

Tagging of Salmon Smolts in the Lone River,
the Eira Hatchery and the Lundesokna
Hatchery in Norway



Preliminary Report
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In 1962 I gave a brief report of the tagging experiments at the above mentioned places. I can now give the results up to the date of 20th September 1963.

The Lone River is one of the smallest salmon rivers in Norway, with a population consisting mainly of small grilse. It is situated a little north of Bergen (see Fig. 1). Since 1956 smolts have been tagged each year in the river, except in 1959. The smolts were caught by electrical fishing gear shortly before their seaward migration, mainly in April.

Far the greatest number have been tagged with Carlin tags, but Lea tags were also used. As shown in Table 1, 3929 smolts have been tagged, and so far 396, a little more than 10 % have been recaptured as adults. The average weight of the recaptured salmon was 1.55 kg. The total weight 617 kg which gives 0.157 kg of salmon flesh for each tagged smolt. As many as 20 % of the recaptures are from rivers. This is an exceptionally high percentage in Norway, and the explanation may be that a great number of the small salmon pass through the meshes in the bag-nets and the other gears in the sea.

In the Eira hatchery, situated some 50 km from Molde (see Fig. 1) about 8000 artificially reared smolts have been tagged in the years 1959 to 1962. The smolts have usually been two years old when tagged, and the tagging have usually been carried out in the spring or early in the summer. Most of the smolts were tagged with Carlin tags, but some Lea tags have also been used. As shown in Table 2, the percentage of recaptures is low, averaging 1.3. Tagging in 1961 has, however, given a far better return than the tagging in the other years, not less than 4 %, and still more recaptures might be expected. The average weight of the recaptured salmon has been as high as 5.16 kg, and the total weight of recaptured fish, 541.5 kg gives 0.07kg salmon flesh for each tagged smolt. Approximately 5 % of the fish have been recaptured in the rivers.

At the Lundesokna hatchery, near Trondheim (Fig. 1) 22,675 smolts were tagged in the years 1957 to 1962. Far the greatest part have been tagged with Carlin tags, but other kinds of tags have been used also.

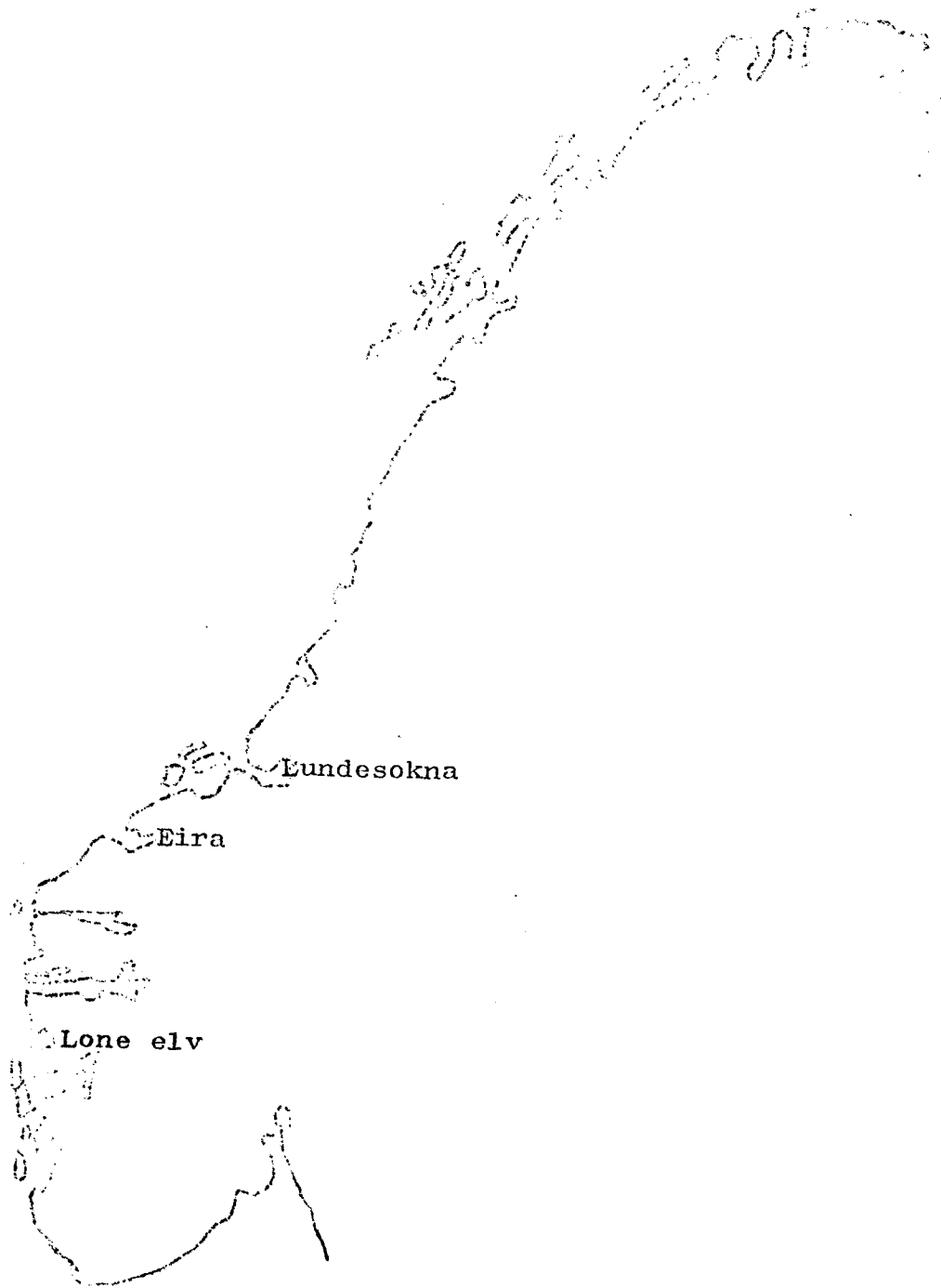
As shown in Table 3, 492 salmon, 2.2 %, have been recaptured as adult fish. The average weight of the recaptured fish was 3.8 kg and the total weight 1,860.7 kg. This gives a weight of approximately 0.08 kg of salmon flesh for each tagged smolt.

In the Lundesokna experiment the year 1961 also gives far better results than the other years.

Compared with the Swedish smolt tagging experiments both in the Baltic and at the Skagorak coast of Sweden the Norwegian experiments in tagging of artificially reared smolts have given very low percentages of recapture. This does not depend so much on the tagging technique used as Dr. Carlin himself has taken part in the tagging from the very start, and has taught us the Swedish tagging technique.

The tagging of wild fish in the Lone River has also been carried out in the same way as the tagging in the Eira and Lundesokna, and the percentage of recaptures from the Lone River is remarkably high.

Fig. 1.



Salmon smolts tagged in Loneelv, Norway. Wildfish.

Year	No. tagged	Mean length in cm	Recaptured as adults.										% re-caught						
			1957		1958		1959		1960		1961			1962		1963		Total No.	Total Wght.
			No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.			
1956	50	13.7	7	9.1											7	9.1	14.-		
1957	182	14.7			6	8.8									6	8.8	3.3		
1958	845	12.7					84	125	8	29	3	9			95	163.-	11.2		
1959																			
1960	907	13.4								85	122.3	19	39.8	9	17.9	113	180.-	12.5	
1961	995	13.-											105	152.6	9	19.7	114	172.3	11.5
1962	950	14.-													61	84.6	61	84.6	6.4
Total	3929														396	617.8	10.1		

Reported until 20 th September 1963.

Recought in rivers 20 %

" " sea 77 %

Place of recapture unknown 3 %

Salmon smolts tagged in the river Eira, Norway.
(Smolts from the Eira hatchery.)

Year	No. tagged	Mean length in cm	Recaptured as adults.										
			1960		1961		1962		1963		Total	Total	% re-caught
			No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	
1959	753	14.9	1	4.7							1	4.7	0.13
1960	2000	13.9			14	36.9	5	38.1			19	75.-	0.95
1961	2062	14.8					33	94.7	49	360.1	82	454.8	4.-
1962	2980	15.-							3	7.-	3	7.-	0.1
Total	7795										105	541.5	1.3

Reported until 20 th September 1963

Recought in rivers	4.7 %
" " sea	92.0 %
Place of recapture unknown	2.4 %

Salmon Smolts tagged in the Lundesokna hatchery, Norway.

Year	No. tagged	Mean length in cm	Recaptured as adults.														
			1958		1959		1960		1961		1962		1963		Total No.	Total Wght.	% Re caught
			No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.	No.	Wght.			
1957	2957	16.8	21	47.-	5	27.1	1	8.5							27	83.-	1.-
1958	2353	17.6			19	50.3	10	64.1	6	54.5	2	18.1			37	187.-	1.6
1959	2095						2	4.-							2	4.-	0.1
1960	1213	14.3							14	23.4	4	25.9	1	5.7	19	55.-	1.6
1961	6558	16.6									207	667.7	84	584.6	291	1252.3	4.4
1962	7499												116	279.4	116	279.4	1.5
Total	22675														492	1860.7	2.2

Reported until 20 th September 1963.

Recought in rivers 6.8 %
 " " sea 88.3 %
 Place of recapture unknown 4.9 %