

## Squirts and aliens!

We ran two specialist training courses in 2012, including a comprehensive two-day course on an often unnoticed and under recorded group - the sea squirts.

We were extremely privileged to have Bernard Picton, Curator of Marine Invertebrates National Museums Northern Ireland, teaching the course. Bernard provided a fascinating insight into the ecology and taxonomy of this group during the classroom sessions. Sea squirts surprisingly belong to the phylum Chordata, like ourselves. They are primitive vertebrates (animals with a backbone) and start life as a swimming larvae, similar to that of a tadpole with a simplified nerve chord and back bone. When they settle and begin their sedentary adult life, they no longer need to coordinate movement, so digest their rudimentary brain!

24 divers attended the course and were rewarded with sightings of lightbulb sea squirts, beautiful flower-like star ascidians, and several non-native sea squirt species.

### Seasearch training



Seasquirts and bryozoans. Photo by Matt Slater

In 2012 we trained 45 local divers on various Seasearch courses, giving them the opportunity to actively participate in conserving their local marine environment. The following people completed their training dives and gained their qualifications:

#### Observer

Debra Walker,  
Becky Gill,  
Liz Clark,  
Mike Boyse

#### Surveyor

Lynda Rose

Phylum	Number of species recorded
Seaweeds	111
Sponges	56
Cnidarians	74
Worms	73
Molluscs	61
Crustaceans	41
Bryozoans	38
Echinoderms	22
Vertebrates	80
Seagrass	1



Seasearch students on a "virtual dive". Photo by Cat Wilding.



Cornwall



## Cornwall Seasearch Surveys - Summary report 2012



Jewel anemones - Malcolm Nimmo



Pink sea fans and dead mans fingers - Sally Sharrock



Common lobster - Emily Priestly



Small spotted catshark - Angie Gall



Leach's spider crab - Richard Morton



Cushion star (*Asterina phylactica*) - David Kipling

To get involved in Seasearch please contact [catherine.wilding@cornwallwildlifetrust.org.uk](mailto:catherine.wilding@cornwallwildlifetrust.org.uk) or visit our website [www.cornwallwildlifetrust.org.uk/seasearch](http://www.cornwallwildlifetrust.org.uk/seasearch)

These survey dives were conducted as part of the national Seasearch Programme. Many volunteers took part in these surveys during 2012, and we would like to thank all involved. Seasearch is a volunteer underwater survey project for recreational divers to actively contribute to the conservation of the marine environment. For details of Seasearch visit [www.seasearch.org.uk](http://www.seasearch.org.uk). For details of Seasearch in Cornwall visit [www.cornwallwildlifetrust.org.uk](http://www.cornwallwildlifetrust.org.uk). This report has been prepared by Catherine Wilding. Financial support for the production of this report and for data entry was provided by: Cornwall Wildlife Trust, SLICK Environmental Challenge Fund, GE money, Natural England and MCS.



# Cornwall Seasearch 2012

A total of 64 Seasearch dives were carried out this year, involving 34 recorders. This produced records for 557 species in Cornwall, totalling 2981 records.

## Porcupine MNHS

Divers travelled from throughout the UK to take part in the Porcupine Marine Natural History Society's Autumn field meeting, which was hosted in Cornwall this year. As part of the meeting, national experts on a variety of marine taxa contributed to Seasearch data, submitting 20 forms over the weekend. A fleet of survey boats simultaneously took to the water, surveying sites around the county including the Fal, Helford and Lizard area, west out from Penzance, and on the north coast out of Rock and Padstow. Divers recorded the spectacular nudibranch (*Janolus cristatus*), red sea fingers (*Alcyonium glomeratum*), and the unusual imperial anemone (*Capnea sanguinea*). Nationally scarce species were also found, including the beautiful yellow cluster anemone (*Parazoanthus axinellae*), the yellow branching sponge (*Axinella damicornis*), and scarlet and gold cup corals (*Balanophyllia regia*).



Lucky divers caught a glimpse of an ocean sunfish, (*Mola mola*) - rarely seen from beneath the water - near Tater Du light. Photo by Richard Morton.

## North Coast MCZs

In 2012 we focused on increasing the number of records from proposed Marine Conservation Zones (MCZ's) around the coast of Cornwall, to support the MCZ designation process. The north coast is notoriously difficult to dive, as consistent strong swells crash against the reef and beaches. We were lucky to receive records from within the Newquay MCZ. Blue mussels (*Mytilus edulis*) form dense beds in these exposed areas and are preyed upon by abundant spiny star fish (*Marthasterias glacialis*). Surveys were completed at Bawden Rocks in St Agnes VMCA which rewarded divers with views of thick carpets of brilliant jewel anemones, the flamboyant nudibranch (*Flabellina pedata*), candystripe flatworm and crevice sea cucumbers.



A tompot blenny peers out from between mussels and bright jewel anemones at Bawden Rocks. Photo by Angie Gall.



## Fowey

Seasearch divers worked with Fowey Harbour Commissioners and Falmouth Marine School to investigate the extent and biodiversity of the seagrass bed at Polruan pool. This area lies just outside the boundary of the proposed Marine Conservation Zone (MCZ). Fowey Harbour is also a Voluntary Marine Conservation Area (VMCA), a conservation initiative led by the local community. Seagrass is an important habitat which creates a nursery ground for many fish species, and protects the coastline from erosion.



A diver recording on a Seagrass bed. Photo by Sally Sharrock

Following an ROV survey by the University of Plymouth, divers surveyed the bed along transects, recording the density of the seagrass and biodiversity of other marine species present. Numerous anemones were found, including snakelocks (*Anemonia viridis*), dahlia (*Urticina felix*) and daisy (*Cereus pedunculatus*) anemones.

Intricate sand mason worms (*Lanice conchilega*) and netted dog-whelk (*Hinia reticulata*) were also present.

## Falmouth non-natives

Seasearch divers have continued their involvement with the Investigate Invasives Project, which is run by the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS). Non-natives can cause substantial problems in the marine environment, and the aim of the project is to find out more about which non-natives have reached our shores and settled. Divers are on the front line when it comes to observing the arrival or spread of new, potentially invasive, species and as such play a very important role in monitoring these species.

The Port of Truro and Falmouth Harbour Commissioners supported Seasearch divers in a unique study of eight different sites in the Fal and Helford Special Area of Conservation. Non-natives were

recorded along the length of the Fal from the upper reaches at Ruan Lanihorne to the Black Rock buoy in the middle of Falmouth Bay. A total of 12 different non-native species found, including the Darwin's barnacle (*Elminius modestus*), compass sea squirt (*Asterocarpa humilis*) and ruby bryozoan (*Bugula neritina*).

This information will be used to track and help minimise the spread on non-native species, by promoting best practice to boat owners and other water users. For more information on the project visit [www.ercis.org.uk/invasivespecies](http://www.ercis.org.uk/invasivespecies). These dives were co-funded by the SLICK project.

Only the siphons remain visible on this leathery seasquirt - the tunic is almost completely covered by other encrusting life forms, including the yellow "stars" of the star ascidian, and the grey *Diplosoma* sp. Photo by Caz Waddell.



## St Austell

An exciting new mearl bed was discovered by Seasearch divers this year, during an exploratory dive in St Austell bay. Mearl is an extremely fragile Biodiversity Action Plan habitat, and the newly discovered site is currently completely unprotected. Information gathered during these dives has led to an extent mapping survey which is being carried out by Cornwall Inshore Fisheries and Conservation Authority on behalf of Natural England. Cornish mearl beds have been the subject of two Seasearch reports in 2012, and the county is lucky to host a high proportion of the British examples of this beautiful habitat.



A spiny starfish prowls over a beautiful mearl bed. Photo by Jane Morgan.