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## CRUISE REPORT

F.R.S. "Scotia"

August 8th-25th 1966.

Personnel:-  
 N.P. Wilkins S.O. in charge  
 S. Jermyn S.S.A.  
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### Objective:-

An investigation of whiting stocks off the Scottish north and west coasts by means of blood, parasite infestation and morphometric techniques.

### Narrative:-

"Scotia" sailed from Aberdeen at 0700 hours on August 9th. On route to the north coast stations drift indicators, bottom current markers and surface current markers were released at Turbot Bank and at the hydrographic stations off Wick. On August 10th daytime trawling commenced along the north coast, with "Scotia" sheltering by night to allow the analysis of whiting blood to be carried out aboard.

Water was taken aboard at Stornoway on August 16th, and further stations in the North Minch, north coast of Scotland, Scalloway Deeps, Fair Isle and Orkney were worked before putting into Thurso on August 19th, to land Mr. Jermyn. Further stations were then worked to the west and north of Orkney and in the Moray Firth before the cruise terminated in Aberdeen on August 23rd.

### Detail:-

#### Fishing.

The trawl was shot on twenty seven occasions, on fifteen of which a small mesh cover was used over the cod-end. Catches for one hour hauls were good in the Minch and in the Shetland, Orkney and Moray Firth areas, but were relatively poor along the north coast.

Trawling was carried out at eleven of the stations listed in the cruise programme, poor weather conditions making it impossible to work the stations along the 100 fathom line and around North Rona. In consequence, twelve other stations closer inshore and not listed in the programme, were fished.

Hand lines were fished while sheltering in Loch Erribollon August 16th. Thirty whiting and approximately 2 boxes of mackerel were caught on this occasion.

#### Whiting Studies

Haemoglobin of approximately 600 whiting was analysed by agar gel electrophoresis. The significance of the observed difference in Hb I-1 frequency and red cell

agglutination in the different samples will be assessed when the age compositions of the samples are determined. The occurrence of Lernaeocera, Bucephaloides and Gilguinea was investigated in all whiting caught and data for racial analysis collected from over 200 individuals. Approximately 200 samples of whiting sera were deep frozen for later studies of serum antigens.

#### Other species

Blood samples were collected and analysed from other available species e.g. ling, hake, cod and Squalus acanthias.

#### Hydrography

Surface observations were made in each statistical square visited (A16-A18, B15-B18, C14, C17, C19, YY16, XX15) and in addition full hydrographic profiles were investigated at three stations in Statistical squares ZZ16 and YY15.

#### Plankton

Plankton hauls using the 1m (26) oblique net were carried out in areas ZZ16d, YY15a and A17a, and one haul, using the standard fine mesh net, was made at ZZ16b.

In the North Minch area (YY15a) collections consisted principally of the medusae Cosmetira pilosella. On the north coast (ZZ16d) they were rich in Calanus finmarchicus and Spiratella retroversa.

N.P. Wilkins  
9th September 1966.