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FRV *Alba na Mara*

Cruise 0809A

REPORT

12 - 31 May 2009

Ports

Loading: 12 May, Ullapool

Unloading: 31 May, Fraserburgh

Personnel

P Boulcott (SIC)

M Burns

M Harding

Gear

Pyramid frame and underwater video camera kit.

Costs to Project: 20 days MF02Q

Objectives

1. to finalise the location of 3 replicate sites after ground truthing using the UW camera system;
2. to estimate species number and abundance in 9 predetermined areas in and around the Firth of Lorn SAC using UW camera and, where necessary, grab sampling techniques;
3. to scallop dredge at least 3 sub-sites immediately outside the SAC using a commercial charter vessel;
4. to re-survey the 3 impact sub-sites on the same basis as objective 1 within a 4 day survey period;
5. to collect sediment from predetermined areas for the purposes of particle size analysis.

Narrative

M Harding and P Boulcott joined *Alba na Mara* at 1130 (all times GMT) on Tuesday 12 May in Ullapool, with M Burns having joined the vessel the previous day. *Alba na Mara* departed at midday and made passage to the Firth of Lorn, stopping for the evening at Loch Hourn. Passage resumed the following day at 0700, with *Alba na Mara* arriving at her anchorage in Loch Buie, Mull at 1900. The next two days were spent assessing the suitability of 5 potential sites in the Firth of Lorn using the camera drop frame. The three sites chosen for study were areas west of the Garvellachs, southeast of the Eilean Dubh Mor, and off the

northwest coast of Jura. Each site was split into three sub-sites: an impact site that would be dredged after initial survey, a nearby control site, and an additional control site situated within the SAC boundary. Six of the nine study sub-sites were redrawn at this stage in order to meet criterion set out by the study design.

Thereafter, from 15 to 28 May, *Alba na Mara* surveyed each of the three designated sites. During this period *Alba na Mara* recorded digital stills images and side elevation and overhead video footage over multiple stations at each of the sub-sites (see table 1). Working in conjunction with the chartered vessel, *Rambling Rose*, surveys of the three sub-sites assigned to the dredge treatment were dredged and surveyed successfully. All relevant controls were also completed within schedule. In order to collect data on infauna, grab samples were collected by the *Rambling Rose* from the sandier site of the three; the site which lay to the northwest of Jura. Additional grab samples were taken from each of the three sites by the *Rambling Rose* for the purposes of particle size analysis.

The half landing for the cruise took place in Oban on 20 May. A further, unscheduled return to Oban was made on 25 May for a crew changeover.

Alba na Mara spent the final working day of the cruise, 28 May, reconfiguring the camera set-up and test-photographing an additional area of the seabed immediately to the south of the Garvellachs. Passage was made for Fraserburgh at 1700 on Thursday 28 May. Steaming through the night and the following day *Alba na Mara* found anchor in Cullen Bay at 0400 on 30 May. The journey was resumed at 1415 and *Alba na Mara* arrived in Fraserburgh harbour at 1745 on 30 May.

Results

The camera survey programme proposed was successfully completed for 3 replicate sites in the Firth of Lorn. A map of the 5 potential sites visited during the preliminary survey are shown in figure 1. The number of camera drop samples taken at each of the three selected sites, sites 1, 3, & 4, is listed in table 1. Side elevation and overhead video footage and digital stills images were recorded during each camera drop. A return to these sites in July/August 2009 and March 2010 is planned. Test photographs of an extra 160 quadrats were taken in the area immediately to the south of the Garvellachs on the final day.

P Boulcott
30 May 2009

Figure 1: Map of the Firth of Lorn SAC depicting the 5 sites visited by 0809a

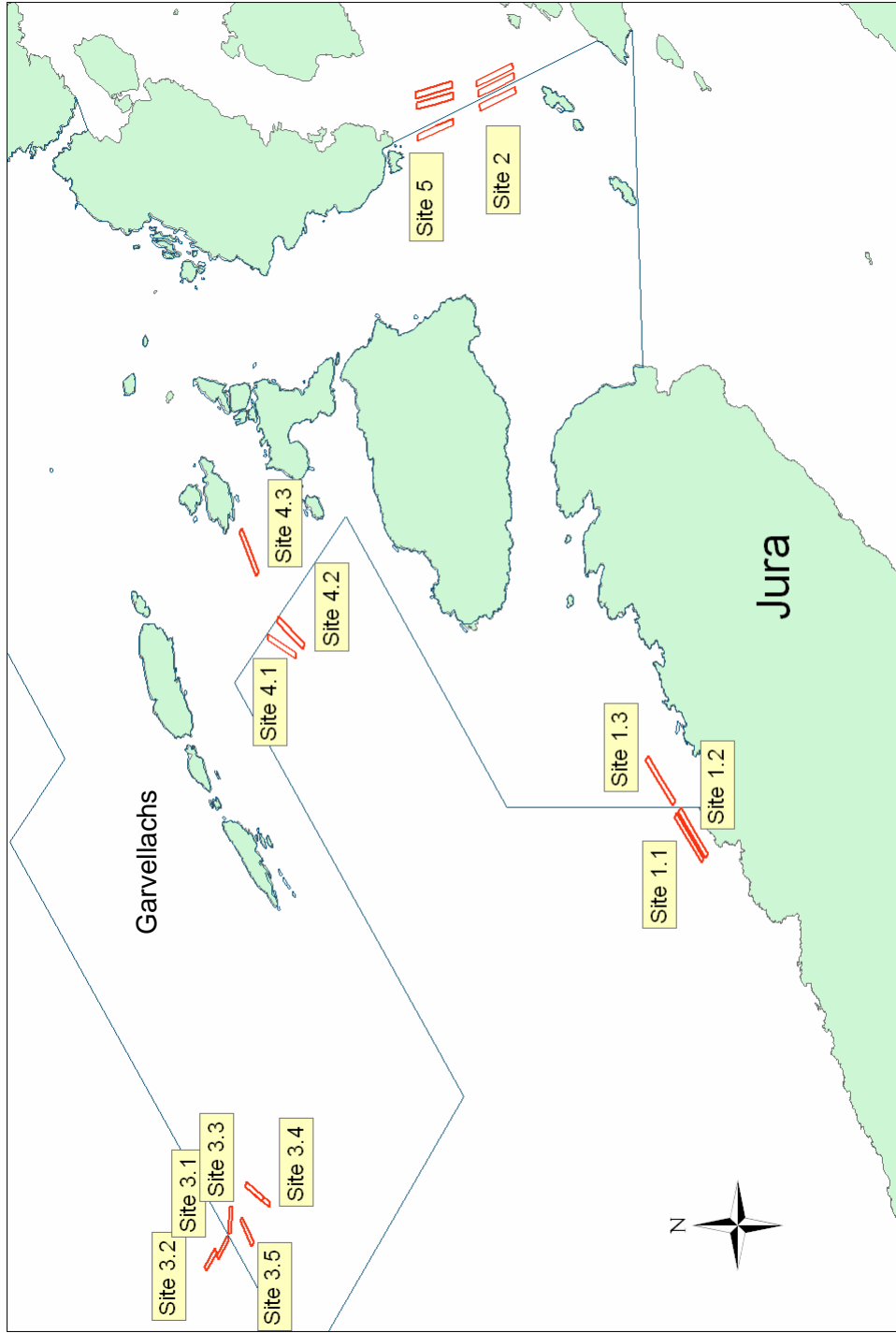


Table 1: number of 2 m² camera frame drops taken in each test area.

Area	Treatment type	Period	Number of camera drops
1.1	Impact	Before	160
1.2	Control	Before	160
1.3	SAC control	Before	160
1.1	Impact	After	160
3.1	Control	Before	120
3.2	Impact	Before	120
3.4	SAC control	Before	120
3.3	SAC addn. survey	Before	120
3.2	Impact	After	120
4.1	Control	Before	160
4.2	Impact	Before	160
4.3	SAC control	Before	160
4.2	Impact	After	160
Garvellachs	Additional test photos	-	160