

# Salmon in Laxá á Ásum 2019

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## Introduction

Many rivers in west- and northwest Iceland suffered a water shortage for most of the 2019 fishing season due to exceptionally “good” weather with no rain. However Laxa á Ásum did not suffer from water shortage and the salmon catch here was better than in the neighbouring rivers, Vatnsdalsá and Víðidalsá which experienced a disappointing salmon catch.

## The salmon catch in 2019

There were 807 salmon caught in 2019. Seven of them were caught in the river mouth and they are neither represented in length distribution of the catch nor the weekly catch. 671 salmon were released (84%). Of the 800 fishes that were caught there were 655 grilse 82% and 145 salmon 18%. The classification between grilse and salmon is based upon size; grilse are those being less than 69 cm long. One grilse was unusually small only 45 cm long (and weighted less than 1 kg.) and two salmon were around 100 cm (and weighted about 10 kg.) Length distribution of the catch is shown in Fig. 1

The weekly catch of grilse (blue) and salmon (red) is shown in fig.2 The peak of the catch was between the 5<sup>th</sup> of August to 11<sup>th</sup> August. In this week the air- and water temperature fell (see water temperature in fig.24) and it rained. The last week which was only 5 fishing days was special. I will refer to “Sporðaköst, a facebook site for anglers The translation from Icelandic to english is mine

“The 2019 fish catch ended with style as Stulli describes it. The last days of the fishing season it rained a lot and the river was flooding and almost impossible to fish in the river below the fishing spot called Tumi. As a result the fishermen who were fishing these last days were going to stop fishing and go home but Sturla urged them to take the morning shift. He said to them “you go to Langhylur and the lot is where the parking place is.” They followed this advice and scored a BINGO. Like when the river was at best some years ago. They caught 30 salmon and lost count on the ones that they lost. It was an unbelievable number of salmon where the river breaks said Sturla Birgisson and he continues The last four days have been unbelievable good and more than sixty salmon have caught. This reminds of the good old times in Ásumum “

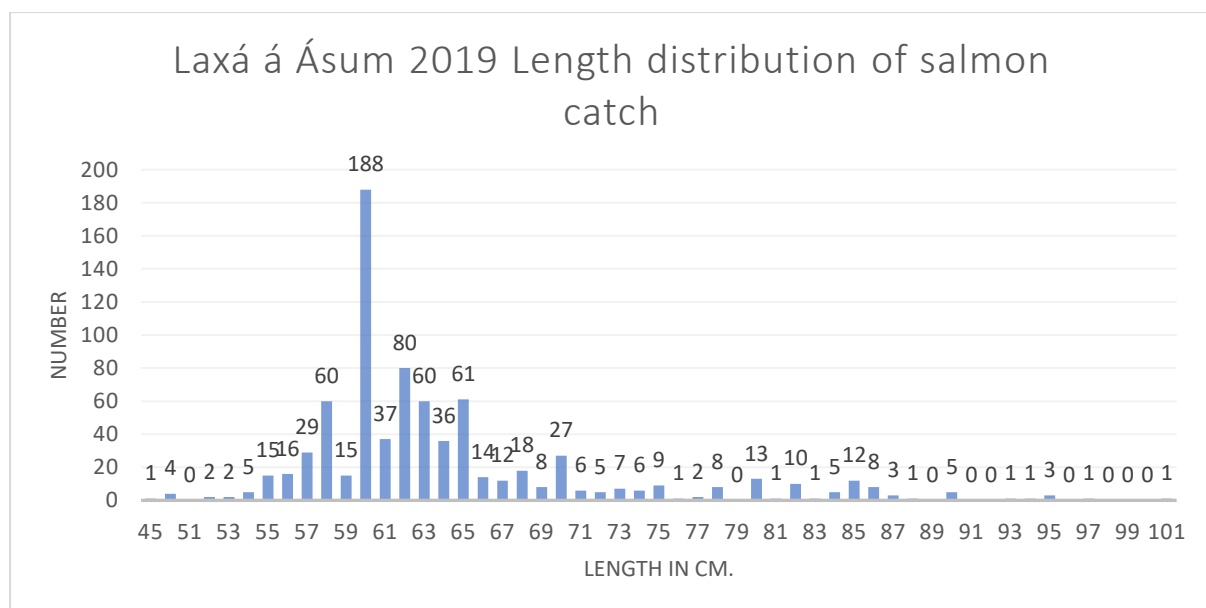


Fig.1 Length distribution of the catch

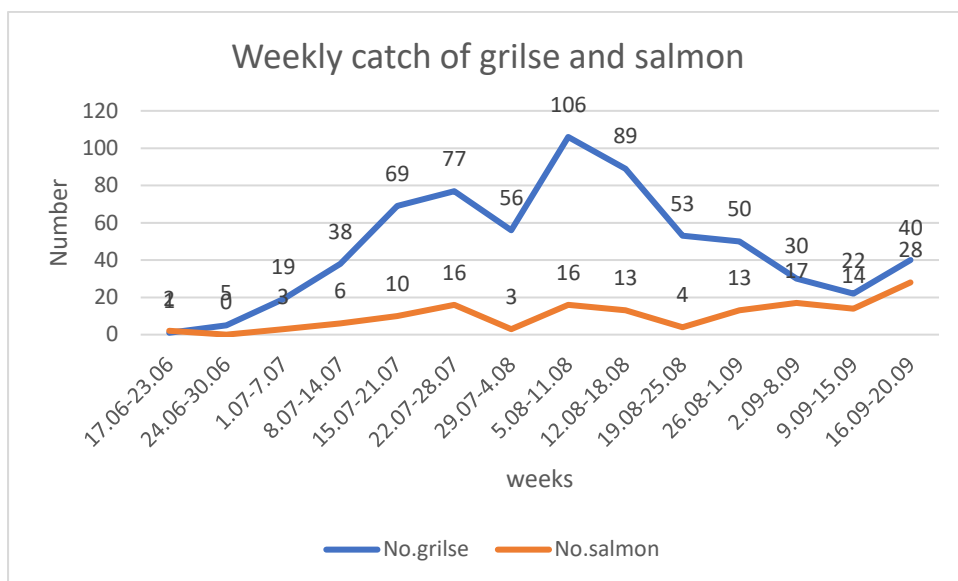


Fig.2.The catch of grilse(blue) and salmon(red) by week. Last week was 5 days.

The catch in neighbourhood rivers Vatnsdalsá and Víðidalsá oscillates in similar manner as the catch in Laxa á Ásum and the catch has been similar last decade or so..(see fig.3). The catch was disappointing in Vatnsdalsá and Víðidalsá. this summer . On the other hand the catch in Laxa á Ásum increased by one hundred from last year.

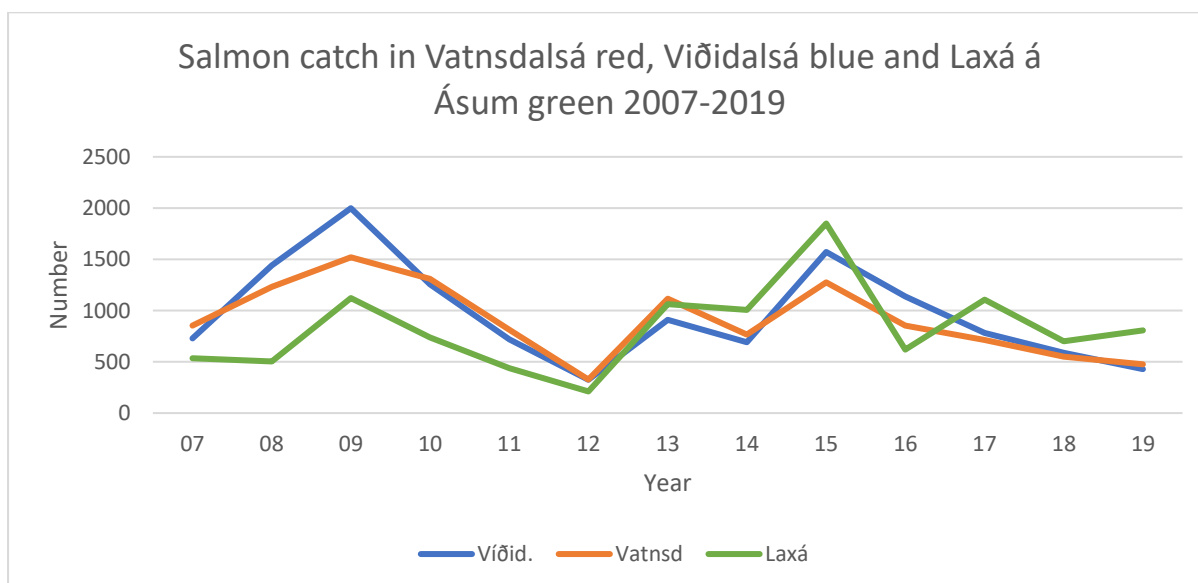


Fig 3. Salmon catch in Vatnsdalsá , Víðidalsá and Laxa á Ásum from 2007 to 2019.

## Parr survey

Parr survey took place in Laxá á Ásum in august 7-9. 2019. The main river was fished with electricity at 6 sites. Fremri Laxá was fished at one site. The parr were aged and density of the various year classes estimated. During the test fishing the water level was average or probably little less and conditions for electrofishing were good.

Table 1 shows the results from the parr survey. ( There was also 10 small trout caught from yearclasses 1 to 3.)

Site no.	Name	Date	Areal	Age								Sum	Density
			m <sup>2</sup>	0+		1+		2+		3+			no./100 m2
				fj.	ml.	fj.	ml.	fj.	ml.	fj.	ml		
1	Húnsstaðahorn	07-Aug	50	22	4.45	7	6.6					29	58
2	Abow Mánafooss	08-Aug	20	3	3.7	8	6.1	7	8.5			19	95
3	50 m. Below Tumi	08-Aug	40	18	3.7	7	7	5	9.8	1	10.6	31	78
4	Below Skotti	08-Aug	50	27	4.1	15	6.2	9	9.1			51	102
5	Below Krokhyll	08-Aug	50	25	3.5	12	6.1	5	9.2			42	84
6	Holt	08-Aug	50	20	3.8	20	5.8	5	9.2			45	90
	Total		260	115	3.9	69	6.3	31	9.16	1	10.6	217	83
	No./100 m2			44		26		12					
7	Fremri Laxá below Hamrakot	09-Aug	50	18	3.5			4	10.6			22	44

Tabel 1. Number(no) and mean length (ml) of salmon parr caught at various sites(1-6) in Laxá á Ásum and one site at Fremri Laxá (7).

0<sup>+</sup> = fry ,1<sup>+</sup> = one winter old parr , 2<sup>+</sup> = two winters old parr, 3<sup>+</sup> = three winters old parr.

Growth is good and fry's (age 0<sup>+</sup>) and parr's (age 1<sup>+</sup> and 2<sup>+</sup>) are in average condition.

Almost all parr in Laxá á Ásum smoltify in spring at the age of 3<sup>+</sup>. Only one parr at age og 3<sup>+</sup> was caught. <sup>1</sup>

The main food for the parr in august is common pond snail (*Lymnaea peregre*) .

Length distribution of salmon parr caught in Laxá á Ásum is shown in figure 4.

A small fraction of the 2<sup>+</sup> parr (and 1<sup>+</sup> at Húnsstaðhorn) were mature males which actively play a good roll spawning process.

### Length distribution of salmon parr 7-8 ágúst 2019

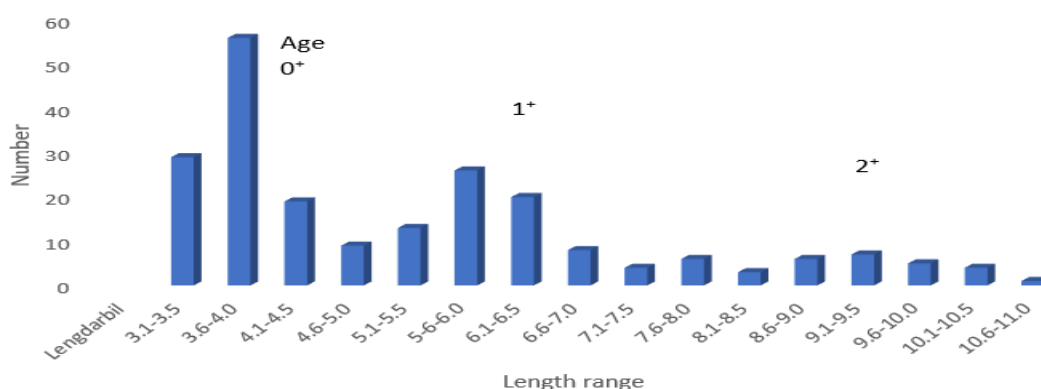


Fig 4. Length distribution of salmon parr caught in 2019.

## Parr density

The catchability of parr depends on several factors including temperature, water flow etc. Each year, sampling conditions are different. The number of 0<sup>+</sup> fish is vastly underestimated; due to the fact that they are small and are difficult to catch and some are still in the gravel. Estimate of the density of one- and two years old fish is more reliable, but most of the 3 years old will have left the river as smolts. The trend in parr mean density is plotted in fig. 5. Although the estimate of parr density is not an accurate figure, a clear trend can be seen through the years.

One winter old(1<sup>+</sup>) yearclass is strong and two winter(2<sup>+</sup>) yearclass is above average. There is a good reason to be a little optimistic for the near future-depending of course on nature being kind

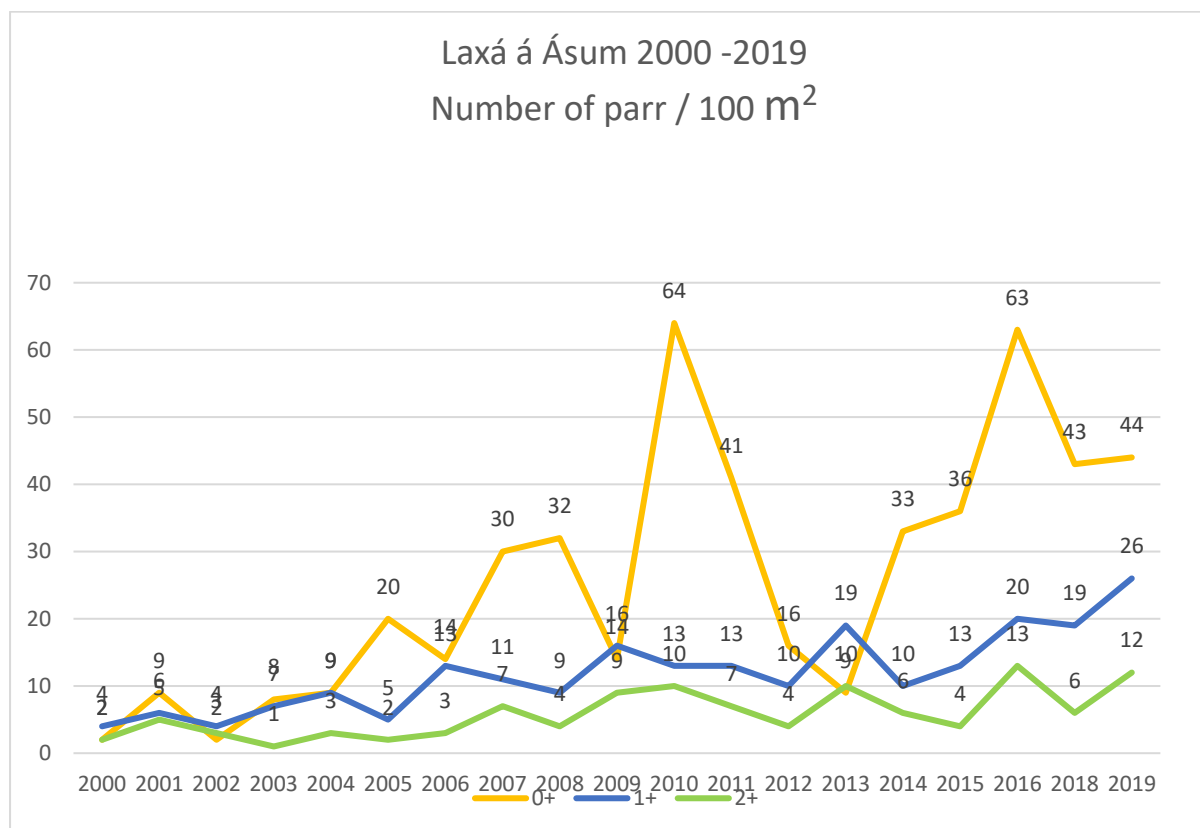


Fig.5 Mean density of parr in year 2000-2018 minus year 2017.

Yellow line is 0<sup>+</sup>, blue line is 1<sup>+</sup> and green line is 2<sup>+</sup>.

Parr condition and numbers at the various survey sites.

Site 1. Húnsstaðahorn



Fig 6 Mature male caught at Húnsstaðahorn 7.0 cm. long and 1<sup>+</sup>

Fig 7 Site 1 at Húnsstaðahorn.

Site is dominated by small gravel; therefore small parr dominate. One 6.1.cm and one 7 cm. long 1<sup>+</sup> parr were mature males No older parr(2<sup>+</sup>) were caught. Large parr probably migrate to Húnavatn,

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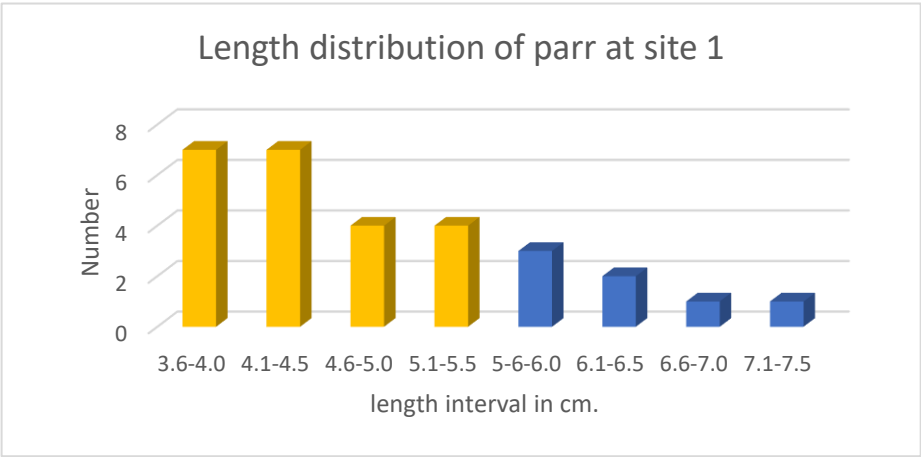


Fig 8 length distribution at site 1 Húnsstaðahorn.

Yellow = 0<sup>+</sup> Blue = 1<sup>+</sup>

## Site 2. Holt

Site is shallow and has small to medium size grave with large stones where most of the large parr were caught



Fig 9 Site 2 Holt.

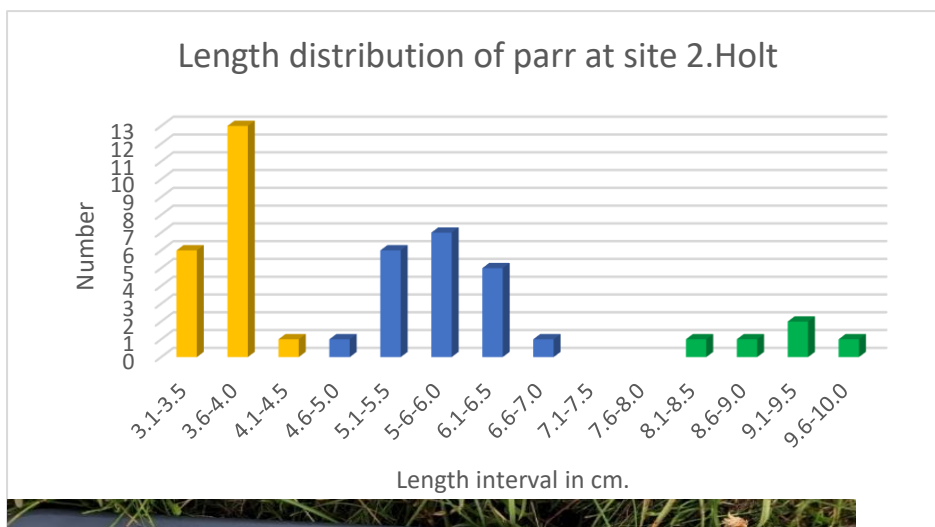


Fig 10. Length distribution of parr at site2 Holt

Yellow = 0+ Blue = 1+  
Green = 2+



Fig 11 The large parr to left are 2+ · 1+ are in the middle And 0+ are to right Three trout parr are at bottom in right corner .



## Site 3. Below Krókhylur

Small gravel dominate the bottom . Some Diatoms (*Didymosphenia geminata* ) coverage in the bottom.



Fig 12 .Site 3 Below Krókhyl.



Fig 13 parr from site 3.Below Krókhylur. The parr number four from left is mature male 8 cm long.

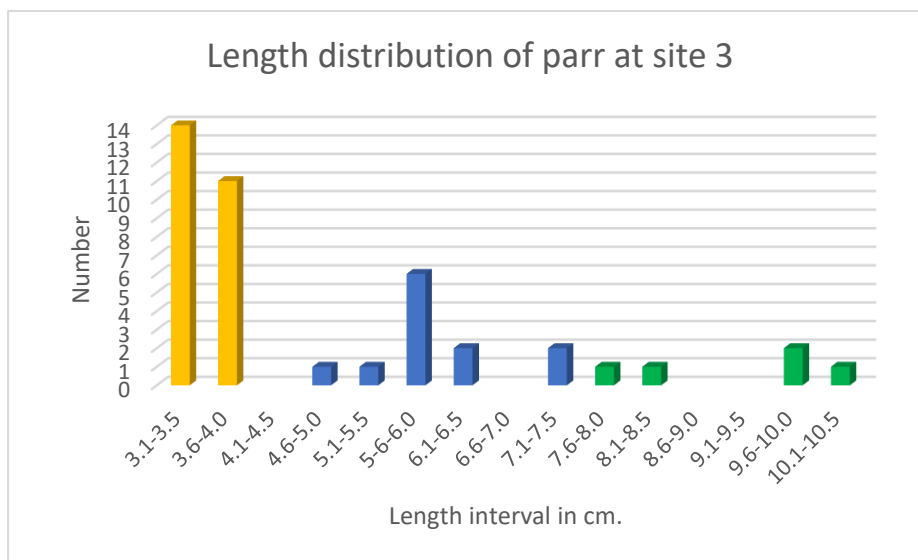


Fig 14.Length distribution of parr at site 3 Below Krókhylur.

Yellow = 0+ Blue = 1+  
Green = 2+

## Site 4. Above Mánafoos.

Excellent bottom for large parr. Stones with diameter from 5 cm up to 30 cm are dominant. Lot of algae and bottom slippery. Large parr 1+ and 2+ dominate the catch but less fry (0+).



Fig.15.Site 4. Above Mánafoos.

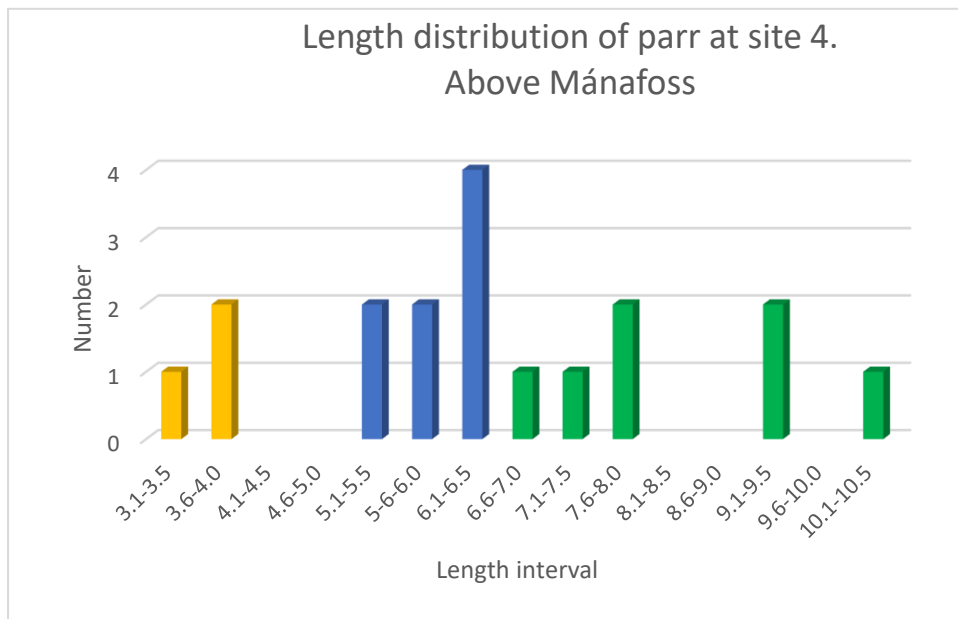


Fig 16. Length distribution of parr at site 4.

Yellow = 0<sup>+</sup>

Blue = 1<sup>+</sup>

Green = 2<sup>+</sup>

## Site 5. 50 meter below Tumi.

River is slow flowing on fine gravel bottom with occasional larger stones As can be seen on figure 17 Diatoms cover the major part of the bottom and catchability of parr is reduced therefore All year classes are represented here . Majority of the catch were 0<sup>+</sup>





Fig 17 Site 5. 50 meter below Tumi. Diatoms can be clearly seen as it covers the major part of the bottom.

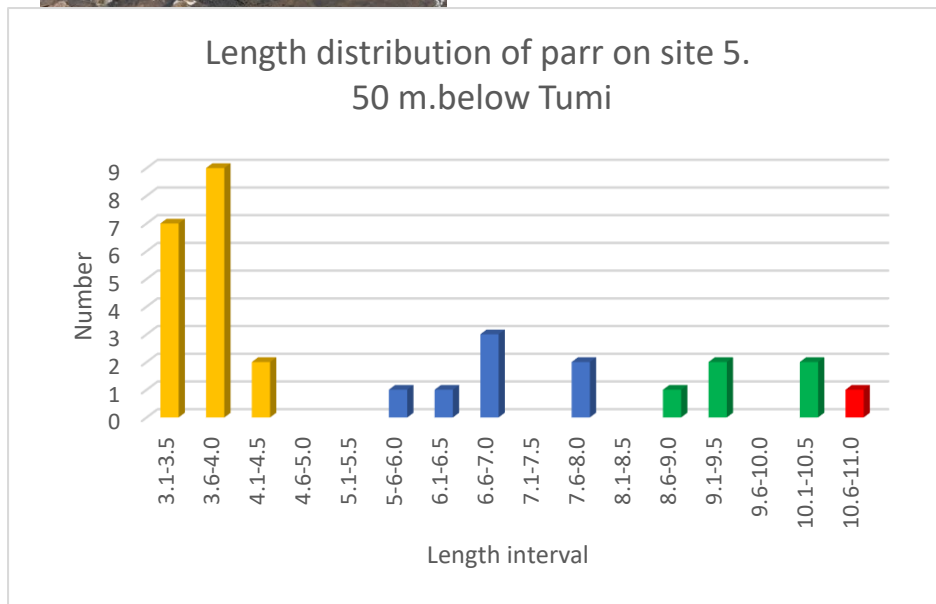


Fig.18. Length distribution of parr at site 5.

50 m. below Tumi

Yellow = 0+

Blue = 1+

Green = 2+

Red = 3+

## Site 6. Below Skotti

Bottom consists of small stones 5 -10 cm in diameter. Frys and parrs were abundant here

Fig 19.

Site 6 Below Skotti. The elocrofishing took place below the rocks seen on this picture.



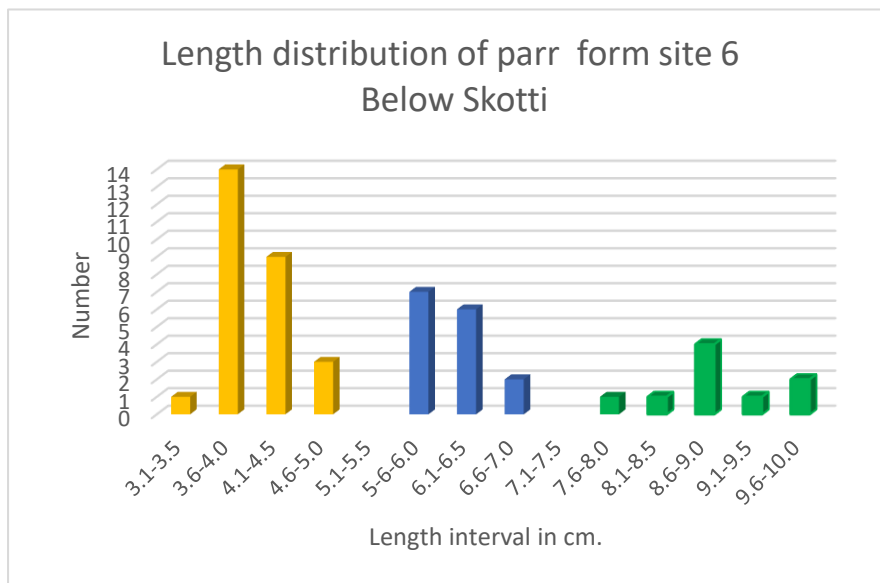


Fig.20. Length distribution of parr from site 6. Below Skotti

Yellow = 0<sup>+</sup>

Blue = 1<sup>+</sup>

Green = 2<sup>+</sup>

## Fremri Laxá á Ásum.

### Site 7 Below Hamrakot

Good bottom for parr, stones with diameter between 5 -20 cm. Last time there was electrified here was 2012. Then there was no 0+ caught but both 1+ and 2+ were found

Now there were 18 fry (0<sup>+</sup>) and 4 parr 2+ but no 1+ caught Troutparr are numerous here. It is clear that salmon does not always spawn here every year(or the spawning fails)



Fig 21  
Fremrl  
Laxá  
below  
Fishinghut  
Hamrakot

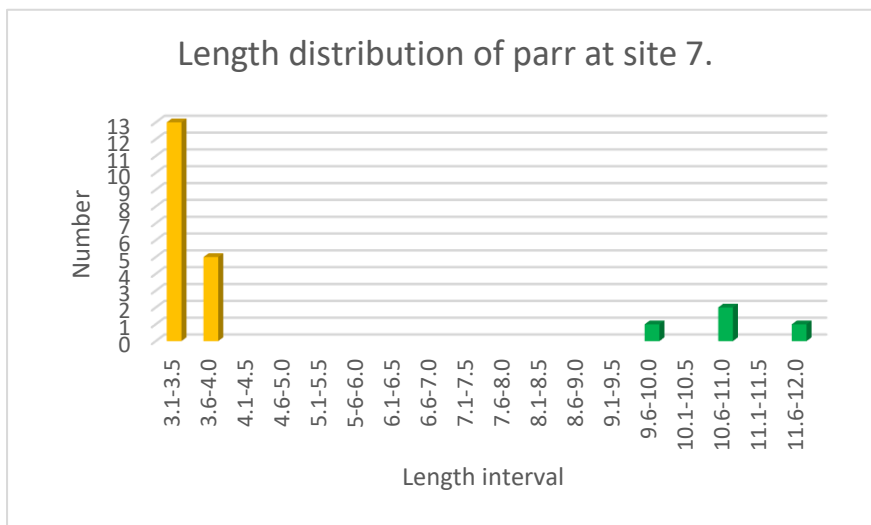


Fig 22. Length distribution of parr at site 7. Fremri Laxá below fishing hut at Hamrakot

Yellow = 0<sup>+</sup> Green = 2<sup>+</sup>

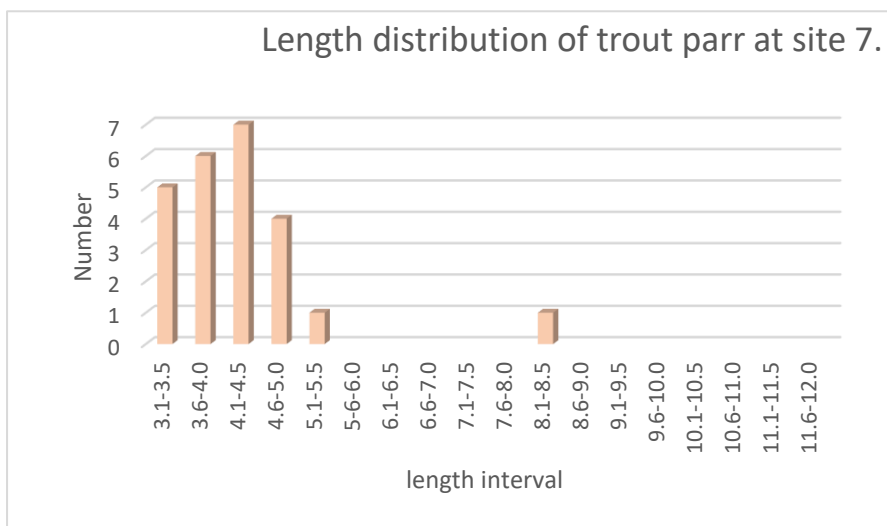


Fig 23. Length distribution of trout parr at site 7. Below fishing hut at Hamrakot

## Water temperature.

River temperature at Holt was recorded at three hours interval 14.mai -19.september

The water temperature in May and June is very important for the smoltification process and the timing of the seaward migration of the smolts. From 14<sup>th</sup> of may until June the water temperature is above average (unfortunately we have no data for first half of May) so it is assumed that the smoltification was at least normal or even very good

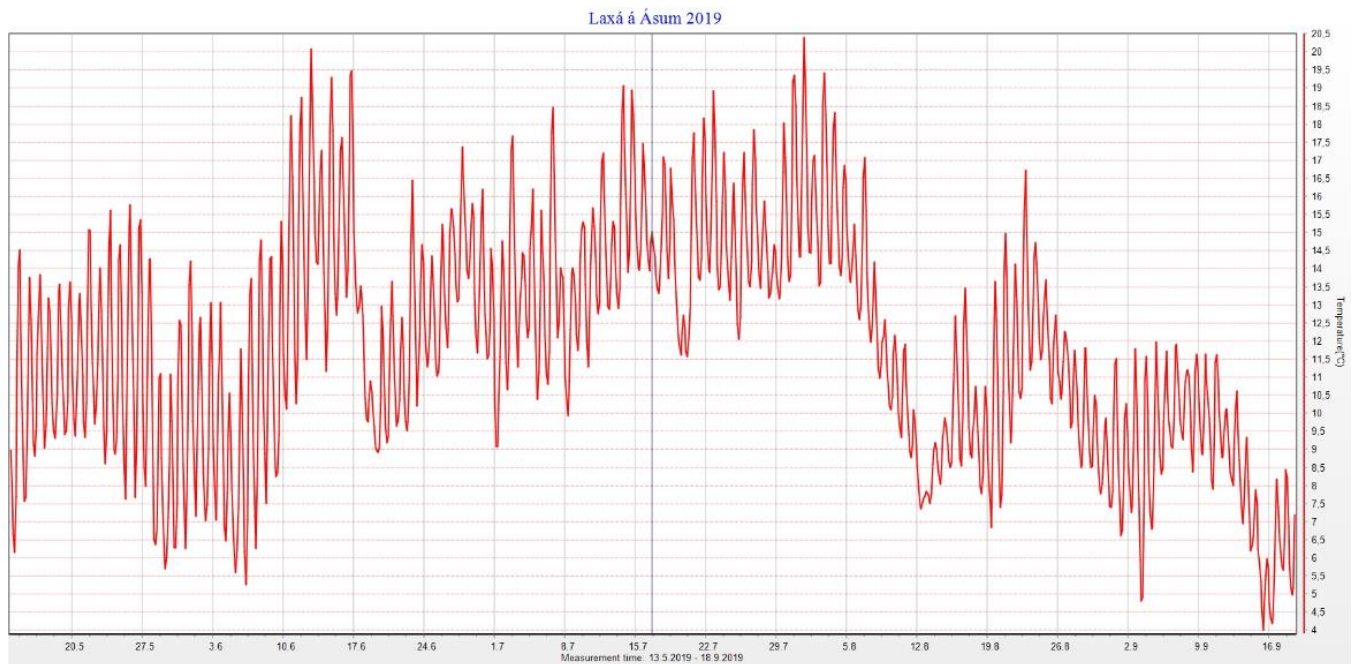


Fig 24. Water temperature in Laxá á Ásum 14/5 til 19/9 2019. Measured at 3 hours interval. 12.00, 15.00 and so forth. Right axis shows temperature between 4-20.5° C

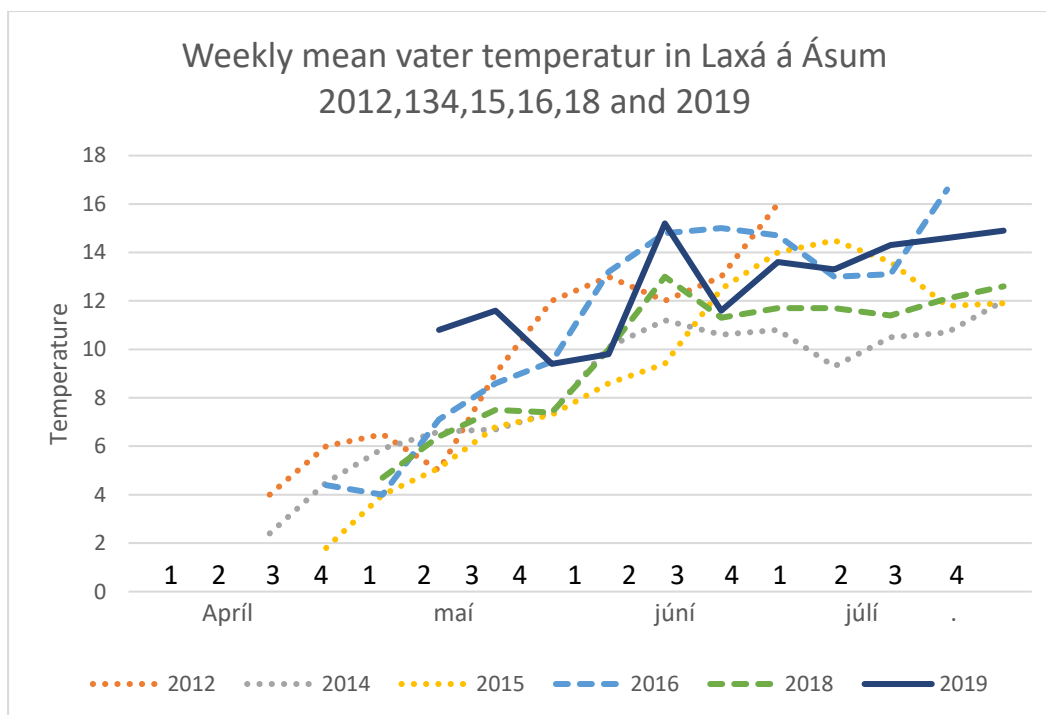


Fig 25. Weekly mean water temperature in Laxá á Ásum in months April-July in years 2012, 14, 15, 16, 18 and 2019