

R1/3

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FRV *Clupea*

Cruise 1104C

REPORT

23 July - 4 August

Personnel

C G Davis (SIC)
M Harding
O Goudie
C Pert (23-27 August)

Objectives

1. To determine the distribution and relative abundance of sandeel on inshore fishing grounds around the Shetland Isles and Fair Isle. With particular emphasis on both *Ammodytes marinus* and *Gymnammodytes semisquamatus*.
2. To ascertain if bacteriological samples can be taken in different locations around *Clupea* without becoming heavily contaminated. Also, to examine if a revised SOP sampling and storage procedure is proving to be effective.

Out-turn days per project: 13 days, MFO1TA

Narrative

Scientific staff joined *Clupea* in Fraserburgh at 0930 hours on Friday 23 July. *Clupea* sailed from Fraserburgh at 1030 hours and made way for Fair Isle, where the vessel anchored at 2240 hours. Fishing began and the survey commenced at 0700 hours on the West Fair Isle grounds on the morning of 24 July. The survey continued up and around the Shetland Isles and Foula, with no weather and only minor gear related difficulties, until the afternoon of 3 August, when *Clupea* made way for Fraserburgh. *Clupea* berthed alongside in Fraserburgh at 0100 hours on the morning of 4 August.

All survey gear was unloaded and scientific staff disembarked and returned to Aberdeen the same morning.

Results

1. Between 24 July and 3 August, a total of 55 valid hauls were made on commercial (historically) sandeel grounds around the Shetland Isles and Fair Isle, using the 'Sunbeam' sandeel trawl. All targeted grounds were surveyed on three occasions, during different time periods (0700-1100, 1100-1500, 1500-1900 hours) and where practical, on different dates. Repeat tows were carried out at the historically important commercial grounds (Mousa, Braeside and South Sands), to verify the exceptionally poor results achieved there during the initial tows, undertaken at the beginning of the survey.

Catch rates of up to 2.341 tonnes per 30 minute haul for *A. marinus* and up to 1.028 tonnes per 30 minute haul for *G. semisquamatus* were achieved at the Shetland grounds (Braeside). Once again, this year saw very low levels of *A. marinus* abundance and another disastrous recruit year. *G. semisquamatus* appear to remain the dominant species of eel on a number of grounds and made up 49 percent of the total eel catch (by weight) during the entire survey. For the third time only in the history of this survey. *G. semisquamatus* 'O' group individuals were encountered, suggesting that this species may now be beginning to develop earlier in the season, than in previous years.

Further analysis of the data gathered for both species will be carried out at FRS.

A total of 2032 *A. marinus* were scored for age / length data, with 8088 individuals being scored for length only. 9791 *G. semisquamatus* and 1435 individuals from 'other' eel species were also scored for length data.

Figure 1 gives the catch rate by time of day in kilogrammes, raised to a standard 30 minute haul for *A. marinus*.

The catch rate for *G. semisquamatus*, in kilogrammes, raised to a standard 30 minute haul can be seen on Figure 2.

The numbers at age for *A. marinus* caught per standard 30 minute haul are shown in Figure 3.

Grounds surveyed are shown on Figure 4.

2. Bacteriological sampling was undertaken on 50 fish, in pools of 10, at 5 different locations around *Clupea*. All samples were successfully taken and suitable numbers and species were obtained. Initial inspection of bacteriological plates taken, indicates contamination and non-specific growth was greatly reduced compared to results from previous surveys undertaken.

C G Davis
15 September 2004

Seen in draft: A Simpson, OIC *Clupea*

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
J Petrie
Security

Non-lab staff

~~Island Cmdr Faroes (Faroes only)~~
~~Flag Officer, Denmark (Danish part of N Sea only)~~
~~Coastguard~~
~~G Lees~~

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
D Lichtman (+ additional copy of track chart
of reports only)
Mrs E Morrison
CO/OIC of Vessel (*Scotia*) (to be faxed)
Library (2)
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Non-lab staff

~~Library, Danmarks Fisk (reports only)~~
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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

C Davis
M Harding
O Goudie

Fishery Officers at

Fraserburgh