

Selectivity of herring in midwater-trawls

by
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During the last years midwater-trawling with two boats in herring fishery became more and more important. Recently some success has been attained with midwater-trawls operating with single boat in cod fishery in Arctic waters. It is to be expected that this technique with two boats as well as with single boat will grow more important in the near future. In this case midwater-trawling can no longer be neglected in selection work.

In August this year, on a trip of the German research vessel "Anton Dohrn", some preliminary work could have been done in selectivity of midwater-trawls for herring in the North Sea. A special herring trawl developed for commercial midwater trawling operated from a single boat has been used. (A description of this trawl made of "Perlon" has been published in "Protokolle zur Fischereitechnik" Vol 7, p. 264/5).

For the examination of selectivity the cover net method has been used. The small meshed cover (28 mm) surrounded completely the tested cod-end. To keep the cover free from the cod-end we intended to fix a plastic hoop around the cod-end in a distance of 30 cm. Unfortunately, this hoop was working like a screw and twisted the floating trawl completely. Therefore, no hoop could be used for the experiments.

As there were scarcely any herring shoals of proper size in midwater area, only two hauls could be examined:

Haul No.	4	7
Position	59°40'N, 01°12'W	59°47'N, 01°02'W
Date	13.8.1962	
Cod-end tested	Nylon single, Td 210x33	
Duration of tow (minutes)	60	120
Quantity of herring caught (baskets)		
	<u>cod-end</u>	<u>cod-end</u>
	18.5	5.3
	<u>cover</u>	<u>cover</u>
	15.5	0.8
Mesh opening (mm) ¹⁾	49.6	50.0
No. of herring in the selection range ²⁾	21296	898
50% retention length (cm)	21.6	21.0
Selection factor	4.4	4.2

¹⁾ measured with the ICNAF gauge, exerting 4 kg pressure
²⁾ between 25 and 75% retention length

The selection factors in the two hauls are similar to those found with a herring bottom trawl in the same area (see H. BOHL, contribution No. 74). These two hauls can only give a hint; more selection work has to be done with midwater-trawls, and that not only for herring.