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

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CRUISE REPORT

F.R.V. "Mara" and F.R.V. "Clupea"

17th July-5th August 1967 20th August-1st September 1967

Objectives: Further trials with the purse seine and herring tagging.

"Mara" and "Clupea" sailed from Buckie for Shetland grounds on 18th July. Fog and unsettled weather conditions persisted over the whole of the first part of the cruise with the result that the purse seine was only shot on four occasions. The first of these was a trial haul to familiarise the crew with the handling of the gear and to gain some experience in operating with the boss-boat. In the second haul the net was successfully pursed on a switable trace but the headline sank with the weight of fish. The catch obtained was only about one cran of herring and therefore it was assumed that most of the fish had escaped over the headline.

Most of the herring caught were badly scaled and only 119 were in good enough condition for tagging.

The catch from the third haul consisted of about a basket of dogfish and a quarter basket of herring, none of which were suitable for tagging. During the fourth haul the net caught on "Mara's" keel and was damaged. A large number of 0 group haddock were seen escaping from the net but there appeared to be no herring in this haul.

On one occasion when conditions were unsuitable for purse seining the opportunity was taken to experiment with the Gourock No. 1 mid-water trawl. Two hauls were made with this gear and the total catch amounted to $1\frac{1}{2}$ baskets, mostly degfish.

After the summer docking "Mara" and "Clupea" returned to the Shetland grounds on 20th August. Apart from fog and periods of stormy weather which hindered the work it was found that most of the herring had moved off the grounds. Intensive echo-searches were made but few traces were located with the result that the net was only shot on one occasion. During this haul difficulty was experienced in picking up the winkie and when the net was eventually pursed and hauled there were no fish in the bag.

The final week of the cruise was spent searching for fish on the grounds east of Orkney but no traces were located.

While the basdic on the boss-boat greatly improved the facilities for searching and detecting fish shoals, and also provided an efficient means of marking and tracking the shoals after they had been located, the fact that the boss-boat had to be towed by "Clupea" or "Mara" restricted the area of operation and freedom of movement between different fishing grounds.

I.G. Baxter G. McPherson A. Corrigall 30th October 1967