

The table to the right shows how many species were recorded in each group and some of the most widely distributed species.

**Sponges**

A wide diversity of sponges was recorded. Particularly common on exposed, westerly facing, sites was the carrot sponge *Esperiopsis fucorum* (photo on inside page), which was much less common at the easterly sites visited in September 2004. The greatest diversity was on slightly silted ledges at Mussel Rock (16spp) and Westward Ledges (15spp). The nationally scarce *Axinella damicornis* was recorded from four different sites.

**Anemones, Corals, Hydroids & Jellyfish**

This is the most widely recorded of the animal groups with 30 species, many of which were very common.

Plumose, jewel and elegant anemones dominated many of the vertical surfaces whilst Devonshire cup-corals and dahlia anemones were found in areas with some sediment.

Three nationally scarce species were recorded, including pink sea fans, but none were common.

The oaten pipe hydroid, *Tubularia indivisa* and the smaller *Tubularia larynx* (below), were prominent at many sites. These species are usually abundant in suitable locations in the spring and are an important food source for many sea slugs, whose numbers also peak at this time.



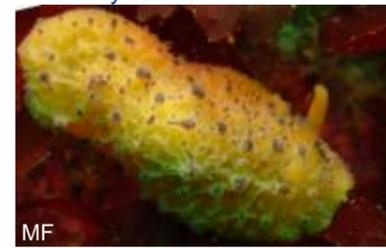
**Crabs and Lobsters**

These were not common at any of the sites though commercial species such as the edible crab and lobster were both regularly recorded in small numbers. Most surprising was the lack of spiny spider crabs, which were only seen at two sites and were recorded as rare on those occasions. This is a widespread and common species elsewhere in SW Britain.

Phylum	Common Name	Number of species	Common Species
Porifera	Sponges	26	Shredded carrot sponge <i>Esperiopsis fucorum</i> Boring sponge <i>Cliona celata</i>
Cnidaria	Anemones, corals, hydroids, jellyfish	30	Oaten pipe hydroid <i>Tubularia indivisa</i> Dead men's fingers <i>Alcyonium digitatum</i> Red fingers <i>Alcyonium glomeratum</i> Dahlia anemone <i>Urticina felina</i> Elegant anemone <i>Sagartia elegans</i> Jewel anemone <i>Corynactis viridis</i> Devonshire cup coral <i>Caryophyllia smithii</i>
Platyhelminthes	Flatworms	1	
Annelida	Segmented worms	10	
Crustacea	Crabs, lobsters, barnacles	14	Edible crab <i>Cancer pagurus</i> Velvet swimming crab <i>Necora puber</i>
Mollusca	Shells, sea slugs, cuttlefish	25	Nudibranch <i>Coryphella browni</i>
Bryozoa	Sea mats	10	Sea Mat <i>Membranipora membranacea</i> Potato crisp bryozoan <i>Pentapora foliacea</i>
Echinodermata	Starfish, sea urchins, sea cucumbers	11	Common starfish <i>Asterias rubens</i> Spiny starfish <i>Marthasterias glacialis</i> Common urchin <i>Echinus esculentus</i> Sea cucumber <i>Pawsonia saxicola</i>
Tunicata	Sea squirts	14	colonial sea squirt <i>Aplidium punctum</i>
Pisces	Fishes	11	Ballan wrasse <i>Labrus bergyllta</i> Two spot goby <i>Gobiusculus flavescens</i>
Mammalia	Mammals (seals & dolphins)	1	
Algae	Seaweeds	35	Red rags <i>Dilsea carnosa</i> Sea beech <i>Delessaria sanguinea</i> branched brown seaweed <i>Dictyota dichotoma</i> Cuvie <i>Laminaria hyperborea</i> Furbelows <i>Saccorhiza polyschides</i> Eelgrass <i>Zostera marina</i>
Angiospermae	Flowering plants	1	
<b>Total Species</b>		<b>147</b>	

**Molluscs**

The 25 species recorded included 14 different nudibranchs (sea slugs). They were commonly found feeding, especially on the hydroids. They included the sponge nudibranch, *Doris sticta* (below), which is nationally scarce.



**Starfish, Sea urchins and Sea cucumbers**

Whilst the diversity of echinoderms was low, the spiny starfish, *Marthasterias glacialis*, common sea urchin, *Echinus esculentus*, and cottonspinner, *Holothuria forskali* were commonly recorded. These are all typical south-westerly species.

**Bryozoans**

There were a number of prominent species, including the potato crisp bryozoan, *Pentapora foliacea*, which is a typical clear water species.

**Fishes**

The most common fishes in the study area were wrasses with all five British species recorded. The ballan wrasse was the most common.

**Seaweeds and Seagrasses**

*In situ* identification of seaweeds is a specialist task and at most sites only the most prominent species were recorded. The sea beech, *Delessaria sanguinea* (right) was especially common. A large healthy eelgrass bed was recorded in the Tresco Channel.



Species	Designation	Where found
<b>Sponge</b>		
<i>Axinella damicornis</i>	scarce	Occasional - 4 sites
<b>Pink sea fan</b>		
<i>Eunicella verrucosa</i>	scarce/BAP	6 sites - common at 1 but rare elsewhere
<b>Yellow cluster anemone</b>		
<i>Parazoanthus axinellae</i>	scarce	Men-a-vaur only, rare
<b>Scarlet and gold star coral</b>		
<i>Balanophyllia regia</i>	scarce	Peninnis Head only, frequent
<b>Sponge nudibranch</b>		
<i>Doris sticta</i>	scarce	Rare - 4 sites
<b>Eelgrass</b>		
<i>Zostera marina</i>	BAP	Tresco Channel

Nationally rare and scarce as defined by JNCC.

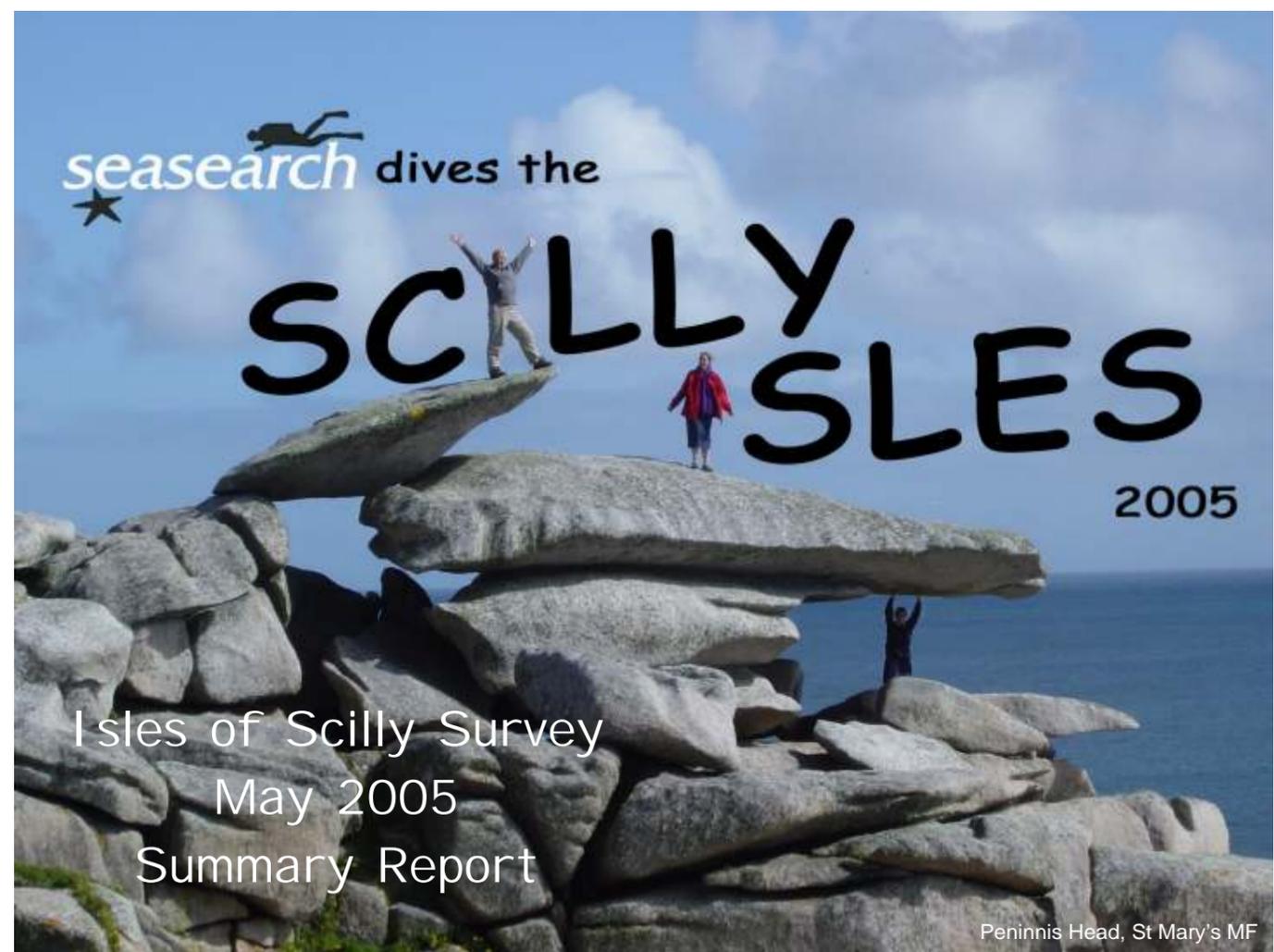
This Seasearch survey was organised as a part of the Marine Conservation Society's Member's Dives Programme. Surveyors taking part were:

Vicki Billings, Fiona Crouch, Mike Flavell, Christine Harling, Rohan Holt, Chris Pirie, Kirsten Ramsay and Chris Wood. Other divers were Sam Cook, Pete Lilley, Darren Murray and David Vinicombe. We would also like to thank Jolene and Tim Allsop.

Text by Chris Wood. Photographs by Mike Flavell (MF), and Chris Wood (CW).



Seasearch is a volunteer underwater survey project for recreational divers to contribute to the conservation of the marine environment. Financial support for the project during 2005/6 and for the production of this summary report has been given by:



peacock worm MF



jewel and plumose anemones CW



spiny starfish and elegant anemones CW



Coryphella browni MF

Peninnis Head, St Mary's MF

### Great High Rock ⑩



carrot sponge MF

This is a coastal site on the west side of Bryher. The main physical feature is a surge gully with rock sides and boulders in the bottom, leading to a boulder slope. There was kelp cover in the shallows and a variety of sponges, especially carrot sponge, *Esperiopsis fucorum*.

### Tresco Channel ⑫



shore crabs mating MF

The channel between Tresco and Bryher comprises sand and gravel with mixed brown, red and green seaweeds, including very large sugar kelps, *L. saccharina*. On the eastern side of the channel is a dense and healthy eel grass bed with many snakelocks anemones, red -specked pimplets, *Anthropleura ballii*, and a variety of tube worms.

### Maen-a-vaur ⑧ & ⑪

Two contrasting sites were visited, the narrowing gully between the two parts of the rock and walls and pinnacles to the west of the main rock. The steep sided rocks on the westerly site had species such as the dead mens fingers shown to the right.



MF

The gully is open to the north and narrows and shallows to the south. There was kelp forest on the upper parts with sparse kelps and a mixed algal/animal turf below. At the southern end there were typical surge gully conditions with scoured bedrock, pink encrusting algae and a community dominated by *Dendrodoa* sea squirts, and *Clathrina* sponge.

### Westward Ledge ⑦ & Mussel Rock ⑨

Both sites have exposed vertical walls from shallow water to at least 30m. In the case of Mussel Rock there is then a slope of very large boulders and bedrock slabs, whilst the wall at Westward Ledge went down to 50m.

The Westward Ledge wall was dominated by oaten pipe hydroids, *Tubularia indivisa*, which were being eaten by nudibranchs, principally *Coryphella browni*. Elegant sponges. Sixteen species of anemones were also common.



At Mussel Rock (above), the deep rocks had flat ledges with a little silt and many cup corals and sponges. Sixteen species of sponge were recorded here.

### Wrecks of the Delaware ⑤ and Empire ⑥

Both of these sites consist of flat rocky seabed with small amounts of wreckage providing some variety of topography. The Delaware site is slightly shallower and had a red algal turf with sparse kelp on the shallower parts. The main piece of wreckage was covered in

oaten pipe hydroid, *Tubularia indivisa*.

The site of the Empire also had an algal turf but was notable for the abundance of the carrot sponge, *Esperiopsis fucorum*. Eight different nudibranchs, sea slugs, were recorded here.

### Trenemene Wall ④

This is a classic Scillies wall with an abundance of plumose, jewel and elegant anemones on a vertical face to about 45m depth. Hydroids, *Tubularia indivisa*, were also common at this time of year.

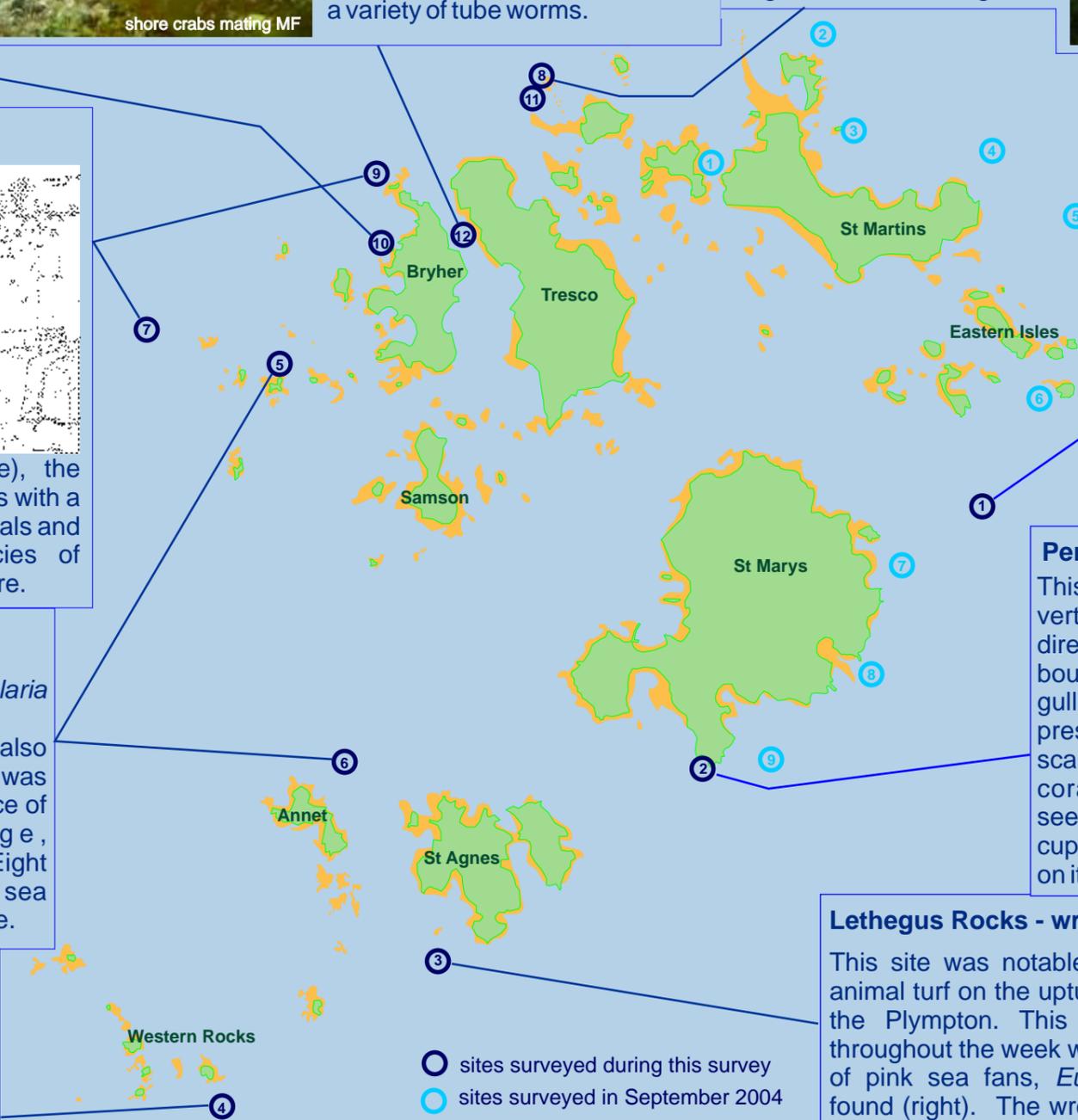
Atlantic grey seals are common on the Western Rocks and we were joined by a seal in shallow water at the end of our dive.



CW

### Survey sites

The sites surveyed were limited by strong winds during the second half of the survey week, and at this time we were only able to dive sites to the north and west as the winds were from the east. However, this was the opposite of the conditions during the previous survey in 2004 and means that 21 different sites throughout the islands have been surveyed within the last year.



- sites surveyed during this survey
- sites surveyed in September 2004

### Trinity Rock ①

This is a rocky reef with the top at a depth of 16m and steep rocky walls to 37m. The site has a very irregular topography with numerous drops offs and pinnacles. It was notable for the presence of the football sea squirt, *Diazona violacea*, potato crisp bryozoans and soft corals.



CW

The main kelp plant on the reef top was *Laminaria ochroleuca* (above) which is limited to south-west England. The more widely distributed *L. hyperborea* was also present.

### Peninnis Head ②

This is a coastal site with vertically sided deep gullies directly off the point and large boulders at the base. The gullies were notable for the presence of the nationally scarce scarlet and gold cup coral. *Balanophyllia regia* seen left with a Devonshire cup-coral *Caryophyllia smithii* on its right.



MF

### Lethagus Rocks - wrecks of Plympton & Hathor ③

This site was notable mainly for the rich tall animal turf on the upturned hull of the wreck of the Plympton. This was the only location throughout the week where significant numbers of pink sea fans, *Eunicella verrucosa*, were found (right). The wreck dates from 1909 and the density of sea fans was up to one colony per square metre. This appears to be an area where there is a variety of local current flows as there were a number of colonies with branches in more than one plane. The condition of the sea fans was good and, as at other sites in the islands, there was a proportion of white colonies, 31% in this case (5 out of 16 fans measured).

In the same habitat were many potato crisp bryozoans, *Pentapora foliacea*, the hedgehog sponge, *Polymastia boletiformis* and other branching sponges.



MF