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FRV *CLUPEA*

CRUISE 1692C

REPORT

30 October - 12 November 1992

Personnel

F G Howard	SSO
J Dunn	HSO
S Gallacher	HSO (5-12 November)
E Macdonald	SO
S Kuenster	Visitor (30 October - 5 November)
J O'Mahoney	Visitor (30 October - 5 November)

Objectives

1. To take sediment samples at set stations between Aberdeen and the Firth of Forth to examine for dinoflagellate cyst distribution.
2. To take sediment samples in the Moray Firth and around the Orkneys to examine for dinoflagellate cyst distribution.
3. To take integrated water samples for plankton analysis.
4. To examine dinoflagellate cysts for evidence of microbiological activity.
5. To creel for velvet crabs.

Narrative

Clupea sailed from Fraserburgh on the afternoon of 30 October and proceeded southwards towards the Firth of Forth. Sediment samples were taken using a Day grab at set stations between Rattray Head and the Forth. In deteriorating weather conditions, *Clupea* made her way into the Forth and dropped anchor off Musselburgh at 2400 on 31 October.

Next day, the opportunity was taken to complete the survey started on *Forth Ranger* (9217H) and sediment samples using Day grab and Craib corer were taken in the Musselburgh-Aberlady Bay area. The dory was launched in sheltered conditions in Largo Bay, and trials using the Craib corer from the dory were made. Trials were also undertaken with the deployment of an instrument carrying rig.

By 3 November weather conditions had abated and *Clupea* proceeded to the outer Firth and water and sediment samples were taken from the offshore region of the Forth, Tay and St Andrew's Bay working northwards towards Aberdeen where *Clupea* docked at 2400 on 4 November. Scientific staff changes were made and *Clupea* sailed on 5 November and proceeded northwards, taking sediment samples in the eastern Moray Firth before steaming for Scapa Flow. Sediment and water samples were taken at several locations throughout the flow. The dory was launched and used to shoot and retrieve creels in inshore areas in Longhope, Mill Bay and Scapa Bay. Sediment samples were taken using the Craib corer operated from the dory at these locations.

Clupea left Scapa Flow on 9 November, sediment and water samples were then taken from a number of locations in the Moray Firth. *Clupea* docked at Fraserburgh at 1700 on 11 November. Staff and gear were offloaded on 12 November.

Results

During the first part of the cruise, sediment samples were taken from 22 stations between Rattray Head and Fife Ness, and from 34 stations in the Firth of Forth and the offshore waters to the east. Integrated water samples for plankton analysis and salinity were taken in the same areas. The majority of sediment samples were taken to the University of Westminster for examination for dinoflagellate cysts.

In the second part of the cruise, sediment samples were taken from 38 stations in Scapa Flow and from 30 stations in the Moray Firth. Water samples were taken for plankton analysis and salinity. Examination of the water samples has not revealed the presence of any toxin producing dinoflagellates.

Creel catches of crustaceans; velvet, green and spider crabs were obtained. Samples of the crabs were used for PSP testing, no PSP toxins were detected by mouse bioassay. The crustaceans were also examined for evidence of toxin producing bacteria. This work is being evaluated.

Sediment samples are being examined for the presence of dinoflagellate cysts, and also for evidence of toxin producing bacteria.

G Howard

4 February 1993

Seen in draft: S Clark

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