



FS 15: Studland Bay rMCZ

Seasearch Site Surveys 2014

This report summarises the results of surveys carried out during 2014 by Seasearch divers in the Studland Bay rMCZ. The aim of the surveys was to continue to add detailed records of the habitats and species found within the area. Particular attention was paid to the Habitat and Species FOCI identified in the Ecological Guidance on the designation of MCZs. Studland Bay has been included in the list of 37 rMCZ sites proposed for designation in the second tranche (these sites are now known as “T2 MCZs”).

Physical Features of the Area

Studland Bay is a shallow, east-facing area on the western edge of Poole Bay, sheltered at the southern end from both the prevailing south-westerly winds and the east-west tidal currents. It contains a large proportion of the seagrass (*Zostera marina*) beds in Dorset, which have a coastal protection function as well as sequestering atmospheric carbon dioxide, and which are listed as a priority BAP habitat. The seabed is predominantly sand with occasional small outcrops of rocky reef.

Features of the Marine Life

The *Zostera* meadows (themselves a BAP priority habitat) provide a nursery area for commercially important fish and shellfish (such as black bream (*Spondyliosoma cantharus*), pollack (*Pollachius pollachius*), cuttlefish (*Sepia officinalis*), sole (*Solea solea*)) as well as the protected or listed species *Hippocampus guttulatus* (spiny seahorse), *Hippocampus hippocampus* (short-snouted seahorse) and *Raja undulata* (undulate ray). Studland Bay is unique in the UK as the only known breeding location for both indigenous species of seahorse and all six species of pipefish have been recorded here, including the rare Nilsson's pipefish (*Syngnathus rostellatus*).

In the bay, shallow water, sandy plains and outcrops of sandstone reef support a range of shellfish, including the native oyster (*Ostrea edulis*, a BAP and MCZ FOCI species), the Chinese-hat shell (*Calyptraea chinensis*), hermit and masked crabs, as well as a variety of burrowing bivalves and worms such as lugworm (*Arenicola* sp.) and sandmason worm (*Lanice conchilega*). They also support a variety of commercially important flatfish such as plaice (*Pleuronectes platessa*, also a BAP species) and sole (*Solea solea*).



Plaice (*Pleuronectes platessa*) hiding under drift *Ulva lactuca*.



Cuttlefish (*Sepia officinalis*) eggs attached to *Zostera marina* eelgrass.



The non-native sea squirt *Botrylloides diegensis* (top) is spreading throughout Poole Bay.



General view of sparse *Zostera marina* with drift algae.

Human Uses

Due to its geographically protected location, Studland Bay is a very popular site for recreational boating activities and provides a safe anchorage as well as private permanent moorings. The bay receives an estimated 1 million visitors every year. The National Trust owns a number of beach huts and runs a popular education centre there.

Benefits of Protection

Fragmentation of the seagrass beds through physical damage caused by high levels of anchoring or bottom-towed fishing gear would have a severe direct impact on the diverse wildlife community as well as indirectly via their coastal protection and potential carbon sink roles.

Careful management of the site to enable its responsible and sustainable use would benefit recreational boaters and other visitors as well as the local fishing industry. It would also potentially open the bay up to more low impact recreational watersport use such as kayaking and snorkelling which is currently limited by the unrestricted boating activity, with a possible knock-on effect of benefitting the local business community.

Acknowledgements

This report has been compiled by Charlotte Bolton of the Dorset Wildlife Trust based on Seasearch survey records made by Lin Baldock, Charlotte Bolton, Rik Girdler, Julie Hatcher, Fiona Ravenscroft, Nigel Topham, Steve Trehella and Richard Yorke, and Seasearch Observation records made by Clare Allen, Elspeth Berry, Mark Hodgson and Richard White. Photos as credited; copyright is retained by the photographer. Seasearch would like to thank the volunteer divers for their records and also Mike Markey of Poole Diving (www.poolediving.co.uk) for taking us to the offshore sites.

Report published by Dorset Wildlife Trust (www.dorsetwildlifetrust.org.uk) for Seasearch (www.seasearch.org.uk).

Technical Appendix

This Appendix contains more detailed information about the surveys undertaken and records made. It includes:

- dive details
- biotope list
- species list

The data has been validated, verified and entered into the Marine Recorder database by Charlotte Bolton. It is available in Snapshot format on request.

MR Survey Name:

“2014 Seasearch Survey of Studland Bay rMCZ”

MR Survey Reference:

MRLRC01500000002

Dive details

Date	Site Name/Position	Surveyor(s)	Form(s)
02/08/2014	Outer Seagrass Site 1 50.6469 -1.9317	Lin Baldock, Elspeth Berry, Mark Hodgson, Fiona Ravenscroft, Nigel Topham, Richard Yorke	DT14/093
02/08/2014	Outer Seagrass Site 2 50.6461 -1.9283	Clare Allen, Charlotte Bolton, Rik Girdler, Richard White	DT14/091 DT14/186
19/08/2014	Middle Beach SZ 038 830	Julie Hatcher, Steve Trehwella	DT14/127

Designated features:

Broad Scale Habitats: Intertidal mud; intertidal sand and muddy sand; Subtidal mixed sediments; Subtidal sand; Seagrass beds (HOCl_17)

Species FOCI: Spiny seahorse, *Hippocampus guttulatus* (SOCl_15); Short-snouted seahorse, *Hippocampus hippocampus* (SOCl_16); Native oyster, *Ostrea edulis* (SOCl_22); Undulate ray, *Raja undulata* (SOCl_33)



Sublittoral Habitats/Biotopes recorded

Description	MNCR 04.05 Biotope Code†	Location*
<i>Zostera marina/Angustifolia</i> beds on lower shore or infralittoral clean or muddy sand	SS.SMp.SSgr.Zmar	1,2,3
Infralittoral fine sand	SS.SSa.IFiSa	1,2,3
Low energy infralittoral rock	IR.LIR	3

† The Marine Habitat Classification for Britain & Ireland (v04.05): jncc.defra.gov.uk/marinehabitatclassification

* Sites are labelled as follows: 1 = Outer Seagrass Site 1; 2 = Outer Seagrass Site 2; 3 = Middle Beach

Species List

No. of unique species recorded (not all to species level) = 60

1. Porifera (sponges)

Scientific name	Common name	Notes
Porifera indet. (orange)		
<i>Suberites</i> sp.	Sea orange	

2. Cnidaria (anemones, hydroids, corals)

Scientific name	Common name	Notes
<i>Anemonia viridis</i>	Snakelocks anemone	Climate-change indicator species
<i>Calliactis parasitica</i>	Parasitic anemone	
<i>Laomedea</i> sp.		
<i>Urticina felina</i>	Dahlia anemone	

3. Annelida (segmented worms)

Scientific name	Common name	Notes
<i>Arenicola</i> sp. (casts)	Lugworm	
<i>Arenicola marina</i>	Lugworm	
<i>Lanice conchilega</i>	Sand mason worm	
<i>Megalomma vesiculosum</i>		
Polychaeta	Bristleworms	
<i>Sabella pavonina</i>	Peacock worm	
Sabellidae	Feather duster worms	
Terebellidae		

4. Crustacea (crabs, lobsters, barnacles)

Scientific name	Common name	Notes
<i>Carcinus maenas</i>	Shore crab	
<i>Diogenes pugilator</i>	South-claw hermit crab	
<i>Inachus</i> sp.	Sponge spider crabs	
<i>Liocarcinus</i> sp.	Swimming crabs	
<i>Macropodia</i> sp.	Long-legged spider crabs	
<i>Maja squinado</i>	Spiny spider crab	
Paguridae	Hermit crabs	
<i>Pagurus bernhardus</i>	Common hermit crab	

5. Mollusca (snails, bivalves, nudibranchs)

Scientific name	Common name	Notes
<i>Buccinum undatum</i>	Common whelk, buckie	
Cephalopoda	Cephalopods	
<i>Cerastoderma edule</i>	Common cockle	
<i>Crepidula fornicata</i>	Slipper limpet	Non-native species
<i>Hinia reticulata</i> (<i>Nassarius reticulatus</i>)	Netted dog whelk	
<i>Rissoa parva</i>		
<i>Sepia officinalis</i> (eggs)	Cuttlefish	
<i>Sepiola atlantica</i>	Little cuttle	
Solenidae	Razor shells	

6. Bryozoa (sea mats/mosses)

Scientific name	Common name	Notes
<i>Amathia lendigera</i>		
<i>Electra pilosa</i>	Frosty sea mat	

7. Tunicata (sea squirts)

Scientific name	Common name	Notes
<i>Botrylloides</i> sp.		
<i>Botrylloides diegensis</i>	San Diego sea squirt	Non-native species
<i>Botryllus schlosseri</i>	Star sea squirt	
<i>Styela clava</i>	Korean sea squirt	Non-native species

8. Pisces (fish)

Scientific name	Common name	Notes
<i>Atherina presbyter</i>	Sand smelt	
<i>Callionymus</i> sp.	Dragonet	
<i>Ctenolabrus rupestris</i>	Goldsinny	
<i>Dicentrarchus labrax</i>	Sea bass	
Gobiinae	Gobies	
<i>Gobius niger</i>	Black goby	
<i>Gobiusculus flavescens</i>	Two-spot goby	
<i>Labrus bergylta</i>	Ballan wrasse	
<i>Mullus surmuletus</i>	Red mullet	
<i>Pleuronectes platessa</i>	Plaice	BAP species
<i>Pollachius pollachius</i>	Pollack	
<i>Pomatoschistus minutus</i>	Sand goby	
<i>Spondyliosoma cantharus</i>	Black bream	
Teleostei	Fry	
<i>Trisopterus luscus</i>	Bib, pout, pouting	

9. Algae (seaweeds)

Scientific name	Common name	Notes
<i>Sargassum muticum</i>	Jap weed, wireweed	Non-native species
<i>Taonia atomaria</i>	Dotted peacock seaweed	
<i>Ulva lactuca</i>	Sea lettuce	
<i>Aglaothamnion tenuissimum</i>		
Corallinaceae (encrusting)	Encrusting pink algae	
<i>Chondrus crispus</i>	Irish moss, carragheen	

10. Angiosperms (flowering plants)

Scientific name	Common name	Notes
<i>Zostera marina</i>	Common eelgrass	BAP habitat (beds), habitat FOCI (beds)

Dorset Wildlife Trust (DWT), Brooklands Farm, Forston, Dorchester, Dorset, DT2 7AA; Tel: 01305 264620; Fax: 01305 251120. Registered Charity No. 200222. For more information about DWT, our work and the Seasearch project, please visit www.dorsetwildlifetrust.org.uk or email seasearch@dorsetwildlifetrust.org.uk

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 or email info@seasearch.org.uk

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