

R1/5

9  
7SR71

In Confidence: Not to be quoted without reference to the Laboratory

## CRUISE REPORT

### FRS SCARBA

24 September - 11 October 1971

#### Objectives:

1. To lay and uplift an array of 4 current meter moorings within 20 miles of the Aberdeenshire coast. A mooring laid at the western edge of Aberdeen Bank will support a temperature profile recorder in addition to current meters.  
These observations will be supported by parachute drogues and direct reading current measurements.
2. To carry out measurements designed to resolve the variability of physical factors and of zooplankton.

#### Narrative:

The four current meter moorings were laid by the evening of 25 September. The temperature profile recorder was not deployed because of the absence of vertical temperature structure. From then until 1 October a detailed environmental survey within an area of 30 miles radius of Rattray Head was carried out. Work was curtailed on two occasions during this period because of bad weather.

"Scarba" put into Aberdeen for fresh supplies on 1 October. Whilst leaving port the following day a crewman was injured and the ship had to berth once again. The ship finally sailed 24 hours later and some time was spent on ensuring the security of the moorings. Three of the six guard dan lights could not be observed and checking in daylight revealed that one dan pole had snapped and the other two dans had been uplifted and replaced by dans of Spanish make but which carried no light or radar reflector. After replacing these dans an additional mooring was laid in the Buchan Deeps in order to test and calibrate the temperature profile recorder. This mooring was uplifted on the 6 October. The remainder of the cruise was devoted to further detailed surveying in the neighbourhood of the moorings.

The ship docked in Aberdeen at 1200 on 10 October.

#### Preliminary Results

##### a) Hydrography

The hydrographic situation was very atypical with water of salinity in excess of 35‰ over the entire area except in a narrow 5 mile band off the East Coast. This situation has not been observed since 1953.

b) Current Measurements

Most of the current meters functioned satisfactorily though the very strong tidal currents (> 2 knots) during the last week of the cruise appears to have upset some of the velocity potentiometers. Two of the records were short due to the current meter clocks stopping whilst on open contact points.

Preliminary analysis of the records reveal fairly persistent southerly flows at all of the offshore moorings. This may be related to the persistent southerly winds and also of the presence of the fairly saline water in the region.

H D DOOLEY  
30 November 1971