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CRUISE REPORT

FRS MARA

29 May - 5 June 1976 [Part of "Mara" cruise 24 May-2 July]

Objectives

1. To carry out a sampling of the benthic populations of Sullom Voe, with special attention to the distribution, density, diversity and biomass of these populations. This survey, an extension of the 1975 preliminary survey, had as its purpose the provision of a more detailed information on the benthic populations of certain 'sensitive' areas which are likely to reveal future interference with the environment.
2. To collect samples of sediment and fauna for hydrocarbon and heavy metal analysis.
3. To conduct a search for the recovery of a box corer lost during the April 1975 survey.

Narrative

The main party of scientists including divers joined the "Mara" at Sullom Voe on the evening of 29 May. On 1 June an additional member of staff in a Landrover carrying underwater television equipment joined the main party in Sullom Voe, having been ferried on the passenger ship. The search for the lost piece of equipment by a towed submersible started on 30 May and it was concluded on 1 June without the corer having been found. However, given the opportunity, ie the presence of a research ship in Sullom Voe with available time and equipment a further attempt should be made to recover it. The benthic survey of the Voe started on 31 May and it was concluded on 4 June. Over this period a total of 15 stations were sampled for macro-meio- and epibenthos, sediment for particle size, carbon and chlorophyll content. The stations which were selected on the basis of the information available from the preliminary survey on April 1975 covered the whole of the Voe though they were mostly concentrated around the 'sensitive' areas at the Inner, Middle and Outer Voe. Three grab samples for macrobenthos using a 10 Van Veen grab, and two core samples for meiobenthos using a Craib corer were taken at each station. The epifauna in five positions at the deeper part of the Voe was also sampled by means of a 2 m Agassiz trawl. The fauna and the type of bottom was also studied by means of underwater television, sixteen stations were surveyed and video-tape records were taken at each station.

The sediments as previously were poorly sorted and inhabited by a highly diverse fauna which was dominated by sedentary and errant polychaetes. Further information on the quantitative and qualitative aspects of the benthic populations of the Voe will be provided in due course.

A small number of stations, located at the inner mid and outer Voe were sampled for sediment, fauna (crabs, fish, mussels, queen scallops) and flora (brown algae) for heavy metal and hydrocarbon analysis. Having concluded the sampling on 4 June the staff returned to Aberdeen.

A Eleftheriou
12.7.76

Seen in Draft: W Mair

SULLOM VOE STATION AND SAMPLING RECORD

BENTHOS SURVEY MAY - JUNE 1976

Station No	Position	Depth fms.	Depth m.	Macro	Meio	Soil	c/ehl	Heavy metals	Hydro- carbons
1	60°23.9'N - 01°22.55'W	15½	28	3	2 V/V	1	1	-	-
3	60°24.15'N - 01°22.15'W	26	48	3	2 Craib	1	1	1	2
5	60°24.55'N - 01°21.7'W	9	16	3	2 Craib	1	1	-	-
7	60°24.4'N - 01°21.3'W	23½	43	3	2 Craib	1	1	-	-
10	60°26.03'N - 01°20.55'W	13		3	2 Craib	1	1	1	-
14	60°26.85'N - 01°18.65'W	11	20	3	2 Craib	1	1	-	-
15	60°27.3'N - 01°17.75'W	12	22	3	2 V/V	1	1	-	-
17	60°26.95'N - 01°17.4'W	8	15	3	2 V/V	1	1	-	-
19	60°27.05'N - 01°16.5'W	10		-	2 Craib	-	-	-	-
20	60°27.2'N - 01°17.1'W	12	22	3	2 Craib	1	1	1	2
25	60°27.83'N - 01°18.7'W	15½	28	3	2 V/V 3 Craib	1	1	-	-
33	60°29.3'N - 01°17.8'W	28		3	2 Craib	1	1	1	2
36	60°29.88'N - 01°17.45'W	29	53	3	2 V/V 2 Craib	1	1	1	2
38	60°29.2'N - 01°15.6'W	12	22	3	2 V/V	1	1	-	-
39	60°29.38'N - 01°15.04'W	21	38	3	2 V/V	1	1	-	-

Other work 1) 16 Stations (the above and Stn. No 8) were surveyed by U.W. T.V. and video-tape records kept (4 tapes).

2) 5 Agassiz Trawl hauls were taken at intervals throughout the Voe.