

Salmon in Laxá á Ásum 2018

Introduction

The summer 2018 was very rainy and rather cold, the river temperature 2-3 degrees lower than normal. The catch of salmon in north Iceland was rather poor. Water level in Laxá á Ásum was high and the temperature was low until late summer. Fishing conditions were poor. Parr survey took place on 22. August in rather high water which gives lower estimates of the parr density. A temperature recorder measured the river temperature at Holt from 28. April until 22. August.

The Salmon catch in 2018

702 salmon were caught in 2018, whereof 565 (80%) were released.

The catch in Laxá Ásum and the neighbouring rivers 2018 was less than in 2017. Fig 1. shows the catch in Laxá, Víðidalsá og Vatnsdalsá from 2008.

Salmon catch has increased last two decades in Laxá á Ásum compared to Vatnsdalsá and Víðidalsá, see fig. 1.

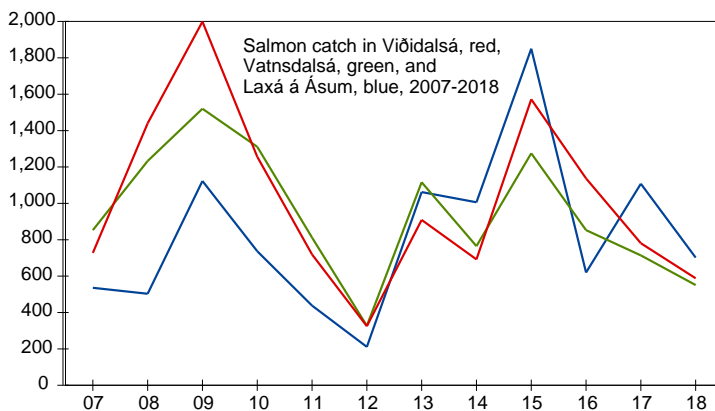


Fig 1. Salmon catch in Laxá Ásum, blue, Víðidalsá, red and Vatnsdalsá, green 2007-2018. These rivers oscillate in similar manner.

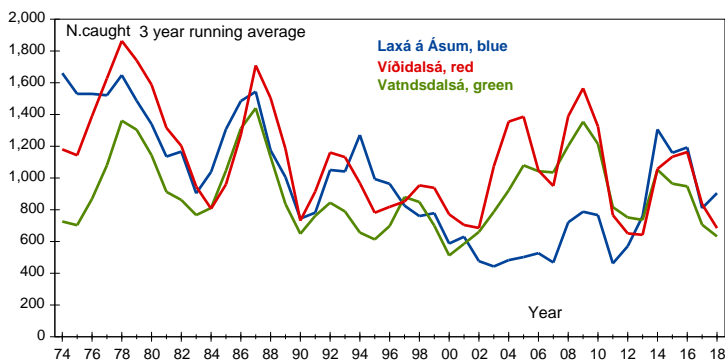


Fig. 2. Long term, 1974-2018, salmon catch in Laxá á Ásum, blue, Víðidalsá, red and Vatnsdalsá, green 1974-2018 smoothed by three year running average. These regular oscillations must be controlled by a common factor, most likely temperature and/or sea conditions.

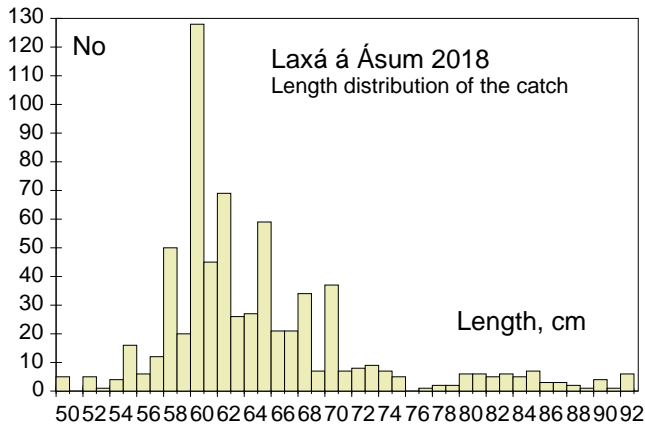


Fig 3. Length distribution of the catch.

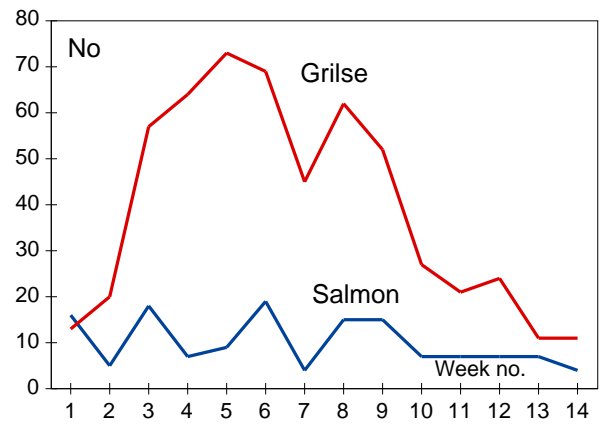


Fig 4. The catch of grilse (red) and salmon (blue) by week. First week starts 19. June, last week, only 2 days, 18. and 19. September.

Results from parr survey

Table 1 shows n.of parr at 5 sites in Laxá. In total 11 trout parr 5.5-6.5 cm hatched in the spring, were caught.

Site no.	Name	Date	Areal	Age								Sum	Density
				0+		1+		2+		3+			
			m ²	No.	ml	No.	ml	No.	ml	No.	ml		No/100 m ²
1	Tumi	22/8	50	7	3.6	16	6.0	4	7.8	5	10.1	32	64
2	Below Tumi	22/8	40	18	3.4	8	5.8	3	6.9	2	9.8	31	78
3	Below Krókhyl	22/8	50	40	3.5	6	6.1			2	11.3	48	96
4	Holt	22/8	45	25	3.7	10	6.2	5	7.1	1	11.2	41	91
5	Húnsstaðahorn	22/8	50	11	4.4	5	7.4	2	9.1			18	36
Total:			235	101	3.75	45	6.37	14	7.7	10	11	170	72
No/100m ²				43		19		6		4			

Table1. N of. salmon parr caught at sites 1-5 in Laxá á Ásum 2018.

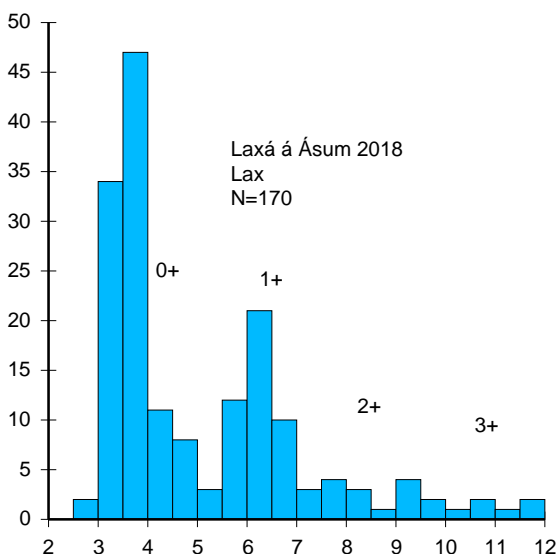


Fig 5. Length distribution of salmon parr caught in 2018

Parr condition and numbers at the various survey sites.

Site 1. Tumi

High numbers of big parr 2-3 years old and one year old parr 6 cm long. Rather few 0+ parr.



Fig 6. Tumi.



Fig 7. Parr from Tumi.

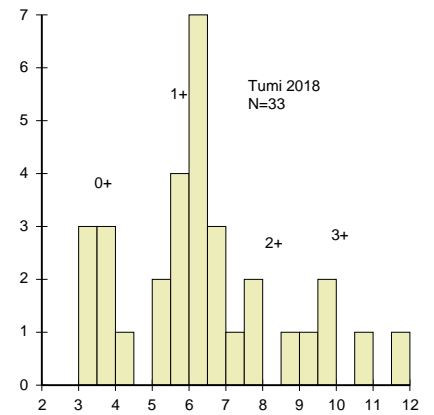


Fig 8. length distribution of parr from Tumi.

Site 2. 300 m below Tumi.

River is slow flowing on fine bottom with few larger stones. 0+ parr numerous.

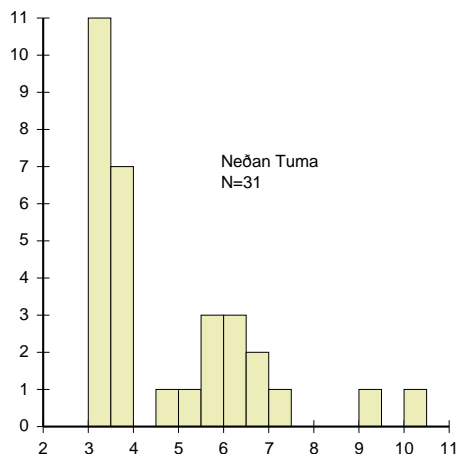


Fig 9. Length distribution of parr at site 2.



Fig 10. Parr from site 2.

Site 3. Below Krókshylur

Small gravel dominate the bottom, lot of small parr.

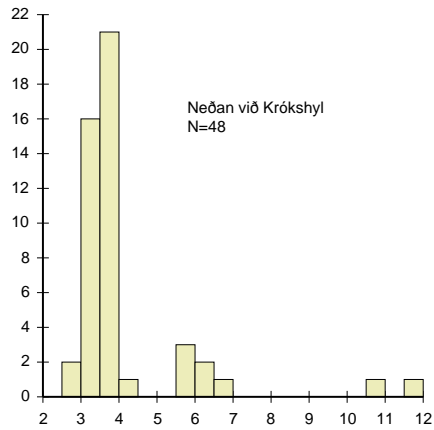


Fig 11. Length distribution of parr at site 3.



Fig 12. Parr from site 3.

Site 4. Holt

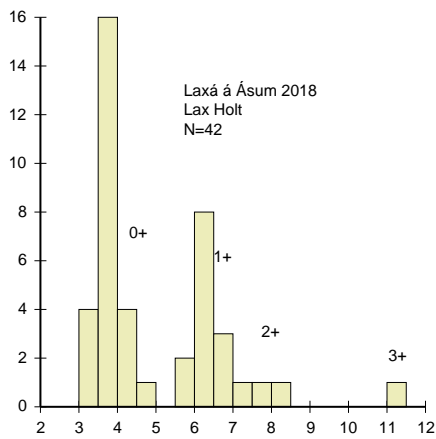


Fig 13. Length distribution of parr at site 4.



Fig 14. Parr from site 4.

Site 5. Húnsstaðahorn



Site is dominated by small gravel, therefore small parr dominate. The 0+ parr were larger than at other sites further up river.

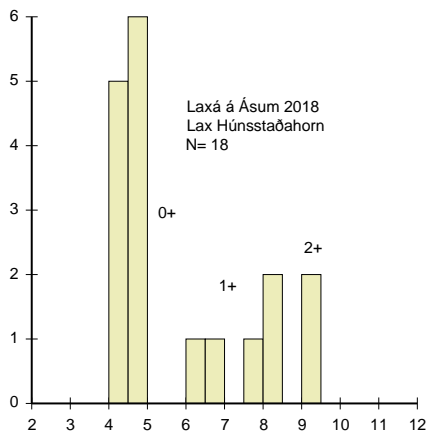


Fig 15. Length distribution of parr at site 5.

Parr density from year 2000

Refer to table 2 and fig 17 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. Spawning in the river is far more than adequate for normal production of parr.



Fig 16. Parr from Húnsstaðahorn. Some of the big parr were mature males. They will participate in the spawning in the fall. They are fathers of large numbers of eggs. Mature males were found at most sites.

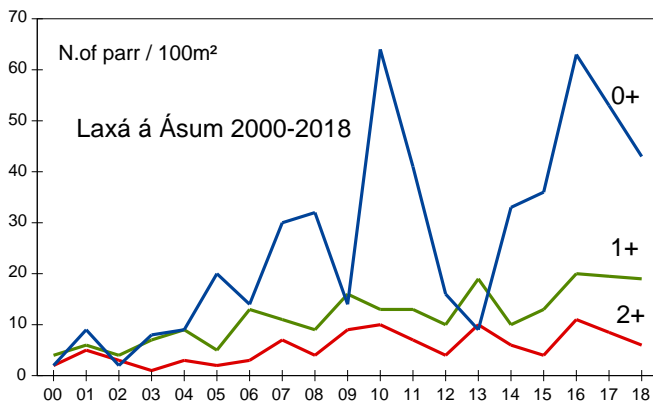


Fig 17. N. of parr 2000- 2018. Blue line is 0+, green line 1+ and the red one shows 2 year old parr.

Year	N. of parr / 100 m²				
	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
17					
18	43	19	6	4	72

Table 2. Parr density in Laxá á Ásum 2000-2018.

Water temperature

River temperature at Holt was recorded at three hours interval 28. April - 22. August.

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

Water temperature in May and June was normal so it is assumed that the smoltification was normal. But from June on until mid August the temperature was 2 degrees less than normal.

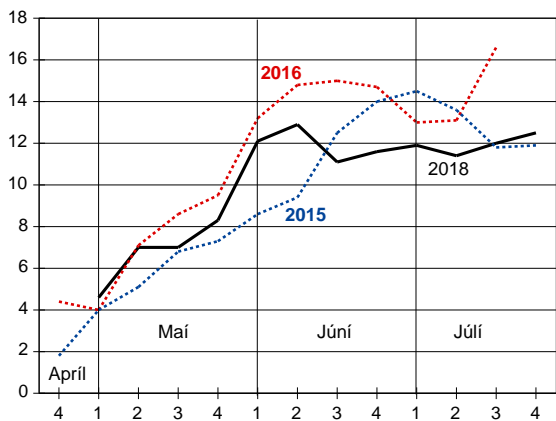


Fig 18. weekly mean water temperature in Laxá á Ásum 2015-2018.

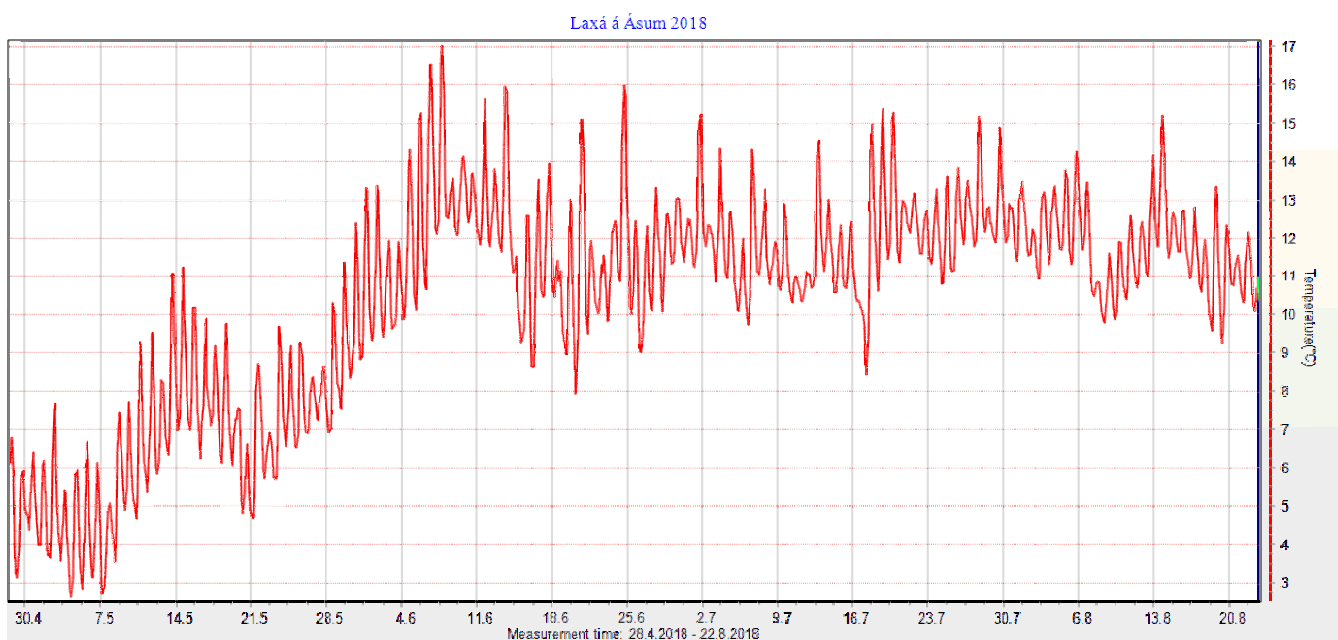


Fig 19. Water temperature in Laxá á Ásum 28/4-22/ 2018.

Measured at 3 hours interval, 12.00, 15.00 and so forth. Right axis show temperature between 3-17 °C.

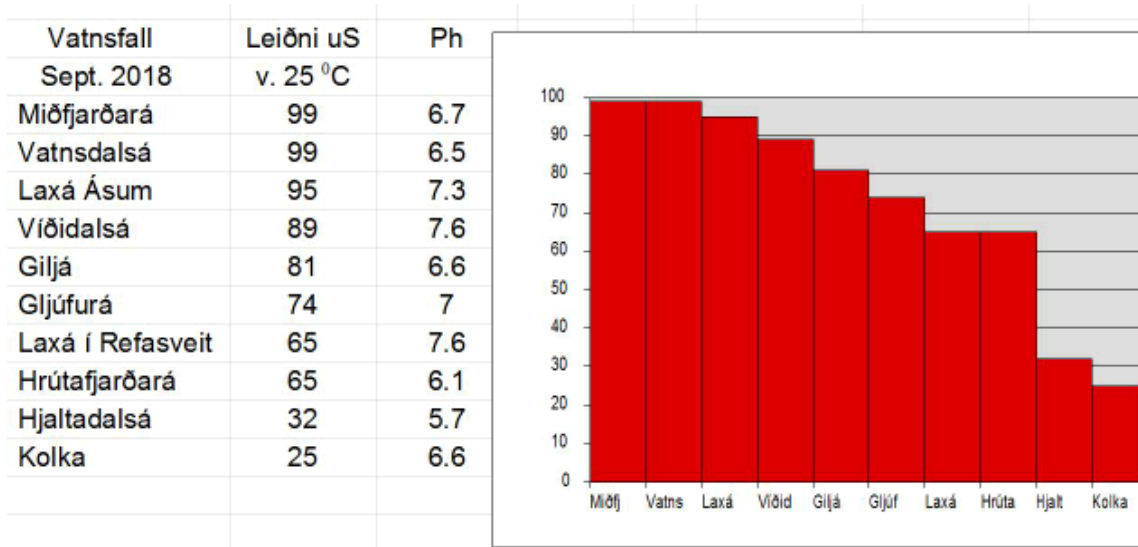


Fig 20. Shows conductivity (uS) and Ph in several rivers in North Iceland in September 2018. Conductivity shows the amount of dissolved nutrients in the water. High values indicate good production of nutrients and fish.