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reference to the Laboratory.

### CRUISE REPORT

F.R.S. "MARA"  
26th August-13th September, 1963

Gear was loaded on "Mara" at Aberdeen Bay on Monday 26th September and during that day the ship worked in Aberdeen collecting live animals for experimental work. These specimens were landed in the evening and taken to the laboratory, and the ship proceeded to Buckie to begin the Moray Firth section of the Scottish coastal survey.

Strong winds held up work on Tuesday 27th, but during the remainder of the week it was possible to work in Burghead Bay, Nairn Bay and Spey Bay, and in the deeper water between Burghead and Lossiemouth. In the week beginning 2nd September the ship worked in the Firths of Inverness, Cromarty and Dornoch and continued sampling the deep water offshore east of Lossiemouth. Weather deteriorated towards the end of the week and on 6th September the ship was stormbound in Buckie. On the week beginning 9th September the ship was diverted to investigate reports of dead and dying fish in various parts of the Moray Firth. This investigation was terminated on Thursday 12th, and it was then possible to return to the survey work which was completed by a sampling programme on the Nephrops grounds. The cruise finished at Buckie on 13th and gear and samples were returned by van to Aberdeen.

#### Results

In the exposed parts of the Firth there were two distinct animal associations - a Tellina fabula - Nucula turgida community on the coastal sand and a mud community characterised by Calocaris macandrei and several polychaete species in deeper parts offshore. In the sheltered firths of Cromarty and Inverness extremely rich mussel communities were encountered, composed of Modiolus in the outer parts of the Firths and Mytilus in inner parts. These were associated with an extremely rich and varied population of polychaetes, crustacea and lamellibranchs.

Throughout the cruise a modified version of the spring-loaded grab was used - the instrument being mounted inside a ring which protected both the grab and the ships side from damage and enabled the grab to be used in bad weather.

A separate report has been prepared on the work done in connection with dead fish investigations.

A. D. McINTYRE

17th September, 1963.