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MRV Scotia

Survey 1512S

PROGRAMME

25 October – 09 November 2012

Ports

Loading: Aberdeen, 22 October, 2012
Unloading: Aberdeen, 09 November, 2012

In setting the cruise programme and specific objectives, etc the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the cruise with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Cruise Report, to I Gibb and the Cruise Summary Report (old ROSCOP form) to M Geldart, within four weeks of a cruise ending. In the case of the Cruise Summary Report a nil return is required, if appropriate.

Personnel

M Robertson	(SIC)
N Collie	
P Copland	
C Shand	
C Johnston	(Visitor - JNCC)
D Bayley	(Visitor - JNCC)
P Chaniotis	(Visitor - JNCC)
A Eggett	(Visitor - JNCC)
R Ross	(Visitor - Plymouth University)
Contractor	(Visitor - MBES/SS)

Estimated days by project: 16 days – SP02Q0 (20113)

Gear

TV Drop frame and VMUX controller, 1020m netsonde cable, Reson 7125 swath system, Edgetech sidescan sonar, mini-Hamon grab, Day grab, Rock dredge, ancillary equipment for benthic sample processing.

Objectives

There are two areas of interest within and near to the Wyville Thomson Ridge Site of Community Importance (SCI) (see Figure 1). Positions for all sampling areas will be provided later.

1. Wyville Thomson Ridge SCI (WTR SCI).

2. SMPA Faeroe-Shetland sponge belt area.

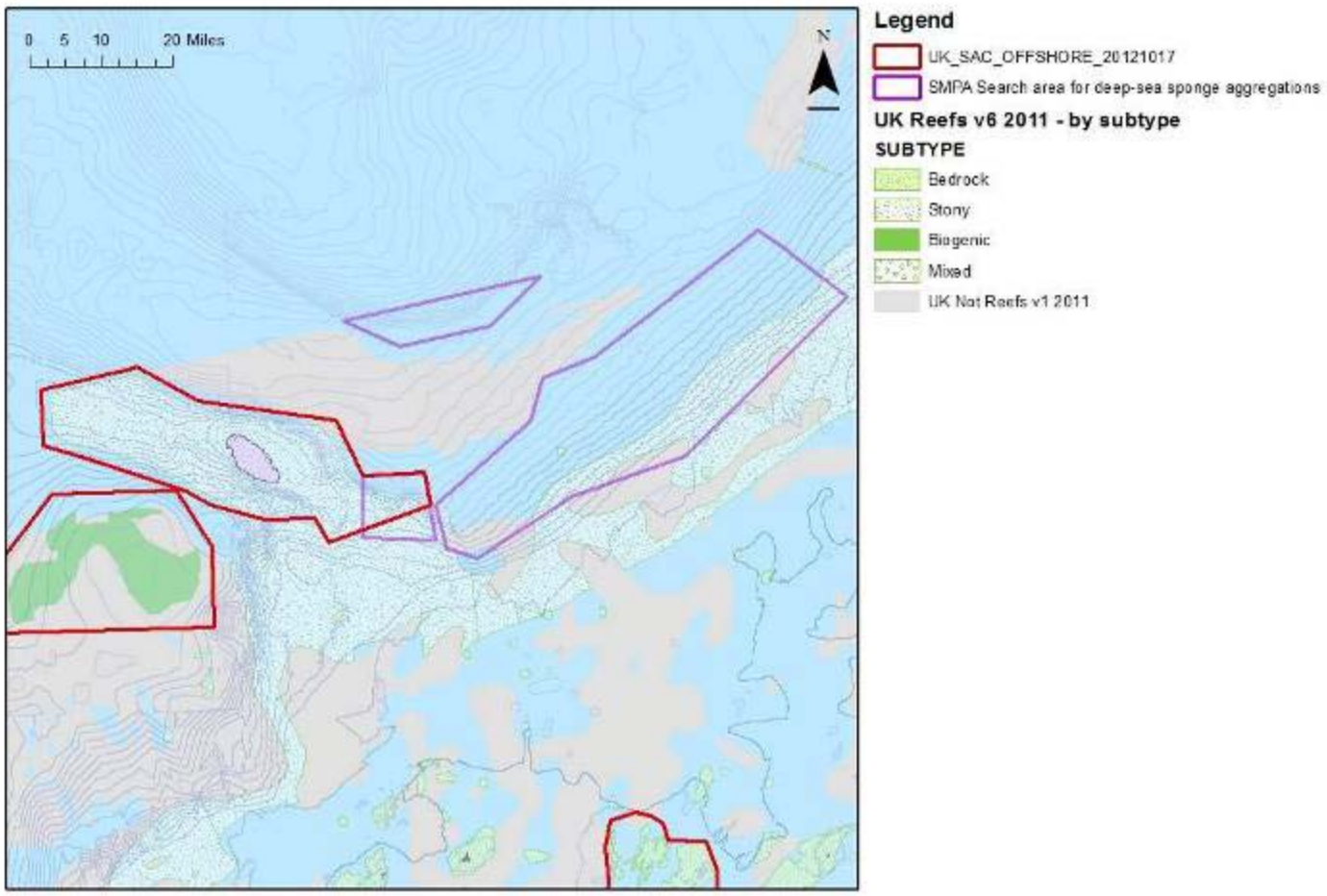

Figure 1: Wyville Thomson Ridge SCI and SMPA priority search areas for survey 1512s

The main purpose of the survey is to obtain evidence to facilitate management discussions at the WTR SCI and to develop methods for future MPS monitoring. Further aims are to survey the SMPA search locations to confirm the presence and extent of deep-sea sponge aggregations

Procedures

For this survey, blocks of specific interest have been identified over areas of high demersal fishing pressure as identified from VMS data (see Figure 2).

- Block A (central): approximately 6km*25km (150km^2) with depths ranging from <350m to 830m. This block has been selected across the site to take a representative slice of the depth range on the northern and southern aspect.

- Block B (marginal): approximately 2km*10km (20 km^2) with depths ranging from 75m to 850m

At each block, 100% coverage, acoustic data will be collected. In central block A, approximately 25 km^2 is shallower than 350m and this area will be surveyed using the Reson 7125 system. Elsewhere, in deeper water, the sidescan (SS) will be deployed. A USBL transponder will be attached to the SS cable to provide positional data via the HiPap system on board Scotia.

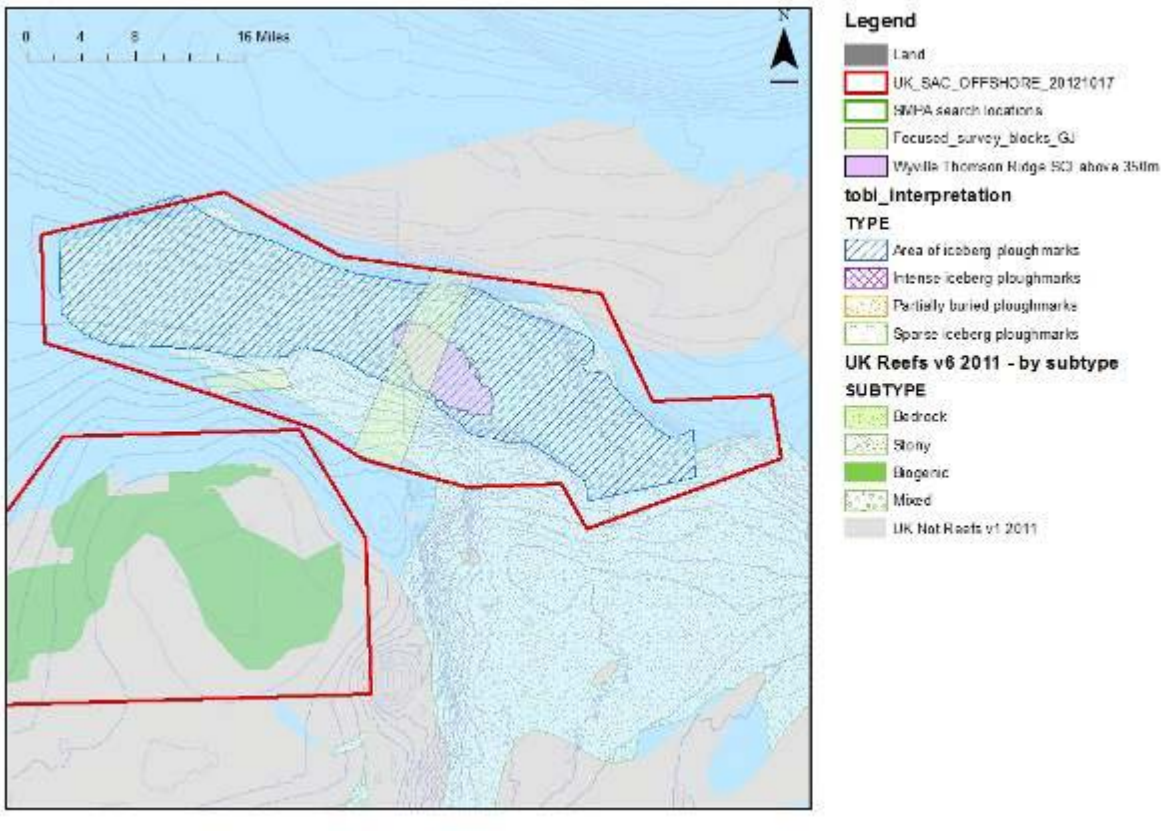

Figure 2: Blocks of survey focus within the WTR SCI boundary

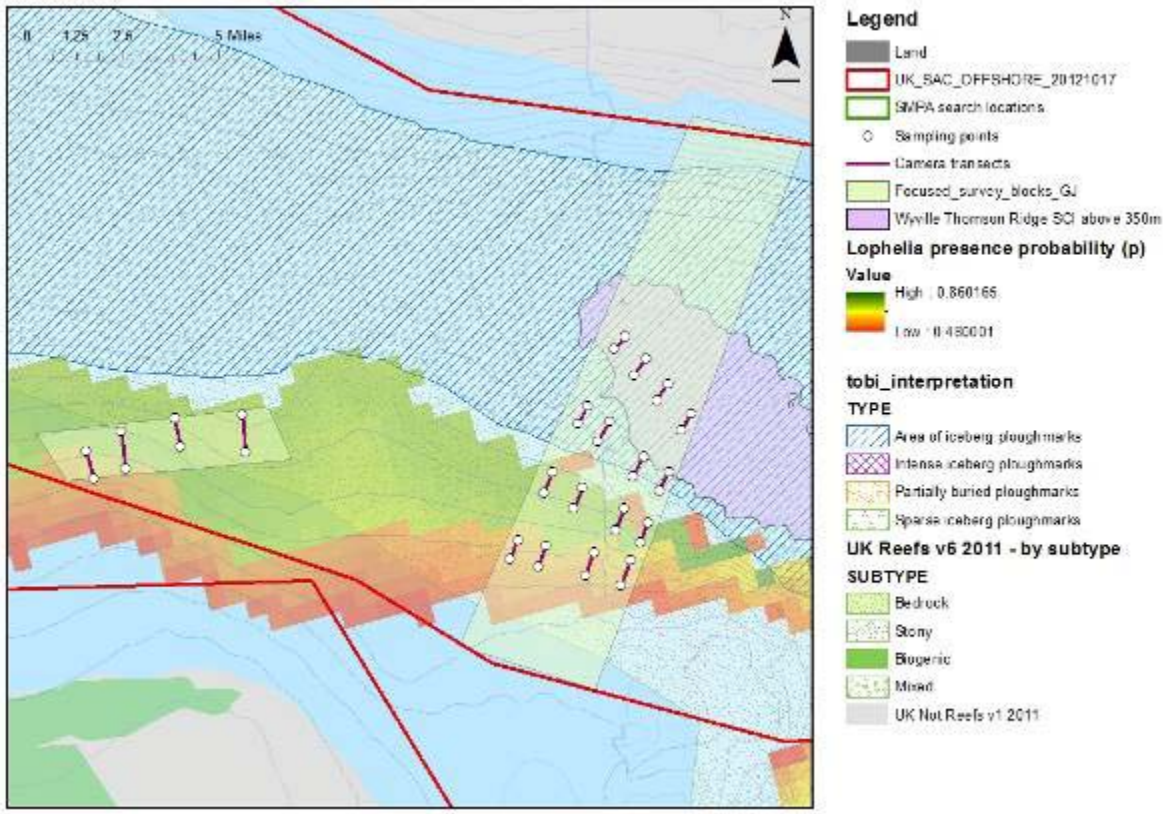

Figure 3: Planned camera tows over areas of highest fishing effort and coinciding with predicted *Lophelia pertusa* reef.

Sixteen, four kilometre long camera transects will be run at four depth zones perpendicular to repeat trawl lines identified from VMS data on Block A, while four transects will be completed over Block B (see Figure 3). At each of these camera tows, samples will be collected with either the Hamon Grab or Rock Dredge depending on the substrate type. Specimens from these samples will be used to aid species identification from the videos and to help characterise the habitat. In addition to this, based on the acoustic data interpretation, up to 24 groundtruthing samples will be selected from within Block A and stratified either by depth or by interpreted habitat data (obtained from earlier surveys). Two or three stations will be sampled per stratum with camera work (500m tows) and grabbing/dredging for biological sampling. Sampling positions for all the above work will be provided while at sea and will be based on the outputs from the Reson and sidescan surveys.

Further to this, up to 10 camera tows will be carried out to the southeast of Blocks A and B, to duplicate work completed during the 2006 SEA SAC. Finally, *Scotia* will collect sidescan data in corridors of the SMPA Faeroe-Shetland sponge belt (see Figure 4), in parallel with the depth contours. It is estimated that a maximum of five acoustic lines will be completed in this area. A drop-camera will then be deployed (a maximum of 10) to identify deep sea sponge aggregations. Representative seabed samples will be collected using the Rock Dredge and mini Hamon grab to enable sponge species identification.

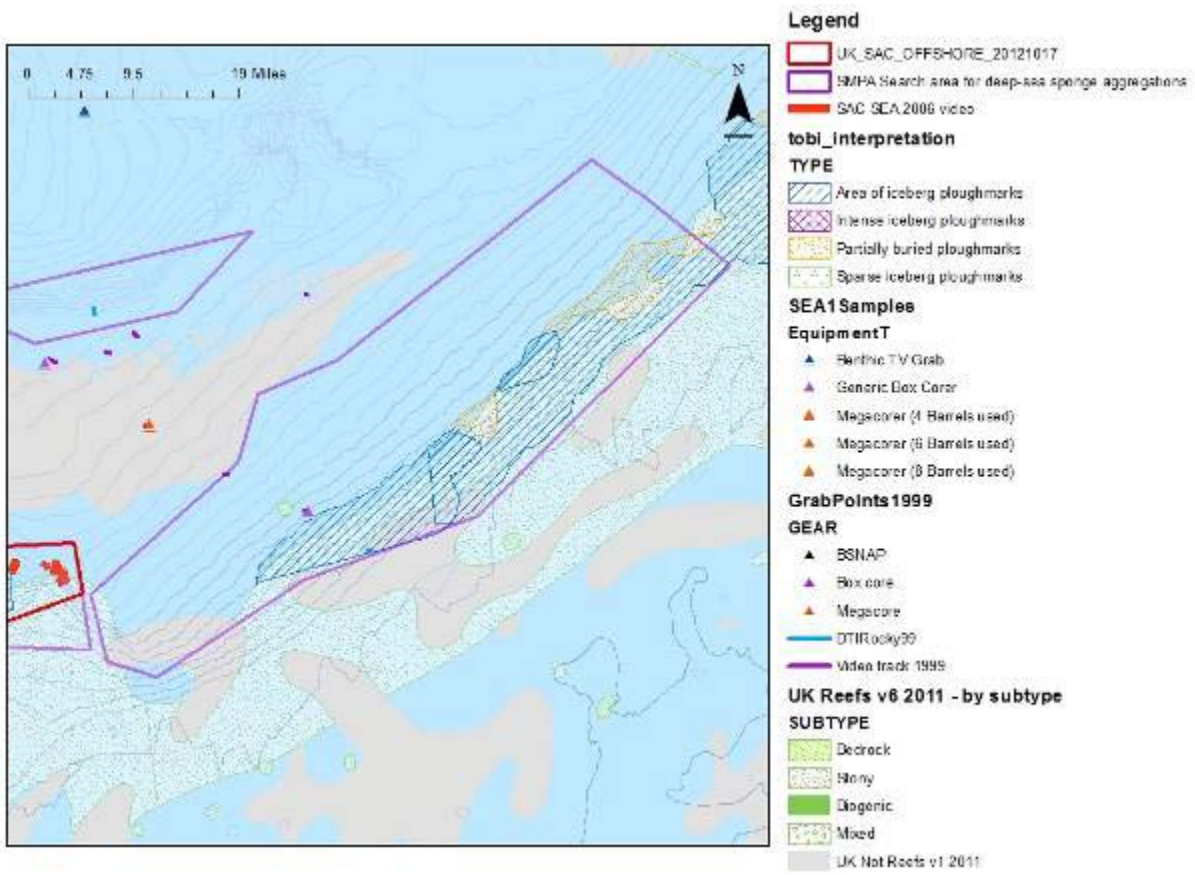

Figure 4: SMPA area of search for deep-sea sponge aggregations in the region of the Faeroe-Shetland Channel

General

Loading of all sampling gear will take place over the period 22-24 October. *Scotia* will then sail on the morning of 25 October and make passage to a position in the Southern Trench where, once safety drills have been completed, testing and trial deployments of all acoustic and camera gear will be carried out. On completion of this task, *Scotia* will sail for the areas of interest in the vicinity of the Wyville Thomson Ridge approximately 150km North West of Cape Wrath. A daily operational sampling plan will be agreed between the SIC, the Captain and the JNCC Team Leader. In the event of adverse weather on the WTR, sampling effort will be transferred to stations probably within the Minch.

Normal contacts will be maintained with the Laboratory.

Submitted:
M R Robertson
18 October 2012

Approved:
I Gibb
19 October 2012

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25 October – 9 November 2012

PROGRAMME AMENDMENT

C Hall will replace C Shand for this survey.

I Gibb
25 October 2012