



AN ROINN TALMHAIOCHTA AGUS IASCAIGH
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by

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FRESHWATER CRAYFISH 1968

The freshwater crayfish inhabits some rivers and lakes in Ireland. The only species known to inhabit Ireland is Astacus pallipes. It looks like a lobster but is very much smaller, seldom more than 10 cm (4 ins.) in length. As a rule it hides by day and comes out to hunt at dusk. Apart from the fact that it feeds on various kinds of dead animal matter nothing is known about its feeding habits in Ireland. In other parts of Europe it eats water weed and many kinds of small creatures. The crayfish can be caught easily in special traps which resemble small lobster pots and are baited with raw meat.

Boiled crayfish are excellent food but are rarely eaten in Ireland. In other countries, especially Sweden, they are regarded as luxury items and are sold at high prices. Crayfish caught in Ireland for export to Sweden should be worth about 5/- per pound to fishermen.

Over the last few years a number of Swedish fish importers have been making enquiries about the possibilities of buying Irish crayfish. This Department has, therefore, been investigating the stocks in some of our lakes to find out whether there are sufficient suitable crayfish to support an export trade. The Department has found that the crayfish is inactive from December to April, due to low water temperatures. The fishery is, therefore, a summer one.

In 1968 Miss Barbara Buckley U.C.C. and Mr. Kevin Clabby, U.C.D. zoology students, were employed by this Department to trap and measure crayfish from a number of Westmeath lakes from July to September. Most of the results in this leaflet are based on their reports. Fishing took place in the following lakes:

White Lake	July 1 - 23, August 11 - 20, September 2 - 8
Lough Ennel	July 23 August 2
Lough Derravaragh	August 2 - 11
Lough Glore	August 21- 31

No crayfish at all were caught in Lough Ennel or Lough Derravaragh nor at the southern end of Lough Glore. The northern end of Lough Glore and the river leaving it were good and White Lake had a very large population. The length measured for each crayfish was that of the carapace, from the back of the eye socket to the centre of the hind end of the carapace. The overall length of a crayfish is difficult to measure accurately because the living animal tries to flex its tail while it is being held on the measuring board. Table 1 shows the measurements of the Lough Glore and White Lake crayfish and the percentage of the catch in each length group.

Table 1. Percentage of catches in length groups.

<u>Carapace length in mm</u>	<u>White Lake</u>		<u>Lough Glore</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
10 - 12				0.1
13 - 15			1.3	1.5
16 - 18	0.08	0.1	0.8	0.1
19 - 21	0.6	1.3	0.7	3.4
22 - 24	2.4	4.3	12.6	13.7
25 - 27	3.8	9.1	8.7	10.0
28 - 30	7.2	16.0	4.8	8.0
31 - 33	11.8	14.3	6.5	10.0
34 - 36	14.1	4.5	6.5	4.1
37 - 39	7.2	0.9	3.1	0.4
40 - 42	1.0		2.1	
43 - 45			0.3	
46 - 48			0.1	
Total	49	51	48	52

Crayfish of carapace length 34 mm are just over 9 cm total length, the minimum size for export to Sweden. Therefore 28% of the White Lake catch and 16% of the Lough Glore catch may be regarded as commercially marketable. Females are considerable smaller than males and the White Lake crayfish are on average larger than the Lough Glore ones.

In July and August in White Lake 779 crayfish were marked by branding with a red hot needle and returned to the water. In September ten of these were recaptured out of a total catch of 474. On the assumption that the released crayfish were randomly distributed amongst those left in the lake the total population of catchable crayfish in White Lake would be roughly 37,000. This population would yield about 13,700 crayfish of marketable size about 310 kg (640 lb.) in weight. It is probable that a catch of this size could be made annually, provided the small crayfish were returned to the water.

The traps used in the experiments were plastic eel traps of Dutch design and manufacture. They were used either without bait, or with tinned fish, fresh fish, ox liver or raw meat as baits. The meat proved the most attractive, followed by the liver. The traps with fish did not catch many more than those with no bait at all.

These results show that there are lakes which support populations of marketable size crayfish. The distribution of the crayfish in Ireland is imperfectly known but attempts are to be made in future years to rectify the defect in our knowledge.