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

FRV *Clupea*

Cruise 0303C

REPORT

20-27 February 2003

Ports

Beginning: 20 February, Fraserburgh

Ending: 27 February, Fraserburgh

Personnel

Barry O'Neill In charge

Mike Breen

Emma Jones

Keith Summerbell

Peter Barkel

Eric Armstrong

Gear

BT 186

Scanmar units, net log

RCTV, towing cable and winch

SIT TV camera

Seabat sonar

Self-recording low light CCD cameras (ROS)

Light intensity recorder (Photomultiplier)

Objectives

1. To obtain accurate morphological (girth, height, width) measurements of haddock, cod and whiting.
2. To observe and quantify the cod-end escape behaviour of these gadoids.

Narrative

1. Four tows were carried out using the detachable cod-end where the chartered *Ocean Starlight* subsequently picked up the cod-end. In three of these tows the cod-end successfully detached at depth whereas in the other it had to be released at the surface and allowed to sink to the holding depth. The *Ocean Starlight* hauled the cod-ends during the night at a rate of 1 m per 15 minutes. In the morning, when the cod-ends had reached the surface, the *Clupea* rendezvoused with the *Ocean Starlight* and retrieved the cod-ends. A sample of the fish were taken from each haul and the following morphological measurement taken: length, head height, head width, head girth, girth at the first dorsal fin and girth halfway along the first dorsal fin. An internal examination was made to ascertain sex, maturity, stomach contents

(empty, medium, full) and swim bladder condition (normal, ruptured, overinflated, deflated).

2. During the remainder of the fishing tows observations were made of fish behaviour in the cod-end. Good visual footage of fish escaping and fish distribution in the cod-end were obtained with the RCTV SIT and net-mounted ccd cameras in water depths down to 80 m. At greater depths, light levels were not sufficient. Acoustic images of the cod-end in cross-section were also obtained using the Reson Seabat multibeam sonar. Whilst individual fish escaping from the cod-end were easily identified using these images, individual fish within the confines of the commercial cod-end fished could not be easily distinguished. In the poor sea conditions encountered there were additional difficulties associated with the large amount of relative motion between the RCTV and the cod-end.

Barry O'Neill
17 October 2003

Seen in draft: A H Nicol, OIC in absence of A Simpson

Circulation List: Cruise Programmes and Reports

CLUPEA VESSEL

Programmes - Mr J A Morrison for approval. Reports - Mr J A Morrison for approval.

Issue two copies of Record of Haul and Station Numbers pro-forma with Scientist-in-Charge's copy of *Scotia* and *Clupea* programmes.

Two xerox copies of track chart for reports to be sent to Dr L Rickards.

PROGRAMMES ONLY

Lab staff

Mr J T M Hunter
Mr T Reid
Mr P J Copland
Mr J Dunn
Mr A Beaton
Mr G Howard
Mr S Halewood
Security

Non-lab staff

~~Island Cmdr Faroes (Faroes only)~~
~~Flag Officer, Denmark (Danish part of N Sea only)~~
Coastguard
Dr J Baxter

PROGRAMMES AND REPORTS

Lab staff

Mr J A Morrison
Capt R Denholm
Mr R S T Ferro) Fish Man team
Mr C Hall) progs only
Dr R M Stagg
Dr C Moffat
Mr M R Heath
Mr A Macdonald
Mr R D Galbraith
D Lichtman (+ additional copy of track chart
of reports only)
Mrs E Morrison
CO/OIC of Vessel (*Scotia*) (to be faxed)
Library (2)
File

Non-lab staff

~~Library, Danmarks Fisk (reports only)~~
~~Mr J Mortensen (Faroes only)~~
Mr A Souplet (Fishing Cruises only)
~~Dr S Ehrich (Entering German Waters) (reports only)~~
W J McCurdy, Belfast
Technical Director, SFIA (J E Tumilty)
Dr L Rickards
Dr I Joint
Director – Havfor Inst, Norway
Dr S Ehrich
Monsieur le Chef du dépt, Nantes
Mr J C Brabant
Mrs van Duyvenvoorde
Dr J G Gordon
Dr J Molloy
R de Clerck
Mr B Stewart
Capt J Cannan (*Scotia* and *Clupea* only)
Controller Coastal Ops - A Stewart
Dr P Grieg-Smith
Mr H C Boyar
Dr R J A Atkinson
Mr H i Jákupsstovu
Mr C Bullimore (To be faxed: 01923 846392)

Laboratory Personnel on Vessel

Barry O'Neill
Mike Breen
Emma Jones
Keith Summerbell
Peter Barkel
Eric Armstrong

Fishery Officers at

Fraserburgh