

Marine Conservation Society Survey Dives Lyme Bay 2006 Report to Devon Wildlife Trust

by
Lin Baldock

Two weekends of diving in Lyme Bay were arranged with John Walker on Miss Pattie through the MCS Member's Dives scheme. Diving took place on 25/26 August and 3/4 September 2005. On both occasions sites of interest to the Devon Wildlife Trust were visited together with dives on the classic reef sites in Lyme Bay. A total of 15 Seasearch Survey forms were completed and will be entered into Marine Recorder. Both weekends were supported by funds towards expenses from Dr Ken Collins of Southampton Ocean and Earth Sciences Department, Southampton University through English Nature.

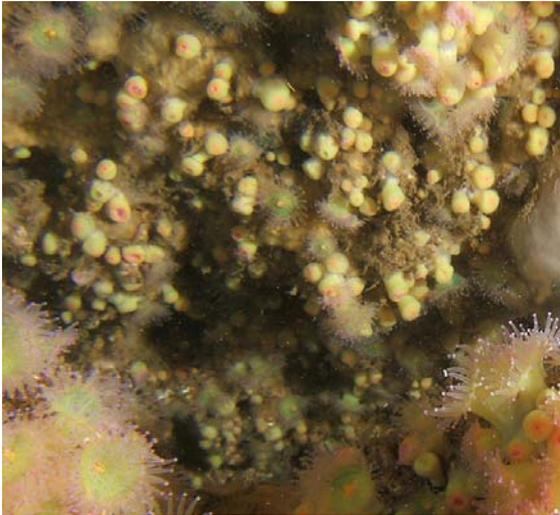
Site: West Bay High Ledge

Date: 25 June 2005

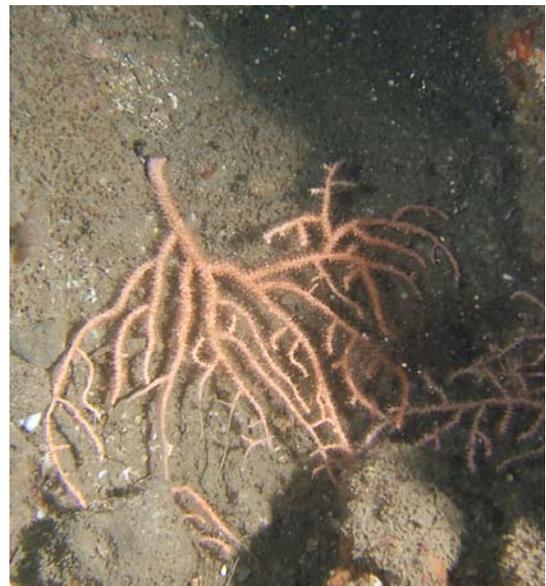
Location: 50° 40.03'N, 002° 48.30'W (OSGB36)

Depth: 25-30m

North facing ledge with silty bedrock slope at about 30m rising up a steep, rocky wall with deep fissures and broken rock from 30m up to 26m. The top of the rocky reef was bedrock with a series of ledges and gullies with a varied turf of bryozoans, sponges, hydroids and tunicates. The pink seafan *Eunicella verrucosa* was common especially on the top of the reef. Individual colonies at the base of the reef had been broken off. Several large patches of jewel anemones (*Corynactis viridis*) were found on parts of the reef most exposed to the tide. This species is unusual on these rocky reefs in Lyme Bay.



Jewel anemones (Bill Hewitt)



Dislodged seafan (Bill Hewitt)

Several jellyfish were reported during the weekend including the Blue Jellyfish *Cyanea lamarckii* and the Compass Jellyfish *Chrysaora hysoscella*.



Blue Jellyfish (Bill Hewitt)



Rock Cook (Mike Markey)



***Pleurobranchus* with egg coil
(Mike Markey)**

Site: Station 15 Devon Trust List (25 June 2005)

Position: 50° 42.95'N, 002° 51.82'W (OSGB36)

Depth: 14-15m

Devon Wildlife Trust had given us a list of potential sites for which they would like information. Four of these sites were selected and dived over the weekend. Station 15 comprised a level seabed of soft mudstone bedrock heavily bored by piddocks in a depth of 15m. There was a mosaic of small mudstone pebbles, cobbles and small boulders and areas of sandy silt to a depth of 1-4cm over mudstone. There was an interesting fauna of sponges, hydroids and tunicates and a range of nudibranchs and the "flying sea slug" *Pleurobranchus membranaceus* laying its coils of eggs on the muddy sand. A variety of red seaweeds were present.

This site was perhaps not a "typical" diver's first choice location but for marine biologists it was fascinating.

Site: Station 19 Devon Trust List (25 June 2005) Golden Cap Reef

Position: 50° 42.11'N, 002° 50.32'W (OSGB36)

Depth: 23m

Our skipper John Walker took the opportunity to dive this site and promptly put it in his "little blue book" he was so impressed with it! It was largely bedrock forming low ledges with areas of mixed muddy sediment holding scallops. The whole site gave an excellent list of fauna with sponges (17 species), hydroids and tunicates abundant.



**General view
Peter Hewitt**



***Axinella* sponge
Peter Hewitt**

Site: Station 17 Devon Trust List Southeast of Charmouth (26 June 2005)

Position: 50° 41.82'N, 002° 52.56'W (OSGB36)

Level seabed of mixed muddy sediment with scattered small boulders at 22m. Some small bedrock reefs with a rock formation looking like piles of pancakes about 30cm thick, each one smaller than the last. Again a site which gave a good list of fauna and with plenty of biological interest. The seafans at this site looked rather sickly unlike those on the deeper rocky reefs which looked healthy. Sparse red algae.



"Niknak" sponge and Leach's Spider crab (Mike Markey)



***Acanthodoris pilosa* (Mike Markey)**

Site: Station 1 Devon Trust List South of Seatown (26 June 2005)

Position: 50° 41.24'N, 002° 49.89'W

Depth: 23-25m

Reef of horizontal bedrock forming large plates with hollows, cavities and deep undercuts with scattered patches of medium to large boulders and mixed, muddy sediment in the hollows. Varied sponge fauna (11 species) and again "sickly" seafans, some with their nudibranch (*Tritonia nilsodhneri*).



Sickly seafan (Bill Hewitt)



Carrot sponge (Bill Hewitt)

Site: Lyme Regis Maerl Bed (3/4 September 2005)

Position: 50° 41.50'N, 002° 54.62'W

Depth: 21-22m

The divers were so taken with this site that we did two dives here, one on each day of the weekend. On Saturday we collected quantitative data on the density of maerl on the site for comparison with the maerl ground off Old Harry at the eastern end of the Dorset coast. Since this was an unplanned exercise we had to improvise our equipment the divers using their safety flags to provide a three-sided quadrat of about a quarter of a square metre from which they then collected all pink, live maerl. These samples were then dried and weighed. Our results showed that the density was higher in Lyme Bay (76-124g/0.5m²) compared with the best bits of the Old Harry site (15-48g/0.5m²). An interesting point was that the water depth at the Lyme Bay maerl bed was 21-22m compared with 12-14m at the Old Harry site. Ken Collins and a number of BSc and MSc students from the School of Ocean and Earth Science at the University of Southampton have shown that at depths greater than 20m in Poole Bay maerl will not survive (ie respiration over the year exceeds production through photosynthesis). The clearer waters of Lyme Bay allow the maerl to thrive in deeper water. A recent survey carried out for the Devon Wildlife Trust has shown that maerl is widely distributed in Lyme Bay.

Results of maerl collections

Lin & Emma 76g/0.5m²

Cathy & Chris 95g/0.5m²

Keith & Nick 98g/0.5m²

Nick & Kate 124g/0.5m²

On the Sunday we drifted over the area to try to get an idea of its extent. Despite the flat seabed and absence of any reef or boulders we came up with a good list of fauna. A lot of small stuff tucked in among the maerl, dead shell and small cobbles. A nice find was Chris and Cathy's butterfly blenny resident in an old whelk shell.



Live maerl (Kate Edey)



Ross coral (Kate Edey)



Red squat lobster (Cathy Lewis)



Butterfly Blenny (Cathy Lewis)

Site: Sawtooth Ledges

Position: 50° 40.58'N, 002° 49.06'W (OSGB36)

Depth: 22-27m

Our first dive each day over the weekend was on part of the Sawtooth Ledges east of Lyme Regis. This rocky reef comes up from about 28m to the top at 22m where a series of low ledges about 1m high and 10-15m apart (hence "Sawtooth") run east-west along the ledge. We were disappointed to find quite a lot of damage at this site with accumulations of detached seafans and tree sponges at the bottom of each ledge. By contrast on each slope up to the next ledge the seafans and sponges seemed to be untouched. The dead men's' fingers were in a very sorry state with a lot of loose fragments about the size of a golf ball rolling around among the broken seafans, sponges and bits of Ross coral.



Broken seafans (Kate Edey)



Detached seafan (Kate Edey)