

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

1991 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES 9/91

(PROVISIONAL: Not to be quoted without prior reference to the author).

STAFF: D J Symonds
I Laing
M J Boon
C D Darby
S I Rogers (Part 1)
D R Eaton (Part 2)
I D Holmes (Part 2)

DURATION: Left Lowestoft 0930h 10 September
Arrived Lowestoft 0125h 1 October
(All times are Greenwich Mean Time)

LOCALITY: Irish Sea, Bristol Channel

AIMS:

1. To carry out pre-recruit flatfish surveys in the eastern Irish Sea and Bristol Channel.
2. To carry out a pre-recruit gadoid survey in the north-western Irish Sea.
3. To carry out comparative fishing on gadoid species with DANI's RV LOUGH FOYLE.
4. To investigate the distribution and abundance of pre-recruit plaice and sole off the western Welsh coast and southern Irish coast.

NARRATIVE

A good passage was made to the Bristol Channel, disembarking an engineer from Lawrence, Scott and Electromotors Ltd at Plymouth en route. The Bristol Channel flatfish survey with the 4m beam trawl commenced off Hartland Point at 0750h on 12 September and continued, in good weather, until the evening of the 13th. An overnight steam to the north western Irish Sea was undertaken and the gadoid survey with the Granton trawl started off Lambay at 0608h on the 14th and, despite an interruption to the sampling programme to change Chief Engineers at Douglas, IoM, was completed at 1042h on 16 September in strengthening S to SW winds. Contact was made with RV LOUGH FOYLE and comparative fishing was carried out off Dundalk Bay during the afternoon and throughout the following day.

The Irish Sea flatfish survey by beam trawl commenced at 0605h on 18 September in Luce Bay and continued in good weather until 1403h on the 20th when CORYSTES steamed to Douglas for the mid-cruise break and change of scientific staff. The flatfish survey was resumed at 0925h on the 21st in fresh W winds which increased during the day resulting in

the last inshore station off Walney Island being abandoned. Strong to gale W to SW winds continued throughout the next two days with the remaining stations of the survey being worked, often in difficult conditions. One haul was also made early on the 24th for live sole to augment the broodstock at the Conwy laboratory and these were landed via a chartered vessel at Rhos-on-Sea, N Wales.

The beam trawl survey off the west coast of Wales on 25 and 26 September was carried out in light winds. This good weather continued on the 27th when the Bristol Channel survey was resumed. However an easterly gale on the following day allowed only three of the four remaining stations to be completed before the scientific work was abandoned at 1109h. Following an uncomfortable journey round Lands End, the beam trawls were transferred to the charter vessel CARHELMAR off Brixham in the afternoon of the 29 September and course set for Lowestoft.

RESULTS

1. Fifty-three valid 15 minute tows of the Irish Sea flatfish survey were completed. The consistent pattern of distribution of sole and plaice seen in previous years was confirmed. Sole were most abundant in Liverpool Bay (up to 180 per 15 minutes off the Wirral and The Ribble estuary) with a smaller concentration in the Solway Firth (90 per 15 minute off Abbey Head). Plaice were also most common in Liverpool Bay (108 per 15 minutes off Formby Point) and in the Solway Firth and Luce Bay (up to 68 per 15 minutes). Low catch rates of both species were found offshore and in the area from Morecambe Bay to St Bees Head. 0-group cod, although caught in several hauls, were not so widespread nor as abundant as in the 1990 survey.

Thirty-three of the planned 34 stations were carried out in the Bristol Channel. Soles were widespread in their distribution (only one station, the most eastern, producing no soles) although the best catches, up to 143 per 30 minutes, were taken in and around Carmarthen Bay and off the Gower coast. Plaice were more restricted and occurred mainly in Carmarthen Bay.

2. The 12 stations of the gadoid survey between IoM and Ireland were successfully completed although producing disappointing catches of most species. Provisional mean numbers per 1 hours fishing of 0- and 1-group cod and whiting are given in the following table:

Sector	Depth zone (cm)	Cod		Whiting	
		0-group	1-group	0-group	1-group
NW	0-50	4.0	1.0	1279.2	77.3
NW	50+	9.0	0.6	1570.2	91.9
'NE'	50+	2.8	2.2	591.4	36.6

The catches of 0- and 1-group cod, although small, were generally better than in 1990. 0-group whiting were much more abundant than in 1990 whereas the number of 1-groups was similar.

3. Seven 1-hour tows were made with the Granton trawl to compare the catch rates of gadoids by CORYSTES and LOUGH FOYLE. The data awaits further analysis in the laboratory.
4. Twenty 30 minute tows with the beam trawl were carried out in Caernarvon, Tremadoc and Cardigan Bays. Catches of sole and plaice were insignificant (except in Muddy Hollow, Tremadoc Bay where 88 soles per 30 minutes were taken) Most hauls produced catches of thornback ray (up to 100 per 30 minutes in Muddy Hollow) and much benthos.

The southern Irish coast was not sampled.

MISCELLANEOUS

1. Records were kept and photographs taken of benthos caught at most stations.
2. No major problems were encountered with the shipboard HP1000 computer (surprise, surprise!). All data were input and a full set of output documents were produced before the end of the cruise. In addition, the results from CORYSTES cruise 10/90 were also entered and data sets obtained.
3. Otoliths (or scales) from 1230 fish of 9 species were collected for pre-recruit and biological studies and to augment the market sampling programme.

Species	ICES Division		Total
	<u>VIIa</u>	<u>VIII</u>	
Cod	57	0	57
Whiting	78	0	78
Plaice	320	122	442
Sole	381	200	581
Lemon sole	30	11	41
Megrim	1	0	1
L.piscatorius	16	10	26
Sea trout	1	0	1
Bass	1	2	3
Total	885	345	1230

4. Samples of sole, dabs, cod and whiting were collected for Mr A Franklin (Burnham-on-Crouch), edible crabs for Dr B Thompson, anglerfish gonads for Dr M Greer-Walker and selected fish specimens for the laboratory's Fish Identification course. Spider crabs and selected benthos were brought back live to the laboratory.

D J Symonds
8 October 1991

SEEN IN DRAFT:

Master - M J Willcock
Senior Fishing Skipper - R Graham

INITIALLED: JGS

DISTRIBUTION:

Basic list +
D J Symonds
I Laing
M J Boon
C D Darby
S I Rogers
D R Eaton
I D Holmes
M Armstrong (DANI)
SFC's: Cumbria
North Western and North Wales
South Wales
Devon
Cornwall

