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

1982 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA : CRUISE 1

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

STAFF:

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DURATION:

Left Lowestoft 1730 h, 5 January
Arrived Lowestoft 0300 h, 18 January
(All times are Greenwich Mean Time)

LOCALITY:

Southern Bight of the North Sea

AIM:

To study the vertical distribution of plaice on their spawning grounds in relation to gonad maturation stage, time of day and state of tide.

NARRATIVE:

CORELLA sailed at 1730 h, 5 January and steamed to a position approximately 20 miles southwest of the Brown Ridge. Midwater trawling began at 1000 h the next day and, apart from a 24 h break for bad weather, continued until 0100 h, 13 January. CORELLA then steamed to Ijmuiden, to deliver 12 boxes of cod and haddock samples from the ICES stomach sampling programme to RIVO and take on fresh water. CORELLA sailed again at 0745 h, 14 January and arrived back on station at 1300 h. Samples of the bottom sediment were taken and midwater trawling resumed at 1600 h. Light meter stations were worked on 15 and 17 January and trawling continued until 2100 h, 17 January. CORELLA then left the working area, and arrived in Lowestoft early the following morning.

RESULTS:

CORELLA made 26 midwater trawl hauls, all but 2 of 3 h duration extending over the period of maximum tidal speed. Two further short hauls were made over periods of low water slack. A total of 446 plaice was caught of which 11 were caught by day (10 hauls) and 435 were caught by night (18 hauls).

The overall sex ratio was 1.31:1 in favour of the female fish. Among the fish caught by night the sex ratio was 1.26:1 in favour of the females on the south-going tide and 1.45:1 also in favour of the females on the north-going tide (Table 1).

Among the male fish 92% were running ripe in maturity stage VI; the remainder were immature. Among the female fish 68% were maturing in stages III-V, 4% were running (Stage VI) and 4% were spents (Stage VII) (Table 2).

Table 1. Sex ratios among plaice caught by night

	<u>South-going tide</u> (9 hauls)		<u>North-going tide</u> (8 hauls)	
	Males	Females	Males	Females
n	113	142	73	106
%	44.3	55.7	40.8	59.2

Table 2. Maturity stages of plaice caught in midwater

Males						
	I	III-V	VI	VII	Totals	
n	15	0	178	0	193	
%	7.8	0	92.2	0	100	

Females							
	I	III	IV	V	VI	VII	Total
n	81	4	112	36	10	10	253
%	32	1.6	44.2	14.2	4	4	100