

Plymouth Reefs and Zostera Weekend 13th 14th August 2005

The aim of the weekend was to visit offshore reefs out of Plymouth and also to survey the *Zostera* bed in Cawsand Bay to obtain an idea of the extent and condition. There was a strong wind warning on the Saturday, which meant that our group of twelve dived the Mewstone Ledges in the morning and carried out the *Zostera* survey in the afternoon. Sunday was a better day and despite a swell we were able to dive the Eddystone reef and Hand Deeps in sunshine. Seven Observer and nine Survey forms were completed over the weekend. The *Zostera* survey gave very good interim results, which can now be followed up in more detail. Several of the group completed qualifying forms for their Observer and Surveyor qualifications. We also had a marine biologist from Italy collecting *Pentapora* samples for her university project, which provided added interest.

The Mewstone Ledges

The Mewstone and Little Mewstone lie to the east of Plymouth Sound off Wembury. They are frequently dived by local groups but since the rocks form a ridge and gully pattern the drop off point can vary considerably and the area has a great variety of life. On this dive a number of different sponges were identified together with a good selection of seaweeds and echinoderms. Particularly special was a sea fan forest at a depth of 24metres covering an area of gently sloping rock of at least 20x10metres although not all were in good condition.



Axinellid sponges on the Mewstone Ledges.

Cawsand Bay *Zostera* survey

The *Zostera marina* bed in Cawsand Bay is well known and has been frequently dived in the past to obtain species lists and assess the health. The extent has not recently been measured and this was the purpose of the afternoon dive.



Five buddy pairs were dropped at the same GPS point and given compass directions to follow. When they reached the edge of the bed they delayed an SMB, which was weighted to stay in place and the divers were free to continue diving if time permitted. The boat crew plotted the GPS of each SMB as it was picked up. This has given the start of an outline of the bed, which can be filled in on subsequent dives. The bed was fairly thick in the centre and more patchy towards the edges which was to be expected. Generally it was in good condition with the network of stabilising roots

well covered although most leaves had a covering of various hydroid and algal growths. Life in the bed was quite rich with several types of anemone, peacock worms, a sea mouse, cuttlefish, pipefish, dragonets, gobies, sole and a fifteen-spined stickleback spotted.

Eddystone Reef

On Sunday we were able to get further out to sea and our skipper dropped us at the head of a long gully to the south of the lighthouse in about 15metres. It was a short swim over a thick bed of sea mat covered kelp to drop down to boulders rich in short and long turf, before descending further to the sandy bottom of the gully. The sand was fairly barren but *Cerianthus* anemones were found at the edges of the gully where the sand movement was less.



Encrusting sponge covered in small starfish.



Feeding sea fan at Eddystone Reef.

Away from the boulders the gully opened out with steep rock walls covered in jewel, plumose and elegant anemones, red weeds, hydroids, dead men's fingers and various species of sponge and on the sponges many tiny starfish less than 1cm across. Sea fans grew towards the base of the walls and on the boulders.

All too quickly it was time to ascend the walls to the kelp forest above and return to the surface.

Hand Deeps

The last dive of the weekend was about 10 miles offshore, to the northwest of the Eddystone lighthouse. Hand Deeps is a set of five pinnacles (or fingers, hence the name) rising to within 7m of the surface. A group dived on one of the pinnacles during the last Seasearch weekend from Plymouth and this time we dived a different pinnacle. Again we dropped onto kelp and a short swim brought us to a series of gullies and walls rich in a large variety of anemones and sponges especially with hydroids and echinoderms also prominent and many sea fans. A variety of seaweeds were identified here together with plenty of fish.

These offshore reefs are in areas of strong currents, which is reflected in the type and diversity of life – a rich habitat of filter feeders and cnidarians.



Jewel anemone encrusted wall at Hand Deeps.

Species summary:

The table shows the number of species recorded at each site from a total of nine Surveyor forms and seven Observer forms.

Phylum	Common name	Number of species recorded at sites			
		Mewstone Ledges	Cawsand Bay	Eddystone Reef	Hand Deeps
Porifera	Sponges	9	0	5	7
Cnidaria	Anemones, corals, hydroids, jellyfish	9	4	10	10
Annelida	Segmented worms	0	4	1	1
Crustacea	Crabs, lobsters, barnacles	3	4	1	3
Mollusca	Shells, seaslugs, cuttlefish	2	2	0	1
Bryozoa	Sea mats	4	0	3	5
Echinodermata	Starfish, urchins, cucumbers	5	1	5	6
Tunicata	Sea squirts	1	0	0	0
Pisces	Fish	7	6	5	7
Algae	Seaweeds	5	4	1	5

Surveyors taking part were: Sally Sharrock, Pam Bowden, Berry Bastie, Gemma Brice, Chiara Lombardi, Paul Lott, Scott Tompsett, Richard Gill, Bob Ellis, Kat Brown, Hugh Miller and Emma Dover. Thanks go to our skipper Brian Allen at Aquanauts for taking us and especially for his help with the GPS points.

Report and photographs by Sally Sharrock.



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