

THE CENTRE FOR ENVIRONMENT, FISHERIES & AQUACULTURE
SCIENCE,
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK, NR33 0HT.
2004 RESEARCH VESSEL PROGRAMME

REPORT : RV CORYSTES: CRUISE 11/04

STAFF:

J Dann (SIC)

M Easey (2IC)

G Course

T Dinmore

S Warne

K Sullivan

J Pettigrew 26th July to 6th August

James Kennedy (Student)

Rob Scott 6th to 9th August

DURATION:

26th July – 9th August

LOCALITY:

North Sea (IVc), English Channel (VIId).

AIMS:

To undertake a beam trawl survey in the southern North Sea and eastern Channel as part of an ICES co-ordinated research programme.

- (i) To obtain fisheries independent data on the distribution and abundance of commercial flatfish species.
- (ii) To collect biological data, including maturity and weight at age, of commercial species.
- (iii) To derive age compositions of commercial flatfish, whilst at sea, for use in stock assessment.
- (iv) To carry out sampling to satisfy the requirements of the EU data regulations.
- (v) To identify the epibenthos by-catch taken in the 4-metre beam trawl and to quantify 12 species as agreed at the International Beam trawl Study Group.
- (vi) To carry out detailed survey of sole distribution in selected areas of VIId and IVc.
- (vii) To collect live spider crabs for Cambridge University.
- (viii) To collect specimens of squat lobster for PhD student Queens University Belfast.

- (ix) To collect live plaice for tank experiments P Witthames.
- (x) To collect otoliths from "0" group plaice for micro milling experiments.

NARRATIVE:

Corystes sailed on the afternoon tide of the 26th August and proceeded overnight to the French sector north of Boulogne where work commenced at 04:30 on the 27th August. A total of 9 stations were worked southwards in the Bay of Boulogne, which yielded large plaice catches. The following day large amounts of static gear were encountered in the survey area which meant that 2 tows were restricted to 15 minutes. As a result of a minor problem with the starboard winch on 29th August fishing was delayed for a short time. The continuous temperature-recording computer also crashed on the same day and was out of operation for the remainder of the cruise. Prime station 5 in the Bay de Seine was abandoned as the net filled up with a mixture of weed and sand which caused problems when trying to haul the gear. A total of 36 valid trawl stations were completed in the French Sector and Corystes made passage over night on the 30th August to commence fishing west of the Isle of Wight on the 31st. Over the next 4 days a further 35 tows were completed in the English sector of the Eastern Channel. There was a larger than normal amount of static gear in the vicinity of some tows which meant 4 tows in the Solent and 1 off Hastings were of restricted duration. On completion of the 107d survey grid the vessel proceeded to a position off Boulogne where 5 tows for live plaice were carried out during the evening of the 3rd August. On completion of these tows the Corystes proceeded to the Belgian sector overnight and fishing commenced the following day at Belgian beam-trawl survey positions in the Southern North Sea. A total of 27 valid stations were worked offshore and in the Thames estuary before the vessel was obliged to divert to Lowestoft to disembark a member of the scientific staff for medical attention. A replacement embarked at Lowestoft and fishing re-commenced off Corton during the evening of the 6th August. The vessel then sailed to Smith's Knoll where a further 4 tows for live plaice were carried out over night. A further 25 trawl stations were worked before the vessel returned to Lowestoft arriving there on the afternoon tide of 9th August.

RESULTS:

The cruise track for the survey is shown in Figures 1a Channel and 1b North Sea. A total of 123 valid trawl hauls were completed 71 in the Channel and 52 in the Southern North Sea.

- 1) The main concentrations of plaice in 107d were off Boulogne and in Rye Bay, In the North Sea the highest concentrations were off the Belgian coast. Figure 2. Sole predominated in similar areas in the Channel, however the highest concentrations in the North Sea were in the Thames and along the coastal margins as far North as Lowestoft. Figure 3
The majority of the fish of both species caught in both areas were less than 3 years old.

2) Biological data was collected from commercial finfish; the details of the numbers taken are given in the following table.

SPECIES	EASTERN CHANNEL	NORTH SEA
SOLE	598 (350 FRA-248 ENG)	481
PLAICE	757 (424 FRA-333 ENG)	300
TURBOT	13	2
BRILL	16	7
FLOUNDER	45	19
DAB	269	169
LEMON SOLE	73	84
COD	3	23
WHITING	41	100

3) All plaice and sole otoliths taken in 107d were aged at sea. A provisional index for the abundance of recruits for the survey was compiled.

4) All but one of the sites where a full benthic sort was required was worked. The 12 species identified by the Beam Trawl Study Group as requiring sampling at all sites were weighed and recorded at the sites they occurred.

5) A total of 32 additional sites, 27 of which were positions worked on the Belgian beam trawl survey, were sampled in the southern North Sea in order to determine the wider distribution of sole outside the Thames estuary. Otolith targets for plaice and sole were achieved for both inshore and offshore areas.

Additional Aims.

a) A total of 34 spider crabs were collected for Cambridge University. In general the spider crabs caught this year were in poor condition, many being damaged.

b) Squat Lobster samples were collected from the Eastern Channel for genetic studies for Deborah Bailie at Queens University Belfast. In all 61 specimens were preserved.

c) Tissue samples from rays, mainly thornback (*R. clavata*), were collected from the Eastern Channel (90 samples) and the Southern North Sea (143 samples) for genetic studies.

d) A sample of 50 juvenile plaice was collected for Audrey Darnaude to carry out otolith micro-milling analysis.

e) Samples of plaice, sole and whiting were collected from the North Sea for Chris Leakey for micro-chemical analysis of otoliths and isotope analysis of muscle tissue.

SPECIES	NUMBER OF SITES	NUMBER OF FISH
PLAICE	13	126
SOLE	29	246
WHITING	18	165

f) Live plaice were collected for tank experiments at the Lowestoft laboratory. A total of 70 fish were caught of which 35 survived.

G) A total of 10 bags containing a variety of fish species were collected for use in fish identification QA at the laboratory. During the cruise there was time to carry out 2 tests to gauge the identification skills of the staff on board. The results of the tests showed that for the majority of the common species taken on the beam trawl survey there were no problems in identification.

J Dann
08 August

20041996
SEEN IN DRAFT:
INITIALLED:

DISTRIBUTION:

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