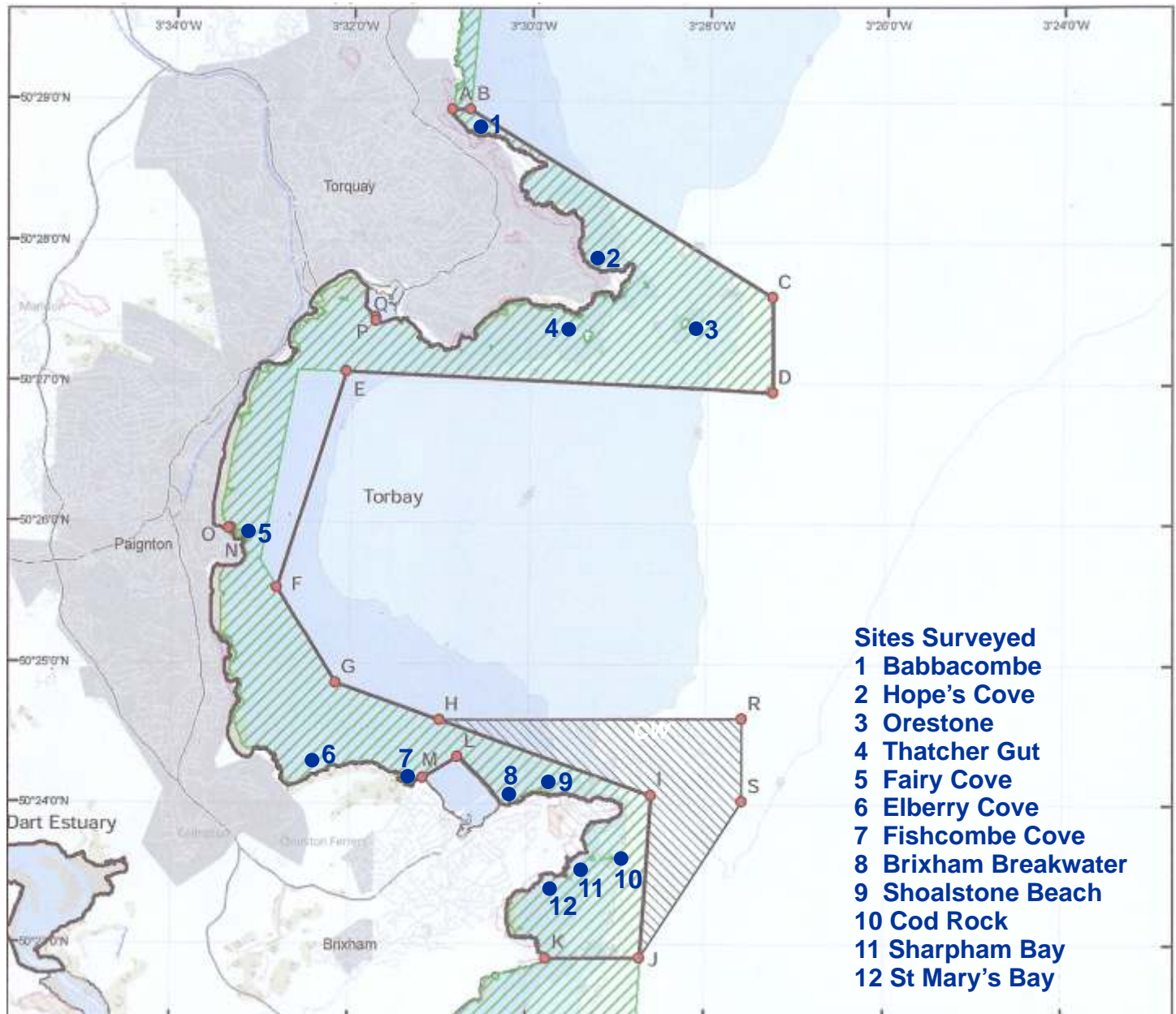


Torbay rMCZ, Devon

Seasearch Site Surveys 2012

This report summarises the results of surveys carried out in the recommended MCZ by Seasearch divers during 2012. The aim of the surveys was to add detail of the habitats and species found within the area to support the designation process. Particular attention was paid to the Habitat and Species FOCI identified in the Ecological Guidance on the designation of MCZs. Surveys were carried out at a number of sites in all parts of the rMCZ.



Physical features Surveyed

The main features of the area surveyed by Seasearch in 2012 were eelgrass beds (Hopes Cove (2), Thatcher Gut (4), Elberry Cove (6), Fishcombe Cove (7) and Brixham Breakwater Beach (8)), infralittoral rocky reefs (Babbacombe (1), Fairy Cove (5), Shoalstone (9) and St Marys Bay (12)), circalittoral rocky reefs (Orestone (3), Cod Rock (10) and Sharpham Bay (11)) and a variety of sediments from gravel to sandy mud (most sites). All of the sites are already within the Torbay SAC, but a number had not been previously surveyed and the records of eelgrass beds at Hope's Cove and Thatcher Gut are new, as are the circalittoral rocky reef in Sharpham Bay.

Features of the Marine Life and Habitats

Eelgrass Beds (Sites 2,4,6,7,8)

Eelgrass, *Zostera marina*, is one of the very few flowering plants underwater and, unlike seaweeds, has a system of roots which can help to bind soft sediments and create a complex habitat in what would otherwise be a relatively un-diverse environment. Seagrass beds are found in shallow, relatively clear, waters where there is limited wave action, but may be tidal currents.

Torbay has a number of eelgrass beds, some of which have been previously surveyed. The two beds shown here at Hope's Cove (Site 2) and Thatcher Gut (Site 4) are both newly identified. Seagrass beds can be damaged by indiscriminant anchoring within them, by extensive potting and by trawling for scallops.



Damage to the eelgrass was seen at Hope's Cove, with uprooted plants present (below). Whilst it not possible to say whether or not the damage was natural or not, there was a yacht anchored in the bed at the time of our visit and cuttle pots were also set close to the edge of the bed.

A variety of anemones, worms, molluscs and small fishes were recorded within the eelgrass beds. Most notable was a short snouted seahorse *Hippocampus hippocampus* at Hope's Cove (which was unfortunately not photographed). A selection of other species are shown below.



Above: Greater Pipefish, *Syngnathus acus*
Below: Sea Hare, *Aplysia punctata*



Above left: Eyelash worm, *Myxicola infundibulum*
Above right: *Polycera* sea slug
Below right: hermit crab



Cuttlefish, *Sepia officinalis*

Cuttlefish come inshore to breed in the spring and, at the time of our survey in May, there were pairs of adults observed (below) and bunches of cuttlefish eggs commonly seen attached to the seagrass fronds at Hope's Cove (right).

At the same time there were pots set just outside the seagrass bed to catch the breeding population. This practice not only removes breeding adults but eggs are often laid on the pots themselves and lost when the pots are raised.



Cuttlefish breed and are commonly recorded from other sites around Torbay, including Babbacombe and Thatcher's Gut (below)



Infralittoral Rock (Sites 1,5,9,12)

Seaweed dominated (infralittoral) rock was surveyed at four, widely spaced, coastal sites, Babbacombe, Fairy Cove, Shoalstone and St Mary's Bay. The presence of a seaweed specialist in the survey team resulted in records of 44 species of seaweeds at Babbacombe and 28 species at Shoalstone. These included a number of non-native species, *Sargassum muticum*, *Heterosiphonica japonica* and *Antithamnionella ternifolia*.



Cuttlefish and eggs were also present at Babbacombe in May, as were the cuttlefish pots spread out across the bay to catch the breeding population.

Other species of note included trumpet anemones, *Aiptasia mutabilis*, at Shoalstone. This is a nationally scarce southern species, which can be locally abundant on shallow rocky reefs.

In July at St Mary's Bay there were many large edible crabs mating.

All of the infralittoral rocky sites were subject to human impacts including potting, mooring, recreational angling and diving. There was considerable litter present underwater, especially at Babbacombe. This included beer cans, cigarette packets and angling line. At Fairy Cove the litter was fishing related and included old pots, rope and rubber.

Circalittoral Rock (Sites 3, 10, 11)

Rocky reefs with small red seaweeds and animal turfs were recorded at Orestone, Cod Rock and Sharpham Bay.

Of these sites Orestone and Cod Rock had been recorded previously, but the reef in Sharpham Bay, south of Berry Head was previously un-recorded.

This site contains low-lying silted reefs at a depth of between 6m and 9m below chart datum. The reefs were up to 2m high in places and covered in a 'turf' of short red seaweeds, bryozoans, feathery hydroids and sponges. Notable species were anglerfish, *Lophius piscatorius* (priority species), and a nationally scarce sea slug, *Okenia elegans* (right).



Sublittoral sands, gravel and mud

Torbay contains a wide variety of underwater sediments. Those recorded in this survey included coarse sediments (mixes of sand, gravel, pebbles and cobbles), both infralittoral (Thatcher Gut, Shoalstone) and circalittoral (Orestone), sands (Babbacombe, Shoalstone), muddy sand (Babbacombe, Hope's Cove, Brixham Breakwater, Sharpham Bay) and sandy mud (Hope's Cove).

Generally the muddy sand and mud sites exhibit the widest variety of mobile and burrowing animals. Typical species are the mud runner crab, *Goneplax rhomboides* (right) and the burrowing anemone *Cerianthus lloydii* (lower right).

An inhabitant of fine sand was the masked crab, *Corystes cassivelaunus* (below).



Human Impacts

Torbay is an area which has high levels of human activity, both recreational and commercial. The activities which we consider are most likely to be having an adverse impact on marine life and habitats are trawling, potting and mooring within sensitive seagrass and subtidal mud habitats.

The majority of other surface-based activities do not have any impact on seabed habitats and species, except around Berry Head where seasonal limitations to protect bird populations are proposed.

Benefits of Protection

The great majority of the rMCZ already lies within a Special Area of Conservation and the proposal only includes those features which are not already listed, and thus theoretically protected, by that designation. Thus many of the rock features, both infralittoral and circalittoral, are not proposed for any protection within the rMCZ. However, we have identified an additional area of circalittoral rock in this survey which should be included.

The conservation objectives for the rMCZ are in most cases to maintain in a favourable condition. This survey adds records of *Ostrea edulis* and *Hippocampus hippocampus* to existing listed priority species.

Only in the case of the seagrass beds and subtidal mud is the objective to recover to a favourable condition. At present there are few concrete proposals to achieve this and we suggest that the seagrass beds should be subject to limitations on mooring and potting in addition to a complete ban on trawling if they are to achieve the conservation objective of recovery.

The rMCZ proposal casts doubt on the presence of subtidal mud within the area. Whilst there is a grey area between the definitions of mud, muddy sand and sandy mud we believe that the muddy sand, at least just outside the seagrass bed at Hope's Cove (pictures above), should also be protected from the same activities.

The seasonal capture of breeding cuttlefish at a number of sites within the bay is not addressed by the rMCZ proposals. This is unlikely to be a sustainable fishery in the long term because of how it is undertaken, and the opportunity should be taken to maintain this population as well as the other features.

This report has been written by Chris Wood based on Seasearch Survey records made by Lin Baldock, Dominic Flint, James Lucey, Nick Owen, Martin Pratt, Mary Restell, Roy Restell, Lynda Rose, Trudy Russell, Sally Sharrock, Jean-Luc Solandt, Chris Webb and Chris Wood, and Observation records made by David Dooley and Sally Sharrock. Photos by James Lucey, Mary Restell, Roy Restell and Chris Wood. Seasearch would like to thank the volunteer divers for their records and also Rick Parker and Tony Hoile for taking us to the sites. Report published by Marine Conservation Society for Seasearch www.seasearch.org.uk

Technical Appendix

This Appendix contains more detailed information about the surveys undertaken and records made. It includes:

- dive details
- map of Hope's Cove seagrass bed
- habitat sketches
- biotope list
- species list

The data has been entered into the Marine Recorder database and is available as a Snapshot in Access format on request. It will also be made available on the

Current proposal

The features proposed for designation are:

Broad Scale Habitats and Habitat FOCI: subtidal mud, intertidal coarse sediment, mixed sediment, mud, sands and muddy sand, low and moderate energy intertidal rock, intertidal under-boulder communities, Honeycomb worm reefs and seagrass bed. The objective is to maintain in favourable condition except for subtidal mud and seagrass beds where it is to recover to favourable condition.

Species FOCI: Long snouted seahorse *Hippocampus guttulatus* (but not *H. hippocampus* which was recorded by us), Native Oyster *Ostrea edulis*, Peacock's tail seaweed *Padina pavonica* and sea snail *Paludinella littorina* - objective to maintain in favourable condition. A number of bird species and harbour porpoise are also listed.

Dive Details

Site 1 - Babbacombe: 22nd April 2012, Observation Form DV12/047, Surveyor David Dooley. Position 50° 28.75'N 03°30.62'W,

Site 2 - Hope's Cove Eeelgrass bed: 13th May 2012, Survey Form NT12/022, Surveyor Chris Wood. Position from 50° 27.832'N 03°29.242'W, to 50° 27.855'N 03°29.233'W.

13th May 2012, Survey Form NT12/044, Surveyors James Lucey and Jean Luc Solandt. Position from 50° 27.861'N 03°29.358'W, to 50° 27.974'N 03°29.322'W

13th May 2012, Survey Form NT12/046, Surveyor Mary Restell. Position from 50° 27.843'N 03°29.290'W, to 50° 27.852'N 03°29.176'W

13th May 2012, Survey Form NT12/047, Surveyor Roy Restell. Position from 50° 27.843'N 03°29.290'W, to 50° 27.889'N 03°29.218'W

13th May 2012, Survey Form NT12/048, Surveyor Trudy Russell. Position from 50° 27.893'N 03°29.380'W, to 50° 27.925'N 03°29.262'W

13th May 2012, Survey Form NT12/049, Surveyor Martin Pratt. Position 50° 27.846'N 03°29.336'W

Site 3 - Orestone: 16th September 2012, Survey Form DV12/167, Surveyor Lynda Rose. Position 50° 27.428'N 03°28.149'W

Site 4 - Thatcher Gut: 1st September 2012, Survey Form DV12/147, Surveyor Sally Sharrock. Position 50° 27.428'N 03°28.149'W

Site 5 - Fairy Cove: 18th November 2012, Survey Form NT12/280, Surveyor Chris Wood. Position 50° 25.94'N 03°33.20'W

Site 6 - Elberry Cove: 2nd September 2012, Survey Form DV12/148, Surveyor Sally Sharrock. Position 50° 24.313'N 03°32.403'W

Site 7 - Fishcombe Cove: 1st September 2012, Survey Form DV12/146, Surveyor Sally Sharrock. Position 50° 24.173'N 03°31.432'W

Site 8 - Brixham Breakwater Beach: 1st January 2012, Survey Form DV12/001, Surveyor Sally Sharrock. Position 50° 24.016'N 03°30.223'W

Site 9 - Shoalstone Beach: 12th May 2012, Survey Form DV12/028, Surveyor Sally Sharrock. Position from 50° 24.064'N 03°30.021'W to 50° 24.103'N 03°29.985'W

12th May 2012, Survey Form DV12/036, Surveyor Nick wen. Position 50° 24.096'N 03°30.005'W

Site 10 - Cod Rock: 15th July 2012, Observation Form DV12/136, Surveyor David Dooley. Position 50° 23.618'N 03°29.056'W,

Site 11 - Sharpham Bay: 12th May 2012, Survey Form NT12/021, Surveyor Chris Wood. Position 50° 23.551'N 03°29.389'W

12th May 2012, Survey Form NT12/043, Surveyors James Lucey and Jean Luc Solandt. Position from 50° 27.861'N 03°29.454'W, to 50° 23.545'N 03°29.432'W

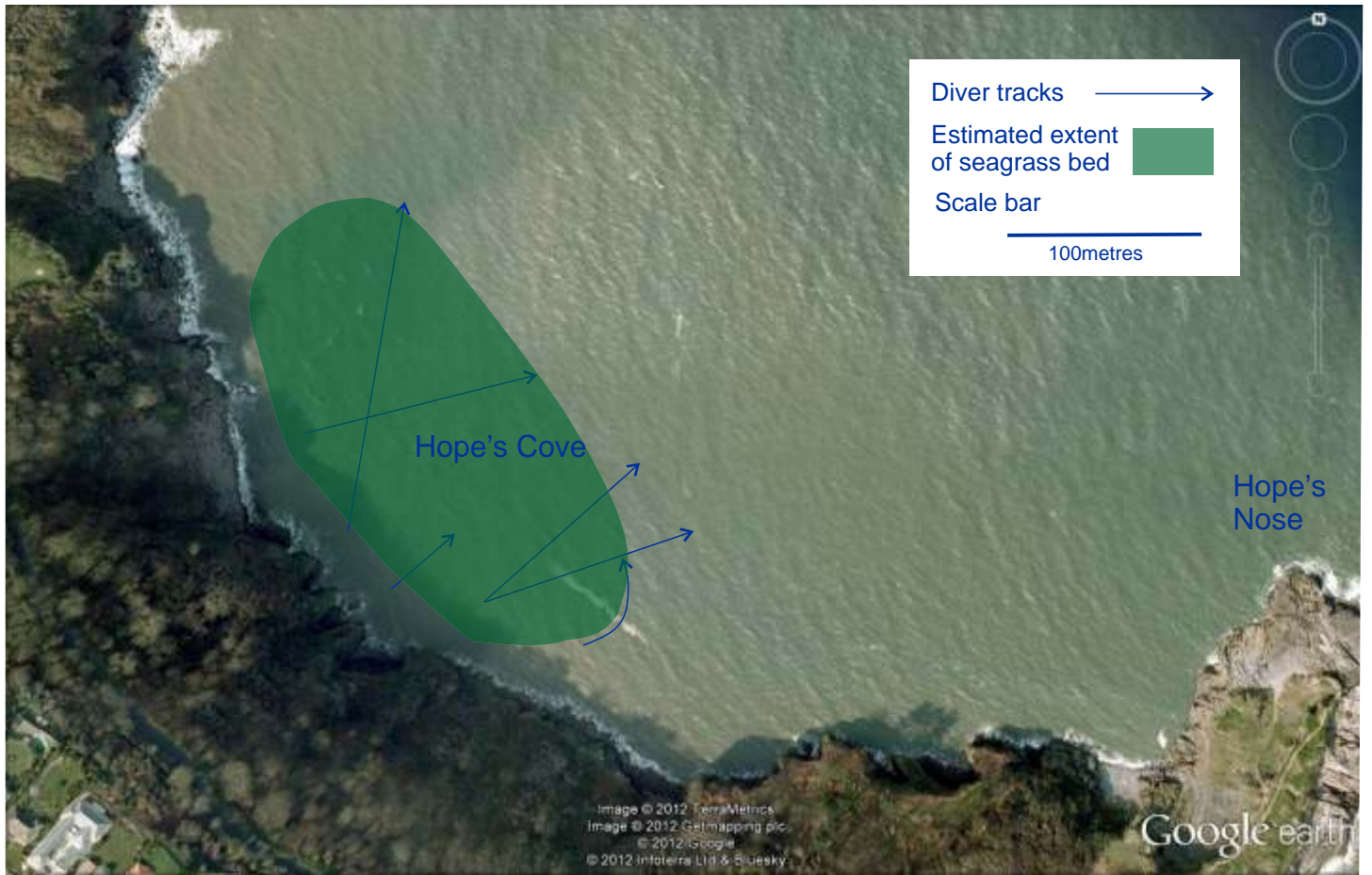
12th May 2012, Survey Form NT12/045, Surveyor Roy Restell. Position from 50° 27.484'N 03°29.429'W, to 50° 23.506'N 03°29.461'W

12th May 2012, Survey Form NT12/050, Surveyor Dominic Flint. Position 50° 23.490'N 03°29.438'W

12th May 2012, Survey Form DV12/031, Surveyor Chris Webb. Position 50° 23.474'N 03°29.458'W

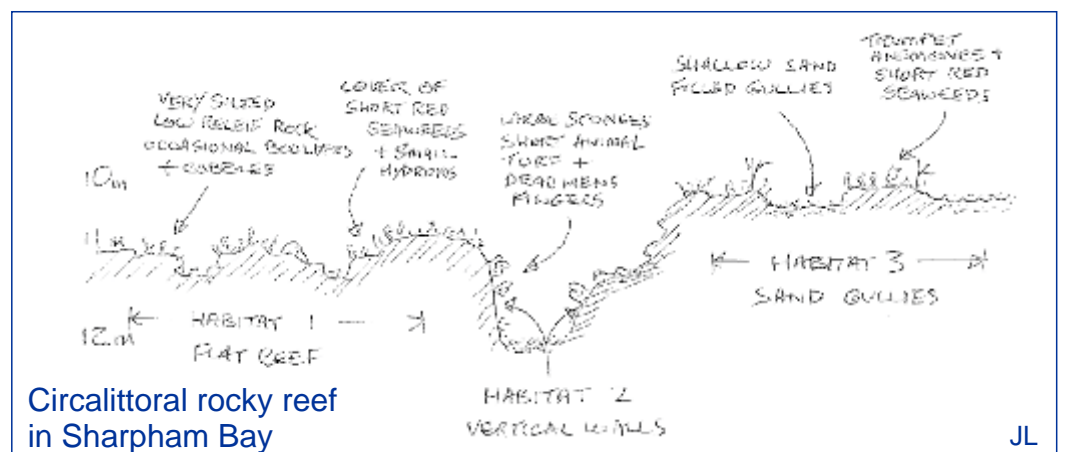
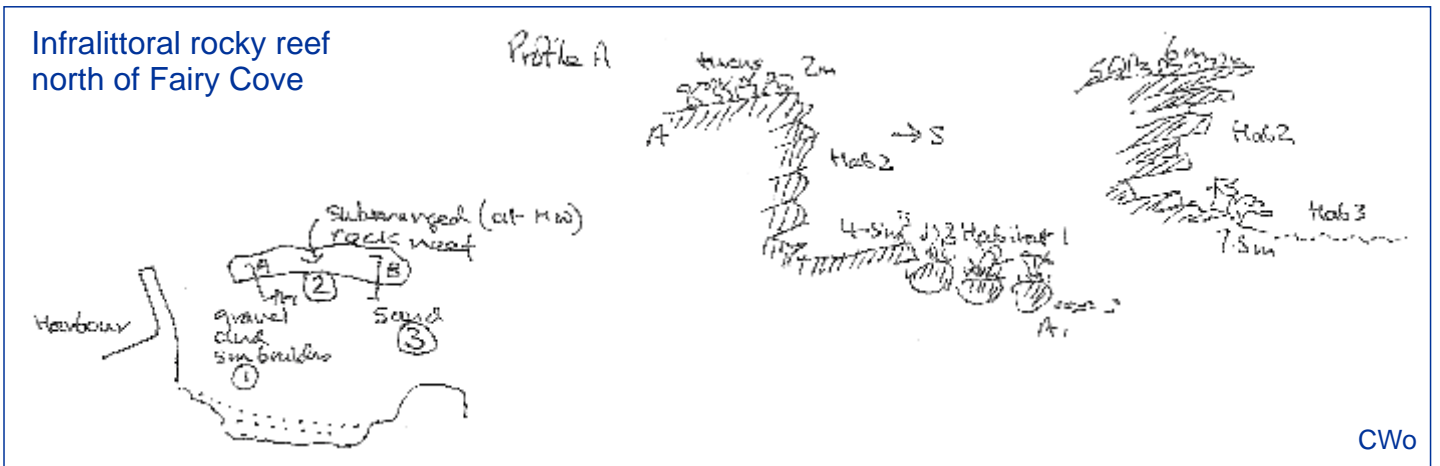
Site 12 - St Mary's Bay: 29th July 2012, Observation Form DV12/100, Surveyor Sally Sharrock. Position 50° 23.486'N 03°29.662'W

Hope's Cove Seagrass bed



The map shows the estimated extent of the seagrass bed based on a GPS tow for the southern extent and diver in and out GPS positions for the other pairs of divers

Habitat sketches



Sublittoral Habitats/Biotopes recorded

Description	MNCR 04:05 Code	Location
Circalittoral Rock Biotopes		
High energy circalittoral rock	CR.HCR	Sharpham Bay (Site 11)
Mixed faunal turf communities	CR.HCR.XFa	Orestone (Site 3), Sharpham Bay (Site 11)
<i>Suberites spp.</i> with a mixed turf of crisiids and <i>Bugula spp.</i> on heavily silted moderately wave-exposed shallow circalittoral rock	CR.HCR.XFa.SubCriTf	Sharpham Bay (Site 11)
Infralittoral Rock Biotopes		
High energy infralittoral rock	IR.HIR	Thatcher's Gut (Site 4)
Kelp with cushion fauna and/or foliose red seaweeds	IR.HIR.KFaR	Brixham Breakwater (Site 8), Shoalstone (Site 9)
Foliose red seaweeds on exposed lower infralittoral rock	IR.HIR.KFaR.FoR	Babbacombe (Site 1), Shoalstone (Site 9)
<i>Saccorhiza polyschides</i> and other opportunistic kelps on disturbed sublittoral fringe rock	IR.HIR.KSed.Sac	Shoalstone (Site 9)
Moderate energy infralittoral rock	IR.MIR	Babbacombe (Site 1), Fairy Cove (Site 5)
Kelp and red seaweeds	IR.MIR.KR	Fairy Cove (Site 5)
<i>Laminaria hyperborea</i> forest and foliose red seaweeds on moderately exposed upper infralittoral rock	IR.MIR.KR.Lhyp.Ft	Hope's Cove (Site 2)
Dense foliose red seaweeds on silty moderately exposed infralittoral rock	IR.MIR.KR.XFoR	Hope's Cove (Site 2)
Littoral Rock Biotopes		
Low energy littoral rock	LR.LLR	Fairy Cove (Site 5)
Sublittoral Sediment Biotopes		
<i>Mytilus edulis</i> beds on sublittoral sediment	SS.SBR.SMus.MytSS	Orestone (Site 3)
Infralittoral coarse sediment	SS.SCS.ICS	Shoalstone (Site 9)
<i>Zostera marina/angustifolia</i> beds on lower shore or infralittoral clean or muddy sand	S.SMp.SSgr.Zmar	Hope's Cove (Site 2), Thatcher's Gut (Site 4), Elberry Cove (Site 6), Fishcombe Cove (Site 7), Brixham breakwater (Site 8)
Infralittoral sandy mud	SS.SMu.ISaMu	Babbacombe (Site 1), Hope's Cove (Site 2)
Circalittoral mixed sediment	SS.SMx.CMx	Orestone (Site 3)
Infralittoral mixed sediment	SS.SMx.IMx	Thatcher's Gut (Site 4), Sharpham Bay (Site 11)
Sublittoral sands and muddy sands	SS.SSa	Babbacombe (Site 1)
Infralittoral fine sand	SS.SSa.IfFiSa	Hope's Cove (Site 2), Fairy Cove (Site 5), Sharpham Bay (Site 11)
Infralittoral muddy sand	SS.SSA.IMuSa	Hope's Cove (Site 2)

Species List

Scientific Name	Common Name	Site	Abundance	Notes
Sponges				
<i>Clathrina coriacea</i>	lace sponge	12	F	
<i>Scypha ciliata</i>	purse sponge	9,11	F-R	
<i>Pachymatisma johnstonia</i>	elephant hide sponge	11,12	F-R	
<i>Dercitus bucklandi</i>	black tar sponge	5,12	F-R	
<i>Tethya citrina</i>	golf ball sponge	5,9,10,11	O-R	
<i>Polymastia penicillus</i>	chimney sponge	9,11	O-R	
<i>Suberites sp.</i>		1,11	R	
<i>Suberites ficus</i>	sea orange	9,10	O-R	
<i>Cliona celata</i>	boring sponge	1,3,5,7,8,9,11	C-R	
<i>Axinella damicornis</i>	crumpled duster sponge	11	O	nationally scarce
<i>Ciocalypta penicillus</i>	tapered chimney sponge	7,8	O-R	
<i>Halichondria panicea</i>	breadcrumb sponge	3,12	F-O	
<i>Halichondria bowerbanki</i>		11	P	
<i>Mycale sp.</i>		8	O	
<i>Hemimycale columella</i>	crater sponge	3,	F	
<i>Raspailia hispida</i>		11	O-R	
<i>Raspailia ramosa</i>	chocolate finger sponge	11	R	
<i>Haliclona fistulosa</i>		11	O	
<i>Haliclona rosea</i>		11	P	
<i>Haliclona viscosa</i>		3	O	
<i>Dysidea fragilis</i>	goosebump sponge	8,11	O	
<i>Amphilectus fucorum</i>	shredded carrot sponge	5,9	R	
<i>Porifera indet crusts.</i>	various encrusting sponges	3,6,9,11,12	F-R	
<i>Porifera indet.</i>	unidentified sponges	8,9	O	
Cnidaria				
Jellyfish, Hydroids, Anemones and Corals				
<i>Chrysaora hysocella</i>	compass jellyfish	2,7	O-R	
<i>Aurelia aurita</i>	moon jellyfish	4	R	
<i>Hydrozoa</i>	unidentified hydroids	10,11	C-O	
<i>Tubularia indivisa</i>	oaten pipe hydroid	11	F	
<i>Hydractinia echinata</i>	hermit crab fur	1,2,4,6,8,9	O-R	
<i>Halecium halecinum</i>	herring bone hydroid	11	O-R	
<i>Hydrallmania falcata</i>	helter skelter hydroid	8	F-O	
<i>Sertularella gaudichaudi</i>		11	P	
<i>Sertuarella polyzonias</i>		11	P	
<i>Kirchenpaueria sp.</i>		9	R	
<i>Kirchenpaueria similis</i>		11	P	
<i>Nemertesia anteninna</i>	antenna hydroid	3,11	O-R	
<i>Clytia hemispherica</i>		11	P	
<i>Obelia sp.</i>		2	F	
<i>Obelia geniculata</i>	kelp fur	5,9,12	F-O	
<i>Alcyonium digitatum</i>	dead men's fingers	2,3,5,10,11	C-R	
<i>Cerianthus lloydii</i>	burrowing anemone	1,2,4,6,11	F-R	
<i>Isozoanthus sulcatus</i>	peppercorn anemone	5	O	
<i>Anemonia viridis</i>	snakelocks anemone	1,2,3,4,5,7,8,11	A-R	
<i>Urticina felina</i>	dahlia anemone	3,4,11	F-R	
<i>Anthropleura ballii</i>		2	R	
<i>Aureliana heterocera</i>	Imperial anemone	9	R	
<i>Aiptasia mutabilis</i>	trumpet anemone	1,3,8,9,10,11	A-R	Nationally scarce
<i>Metridium senile</i>	plumose anemone	1,3,10	O-R	
<i>Sagartia sp.</i>		6	O	
<i>Sagartia elegans</i>	elegant anemone	3,4,11	O-R	
<i>Sagartia troglodytes</i>		1,6,11	O	

Scientific Name	Common Name	Site	Abundance	Notes
<i>Cereus pedunculatus</i>	daisy anemone	3,7,9,11	C-R	
<i>Sarartiogeton undatus</i>		1,2	O	
<i>Calliactis parasitica</i>	parasitic anemone	1,2,3,4,6,7,10,11	O-R	
<i>Adamsia carcinopados</i>	cloak anemone	2,7,8	R	
<i>Peachia cylindrica</i>		1,2,6,11	R	
<i>Corynactis viridis</i>	jewel anemone	5	F	tiny individuals
<i>Caryophyllia smithii</i>	Devonshire cup-coral	3,5,11	O-R	
Nemertea				
	Ribbon Worms			
<i>Lineus longissimus</i>		11,12	R	
Annelida				
	Segmented Worms			
<i>Annelida/Polychaeta indet.</i>	unidentified worms	1,2,11	S-R	
<i>Eulalia sp.</i>		1	O	
<i>Eulalia viridis</i>	greenleaf worm	2,9	F-O	
<i>Arenicola sp.</i>	lugworm	1,2,5,6	F-O	
<i>Terebellidae indet.</i>		1	F	
<i>Eupolymnia nebulosa</i>		1,2,4,6,11	F-R	
<i>Lanice conchilega</i>	sand mason worm	1,2,3,4,5,6,11	F-R	
<i>Bispira volutacornis</i>	double spiral worm	3,5,11	O-R	
<i>Myxicola infundibulum</i>	eyelash worm	1,2,4,6	O-R	
<i>Sabella pavonnina</i>	peacock worm	2,6,11	F-R	
<i>Pomatoceros sp.</i>	keel worm	1,2,5,7,9,12	C-O	
<i>Spirorbis sp.</i>	spiral worm	1,2	O-R	
Pycnogonida				
	Sea Spiders			
<i>Pycnogonidae</i>	unidentified sea spider	4	R	
Crustacea				
	Barnacles, crabs and lobsters			
<i>Cirripedia.</i>	barnacles	1,5,9,12	A-F	
<i>Elminius modestus</i>		2	O	
<i>Balanus sp.</i>		9	C	
<i>Mysidacea</i>	mysid shrimp	7,9	O	
<i>Caridea</i>	unidentified shrimp	2	F	
<i>Palaemon serratus</i>	common prawn	4,5,12	F-R	
<i>Crangon crangon</i>	brown shrimp	1,2	R	
<i>Diogenes pugilator</i>		2	C-O	
<i>Paguridae</i>	hermit crabs	1,2,6,11	C-R	
<i>Anapagurus hyndmanni</i>		1	F-O	
<i>Pagurus bernhardus</i>	common hermit crab	1,2,3,4,6,7,8,9,10,11	C-R	
<i>Pagurus prideaux</i>		2,7,8	O-R	
<i>Galathea strigosa</i>	spiny squat lobster	11	R	
<i>Maja squinado</i>	spiny spider crab	1,2,3,6,7,9,10,11	F-R	
<i>Hyas araneus</i>	sea toad	2,11	R	
<i>Inachus sp.</i>	sponge spider crab	2,3,4,5,9,11	F-R	
<i>Inachus dorsettensis</i>	sponge spider crab	11	R	
<i>Inachus phalangium</i>	sponge spider crab	1,8	O-R	
<i>Macropodia sp.</i>	scorpion spider crab	1,2,3,4,6,9,11	O-R	
<i>Corystes cassivelaunus</i>	masked crab	1,2	R	
<i>Cancer pagurus</i>	edible/brown crab	1,2,3,4,5,8,9,10,11,12	F-R	
<i>Liocarcinus sp.</i>	swimming crab	1	O	
<i>Liocarcinus depurator</i>	harbour crab	2,8,11	O-R	
<i>Necora puber</i>	velvet swimming crab	1,3,5,7,8,9,10,11,12	F-R	
<i>Carcinus maenas</i>	shore crab	8	R	
<i>Goneplax rhomboides</i>	mud runner	2,4,8	O-R	

Scientific Name	Common Name	Site	Abundance	Notes
Mollusca	Molluscs			
<i>Gibbula</i> sp.	topshell	12	F	
<i>Gibbula magus</i>	turban topshell	1	O	
<i>Gibbula cinerea</i>	grey topshell	1,2,5,8,9	C-R	
<i>Gibbula umbilicalis</i>	flat topshell	1,2	C-R	
<i>Calliostoma zizyphinum</i>	painted topshell	2,5,8,9,11,12	F-R	
Patellacea	unidentified limpets	1,5,12	C-O	
<i>Patella vulgata</i>	common limpet	1	O	
<i>Turritella communis</i>	tower shell	1,2,6	O-R	
Littorinidae	unidentified periwinkle	1	C	
<i>Littorina littorea</i>	common periwinkle	1	C	
<i>Rissoa parva</i>		1,2,11	O-R	
<i>Aporrhais pespelecani</i>	pelican's foot shell	1,2	R	
<i>Crepidula fornicata</i>	slipper limpet	1,5,6,7,8,9,11	C-R	non-native species
Simnia sp.	false cowrie	11	R	
<i>Trivia arctica</i>	arctic cowrie	5,11	O-R	
<i>Triva monacha</i>	european cowrie	11	R	
<i>Polinices</i> sp.		1	O	
<i>Euspira catena</i>		2	O-R	
<i>Epitonium clathrus</i>		11	R	
<i>Ocenebra erinacea</i>	sting wrinkle	1-11	O-R	
<i>Nucella lapillus</i>	dog whelk	1	O	
<i>Buccinum undatum</i>	common whelk	2,3,8,11	F-R	
<i>Hinia reticulata</i>	netted dog whelk	1,2,4,5,7,8,9,11	C-R	
<i>Acteon tornatilis</i>		2	R	
<i>Philine aperta</i>		1,2,6	F-O	
<i>Elysia viridis</i>		4	R	
<i>Aplysia punctata</i>	sea hare	2,4,9	O-R	
<i>Gonidoris nodosa</i>		11	R	
<i>Okenia elegans</i>		2,11	R	nationally scarce
<i>Crimora papillata</i>		11	O	
<i>Polycera faeroensis</i>	yellow edged polycera	11	R	
<i>Polycera quadrilineata</i>	lined polycera	2	R	
<i>Limacia clavigera</i>		11	R	
<i>Pelecypoda indet.</i>	unidentified bivalve	1	F	
<i>Mytilus</i> sp.	mussel	9	R	
<i>Mytilus edulis</i>	blue mussel	1,3,4,5,11,12	C-R	
<i>Ostrea edulis</i>	native oyster	1,2,5	O-R	BAP/FOCI species
<i>Pecten maximus</i>	king scallop	1,2,6,7,9,11	O-R	
<i>Chalmys distorta</i>	humpback scallop	6	R	
<i>Acanthocardia aculeata</i>	spiny cockle	6	R	
<i>Mactra</i> sp.		1	R	
<i>Lutaria angustior</i>		1	O	
<i>Lutraria lutraria</i>	common otter shell	2,11	F-O	
<i>Ensis</i> sp.	razor shell	1,2,6,11	C-O	
<i>Chamelea gallina</i>		1	O	
<i>Dosinia exolata</i>		1	O	
<i>Mya truncata</i>	blunt gaper	2,11	F-R	
<i>Gastrochaena dubia</i>		1,9	C-O	
Pholadidae	unidentified piddock	9	F	
<i>Sepia officinalis</i>	cuttlefish	1,2,4,6	O-R	
<i>Sepiolo atlantica</i>	little cuttle	2	R	

Bryozoa	sea mats and sea mosses			
<i>Crisia</i> sp.	white claw sea moss	1,3,9,11	C-O	
<i>Crisia aculeata</i>		11	P	
<i>Crisia denticulata</i>		11	P	
<i>Crisia denticulata</i>		11	P	
<i>Crisia ramosa</i>		11	P	
<i>Eurystrotos compacta</i>		11	P	
<i>Alcyonidium diaphanum</i>	finger bryozoan	11	O	
<i>Alcyonidium hirsutum</i>		11	O	
<i>Nolella dilatata</i>		11	P	
<i>Aetea anguina</i>	snakes head coralline	11	P	
<i>Membranipora membranacea</i>	sea mat	2,5,9,12	F-O	
<i>Electra pilosa</i>	frosty sea mat	2,9,11,12	C-R	
<i>Chartella papyracea</i>		11	F	
<i>Bugula</i> sp.	unidentified spiral bryozoan	3,11	O-R	
<i>Bugula flabellata</i>	spiral bryozoan	11	O	
<i>Scrupocellaria</i> sp.		1,9	C-F	
<i>Cellaria</i> sp.		3,11	F-R	
<i>Cellaria sinuosa</i>		11	P	
<i>Pentapora foliacea</i>	potato crisp bryozoan	9,11	R	
<i>Parasmittina</i> sp.		11	R	
<i>Microporella ciliata</i>		11	P	
<i>Haplopoma impressum</i>		11	P	
<i>Cellepora pumicosa</i>	pumice bryozoan	9	O	
<i>Bryozoa</i> indet. crusts	encrusting bryozoans	1,5,11	C-R	
Echinodermata	Starfish, sea urchins and sea cucumbers			
<i>Antedon bifida</i>	common featherstar	3,4,10,11	A-R	
<i>Luidia ciliaris</i>	seven armed starfish	3,4,8	R	
<i>Astropecten irregularis</i>	sand star	2	R	
<i>Asteria rubens</i>	common starfish	2,3,5,7,8,10,11	C-R	
<i>Marthasterias glacialis</i>	spiny starfish	9	R	
<i>Amphiura</i> sp.		1	F	
<i>Amphiura brachiata</i>		2,4,6	F-R	
<i>Ophiura</i> sp.	sand brittlestars	1,2,4	O-R	
<i>Ophiura albida</i>	sand brittlestar	1	O	
<i>Ophiura ophiura</i>	sand brittlestar	2,11	O-R	
<i>Echinocardium cordatum</i>	heart urchin	2	R	
<i>Echinocardium flavescens</i>	heart urchin	2	R	
<i>Aslia lefeveri</i>	brown crevice sea cucumber	11	O	
<i>Lapidoplax digitata</i>		1,2	F-O	
Tunicata	Sea Squirts			
<i>Clavelina lepadiformis</i>	light bulb sea squirt	10,11	O-R	
<i>Polyclinum aurantium</i>		11	P	
<i>Morchellium argus</i>	pink club sea squirt	9,11,12	F-R	
<i>Sidnyum elegans</i>		3,9,11	O-R	
<i>Aplidium pallidum</i>		9	R	
<i>Aplidium punctum</i>	orange club sea squirt	8,9	O-R	
<i>Didemnum</i> sp.		3	O	
<i>Diplosoma spongiforme</i>	sponge sea squirt	5	F	
<i>Ciona intestinalis</i>	yellow ringed sea squirt	4	O	
<i>Asciella aspersa</i>		4	R	
<i>Ascidia conchilega</i>		11	O-R	
<i>Ascidia mentula</i>	red sea squirt	11	O-R	
<i>Phallusia mammillata</i>	giant sea squirt	5	R	
<i>Styela clava</i>	leathery sea squirt	5,9,11	R	non-native species
<i>Polycarpa scuba</i>	teapot squirt	9,11	C-O	

Scientific Name	Common Name	Site	Abundance	Notes
<i>Dendrodoa grossularia</i>	gooseberry sea squirt	11,12	O-R	
<i>Distomus variolosus</i>	baked bean sea squirt	11	R	
<i>Stolonica socialis</i>	orange sea squirt	11	F-O	
<i>Botryllus schlosseri</i>	star sea squirt	2,3,4,9,12	O-R	
<i>Molgula sp.</i>		11	O	
Pisces	Fishes			
<i>Scyliorhinus canicula</i>	lesser spotted catshark	2	O-R	
<i>Lophius piscatorius</i>	anglerfish/monkfish	6,11	R	BAP/FOCI species
<i>Pollachius pollachius</i>	pollack	4,5	R	
<i>Trisopterus luscus</i>	bib/pouting	5	O	
<i>Trisopterus minutus</i>	poor cod	6	O	
<i>Hippocampus hippocampus</i>	short-snouted seahorse	2	R	
<i>Syngnathus acus</i>	greater pipefish	1,2,3,7,11	F-R	
<i>Taurulus bubalis</i>	long spined sea-scorpion	5	R	
<i>Crenilabrus melops</i>	corkwing wrasse	5,12	O-R	
<i>Ctenolabrus rupestris</i>	goldsinny wrasse	5,7,9,10,12	R	
<i>Labrus bergylta</i>	ballan wrasse	1,4,5,7,8,12	F-R	
<i>Echiichthys vipera</i>	lesser weever	7	R	
<i>Triperygion deleasi</i>	black faced blenny	5	R	
<i>Ammodytes sp.</i>	sand eel	4	O	
<i>Callionymus sp.</i>	unidentified dragonet	2	O	
<i>Callionymus lyra</i>	common dragonet	1,2,4,6,7,9,10	F-R	
<i>Callionymus reticulatus</i>	reticulated dragonet	1,9	F	
<i>Aphia minuta</i>	transparent goby	6	R	
<i>Gobius niger</i>	clack goby	7	R	
<i>Gobiusculus flavescens</i>	two spot goby	2,9	O	
<i>Pomatoschistus sp.</i>	small unidentified goby	1,2,4,5,9	C-R	
<i>Pomatoschistus minutus</i>	sand goby	2,6,7,11	F-O	
<i>Pomatoschistus pictus</i>	painted goby	1,4,6,7,8,9	F-R	
<i>Thorogogius ehippiatus</i>	leopard spotted goby	6	R	
Pleuronectidae	unidentified flatfish	1	F	
Mammalia	Mammals			
<i>Halichoerus grypus</i>	Atlantic grey seal	6,12	R	
Algae	Seaweeds			
<i>Cyanophycota</i>	blue-green algae	1	R	
<i>Rhodophycota indet.</i>	various red seaweeds	all	A-O	
<i>Porphyra sp.</i>	laver	1	O	
<i>Asparagopsis armata</i>	harpoon weed	1	O-R	non-native species
<i>Bonnemaisonia hamifera</i>	Bonnemaison's hook weed	1	R	non-native species
<i>Gelidium sp.</i>		1	F	
<i>Gelidium latifolium</i>	spiny straggle weed	1	F	
<i>Palmaria palmata</i>	dulse	1,8,9,12	F-O	
<i>Rhodothamniella floridula</i>	sand binder	1	R	
<i>Corallina sp.</i>	coralline algae	1,9,12	F	
<i>Corallina officinalis</i>	common coral weed	1,5,9	F	
<i>Jania rubens</i>	slender-beaded coral weed	1,9	O-R	
<i>Calliblepharis ciliata</i>	fringe weed	1,9,11	C-O	
<i>Cystoclonium purpureum</i>	purple claw weed	1	O	
<i>Dilsea carnosa</i>	red rags	1,2,5,9	O	
<i>Dumontia contorta</i>	Dumont's tubular weed	1	O	
<i>Furcellaria lumbricalis</i>	clawed fork weed	1,9	O-R	
<i>Chondracanthus acicularis</i>	creephorn	1,9	O	
<i>Chondrus crispus</i>	caragheen	1,5,8,9,12	F-O	
<i>Callophyllis laciniata</i>	beautiful fan weed	1,2,9	O-R	

<i>Kallymenia reniformis</i>	beautiful kidney weed	1,9	O-R	
<i>Meredithia microphylla</i>	mermaid's ear	11	F	
<i>Phyllophora crispa</i>	sandy leaf bearer	1,9	F-O	
<i>Phyllophora pseudoceranoides</i>	stalked leaf bearer	9	R	
<i>Phyllophora sicula</i>	hand leaf bearer	9	C	
<i>Schottera nicaeensis</i>	shaded weed	1	R	
<i>Polyides rotundus</i>	discoid fork weed	5	F	
<i>Solieria chordalis</i>	Solier's red string weed	1	O	
<i>Gracilaria</i>		1,6	O	
<i>Gracilaria gracilis</i>	slender wart weed	1,2	O	
<i>Plocamium cartilagineum</i>	cock's comb weed	1,2,9	A-R	
<i>Chylocladia verticillata</i>	juicy whorl weed	1	R	
<i>Gastroclonium ovatum</i>	red grape weed	1	O	
<i>Antithamnionella ternifolia</i>		1	P	
<i>Ceramium echionotum</i>	banded pincer weed	1	O	
<i>Halurus flosculosus</i>	Mrs Griffith's little flower	9	R	
<i>Microcladia glandulosa</i>	flattened pincer weed	1	F	
<i>Monosporus pedicellatus</i>		9	R	
<i>Pterothamnion plumula</i>	bushy feather weed	1	P	
<i>Heterosiphonia sp.</i>		1,9	C-O	
<i>Heterosiphonia plumosa</i>	siphoned feather weed	1,2,5,8,9,11	C-R	
<i>Cryptopleura ramosa</i>	fine-veined crinkle weed	1,9	O	
<i>Delessaria sanguinea</i>	sea beech	1,2,8,9,11,12	F-R	
<i>Drachiella spectabilis</i>	rainbow weed	2,11	F-O	
<i>Erythroglossum laciniatum</i>	flat tongue weed	1	R	
<i>Phycodrys rubens</i>	sea oak	2	C	
<i>Boergeseniella fruticulosa</i>	tufted shrub weed	9	R	
<i>Brongniartella byssoides</i>	Brogniart's thread weed	1	O	
<i>Chondria dasyphylla</i>	diamond cartilage weed	1	F	
<i>Osmundea osmunda</i>	rounded fern weed	1	O	
<i>Polysiphonia sp.</i>		8	F-R	
<i>Polysiphonia elongata</i>	elongate siphon weed	1,2,9	F-O	
<i>Polysiphonia stricta</i>	pitcher siphon weed	1	O	
<i>Chromophycota</i>	unidentified brown seaweed	1,8,9	F-R	
<i>Colpomenia peregrina</i>	oyster thief	1,9	R	non-native species
<i>Dictyota dichotoma</i>	brown fan weed	1,2,9,12	F-R	
<i>Desmarestia aculeata</i>	Landlady's wig	1,9	R	
<i>Desmarestia ligulata</i>	Desmarest's flattened weed	1,9	R	
<i>Chorda filum</i>	mermaid's tresses	7	O	
<i>Laminaria sp.</i>	unidentified kelp	1	C	
<i>Laminaria digitata</i>	oarweed	12	A	
<i>Laminaria hyperborea</i>	cuvie, forest kelp	1,2,4,5,9,12	C-O	
<i>Saccharina latissima</i>	sugar kelp	1,2,5,8,9	F-O	
<i>Saccorhiza polyschides</i>	furbellows	2,5,8,9	C-O	
<i>Halidrys siliquosa</i>	podweed	1,5,8,9	F-O	
<i>Fucus sp.</i>	unidentified wrack	1,12	C-F	
<i>Fucus serratus</i>	serrated wrack	5,6	C-F	
<i>Himanthalia elongata</i>	thong weed	5	O	
<i>Sargassum muticum</i>	wireweed	1,4,5,8,9	C-O	non-native species
<i>Chlorophycota</i>	unidentified green seaweed	8	R	
<i>Ulva sp.</i>		1,6,7,8,9,12	F-R	
<i>Ulva lactuca</i>	sea lettuce	1,2,5,9	C-O	
<i>Codium sp.</i>		9	R	
encrusting algae indet.	pink encrusting algae	1,2,4,5,9,11,12	C-R	
Angiospermae	Seagrasses			
<i>Zostera marina</i>	eelgrass	2,4,5,6,7,8,11	A-R	