

Specimen salmon have become exceedingly rare. Is this a manifestation of decline in salmon stock or of the cyclical nature of salmon and grilse runs?

IRISH SALMON CYCLES

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RO SPECIES of fish has been so assiduously pursued in Ireland as the salmon. The historical records indicate how much our predecessors appreciated the salmon and afforded it royal status — the King of Fish.

Whether or not the Irish salmon is threatened with imminent extinction is currently a highly contentious issue. Undoubtedly, the salmon has been subjected to an ever-increasing amount of harrassment during the last two decades: uncontrolled piracy both at the salmon's feeding grounds in the sea and on their return migration to our rivers; destruction of the salmon's freshwater breeding habitat by indiscriminate drainage and by hydro-electric schemes; further deterioration of the nursery areas by pollution; and finally, by both public and political indifference.

Although there is irrefragable evidence to support the fact that the numbers of salmon entering our rivers has declined dramatically during the last decade, there is also historical evidence of the occurrence of natural long-term fluctuations in the runs of Irish salmon — the so called *salmon cycles*.

Before discussing these natural cycles it may be as well to explain some of the more relevant aspects of the salmon's life history. In general, the longer the salmon spends feeding in the sea, the larger they become. Those fish which spend less than two full years in the sea are known as *grilse*, whereas those fish which spend two or more years in the sea are colloquially termed *salmon*. *Grilse* enter our rivers from May to

October and they usually weigh between 6 and 7 lb. Various groups of *salmon* enter our rivers at different times of the year: *spring fish* between January and May and *summer fish*, from May to October. The average weight of the various groups of *salmon* can vary between 10 and 60 lb. depending on the

length of time spent feeding in the sea. Some rivers have runs of both *salmon* and *grilse*, while others are primarily dependent on one group or the other.

In 1971 the late Dr A.E.J. Went of the Department of Fisheries published details of an analysis he had made of the relative



Niall J. Nolan with a 30 lb salmon landed with a 1½" brown and gold devon above Longfields Bridge on the Blackwater near Mallow in 1956 (photo courtesy of Fergal Nolan)



Salmon affected by UDN disease

proportions of *salmon* and *grilse* in the Irish commercial catch between 1924 and 1969. This study revealed the cyclical nature of both *salmon* and *grilse* runs into Irish rivers over almost half a century. Record of anglers' catches during the same period substantiate the phenomenon of these *salmon-grilse* cycles.

Figure 1. illustrates the percentage of *salmon* and *grilse* in the commercial catch between 1905 and 1969 inclusively. During the first decade of this century *grilse* comprised the greater part of the commercial catch but during the next two decades the *grilse* proportion of the catch declined to an all time low. At the same time, the *salmon* which only accounted for 38% of the catch between 1905 and 1909, increased steadily in

importance and during the mid-Twenties reached a peak of 70%. Excellent catches of *salmon* were made by anglers during the 1920s and several fish weighing in excess of 50 lb were recorded, particularly from the Blackwater and Shannon.

Good runs of *salmon* took place until the late 1930s but the larger fish thereafter showed a gradual decline in numbers. Since the larger fish tend to run earlier in the season than the *grilse*, this also meant a decline in the early spring runs. However, during the mid Fifties, the *salmon* made a slight come back in numbers and when the Irish Specimen Fish Committee (ISFC) was established in 1955, it fixed the specimen weight for *salmon* at 40 lb. From the mid Sixties, however, the decline in the numbers of the larger fish became very rapid, and they have now

reached a very low level, even compared with the period up to the mid Sixties. On the other hand the *grilse*, which had been somewhat scarce up to the mid Thirties, gradually increased in numbers, with a dramatic rise from 1962 onwards. Currently, rivers which formerly had the reputation of being fine spring fish rivers have few early running *salmon* and the main runs are of *grilse*.

Furthermore, the commercial catch is now almost entirely dependent on *grilse*. Anglers' catches during the last 30 years also reflect the decline in the *salmon* run. The ISFC, for example, gradually recognised that their 40lb specimen limit was too high under the conditions then prevailing and it was reduced accordingly to 35 lb in 1960, to 30 lb in 1961 and finally to 25 lb in 1971. Despite this reduction, only 32 *salmon* weighing upwards of 25 lb have been recorded by the ISFC since it was formed in 1955.

Ireland has not been alone in this regard because the larger *salmon* groups have also declined in the other major salmon producing countries.

Several things have been blamed for this decline in the spring fish runs, including the commercial fishery in West Greenlandic waters (intensified from 1964 onwards), where at least some of our *salmon* feed, and the advent of Ulcerative Dermal Necrosis disease (UDN) in 1964 which is particularly severe among early running *salmon*. However, these factors cannot be regarded as the only reasons for a trend which began 30 years earlier. It would appear that the decline is also partly due to a natural cyclical phenomenon.

The rapid decline in the early *salmon* runs since 1962 was accompanied by a dramatic increase in the *grilse* runs. The *grilse* component of the commercial catch rose steadily up until 1975 but has gradually declined in recent years. There are currently indications that the *salmon* runs are on the increase again in Scottish rivers but there is no evidence to suggest that the Irish *salmon* is about to stage a come-back. Until such evidence is secured, we would be wise to entertain the possibility of the *salmon's* extinction with active concern and responsibility.

