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Confidential: Not to be quoted without  
reference to the Laboratory.

CRUISE REPORT

F.R.V. "MARA"

22nd August-17th September, 1960.

Personnel: M. J. D. Mowat, E.O.  
S.F. Pirie, Asst. (Sci.)

The cruise started in the Moray Firth as planned with instrumented tests on the seine net gear. It soon became obvious that the recorded readings from the seine net warp tension meter were erroneous due to a considerable zero drift. Various attempts to clear the fault were made, but it was only after returning to the laboratory that the cause of the trouble was found and this necessitated re-designing the D.C. supply system to the instruments.

To record engine exhaust temperature, which together with r.p.m. gives a measure of engine power, a thermocouple was fitted in the exhaust manifold of only one of the cylinders. This worked quite well, the recorded temperature plot being sensitive to changes of engine load during fishing operations. The method looks to be capable of development to include all cylinders. Engine speed was recorded from an extension lead from the tachometer system, but here the change from an A.C. tachometer system to a D.C. recorder led to some unstable readings at certain engine speeds and further design work is required. Tests were also carried out on a new miniature depth recorder but the vessel was never in deep enough water for an adequate trial, as had been scheduled for later in the cruise.

When the faults in the tension meters had not been cleared by the middle of the second week it was decided to abandon instrumented gear testing and continue with comparative fishing, the more particularly as a reasonable supply of fish, mainly whiting, was to be found at the Cruden Buoy. The nets compared were the standard seine net and the Wing trawl used as a seine net. Codends were fitted with small mesh covers. This part of the cruise went smoothly, a total of eighteen comparative fishing hauls being made. Work was interrupted for only two more days by weather and was terminated on the 13th September to allow 'Mara' to be refitted for the trawling programme which followed.

M. J. D. MOWAT.

27th March, 1961.