5249

P17/15

Not to be cited without prior reference to the Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 1898S

Scotia 1898S
Prog held - but
cannot find on
new database

5/11/99 New entry
on database for
this cruise. 5249

REPORT

20 October - 6 November 1998

Ports:

Loading:	Aberdeen, 20 October
Half-landing:	Stonoway, 30 October
Unloading:	Aberdeen, 6 November

Personnel

R D Galbraith	SSO	In charge
R J Kynoch	SO	
J T M Hunter	HPTO	20-30 October
G I Henderson	SO	20-30 October
P J Barkel	PTO	20-30 October
J D M Gordon	SAMS	20-30 October
P Mc Garr	SAMS	20-30 October
S Mormede	Student	20-30 October
S Fleming	Glasgow University	20-30 October
J A Morrison	PSO	30 October - 5 November
P J Copland	HSO	30 October - 4 November
N S Collie	PTO	30 October - 4 November
M Fjotoft	Ulstein Brattvaag	
B Stokkeland	Ulstein Brattvaag	

Objectives

1. To undertake fishing trials with BT 185.
2. To carry out detailed engineering performance measurements on above.
3. To investigate selectivity of current regulation cod-end mesh size (100 mm) on deep water species.
4. To obtain video film of the behaviour of these species within the trawl cod-end.
5. To carry out pelagic trawling trials using ITI instrumentation.
6. To carry out winch calibration and training programmes.

Out-turn days per project:

MO6R - 11 days, LAB 5-6 days

Narrative

Scotia left Aberdeen on 20 October and started fishing trials on Ymir ridge late on 21 October, having been delayed on passage by bad weather. The weather deteriorated overnight and on both 22 and 23 October no fishing was possible due to SW gales. Trials resumed on 24 October and continued until the evening of 26 October when work was again halted by bad weather. *Scotia* dodged south until the morning of 28 October when one further fishing haul was carried out on Vidal Bank. With the wind now NW and of sufficient strength to preclude any offshore work *Scotia* steamed overnight to the relatively sheltered waters of the South Minch to carry out engineering trials. However, during the first tow on 29 October naval activity in the area indicated that a major NATO exercise was taking place. On contacting Faslane *Scotia* was advised that submarines were operating in the area and no trawling should take place. The gear was immediately hauled and *Scotia* steamed north to Stornoway for the half landing.

Brattvaag engineers joined *Scotia* at the half-landing in Stornoway on 30 October and immediately began some adjustments on the MRS system and changed a printed circuit board in the CTD winch control. *Scotia* cast off from Stornoway at 0825 hours on 31 October and after a "man overboard" drill the Brattvaag engineers adjusted the maximum tension on all the scientific winches. During this process the engineers discovered that there was a faulty servo motor in the system. Attempts were made to source a replacement motor - but one was not immediately available due to it being the weekend. Consequently, a decision was made to make for deep water to carry out pelagic trawling trials.

Pelagic trawling trials using the 2020 Autotrawl System were started in deep water at 0700 hours on 1 November. During these operations it was discovered that the maximum speed of the netsonde cable winch did not appear to be compatible with the maximum speed of the trawl winches. This problem was overcome by switching off two of the pumps to the trawl winches - thus achieving comparable speeds between both systems. On subsequent examination of this problem it was found that the discrepancy was due to 3,000 metres of netsonde cable being carried on the netsonde winch instead of 4,700 metres - for which it had been designed. The Braatvaag personnel fully explained the system and stood by during operations and all the MVM Fishing Officers had hands-on training on the Autotrawl System. "Scotia" then made for Stornoway on the evening of 2 November to await the arrival of the servo motor - as a combination of bad weather outside the Minch, and the submarine exercises within the Minches, had precluded further trawling.

Scotia arrived at Stornoway in the early morning of 3 November and lay at anchor awaiting news of the pump. Word was received that the pump was being sent via Aberdeen, but had not yet arrived. To prevent further delays *Scotia* sailed for Aberdeen, berthing there at 1120 hours on 4 November. The pump was finally received and fitted on the morning of 5 November and the same afternoon *Scotia* proceeded to sea and trials and crew training on the MRS system were carried out off Aberdeen in 140 metres depth. *Scotia* returned to Aberdeen later on the evening of 5 November at the end of the cruise.

Results

1. Eleven deep water hauls were made and, despite some initial rigging and handling problems on the first haul, appropriate shooting and hauling procedures were soon established. The new 1,800 kg R-type otter boards performed well in all conditions.

2. No deep water engineering trials were possible due to the adverse weather encountered.

3. As with previous cruises on *Scotia II* when unsupported small mesh covers with 100 mm cod-ends were used very little cod-end selectivity was apparent for marketable deep water species. A detailed catch analysis of all species will be carried out in the Laboratory.

4. Some seven hours video film of variable quality was obtained of fish behaviour in the cod-end.

5. All ITI instrumentation was tested on the blue whiting trawl (PT 153) and signals were received up to a maximum range of 1.2 kilometres astern of the vessel. With Scanmar instrumentation a maximum of 2.4 kilometres was achieved using the drop keel transducer.

6. Training in the operation of the 2020 Autotrawl system during pelagic fishing operations was carried out for all Fishing Officers during 1 and 2 November.

   Crew training on the MRS system was carried out off Aberdeen on 5 November for all deck hands aboard.

R D Galbraith
8 July 1999