


International Council for the
Exploration of the Sea

C.M. 1963
Scombriform Fish Committee
No. 113 

Mackerel Investigations in Donegal Bay

by
J. Molloy



Mackerel landings, in recent years, have generally been low around the Donegal coast, and have never exceeded 3290 cwt (1958). During July, 1963, however, reasonable catches of mackerel were made in Donegal Bay. Two samples of these fish were examined for length, sex, maturity, age and dorsal fin-ray count. Fish numbering 253 were examined and the results obtained are summarized in Table 1 below. Over 95% of the total were young fish (less than three years of age). Of this total the vast majority (78%) were sexually immature. The mean lengths for the male and female 0-group fish show that the females were slightly larger. Comparing the 0-group and 1-group fish in Table 1, it may be seen that there is an approximate difference of 6 cm between these two year-classes and that during the first year of life growth is very rapid.

Ages were determined by using the otoliths. All otoliths were read from the basal portion. In older fish, the presence of false rings and split rings on the rostrum made it impossible to obtain a reliable reading from this portion of the otolith.

From Table 1 it will also be seen that some of the young fish were in more advanced stages of maturity (Stage V & VII; Stevens) and a small number were recovering spents.

Reference

Stevens, G. A. 1952 In Journ. Mar. Biol. Assoc., XXX, pp.549-67.

Table 1. Killybegs (July)

Number of winter rings		0	1	2	3	4	6	7	9+	Total
Immature juveniles	No. of fish	12	2							14
	Mean length	24.2	23.0							
	Mean fin-ray count	11.91	13.0							
Males	No. of fish	74	26	11	1	2	1			115
	Mean length	23.5	29.3	31.9	34.2	35.9	35.4			
	Mean fin-ray count	12.04	11.80	11.27	12.00	11.00	12.00			
Females	No. of fish	63	31	23	2	2		2	1	124
	Mean length	23.8	29.4	31.8	34.6	35.6		34.7	39.1	
	Mean fin-ray count	12.09	11.45	11.82	11.00	11.50		11.50	12.00	
Total	No. of fish	149	59	34	3	4	1	2	1	253
	Mean length	23.7	29.1	31.8	34.5	35.8	35.4	34.7	39.1	
	Mean fin-ray count	12.05	11.66	11.64	11.33	11.25	12.00	11.50	12.00	