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previous reference to the laboratory.

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CRUISE REPORT

F.R.S. "SCOTIA" and F.R.S. "KATHLEEN"

13th-30th July, 1953

Aims

The aims of the cruise were -

- (a) Comprehensive survey of the bottom, its nature and fauna, in Aberdeen Bay and St. Andrews Bay.
- (b) Sampling in central North Sea area for the investigation of productivity.
- (c) Echometer survey.

General

F.R.S. "SCOTIA" left Aberdeen at 1400 hours on the 14th July. At the completion of the cruise the ship arrived in Aberdeen at 0500 hours on the 30th July. F.R.S. "KATHLEEN" commenced survey work on 13th July and concluded it on 22nd July.

Bottom Survey

The bottom survey investigations, when van Veen samplers were used, were carried out jointly by F.R.S. "SCOTIA" and F.R.S. "KATHLEEN", the latter ship taking the inshore shallow water stations.

One hundred and thirty-five stations were worked in Aberdeen Bay, ninety-three by "SCOTIA" and forty-two by "KATHLEEN", respectively. One hundred and thirty-one stations were worked in St. Andrews Bay, eighty-one being taken by "SCOTIA" and fifty by "KATHLEEN". The bottom survey programme was completed in full by both ships. Good samples, average volume about $2\frac{1}{2}$ litres, were obtained at all stations by both ships.

The bottom in Aberdeen Bay within the thirty fathom line was found to be markedly uniform, consisting mainly of fine, hard-packed sand, though with an admixture of mud at the southerly end of the bay off the mouth of the River Don. Outside the thirty fathom line the bottom which here consisted of a mixture of sand and coarse gravel, sloped sharply. The predominant animal inside the thirty fathom line was Nucula.

The bottom in St. Andrews Bay was uniform, grading from mud at the south-east end to fine sand (of a softer variety than that of Aberdeen Bay) in the north. The predominant organism was Echinocardium.

Productivity

The productivity survey was carried out in full by F.R.S. "SCOTIA". On Fladen the bottom temperature averaged 6.6°C ., being approximately the same as on the survey in the previous month. The surface temperature was around 14.4°C .. Inshore, the bottom temperatures averaged 8.5°C ., as compared with 7.5°C ., in the June survey, whilst the surface temperatures were around 13.0°C ..

Echometer Survey

A separate report is submitted giving results of the herring echometer survey carried out by F.R.S. "SCOTIA".

H. J. THOMAS

12th August, 1953

CIRCULATION

Mr. W. K. Rose
Capt. C. H. Champness
Mr. Wall
Mr. M. Graham
Dr. H. A. Cole
Mr. K. M. Rae
Dr. G. Reay
Dr. A. V. Taning
Captain Bruce
Captain McLaren
Mr. Smith
Mr. Jappy

Dr. Lucas
Dr. Wood
Dr. Fraser
Dr. Ritchie
Dr. B.B. Rae
Dr. Thomas
Mr. Parrish
Dr. Johnston
Mr. McIntyre
Mr. Jones

Mr. Pope
Mr. Thomson
Mr. Mauchline
Mr. Seaton
Mr. Gooding
Mr. Birkett
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Spare 4.

C R U I S E R E P O R T

F.R.S. "SCOTIA" - 28th - 30th July, 1953

Staff: R. J. Grierson, Asst. Sci. in charge.
M. McLeod, " "

The cruise was completed according to programme. "Scotia" sailed from Aberdeen at 0030 hours on 28th July and returned on the 30th.

Hydrography:

Surface temperatures were as shown on attached chart. Off-shore surface temperatures were unusually high, reaching 15.18° at station 40, 60 miles N.E. of Fraserburgh. Inshore temperatures were much lower and nearer normal for the season, being only 11.34° at station 57, 15 miles N.E. of Fraserburgh.

Plankton:

The samples have been forwarded to S.M.B.A., Leith as arranged.

Echo-traces:

Though the M.S.24 sounder developed a fault and was giving a false depth indication it was effective for fish detection, although results were much poorer than on the previous survey. Traces were very few, the most notable being picked up about 45 miles NNE of Fraserburgh. Fewer traces were obtained in the area being worked by the drifter fleet, which was about 30 miles to the S.E. of the above position. About a dozen Dutch drifters and German herring trawlers were observed throughout the survey.

R. J. GRIERSON

13th August, 1953.

CIRCULATION:

Mr. W. K. Rose
Capt. C. H. Champness
M. Graham.
Mr. Wall, M.A.F.
H.I.B., Edinburgh
Capt. Bruce
Master "Silver Scout"
Capt. McLaren
Mr. Jappy
Mr. J. Smith

Dr. Lucas
Mr. Parrish
Mr. Craig
Mr. Grierson
Mr. McLeod
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File

58°

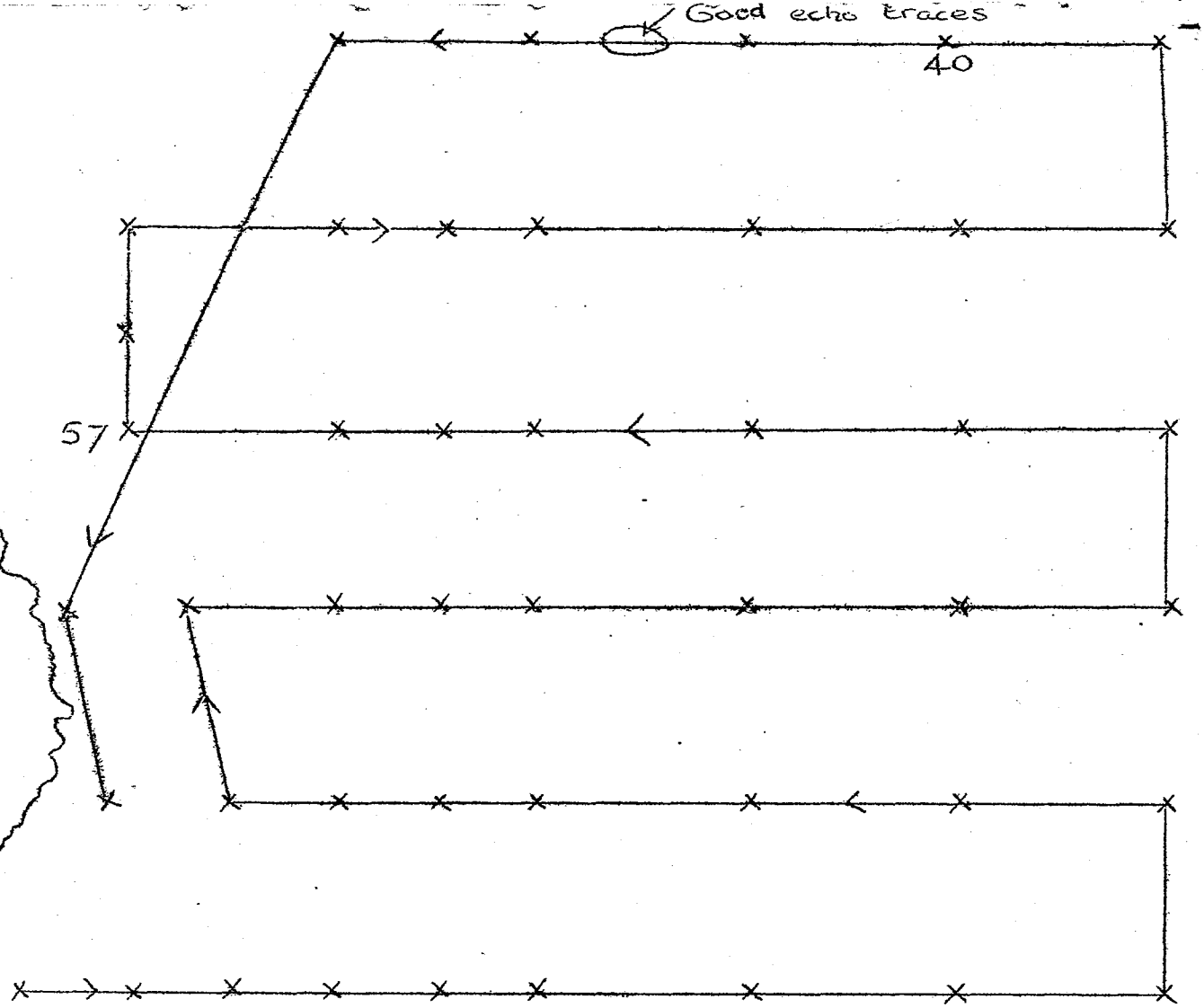
57°30'

57°

F.R.S. "SCOTIA" 28-30 JULY 1953 ROUTE CHART

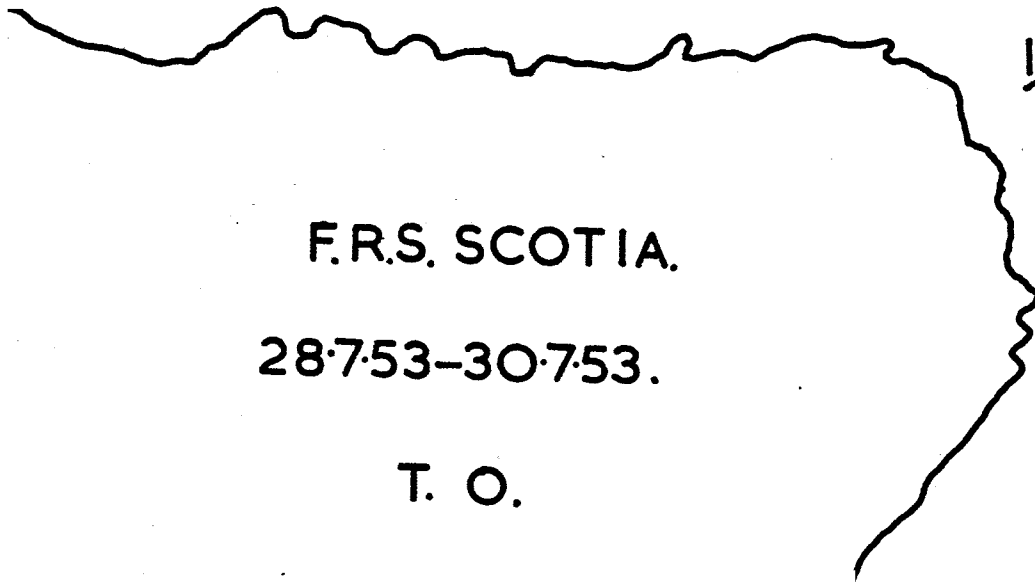
At all Stations:- { Surface Temperature & Salinity
 { Plankton Indicator

Echo-sounding throughout



Good echo traces

40



F.R.S. SCOTIA.

28.753-30.753.

T. O.

