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MRV *Alba na Mara*

Survey 0315A

PROGRAMME

10-24 March 2015

Ports

Loading: Fraserburgh, 06 March 2015

Unloading: Fraserburgh, 24 March 2015

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

K Summerbell (SIC)

J Mair

J Hunter

N Aldridge

Costs to Project: 15 days - 20236

Equipment:

BT 201 prawn net – with separator panel and two 80mm codends

Trawl Doors

Sweeps, bridles, backstrops and pennants

Spare netting and twine

2 x PSL5000 light unit

4 x 30m light fibre cables

CTD and PAR sensor

Video Cameras

Flashback recorders and housing

Pyramid camera frames

Scanmar units – wing, door and height

Catch bins

Catch sorting table

Objectives

- To investigate whether lights attached to the mouth of the trawl can influence fish behaviour.

Procedure

Equipment will be loaded at Fraserburgh on 6 March 2015, and the trawl will be rigged onto the net drum. Scientific staff will join *Alba na Mara* vessel around 1730 on 10 March, and then *Alba* will leave Fraserburgh around 1800 and steam up to the Orkney Islands. *Alba* will operate during the night between the hours of 1800 and 0600 for most of the survey. Weather permitting; *Alba* will operate to the fishing grounds east of Copinsay Island (Figure 1). A number of short hauls will be carried out to ensure the separator panel in the trawl is rigged correctly through observations with video cameras mounted on the trawl. These rigging trials will probably take a whole night to complete. Fish behaviour trials will continue for the rest of the survey. *Alba na Mara* will return to Fraserburgh by 0600 on 23 March to allow 24 hours to change back to day-time working hours. Scientific personnel and equipment will be unloaded on 24 March.

Fish Behaviour Trials

Around four fishing hauls will be carried out each night using the BT201 prawn net. The trawl is fitted with a horizontal separator panel that leads to two separate 80 mm codends. Hauls will be an hour and a half long initially, with the potential to be adjusted depending on the catch volume. The net will be towed at three knots. Scanmar units will be used to monitor wing spread, door spread, and headline height during each haul. There will be two light fibre lines permanently attached to the trawl, one along the leading edge of the separator panel, the other along the centre section of the fishing line. This will allow four lighting variables to be trialled: panel light on, fishing line light on, both lights on and both lights off. The lighting variable will be changed between hauls so that each gets an even distribution of the night time periods throughout the survey. The PSL5000 light unit and 12V battery pack cannot be wound onto the net drum so will be attached to/detached from each light fibre cable during shooting/hauling as required.

Large bins will be used on deck to receive and store the catch from the separate codends. The catch will be sorted into key species, weighed and individual total length measurements recorded.

A CTD with a PAR irradiance sensor will be used to measure the background light levels before and after each haul. The sensor will not be sensitive enough to measure light levels at the fishing depth during the night-time darkness. Instead surface and subsurface light measurements at 10 m will be taken.

Any marine litter brought onboard during trawling operations will be documented and photographed before being placed into "KIMO Fishing for Litter" bags. At the end of the survey the bags will be deposited safely on the quayside to be collected for disposal.

Normal contacts will be maintained with the laboratory.

Submitted:
K Summerbell
19 January 2015

Approved:
I. Gibb
09 March 2015



Figure 1: Chart showing the fishing ground East of Copinsay Island indicated in red.