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MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK NR33 0HT

1994 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 10
(PROVISIONAL: not to be quoted without prior reference to the author)

STAFF:	D J Symonds M J Boon A J Winpenny B F M Harley (26 August-15 September) I D Holmes P Marchal (26 August-7 September) P A Large (8-19 September)
DURATION:	Left Lowestoft 1230 h 26 August Arrived Lowestoft 0720 h 19 September (All times are Greenwich Mean Time)
LOCALITY:	Irish Sea, Bristol Channel, Celtic Sea

AIMS:

1. To carry out beam trawl surveys of groundfish in the Irish Sea, Bristol Channel and Celtic Sea.

2. To collect data on maturity and weight at age of sole, plaice and lemon sole.

3. To determine the distribution and abundance of juvenile and adult sole and plaice.

NARRATIVE:

A good passage was made to the west coast in reasonable weather conditions and the first trawl station, 7 miles off Hartland Point, was started at 0716 h on 28 August. The survey in the Bristol Channel continued uninterrupted and was completed at 1022 h on the 31st. Stations were worked off the Bristol Channel and SE Ireland during the following 3 days before a move was made into the Irish Sea. Stations in Cardigan Bay, central Irish Sea (south and south-west of the Isle of Man) and off the southern coast of Scotland were completed before CORYSTES docked at Workington at 2315 h on 6 September for the mid-cruise break and staff changes.

On leaving Workington at 1145 h on 8 September, the trawl survey in the north-east Irish Sea continued in increasing west to south-west winds and swell which resulted in the loss of a half day's work on the 11th. The remaining stations in the north-east Irish Sea were completed on 13 September and trawling was carried out along the Irish coast on the 14th. Mr Harley was

landed at Pwllheli at 0500 h the following morning to return to Lowestoft by road because of family illness. The remaining stations in Caernarvon Bay, St George's Channel and two off the Bristol Channel completed the scientific work of the cruise at 0606 h on 17 September and CORYSTES proceeded to Lowestoft.

RESULTS:

Aims 1, 2 and 3 A total of 121 valid 30-minute tows with the 4 m beam trawl fitted with chain mat, flip-up ropes and a 40 mm cod-end liner was carried out in the Bristol Channel, Celtic Sea and Irish Sea. All fish and selected commercial crustaceans were identified to species, weighed and measured. Station, catch and length data were input to the Fishing Survey System on the VAX. Photographs were taken of the benthos at each station and the abundance of the major animal groups were recorded. Data from the ROXANN ground discrimination system and the continuous temperature and salinity system were logged. In addition, salinity and temperature profiles were determined by shallow water Guildline on 10 days, before and after trawling, and discrete water samples were collected regularly throughout the cruise for subsequent laboratory salinity analysis to calibrate the logged data.

Fish catches were similar to those seen in previous years. Seventy five species were recorded, the main ones being, by weight, plaice (17%), lesser spotted dogfish (15%), dab (13%) and sole (11%) and, by number, dab (25%), solenette (13%), common dragonet (10%) and plaice (10%). Immature plaice and sole were found in largest numbers in Carmarthen Bay, Liverpool Bay and the outer Solway Firth. The abundances of maturing adults of both species were generally low and their distribution more widespread.

Otoliths of 3534 fish from nine species were collected for biological studies and assessment purposes:

Species	ICES division			
	VIIA	VIIF	VIIG	Total
Plaice	1414	222	71	1707
Sole	619	384	37	1020
Whiting	167	72	21	260
Cod	26	8	7	41
Lemon sole	115	53	58	226
Megrim	1	20	58	79
Anglerfish	39	42	81	162
Turbot	5	13	0	18
Brill	14	4	3	21

The sex, maturity and weight of all individual otolithed fish (except whiting) were recorded. The incidence of the microsporean parasite *Spraguea lophii* in otolithed anglerfish was also noted.

Plaice and sole were aged at sea and the numbers at age in the catches were calculated. These results were communicated to the Southern Shelf Demersal Working Group meeting in Copenhagen.

The immature ovaries of 101 sole and 206 plaice from the Irish Sea were preserved for laboratory validation of macroscopic maturity staging and the identification of fish which will spawn in the next spawning season.

Various fish and shellfish samples were deep frozen. These included selected fish specimens for the laboratory's fish identification courses, plaice, sole, flounder, dab, whiting and cod from various NMP sites (Mr Franklin), bass (Mr Eaton), butterfly blennies (Dr Kaiser), swimming crabs (Mr Winpenny), lesser weevers (Dr Nash, Port Erin) and flatfish (Ms Mignot, Swansea). Spider crabs (University of Cambridge) and sea anemones were brought back live to the laboratory.

D J Symonds
19 September 1994

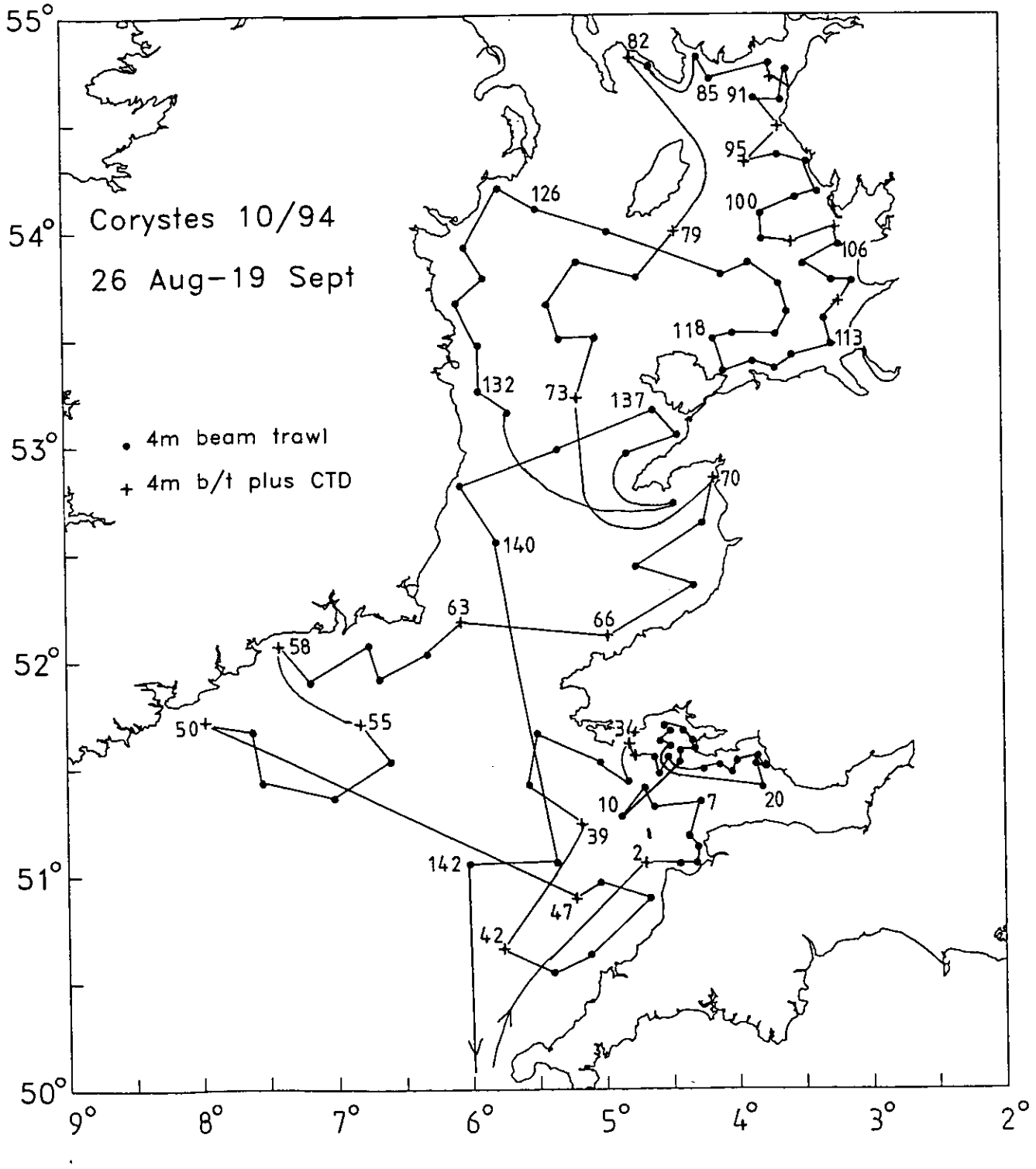
SEEN IN DRAFT:

Master:	M Willcock
Senior Fishing Skipper:	R Graham

INITIALLED: J W H

DISTRIBUTION:

Basic list +	M J Armstrong (DANI, Belfast)
D J Symonds	P Connolly (DOM, Dublin)
M J Boon	FCO (for Republic of Ireland)
A J Winpenny	Sea Fisheries Committees:
B F M Harley	Cumbria
I D Holmes	North Western and North Wales
P Marchal	South Wales
P A Large	Devon
	Cornwall


Corystes 10/94
26 Aug–19 Sept
4m beam trawl
4m b/t plus CTD
55°
54°
53°
52°
51°
50°
9°
8°
7°
6°
5°
4°
3°
2°
82
85
91
95
126
100
79
106
118
113
132
73
137
70
140
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39
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142
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