

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1991 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 1A

STAFF: J G Pope (NIC)
C G Brown
T W Boon
B C Mumford
T Watson
M W Easey

DURATION: Left Lowestoft 1416 h 7 January 1991
Arrived Lowestoft 1930 h 13 January 1991
All times are GMT

LOCALITY: North Sea

AIMS:

1. To compare mid-water trawl and bottom trawl catches in terms of composition, quantities and length distributions of major species.
2. To compare predation rates and prey selection in cod, haddock and whiting caught in mid-water and on the bottom. Including, if practical, 24 h sampling periods to investigate diurnal patterns.
3. To establish warp length/depth/spread/height characteristics of the GOV trawl on CORYSTES.

NARRATIVE:

CORYSTES departed Lowestoft at 1416 h on the 7 January and made passage to the North East Coast area. Fishing commenced at 1303 h on the 8 January at a station in the vicinity of the Farne Deeps. After three tows with the GOV bottom trawl a suitable position for a 24 h feeding study was established at 55°54'N 0°27'W. This was worked with the GOV until severe gales intervened at 1257 h on the 9 January.

CORYSTES then moved to a more sheltered station at 44°54'N 01°23'W and commenced a second 24 h feeding study. This was however curtailed by further severe gales at 1103 h on the 10 January. CORYSTES then dodged into Berwick Bay where the GOV bottom trawl was unrigged and the 800 Engles midwater trawl rigged. Work resumed with the midwater trawl at the previous position at 0936 on the 11 January. Four stations were worked at this position at different times of day and night but catch rates were always very low or non-existent. A move was therefore made back to the positions fished in the vicinity of the Farne deeps. Catch rates and fish marks were however equally sparse in that area and it was decided to sample a series of locations for catch rates with the Engles trawl and to maintain an echo sounder watch for likely positions. Stations were made off Coquet Island, Shields, and Hartlepool Bank on the

North east coast and at the Castle Ground, the Inner Bank, the Outer Bank, Bolder Bank, the Sole Pit and the Silver Pit in the Humber area. Gear damage was sustained to the first Engles trawl at the Bolder Bank and to the replacement Engles trawl at the Silver Pit. Since repairs were not practical in the available time, passage was made for Lowestoft. CORYSTES docked at 1930 h.

RESULTS:

Aim 1:

Eleven GOV hauls (10 valid) and 13 Engles trawl hauls were made and catch rates and composition sampled using groundfish survey methods and documentation. Catch rates were generally low with the GOV and minimal with the Engles trawl. Watches of the echosounder indicated available fish to be tight on the bottom.

Aim 2:

Stomach samples were taken from GOV hauls for cod (6 stations), haddock (6 stations) and whiting (9 stations). Low catch rates however limited some of these samples to only a few fish. One 24 h stomach sampling series was completed at 55°54'N 0°27'N. Another was attempted but did not cover the full-time period due to heavy weather.

Aim 3:

Due to similar depths being worked to those already studied by CORYSTES 12A/1990 and due to marginal conditions for much of the time the GOV trawl was worked, warp length variation experiments were not attempted. The Scanmar sensors were deployed on both the GOV and 800 Engles trawl and were computer logged. These worked in a generally satisfactory fashion.

John G Pope
6 February 1991

SEEN IN DRAFT: SFM

INITIALLED: JS

DISTRIBUTION:

Basic list+
J G Pope (NIC)
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