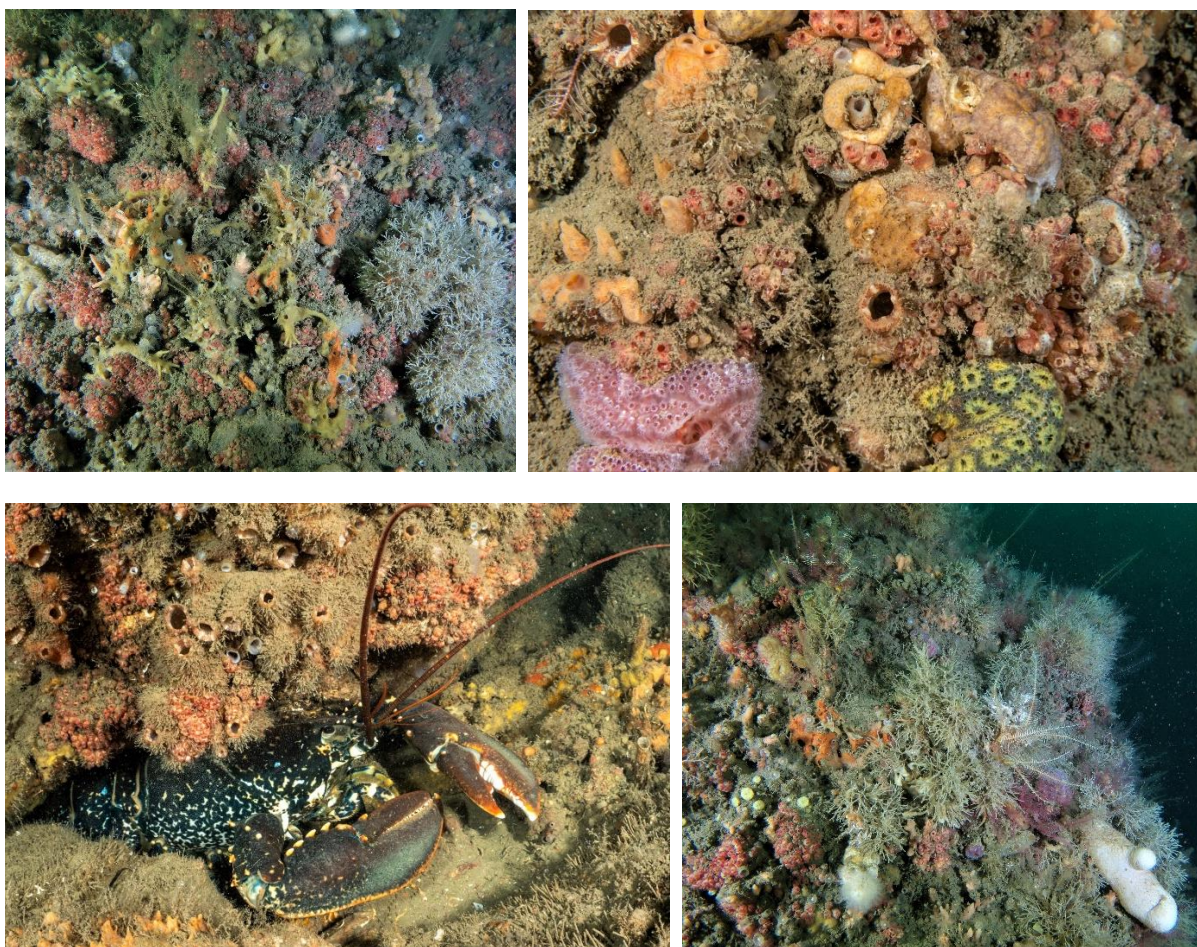


Along the northern part of the reef lies a long edge, dropping from ~18m to ~27m bcd, with a similar kelp park deepening by cnidarian dominated walls. Here it runs out to a level area of low bedrock and overlying gravel patches. This well scoured habitat resembles a snowfield as it is dominated by dead men's fingers *Alcyonium digitatum* with pink sea fans *Eunicella verrucosa* and scour-tolerant sponges (such as yellow hedgehog sponges *Polymastia boletiformis*) amongst – a fabulous vista in the superb visibility.



Plymouth Sound

At the top of the Sound, the Mallard Shoal, with its steep slopes and walls, is an oasis of life - in terms of both abundance and species diversity. Its top was dominated by *Cellaria* spp. and dead men's fingers with some sponges, hydroids, anemones (mainly sandy creeplet *Epizoanthus couchii*) and ascidians. The walls hosted a particularly diverse ascidian turf of at least nineteen species (most abundantly *Distomus variolosus* and *Polycarpa scuba*) along with varied sponges, hydroids and anemones and bryozoans. Featherstars *Antedon bifida* were common throughout. The non-native compass sea squirt *Asterocarpa humilis* was found and is clearly seen above the lobster *Homarus gammarus* (in Mike Markey's photo below, also in upper right one by Mike). Variable blennies *Parablennius pilicornis* were also seen here reflecting their further establishment in the Sound.



As the Sound deepens and the reefs transition with coarse sediment a large feature known as the Inner Dropoff occurs where some unusual fish have been recorded by Seasearchers over the years. Here this year a comber *Serranus cabrilla* was spotted by Bill and Peter Hewitt (photo below by Peter Hewitt) – while comparatively rare, it has been recorded more frequently in the last few years suggesting a possible extension of range northwards of this grouper species. Another individual was recorded in Bigbury Bay by Seasearchers.

Crownhill Bay is another fishy site with varied species, including plaice *Pleuronectes platessa* and spotted rays *Raja montagui*, recorded by keen Surveyors.



Further south is the fabulous Plymouth Dropoff, a long meandering wall with several locations sporting sunset cup corals *Leptopsammia pruvoti* in considerable abundance and with many smaller individuals suggesting good recruitment. Cup corals are well represented here with Devonshire *Caryophyllia smithii*, southern *C. inornata* and Weymouth carpet corals *Hoplangia durotrix* seen. The abundance theme is continued with the displays of red fingers *Alcyonium glomeratum*, pink sea fans, yellow cluster anemones *Parazoanthus axinellae* and football sea squirts *Diazona violacea* (photo above and cover).

Seagrass Beds in the Plymouth Sound & Estuaries SAC

Over 4 survey days, partly funded by the EU LIFE Recreation ReMEDIES Project, 13 Seasearchers surveyed 28 sites producing 35 Seasearch forms – a great achievement by the dedicated team. The resulting Seasearch forms represent a great gift of time, effort and, indeed, money, which is estimated as at least £3100 (for diving gas, transport and boat fees) – a generous volunteer contribution indeed. These surveys are reported in more detail in reports to be available on the Seasearch website later this year.

Four known seagrass beds in the SAC were surveyed: Drake’s Island, Cawsand Bay, Jennycliff Bay and Tomb. Additionally, exploratory dives were tasked to find seagrass in suitable areas and/or adjacent to a known bed and these surveyed from Sandway Point to Kingsand. All these seagrass sites are subtly different reflecting their varied exposure to waves, tide and water clarity.

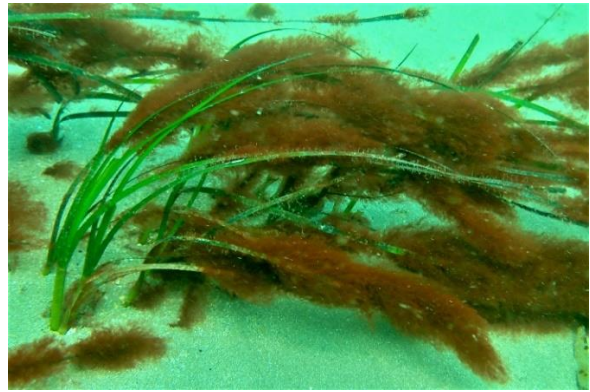
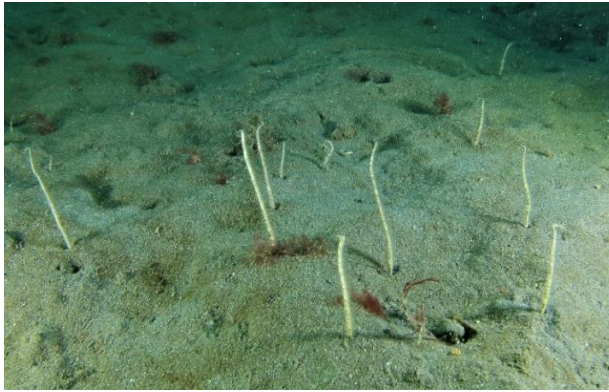
At Drakes Island seagrass bed, a thornback ray *Raja clavata* was found amongst a thicker patch of seagrass in the generally patchy bed. With lower water clarity here, the deeper extent of the bed is expectedly shallower.

The Tomb seagrass bed is located just outside of the bar at the entrance of the Yealm Estuary, Wembury Bay. It is significantly more exposed than the others surveyed in Plymouth Sound and grows in rippled fine sand. It homes masked crabs *Corystes cassivelaunus* and moon shells *Euspira catena* in some abundance. Growing on the seagrass were Stauromedusae, including kaleidoscope jellyfish *Haliclystus auricula* (photo lower left by Peter Hewitt), and hydroids. Juvenile flatfish were also seen.



Sandway Point survey area is northeast of the known Cawsand Bay seagrass bed and was well explored as a potential seagrass area. Seagrass was found but it was very sparse with an occasional denser clump seen, often with attached red weed (photo below by Catherine Gill).

Evident here is the small-scale bioturbation of the muddy fine sand, caused by a variety of buried animals – heart urchins *Echinocardium cordatum*, razor shells *Ensis* sp., and worms along with surface ploughers. Burrowing brittlestars *Acrocnida brachiata* were frequent (photo below). Other fauna included burrowing anemones, mainly *Cylista undata* and *Cerianthus lloydii*, varied worms, including eyelash worms *Myxicola infundibulum*, peacock worms *Sabella pavonina* and Terebellidae, some crabs and diverse molluscs, such as moon shells, tower shells *Turritella communis*, sand slugs *Philine quadripartita* and cuttlefish *Sepia officinalis*. Varied fish included sand gobies *Pomatoschistus* spp., common dragonets *Callionymus lyra*, spotted dragonets *C. maculatus*, dab *Limanda limanda*, juvenile grey gurnard *Eutrigla gurnardus*, Dover sole *Solea solea* and plaice.



The Ocean Conservation Trust had deployed seagrass restoration pillows at two sites in Jennycliff Bay earlier in the year and these pillows contained seagrass seedlings to promote recolonisation. We surveyed both sites and found almost all these pillows which were then photographed by Peter Hewitt, Bill Hewitt (upper photos below), Keith Hiscock, Mike Markey and Chris Webb to record the establishment of the seagrass and any additional life.

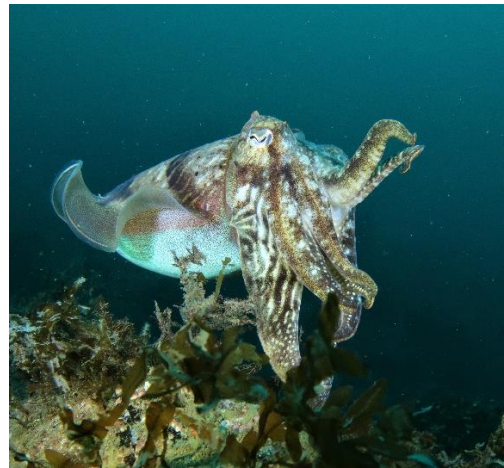
The pillows lie on a fine sand seabed with seagrass patchy in distribution, its abundance reaching common in some patches and in generally good condition. The seaweed flora was mainly red seaweeds – including a long narrow-fronded species of the Gracilariaceae family and the non-native *Antithamnionella ternifolia*. The animals (lower photos by Keith Hiscock) included a superbly camouflaged common dragonet and a *Suberites* sp. sponge-laden hermit crab (Paguridae) roaming these infralittoral sands.



Plymouth Mewstone to Stoke Point

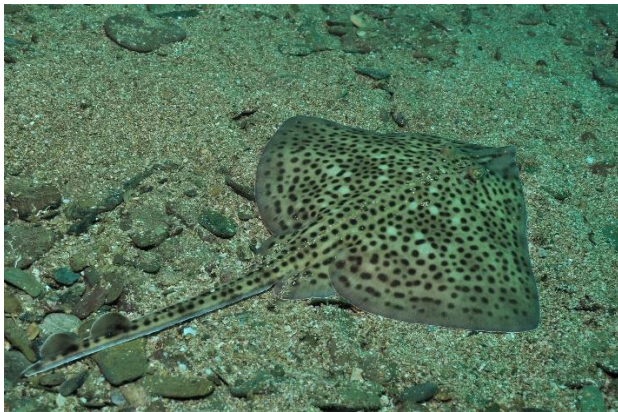
Independent individuals contributed forms from popular dive sites along this stretch of coast, including Fairylands and Hilsea Gulley.

StokeHills, a newly surveyed site between Stoke Point and Hilsea, proved to be both very scenic and diverse, especially in the sponge department with twenty species recorded. It's a ridge bearing several, deep narrow gulley's which open out to low reef merging with sediment. Yellow staghorn sponges *Axinella dissimilis* are particularly abundant, often in dense stands, and quite large (photo upper left by Mike Markey). Varied cnidarians also abound and the verticals often homed large patches of yellow cluster anemones in amongst football sea squirts, jewel anemones, potato crisp bryozoans *Pentapora foliacea* and encrusting species of sponge, bryozoan and algae. A cuttlefish hovers over the predominant brown seaweed here *Dictyopterus polypodioides*. Holes in the fissured rock sheltered fish such as poor cod *Trisopterus minutus* (cover photo by Mike Markey).



Bigbury Bay Reefs

Stokerme Reef 4 continues the survey of a rugged reef system bordering coarse mixed sediment. The vertically-stratified reef consists of deep narrow gulley's with colourful walls of encrusting species dusted with 'snowflake' sea squirts *Didemnum maculosum* var. *dentata* (cover photo by Mike Markey). Higher up each gulley dead men's fingers dominate and the highly fissured rock provides many homes for crawfish *Palinurus elephas*. Varied fish were found, including spotted ray (photo by Peter Hewitt) and sand eels on the sediment, another comber, a variable blenny, red mullet *Mullus surmuletus* and a rather isopod (*Anilocra* sp.)-burdened cuckoo wrasse (photo by Mike Markey).



Keen individuals shore diving Outer Hope Cove report sea hares and dover sole whilst the Louis Schied wreckage homes red mullet and black bream (photos below by Tamsyn Mann).



Torbay MCZ

Numerous Observation records were provided by keen independent individuals diving the reefs and shore sites within the MCZ. The Channel hopping species maintain their fin hold with records of variable blennies and the snakelock's shrimp *Periclimenes sagittifer* continuing from Babbacombe around to the Ore stone. The eagle-eyed diver is further rewarded with critters hiding in the cracks such as these common prawns *Palaemon serratus*, here in some numbers.

The reef, sediment and seagrass bed out from Brixham Breakwater Beach was thoroughly 'observed' and 'surveyed' by enthusiastic course students.



Lundy

Two infralittoral reefs on the less-visited west side of the island were surveyed and fifteen seaweed species recorded, thanks to Eddie Rickard. Similarly, the Devil's Kitchen shore on the south side was observed by Tara McEvoy-Wilding, both representing new sites recorded.



Photos above by Mike Markey.

Priority Species and Habitats

With its two coastlines, Devon has a great variety of Priority (formerly BAP) species and habitats and those recorded this year are listed below:

PRIORITY SPECIES		AREAS WHERE RECORDED
<i>Eunicella verrucosa</i>	pink sea fan	Most areas
<i>Leptopsammia pruvoti</i>	sunset coral	Plymouth Sound
<i>Palinurus elephas</i>	crawfish	Plymouth Sound to the Bolt
<i>Ostrea edulis</i>	native oyster	Torbay
<i>Pleuronectes platessa</i>	plaice	Plymouth Sound
<i>Solea solea</i>	sole	Plymouth Sound, Bigbury Bay
PRIORITY HABITATS		AREAS WHERE RECORDED
Seagrass Beds		Plymouth Sound, Torbay
Fragile Sponge & Anthozoan Communities on Subtidal Rock		Plymouth Sound to Bigbury Bay

Crawfish

Seasearch records (Observation, Survey and Crawfish forms) indicate a continued crawfish presence in the South Devon areas recorded (from the Bolt to Plymouth Sound) with juveniles up to individuals with carapace lengths of 10cm+ seen. This is the eighth year of their recovery and the fewer records this year preclude any further comment about size trends. Photo below left by Mike Markey.



Courses

We had a very successful online Southwest Region Surveyor Course with 24 students/refreshers and tutored by Charlotte Bolton, Chris Webb, Lin Baldock and Matt Slater with ML Anderson administrating. Resuming in-person Observer Courses was excellent too with a great group of students attending and working hard to achieve their qualification.

Acknowledgements

As always, my huge thanks go to all our Seasearchers who 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 Alison Wilson, Amy McQuillan, Bill Hewitt, Catherine Gill, Charles Sheldrick, Chris Webb, Christine Grosart, Dave Walker, Eddie Rickard, Emily Burroughs, Fiona Hampton-Matthews, Glenn King, Hoi Leung, Jane Tanasa, Kathryn Fleming, Keith Hiscock MBE, Lucy Martin, Mark Harrison, Mike Markey, Nick Owen, Paula Bird, Peter Hewitt, Sarah Dashfield, Shannon Lowe, Stewart Buchan, Tamsyn Mann and Tara McEvoy-Wilding. I hope I haven't missed anyone out.



Our immensely helpful charter skippers also deserve many thanks: Danny Daniels (from Discovery Divers, Plymouth) and Will & Anne-Marie Mason (from Falcon Diving Charters, Dartmouth). Their extensive site knowledge and good humour have taken us to some fabulous sites and returned us safely - this is greatly appreciated.

Special thanks go to Jane Tanasa and Charles Sheldrick, and the generosity of Exeter Sub Aqua Club, for the Observer Course venue.

Finally, big thanks to our data enterer.

All photographs are by Chris Webb unless otherwise indicated and copyright remains with the original photographer. My thanks go to all these photographers for the generous use of their superb images. Photographs above by Danny Daniels.

Seasearch in Devon has been supported financially in 2022 by:



MARINE CONSERVATION SOCIETY
*LIFE Recreation ReMEDIES (LIFE18 NAT/UK/000039)
Reducing and Mitigating Erosion and Disturbance
Impacts affecting the Seabed*