



FS 15: Studland Bay rMCZ

Seasearch Site Surveys 2013

This report summarises the results of surveys carried out during 2013 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.

Update (February 2014): Studland Bay has been included in the list of 37 rMCZ sites proposed for designation in the second tranche; this process is currently scheduled to take place at the end of 2015.

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 support a range of shellfish, including the native oyster (*Ostrea edulis*, a BAP and MCZ FOCI species), the Chinese-hat shell (*Calyptrea 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*).

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. There are a number of National Trust owned beach huts and the bay receives an estimated 1 million visitors every year. The National Trust 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 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.



Spiny seahorse, Hippocampus guttulatus (SOCl_15) in seagrass bed (HOCl_17) of Zostera marina



*Screenshot from static baited fish camera showing juvenile pollack (*Pollachius pollachius*) and black bream (*Spondyliosoma cantharus*), both important commercial species*



Native or European oyster, Ostrea edulis (SOCl_22)



Acknowledgements

This report has been compiled by Charlotte Bolton of the Dorset Wildlife Trust based on Seasearch survey records made by Julie Hatcher and Steve Trehwella. Photos by Julie Hatcher, as credited; copyright is retained by the photographer. Seasearch would like to thank the volunteer divers for their records.

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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 entered into the Marine Recorder database and is available in Snapshot format on request.

Designated features and management approach:

Broad Scale Habitats: Intertidal mud; intertidal sand and muddy sand; Subtidal mixed sediments; Subtidal sand; Seagrass beds (HOCI_17)

Species FOCI: Spiny seahorse, *Hippocampus guttulatus* (SOCI_15); Short-snouted seahorse, *Hippocampus hippocampus* (SOCI_16); Native oyster, *Ostrea edulis* (SOCI_22); Undulate ray, *Raja undulata* (SOCI_33)

Dive details

Date	Site Name/Position	Surveyor(s)	Form(s)
06/07/2013	Middle Beach 50.648 -1.948	Julie Hatcher, Steve Trewhella	DT13/083
30/08/2013	Middle Beach 50.648 -1.948	Julie Hatcher, Steve Trewhella	DT13/081
31/08/2013	Middle Beach 50.648 -1.948	Julie Hatcher, Steve Trewhella	DT13/082



Sublittoral Habitats/Biotopes recorded

Description	MNCR 04.05 Biotope Code†
<i>Zostera marina/Angustifolia</i> beds on lower shore or infralittoral clean or muddy sand	SS.SMp.SSgr.Zmar
Infralittoral fine sand	SS.SSa.IFiSa
Infralittoral mobile clean sand with sparse fauna	SS.SSa.IFiSa.IMoSa
Low energy infralittoral rock	IR.LIR

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

Species List

‡ Abundance recorded on the SACFOR scale, plus P for 'present' if no abundance recorded (*i.e.* identification made from photograph during post-survey analysis).

1. Porifera (sponges)

Scientific name	Common name	Abundance‡	Notes
Porifera indet.		P	

2. Cnidaria (anemones, hydroids, corals)

Scientific name	Common name	Abundance‡	Notes
Hydrozoa spp.	Hydroids	C	
<i>Anemonia viridis</i>	Snakelocks anemone	C-O	
<i>Sagartiogeton undatus</i>		P	

3. Annelida (segmented worms)

Scientific name	Common name	Abundance‡	Notes
<i>Arenicola</i> sp. (casts)	Lugworm	A-P	
<i>Lanice conchilega</i>	Sand mason worm	F-P	
<i>Megalomma vesiculosum</i>		R	
<i>Sabella pavonina</i>	Peacock worm	F-O	
<i>Pomatoceros</i> sp.	Keel worms	R	

4. Crustacea (crabs, lobsters, barnacles)

Scientific name	Common name	Abundance‡	Notes
Mysidacea	Ghost shrimps	P	
<i>Carcinus maenas</i>	Shore crab	O-R	
<i>Crangon crangon</i>	Brown shrimp	C-O	
<i>Diogenes pugilator</i>		F	
<i>Homarus gammurus</i>	Common lobster	R	
<i>Idotea linearis</i>		R	
<i>Macropodia</i> sp.	Long-legged spider crab	F	
<i>Maja squinado</i>	Spiny spider crab	O-R	
<i>Pagurus bernhardus</i>	Common hermit crab	C-F	
<i>Palaemon serratus</i>	Common prawn	R	

5. Mollusca (snails, bivalves, nudibranchs)

Scientific name	Common name	Abundance‡	Notes
<i>Cerastoderma edule</i>	Common cockle	C	

Scientific name	Common name	Abundance‡	Notes
<i>Crepidula fornicata</i>	Slipper limpet	C-O	
<i>Ensis siliqua</i>	Razor clam	C	
<i>Hinia reticulata</i> (<i>Nassarius reticulatus</i>)	Netted dog whelk	C-F	
<i>Lacuna vincta</i>		F	
<i>Ostrea edulis</i>	Native, European oyster	F	BAP, Species FOCI
<i>Rissoa</i> sp.		F	
<i>Sepia officinalis</i>	Cuttlefish	F-R	
<i>Sepiola atlantica</i>	Little cuttle	O	

6. Bryozoa (sea mats/mosses)

Scientific name	Common name	Abundance‡	Notes
Bryozoa indet.		P	

7. Tunicata (sea squirts)

Scientific name	Common name	Abundance‡	Notes
<i>Asciidiella aspersa</i>		O	
<i>Ciona intestinalis</i>		R	
<i>Clavelina lepadiformis</i>	Lightbulb sea squirt	O	

8. Pisces (fish)

Scientific name	Common name	Abundance‡	Notes
Teleostei (juvenile)	Fry	A-C	
Ammodytidae	Sand eels	F	
<i>Atherina presbyter</i>	Sand smelt	O	
<i>Callionymus</i> sp.	Dragonet	F	
<i>Crenilabrus melops</i>	Corkwing wrasse	F-C	
<i>Gobius niger</i>	Black goby	F	
<i>Gobiusculus flavescens</i>	Two-spot goby	F	
<i>Hippocampus guttulatus</i>	Spiny seahorse	R	BAP, Species FOCI
<i>Labrus bergylta</i>	Ballan wrasse	F-C	
<i>Pleuronectes platessa</i> (juvenile)	Plaice	R	BAP
<i>Pollachius pollachius</i> (juvenile)	Pollack	C-O	
<i>Pomatoschistus minutus</i>	Sand goby	A-C	
<i>Solea solea</i>	Common sole	R	BAP
<i>Spinachia spinachia</i>	Fifteen-spined stickleback	C	
<i>Spondyliosoma cantharus</i> (juvenile)	Black bream	C-F	
<i>Syngnathus acus</i>	Common pipefish	O-R	
<i>Syngnathus rostellus</i>	Nilsson's pipefish	R	
<i>Syngnathus typhle</i>	Broad-snouted pipefish	R	

9. Algae (seaweeds)

Scientific name	Common name	Abundance‡	Notes
<i>Chondrus crispus</i>	Irish moss, carrageen	F	
<i>Sargassum muticum</i>	Jap weed, wireweed	F-O	
<i>Ulva lactuca</i>	Sea lettuce	O-R	

10. Angiosperms (flowering plants)

Scientific name	Common name	Abundance‡	Notes
<i>Zostera marina</i>	Common eelgrass	SA-P	BAP habitat (beds), habitat FOCI (beds)

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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 or email info@seasearch.org.uk

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