

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

1974 RESEARCH VESSEL PROGRAMME

REPORT: R V CLIONE: CRUISE 18

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

STAFF:

M Greer Walker
G P Arnold
D Thompson
C Garrod
E Shreeve) 9-13 December only
B Mumford)

DURATION:

Left Lowestoft 1800 h 9 December
Arrived Lowestoft 1015 h 18 December

All times are Greenwich Mean Time

LOCALITY:

Southern North Sea

AIM:

To test the hypothesis that plaice travel southwards to their spawning grounds in the Southern Bight by means of a tidal transport mechanism and to identify the possible migration tracks.

NARRATIVE

CLIONE left Lowestoft at 1800 h 9 December and anchored in the Gorleston Road. The following morning CLIONE steamed out to the Cross Sand where the day was spent dodging and gale force winds prevented any work until 12 December. This day was spent familiarising both the crew and the scientific staff with the Engel midwater trawl and its operation. That evening CLIONE was again forced to seek shelter off Great Yarmouth. At 1000 h 13 December Mr Shreeve and Mr Mumford were put ashore in the rubber boat. Following a moderating forecast CLIONE returned to the Cross Sand arriving at 1800 h. Two hauls were made during that night. It was decided on account of the bad weather to take advantage of the lee and to tow north and south rather than east and west, as originally planned. The ship then steamed south to the Outer Gabbard area at 0600 h 14 December, but after dodging during the morning it was decided at 1100 h to seek shelter off Southwold where tests with the 2400 QSM spectroradiometer were attempted. With a moderating forecast CLIONE returned to the Outer Gabbard and began fishing at 1800 h that day. Fishing continued until 16 November when repairs to the transducer winch became necessary. Spare parts were collected at Lowestoft using the rubber boat at 1030 h and effective repairs made. CLIONE steamed to the Cross Sand at 1000 h 17 December but high winds made work impossible and the ship anchored again in the Gorleston Road at 1600 h. CLIONE docked at 1015 h the following morning.

RESULTS

1 The catch of plaice in midwater on consecutive northerly and southerly tides was compared. Fishing commenced $1\frac{1}{2}$ h before maximum tidal stream velocity and finished $1\frac{1}{2}$ h afterwards on each of the tides. Two trials (Stns 1 and 2) and four full pairs of hauls were made. Eleven plaice were caught on north-going tides and 36 on south-going and in every case more plaice were caught on the south-going than the north-going tide of the pair. These results are consistent with the hypothesis under test and are detailed below.

Stn No	Date	Position Shot	Position Hauled	Time Shot	Time Hauled	Tide	No of plaice caught		
							Male	Female	Total
	Dec 1974								
1	12	52°35.8'N 02°10.8'E	52°35.5'N 02°08.8'E	1011	1033	S	0	0	0
2	12	52°37.7'N 02°10.4'E	52°38.2'N 02°11.0'N	1340	1410	N	1	0	1
3	13	52°36.5'N 02°14.0'E	52°20.0'N 02°13.2'E	1840	2140	S	2	3	5
4	14	52°21.8'N 02°14.5'E	52°36.5'N 02°15.5'E	0135	0451	N	2	2	4
6	14	52°16.5'N 02°10.0'E	52°02.5'N 02°09.5'E	1827	2130	S	7	7	14
7	15	52°01.0'N 02°10.0'E	52°14.8'N 02°10.0'E	0031	0330	N	3	2	5
8	15	52°15.7'N 02°15.1'E	52°01.5'N 02°13.5'E	0800	1057	S	1	2	3
9	15	52°00.2'N 02°15.5'E	52°14.5'N 02°15.0'E	1253	1600	N	0	0	0
10	15	52°19.4'N 02°05.4'E	52°03.5'N 02°05.0'E	1920	2230	S	3	11	14
11	16	52°04.3'N 02°05.8'E	52°19.2'N 02°04.0'E	0215	0515	N	0	2	2
Totals							19	29	48

2 The ship was successfully familiarised with the gear but the difficulty in handling the doors and bridles in high winds proved restricting.

3 Live rays and plaice were returned to the laboratory for Mr Scholes. Sprats and small gadoids were collected and frozen for the fish farming programme.

4 Measurements with the spectroradiometer were unsuccessful because of the turbidity of the water.

M Greer Walker
20 December 1974

SEEN IN DRAFT: G S (Master)
W G (Fishing Skipper)

INITIALLED: A J L

DISTRIBUTION: Basic List

Dr Greer Walker Mr C Garrod
Dr Arnold Mr Shreeve
Mr D Thompson Mr Mumford
Mr P Scholes