

# Dorset Seasearch: Annual summary report 2013

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2013 saw the creation of 27 new marine protected areas (MPAs), of which three are in Dorset: Chesil Beach and Stennis Ledges, Poole Rocks and the more remote (at least to most Seasearch divers!) South Dorset. Almost 700 km<sup>2</sup> of Dorset waters (measured out to the 12nM limit) are now under statutory protection requiring management (this means Special Areas of Conservation (SACs), Marine Conservation Zones (MCZs) or 'no-trawl zones'), representing 26% of that area.

The year ended with a bit of a rush as the timetable for submission of pre-consultation evidence for the next tranche of MCZ designations (announced on 24<sup>th</sup> February 2014) required us to submit the Seasearch dataset much earlier than normal (mid-February), along with photos of particular species and habitats identified as FOCI (features of conservation interest).

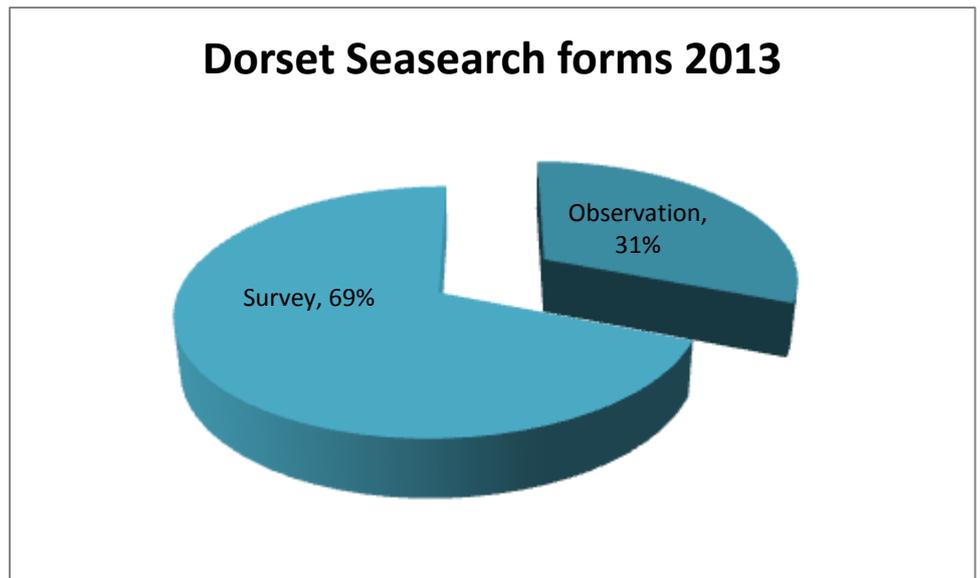
As in previous years we planned our dives with the help of acoustic data to identify potentially interesting sites. The results of recent bathymetric surveys of Poole Bay and (some of) Lyme Bay have been released by the Maritime and Coastguard Agency under the Open Government Licence and have been converted into web-accessible form by Peter Tinsley, augmenting the original DORIS output. This map is an absolutely fantastic dive-planning resource for divers, allowing us to pinpoint our surveying efforts and identify new and potentially interesting sites and habitats. Check it out at [http://www.dorsetwildlifetrust.org.uk/dorset\\_seasearch.html](http://www.dorsetwildlifetrust.org.uk/dorset_seasearch.html)

For the next couple of years Dorset Wildlife Trust are involved in a Interreg IVa/European Regional Development Fund (ERDF)-supported project known as PANACHE – *Protected Area Network Across the Channel Ecosystem* - taking a leading role in the areas of citizen science and public engagement, which encompasses Seasearch activities. We will be making special efforts to record against a core species list including non-natives and climate change indicators, chosen to be applicable to all the PANACHE activities on both sides of the Channel. We are also taking part in another Interreg IVa project, "3C (Channel Catchment Cluster): marine non-native species monitoring – sharing best practice across the Channel", so non-native species will be particularly under the spotlight in 2014.

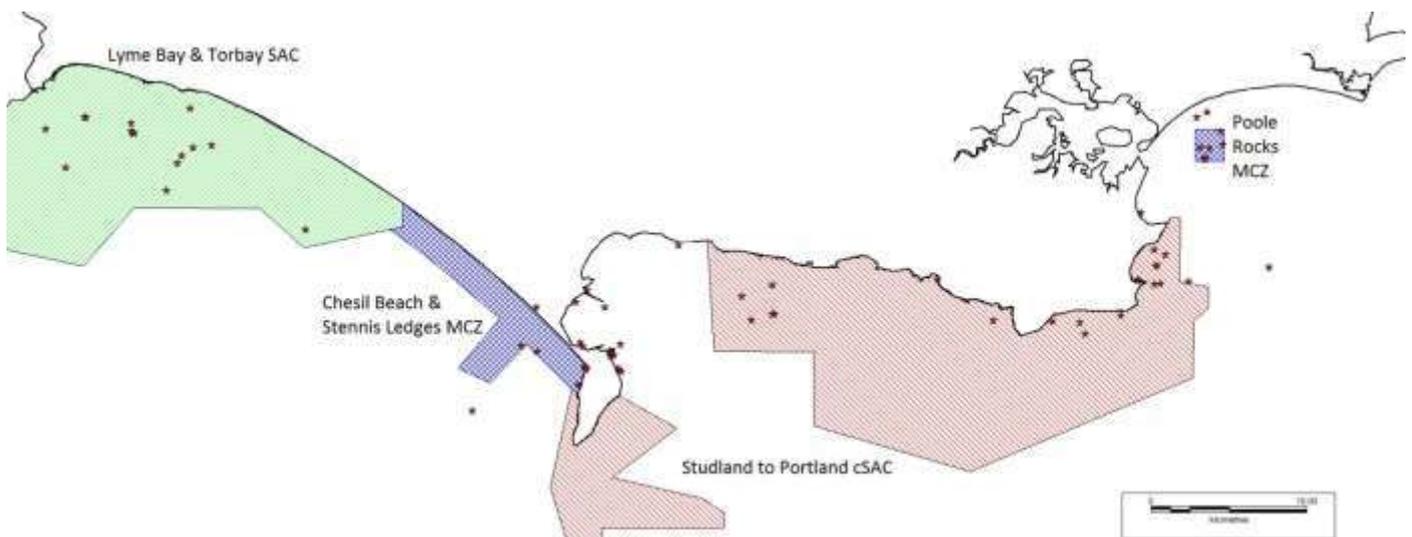
Despite a slow start to the year when the sea temperature dropped well into single figures and delayed the plankton bloom, the weather gods finally smiled upon us and delivered a glorious period of calm settled weather in the summer with fantastic viz and warm sunshine, so none of our planned survey dives were affected by weather. Seasearch regulars Kathryn Dawson and James Lucey helped out with the marshalling duties, for which many thanks! We continued to receive survey forms of dives from hardy individuals well into the winter months as the sea temperatures held up in double figures. Little did we realise that the December storms were just a harbinger for what was to come...

## Recording

A total of 142 forms (44 Observation and 98 Survey) were sent in to DWT by more than 50 divers during 2013; the proportion of the more detailed Survey forms was gratifyingly high at 69% - an excellent result! The overall total (including forms sent in to other co-ordinators and forwarded on to DWT) was 175 forms. This led to 88 survey events (created by combining forms when pairs or groups of divers carry out their surveys in essentially the same place).



The dive locations are plotted on the maps below which also show the boundaries of the marine protected areas.



## Training

Dorset Seasearch was involved in two Observer courses in April and July 2013 (both organised by local Portland dive centre Scimitar Diving). The more advanced Surveyor course held at the end of May 2013 saw a good attendance of 9 people who enjoyed far better visibility on their dive in the Poole Rocks MCZ than we had at the surface. Charlotte Bolton has become an Observer tutor, so the list of Dorset tutors is now as follows: Kathryn Dawson and Peter Tinsley (Surveyor and Observer tutors), Charlotte Bolton, Josie Pegg and Nick Reed (Observer tutors), Nick Owen (Observer tutor-in-training).

We also ran two specialist courses in 2013: bryozoan and hydroid turf at Portland Marina in April, followed by an algae course at the end of May, taking advantage of the low spring tides. Many thanks to our expert tutors Dr. Joanne Porter (author of the Seasearch guide to B&H), Mary Spencer-Jones, a Senior Curator at the Natural History Museum and Dr. Lin Baldock (local marine biology consultant) for their time and patience.

## 2013 Highlights (in pictures)



Above: Black bream (*Spondyliosoma cantharus*) eggs in **Poole Bay**



Above: **Pollack Rock** (Poole Rocks MCZ) – no, it's not a pollack, they were unrecorded at this site!



Left: Master of disguise, *Sepia officinalis*, at the wonderful **Jetties site on Brownsea Island**.

Below: One of the take-home messages from the Dorset turf and Cornwall hydroids/predators courses was that to spot your nudi, you first had to learn to identify its prey... Here's *Doto dunnei* on *Kirchenpaueria pinnata* on the **Fleur de Lys wreck in Swanage Bay**

Below: Speaking of disguise, here's a *Doto pinnatifida* in **Lyme Bay**...





Above: Brittlestar beds (with engulfed plumose anemone, *Metridium senile*) – this is at **Thatcher's Reef in Torbay** (in Devon but it's a lovely photo anyway...!)

Above: *Ampelisca* (a tube-building amphipod crustacean) mats at **Dancing Ledge, South Purbeck**

### 2013 Summary (in numbers)

Using the MNCR 04.05 key (available on the JNCC website at [jncc.defra.gov.uk/marinehabitatclassification](http://jncc.defra.gov.uk/marinehabitatclassification)) the total number of biotopes assigned was 173 (57 unique), of which 67 (38.73%) were identified as circalittoral rock (CR), 40 (23.12%) as infralittoral rock (IR) and 64 (36.99%) as sublittoral sediment (SS) (the remaining two samples keyed out as littoral sand and littoral rock). Overall, 164 biotopes (94.8%) were keyed out to Level 3 or greater, of which the most commonly occurring were CR.HCR.XFa (Mixed faunal turf communities; 29 occurrences), SS.SCS.CCS (Circalittoral coarse sediment; 11), SS.SCS.ICS (Infralittoral coarse sediment; 9), IR.HIR.KFaR.FoR (Foliose red seaweeds on exposed lower infralittoral rock; 7), CR.HCR.XFa.ByErSp.Eun (*Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock; 7), CR.FCR.Cv.SpCup (Sponges, cup corals and anthozoans on shaded or overhanging circalittoral rock; 7) and SS.SMp.SSgr.Zmar (*Zostera marina/angustifolia* beds on lower shore or infralittoral clean or muddy sand; 7). It was only possible to key out 10 biotopes to the highest level (Level 5 or 6) and all of these were in the CR complex, indicating how complicated a process biotope assignment can be.

In addition to the fantastic species images recorded, we received lots of very useful habitat shots and video footage that supplement the information received on the forms and can help to assign a biotope.



**Blacker's Bump, South Purbeck (above)**

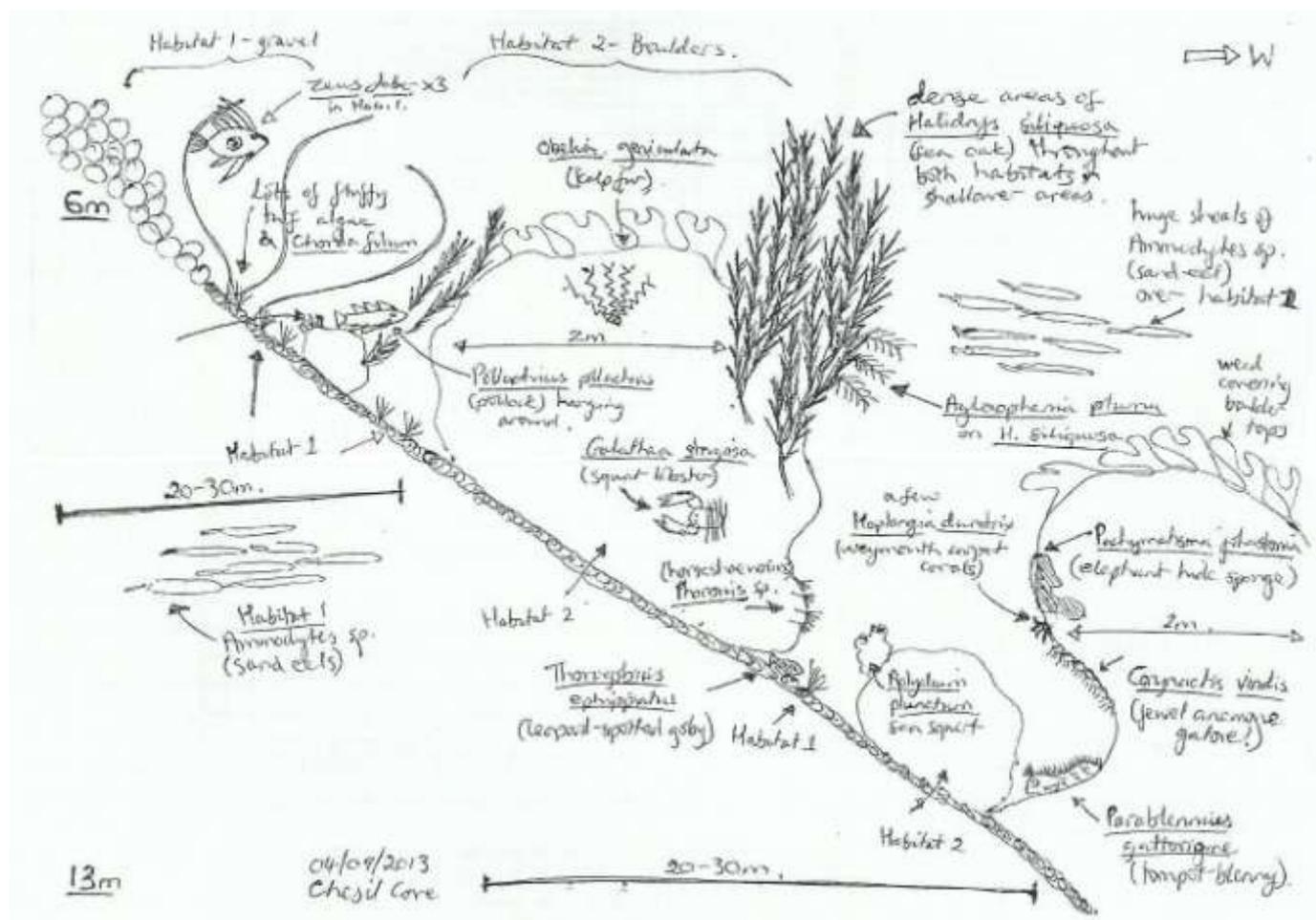


Another new site in Lyme Bay, christened **“Try Reef”** (since it looked from the bathymetry as if it was worth a try) (left and below left).

A previously-undived patch reef in **Poole Rocks MCZ** (below right)



We use the sketches on the forms in the same way and are now scanning in the sketches to augment the image catalogue. This particularly detailed and lovely sketch of Chesil Cove was received on a survey form from Amy Marsden, and definitely captures the feeling of the site:



## Non-native and climate change indicator species

Many of the species listed as non-native (NNS; not necessarily invasive) have become so common in Dorset that we hardly think of them as such (e.g. *Crepidula fornicata*). Other species are labelled as climate change indicators (CCI) since they may signify range expansions (usually southerly/south-western species heading north and/or east, in Dorset).

Species name	Phylum	Classification (CCI, NNS)	Where recorded (2013 only)
<i>Anemonia viridis</i>	Cnidaria	CCI	County-wide: Lyme Bay (rare), Weymouth Bay, Poole Bay, Poole Harbour
<i>Asparagopsis armata</i>	Algae	CCI, NNS	Weymouth Bay, Purbeck, Poole Bay
<i>Botrylloides violaceus</i>	Tunicata	NNS	Portland Marina
<i>Bugula neritina</i>	Bryozoa	NNS	Portland Marina
<i>Calliostoma zephyrinum</i>	Mollusca	CCI	County-wide: Lyme Bay, Weymouth Bay, Poole Bay, Poole Harbour

Species name	Phylum	Classification (CCI, NNS)	Where recorded (2013 only)
<i>Codium</i> spp.	Algae	NNS	Portland Harbour/Marina
<i>Corella eumyota</i>	Tunicata	NNS	Brownsea (Poole Harbour), Portland Marina, The Fleet
<i>Crepidula fornicata</i>	Mollusca	CCI, NNS	County-wide: Lyme Bay, Weymouth Bay, Poole Bay, Poole Harbour
<i>Elminius (Austrominius) modestus</i>	Crustacean	NNS	Portland Marina
<i>Gibbula umbilicalis</i>	Mollusca	CCI	Portland Harbour
<i>Grateloupia turuturu</i>	Algae	NNS	Brownsea (Poole Harbour), Portland Marina, The Fleet
<i>Halidrys siliquosa</i>	Algae	CCI	Portland (both coasts), Purbeck, Poole Bay, Brownsea (Poole Harbour)
<i>Nucella lapillus</i>	Mollusca	CCI	Portland (both coasts)
<i>Sargassum muticum</i>	Algae	CCI, NNS	Weymouth Bay east to Poole Bay
<i>Styela clava</i>	Tunicata	NNS	Portland, Brownsea (Poole Harbour), Poole Bay
<i>Undaria pinnatifida</i>	Algae	NNS	Portland Marina, Brownsea (Poole Harbour)

Not unexpectedly, the majority of the non-native species (NNS) are found in the vicinity of commercial or recreational hotspots for water-based activities.

### Groups, species and records of conservation interest recorded in Dorset during 2013

**N.B.** Counts for species numbers includes groups of genera where sightings were not recorded to species level.

Total number of unique species (including records at a higher taxonomic level) = 612.

Total number of species records = 6247

Phylum/subphylum	Count of species recorded (2012 total)	Most frequently recorded species (count)	Rare/scarce, Biodiversity Action Plan (BAP), Wildlife and Countryside Act (WCA) and MCZ FOCI (feature of conservation interest) species
Porifera (sponges)	73 (54)	<i>Dysidea fragilis</i> (72), <i>Amphilectus fucorum</i> (53), indet. crusts (51), <i>Hemimycale columella</i> (48)	Nationally scarce species: <i>Adreus fascicularis</i> (4)
Cnidaria (corals, anemones, hydroids)	73 (58)	<i>Anemonia viridis</i> (58), <i>Actinothoe sphyrodeta</i> & <i>Nemertesia antennina</i> (37), <i>Alcyonium digitatum</i> (32), <i>Caryophyllia smithii</i> (25)	BAP/WCA species: <i>Eunicella verrucosa</i> (22)
Platyhelminthes (flat worms)	1 (1)	<i>Prostheceraeus vittatus</i> (1)	
Annelida (segmented)	29 (23)	<i>Bispira volutacornis</i> (51),	

Phylum/subphylum	Count of species recorded (2012 total)	Most frequently recorded species (count)	Rare/scarce, Biodiversity Action Plan (BAP), Wildlife and Countryside Act (WCA) and MCZ FOCI (feature of conservation interest) species
worms)		<i>Pomatoceros</i> sp. (41), <i>Lanice conchilega</i> (27), <i>Terebellidae</i> (21), <i>Sabella pavonina</i> (19)	
Crustacea (crabs, shrimps etc.)	52 (34)	<i>Necora puber</i> (56), <i>Cancer pagurus</i> (41), <i>Cirripedia</i> (34), <i>Maja squinado</i> (33)	
Pycnogonida (sea spiders)	3 (0)		
Mollusca (snails, bivalves, sea slugs)	73 (50)	<i>Calliostoma zizyphinum</i> (36), <i>Hinia reticulata</i> (33), <i>Crepidula fornicata</i> (31), <i>Gibbula cinerarea</i> (31)	BAP/MCZ FOCI species: <i>Ostrea edulis</i> (18) Nationally scarce species: <i>Tritonia nilsodhneri</i> (7)
Bryozoa (seamats)	60 (41)	<i>Chartella papyracea</i> (44), <i>Flustra foliacea</i> (38), indet. crusts (35), <i>Alcyonidium diaphanum</i> (32), <i>Pentapora foliacea</i> (27)	
Echinodermata (starfish, sea cucumbers)	20 (15)	<i>Asterias rubens</i> (14), <i>Pawsonia saxicola</i> & <i>Thyone</i> sp. (9), <i>Henricia</i> sp. (8)	
Tunicata (sea squirts)	46 (45)	<i>Botryllus schlosseri</i> (43), <i>Ascidia mentula</i> (37), <i>Phallusia mammillata</i> (32), <i>Clavelina lepadiformis</i> (28)	Nationally scarce species: <i>Phallusia mammillata</i> (32), <i>Pycnoclavella aurilucens</i> (6)
Pisces (bony fish & elasmobranchs)	53 (49)	<i>Parablennius gattorugine</i> & <i>Labrus bergylta</i> (48), <i>Ctenolabrus rupestris</i> (44), <i>Pollachius pollachius</i> (37), <i>Gobius niger</i> & <i>Crenilabrus melops</i> (31)	BAP species: <i>Pleuronectes platessa</i> (3) MCZ FOCI species: <i>Gobius couchi</i> (7)
Algae (seaweed)	140 (90)	Corallinaceae (48), <i>Rhodophyceae</i> (34), <i>Ulva lactuca</i> & <i>Sargassum muticum</i> (25), <i>Griffithsia corallinoides</i> & <i>Calliblepharis ciliata</i> (22)	
Marine plants (angiosperms)	1 (1)	<i>Zostera marina</i> (4)	BAP habitat: <i>Zostera marina</i>

Algae continue to be the most widely recorded phylum (in terms of number of species), signifying the success of the specialist courses held in recent years (and the Seasearch guide published in 2010). There has also been a large increase in the number of bryozoan species recorded, undoubtedly reflecting the recent publication of the Seasearch guide, and the concerted efforts to collect and identify specimens in 2013. In 2014 we will be focusing our attention on sponges and squirts (in anticipation of more Seasearch guides to come!)

## Finally, a big thank you to all the divers and volunteers who contributed to Dorset Seasearch in 2013:

Alan Patterson, Alex Gibson, Alison Bessell, Alison Howarth, Amy Marsden, Andy Hayward, Andy Marsh, Anthony Hayes, Barbara King, Carol Horne, Carole Mapstone, Caz Allen, Cherry Williams, Chris Stevens, Chris Webb, Chris Wood, Christine Lissoni, Cordelia Chapman, David Green, Dawn Watson, Ed Smith, Emma Collins, Fiona Ravenscroft, Fiona Tibbitt, Fiona White, Fran Harland, Gemma Marriage, Gerald Legg, Gordon Bird, Harvey Wilson, Howard Thomas, James Lucey, Jen Ashworth, Jo Porter, Joe Bater, John Parkin, Jon Chamberlain, Josie Pegg, Julie Hatcher, Karen Dunford, Kathryn Hayes, Kevin Jones, Liam Colleran, Lin Baldock, Lizzie Heaver, Lois Beck, Lou Lloyd-Williams, Louise Bebb, Mark Harrison, Mark Hodgson, Mark Ninnim, Mary Spencer-Jones, Matt Doggett, Mike Markey, Mike Sharland, Neil Watson, Nick Owen, Nigel Topham, Pedro Viegas, Polly Whyte, Richard Lloyd, Richard White, Richard Yorke, Rik Girdler, Rod Sterland, Rosalind Palfrey, Ruth Hicks, Sally Sharrock, Shariff Moosun, Steve Horsley, Sue Hulme, Tamsyn Mann, Terry Bridgwood, Tim Mapstone, Tom Stamp, Yvonne Barnicoat.

And thanks also to the **skippers** who took us there, waited patiently, provided hot drinks and cake and then brought us safely home again: Mike Markey (Poole Diving), David Sellers and Jerome 'Smudge' Smith (Scimitar Diving), John Walker ('Miss Pattie') and Rob King ('Blue Turtle').

Apologies to anyone whose name has been inadvertently omitted from this list. **We hope to see you again in 2014!**

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Seasearch is a partnership between the Marine Conservation Society (MCS), The Wildlife Trusts, statutory nature conservation bodies and others, co-ordinated nationally by MCS and co-ordinated and delivered locally in England by Wildlife Trust and MCS local co-ordinators. For more information on Seasearch and to see all of the partners involved nationally, please visit [www.seasearch.org.uk](http://www.seasearch.org.uk) or email [info@seasearch.org.uk](mailto:info@seasearch.org.uk)

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