International Council for the Exploration of the Sea

C.M. 1963 Hadrid Salmon and Trout Ctec

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

THÜNEN

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 Borgen (see Fig. 1). Since 1956 smolts have been tagged each year in the river, except in 1959. The smolts were caught by clectrical 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 recaught as adults. The average weight of the recaught salmon was 1.55 kg. The total weight 617 kg which gives 0.157 kg of salmon flesh for each taggod 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 moshes in the bag-nets and the other gears in the sea.

In the Eira hatchery, situated some 50 km from Holde (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 parried out in the spring or early in the summer. Most of the smelts 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 recaught fish, 541.5 kg gives 0.07kg salmon flesh for each tagged smolt. Approximately 5 % of the fish have been recaught 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 recaught as adult fish. The average weight of the recaught fish was 3.8 kg and the total weight 1,860.7 kg. This gives a weight of approximately 0.08 kg of

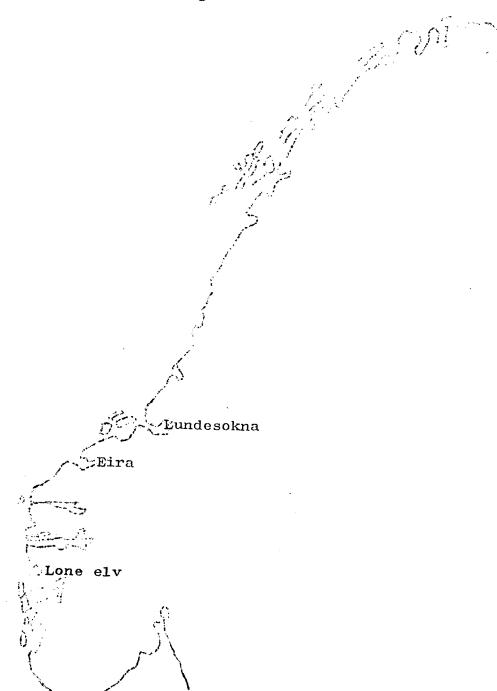
weight 1,860.7 kg. This gives a weight of approximately 0.08 kg of salmon flesh for each tagged smolt.

In the Lundesokna experiment the year 1961 also gives far better

results then the other years.

Compared with the Swedish smolt tagging experiments both in the Baltic and at the Skagerak 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.



Salmon smolts tagged in Loneelv, Norway. Wildfish.

Tear	No. tag- ged	Mean lenght in cm	Recaptured as adults.													
e e e e e e e e e e e e e e e e e e e				1958 No.Wght.	1959 No.Wght.	1960 No.Wght.		1962 No.Wght.		Total No.	Total Wght.	% re- caught				
1956	50	13.7	7 9.1	· · · · · · · · · · · · · · · · · · ·	ell Programmer di	To the foreign of the control of the				7	9.1	14				
1957	182	14.7		6 8.8			e de la companya de l			6	8.8	3.3				
1958	845	12.7			84 125	8 29	3 9	· a deput		95	163	11.2				
1959			July a day	Office a compare	The state of the s	A Control of the Cont	prime on A	The same of	agrication	and the state of t	Control of the Contro					
<b>1</b> 960	907	13.4			The state of the s		85 122.3	19   39.8	9 17.9	113	180	12.5				
<b>1</b> 961	995	13	Company Company	An entire plants	And the second s		2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	105 152.6	9 19.7	114	172.3	11.5				
<b>1</b> 962	950	14	control of the second	ec comments	Security of the security of th	The state of the s	7	Charles and	61   84.6	61	84.6	6.4				
Total	3929	-		The state of the s	Of the state of th		The second secon	Para de la constanta de la con		396	617.8	10.1				

Reported until 20 th September 1963. Recaught 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.	Mean											
	tag- ged	length in cm	196 No. W		196 No.W			962 Wght.			Total	Total Wght.	% re- cartured
1959	753	14.9	1 4	1.7	The second second second				of Authorized		1	4.7	0.13
1960	2000	13.9	LITY AND DISCOURT	ST WAY, DILLAGO	14 3	6.9	5	38.1			19	75	0.95
1961	2062	14.8			A. always and a second		33	94.7	49	360.1	82	454.8	4
1962	2980	15				,		į	3	7	3	7	J.1
Total	7795	Commence of the commence of th	The state of the s	and the same			, ,	1			105	541.5	1.3

Reported until 20 th September 1963 Recaught in rivers 4.7 % " sea 92.) % Place of recapture unknown 2.4 %

Salmon Smolts tagged in the Lundesokna hatchery, Norway.

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Year	No. tag- ged	Mean length		Recaptured as adults.													
		in cm	1.9	358 Nght.		59 Wght.	19 No.		19 No.			062 Wght.	196 No.		Total No.	Total Wght.	% Re caught
1957	2957	16.8	21	47	5	27.1	1	8.5	e deci a	s confi	!	1	n. Photograph		27	83	1
1958	2353	17.6			19	50.3	10	64.1	6	54.5	2	18.1	The second second		37	187	1.6
1959	2095	The second secon					2	4	1	STATE OF THE PROPERTY OF THE P			demonstrating has		2	4	0.1
1960	1213	14.3				1			14	23.4	4	25.9	1.	5.7	19	55	1.6
1961	6558	16.6							, , ,	† †	207	1667.7	84	584.6	291	1252.3	4.4
1962	7499				; ;				(1000 - 1000 H)	•	and and	i	116	279.4	116	279.4	1.5
Total	22675	1		1		The control of the Co	***************************************		* 6.5.0	10 mg	. No sorter			, , , , , , , , , , , , , , , , , , ,	492	1860.7	2.2
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Reported until 20 th September 1963. Recaught in rivers 6.8 % " " sea 88.3 % Place of recapture unknown 4.9 %