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Spanish Research Report, 1964

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Spanish otter trawlers and pair trawlers caught a total of 230,501 metric tons of fish in Subareas 1, 2, 3, 4 and 5 of the ICNAF Convention Area in 1964. The two types of fishing vessels landed almost equal amounts of, mainly, cod. However, otter trawlers were active in Subareas 2, 3 and 4, while the operation of the pair trawlers was confined almost entirely to Subareas 3 and 4. Table 1 shows the landings by species, type of fishing vessel and subarea for 1964.

TABLE 1. SPANISH OTTER TRAWL AND PAIR TRAWL LANDINGS (METRIC TONS) IN SUBAREAS, 1964.

SUBAREA	OTTER TRAWL				PAIR TRAWL				GRAND TOTALS
	COD	HADDOCK	VARIOUS	TOTALS	COD	HADDOCK	VARIOUS	TOTALS	
1	743	-	-	743	-	-	-	-	743
2	45,285	3	73	45,361	-	-	-	-	45,361
3	51,184	318	629	52,131	66,060	1,587	451	68,098	120,229
4	16,628	35	188	16,891	38,633	4,974	3,689	47,296	64,187
5	-	-	-	-	18	2	2	22	22
TOTALS	113,840	356	890	115,086	104,711	6,562	4,142	115,415	230,501

Investigations on the biology, particularly the age and growth of cod, were carried out by O. Cendrero of the Laboratorio del Instituto Espanol de Oceanografia, Santander, from the commercial trawler VIRAZON during June, July and August in Subarea 3. The results of this research are to be found in 1965 Research Document No. 22 "Some aspects of the biology of cod from the Newfoundland fishing grounds in 1964".

Investigations on cod biology were, also, carried out by A. Figueras of the Instituto de Investigaciones Pesqueras, Vigo, from the trawler AQUILON of the PYSBE company from February to October in Subareas 2, 3 and 4. The results of this research are presented in 1965 Research Document No. 24 "Age and growth of cod caught by the Spanish trawler AQUILON in Subareas 2-4 in 1964".

In addition, J. Arambarri of the PYSBE company in St. John's, Newfoundland, has provided a "Summary of the 1964 Spanish fishing season" (1965 Research Document No. 38).

SUBAREA 2

A. Status of the FisheriesI. Cod

Fishing was carried out mainly in Div. 2J in 1964. The bulk of the fleet arrived in the spring. Ice hampered fishing. Catches were good in the spring, generally poor in the summer and improved in the late fall.

Cod sampled in Div. 2J averaged 59.8 cm in length with a dominant length-group of 54-56 cm. The 1958 year-class (6 years old) was dominant in the samples which had a mean age of 6.8 years. Age at first maturity averaged 6.1 years. Average length and age of cod showed a slight increase from 1960, 1961 and 1962.

SUBAREA 3

A. Status of the Fisheries

I. Cod

The main fishery was carried out in Div. 3L by otter trawlers and Div. 3K by pair trawlers. The dominant year-class in most samples in the Divisions is the 1958 one. The 1957 year-class is still strong in the fishery. In Div. 3L the 1958 and 1959 year-classes make up more than one-half of the stock. The average length and age of the cod in the subarea has increased slightly from previous years (1965 Research Document No. 22) presents data on the cod length-girth relationship and feeding. Cod feed on small copepods and amphipods and both small and large cod feed on sand-eels or capelin. Character of the otoliths of cod in the subarea and growth rates in each of Div. 3K, 3L and 3N have been studied by Figueras (1965 Research Document No. 24).

SUBAREA 4

A. Status of the Fisheries

I. Cod

Fishing by the pair trawlers and otter trawlers started in the subarea early in February. Samples taken in Div. 4R had the 1958 year-class dominant with an average age of 6.3 years and average length of 57.5 cm. In Div. 4Vn, cod sampled had a bimodal length frequency and average length of 48.9 cm. Again the 1958 year-class was dominant and cod averaged 5.9 years of age. In Div. 4Vs, the cod were large, averaging 65.7 cm in length, and averaged 6.2 years of age. In contrast to the cod in Div. 4R and 4Vn, the 1959 year-class is dominant.