Marine Conservation Society Seasearch Dives
Lyme Bay 14/15 August & 16/17 October 2004

Summary Report by Lin Baldock

Two days of diving by groups of divers co-ordinated by the Marine Conservation Society (MCS) were carried out on 14th & 15th August and 16th & 17th October 2004. Ten sites were covered and a total of 37 Seasearch forms completed between the various buddy pairs with 24 divers taking part. Summaries of the findings from each site are given below.

Site: North of Tom's Head, Beer Home Ground (14-Aug-04)
Position: 50º 38.40'N, 003º 03.57'W (OSGB36)

Flat-topped mudstone reef at a depth of 21m with a sloping ledge to the north composed of narrow steps and ledges of rock at an angle of about 60º with small boulders, cobbles and pebbles. Rock surfaces pitted and all surfaces covered in fine silt, clearly seen in the photographs below.

***Nemertesia antennina* & *Cellaria* sp**

Protula tubularia

The site had been described by John Walker (Skipper: Miss Pattie) as a "pristine reef with abundant seafans". However divers reported that the site had been recently dredged with rocks having been turned over and broken. Quite a few seafans had been flattened and detached.

It was concluded that the site was probably not suitable for Sunset corals since the mudstone bedrock is too friable and the ledge too gently sloping for this species.

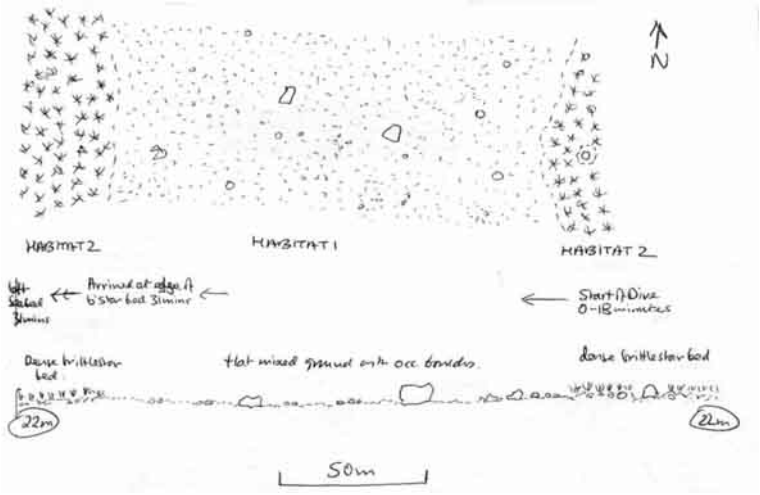
Site: Tesco's Reef, Culverhole Point (14-Aug-04)
Position: 50º 41.67'N, 003 01.31'W (OSGB36)

North-facing rock ledge about 4m high rising up from sandy seabed at 12m. Undercut strata form deep horizontal fissures full of marine life. Rock pitted with holes. The top of the ledge at 8m had a dense cover of red and brown algae including the kelp *Saccorhiza polyschides*. Sandy seabed at 12m at the base of the ledge with sand *edulis* common. This is a site well known for its prolific marine life.

Site: Brittlestar Beds, Beer Home Ground (14-Aug-04)

Two drift dives were made across the brittlestar bed identified during the Devon Wildlife Trust's video survey made in 2003 at drop down video station No 23. The dives were started at Station 23 and 100m north of this and divers drifted a short distance west in a water depth of 22m.

- Start position: 50º 39.769' N, 003º 01.543' W (OSGB36)
- Start position: 50º 39.823' N, 003º 01.543' W (OSGB36)



Sketch of brittlestar bed habitat

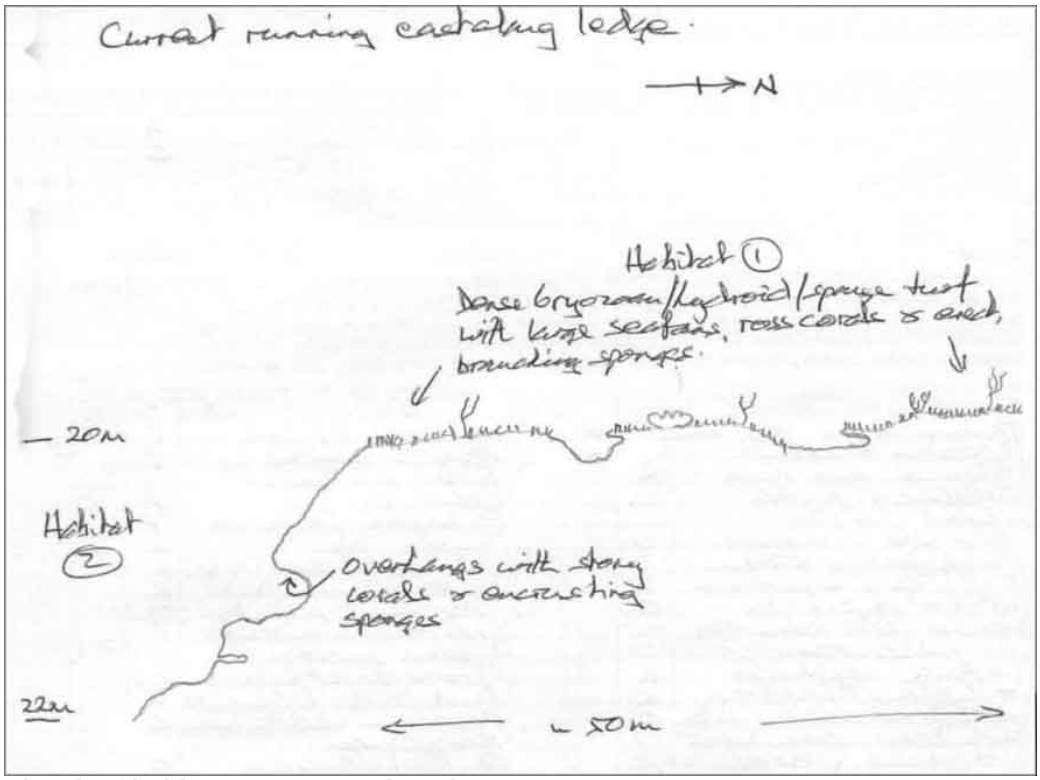
Dense but discontinuous populations of brittlestars (*Ophiothrix fragilis*) were found on both dives indicating some continuity in the presence of the brittlestars over two years.

A sample of brittlestars was collected by each pair of divers and sent to Dr Ken Collins at the Department of Ocean and Earth Science, Southampton University for further analysis. Dr Collins is studying populations of brittlestars along the south coast of Dorset and Devon (distribution, size range and fecundity).

The seabed at this site was composed of mixed sediment: cobbles, pebbles, gravel and sand with scattered boulders. The brittlestar bed was not continuous. Where the brittlestars were absent there was a varied fauna of attached and mobile animals whereas under the mat of brittlestars there was virtually no other fauna.

Site: Sawtooth Ledges (15-Aug-04)
Position: 50º 40.86'N, 002 48.15'W (OSGB36).

More or less level seabed of hard sandstone bedrock at a depth of 20m with shallow gullies to a depth of about 0.5m. Surfaces virtually devoid of silt.



Sketch of habitats on Sawtooth Ledges

The marks used for this site were for a known position for the sunset coral (*Leptopsammia pruvoti*). Large numbers of sunset corals of various sizes were found on vertical and slightly overhanging ledges at a depth of about 22.5m. There was a very characteristic community associated with these corals which included two interesting encrusting sponges: *Thymosia guernei* and the bright blue *Hymedesmia paupertas* among several others, and another stony coral: *Caryophyllia inornata*. The larger sunset corals often supported several individuals of the barnacle *Boscia anglica*, a species restricted to growth on stony corals.

The top of the ledge at a depth of 20m supported a very diverse community of erect sponges (19 species identified, encrusting species excluded), with large seafans (*Eunicella verrucosa*), ross coral (*Pentapora foliacea)* and the large sea squirt *Phallusia mammillata* all surrounded by a dense sponge/hydroid/bryozoan turf. Several red algae were recorded with *Drachiella heterocarpa* being the dominant species.

Site: Dog's Leg Ledge (15-Aug-04)
Position: 50º 40.76'N, 002º 50.14'W

A site of more or less level bedrock of hard sandstone at 23m with a gentle slope to the north of angular boulders to a depth of 25m. The flat rock surface had a thin covering of fine silt over polychaete tubes and was pitted and pock marked with narrow fissures. The site had seafans covering a range of sizes, many with the nudibranch *Tritonia nilsodhneri* with their egg coils. The bryozoan/hydroid turf at this site was much sparser than that at Sawtooth Ledges and the site seemed less diverse (for example only eight species of sponge recorded).

Site: Lanes Ground (16-Oct-04)
Position: 50º 40.46'N, 002º 54.94'W (OSGB36)

More or less level seabed at 25m with small and medium sized boulders with coarse sand between. Rocky surfaces supported a diverse growth of hydroids, sponges (15 erect species), bryozoa and tunicates. Seafans (numerous small colonies), scallops, Ross coral (large colonies) and *Phallusia mammillata* present in good numbers.

Ross Coral *Pentapora foliacea*

Mixed sponges, hydroids and bryozoa

Site: New Ledge (16-Oct-04)
Position: 50º 40.58'N, 002º 49.13'W (OSGB36)

A rocky reef rising about 4m from a seabed of poorly sorted, silty sediment at 25m. Signs of dredging and potting. Top of reef at 20-21m a series of low ridges about 0.5-1m high supporting prolific growths of sponges (15 species) and hydroids (nine species) especially along the ridge crests. Large colonies of pink sea fans and Ross coral. A species-rich site.

Ross coral and Cuckoo Wrasse

Gold sinny and mixed sponges and bryozoa

Site: West Bay High Ground (17-Oct-04)
Position: 50º 42.40'N, 002º 48.91'W (OSGB36)

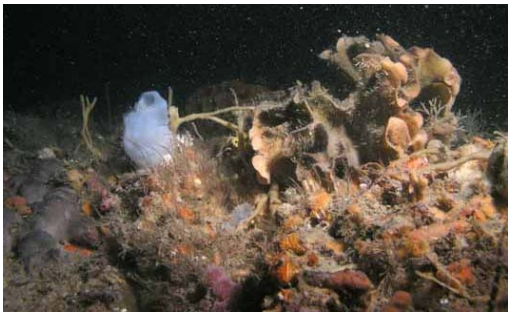
A rocky reef of more or less level bedrock rising to about 8m depth in a series of low ledges from the seabed at 12m of fine to medium rippled sand. Ledge with deep overhangs and crevices. Fauna dominated the deeper parts of the reef with a diverse community of hydroids, sponges and small molluscs. Mixed foliose red algae at shallower depths added further diversity and a dense under storey beneath the kelp *Saccorhiza polyschides*. Patches of the edible mussel (*Mytilus edulis*) appeared to represent two age groups: 0+ and probably 5-6 years old.

Plenty of litter: plastic bags, fish scraps, fishing line, sweet wrappers, panty liners.

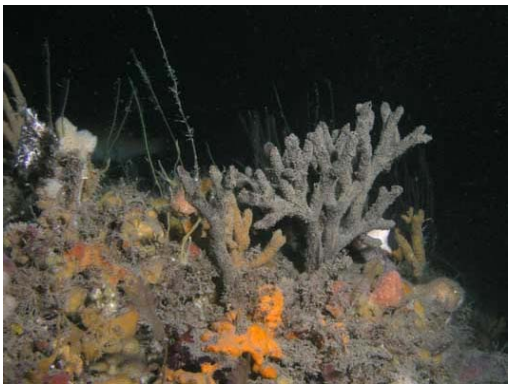
Site: Outer Sawtooth Ledge (17-Oct-04)
Position: 50º 40.56'N, 002º 48.91'W (OSGB36)

More or less level rocky reef rising about 4m from a cobblely, silty, sandy seabed at about 25m depth. The reef top was fairly flat with low ledges (to 0.5m) running WSW/ENE along it. There was a cover of fine silt over most surfaces. Diverse community of sponges (14 erect or massive species), hydroids, anemones and tunicates. Large, healthy pink seafan and Ross coral colonies.

No evidence of human impacts.



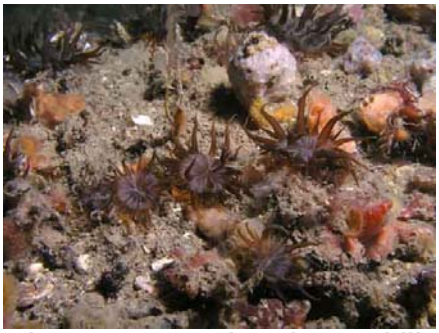
Sea squirt *Phallusia mammillata* and mixed fauna



Mixed sponges

Site: The Mushrooms (17-Oct-04)
Position: 50º 41.43'N, 002º 51.74'W (OSGB36)

Large rocky mounds (round or oval on shape and some with overhangs) up to 5m across and rising up to 1m from the seabed of bedrock, boulders and cobbles at a depth of 21m. Rock surfaces covered in short, dense epifaunal turf of hydroids, sponges, anemones (*Aiptasia mutablilis*) and tunicates. Overhangs with solitary corals (*Caryophyllia inornata*) in abundance together with encrusting sponges and bryozoans. This site might be suitable for the rare colonial coral *Hoplangia durotrix*. This warrants further investigation.



The anemone: *Aiptasia mutabilis*

The hard coral *Caryophyllia inornata*

With many thanks to divers taking part in the surveys:
Gavin Black, Angela Read, Phil Reynolds, Bill Hewitt, Peter Hewitt, Vicki Billings, Caroline Bateman, Julie Hatcher, Steve Trewhella, Isobel Cook, Chris Wood, Lin Baldock, Mike Markey, Colin Froud, Debbie Stenner, John Pyle, Graham Bates, Fiona Ravenscroft, Nick Owen, Darren Murray, Tim Theobalds, Dominic Smith, Emmy Kelly.

Photographs:	Peter Hewitt:	North of Tom's Head.
	Mike Markey:	Lanes Ground, New Ledge, Outer Sawtooth Ledge, The Mushrooms
Drawings:	Chris Wood:	Brittlestar beds
	Lin Baldock	Sawtooth Ledge

Funding
These surveys in Lyme Bay were supported by Seasearch, a national project for volunteer sports divers which is co-ordinated by the Marine Conservation Society. Further funding was provided by Dr Ken Collins, School of Ocean and Earth Sciences, University of Southampton through a grant from English Nature.

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