

CRUISE REPORT

FRV "CLUPEA"

February 2-14, 1970

PRINCIPAL OBJECTIVES

To experiment further with methods for catching roundfish in good condition.

NARRATIVE

"Clupea" sailed at 0900 hours on February 2 and proceeded to a position in Aberdeen Bay where 45 tagged and aquarium adapted haddock were released. Fishing then commenced in Aberdeen Bay and, as the catches appeared to be suitable, fishing for the duration of the cruise was carried out at various positions in that area.

For the first three days of the cruise, comparative tows were made, in 30 fm depth, with a canvas bag codend and with a new design of collapsible and detachable codend. An extension piece of half inch knotless netting was used both with the canvas bag codend and with the detachable codend and towing speeds were kept down to $1\frac{1}{2}$ knots with the object of reducing the "fatigue factor". No attempt was made at this stage to bring the detachable codend to the surface slowly.

On February 5 a codend was fished and detached and the process of raising it slowly to the surface commenced. Unfortunately this experiment had to be terminated after only a few hours due to bad weather.

Work recommenced on the 9th and a codend was fished and detached and raised to the surface during a period of 27 hours. During this period several hauls were made using the canvas bag codend raised to the surface at normal hauling speeds.

On the 11th and 12th the detachable codend was again fished and detached and raised slowly and during this period further hauls were made using the canvas codend.

The cruise terminated on the evening of the 12th, and arrangements were made for the vessel to be slipped at Hall Russell's shipyard on the 13th in order to change the propeller blades.

RESULTS

The bulk of the catches throughout the cruise consisted of haddock.

The total numbers of haddock caught in each type of codend and the numbers found lively enough to be tagged and released or kept alive for subsequent aquarium use are shown in the following table.

These results show that the proportions of lively fish in good condition was higher with all three types of codend than in the case with a standard trawl codend under normal fishing conditions when the percentage of taggable haddock is usually about 10-20%: the proportion with the detachable codend raised slowly to the surface was particularly high, being 81%.

In addition to haddock, a total of 65 cod, 86 lemon sole and 36 plaice were tagged during the cruise. Only two of the cod were taken in the detachable codend raised slowly and so no useful comparison can be

made with the numbers caught in the other codends. The plaice and lemon soles caught in all three types of codend appeared to be in excellent condition and all were suitable for tagging.

During the course of the cruise, 64 haddock, 14 whiting and 4 herring were brought back alive to the laboratory aquarium.

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Table 1

Numbers of haddock caught and tagged or kept alive

Type of Codend	No. of hauls	No. caught	No. tagged or kept alive	% tagged or kept alive
Canvas bag raised rapidly	7	1647	421	26
Detachable codend raised rapidly	4	197	67	34
Detachable codend raised slowly	2	303	244	81