



Devon 2012 Summary Report



Vibrant reef life at Greystone ledges, Bolt Tail

Report prepared by Sally Sharrock
Seasearch Coordinator, Devon

Introduction

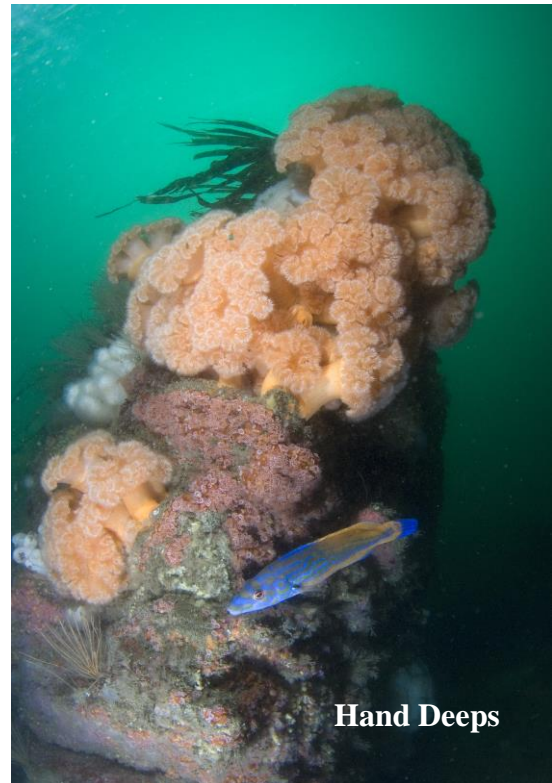
The year was a mixed one with challenging weather conditions causing more cancellations than any other recent year. However mid-week conditions were often suitable and many Observation and Survey forms came from individual or small groups of divers on these short notice trips. Despite the general financial situation bookings for both dives and courses were good.

Recommended Marine Conservation Zones were a main target for organised dives to obtain extra information in support of the consultation process due to start in Dec 2012. Two rMCZs on the south coast (Torbay, Skerries Bank and surrounds) were adequately covered and separate reports have already been written for these areas - links to the reports are included in the next section. The rMCZs on the north coast (always a difficult area) were once again hit by bad weather. Two planned trips to the Tintagel/Hartland rMCZ were cancelled and only one day diving in the Bideford to Foreland rMCZ was accomplished.

The emphasis on the rMCZs together with the weather meant that there were inevitably some of the usual areas of Devon not covered. Notable here was Lyme Bay where no forms were received from the Devon part of the bay closed to bottom trawling.

As in most years dives out of Plymouth formed a large number of Seasearch dives in Devon this year. Sites from the Bolt area near Salcombe, several in Bigbury Bay, westwards to Plymouth Sound and south out to sea as far as the Eddystone reef system were surveyed, most of which fell within the Start Point to Plymouth Sound and Eddystone SAC.

Boats from Plymouth also covered Hand Deeps (photo right), Hatt Rock and sites in Whitsand Bay. Recording forms from those dives have been passed on to Cornwall Seasearch.



Areas Surveyed

- Torbay

Sites in and around Torbay were surveyed as part of the MCZ workshop weekend. Short snouted seahorse *Hippocampus hippocampus*, native oyster *Ostrea edulis*, eelgrass *Zostera marina* and angler fish *Lophius piscatorius* were all recorded on these dives. A report has already been prepared with regard to these specific dives which hopefully will support the consultation process and can be found here.

<http://www.seasearch.org.uk/downloads/TorbaySurveyReport.pdf>

Certain eelgrass beds in Torbay were also surveyed later in the year on an evening dive and over two weekends in conjunction with Torbay Coast and Countryside Trust

and a subsidy from Crown Estates. Grid surveys on specific transect lines with abundance counts and health estimates were undertaken and the information forwarded to TCCT for analyses. It is hoped similar surveys can be carried out in subsequent years to monitor the beds in an on-going project.

Other sites between Torbay and Teignmouth were also surveyed by independent divers on several occasions.

Biotopes

LR.LLR.F	IR.HIR.KFaR	SS.SMp.SSgr.Zmar
IR.MIR.KR	CR.HCR.XFa	SS.SSa.IMuSa
IR.MIR.KR.XFoR	CR.HCR.XFa.SubCriTf	SS.SMu.ISaMu
IR.MIR.KR.Lhyp.GzFt	SS.SCS.ICS	SS.SMx.CMx
IR.MIR.KR.Lhyp.Ft	SS.SBR.SMus.MytSS	SS.SMx.IMx
IR.HIR.KSed.Sac	SS.SSa.IFiSa	

- Dartmouth

Early in the year planned dives at Start Point had to be abandoned due to the weather so survey dives within the Dartmouth SAC were carried out instead.

The deepest, Bull Rock, a submerged pinnacle in a strong tidal stream had a typical fauna of oaten pipe hydroids *Tubularia indivisa*, sponges and anemones with occasional pink sea fans *Eunicella verrucosa*. An unusual number of butterflyfish *Pholis gunnellus* were also recorded (see photo left). Potting activity was also evident here.



Butterfish

Somewhat shallower, Shooter Rock also had potting activity and below the kelp park exhibited similar tide-swept fauna. The tiny stalked sponge *Guancha lacunosa* was recorded here in an unusually exposed situation. Pink sea fans at both these sites had numerous bull huss *Scylliorhinus stellaris* egg cases attached and the fans were generally in poor condition.

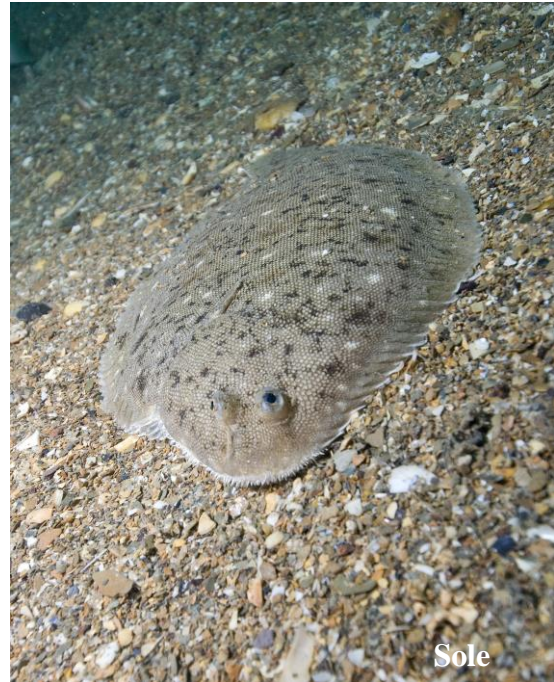
Two very silt covered sites within the harbour limits at the mouth of the Dart recorded a varied quantity of litter – angling line, plastic bags and old fishing net.

Biotopes

IR.LIR.K.LhypLsac.Ft	IR.MIR.KR.XFoR	SS.SCS.ICS
IR.MIR.KR.LhypT.Ft	CR.HCR.FaT.CTub	SS.SCS.CCS
IR.MIR.KR.LhypT.Pk	CR.HCE.XFa.SpAnVt	
IR.MIR.KR.LhypTX.Pk	CR.HCR.XFa	

- Skerries Bank and Surrounds rMCZ

Sites in this area cover the stunning rocky reefs around Start Point in strong tidal streams plus low-lying reef sites off Hallsands and Beesands, all of which are reasonably well known. The Start Point sites are notable for gravel overlying scoured rock and the accompanying chimney sponges, scarce finger sponge *Adreus fascicularis* and dahlia anemones *Urticina felina*. This anemone also occurs in great profusion on some of the low-lying silt covered reefs off Hallsands.



The large stretch of mobile sandbanks which form the Skerries Bank itself is rarely dived but proved to have a number of flat fish including sole *Solea solea* (photo right), plaice *Pleuronectes platessa*, various species of ray and large shoals of sand eels on coarse sand and gravel which dropped away steeply in dramatic waved dunes. Many crabs also found a home here. A full report can be found here.

<http://www.seasearch.org.uk/downloads/SkerriesBankSurveyReport.pdf>

One of the wrecks in the area, the Newholm was also surveyed. This was dominated by oaten pipe hydroid *Tubularia indivisa* with very mobile sediment both around and inside the structure. Ling *Molva molva* was recorded here.

Biotopes

CR.MCR.CMus.CMyt
CR.MCR.EcCr.UrtSc
CR.HCR.XFa
CR.HCR.FaT

CR.HCR.XFa.ByErSp
SS.SMx.CMx
SS.SSa.CMuSa
SS.SCS.CCS

SS.SMu.CSaMu
SS.SCS.CCS.NMix
CR.FCR.FouFa.AdigMsen

- Bolt and Bigbury Bay area

A new site named Bolberry gullies (off-shore from Bolberry Down) was faunal turf covered rock reef ridges with clean sand and gravel gullies. Crawfish *Palinurus elephas* and pink sea fans were recorded here together with chimney sponges and the uncommon erect sponge *Adreus fascicularis* where the sediment overlaid the rock.

South-eastern Greystone ledges (photo front cover) was a reef and gully area with a vibrant turf of sponges and anthozoans on the rock, the gravel being dominated by gravel cucumbers *Neopentadactyla mixta*. Angler fish was also recorded here.

The well-known wreck of the Maine further south off the Bolt in very tide-swept waters was also surveyed in March and found to have a large abandoned gill net the full length of the wreck (see photo below). Other divers later removed this although small remnants were still in place as late as October. Too deep for all but the smallest red algae the wreck has a varied faunal turf dominated in spring by oaten pipe hydroid and later in the year by bryozoans with small erect sponges and pink sea fans on the upper facing plates, abundant Devonshire cup corals *Caryophyllia*

smithii, many featherstars *Antedon bifida* and on the shallowest sections the typical wreck fauna of dead men's fingers *Alcyonium digitatum* and plumose anemones *Metridium senile*.



Further west into Bigbury Bay Chicken Rock is an upward facing extensive area of undulating rock with pockets of good numbers of healthy pink sea fans. The very tide-swept area was dominated by hydroids including large numbers of Indian feather hydroid *Gymnangium montagui* and large massive and erect sponges.

Alternative Rutts is a limestone rock outcrop similar to the more often dived East Rutts. A kelp forest of the south-western species of golden kelp *Laminaria ochroleuca* dominated the upper surfaces with convoluted and pitted vertical, steep and overhanging rock below. Many pink sea fans were recorded with a good variety of sponges.

The wreck of the Persier was notable for the increase in pink fingers *Alcyonium hibernicum* – they are now quite extensive (and some up to 2cm high) both at the stern and near the bow.

Biotopes

IR.HIR.KFaR.LhypR.Loch
CR.HCR.XFa
CR.HCR.XFa.ByErSp.Eun
CR.MCR.EcCr.FaAICr

CR.FCR.FouFa.AdigMsen
CR.HCR.XFa.ByErSp
CR.MCR.EcCr.UrtScr
CR.HCR.XFa.SpAnVt

SS.SCS.CCS.Nmix
SS.SCS.CCS

- Stoke Point to the Mewstone and Sound Approaches

Sites surveyed to the immediate east of Plymouth include the reefs and pinnacles from Stoke Point past Hilsea Point with dramatic gullies, varied sponge and anthozoan fauna and many pink sea fans. Sites to the south-west of the Mewstone in an area known generally as 'inner drop off' were especially featured this year on evening dives. Ridges of dramatic stratified rock in overhanging layers are interspersed with sediment filled gullies and give way deeper to areas of lower-lying upward facing scoured rock surrounded by coarse mobile gravel and sand. Habitats are varied from pink sea fan dominated fragile



Endectyon delaubfaunensis

sponge and anthozoan turf to caves and overhangs with tiny pink fingers and many cup corals including Weymouth carpet coral *Hoplania durotrix*. Sponges included the pink sponge *Hexadella racovitzai* and mashed potato sponge *Thymosia guernei*. Deeper, the scoured rock habitats had pink sea fans interspersed with large stands of the finger sponge *Adreus fascicularis*, the yellow sponge *Endectyon delaubfaunensis*, many chimney sponges and Steven's goby *Gobius gastevenus* on the mobile sediment. Potting is active across the area and on several dives fishing debris was recorded and some recovered.

Biotopes

IR.MIR.Lhyp.Ft	IR.HIR.KFaR.FoR	CR.FCR.CvSpCup
IR.MIR.KR.Lhyp.GzFt	CR.HCR.XFa	CR.MCR.EcCr.UrtScr
IR.MIR.KR.Lhyp.GzPk	CR.HCR.XFa.ByErSp.Eun	SS.SCS.CCS.PomB
IR.HIR.KFaR.LhypR	CR.HCR.XFa.SpAnVt	SS.SCS.CCS

- Plymouth Sound

Drake's Island eelgrass was surveyed with regard to a planning application which would impact on the beds to the north and east of the island. A full report of that survey has been prepared, submitted to both Natural England and Devon Wildlife Trust and can be found here.

<http://www.seasearch.org.uk/downloads/Drakes%20Is%20eelgrass%202012.pdf>

Two dives were carried out at Kingsand/Cawsand in conjunction with the annual Bioblitz that the Marine Biological Association organised. On 7th July a dusk dive and on 8th July a morning dive produced a total of over 70 species including eelgrass, cuttlefish *Sepia officinalis*, little cuttle *Sepiolo atlantica*, sole and plaice and the non-native slipper limpet *Crepidula fornicata* to add to the overall 1000+ land and marine species from the weekend. Although not uncommon, many of the species were 'new to the location' and show how under recorded such locations can be.

Dives were carried out within the Sound on other occasions, usually due to inclement weather and they often featured the Breakwater Fort which has a healthy population of pink sea fans in unusually shallow water. The numbers of sea fan nudibranch *Tritonia nilsodhneri* appear to have recovered from an almost complete lack a few years ago. Juvenile recruits of sea fans were also recorded in healthy numbers both on the fort structures and on the rocks around.

Rocky sites on the west and east sides of the Sound had kelp forests with a high proportion of golden kelp. This species does appear to be more extensive than in the past. The non-native kelp wakame *Undaria pinnatifida* is well established on the breakwater fort and around Bovisand harbour.

The following biotopes were recorded within the Sound area:

IR.FIR.SG.CrSpAsDenB	CR.HCR.XFa	SS.SSa.IFiSa.IMoSa
IR.HIR.KFaR.LhypR.Loch	SS.SMu.CFiMu	SS.SSa.IMuSa.EcorEns
SS.SMp.SSgr.Zmar	SS.SCS.CCS	

- Eddystone Reef area

Several surveys were carried out on the offshore reefs of the Eddystone, often in conjunction with Hand Deeps and Hatt Rock. Details from the latter two sites go to Cornwall Seasearch. The Eddystone area is well known but sites this year at or near



to the Eddystone were chosen as being previously unsurveyed or certainly not recently. Many of them had kelp forest or park on the shallower rock with colourful walls below dominated by jewel anemones *Corynactis viridis* and encrusting sponges falling to areas of clean white gravel with low lying rock outcrops. The encrusting sponges were often covered in tiny brittlestars – seen in the photo here. Large shoals of

bass *Dicentrarchus labrax* were sometimes encountered. The deeper areas were rich in pink sea fans, varied sponges including chimney sponges and the hedgehog sponge *Polymastia boletiformis* together with bryozoans such as potato crisp bryozoan *Pentapora foliacea*. Angler fish and ling *Molva molva* were recorded on a couple of occasions and sunfish *Mola mola* seen and photographed underwater. On one dive a large patch of white cluster anemones *Parazoanthus sp* was recorded in the unusual shallow situation of an exposed vertical wall at just 14m below sea level.

The following biotopes were recorded:

IR.HIR.KFaR.LhypR.Pk
IR.HIR.KFaR.LhypFa
IR.MIR.KR.LhypT.FT

CR.HCR.XFa.SpAnVt
CR.HCR.XFa.ByErSp.Eun

CR.HCR.XFa.CvriCri
CR.MCR.EcCr

- Lundy Island

One day was spent at Lundy Island undertaking pink sea fan counts. Unfortunately the team was restricted to the east side of the island but covered Gull Rock and the Knoll Pins. The fans generally were in a poor condition with many fouled, especially at the base and some standing dead ones. More worrying was the almost complete lack of juveniles or new recruits.

Recruitment on the south coast of Devon has been good over the last few years but at Lundy seems to be almost totally lacking.

However, three crawfish were recorded on the day together with angler fish and sunset cup corals *Leptopsammia pruvoti*.

Several other Observer forms have been received from independent divers visiting Lundy.



Biotopes were:

IR.HIR.KFaR.FoR.Dic
CR.HCR.XFa.SpAnVt
CR.FCR.Cv.SpCup

CR.HCR.XFa.ByErSp
CR.HCR.XFa
CR.HCR.XFa.ByErSp.Eun

SS.SMu.CFiMu

- North Devon coast

One day was spent diving within the Bideford to Foreland Point rMCZ in difficult conditions. The dives were in shallow water close inshore and unfortunately added very little to existing records. The second day was cancelled due to storm force winds.

Dives planned for Hartland Point to Tintagel rMCZ were cancelled, rearranged and cancelled again!

The north coast still proves very difficult to survey both because of the weather and also due to the restricted number of available boats and the high cost.

Biotopes were:

IR.MIR.KR.XFoR

CR.MCR

SS.SSa.IFiSa

IR.MIR.KR.Lhyp

SS.SMx.CMx

- Evening dives

These dives from Plymouth are always popular but this year they were hit hard by bad weather cancellations. Three dives targeted the inner drop-off as planned, other dives diverted inside the Sound when the weather was uncooperative and surveyed Ramscliffe eelgrass bed and measured pink sea fans on the Breakwater Fort.

Special sites and species

Devon is rich in special sites. Extensive SACs covering rocky reef habitats with areas of the BAP habitat 'fragile sponge and anthozoan turf' widespread across the area, extensive eelgrass beds which is another BAP habitat, rare species such as sunset cup corals, two rMCZs on the south coast (not including estuaries) and two on the north coast plus iconic Lundy Island give divers a privileged selection of wonderful sites to choose from.

BAP species have been mentioned in the text but the following is a list of those species recorded in 2012 and where.

BAP Species		Areas where recorded
<i>Amphianthus dohrnii</i>	Sea fan anemone	Eddystone area
<i>Eunicella verrucosa</i>	Pink sea fan	Dartmouth, Start Point Bolt area, Bigbury Bay Stoke Point to Mewstone Plymouth Sound & approaches Eddystone, Lundy
<i>Leptopsammia pruvoti</i>	Sunset cup coral	Lundy
<i>Palinurus elephas</i>	Crawfish	Bolt, Lundy
<i>Ostrea edulis</i>	Native oyster	Torbay
<i>Hippocampus hippocampus</i>	Short snouted seahorse	Torbay
<i>Solea solea</i>	Sole	Skerries Bank, Plymouth Sound
<i>Pleuronctes platessa</i>	Plaice	Skerries Bank Plymouth Sound & approaches
<i>Lophius piscatorius</i>	Angler fish	Torbay, Bolt Lundy, Eddystone
<i>Molva molva</i>	Ling	Start Point, Eddystone
<i>Scomber scombrus</i>	Mackerel	Eddystone

Courses

Training is a key part of Seasearch activities. Most participants start with one of the organised courses and subsequent training dives and then join on some of the other trips where they gain extra experience and knowledge from Seasearch tutors and other divers. We hope they will then return record forms from their own dives too. Specialist courses are also very popular. In 2012 the following courses were run:



Surveyor course members at work!

- Observer Courses

At Plymouth University with 14 marine biology students

At Discovery Divers, Fort Bovisand with 14 participants

At Aquanauts in Plymouth with 9 participants

Those attending came not just from the local Plymouth and Devon area but from as far afield as Wales, Dorset and the Bristol area. Many have now completed their Observer qualification or are well on the way to doing so.

- Surveyor Course

A course was held jointly with Cornwall Wildlife Trust at Porthkerris and several of the participants have already gained their Surveyor qualification.

- MCZ Training Workshop

A half day workshop was held at the Torbay Coast and Countryside Trust Seashore Centre led by Jean-Luc Solandt and Chris Wood together with 12 participants to discuss the best ways of bringing together extra information to further the MCZ consultation process due to start in December 2012. This was followed by 1 ½ days diving both from a boat and dives from the shore within the Torbay rMCZ area covering 6 sites.

- Anemones & Corals Workshop

18 participants took part in a full day classroom workshop in Plymouth with tutor Chris Wood followed by a day diving in Plymouth Sound. Pink sea fans became the primary feature of the diving which was unfortunately in rather difficult weather conditions.

- Marine ID for Improvers

A one day course was organised by Severnside SAC in Bristol for 21 participants from 5 different local dive clubs (all of which dive in Devon) covering marine identification to aid those wishing to go on to the Surveyor qualification and also those divers just wanting to know more. Many were already Seasearch divers but some of those who had not yet 'taken the Seasearch plunge' have already signed up for courses in 2013.

Recording forms

At the time of writing 75 Survey forms, 104 Observation forms and 22 Pink sea fan recording forms have been received giving a total of 201 forms. The number of Survey forms at 47% is encouraging. The Survey forms provide a much more comprehensive picture of each site and also usually allow a biotope code to be attached to each habitat on the record. Many of the Observation forms were from those who had attended an Observer course and it is good to have a new input of divers each year - they will hopefully become our Surveyors in a couple of years.

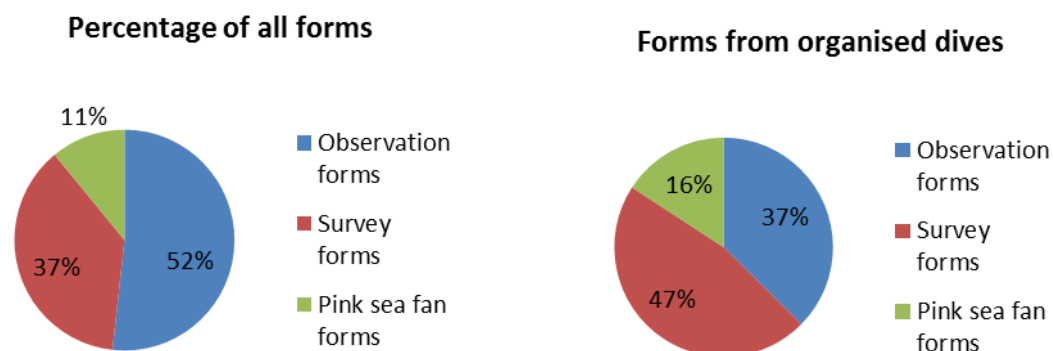
Pink sea fan measurement forms were submitted from several sites and have been added to the national database.

All Devon Observation and Survey forms have now been input to Marine Recorder with the biotopes added where possible.

The following table lists the Observation and Survey forms received:

Area	Observation forms	Survey forms
Lundy Island	27	3
North Devon Coast	2	2
Teignmouth/Torbay	12	23
Dartmouth	6	10
Skerries Bank & surrounds	2	10
Bolt & Bigbury Bay	12	9
Stoke Point to Mewstone	6	4
Plymouth Sound & approaches	29	11
Eddystone area	8	3
Overall total	104	75
Totals from organised trips	52	65

The first pie-chart below on the left shows the relative percentages of all the forms received so far. It is usual for Observation forms to outnumber Survey forms.

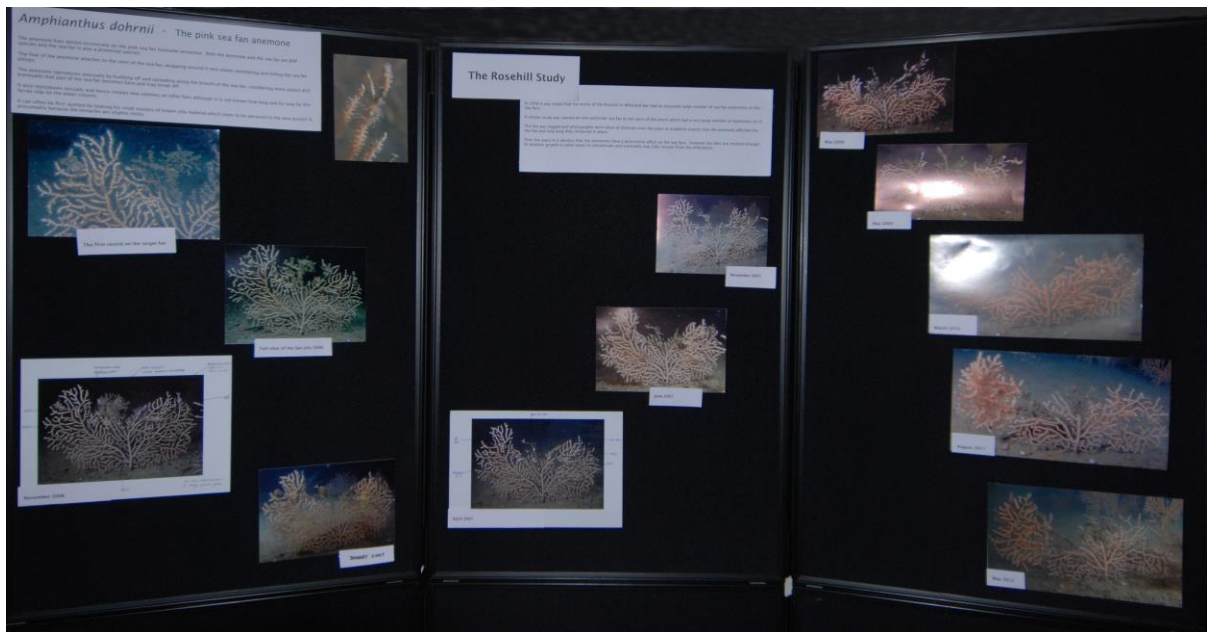


The second chart includes percentages of forms from only those dives organised specifically as Seasearch dives. This includes Observer training dives which usually account for a large proportion of Observation forms but despite that the percentage of Survey forms is higher which emphasises the importance of these organised dives. Although we frequently tell divers that 'any dive can be a Seasearch dive' it appears that they are reluctant to fill in the more complex Survey form on their individual dives. The organised dives do tend to target those specific areas and sites

we particularly want information from but it is very frustrating to get good numbers of Observation forms (rather than Survey forms) from other sites that we may not have the chance to organise surveys for. Hopefully more independent divers will consider stepping up to Surveyor level and completing those forms.

Rosehill sea fan anemone project

Since 2006 monitoring of a particular pink sea fan on the wreck of the Rosehill in Whitsand Bay has been an on-going project. The fan in question was chosen because it was initially well covered with at least 30 pink sea fan anemones.



Over the years photographs have been taken to illustrate the movement and longevity of the anemones, how they affect the sea fan and incidentally how fast the fan grows. They appear to have a serious detrimental effect on the part of the fan where they attach, smothering the fan's polyps and eventually leading to the fan dying off and breaking away. The original rounded fan is now almost U-shaped. The good news is that the outer edges of the fan continue to grow and appear healthy. After 6 years of monitoring there are still some anemones on the fan but considerably less than originally. Nearby fans however now have more anemones than before.

A series of photographs illustrating the development of the fan and anemones was produced in a display for the Anemones and Corals Workshop. A summary report on the project is being prepared and will be available on the Seasearch website in 2013.

Acknowledgements

Thanks go to all those Seasearchers who have filled in and returned forms and to those who have readily come forward to survey the less popular but nonetheless important sites – eelgrass beds and pink sea fan counts in very poor visibility come to mind!

Devon Seasearch is also very grateful to Rob Adams and Chris Webb who have both organised and run dive trips for Seasearch this year and to Dominic Flint for running the Bioblitz dives and assisting with the Torbay eelgrass survey dives. The demand for Seasearch organised dives in Devon is such that it is impossible for one person to organise and run them all. It is most encouraging that for the 2013 season other experienced Seasearchers have already stepped forward to book and run boats.

Thanks must also go to the skippers, Danny Daniels and Dave Titchey from Discovery Divers, Tony Hoile from Dartmouth, Rick Parker in Torbay, Andrew Benguey out of Ilfracombe and Paul Harris at Aquanauts all of whom have done their very best to find us the best sites, drop us exactly where we wanted sometimes in difficult conditions, take GPS readings for us and always pick us up safely. We appreciate that!

Seasearch in Devon has been supported financially in 2012 by:

