



Length and Age Composition of Salmon of the Commercial Digitalization sponsored
Catch from Seven of the Major Centres in Ireland by Thünen-Institut

by
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During 1970 regular visits were paid to seven of the major fishing centres in the country from April to July/August in an effort to determine the composition of stocks in these centres. The total commercial catch in these centres represents 75% of the fish taken in the country as a whole.

In 1970 very few fish were taken in the months of February and March and where sampling was carried out i.e. Rivers Shannon and Moy, it was included in the April sample as the composition of the stock was similar. In the River Erne and the north Mayo and Donegal coastal (drift net) fisheries few fish were landed before the month of June and only the summer catches (June to August) of fish were sampled.

Fortnightly visits were paid to each of the centres and a random sample of fish was taken for length and weight, together with scales for age determination. All fish were measured to the fork of the tail to the nearest cm and the samples taken represented 1% or more of the total catch, with the exception of Waterford Harbour where only 0.5% was sampled. The numbers of fish sampled in each of the centres are given as follows:-

River Blackwater	548
Waterford Harbour	457
River Shannon	216
River Moy	335
River Erne	317
North Mayo	387
Donegal	629
Total	<u>2 889</u>

In the calculations made the samples taken were adjusted in relation to the total catch.

From Table 1 it can be seen that well over 80% of the catch were grilse (L + sea winter fish), the only exception being Waterford Harbour where it was found that 2 and 2+ sea winter fish formed 27.2% of the catch. In the north west of the country in the River Erne and in the north Mayo and Donegal drift nets virtually all the fish were grilse.

The percentage size composition (in 5 cm groups) of the grilse stock is given in Table 2. With the exception of Waterford Harbour, the River Moy and River Erne, the peak was in the 60 cm group. A little over 50% of the grilse in Waterford Harbour were 65 cm and over. In the River Moy and River Erne the peak occurred in the 55 cm

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group. In Ireland the accepted commercial weight difference between salmon and grilse is 8 lb (3.6 kg). Using a value for the condition coefficient of 1.1 (Menziess' scale) the proportion of fish over 8 lb in weight would be as follows:-

	%
River Blackwater	37.6
Waterford Harbour	50.9
River Shannon	6.0
River Moy	5.2
River Erne	13.5
North Mayo	35.9
Donegal	37.6

Went (1970) found that in the case of the River Foyle 41% of the Foyle grilse were 8 lb and over in weight. Munro and Hynd (1971) got an increase in the number of grilse over 8 lb as the season progressed. The highest figure recorded was 36.1% in the month of August in the River Tay.

References

- MUNRO, W. R. and HYND, I. T. R., 1971. Unpublished. ICES/ICNAF Salmon Doc., 17. F.W.71.
- WENT, A. E. J., 1971. Salmon of the Foyle system (1970). 19 Rep. Foyle Fish Com., (in press).

Table 1. Estimated monthly percentage composition in sea winters from the seven major fisheries.

Sea Winters	M o n t h					Total
	April	May	June	July	August	
<u>River Blackwater</u>						
1+	-	0.1	24.9	51.6	8.6	85.2
2	1.7	2.7	2.7	-	-	7.1
2+	-	1.1	5.4	0.7	0.5	7.7
Total	1.7	3.9	33.0	52.3	9.1	100.0
<u>Waterford Harbour</u>						
1+	-	0.4	14.4	43.4	14.6	72.8
2	1.8	1.7	2.1	1.0	-	6.6
2+	0.4	1.9	11.9	6.4	-	20.6
Total	2.2	4.0	28.4	50.8	14.6	100.0
<u>River Shannon</u>						
1+	-	1.4	65.9	25.6	-	92.9
2	0.9	1.2	0.9	-	-	3.0
2+	-	0.8	1.6	1.5	-	3.9
3	0.2	-	-	-	-	0.2
Total	1.1	3.4	68.4	27.1	-	100.0
<u>River Moy</u>						
1+	-	0.5	36.5	51.1	-	88.1
2	1.7	1.5	2.8	-	-	6.0
2+	-	0.2	4.8	0.9	-	5.9
Total	1.7	2.2	44.1	52.0	-	100.0
<u>River Erne</u>						
1+	-	-	73.0	23.1	2.2	98.3
2	-	-	0.4	0.9	-	1.3
Previous spawners	-	-	0.4	-	-	0.4
Total	-	-	73.8	24.0	2.2	100.0
<u>Donegal drift nets</u>						
June/July						
1+	98.7					98.7
2+	1.3					1.3
Total						100.0
<u>North Mayo drift nets</u>						
June/July						
1+	97.2					97.2
2	1.8					1.8
Previous spawners	1.0					1.0
Total						100.0

Table 2. Percentage size composition (fork length) in 5 cm groups of the 1+ sea winter fish from seven major fisheries.

Length	River Blackwater	Waterford Harbour	River Shannon	River Moy	River Erne	North Mayo	Donegal
Under 50	-	-	-	7.6	0.3	-	0.3
50	3.9	2.8	11.1	20.4	4.8	-	0.3
55	15.1	11.5	23.1	37.4	41.5	13.4	9.5
60	43.4	34.8	59.8	29.4	39.9	50.7	52.3
65	22.8	42.7	6.0	4.7	13.5	30.5	32.6
70	10.5	7.3	-	0.5	-	4.5	4.7
75	2.8	0.9	-	-	-	0.6	0.3
80	0.6	-	-	-	-	0.3	-
85	0.9	-	-	-	-	-	-