

MR BALE

dw

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

1975 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 4

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

STAFF

- R G Houghton
- W Parnell
- C N Humphries
- A Watson
- T Watson

DURATION

Left Lowestoft 1010 h 27 February
 Arrived Lowestoft 0700 h 11 March
 All times are Greenwich Mean Time

LOCALITY

North Sea

AIMS

1. To carry out a grid of tintownet (TTN) stations off the North-east coast of England.
2. To determine the distribution of spawning cod by trawling.
3. To tag spawning cod.
4. To collect cod blood and tissue samples.

NARRATIVE

CORELLA left Lowestoft at 1010 h 27 February and TTN calibration began at 1519 h in the Well Bank area. The TTN grid commenced at 1856 h 27 February at 53°37'N, 2°15'E and was completed by 1244 h 2 March at 54°22'N 0°15'W after 38 stations. The grid covered the area from 53°37½'N to 55°22'N between the English coast and 2°15'E.

Fishing began at 1515 h 2 March off Scarborough and the grid of 20 stations, which was within the area of the TTN grid, was completed at 1140 h 7 March. Hauls were of one hour duration using an 82 foot headline Granton otter trawl with 15 fathom bridles; the codend was blinded with shrimp-netting. On 3 March CORELLA went into the Tees to take on freshwater and to pick up the assistant cook, sailing again at 0700 h 4 March.

After the trawl survey CORELLA returned to the area south of Brucey's Garden where most spawning cod were caught to obtain fish for marking and tissue sampling. A further 19 stations were completed using the otter trawl. A large concentration of Russian and Polish side trawlers (estimated at 40 with 3 "mother-ships") were working in this localised area at the same time.

CORELLA left the area at 0900 h 10 March following a haul when severe damage to the trawl occurred which could not be repaired in time to continue fishing before the deadline for leaving for Lowestoft. The final station using the 200 m.p.i. plankton net to collect diatom samples for Dr Dodge was completed at 2050 h 10 March off the East Anglian coast. CORELLA docked at Lowestoft at 0700 h 11 March.

RESULTS

1. 38 TTN stations were completed and samples preserved. A temperature profile was recorded at the first 32 stations. Little stratification was observed; temperature ranged from 6.7°C in the north to 5.4°C in the south and the isotherms were orientated in a SW-NE direction. Gelatinous phytoplankton and Pleurobrachia were common in the southeast, euphausiids in the north-west.

2. Mature cod were caught at most trawl stations and were in ripe running or recently spent condition. The highest numbers (25 per haul) were caught in the area known as the "Outer Cod Pitch" south of Brucey's Garden at 54°40'N, 0°40'E. Immature cod were concentrated in two areas: 30 n.m. east of the Durham coast and on the west Dogger. High numbers of I-group cod were caught in the same two areas as the larger immature fish (up to 60 per haul).

Other common species were dabs, whiting, haddock, plaice and lemon soles. Lemon soles of all sizes were common in the stations closest to the coast; mature spawning plaice were concentrated in Baymans Hole and immature fish in the shallower water south of Flamborough. Large haddock were uncommon and no spawning fish were found. Raja radiata (starry ray) were caught at most stations. One small Phrynorhombus norvegicus (Norwegian topknot) was caught on the Southernmost Rough.

3. 271 cod were tagged. The fish were in good condition; only about a fifth of the total catch of otherwise taggable fish were rejected.

4. Blood and tissue samples were taken from 73 cod.

R G Houghton
14 March 1975

SEEN IN DRAFT: JEWB
ETB

INITIALED: AJL

DISTRIBUTION:

Basic List
R G Houghton
W Parnell
C N Humphries
A Watson
T Watson