Jón Kristjánsson
Fisheries Consultant
Skipasund 90, 101 Reykjavík

December 1998

Salmon in Ormarsá and Deildará 1998

1. Ormarsá

The river was investigated august 25- 28, 1998. The river and the tributary Lambhagakvísl were fished with electricity and nets were set in Arnarstaðavatn.

Results

The catch of salmon parr at various sites is shown graphically in fig.1 and listed in table 1. The length distribution of char caught in electrofishing along with the salmon is shown in fig. 2.

General

The summer of 1998 was very cold in North Iceland. The first "warm" days were in late august. It took the salmon long time to migrate up river. The 0+ year class has low catchability under such circumstances and numbers caught are only indications.

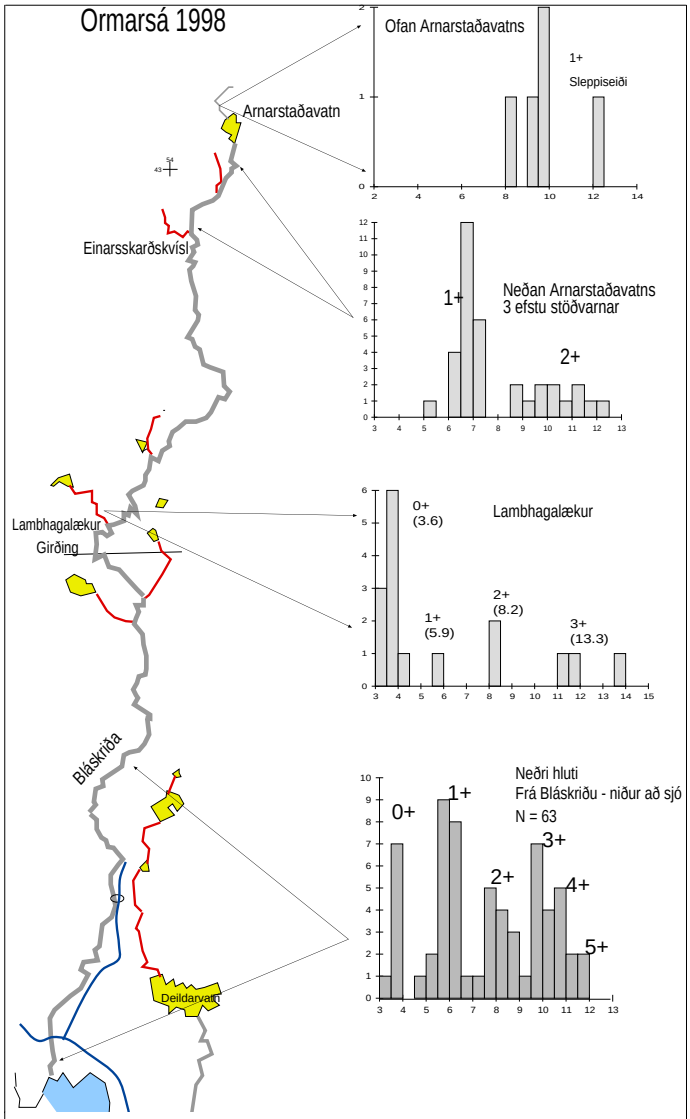

Fig. 1. Graphic representation of the test fishing in Ormarsá 1998. Length distribution of salmon parr caught by electrofishing related to the various parts of the river.

The fishing sites:

1. Above Arnarstadavatn.

The exact location is a swift approximately 100 meters from the lake inlet. This site was fished in 1996 but no salmon was found. Now, a considerable amount of large salmon parr were found. Few were killed for aging, they all were one year old. These are definitely from the parr release in 1997.

2. The stretch above Einarsskarðskvísl.

The river was fished at three sites, from just above the cold tributary Einarsskarðskvísl up to a site where an old road crosses the river some 2 km below Arnarstaðavatn. Only two size classes of salmon parr (1+ and 2+) were caught and parr status was similar at all three locations. No fish from the 1997 release were observed. Bottom vegetation was sparse, contrary to 1996 when the bottom was covered with moss.

3. Lambhagakvísl.

Where this river flows into Ormarsá it is more like a ditch, not likely to foster salmon parr. But few hundred meters up,

Table 1. Mean length at age, and number of salmon parr caught at various sites in Ormarsá august 25-28th 1998. Number of fish in brackets. Lambhagakvísl was fished at different sites the first km above the main river.

Site No	Location	Areal (m^2)	Density 0+	1+	2+	3+	4+	Fish/100 m^2
1	Above Arnastv.	20		9.5(5)				25
2	Above Einarskkv.	120		6.7(22)	10.4(10)			27
3	Lambhagakv.	+	3.6(10)	5.9(1)	8.2(2)	12.3(3)		
4	Pool 14	40	3.7(2)	6.0(4)	8.0(3)	10.3(4)		33
5	Below Foss	60	3.6(5)		8.2(2)	9.5(3)	10.9(4)	23
6	Pool 9	60		5.7(2)	7.8(5)	10.5(3)		17
7	Pool 4	20		5.6(14)	8.3(3)	10.2(2)		95
8	Bridge	150		5.9(1)		10.0(4)		3
Total:		470+	(17)	(49)	(25)	(19)	(4)	

Table 2. Mean length at age, and number of salmon parr caught at various sites in Haffjarðara august 21-23, 1998. Number of fish in brackets.

Site No	*Location*	*Areal (m^2)*	*Density 0+*	*1+*	*2+*	*3+*	*Fish/100 m^2*
1	*Upper junction*	*40*	*4.1(6)*	*6.6(11)*	*9.9(11)*		*70*
2	*Below Long Pool*	*50*	*3.8(5)*	*6.0(3)*	*8.2(10)*	*10.4 (2)*	*40*
3	*Flatna*	*50*	*4.3(7)*	*6.7(1)*	*9.1(2)*	*10.6(1)*	*22*
4	*100 m below Falls Pool*	*40*		*6.5(6)*	*8.9(10)*	*11.0(4)*	*50*
5	*100 m below Stone*	*40*	*4.1(18)*	*6.3(7)*	*10.2(1)*		*65*
6	*Above Home Pool*	*50*	*3.5(3)*	*6.0(11)*	*9.5(7)*		*42*
7	*Below Sheep Pool*	*100*	*4.3(8)*	*6.8(8)*	*10.2 7)*		*23*
Total:		*370*	*(47)*	*(47)*	*(48)*	*(7)*	*40*

the river gradually changes to become a decent salmon river. The flow was guessed to be 2 m^3, the bottom was coarse, a good nursery ground. During the walk along the banks, the river was fished with electricity. Both char and salmon parr were found, the density of salmon parr increased up the river. Parr of age 0+ were numerous.The stretch walked was 1-1.5 km and at the uppermost location the river looked promising further up. No particular pools were observed. This river is worth further investigation.

4. Above pool 14, below a small island in the river.

River loaded with fish, fish everywhere.

5. Where the road comes to the river 200 m below Foss.

This was the lowest site where 0+ fish were found in numbers. There was a lot of them but they were hard to catch.

6. 100m above fishing pool 9.

Less fish than at no.4. As the current was swift, fish were hard to catch .

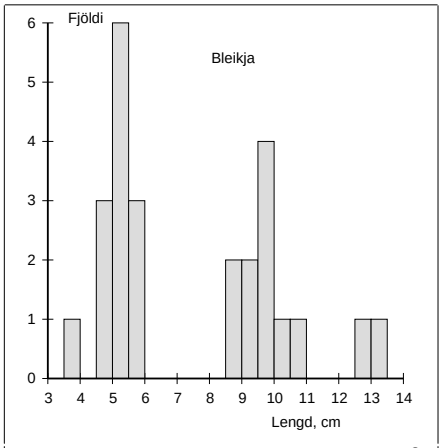

Fig. 2. Length distribution of char caught in Ormarsá 1998

7. Above fishing pool no. 4.

Very high densities of parr. The big fish were in swift current and were hard to catch. There was a lot more of them than the figures indicate. It has also been noted that the density numbers (parr / 100m^2) are only indications. The main purpose of the electrofishing is to give general impression of the parr population and to collect samples for age and growth analysis.

8. Below the bridge at the estuary.

Only few fish were found, this stretch is almost free for parr.

Analysis of scale samples

Scale samples were taken from 12 fish caught in september. There were 11 male- and 1 female- fish, all grilse. Four had spent 3 winters in fresh water, 6 had spent 4 winters and 1 had spent 5 winters. One fish had escaped from a fish farm.

Net fishing in Arnarstaðavatn.

Four nets were out in the lake for one night. Catch was very low, one sea char and three small stationary chars.

Year	1 SW	2 SW
74	68	55
75	71	46
76	108	39
77	195	80
78	74	212
79	50	69
80	4	120
81	47	7
82	11	34
83	62	25
84	23	50
85	168	16
86	155	195
87	120	155
88	191	87
89	139	125
90	64	122
91	114	42
92	280	55
93	157	209
94	60	109
95	153	10
96	89	92
97	109	32
98	85	35

Table 4. Catch of grilse (1 SW) and salmon (2 SW) in Ormarsá 1983-1997

Comments

Parr density in Ormarsá is high and growth is very good. For comparision, table 2 shows length at age and density of parr caught in Haffjarðará few days earlier. That river is very productive and growth of salmon parr in 1998 was good. It can be seen that the figures for Ormarsá and Haffjarðará are similar. The state of parr production in Ormarsá in 1998 was probably near maximum. This is most interesting in the view of he cool summer.

The parr production has been good for the last two years. Therefore the question arises why the fishery is still bad. There is no simple answer to this. The best guess is that one has to seek explanation in unusually high sea mortality, without being able to point out any particular reason. It is possible that the smolt runs out from the river have not (yet) been reflecting the good state of production in the river.

Although the grilse catch in Ormarsá was low in 1998, grilse runs in other rivers in North Iceland was fairly good. There is a certain hope that the catch in Ormarsá will increase in 1999.

The status of salmon parr in the river is such that release of parr is not necessary.

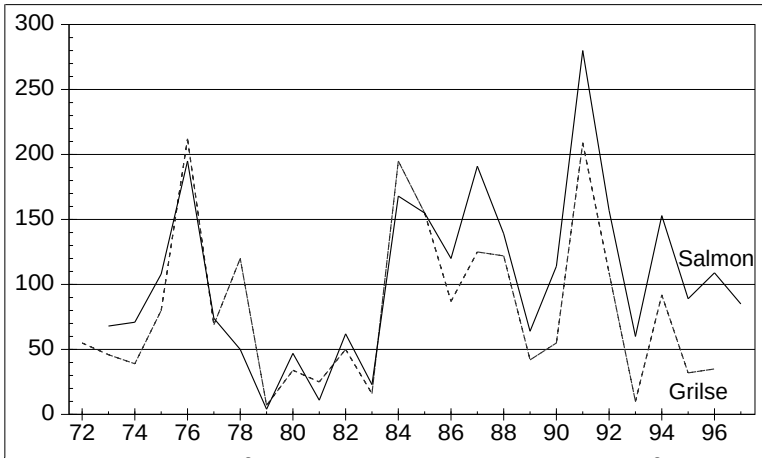

Fig. 2. Catch of grilse and salmon originating from the 1972-1997 smolt year classes. Smolts leave the river in the spring, grilse spend one year at sea (1 SW), salmon spend two years at sea (2 SW).

2.Deildará

The river was fished at two sites august 28, 1998, and nets were set in Deildarvatn. The inlet in the south part of Deildarvatn was investigated. The river and the tributary Lambhagakvísl were fished with electricity at sites listed in Table 3. This was a very brief investigation and only few fish were killed for ageing.
It seemed that the river was in a healthy state of production.

Comment on the fishing sites:

1. Below the fence at Deildarvatn.

This site has a dense population of salmon and trout both species in very good condition. The fence was investigated and seemed to be tight, as to hold back the salmon. No big fish were observed below the fence.

2. Above the bridge at the main road.

There was a large number of parrs of all age classes. I saw no point in fishing a lot of parr as the production seemed to be in a very good state.

3. The inlet to Deildarvatn.

This is a small tributary, reached from the Ormarsá road. Both trout and salmon were found. These are certainly from natural spawning. The brook is small, hosting only a small population. As no 0+ were found, salmon parr may have migrated from the lake rather than having been born in the brook.

Table 3. Mean length at age, and number of salmon parr caught at various sites in Deildará august 28th 1998. Number of fish in brackets.

Site No	Location	0+	1+	2+
1	Below the fence	4.3(5)		12.2(5)
2	Above main road	4.1(4)	6.5(7)	9.8(5)

Netting in Deildarvatn

The purpose of the net fishing was to see if salmon or sea char were found. No salmon were caught but Two sea run chars were caught, confirming that they are able to swim through the fence. No salmon was caught. Stationary fish, trout and char were also caught. These fish were rather small but of average- good quality. Increased fishing pressure would improve the quality of the fish.