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The species composition of skates and rays
landed at Fleetwood and Milford Haven

by

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Introduction

In both the Bulletin Statistique of the International Council and the Sea Fisheries Statistical Tables of the Ministry of Agriculture, Fisheries and Food, the landings of all species of the genus Raja are classed under the heading "Skates and Rays". The only research on the numerical composition of the species of Raja landed in England was carried out by Steven (1932). Twelve species of Raja occur in British waters, and as a preliminary to a study of their population dynamics it was necessary to determine which species were most important in the catches. This paper summarises the results of the first two years' work.

At ports in England and Wales there is very little sorting of rays into the separate species on landing the catch. Raja batis (skate) are usually landed separately at all ports, while at Fleetwood R. brachyura and R. montagui, known collectively in the fish trade as blonde ray, are sold separately from other species if the landing contains a large proportion of these two species. At Milford, large R. clavata are also sold separately.

Method

In 1961 sorting programmes were started at Fleetwood and Milford. The method used followed that of a standard measuring programme except that the numbers of each species of ray in each category sampled were counted. These were then raised to the ship's total landing. All the ships' samples were finally raised to the port's total on a monthly basis. At Fleetwood sampling was limited to boats landing from Statistical Region VIA, and at Milford to boats landing from Statistical Region VIIA.

Results

The results are shown in Tables 1 and 2.

Table 1

The numerical and percentage species composition of Raia landed at Milford, from Region VIIIA, in 1961 and 1962.

Species	1961		1962	
	Number	%	Number	%
<u>R. batis</u>	4,556	0.6	5,096	0.7
<u>R. brachyura</u>	126,297	15.9	102,572	13.9
<u>R. clavata</u>	275,994	34.7	259,937	35.1
<u>R. circularis</u>	1,511	0.2	2,413	0.3
<u>R. fullonica</u>	3,904	0.5	2,880	0.4
<u>R. microcellata</u>	Absent	-	6,119	0.8
<u>R. montagui</u>	283,676	35.6	271,311	36.7
<u>R. naevus</u>	100,433	12.6	89,674	12.1

Table 2

The numerical and percentage species composition of Raia landed at Fleetwood, from Region VIA, in 1961 and 1962.

Species	1961		1962	
	Number	%	Number	%
<u>R. batis</u>	24,086	9.2	19,740	7.7
<u>R. brachyura</u>	143,931	55.2	122,531	48.0
<u>R. clavata</u>	29,887	11.5	35,725	14.0
<u>R. circularis</u>	9,666	3.7	15,160	5.9
<u>R. montagui</u>	31,512	12.1	48,233	18.9
<u>R. naevus</u>	21,672	8.3	13,697	5.4

The percentage composition of the species has remained almost constant from 1961 to 1962 at both ports. At Milford R. montagui and R. clavata occur in almost the same proportion, with R. brachyura being the third most important species. At Fleetwood R. brachyura forms approximately half the

number of rays landed, the total numbers of this species landed being almost equal to those at Milford.

Therefore of the eleven species found in British waters in Regions VIA and VIIA only three are of commercial importance, five occur in small numbers in the catches, while three are either absent from these regions or landed in such small numbers as to be missed by the sampling programme. These three species are R. oxyrhynchus, R. marginata and R. radiata.

Discussion

The species composition of the catches does not necessarily reflect the actual species composition in the sea. Steven (1932) found that the species composition of rays landed by trawlers differed from that landed by liners. This he ascribed to the different grounds worked by the two types of boats. It is probable that the species composition of rays landed by trawlers now reflects more accurately the actual species composition, because of the development of trawl gear that enables grounds to be trawled at the present time that it would have only been possible to work with lines in 1932. However, the landings from Region VIA probably contain a higher proportion of R. brachyura than actually occurs in the sea in that area. This results from the Fleetwood trawlers concentrating upon grounds in this region that yield a high proportion of this species, the reason being the high price fetched by this species on the market.

Reference

- Steven, G. A. 1932. Rays and skates of Devon and Cornwall.
II. A study of the fishery with notes on the occurrence, migration and habits of the species.
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