

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

MISS HOWARD

1970 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 4

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

STAFF

R C A Bannister
M Macdonald
M W Easey
R N Tucker
C Lee (Hong Kong)
G T Thacker (36 hours only)

DURATION

Left Lowestoft 1900 hours 17 February

Arrived Lowestoft 1300 hours 27 February

All times are British Standard Time

LOCALITY

North Sea

AIMS

1. Trawl survey for plaice and dab population studies.
2. Plaice, dab and cod fecundity studies (Part II).
3. Comparison of catch data and 100 kHz echo traces for demersal species.
4. Collection of live fish for hatchery use (Messrs Riley, Thacker and A Jones).
5. Collection of cod and sole pituitary material (Drs Purdom and Shelbourne).
6. Collection of samples of demersal fish (Dr Portman, Burnham).
7. Collection of 100 starfish for Mr Hewett (Radiobiological Laboratory).

NARRATIVE

CLIONE left Lowestoft at 1900 hours 17 February and proceeded to the Brown Bank to trawl for live mature Southern Bight plaice. After arrival at 0240 hours 18 February CLIONE dodged for six hours but was able to begin fishing at 0830 hours. Three hauls were made in this area and a further two hauls in deeper water twenty miles to the west. These were completed by 2200 hours 18 February. With sufficient live fish aboard and with the deadline for this part of the cruise approaching CLIONE proceeded to Lowestoft and arrived at 0900 hours 19 February, landing Mr Thacker and his collection and sailing again on the same tide at

1020 hours. During the rest of that day CLIONE made a good passage to the P Buoy grounds where it was proposed to begin the second part of the cruise, but on arrival off buoy P2 at 0443 20 February, strong south west winds and a heavy swell made work impossible. CLIONE therefore dodged or ran in this area until work could begin at 0800 hours 21 February, by which time the ship was in the vicinity of the White Bank. It was decided to start work immediately in this area and work off the P Buoys was abandoned. This proved to be the only interruption to the planned programme and by the time the last haul was completed at 2200 hours, 26 February, trawling had been carried out successfully at 37 stations on the following grounds:-

Brown Bank	Sylt Outer	Tail End	Lower Scruff	Mud Hole
White Bank (SW)	Horn Reef	Upper Scruff	Silver Pit	Cleaver Bank
White Bank (E & SE)	Coffee Soil	Clay Deep	Botney Gut	Tea Kettle

Returning to Lowestoft CLIONE secured alongside at 1300 hours, 27 February.

RESULTS

Aim 1. The plaice and dab survey was completed satisfactorily on all but the P Buoy grounds. Generally plaice catches ranged between 1 and 2 baskets per hour but an hours tow in West Mud Hole yielded 4 baskets of plaice, mainly between 30 and 40 cms in length, but with large numbers of Echinocardium also in the haul. High dab catches were taken at Botney Gut and south east of the Cleaver Bank.

2. Approximately 120 plaice, 70 dab and 6 cod gonads were collected to add to the material from ERNEST HOLT Cruise 1. Production by stage VI female plaice was observed in most of the localities fished.

3. 100 kHz echo sounder records were obtained for the first five hauls but thereafter a malfunction in the Alden recorder prevented further use of this equipment.

4. Mr Thacker supervised the collection of the following material landed on 19 February:-

<u>Live Fish</u>	Plaice	Dab	Sole	Flounder
	60 ⁰ V-VI	3 ⁰ V-VI	5	1 ⁰ VI
	60 ⁺ VI			

Artificially fertilised material 20,000 plaice eggs.

Live eggs (plankton net material) Plaice, dab, flounder, cod, whiting

<u>Live Copepods</u>	<u>Temora longicornis</u>
	<u>Centropages sp.</u>
	<u>Paracalanus parvus</u>
	<u>Pseudocalanus elongatus</u>
	<u>Acartia clausi</u>

In addition two thornback rays and nine turbot were landed live at the end of the cruise.

5. A small amount of cod and sole pituitary material was obtained. Sole were generally scarce except in the area south of the Cleaver Bank where

a large fleet of beam trawlers had gathered.

6.)
7.) } Completed.

8. Samples of herring and sprat, principally from the Bloden area, were deep frozen for Mr Burd and Dr Johnson.

9. Of the juvenile gadoids only whiting were encountered in any numbers, cover catches of this species averaging $\frac{1}{2}$ a basket per hour throughout the cruise, with a maximum of 3 baskets per hour in the Silver Pit and on the Cleaver Bank.

R C A Bannister
9.3.70

Seen in draft: M Sutcliffe (Captain)

A Button (Fishing Skipper)

INITIALLED: AJL

DISTRIBUTION:

Basic list

R C A Bannister
M Macdonald
M W Easey
R N Tucker
C Lee (Hong Kong)
G T Thacker