

Not to be cited without prior reference to Marine Scotland, Marine Laboratory, Aberdeen.

RV *Aora*

Cruise 1410H

PROGRAMME

16-25 August 2010

Loading: 16 August, University Marine Biological Station, Millport

Unloading: 25 August, University Marine Biological Station, Millport

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:

T Howell (SIC)
J Hunter
P Boulcott
D Bova Part 2
T Stevenson Part 1 (UMBS)

Project Code: MF02q (10 days)

Gear

Camera drop frame + Digital stills camera + Colour video camera
Laser scale
Falcon remote underwater vehicle (ROV)
400 m umbilical cable with 37 Male pin connectors
2 X three dredge scallop towing bars without dredges but including bridals and shackles
Buoys
Leaded rope + 2 x Bruce anchors

Objectives

1. To conduct an impact study examining the effect of scallop dredging on a rocky reef;
2. To conduct a camera survey of the rocky reef feature before and after dredging;

3. To collect ROV footage of the reef after dredging.

The study aims to conduct an impact study examining the effect of scallop dredging over rocky reef habitats. The study is to be conducted in the waters around the Firth of Lorn Special Area of Conservation (SAC): centre of the site, 5°43'0"W, 56°13'0"N. The first phase of the cruise will be dedicated to a broad-scale survey of sites outside the SAC that are known to have potentially suitable, hard substrates. A primary objective of the survey is to dredge an area of rocky reef biotope comparable to sites found within the Firth of Lorn SAC. Typical component species of such biotopes are: colonial ascidians, dead men's fingers (*A. digitatum*), and bryozoans. The task of identifying such substrates will be carried out using the UMBS's (University Marine Biological Station, Millport) sidescan sonar and Marine Scotland's camera drop frame. Once identified, the next phase of the cruise will be to conduct a photographic/video survey of the reef prior to dredging using a camera drop-frame. Following this, the impact of dredging will be approximated by the action of towing or winching an array of three scallop dredges over the reef. For safety reasons, the dredge may be winched rather towed over the feature of interest. When completed, the towed area will again be surveyed photographically using a camera drop-rane. If time allows ROV footage of the reef will also be collected following dredging.

General

Weather permitting, *RV Aora* will depart on the morning of 16 August from Millport and will arrive in the Firth of Lorn SAC the next day. The remainder of the scientific time on this cruise will be spent around the boundaries of the SAC. Strong water currents operate in the Firth of Lorn and the deployment of the ROV will be timed to coincide with periods of slack water. Down time due to severe weather will be used to refine the photographic techniques being developed by Marine Scotland Science. *RV Aora* will arrive at Millport on the morning of 25 August.

Normal contact will be maintained with the Laboratory.

Submitted
T Howell
06 August 2010

Approved
I Gibb
06 August 2010