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

CRUISE REPORT

F.R.S. "CLUPEA"

14th February-15th March, 1966

Objective: Ballantrae Bank herring egg survey.

The grab survey was begun on 14th February at the position where herring spawn was found in 1965. No eggs were taken in the grab samples at this position and the survey was extended over a wider area of the Bank. On 16th February a small patch of eggs was located near the southern edge of the 1965 patch position. The eggs, which were in an advanced stage of development, were sparsely spread, in a single layer, over an area of about 20 yds by 10 yds. Most of these eggs had hatched by 22nd February. Between 16th and 24th February the grab survey over the Bank was continued but no additional patches of spawn were located. On 24th February two small patches of spawn, about $\frac{1}{2}$ mile apart, were found within the area occupied by the 1965 patch. The eggs in these patches were at a very early stage of development and, therefore, had been recently deposited.

During the 3rd week a much larger patch of spawn was located which included the two small patches found during the previous week. This patch was delimited by taking grab samples across it. The results indicate that a continuous patch of spawn stretched for $1\frac{1}{2}$ miles in a north/south direction and about $\frac{3}{4}$ mile in an east/west direction. This was considerably larger than the patch located in 1965.

Divers were able to collect samples of spawn and carry out some photography. No herring were observed; the only fish seen were two plaice.

A few larvae were obtained over the patch at the end of the 4th week and the main hatching occurred about the 13th March.

A hydrographic survey of Ballantrae Bank was made on the 8th March. The temperature ranges at the surface were 6.6-7.1°C and for the bottom 6.6-6.8°C.

On the 23rd February a sample of fish was taken by trammel net to provide gonad material for Mr. Blaxter.

I. G. Baxter
D. P. Sharman
31st May, 1966.