

Algae

Seaweeds are often overlooked whilst diving, although 25 species were recorded during the 2003 surveys. Many were simply included as 'mixed reds' or similar. Further training in seaweed identification may be required.

Sponges

A variety of sponges were recorded, however this group of animals is notoriously difficult to identify in situ so very few of the rarer or less well known species were reported.

Anemones, Corals, Hydroids and Jellyfish

13 different anemones were recorded, including the nationally scarce yellow cluster anemone *Parazoanthus axinellae* that inhabits dark overhangs and crevices. Jewel anemones were very common on the vertical rock faces of many of the dive sites.

Of the corals, pink sea fan was found at a lot of sites, including some new records. Historic data does not reflect this wider distribution and it seems that this nationally scarce species isn't as rare as thought in Cornish waters. A worrying note was that about half of the sea fans at Maen Garrick on the Manacles were in poor condition. Several jellyfish species were seen.

Crabs and lobsters

Edible crabs, velvet swimming crabs, and spiny spider crabs were recorded as common at many sites including rocky and sandy habitats. Lobsters were also recorded on several dives, including within the St. Agnes No Take Zone although pots were also seen in the area, which indicates some non-compliance with the voluntary designation.

Shells and sea slugs

Many of the usual shallow rocky reef species were recorded such as limpets, mussels and topshells. The non-native slipper limpet *Crepidula fornicata* was found in the Helford which may cause

Table 1: Species recorded per group and most common species found.

Phylum	Common name	Number of species	Common species
Algae	Seaweeds	25	Kelp
Porifera	Sponges	19	Boring sponge Golf ball sponge Orange encrusting sponge
Cnidaria	Anemones, jellyfish hydroids, corals	30	Snakelocks anemone Jewel anemone Dead mens fingers Pink sea fan
Annelida	Worms	13	Keelworm Peacock worm Crevice tube worm
Crustacea	Crabs, lobsters, prawns, barnacles	17	Edible crab Velvet swimming crab Spiny spider crab
Mollusca	Shells, sea slugs, cuttlefish	33	Topshell Limpet Sea lemon
Bryozoa	Sea mats, sea firs	8	Sea mat Potato crisp bryozoan
Echinodermata	Starfish, brittlestars, urchins, cucumbers	16	Common starfish Spiny starfish Edible urchin
Tunicates	Seasquirts	13	Lightbulb seasquirt Baked bean seasquirt
Pisces	Fish	42	Cuckoo wrasse Ballan wrasse Pollack Bib
Total Species	218		

problems for the oyster populations there. No native oysters were recorded from any of the survey sites.

12 species of sea slug were recorded, the most common being the sea lemon *Archidoris pseudoargus*.

Starfish, sea urchins, and sea cucumbers

The common starfish, spiny starfish, edible urchin and cotton spinner were recorded from most sites. Less common echinoderms that were found included the feather star *Antedon bifida* and gravel cucumber *Neopentadactyla mixta*.

Fish

This was the most diverse group of animals recorded with 42 different species. Fish were seen at most sights surveyed. The most common were the wrasse, particularly cuckoo and

ballan wrasse which were seen at most rocky sites. Fish from the cod family such as pollack and bib were also recorded from a

large number of sites. Amongst the rarer fish were ling, red gurnard, john dory and sunfish.

Table 2 Nationally Rare and Scarce Species recorded during 2003

Species	Designation	Where found
Eelgrass	BAP long list	Helford.
<i>Zostera marina</i>		(Abundant off Durgan).
Maerl	rare / BAP	Old Walls. Fal Bay.
<i>Lithothamnion coralloides</i>		Nare Head.(Occasional).
Yellow cluster anemone	scarce/ BAP long list	Manacles. (Rare).
<i>Parazoanthus axinellae</i>		
Trumpet anemone	scarce/ BAP long list	Manacles. (Rare).
<i>Aiptasia mutabilis</i>		
Pink sea fan	scarce / BAP	Wide distribution of sites including new records at Port Quin, St. Agnes, Gorren Haven. (Frequent.)
<i>Eunicella verrucosa</i>		
Scarlet and gold coral	scarce / BAP long list	St. Agnes. (Rare).
<i>Balanophyllia regia</i>		
Ling	BAP	Porthallow. Manacles. (Rare).
<i>Molva molva</i>		
Nationally rare and scarce as defined by JNCC BAP = Biodiversity Action Plan		

These survey dives were organised as part of the Cornwall Wildlife Trust's Seasearch training programme. Other surveys were carried out independently and contribute to our database of information and records.

Over 100 divers took part in Cornwall's Seasearch surveys during 2003, too many to mention individually here, but thanks to all involved.

This report has been prepared by Ruth Williams.

Photographs are by John Trenain, Paul Naylor and Seasearch contributors.



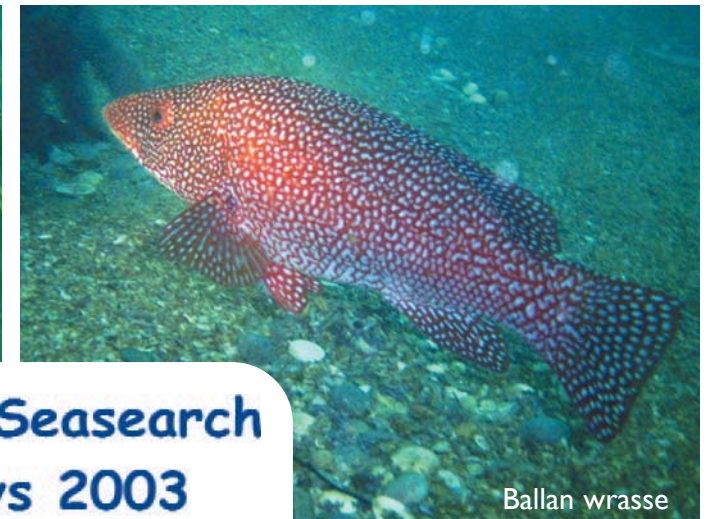
Seasearch is a volunteer underwater survey project for recreational divers to contribute to the conservation of the marine environment. Financial support for the project during 2003 and for the production of this summary report has been given by:



Cornwall



Eel grass



Ballan wrasse

Cornwall Seasearch Surveys 2003 Summary Report



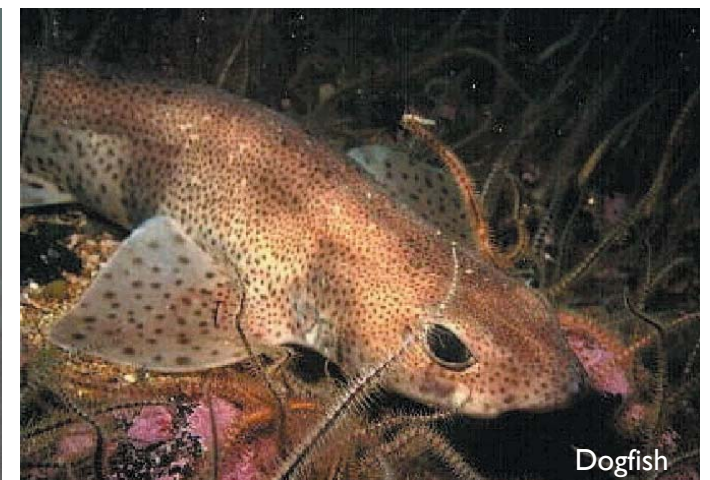
Pink sea fan



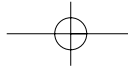
Slipper limpet



Diver with sea fan



Dogfish



St. Agnes

Seasearch divers were asked to survey the voluntary No Take Zone (NTZ) at St. Agnes to determine seabed cover and species diversity. The initial dives at two locations within the NTZ were carried out in April 2003.

The first site north of Green Island consists of a rocky reef and boulders going down to a depth of 10m, with heavy sand scour at the base. Even though this site is within the NTZ, there was evidence of lobster potting activity. Attached life is limited due to the sand scour, but includes cushion stars, dahlia and strawberry anemones, sponges including *Esperiopsis fucorum* and *Hemimycale columella*, the European cowrie *Trivia monacha*, and abundant sea lemon egg masses. Of particular note at this site is the nationally scarce scarlet and gold cup coral *Balanophyllia regia*. *Rhizostoma octopus* jellyfish were seen at the surface.

The second site, at Gadger Cave to the north of the NTZ, was accessed through a sea arch. This is a rich site with abundant life including very large dahlia anemones and edible mussels amongst the kelp park. Dead men's fingers, jewel anemones, and a variety of encrusting sponges were recorded from the vertical rock faces and lobster were found along with other crustaceans (edible, velvet swimming and spider crabs).

Other areas surveyed near St. Agnes include:

The Arches, St. Agnes Head, King Harry Ferry wreck (including a new record of pink sea fan *Eunicella verrucosa*), Bawden Rock, Trevellas Porth and Trevaunance Point.



Dahlia anemone: Paul Naylor

North Cornwall

The north coast of Cornwall can be a difficult place to dive with big surf and limited access. Consequently there are very few records of what marine life is found along this stretch of coastline so it was a priority to get Seasearch underway here. Members of Bude BSAC surveyed Millook beach as part of their Seasearch Observer training during June 2004. This popular beach to the south west of Widemouth Bay, is well known to local divers. From the shore, a serrated rocky reef interspersed with sand patches extends out to 9m deep.

Kelp covered rocks in shallow water are replaced by mixed reds on the reef tops and coralline algae and *Lithothamnion* on the slopes. The angled reefs form sheltered crevices on the shoreward side, home to velvet swimming crabs, edible crabs, spider crabs and the occasional lobster. Tompot and other blenny species were also seen, as well as the usual rocky reef animal turf of limpets, barnacles, strawberry and snakelocks anemones and seaquirts. Sand scour around the reef limits the species found. A seal watched inquisitively at the surface.

Other areas surveyed in North Cornwall include:

Bosccastle Harbour, Cow and Calf near Port Quin, Stepper Point and wreck of Arthur town near Padstow, Moulds Island at Port Quin (new record of pink sea fan *Eunicella verrucosa*), Trevoze Head, Port Gaverne, Newlands Rock in Camel estuary (another new pink sea fan site).



Velvet swimming crab: Paul Naylor

Mounts Bay and Penwith

Low Lee Reef, about 2km out of Newlyn Harbour was the site Penzance BSAC chose as their Seasearch training dive in May. The rocky reef lies between 14 and 18m deep and has been made into a roped underwater nature trail. The scattered wreckage of the SS Primrose adds further interest.

This site has abundant marine life from all taxonomic groups. The reef tops and surrounding boulders are covered in kelp and mixed red and brown seaweeds. Common and spiny starfish, sea urchins and sea cucumbers *Holothuria forskali* are abundant on the boulders and in gravel patches. The vertical rock faces of the reef itself are covered in jewel anemones, *Actinothoe sphyrodeta* anemones, Devonshire cup corals, dead men's fingers, sponges, lightbulb seaquirts, star seaquirts, and sea beard hydroids. A variety of fish species were recorded including wrasse and flatfish species, bib, dogfish and conger eels, particularly around the wreck.

Other areas surveyed in this area include:

The Alice Marie wreck in Mounts Bay, the Conqueror wreck near Lamorna, Logans Rock off Porthcurno, the Zone wreck off Hayle, and Godrevy Point.



Yellow cluster anemone,

Lizard and Manacles

The Manacles is a huge draw for divers with vertical rocks jutting out of the sea and numerous wrecks. It also has an amazing amount of marine life and several sites have been well surveyed in the past. Several independent divers carried out Seasearch dives around the Manacles and the Lizard area during 2003. Some of the sites surveyed are detailed below.

Drawna Rocks, off Porthkerris, can be dived from shore. Pink sea fans were recorded at 13m, and red gurnard was seen which is an unusual sight during daylight hours.

The **SS Volnay wreck**, off Porthallow, lies on sand at about 20m. The wreck is covered in dead men's fingers and *Carophyllia smithi* with a sizeable colony of pink sea fans at one end. Ling was also recorded at this site.

Raglan Reef, The Manacles, is a popular rocky reef which drops down from about 5m below the surface to 22m deep. The faunal turf includes the usual mix of sponges, hydroids, jewel and plumose anemones. Of note at this site are the number of large pink sea fans and colonies of potato crisp bryozoan (*Pentapora foliacea*).

Maen Garrick, The Manacles, has steep rock faces from 16m to 24m with an area of flatter rock and sand at the base. Jewel anemones and dead men's fingers cover vertical surfaces and the Yellow cluster anemone, *Parazoanthus axinellae* was recorded in an overhang. There is a proliferation of pink sea fan colonies here, however it was noted that approximately 50% of the colonies are damaged or looking unhealthy.

The Voices, The Manacles, has a vertical face on one side with wreckage at its base and a slope of bedrock going down to about 25m. Numerous fish species are recorded here as well as jewel anemones and abundant pink sea fans.

Mullion Island is rocky reef slope with several deep gullies going down to a sand area at 20m. Kelp forest changes into typical rocky reef animal turf with a large number of sea urchins and spiny starfish *Marthasterias glacialis*.

Helford

The sheltered Helford estuary offers safe, shallow, shore diving, but is also home to one of the largest eelgrass beds in Cornwall which has been the subject of study by the Helford Voluntary Marine Conservation Group for several years. Duchy Divers surveyed this area off Grebe beach and Durgan as part of their Seasearch training. From the beach, the silty sand seabed extends out to the middle of the estuary with eelgrass beds flourishing between 2m and 5m. Eelgrass provides shelter, feeding and breeding grounds for a wide variety of animals which are often overlooked. Peacock worms *Sabella pavonina*, tube worms *Myxicola infundibulum* and daisy anemones are found in abundance in the sediment. Snakelocks anemones cling to the eelgrass blades and sand gobies and shoals of bib and wrasse were recorded. Unfortunately the invasive Japweed, *Sargassum muticum*, was also found at this site, as were the American import, slipper limpets *Crepidula fornicata*.

Fal Bay

Falmouth Bay has several well-known and well-surveyed sites. As part of their Seasearch training, Fal SAC helped to re-survey the Old Walls, off St. Anthony Head in July 2003.

The Old Walls are patches of reef interspersed with sand and cobbles at a depth of 25m. Very little algae is recorded at this depth but the rocks are covered in a rich animal turf. Dead men's fingers, the boring sponge *Cliona celata*, sea beard hydroids, spiny starfish, urchins and cotton spinners are abundant. Occasional patches of pink sea fans are recorded with large colonies of potato crisp bryozoan *Pentapora foliacea*. Beds of brittlestars are found between the reefs and small patches of live maerl, a nationally rare species and important habitat, are also recorded.

Duchy Divers surveyed Castle Beach in Falmouth in May 2003. This site is a well used shore dive with a varied rocky reef interspersed with sand and pebbles going to a depth of about 7m. The gullies, crevices and outcrops at this site add interest and ensure a wide diversity of species is found on each dive.

Castle beach reef has a thick kelp forest with other mixed seaweeds growing on the reef tops, with some japweed *Sargassum muticum*. This is home to a variety of fish including ballan, corkwing, goldsinny and cuckoo wrasse, pollack, pipefish, tompot blenny, sandeels and plaice. Common dogfish are abundant too. Cuttlefish were recorded but there weren't many crustaceans apart from an occasional spiny spider crab and velvet swimming crab.

Other areas surveyed in Fal Bay include:

Pendennis Point, The Hera wreck, Epsilon wreck, Gull Rock off Nare Head, Gwineas Reef off Gorran Haven (pink sea fans and an unconfirmed football sea squirt (*Diazona violacea*) record which is unusual for this area), and Dodman Point (more pink sea fans and a pod of 10 bottlenose dolphins).



Potato crisp bryozoan

