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

FRV MARA Cruise 9/80 REPORT 4-22 August 1980 9MR80 AR

## Objectives

To participate in a joint demersal pair trawling project arranged between the Marine Laboratory and the Bergen Fishing Technology Institute. The Norwegian pair trawlers NALEY and NORDLENDING will tow the gear and provide facilities for underwater and shipboard instrumentation. MARA will operate underwater TV equipment to observe the pair trawl fished by the other two vessels. MARA will act as command ship while the three ships are working together.

## Narrative

MARA left Buckie on 4 August and steamed through the Pentland Firth to the Tolsta Grounds. The remainder of the first week was spent testing equipment and seeking a tow suitable for pair trawling at the appropriate depth. This proved somewhat difficult due to the nature of the bottom (sand interspersed with scattered clumps of large boulders) but eventually a reasonably clear three mile tow was established. Two tapes of the Three Bridle Trawl in very good water clarity conditions were also made.

The Norwegian vessels arrived in Stornoway on 10 August and instrumentation was loaded the following morning. The three vessels began working together on the afternoon of 11 August and continued until the afternoon of 15 August when thick fog prevented further television work.

On 18 August weather conditions were unsuitable for working in the Tolsta area and it was decided that the Norwegian vessels would return to the Norwegian sector of the North Sea to complete instrumentation work while MARA would steam to the Moray Firth to continue single boat television work. All three vessels left Stornoway on 19 August and MARA reached Buckie early on 20 August, but deteriorating weather conditions had forced the Norwegian vessels to seek shelter in Kirkwall. No further work was possible that week and gear and equipment were unloaded from MARA on 22 August.

The Norwegian vessels were eventually able to leave Kirkwall on 23 August and carried out two instrumented hauls in the Ling Bank area on 24 August before disembarking laboratory staff and instrumentation at Aberdeen on 25 August.

## Results

Ten pair trawl hauls were made on the Tolsta grounds, 2 with the Faroe trawl (both televised) and 8 with the Engel trawl (3 televised, 3 instrumented) plus a further 2 instrumented hauls with the Engel trawl on the Ling Bank. The video tape and instrument records are meantime being analysed and a joint UK/Norwegian report will be issued in due course.

R D Galbraith 24 September 1980

Seen in draft: W B Reid - O I C (FRV MARA)