

CRUISE REPORT

F.R.S. "SCOTIA"

1st - 17th October, 1955

OBJECTIVES:

- (1) To study the use of the Kingfisher echosounder as a means of detecting white-fish and to estimate their vertical distribution.
- (2) To use the "pick-a-back" trawl to examine the vertical distribution of white-fish near the bottom by day and by night.
- (3) To obtain information on the incidence of Lernaea in Gadoids.

GENERAL:

The vessel left Aberdeen on Saturday 1st October and worked for a day and a half in the Aberdeen area making sure that the pick-a-back trawl operated as it was supposed to do. Faroe was reached on the 4th. Two hauls were made on the Nolso ground and in both the pick-a-back trawl was damaged. On the 5th the Mylings ground was fished and there the lower half of the pick-a-back trawl was destroyed. Replacing it with Scotia's otter trawl as the bottom half, the vessel worked off the Waterfall on the 7th. Scotia's otter trawl was destroyed here and a new one was bent on. After this somewhat destructive start work was concentrated on the Annie's Hill (Enniberg) ground and for the remainder of the trip the nets suffered no damage. By this time the Aberdeen trawl strike was over and a few Aberdeen vessels were working in the same area. The fishing was not heavy. There were some interruptions due to weather and trouble with Scotia's trawl warp recorder entailed an extra run into Fuglefjord to have it repaired. On the 14th the vessel returned to the Nolso ground but after two hauls the deteriorating weather left the choice of losing more time sheltering or running before it in the hope of getting more work done near Aberdeen. The 16th and 17th were spent near Aberdeen working with the pick-a-back trawl and again checking headline heights now that the bottom half of it had been replaced by Scotia's trawl. Weather conditions forced a return to Aberdeen on the 17th.

ECHOSOUNDING:

It was not feasible to make the total count of every CRT break estimated as being due to fish during every haul and as a second best a count was made at intervals during each haul and averaged for the haul. In general fish markings were poor compared with what has been observed on herring trawling grounds and practically no markings observed on the C.R.T. were strong enough to make even a light mark on the recording paper. Catches too were light. An examination of the break counts and the catches showed no relationship between them, not even the simple one: more breaks more fish. All that could be said is that there were on the whole fewer breaks between 1 and 2 fathoms from the bottom than between the bottom and 1 fathom up and there were always fewer fish in the top net than in the lower one. This held both at Faroe and near Aberdeen.

TRAWLING:

Naturally the double decked "pick-a-back" trawl was not so easy to handle as the ordinary otter trawl but it was no harder than expected and no real difficulty was encountered nor need its use be confined to the calmest of weather. The gape of the lower net was about 1 fathom and that of the upper net slightly more. Replacing the lower half by Scotia's trawl scarcely altered these figures. Some measurements of warp spread and drag were also made.

Interesting information was obtained on the vertical distribution of white fish near the bottom by day and by night both at Faroe and in the North Sea. Some effects on the vertical distribution related to the presence of Aurelia were also observed.

LERNAEA:

Investigations into the incidence and distribution of Lernaea were made both at Faroe and near Aberdeen. No Lernaea was found in Faroese haddock or whiting. The only infected fish was cod (7 individuals). With one exception these were large fish with mature stages of the parasite. The possibility of these being immigrants from other waters has to be taken into account. The results obtained in Aberdeen bay were consistent with those obtained earlier by the research ships and sampling of commercial catches.

W. DICKSON
5th December, 1955.

CIRCULATION:

Mr. Wall	Mr. G. S. Gault
Mr. M. Graham	Dr. Lucas
Dr. J. N. Carruthers	Dr. Wood
Mr. W. K. Rose	Dr. Tait
Capt. D. T. MacCallum	Dr. Fraser
Mr. F. S. Russell	Dr. Rae
Mr. K. M. Rae	Mr. Parrish
Dr. G. Reay	Mr. Saville
Dr. E. Leloup	Mr. Connolly (2)
Dr. A. Taning	Mr. Dickson
Dr. J. Ancellin	Mr. Kabata
Prof. A. Buckmann	Mr. Perkins
Dr. B. Havinga	Mr. Devlin
Dr. A. R. Molander	Library (2)
Captain Bruce	File
Capt. A. M. Finlayson	Spare 4
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