

Salmon in Laxá á Ásum 2016

Introduction

Temperature in the spring of 2016 was favourable for smoltification and seaward run of the salmon parr. Also water flow was high during the seaward migration which is preferable to avoid predation. The summer was dry and hot. Salmon fishing in NV- Iceland was very good in the start of the season but runs dwindled as the season went on. Parr investigations took place 18-19 August. The river was fished with electricity at 6 sites, numbers of salmon parr noted and samples taken for age determination. The results from the electrofishing create an index. As about 30% of the fish in an area is caught by this method, the index numbers are much lower than the actual numbers of (n.of) fish in the area.

A temperature recorder measured the river temperature from 22. April until 19. August. The temperature from April to mid June is very important for the smoltification of parr and the timing of the seaward migration of the young Salmon.

The Salmon catch in 2015

620 salmon were caught in 2016, whereof around 400 were released .

The catch in Laxá Ásum and the neighbouring rivers 2016 was less 2015. Fig 1. shows the catch in Laxá, Víðidalsá og Vatnsdalsá from 2008.

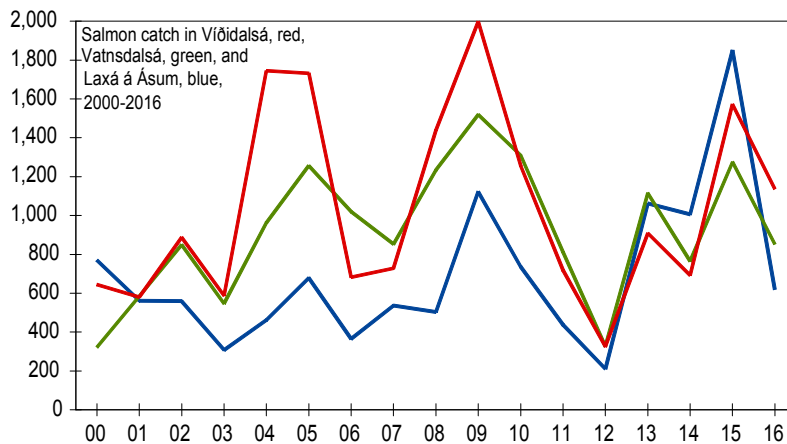


Fig 1. Salmon catch in Víðidalsá, red, Vatnsdalsá, green and Laxá Ásum, blue, 2000-2016. These rivers oscillate in similar manner.

Results from parr survey

Table 1 shows n.of parr at 6 sites in Laxá. Only 7 trout parr were caught.

Site no.	Name	Date	Areal	Age						Sum	Density
				0+	1+	2+	ml	ml	ml		
			m ²	No.	ml	No.	ml	No.	ml		No/100 m ²
1	Skótti	19/7	50	49	3.4	8	6.8	7	9.7	64	128
2	400 m neðan Skotta	19/7	50	21	3.2	6	6.0	10	8.5	37	74
3	Tumi	19/7	25	14	3.0	6	5.8	4	9.1	24	96
4	Neðan Krókhyls	18/7	40	16	3.2	5	5.6	5	8.9	26	65
5	Holt	19/7	40	19	3.5	13	5.9	7	9.3	39	98
6	Húnsstaðahorn	19/7	40	36	3.5	12	6.3			48	120
Sums:			245	155	3.3	50	5.9	33	8.9	238	97
No /100m ²				63		20		13			

Table 1. N.of salmon parr caught at sites 1-6 in Laxá Ásum 2016.

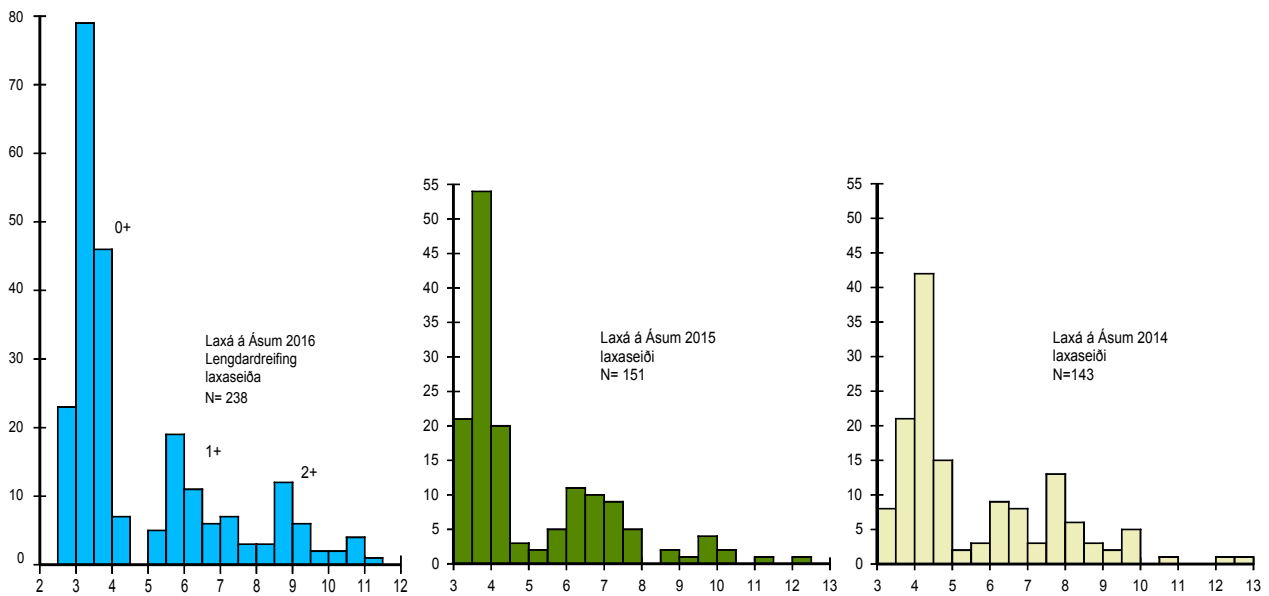


Fig 2. Length distribution of salmon parr in 2016, blue bars to the left. Also shown n.of parr in 2014 and 2015. Graphs are in the same scale. The sampled areal was similar all years, around 250 m².

Parr density in 2016 is the highest ever measured (table 2). All survey sites were packed with fry and parr of all sizes. The growth is good and large parr are in very good condition. Three year old parr were not found, they went to sea this spring. All the big parr were 2 years old. The good growth is caused by warm and sunny summer and even water flow, as the power plant has been out of operation for two years.

If weather conditions will be favourable the spring of 2017, good runs can be expected in 2018.

Parr condition and numbers at the various survey sites.

Site 1. Skotti

High numbers of parr of all age classes. Mostly 0+ fry but lot of larger parr. Stones covered with long dense green algae, bottom very slippery. Indication of good production of food item and shelter for parr.



Fig 3. Skotti



Fig 4. Parr from Skotti. Lot of big parr in excellent condition.

Site 2. 400 m below Skotti

High density of large 2 year old parr, normal density of younger parr and fry.



Fig 5. Parr from site 2.

Site 2. Tumi

Tumi is a man made fishing pool consisting of a stone wall across the river. A lot of parr of all year classes.



Fig 6. Tumi



Fig 7. Parr from Tumi. This fishing site was only 25 m².

Site 4. Below Krókhylur.

High parr density, all year classes. Slippery vegetated bottom.

Site 5. Holt

Very high density of all age groups of parr. Relatively higher numbers of big parr than were found in earlier years. This is interesting because this area is shallow and the bottom consists of small gravel and therefore not very suitable for larger parr.



Fig 8. Parr from Holt, 7 biggest are 2 years, then 1 year old in the same line and 0+ fry lowest in the picture.



Site 6. Húnsstaðahorn

This site was surveyed in 2013. Then, an area of 120 m² was fished but the catch was only 15 parr, or 8 fish /100 m². Now, the catch at this site was very high or 48 parr on 40 m² fishing areal that is 120 /100m². Only age 0+ and 1+ fish were caught.



Fig 9. Parr from Húnsstaðahorn, 0+ and 1+ fish

Parr density from year 2000

Refer to table 2 and fig 10 which show parr density in previous years. There has been great increase in 0+ fry recent years and older parr have also shown up going trend. No 3 year old parr were caught in 2016, they have all migrated to the sea. Growth of 2 year old parr is better than before.

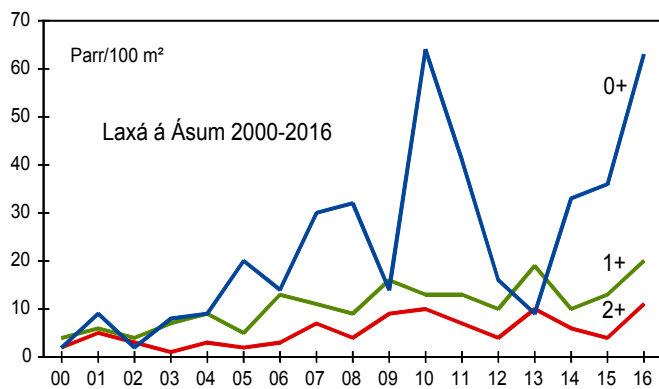


Fig 10. N.of parr 2000- 2016. Blue line is 0+, green line 1+ and the red one shows 2 year old parr.

Year	N.of parr / 100 m ²				
Age:	0+	1+	2+	3+	Sum
00	2	4	2		9
01	9	6	5		21
02	2	4	3	1	10
03	8	7	1		16
04	9	9	3		21
05	20	5	2		27
06	14	13	3		30
07	30	11	7	1	49
08	32	9	4	1	46
09	14	16	9	1	40
10	64	13	10		88
11	41	13	7	1	62
12	16	10	4	1	31
13	9	19	10	6	43
14	33	10	6	1	49
15	36	13	4	3	56
16	63	20	13		97

Table 2. Parr survey results in Laxá Ásum 2000-2016.

Water temperature

Temperature was recorded at three hours interval 24. April - 18. July

The water temperature in May and June is very important for the smoltification process and the timing of the seaward migration of the smolts.

In 2016 the temperature conditions were very favourable so average or good run of I SW salmon can be expected in 2017

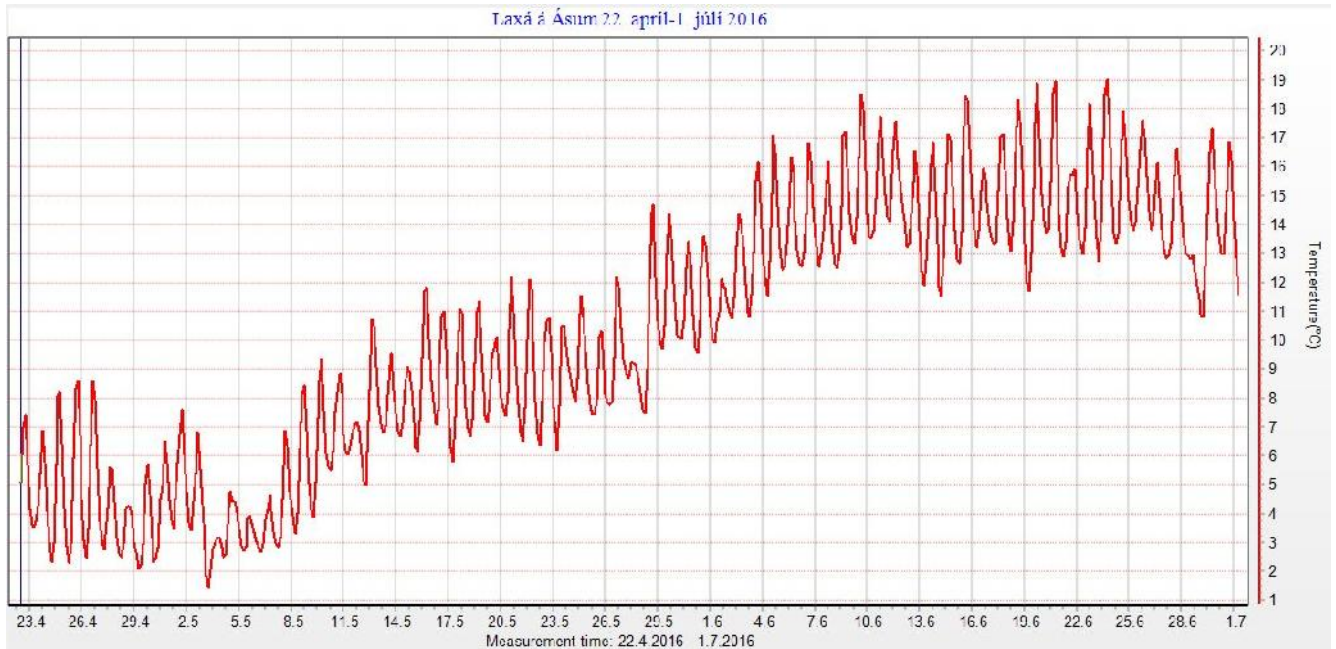


Fig 11. Water temperature in Laxá Ásum 22/4-1/7 2016.

Measured at 3 hours interval, 12.00, 15.00 etc. Right axis shows temperature 1-20 °C. There can be up to 7 degrees difference between day and night when sun is shining. June was sunny, the temperature was high 13-18 degrees mostly, which can explain the high production of bottom algae.

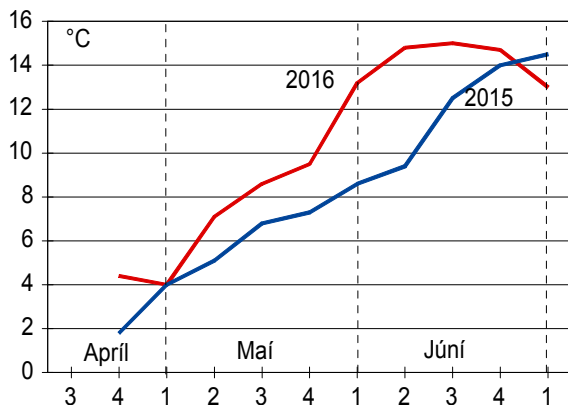


Fig 12. Comparison of the spring temperature the years 2015 and 2016. The red line represents 2016, the blue one 2015.

The temperature 2016 was much more preferable for parr growth than it was in the spring of 2015.