

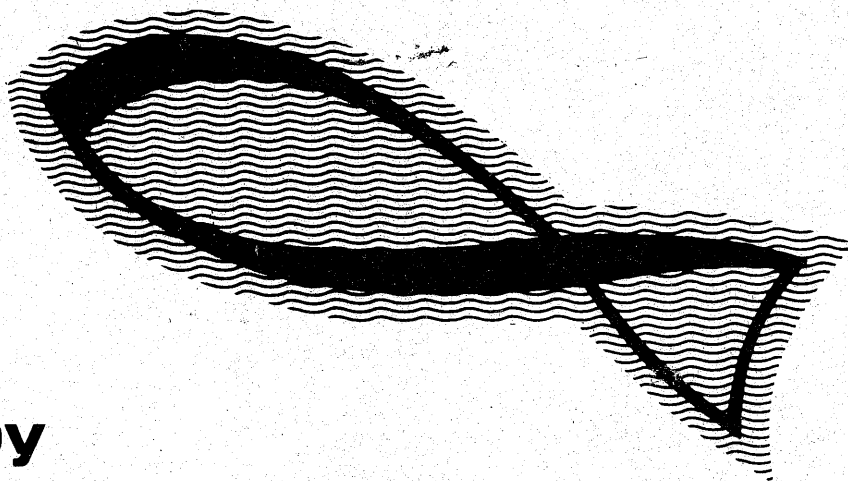


**Fishery Leaflet
Number 94
1978**

**an roinn
iascaigh**

**The herring fisheries on the
South and South-West coasts
1977-78**

**LIBRARIAN
FISHERIES RESEARCH CENTRE,
ABBOTSTOWN,
CASTLENOCK,
Co. DUBLIN,**



**by
J. Molloy**

**Department of Fisheries
Trade and Information Section
Dublin 2**

The herring fisheries on the South and South-West coasts, 1977-78

by

J. Molloy

Abstract

Herring fishing off the south coast, in that area now commonly known as the Celtic Sea, was prohibited during most of the year commencing 1 April 1977. In spite of this, however, nearly 3,000 tons of adult herring are believed to have been taken, mainly by Irish and Dutch vessels. Scientific investigations and the results obtained from a trawling survey carried out from September 1977 to January 1978 indicated that the spawning stock is still in a very depleted condition.

Recruitment of young herring to the adults stocks during the last three years has been critically low and because the adult stock size is now estimated to be only 10,000 tons a continuation of the existing ban on fishing must be envisaged for some time.

The fishery off the south west coast in 1977, showed an increase in landings largely due to increased catches in November off Fenit, Co Kerry.

South Coast (Celtic Sea). Throughout the season spasmodic catches, believed to have been taken by mid-water trawlers in the Celtic Sea, were landed at Kilmore Quay, Dunmore East, Ballycotton, Kinsale, Baltimore, Castletownbere and Killybegs. Some landings taken by boats using drift nets, were made at various smaller ports on the Wexford and Waterford coasts - mainly at Helvick, Ardmore and Passage East. All of these catches, with the exception of about 300 tons landed in Dunmore East and Kilmore Quay on 1 February were the result of illegal fishing. The landings made on 1 February were legal because the order prohibiting herring fishing in the Celtic Sea expired on 31 January and was not renewed until some days later.

The reported catches by continental countries fishing in the Celtic Sea totalled about 1,300 tons. These were mainly the result of by-catches in the Dutch and F.R. German mackerel fisheries. However about 80 tons was also taken by one French vessel fishing off the Smalls, as a result of which the skipper of the vessel was convicted and penalised.

The catches by the Irish boats were taken mainly in Baginbun Bay although some catches made earlier in the season were taken off Ballycotton and off Cork Harbour.

Scientific investigations: Samples of herrings were obtained during the season from catches believed to have been taken in the area and also during the course of a scientific trawl survey. The age distribution was dominated by two-year old herrings which had been spawned during 1975/76. The main recruitment to the Celtic Sea stock takes place during the summer months when the herrings are three years old, but the amount of three year olds present in 1977/78 was very low compared with previous years. The immediate future prospects of the fishery now completely depend on how successful the spawnings have been during 1976/77 and 1977/78, about which nothing is yet known, and upon a rigid observation of the ban on herring fishing.

The percentage distribution of the age classes in 1977/78 is shown below. In previous reports the age distributions have always been expressed as numbers of fish per age group per unit of effort. However no valid catch per effort data could be collected during 1977/78 because of the closure of the commercial fishery. It is noteworthy that over 80% of the stock consists of 1,2 and 3 winter ring herring, illustrating how completely it is now dependent upon the success of recruiting herrings.

Age (Winter Rings)	1	2	3	4	5	6	7	8	7 8
%	43.9	18.8	18.6	8.0	5.3	2.2	2.0	0.5	0.7

Trawl Survey: During the season a trawl survey was carried out from mid-September until the end of January using the M.F.V "Sure Swift" from Duncannon. The idea of the survey was to obtain samples of the spawning stock for a number of reasons and also to estimate the abundance of shoals which appeared on the spawning beds. Because of the extent of the area involved and the limited time available it was decided to concentrate the survey on the area extending from Baginbun Bay to Mine Head. During the duration of the surveys "markings" considered to be from herring were found on only three occasions. Apart from these occasions and the few times that herrings were located by boats fishing in the area, shoals appeared to be virtually absent from the spawning grounds.

The low recruitment coupled with the high mortality rate on young herring caused by the industrial fishery in the Irish Sea and the illegal catches in the Celtic Sea during 1977/78, means that the total adult stock is still only around 10,000 tons. As the declared management objective is to increase the stock to 40,000 tons, the prohibition of all herring fishing in the Celtic Sea during 1979/80 should be continued and this prohibition should be rigorously enforced.

South west coast: Landings of herring during 1977 from the south west coast, i.e. that section of the coast extending from Galley Head to the mouth of the Shannon, amounted to over 4,000 tons. This was a considerable increase on the figure for 1976 and was caused mainly by substantial landings which were made at Fenit during November and December. The quantities landed and the value at the main ports during 1977 were as follows:

<u>Port</u>	<u>Quantity</u> <u>m. tons</u>	<u>Value</u> <u>£</u>
Baltimore	325	121,450
Castletownbere	1,657	487,761
Dingle	819	229,067
Fenit	821	211,500

-4-

Scientific investigations: Isolated samples were obtained throughout the year from landings made at Dingle in January, Cahirciveen in September and Fenit in November and December. In all cases the herring belonged to an autumn spawning component and spawning would appear to have taken place in October or early November. The samples from the three areas were very similar and were dominated to a large extent by three and four year old herring. The percentage age distributions from each area were as follows:-

Age W. Rings	1	2	3	4	5	6	7	8	> 8
Dingle (Jan)	4.0	14.2	32.3	12.2	2.4	6.8	16.8	4.2	7.1
Cahirciveen (Sept)	3.7	63.0	10.1	7.1	6.7	6.4	-	1.7	1.3
Fenit (Nov. Dec)	17.2	33.5	19.5	7.6	2.8	5.8	1.4	1.1	1.1

The increased landings made off the south west coast, particularly those at Fenit in the autumn and winter of 1977/78, have led to speculation that it might be possible to develop a substantial fishery off that section of the coast. However there is little information about the herrings off the south-west coast and what is available would suggest that a number of races - both autumn and winter spawners inhabit the area. Small races of herrings tend to fluctuate very much in abundance so that it is speculative to say that a continuous worthwhile fishery could be developed and maintained. However the results of the 1978 fishing effort in the area will be extremely valuable.

Acknowledgements

The co-operation of skippers, buyers and fishermen and members of the South and East Coast Fishermen's Association for supplying information and statistics used in compiling this report is gratefully appreciated. Particular thanks is due to the skipper - Mr P. Downes of the Sure Swift and his crew for their help during the season.