

R.V. CORELLA

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Report for Cruise 11/69

Staff

Duration

R C A Bannister	17 June-1 July
P Scholes	
S Flatman	
R V Perkins (Hull)	
C Lee (Hong Kong)	

Aims:

1. Routine trawl survey of North Sea plaice grounds.
2. Plaice tagging in the Skagerrak.
3. Dab population investigations.
4. Preliminary investigations of comparative feeding of dab and plaice.
5. Boothbay Net survey for '0' group cod.
6. Collection of live fish.

Narrative

CORELLA east off from Lowestoft at 1000 hours, 17 June and proceeded overnight to the Outer Rough where trawling began at 0800 hours, 18 June and continued for the rest of the day. Attempts to work the more northerly East and Middle Bank grounds on the following day were frustrated by the extensive weed patches in this area and during the afternoon and evening of 19 June the ship steamed east into the mouth of the Skagerrak where, during the next two days, a small area was worked outside Danish territorial waters north of Hantsholm to complete the tagging part of the programme. During the evening of 21 June CORELLA returned westerly, reaching the Inner Shoal early on 22 June. Thereafter, with generally fine conditions, the ship completed the plaice and dab population and feeding investigations on the following grounds:-

Inner Shoal	Middle Rough	Silver Pit
Coffee Soil	Bruceys Garden	Cleaver Bank
Tail End	Southernmost Rough	Botney Gut

before returning to Lowestoft and docking at 1000 hours, 1 July.

Results:

- * 1. The plaice and dab population surveys were completed satisfactorily, approximately 2000 otoliths being collected for the routine age length key material. The shrimp net cover retained the many dabs escaping through the 60 mm codend. As is well known dabs are more numerous than plaice on a high proportion of the North Sea fishing grounds and the results from this cruise have been no exception to this rule. In many of the dab samples the presence of ripe fish among the smaller size groups shows just how extensive the

spawning season may be for this species. However, even for plaice, several stations revealed rather high proportions of only recently spent males and females.

2. A total of 220 plaice were tagged with Petersen Discs, of which 130 were liberated off Hantsholm. Heavy bruising and the generally poor quality of most of the fish caught accounts for the small numbers in this release. Dabs tagged on two occasions with Petersen Discs and left in the deck tanks failed to survive.

3. A large amount of material for plaice and dab stomach analysis was collected from most of the grounds visited during the cruise. For plaice, livers were deep frozen for an associated study of condition, for which the total weight, gut, liver and gonad weight were also recorded using the Torbal Torsion Balance, which, though not ideal, gave reasonably accurate weights under most sea states. Attempts to obtain crude estimates of digestion rates for the two species using fish held in deck tanks over an eighteen hour period gave mixed results but showed the problems to be encountered in attempting to assess at sea the possible daily food intake.

4. In recent weeks the poor quality of the plaice caught by the local fleet on most of the more northerly trawling grounds has been of some concern. It is hoped that first hand observations made during this cruise following contact with vessel owners will give an explanation of this phenomenon.

5. Time permitted only three Boothbay Net hauls in the East Dogger Bank Area, with negative results so far as '0' group cod were concerned. However one and two year old cod, haddock and whiting were often quite abundant in the cod end and cover in many areas.

6. Cod and plaice blood samples were collected for analysis of active iron by the Radiobiological Laboratory, and several small samples of pelagic and industrial fish species were deep frozen.

7. Small gadoids failed to survive the rigours of hauling, but live male and female turbot were returned for Alan Jones, as a result of which a successful artificial fertilisation has since been carried out.

R C A Bannister
7 July 1969

Seen in draft: ARGE, , AJL

Distribution:

Basic list, plus the following:-
R C A Bannister
P Scholes
S Flatman
R V Perkins (Hull)
C Lee (Hong Kong)