

R1/3

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MFV *Christina S*

Charter Cruise 0400H

REPORT

7-26 July 2000

Personnel

D G Reid (In charge)
P Copland
D Beare (17-26 July)
K Peach
F Burns
S Halewood (7-17 July)

Half-landing: Ullapool 17 July

Objectives

To carry out an acoustic survey for herring in ICES area VIa(N) as part of the ICES coordinated acoustic and mid-water trawling survey in the north western North Sea and North of Scotland. Project code MF01t.

Out-turn days per project: MF01t - 20 days

Narrative

Loading of the vessel and installation of container and equipment was carried out on the 5th and 6th and completed successfully. The vessel left Fraserburgh at 1400 hours on 12 July and proceeded to Loch Eriboll for a calibration carried out overnight. Survey work began at Cape Wrath on the morning of the 13th. The survey continued in initially poor weather until 17 July when the vessel steamed to Ullapool for half landing and crew change. A second calibration was carried out in Loch Broom on the 18th. The survey continued from the 18th in good weather, until the 23rd when the weather deteriorated to gale force, however, the vessel was able to continue the survey to completion on the 25th. A final calibration was carried out at Scapa Flow on the evening of the 25th. The vessel then steamed to Fraserburgh for offloading on the 26th. No time was lost due to weather or mechanical breakdown. One net was seriously damaged on a wreck on the fourth shoot.

Results

The full survey area was covered, mostly at a transect spacing of 7.5 nautical miles. Closer spacing (3.75 nm) was used in the area of Barra Head, and wider spacing (15 nm) in some areas identified as having historically low herring abundances. The survey was not extended into the area between 3° and 4°W as in 1999, as time was not available. A single diagonal transect was run from 60°N 4°W to the Pentland Firth in the area covered by the acoustic

survey on FRV *Scotia* see Figure 1. Fifty fishing operations were carried out with 42 of these containing significant numbers of herring, see Figure 1. Otoliths were taken for 3,770 herring across the survey area, these fish were also scored for weight, sex, maturity, gonad weight and feeding state and gut weight if feeding. 1,104 Elementary Distance Sampling Units (EDSU) were covered at 2.5 nautical miles per EDSU, resulting in 2855 nautical miles of survey track covered. The echo integral assigned for each of these EDSU is presented in Figure 2. The catches of herring in the trawl hauls is presented in Figure 3. Detailed analysis of results will be carried out after otolith reading has been completed. The initial impression is that there were good numbers of herring present in the area, and the usual areas of concentration were well occupied (Barra Head, W of Lewis, and the shelf break NW of the Butt of Lewis. In addition, herring were identified in layers and scattered small marks throughout much of the area, which is unusual for this area, but corresponds to observations in the N Sea surveys in 1999 and 2000.

Dr D Reid
28 July 2000

Figure 1
Haul location and composition with survey track
Christina S July 2000 West Coast Acoustic Survey

200m contour

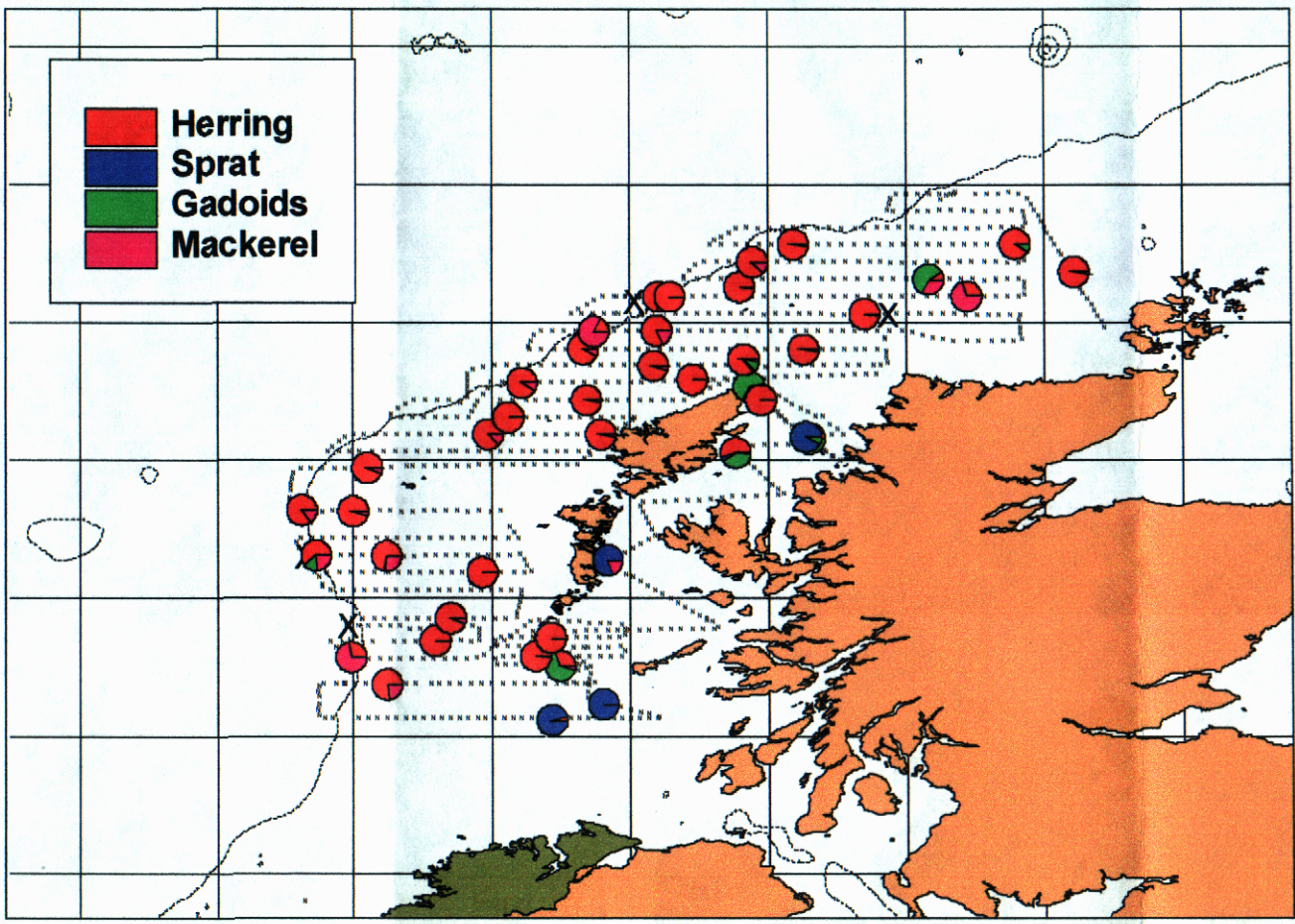


Figure 2
Echo integral assigned to herring
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200m contour

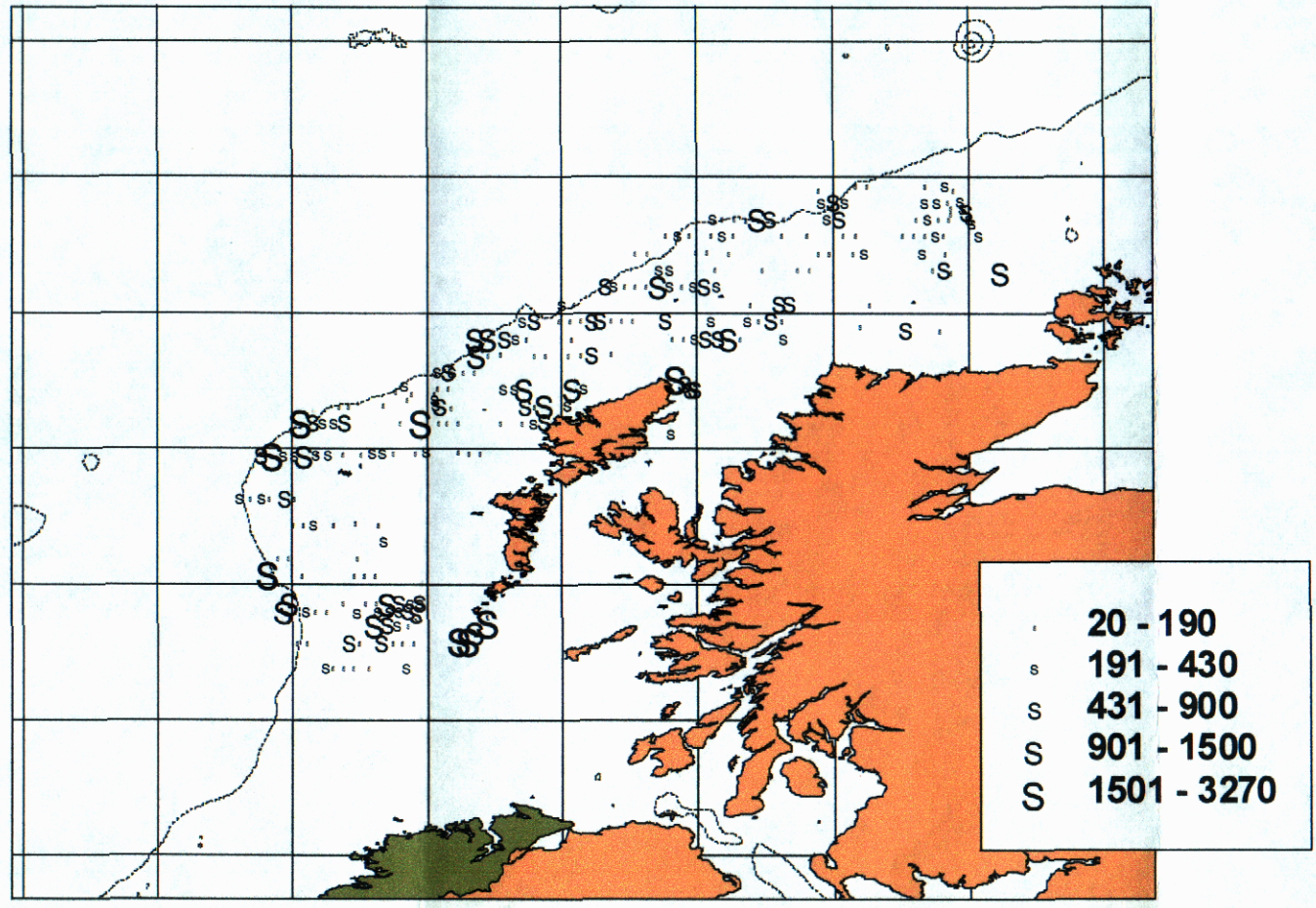


Figure 3
Haul numbers and location with herring catch
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Contours.shp

