

# Seasearch surveys in the Lizard Point Special Area of Conservation 18th-19th May 2017



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Seasearch is a marine species and habitats recording programme for volunteer recreational divers. One of its aims is to survey areas where there are gaps in current information, and it concentrates on both existing and potential marine protected areas.

The Lizard Point Special Area of Conservation has been designated primarily for its reefs. The designation refers to the complex geology of the area but does not say anything about the marine life. However there is a description of the habitats and species present in Natural England's conservation advice document<sup>1</sup>.

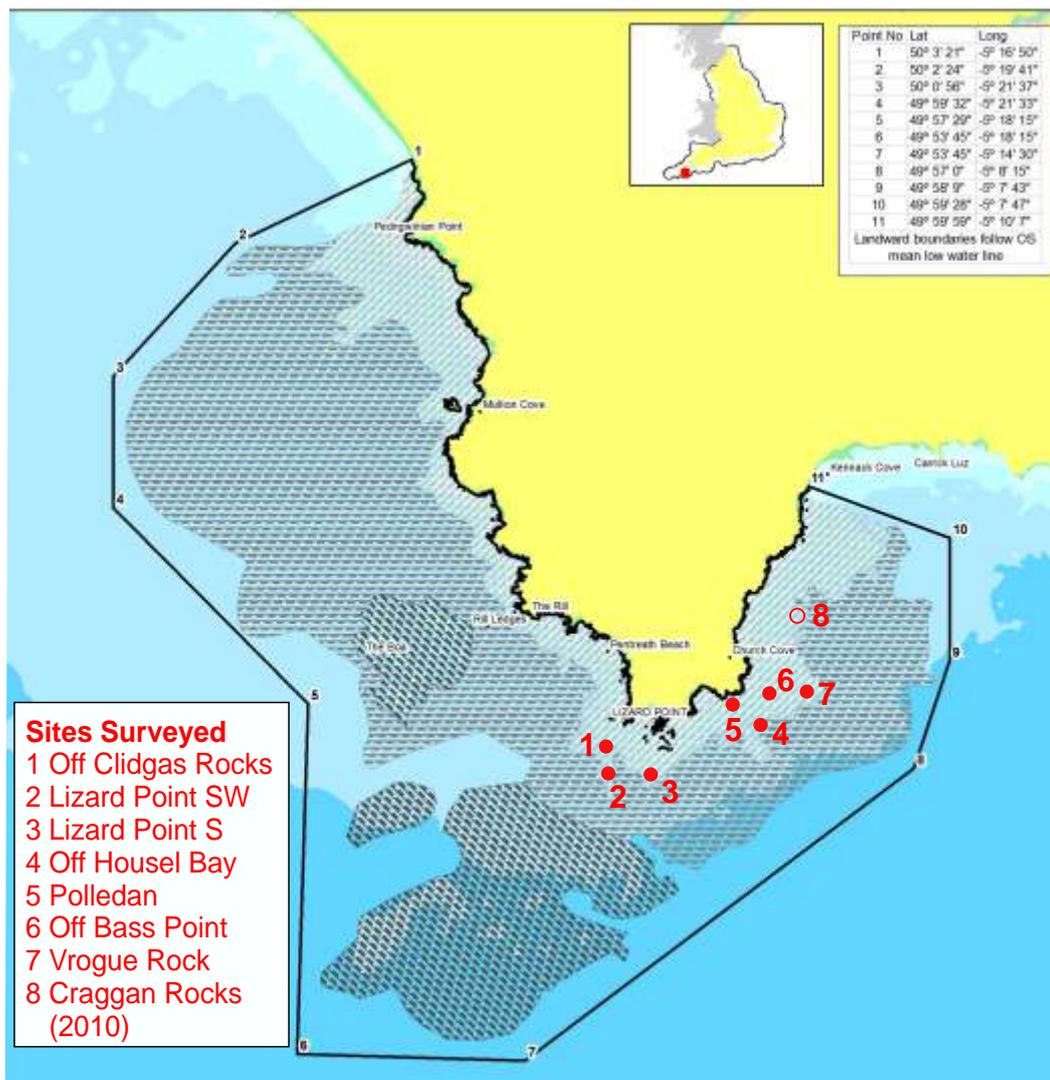
Seasearch has only received two previous records from within the SAC, from Craggan Rocks in 2010. This survey was planned to add both habitats and species data from other sites within the SAC. It was undertaken by a group of 12 Seasearch volunteers in May 2017 and organised by former National Coordinator Chris Wood. Diving was undertaken from the catamaran Celtic Cat, skippered by Mike Anselmi of Porthkerris Divers.

This report has been prepared by Chris Wood and the data has been entered into the Marine Recorder database by Sally Sharrock.



The sites surveyed were all in the Coastal Upstanding Reefs sub-feature as defined by Natural England in 2010 and are shown on the map (right). Sites 1-3 are classified as very exposed and we were fortunate to have sufficiently calm conditions to dive them safely. Even so there was significant ground swell underwater on the first of the two survey days. Sites 4-7 are a little less exposed but all are high energy sites. Site 8 was surveyed in 2010 and is less exposed than any of those surveyed in 2017.

The habitats surveyed were all in the depth range of 15-20m below chart datum and included both lower infralittoral (kelp dominated) and circalittoral (animal dominated) habitats. Particular attention was given to priority species and habitats.



The data collected comprised 15 Seasearch forms (8 Survey & 7 Observation forms) together with underwater photographs and video of both habitats and species. The data have been entered into the Marine Recorder database and made available to Natural England. They will be added to the Seasearch data available for public use on the National Biodiversity Network. Additional photographs are available and links are given in this report to video data. All of the data is available for non-commercial use.

## Site Descriptions

### Site 1 - Off Clidgas Rocks

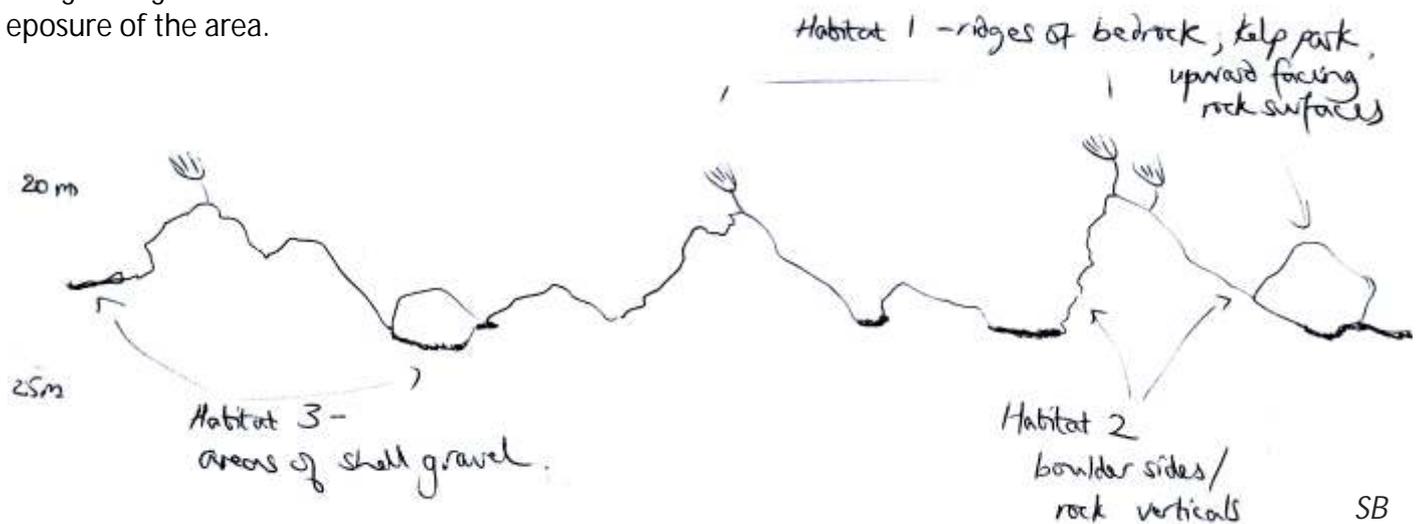
Very exposed site comprising rugged rocky reef 15.5-21.5m below chart datum (bcd). Vertical faces regularly up to 3m tall but exceptionally 6m. *Laminaria hyperborea* kelp park at 15.5m with dense oaten pipe hydroids *Tubularia indivisa* (right) at the top of vertical faces and jewel anemones *Corynactis viridis* lower down. Lower surfaces dominated by hydroid turf, especially *Nemertesia antennina* and *Halecium halecinum* (below). At the base of the rocky reef (21.5m bcd) there was scoured rock with patches of mobile cobbles and gravel.



Site 2 - Lizard Point South-West

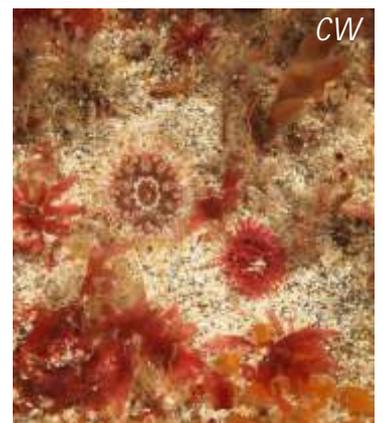
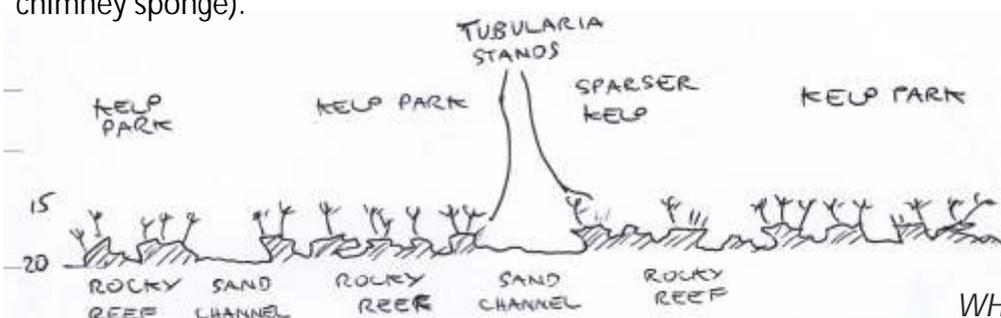
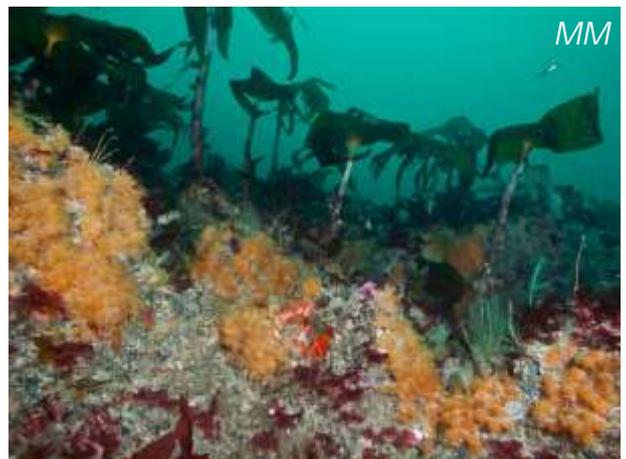
Very exposed site comprising rugged rocky reef 14.5-21.5m bcd. Convolved system of ridges and gullies (sketch below). Shallower, upward facing, surfaces with kelp forest thinning to kelp park and an understory of red seaweeds and colonial seasquirts (image right). Vertical and overhanging gully sides with *Tubularia indivisa* at the top and jewel anemones, sponges and sea squirts lower down. Gully bottoms contained boulders and gravel with patches of coarse sand and gravel.

At all sites potato crisp bryozoan, *Pentapora foliacea*, and hornwrack, *Flustra foliacea*, were low growing forms because of the extreme exposure of the area.



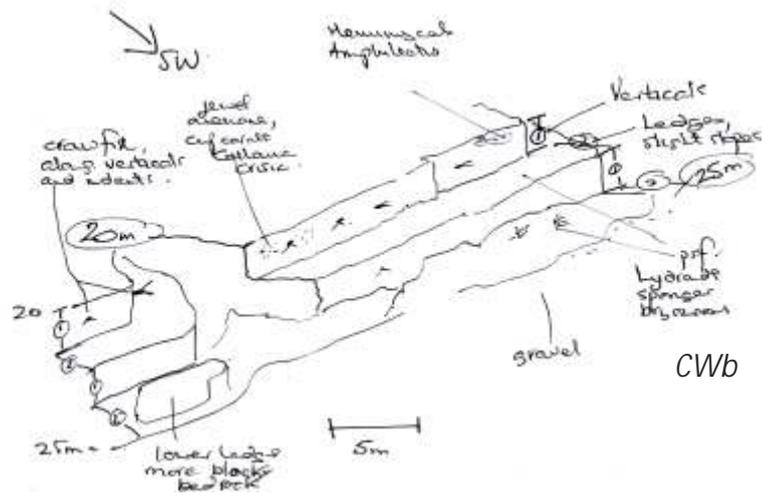
Site 3 - Lizard Point South

Very exposed site with low profile rocky reef 11-21m bcd (sketch below). *Laminaria hyperborea* kelp park on upward facing surfaces with red algae both on kelp stipes and as small leafy species on rock below the kelp. Sea squirts were also common, with *Stolonica socialis* and *Synoicum incrustatum* the prominent species (right). Where there were small vertical faces these had abundant *Tubularia indivisa* at the top with encrusting sponges, jewel anemones and a mixed hydroid/bryozoan turf. Gullies between ridges were filled with mobile waved coarse sand and gravel which had scoured adjacent rock surfaces and contained a number of scour-tolerant species such as *Urticina felina* (Dahlia anemone, below right) and *Ciocalypa penicillus* (Tapered chimney sponge).



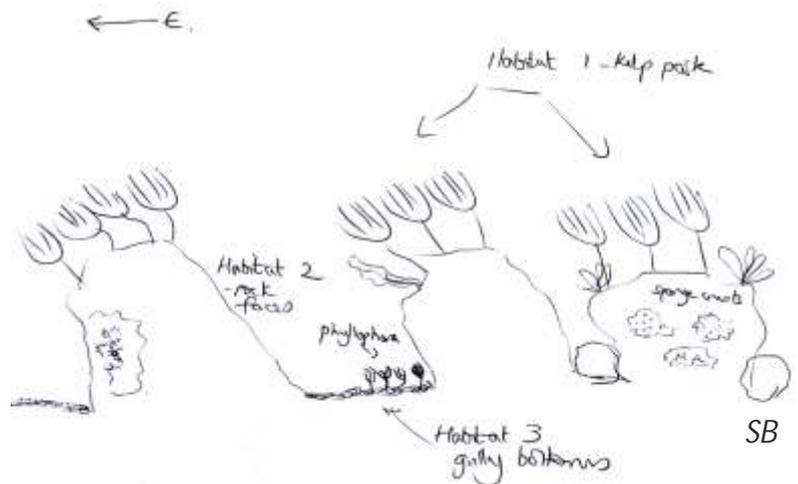
### Site 4 - Off Housel Bay

The site is slightly east of the Lizard Point and is slightly less exposed because of the limited protection of the rocks off the point itself. It is still within the 'very exposed' category. Stepped circalittoral reef at 17.5-21.5m bcd deepening to the south-west to become scoured boulders and cobbles. Upward facing rocks had a faunal turf of sponges, hydroids and bryozoans (including *Pentapora foliacea* - below) and the short vertical faces (1-2m high) had a turf of jewel anemones, sponges and bryozoans. The lower scoured boulders and cobbles were relatively stable and had a fauna of sponges, soft corals, hydroids and bryozoans as well as some red and brown seaweeds, principally *Dictyopteris polypodioides* and *Delessaria sanguinea* (right).



### Site 5 - Polledan

The site is closer inshore than any of sites 1-4 and receives some protection from Lizard Point. The area surveyed was an infralittoral rocky reef with a *Laminaria hyperborea* kelp forest and an understory of red seaweeds sea squirts and encrusting sponges (sketch and image right). Vertical rock faces beneath the kelp had a faunal turf of sponges, jewel anemones and encrusting bryozoans. At the base of the reef (14m bcd) the seabed became coarse rippled sand.



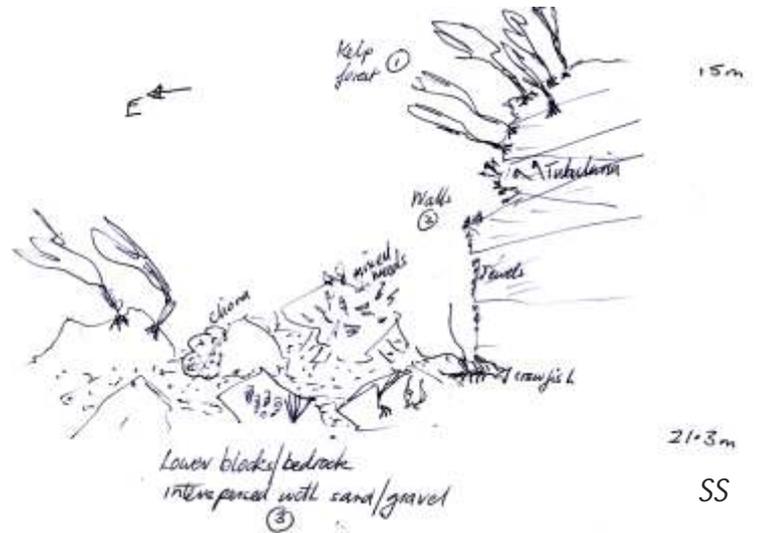
### Site 6 - Off Bass Point

This site is similar to Site 5 but a little to the east and the area surveyed was a little deeper. The reef was a complex system of bedrock and boulders, gullies, vertical walls with abundant faunal turf and topped by a kelp park with a rich understory of foliose red seaweeds. To the south east the seabed flattened out at 14m bcd and became stable boulders surrounded by cobbles and pebbles. The latter were heavily encrusted with keelworms.



## Site 7 - Vrogue Rock

Vrogue Rock itself has a charted depth of 2.9m bcd but our surveys did not find anything shallower than 12.5m bcd. Close to the position of the rock itself we found rocky pinnacles up to 5m high with kelp forest on the tops and *Tubularia indivisa* and jewel anemone dominated sides (below left). The surrounding seabed was of jumbled boulders interspersed with sand and gravel (sketch right). Away from Vrogue Rock, both to the north and the south, the seabed was flatter rock with kelp forest and park (below right) and an understory of red and brown algae, sponges, jewel anemones and hydroids.



## Priority Species and Habitats

The Lizard Point SAC is designated for its reef features and all of the sites surveyed were primarily rocky reefs. These included both infralittoral and circalittoral rock and upstanding reefs and low lying ones. In addition to this general designation the following priority species and habitats were recorded.

### Pink Sea Fan, *Eunicella verrucosa*

This species is nationally scarce but locally abundant in south-west England in suitable habitats. It is a listed feature of the nearby Manacles MCZ. Pink sea fans are scarce in very exposed locations as they are vulnerable to physical damage and we did not find any colonies off Lizard Point itself. However they were present off Housel Bay (Site 4) where the deep Atlantic swells may be slightly moderated by the shallow reefs off Lizard Point.



Crawfish or Spiny Lobster, *Palinurus elephas*

This species is included in the list of priority species in England (formerly Biodiversity Action Plan) because of the plummeting population due to past overfishing. It is a species for which the aim is to 'recover to favourable condition' in the nearby Manacles MCZ. Seasearch divers and others have recorded significant numbers of crawfish, mostly juvenile, in south-west England since 2014 and Lizard Point is no exception. Crawfish were recorded at five of the seven sites at densities from rare to frequent (table below). The latter would have been unthinkable anywhere in England in the last 20 years prior to 2014.



Large crawfish above and juvenile (small) below

	small	medium	large
Site 1 Clidgas Rocks	1	1	2
Site 2 Lizard Point SW			
Site 3 Lizard Point S	1		
Site 4 Off Housel Bay	6	1	3
Site 5 Polledan	1		
Site 6 Off Bass Point			
Site 7 Vrogue Rock	2	2	
Total	11	4	5



Lizard Point SAC clearly contains suitable rocky habitats for crawfish and, as the image shows, the new populations are reaching a size at which they could be targeted by commercial or recreational fishery. Natural England assesses the Lizard Point SAC as 'moderately to highly vulnerable' to selective extraction of, *inter alia*, crawfish.<sup>1</sup> Seasearch would like to see taking of crawfish banned in all SACs and MCZs, but in the meantime the populations should at least be actively monitored.

Fragile Sponge and Anthozoan Communities  
This priority habitat is found in a number of different MNCR biotopes. Because of the exposure of all of the sites surveyed, tall fragile sponges and anthozoans, such as yellow staghorn sponge, *Axinella dissimilis* and pink sea fans, *Eunicella verrucosa*, were uncommon. Most sponges and anthozoans were low growing species such as jewel anemones, *Corynactis viridis*, and encrusting sponges such as *Phorbaspilosum*. Even those sponges which have a variety of growth forms, such as carrot sponge, *Amphilectus fucorum* (right), here adopted a low growth form suited to the exposed conditions.



Sponge and anthozoan biotopes recorded included:  
CR.HCR.XFa.Lizard Point South (Site 3), Polledan (S5)  
CR.HCR.XFa.ByErSp.Eun Off Housel Bay (S4)  
CR.HCR.XFa.CvirCri Lizard Point South-West (S2)  
CR.HCR.XFa.SpAnVt Lizard Point South-West and South (S2 & S3), off Housel Bay (S4)

Left: *Alyconium digitatum* and *Hemimycale columella* anthozoan-sponge community off Housel Bay

## Contributing to Monitoring the condition of the Lizard Point SAC

Natural England has produced an advice document for the SAC which includes recommendations for the monitoring of the SAC. Appendix A of the advice document<sup>1</sup> contains a Favourable Condition Table which includes biotopes and species to be measured as a part of the process of assessing if the SAC is being maintained in a favourable condition.

This survey is not designed to form part of that monitoring process but we have compared the biotopes and species we observed with the Favourable Condition Table as a guide to the current condition of the SAC. The reports on which this table was based are dated 2008 and 2011 and thus we hope this survey will be a useful update. Because the original work was carried out some years ago we suggest some updates based on this 2017 review.

Natural England divide the reefs in the SAC into three categories:

- Offshore Upstanding Reef Communities
- Coastal Upstanding Reef Communities
- Flat Bedrock Reef Communities.

The extent of the three areas is shown on the map on page 1 of this report.

Seasearch did not survey any sites in the offshore reefs category and most of the sites fall broadly on the boundary between the coastal upstanding reefs and flat bedrock reefs. Thus for some sites the habitats we found fell in both the coastal upstanding and flat bedrock reef categories. These are separately described in the Seasearch raw data and this is reflected in the table below. The Table shows the records made in this study for each of the listed biotopes and species in the Natural England advice. For biotopes, X indicates presence and for species the abundances use the semi-quantitative SACFOR scale.<sup>2</sup>

		Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7
		Clidgas Rk	Lizard Point SW	Lizard Point S	Off House Bay	Polledan	Bass Pt	Vrogue Rk
Sub-feature: Coastal Upstanding Reefs								
CR.HCR.XFa.ByErSp.Eun					X			
IR.HIR.KFa.FoR.Dic							X	
IR.HIR.KFa.LhypR.Ft			X			X		X
IR.HIR.KFa.LhypR.Pk		X	X	X			X	
IR.HIR.Ksed.LsacSac								
<i>Alcyonium digitatum</i>	Dead men's fingers	OO	OOOO	C	OR			OOOR
<i>Antedon bifida</i>	Common featherstar			O				
<i>Cliona celata</i>	Boring sponge	CF	OOORRR	O	OO			COOO
<i>Corynactis viridis</i>	Jewel anemone	FO	CFFOOO	C	CO	C		CC
<i>Dilsea carnosa</i>	Red rags					F	C	
<i>Flustra foliacea</i>	Hornwrack		FO					O
<i>Laminaria hyperborea</i>	Cuvie/Forest kelp	FO	CCO	C	R	A	C	CO
<i>Saccharina latissima</i>	Sugar kelp						R	
<i>Saccorhiza polyschides</i>	Furbelows	R						
<i>Eunicella verrucosa</i>	Pink sea fan				OR			
<i>Pentapora foliacea</i>	Potato crisp bryozoan (ross)		R		O			OR
<i>Stolonica socialis</i>	Orange seasquirt	O	FOO	C	R	O		
Sub-feature: Flat Bedrock Reefs								
CR.HCR.XFa.ByErSp.Eun			X					
CR.HCR.Xfa.CVIRCri								
CR.MCR.EcCr.FaAICr.Flu								
IR.HIR.KFa.FoR.Dic				X				
IR.HIR.KFa.LhypR.Ft				(Pkx4)				X
<i>Alcyonium digitatum</i>	Dead men's fingers	F		FFOOORRRR	COOR			O
<i>Antedon bifida</i>	Common featherstar			CFF				
<i>Caryophyllia smithii</i>	Devonshire cup coral			OOO	ORR			ORR
<i>Corynactis viridis</i>	Jewel anemone	A		CFOOOOR	ORP			FFO
<i>Alcyonium glomeratum</i>	Red fingers							
<i>Eunicella verrucosa</i>	Pink sea fan							
<i>Pentapora foliacea</i>	Potato crisp bryozoan (ross)	O			ORR			OR
<i>Stolonica socialis</i>	Orange seasquirt	FF		CCFOOO	O			
Additional Characterising/Priority Biotopes/Species								
CR.HCR.FaT.CTub			X					
<i>Palinurus elephas</i>	Crawfish/Spiny Lobster (priority)	O		R	F	R		F
<i>Tubularia indivisa</i>	Oaten Pipes Hydroid (characterising)	CO	ACCFFOR	ACFFFOOO				FFFOO
<i>Dictyopterus polypodioides</i>		O	O	OR	FR		FOR	FOR

The table shows that most of the selected biotopes and species were recorded by this Seasearch survey.

In the Coastal Upstanding Reefs sub-feature four of the five biotopes were recorded. However both the *Eunicella* biotope CR.HCR.XFa.ByErSp.Eun and the brown algae biotope IR.HIR.KFaR.FoR.Dic were only found at one site. In the case of CR.HCR.XFa.ByErSp.Eun this is not particularly surprising owing to the extreme exposure of the site. Sea fans may be more common deeper in the offshore sub-feature. In the case of IR.HIR.KFaR.FoR.Dic the defining algae *Dictyopteris polypodioides* and *Dictyota dichotoma* were recorded but normally not at a density that would make them a characterising species.

The sediment fringe biotope IR.HIR.Ksed.LsacSac was not recorded, and the defining species *Saccharina latissima* was only seen at one site, where it was rare.

In the Flat Bedrock Reefs sub-feature only three of the five listed biotopes were recorded. We did not find *Eunicella verrucosa* in any of the flat bedrock habitats and thus CR.HCR.XFa.ByErSp.Eun was not recorded. However IR.HIR.KFaR.FoR.Dic was present at one site. There is only one record of both CR.HCR.Xfa.CVirCri and IR.HIR.KFaR.LhypR.Ft. These two biotopes are a little strange for a flat bedrock sub feature. *Corynactis viridis* is the defining species for CR.HCR.Xfa.CVirCri but is almost always found on vertical bedrock and thus would be more likely to occur in either of the upstanding reefs sub-features. IR.HIR.KFaR.LhypR.Ft, as a kelp forest biotope, is also somewhat unlikely on flat bedrock, mostly below 20m bcd. We frequently recorded the kelp park biotope IR.HIR.KFaR.LhypR.Pk from these sites and this is a more likely biotope, unless one was intending to demonstrate the extreme clarity of water at the site and thus the ability of kelp to grow as a forest below 20m.

All of the listed species were recorded at one or more site, except *Alcyonium glomeratum*, Red Fingers which was surprising as it is a relatively common south-westerly species. The similar *Alcyonium digitatum* was commonly recorded and we cannot account for the absence of *A. glomeratum* from the sites we surveyed.

From our records two other features stand out.

Oaten Pipe Hydroids, *Tubularia indivisa*, were a prominent and characterising species at many of the coastal upstanding reef sites. This is a frequent feature in areas of strong tidal streams and the biotope CR.HCR.FaT.CTub was recorded at Lizard Point (image page 2). We believe this species and the biotope should be added to the favourable condition table for the Coastal Upstanding Reefs sub-feature as they are so characteristic of the area.

At the time of the studies and production of the monitoring tables *Palinurus elephas*, Crawfish, were very rare in south-west England. However they were, and remain, a priority species. Now that their numbers have increased, and our study shows that they are regularly found in the Lizard SAC, we believe they should be added to the species to be monitored. They remain vulnerable to exploitation and their presence should be an additional indication of favourable condition.

## Summary

We do not believe that our survey results suggest any diminution in the favourable condition status for the sites surveyed in the Lizard Point SAC. However we do suggest that consideration be given to adding the following species and biotopes to the favourable condition tables to more fully reflect the elements that go to make up its favourable status.

- Add IR.HIR.KFaR.LhypR.Pk to the list of biotopes for the Flat Bedrock Reefs sub-feature,
- Add CR.HCR.Xfa.CVirCri to the list of biotopes for the Coastal Upstanding Reefs sub-feature,
- Add CR.HCR.FaT.CTub to the list of biotopes for the Coastal Upstanding Reefs sub-feature,
- Add *Tubularia indivisa* to the list of species for the Coastal Upstanding Reefs sub-feature,
- Add *Palinurus elephas* to the list of species at least for the Coastal Upstanding Reefs sub-feature, and ideally for the Flat Bedrock and Offshore sub-features too.

## Acknowledgements

Seasearch would like to thank the volunteer divers who contributed data and images for this survey. They were: Bob Jones, Charlotte Bolton, Chris Webb, Chris Wood, Dave Sellars, David Kipling, Matt Doggett, Mike Markey, Polly Whyte, Rob Adams, Sarah Bowen, Sally Sharrock and William Hughes.

The data has been entered into the Marine Recorder database by Sally Sharrock and this report has been written by Chris Wood, who organised the survey on behalf of Seasearch.

We would like to thank Mike Anselmi for being our skipper and Mike, Jo and staff at Porthkerris Divers for all their help.

Financial support for a part of the boat costs and the preparation of this report was given by the Crown Estate.

## References

1. Natural England: Lizard Point candidate Special Area of Conservation. Formal advice under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010 Version 2.0, July 2012
2. Joint Nature Conservation Committee: SACFOR abundance scale used for both littoral and sublittoral taxa from 1990 onwards. <http://jncc.defra.gov.uk/page-2684>



## Seasearch Data

All Seasearch data is entered into the Marine Recorder database and shared with the Country Conservation Agencies and made available to all through the National Biodiversity Network (NBN).

In addition to this report there is a short video of the survey which can be accessed at <https://www.youtube.com/watch?v=WZ9PJNoQHag>

For access to the raw data and additional images and videos contact [info@seasearch.org.uk](mailto:info@seasearch.org.uk)