

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

MRV *Alba na Mara*

Survey 0121A

PROGRAMME

6-22 January 2021

Ports

Loading: Fraserburgh, 18 December 2020

Sailing: Fraserburgh, 06 January 2021

Unloading: Fraserburgh, 22 January 2021

In setting the survey 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 survey with staff on-board before work is commenced.

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

Gear

2 x static time lapse camera frames/landers

2 x stand-alone time lapse stills cameras, recorders and power supplies (for static camera frames)

Day grab, sieves and table

Hand deployed mini-lander with self-sufficient camera, lighting and power supply

Estimated Days per Project: 17 Days, 20159

Objectives

- To carry out systematic sediment sampling in the Moray Firth.
- To obtain video footage from *Nephrops* grounds using a hand deployed lander to measure *Nephrops* burrow diameter, and where possible, associated complex size.
- To observe fauna in the Moray Firth using the static lander and time lapse camera.

Procedure

Survey activity will be very dependent on the weather, and it may be required to alter the work plans during the survey. All the work is scheduled to be completed in the Moray Firth.

On leaving port the vessel will head west to the Inner Moray Firth. On arrival, two suitable sites will be located to deploy the landers. Each lander will be equipped with a time lapse camera, flash and power supply. Ideally the landers will be lowered onto *Nephrops* grounds, but weather and local commercial activity will have to be taken into consideration. Depending on the weather and progress with the work schedule, these frames will remain in place until for

the duration of the survey. The footage from both landers will be downloaded at sea once the landers have been recovered. However, there maybe a requirement for the landers to be recovered mid-point during the survey and then redeployed.

Sediment samples will be taken on north/south transects, beginning where safe and practicably as possible, and in discussion with the skipper, as close to the east side of Riff Bank North in the Beaully Firth. Once clear of Tarbat Ness, the work will be repeated in the area off Dornoch, and work east. Once clear of Tarbat Ness the work will continue east, working alternately north to south then south to north, beginning a new transect when samples show strong evidence of non-*Nephrops* habitat. Each station will be 0.5 of a mile apart north/south and each transect approximately three miles apart east to west. Samples will be obtained using a Day Grab, with each sample being frozen.

Depending on weather conditions, a self-contained camera system mounted inside a small frame (with a foot print of approx. 40 cm x 40 cm) will be lowered to the sea bed by hand. As the vessel drifts across the high density *Nephrops* habitat, the frame will make contact with the sea bed and obtain video footage of the grounds. This will be carried out for approximately one hour at a time (the length of the battery life) and repeated on a daily basis when possible and appropriate. The frame will have a graduated rule attached to provide a scale reference.

Due to the impact of COVID19 there will be no half landing during the survey.

General

Due to COVID19 restrictions there will only be one scientist onboard during the survey.

No chemicals will be required on board for this survey.

Normal contact will be maintained with the laboratory.

Submitted:
A Weetman
01 December 2020

Approved:
I Gibb
23 December 2020