# Not to be quoted without reference to the writer

# R. V. CLIONE

# Report for Cruise 4/68

Staff: R. C. A. Bannister

Duration: 19-29 March 1968

B. C. Bedford

M. R. Vince

R. N. Tucker

J. W. Read

J. K. Curtis (Grimsby)

All times G.M.T.

## Aims:

- 1. To continue the seasonal trawl survey of adult plaice in the southern North Sea, especially in the following areas:-
  - (a) Tail End of Dogger Clay Deep-Lower Scruff (J9, J10).
  - (b) Outer Silver Pit Markham's Hole-Botney Gut (G7, J6).
  - (c) Brown Ridges Knoll Deep (G4 and H4).
- 2. To supplement plainer larval survey No. 6 (CORELLA 5/1968) by working a line of Tin Tow Net (TTN) stations through the northern larval patch between the Lower Scruff and Turbot Bank.
- 3. To collect and preserve small plaice for predation studies (Mr. Harding).

#### Narrative

Despite the poor forecast which followed the high winds of the previous three days, CLIONE left Lowestoft at 1245 hrs on 19th March and while in the Roads streamed the cable for the after winch. This was completed by 1320 hrs and the ship moved to Yarmouth Roads, anchoring at 1355 hrs to await a reasonable forecast. At 1800 hrs CLIONE cleared away for the Brown Ridges, but the continuing gale made trawling there impossible and the ship steamed on to Texel, arriving there on the morning of the 20th. In the unfavourable conditions prevailing, no shelter was obtained and CLIONE moved north-west to dodge into the SW gale for the rest of the day near buoy ST1. Conditions moderated after midnight and the 30" high-speed plankton sampler (TTN) was calibrated en route to the first station, which was worked at 0245 hrs on 21st March at a position 54 05'N 03 45'E. Working north-east during the day a further 9 TTN stations were completed under favourable conditions, the series being terminated at a position 56 22'N 06 15'E, south of the Monkey Bank, by 2100 hrs on the 21st.

CLIONE then steamed south-west during the night to begin the trawl survey near the Tail End of the Bank, where periods of reduced wind and swell allowed 4 two-hour hauls to be made on 22nd March. During the next two days the persistent SW gales prevented all but two hauls at the Clay Deeps and two hauls NE of the Cleaver Bank, between which the ship dodged for several hours each day. However, more settled weather on the 25th and 26th allowed good fishing in the Cleaver Bank, Botney Gut, Silver Pit and Flamborough Off areas, and by the end of the 28th, with the weather now very fine, selected tows at the Haddock Bank, Swarte Bank, Brown Bank and Brown Ridges had also been completed. CLIONE left the Brown Ridges at 2000 hrs on the 28th and steamed overnight to Lowestoft, berthing on time at 0930 hrs G.M.T. on 29th March.

### Results

- 1. The series of TTN stations in the White Bank area was completed satisfactorily.
- 2. Some trawling was possible in each of the intended survey areas and although the time lost in the first half of the trip reduced the number of hauls possible on each ground, enough plaice were caught to provide suitable length distributions and age-length keys (1000 otoliths) for each area. Some of the differences in modal length, sex ratio and maturity stages between areas suggested by a cursory glance at the results are to be expected from what is already known of the biology of this species in the North Sea.

Consistent quantities of plaice and other prime flatfish were taken on all grounds by the gear used (short bridles and heavy chains), which seems to be the one best suited for this ship when working for flatfish on bosom grounds in the North Sea. Some group II fish were taken, even after the quantities of scruff present had necessitated a change from the 44 mm codend to one of 66 mm.

- 3. A surprisingly large number of soles were taken on nearly every ground surveyed.
- 4. No baby plaice of the size required for predation studies by Mr. Harding were obtained.
- 5. A number of the 1966 year-class of haddock were found at the Tail End of the Bank.
- 6. Live plaice, dabs and sole were carried in the deck tanks and the fish-hold for Dr. Purdom and Mr. Riley.

R. C. A. Bannister 2 April, 1968

Seen in draft: H.A.C. T.A.S. D.J.G.

#### Distribution

Basic List, plus the following:-

Mr. Bannister

Mr. Bedford

Mr. Vince

Mr. Tucker

Mr. Read

Mr. Curtis (Grimsby)