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IN CONFIDENCE: Not to be quoted without reference to the Laboratory

CRUISE REPORT

FRV "MARA"

3-6 MAY, 1977

Objectives:

To investigate the effect on the benthic fauna of sand dredging operations in the Moray Firth between Carness Point and Quarry Head.

Procedure:

The changeover of gear and scientific personnel took place at Buckie on Tuesday, 3 May. "Mara" left for Troup Head at 0400 hrs on Wednesday, but returned shortly afterwards due to weather conditions. Another attempt was made at noon on the same day, but weather conditions were still unsuitable.

Mr Murison and Mr Basford employed the remainder of the afternoon and evening (1400-2100 hrs) in driving to Burghead Bay and carrying out a survey of the beach benthos (a continuation of the Benthos Section's coastal survey programme). Samples were collected along a down-shore traverse for macrobenthos, meiobenthos, sediment, chlorophyll, carbon and salinity analysis. Observations were also made on temperature, water-table and beach profile and topography.

"Mara" left Buckie for Troup Head at 0430 hrs on Thursday. The morning was spent on an U.W.T.V. survey of the dredging area. During this work the camera unit developed a serious leak allowing seawater inside the casing. Repeated efforts to seal the unit were unsuccessful and the TV work was abandoned. Video tape records of 20 min. duration were retained for future reference.

The remainder of the day was spent on grab sampling (S-M grab) and a series of samples was collected for macrobenthos and sediment analysis.

Weather conditions were unsuitable for use of the new Craib corer and so this instrument was tested in the harbour on return to Buckie in the evening.

Gear was off-loaded at Buckie on Friday morning and the scientific personnel returned to Aberdeen.

Results:

The limited U.W.T.V. survey showed no evidence of unnatural disturbance of the sediment. The uniformly ripple-marked seabed suggested that water movement on the bottom may be sufficiently strong to remove relatively quickly any unevenness produced by dredging operations.

A limited examination of the samples will determine if the dredging operations had any effect on the fauna, in which case a further analysis of the samples will be required.

D J Murison  
13 May 1977Seen in draft - James A Calder  
OIC, "Mara"