

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

1993 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES CRUISE 10

STAFF: D J Symonds (Part 2)
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DURATION: Left Lowestoft 0900 h 2 September
Arrived Lowestoft 0636 h 27 September
All times are Greenwich Mean Time

LOCALITY: North Sea, Irish Sea, Bristol Channel, Celtic Sea

AIMS:

1. To carry out beam trawl surveys in the Irish Sea, Bristol Channel and Celtic Sea.
2. To tag pre-recruit sole and plaice in Tremadoc Bay.
3. To repeat tows carried out on RVs BELGICA and ISIS in the southern North Sea to compare catch rates of demersal fish species.

NARRATIVE:

On leaving Lowestoft, CORYSTES proceeded to a position about 12 miles east of Aldeburgh where trawling with the 4 m beam trawl commenced at 1155 h on 2 September. Nine hauls were carried out in this vicinity before steaming to the Bristol Channel. A good passage was made in favourable conditions and the first survey station with the beam trawl was started at 0849 h, 15 miles west of Trevoise Head on 4 September. Trawling continued uninterrupted, but in gradually deteriorating weather, and the routine Bristol Channel survey was finished at 1833 h on the 7th. An overnight steam was made to Red Wharf Bay, Anglesey, and the north-east Irish Sea survey started at 1037 h. Despite unsettled weather with winds reaching strong to gale force on occasions, the 54 stations of the survey were successfully completed by 14 September. Because of persistent north-east winds the scheduled mid-cruise break and change of staff at Douglas, Isle of Man, was delayed 36 hours until the morning of the 16th.

The unsettled weather continued when CORYSTES left Douglas at 0630 h on 17 September but, with improving conditions, trawling in the western and southern Irish Sea was carried out until the 22nd. In addition to working a curtailed trawl survey in the Celtic Sea during the

following two days, 6 hauls were made in the evening of the 23rd in an area about 30 miles south of Conningbeg light where white-coloured anglerfish (*Lophius*) had been reported by commercial trawlers, and 7 hauls in the evening of the 24th off Carmarthen Bay to catch pre-recruit plaice for tagging. The final station of the survey (20 miles north north-west of Trevoze Head) was abandoned on the morning of 25 September due to the presence of a number of vessels working fixed gear in the area and course set for Lowestoft at 0630 h.

RESULTS:

Aim 1

Thirty minute tows with the 4 m commercial beam trawl fitted with a 40 mm codend liner were carried out at the standard 34 stations of the Bristol Channel survey and the 54 stations of the north-east Irish Sea survey. In addition, 38 and 16 stations were completed in the rest of the Irish Sea and the Celtic Sea respectively. Generally, catches were as expected, being good in coastal stations and relatively poor in the deeper waters of the Irish Sea and Celtic Sea. Records were kept and photographs taken of benthos caught at all stations. Data from the ROXANN ground discrimination system and the continuous salinity and temperature system were logged throughout the survey area.

As in previous years, soles were found in and around Carmarthen Bay (up to 95 per 30 min tow), Liverpool and Morecambe Bay (178 per tow) Solway Firth and Tremadoc Bay (35 per tow). Few were found in other localities. Bristol Channel sole were aged at sea (from otoliths) and preliminary results of year class strengths were communicated to the Southern Shelf Demersal Working Group meeting in Copenhagen.

Plaice were similarly distributed, but catch rates of pre-recruits in the Bristol Channel were lower than usual (up to 54 per 30 minute tow). In the north-east Irish Sea, catches of up to 375 per tow were taken and in Irish coastal waters catches rose to over 1100 per tow (north of Rockerbill).

0-group cod were found in many Irish Sea stations, indicating that the 1993 year class many be above average. Two hundred and twenty-one were taken in a 30 minute tow north of Tuskar Rock.

One notable catch was a 34 cm triggerfish (*Balistes carolinensis*) taken in Carmarthen Bay.

Otoliths of 3317 fish from 7 species were collected for biological studies and to augment the market sampling programme.

Species	ICES Division			
	VIIa	VIIb	VIIg	Total
Sole	803	389	46	1238
Plaice	1003	267	27	1297
Lemon sole	123	39	44	206
Megrim	0	2	14	16
Cod	84	2	1	87
Whiting	168	86	55	309
Anglerfish	83	33	48	164

All otolithed fish (except whiting) were individually weighed.

Selected fish samples were deepfrozen or preserved. These included specimens for the laboratory's fish identification course, fish for the National Monitoring Plan (Mr Franklin), bass for Mr Eaton, elasmobranch material for Mr Ellis (Swansea), flatfish for Ms Mignot (Swansea), butterfly blennies for Dr Kaiser, lesser weavers for Dr Nash (Port Erin) and 0-group cod for Dr Brander. No white anglerfish were caught, but material from 'normal' anglerfish were preserved for laboratory analysis. Spider crabs, starfish and other selected benthos were brought back live to the laboratory.

Station details and catch data were input to the Fishing Survey System on the VAX and a full set of output documents were produced by the end of the cruise.

Aim 2

It was inconvenient to tag plaice and sole in Tremadoc Bay but 192 tagged plaice were released in Carmarthen Bay to supplement a tagging exercise carried out in August from a commercial vessel.

Aim 3

Nine tows were made with the 4 m beam trawl in the southern North Sea to compare the catch rates with those of RV BELGICA and ISIS using different gears in the same area. Catches were generally light but consistent. Otoliths of 66 sole and 4 dab were collected.

S Milligan (Part 1)
D J Symonds (Part 2)
29 September 1993

SEEN IN DRAFT: BC, JH

INITIALLED:



DISTRIBUTION:

Basic list+

D J Symonds

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C D Darby

D B Edwards

I Holmes

P A Large

A M Watson

Sea Fisheries Committees:

Cumbria

North Western and North Wales

South Wales

Devon

Cornwall

