

F I S H E R I E S R E S E A R C H B O A R D
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Title

Report on Salmon Scale Readings, Pollett River

1947

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Scales from daily samples of the Pollett River smolt catch taken in the smolt trap in the spring of 1947 were examined. The scales were read primarily to determine whether or not a planting check occurs, i.e. whether or not growth is retarded while the underyearlings are becoming adjusted to their new environment after being taken from the hatchery, and whether planted stocks could thus be distinguished from native. Two hundred and five scales were read from the Pollett River samples of which 105 showed planting checks. Between the first circulus and the first winter check occurred two and sometimes three narrow circuli which indicated retardation in growth. This was said to be the planting check. It is thought that such a check might be attributed to the new conditions which the salmon had to face as a result of its changed environment. Such retardation in growth might however be due to other factors such as change in available food supply through the summer or change in the type of food taken by the salmon as it matures. Scale readings of natural growing stock in the same area should provide some means of checking in this respect.

The accompanying histogram (Fig. 1) shows that the first growth check (planting) occurred from circuli 4 to 9 inclusive, circulus 6 having the highest frequency, namely 35. First winter growth occurred from circuli 6 to 23 inclusive, circulus 12 having the highest frequency, namely 65. Second winter growth occurred from circuli 18 to 33 inclusive, circulus 27 having the highest frequency, namely 28.

C. W. Andrews.

Date	Book	Page	No.	Planting Check O'clock Size.	Lat. Winter O'clock Size.	Reg. Winter O'clock Size.	Bolt Growth	Age	Remarks
May 10	100000	100000	100000	100000	100000	100000	100000	100000	No separation between planting and 1st winter growth
10	100000	100000	100000	100000	100000	100000	100000	100000	
10	100000	100000	100000	100000	100000	100000	100000	100000	Spacing check 1-
10	100000	100000	100000	100000	100000	100000	100000	100000	Spacing check 1-
10	100000	100000	100000	100000	100000	100000	100000	100000	Spacing check (1-) F3
10	100000	100000	100000	100000	100000	100000	100000	100000	Spacing check (1-) F3 No separation between P.C. and 1st winter (T)
10	100000	100000	100000	100000	100000	100000	100000	100000	No separation between P. and 1st winter (T)
10	100000	100000	100000	100000	100000	100000	100000	100000	Examined 20 scales, found all regenerated All 10 examined regenerated No separation of P. and 1st winter (T)
10	100000	100000	100000	100000	100000	100000	100000	100000	

Last scale, check with scale fall from same page

Date	Loc	Page	No.	Planting Check	Check Date	1st Date	Water Date	2nd Date	Water Date	Spawning Date	Sex	Remarks
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	No separation between planting and last winter (F)
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	No separation between planting and last winter (F)
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	No separation between planting and last winter. Spawning mark (F)
1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	Spawning check (C)

Follett River, 1947. C.M.A.

Key	Date	Book	Page	No.	Planting Check	Check Class.	1st Winter Cl.	Winter Class.	2nd Winter Cl.	Winter Class.	Scout Group	Age	Remarks
	1947-01-01	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	Spawning mark G3
	1947-01-01	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	Spawning mark F3. Plant check appears very definite
	1947-01-01	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	
	1947-01-01	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	Scale lost
	1947-01-01	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	
	1947-01-01	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	No separation between planting and 1st winter

Pollett River, 1947. C.M.A.

Date	Book	Page	No.	Planting O'clock	Check Circ.	1st. Winter O'cl. Circ.	2nd. Winter O'cl. Circ.	Scout Growth	Age	Remarks
May 28	1111	1111	1		000	F3 +13	F3 +7	+10	24	Spawning check C3
28	1111	1111	1	C2	2,000	C2 +10	C2 +6	+10	24	
28	1111	1111	1	C3	2,000	C3 +6	C3 +9	+11	24	Spawning check C3
28	1111	1111	1	C3	2,000	C3 +10	C3 +10	+10	24	
28	17	17	1	C3	2,000	C3 +13	C3 +11	+10	24	Spawning mark C3 (7)
28	17	17	1	C3	2,000	C3 +10	C3 +10	+10	24	
28	17	17	1	C3	2,000	C3 +10	C3 +10	+10	24	

Pollett River, 1945. C.W.A.

1945

Date	Book	Page	No.	Planting check		1st. Winter		2nd. Winter		Smolt Growth	Age	Length
				O'clock	Circ.	O'cl.	Circ.	O'cl.	Circ.			
May 29	1	1	1		0	C3	+4	C3	+13	+4	2+	150
29	1	2	1		0	F4	+10	F4	+10	+3	2+	146
29	1	3	1	F4	4,5,6	F4	+7	F4	+8	+4	2+	174
29	1	4	1	C3	0	C3	+10	C3	+11	+4	2+	164
29	1	5	1	C9	0	C9	+12	C9	+14	+5	2+	195
June 1	1	1	1		0	C3	+11	C3	+12	+3	2+	173
1	1	2	1		0	F9	+11	F9	+11	+6	2+	180
1	1	3	1		0	C3	+12	C3	+9	+3	2+	184
1	1	4	1		0	C3	+11	C3	+12	+5	2+	183
1	1	5	1		0	C9	+10	C9	+12	+6	2+	154

Date	Book	Page	No.	Planting Depth	Water Depth	Water Temp.	Remarks						
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	Sampled all pages - poor scales
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter
8/28	10000	10000	10000	0	0	0	0	0	0	0	0	0	No separation between planting and 1st winter

Follett River, 1947. C.W.A.

Date	Book	Page	No.	Planting check O'clock	Circ.	1st. Winter O'cl.	Circ.	2nd. Winter O'cl.	Circ.	Smolt Growth	Age	Length	Remarks	
May	112	1	1		0	03	3 to +14	03	+12	+1	2+	167		
			1		0	03	1 to 13	03	+14		2+	179		
			1		0	03	1 to 14	03	+11	+2	2+			
			1		0	03	1 to 10	03	10	+2	2+	163		
	110	1	1		0	03	2 to 12	03	+12	+2	2+	158		
			1		0	03	2 to 11	03	+14	+1	2+	171		
	113	1	1		0	03	3 to 14	03	+13	+2	2+	170	Spawning mark F3	
			1		0	03	3 to 11	03	+11	+1	2+	147		
			1		0	5,6,7	03	3 to 16	03	+12	+1	2+		166
	114	1	1		0	03	4 to 10	03	+11	+2	2+	147		
			1		0	03	4 to 14	03	+15	+2	2+	164		
			1		0	03	4 to 7	03	+13	+2	2+	164		
			1		0	03	4 to 9	03	+16	+2	2+	170		
	110	1	1		0	5 to 7	03	+5	03	+11	+2	2+	165	
			1		0	03	5 to 11	03	+15	+2	2+	164		
	118	1	1		0	7	3 to 14	03	+8	+2	2+	168		
			1		0	5,6,7	3 to 11	03	+12	+1	2+	165		
			1		0	5,6,7	3 to 12	03	+16	+1	2+	172		

Pollett River, 1947. C.N.S.

Date	Book	Page	No.	Planting check Dial. Circ.	1st. Winter Dial. Circ.	2nd. Winter Dial. Circ.	Molt Growth	Age	Length	Remarks
May 26 26	26 26	3	1	C3 5,6	C3 +6	C3 +11	+2	2+	171	Read many samples from all other pages - all regenerates or poor
26 26	26 26	3	1	F3 0	F3 +10	F3 +15	+2	2+	167	
		3	1	F3 0	F3 +11	F3 +15	+2	2+	175	
27 27	1 1	1 2	1 1	C3 6,7,8	C3 +4 1 to 14	C3 +10 +13	+3 +1	2+ 2+	188 170	

Bennet Brook, 1947. C.N.A.

Date	Book	Page	No.	Planting check		1st. Winter		2nd. Winter		Smolt Growth	Age	Length	Remarks
				0'clock	Circ.	0'cl.	Circ.	0'cl.	Circ.				
May 19	1	1		0		09	+20	09	+14	+2	2-	146	½ dorsal spike (?)
19	1	2		0		09	+13	09	+12	+1	2-	155	

Bassett Brook, 1945. C.V.A.

Date	Book	Page	Planting check O'clock	Dir.	1st. Winter O'cl.	Dir.	2nd. Winter O'cl.	Dir.	Leaf Growth	Age	Length	Remarks
May 28	100000	100000	79	5.4.7	80	+11	80	+14	+2	24	185	Native
May 28	100000	100000	80	7.8.8	80	+10	80	+12	+2	24	180	Native
May 28	100000	100000	79	5.4.7	79	+6	79	+12	+1	24	185	(Leaf scale) Dorsal spine
May 28	100000	100000	79	0	79	+11	79	+13	+2	24	185	1/2 dorsal Native
May 28	100000	100000	80	0	80	+11	80	+13	+1	24	185	1/2 + st. pel., removed left also
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	D.S. Middle of dorsal
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	1/2
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	D.S. Native
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	Native
May 28	100000	100000	79	1.0	79	+11	79	+13	+2	24	185	Dorsal spine or L/3 dorsal
May 28	100000	100000	79	1.0	79	+11	79	+13	+2	24	185	Dorsal L/3
May 28	100000	100000	80	0	80	+11	80	+13	7	24	185	1/2 dorsal resp. etc. Planting check (7) might be 1st winter growth, since only 2 narrow bands after 8th airfall
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	Native
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	Native
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	Native
May 28	100000	100000	79	0	79	+11	79	+13	+1	24	185	1/2
May 28	100000	100000	79	0	79	+11	79	+13	+2	24	185	Native

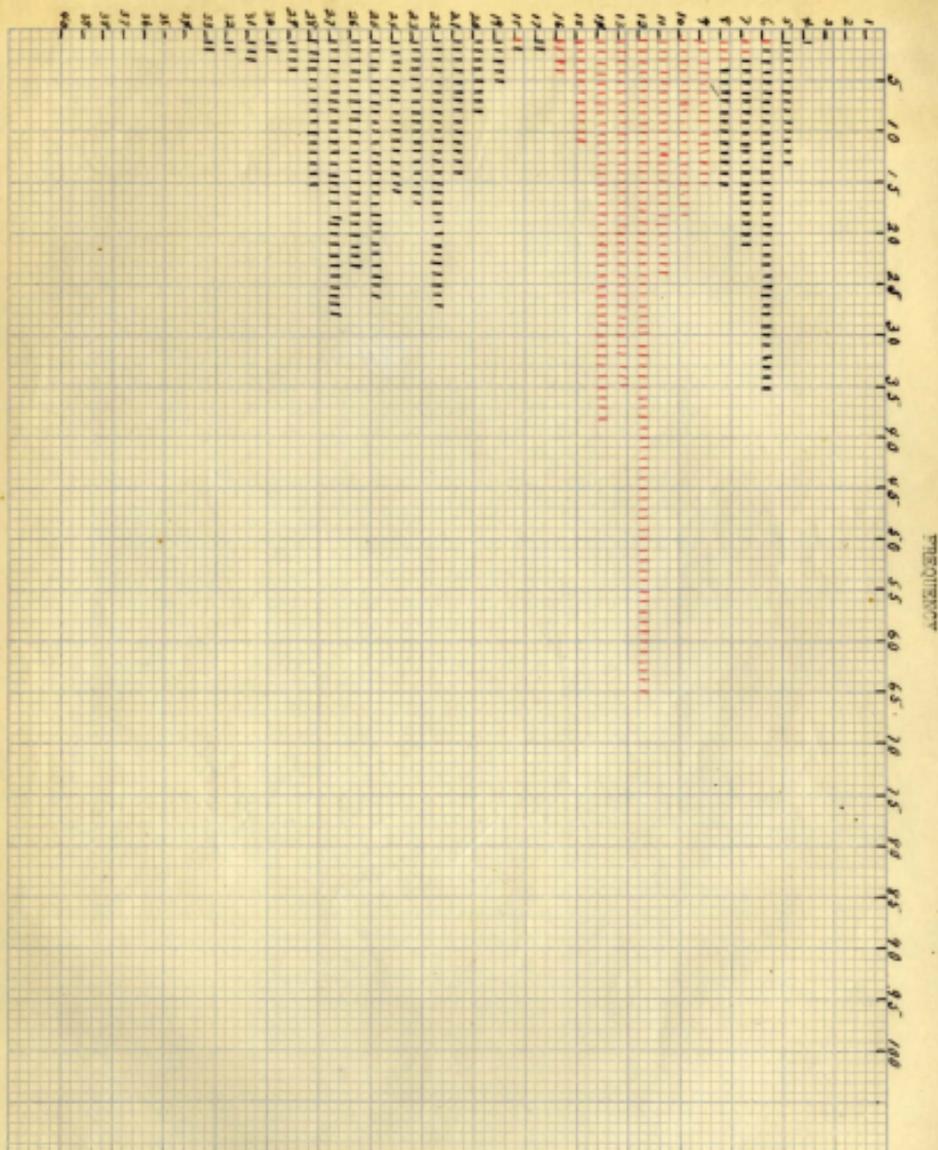
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Circuli, numbered from centre of scale to end of second winter.

Second Winter

First Winter

Planting.



ACONITUM

Fig. 1. Frequency of scale circuli occurring in the planting, first and second winter growth check.