

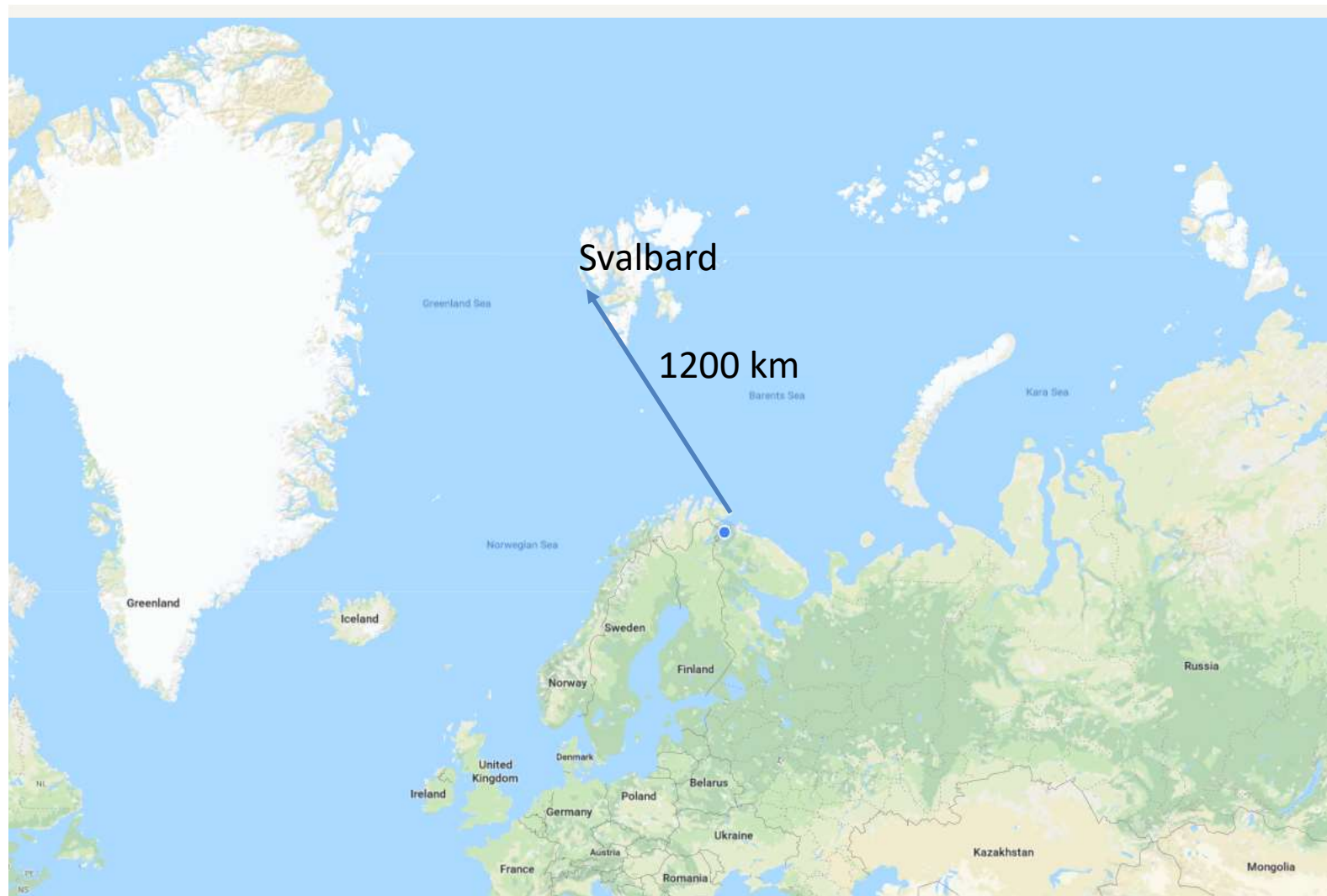
Pink salmon in Svalbard



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Salmonids on Svalbard

- Only freshwater fish - Arctic charr
 - Stationary and anadromous
- 40 systems with anadromous fish
- Cold systems – some lakes are covered with ice 10 – 11 months
- Arctic charr grow slowly – 35-40 years old
- Some sports fishing in lakes and rivers with rod and reel both in summertime and wintertime
- Gillnet fishing in the marine system is allowed for local citizens – the target is anadromous Arctic charr



- Pink salmon and also Atlantic salmon observed along the coast of Svalbard during the last 15 years
- Is this a surprise?

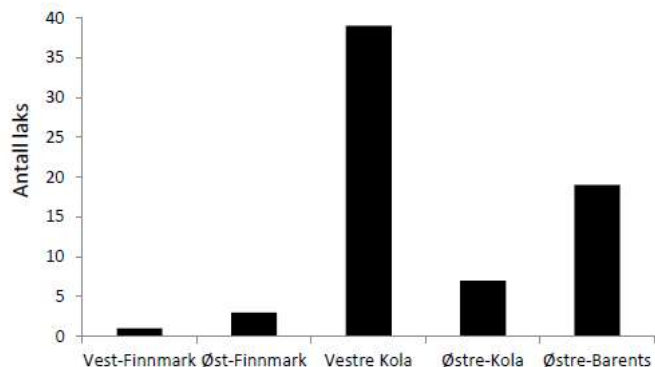
Photo: Jørgen Berge

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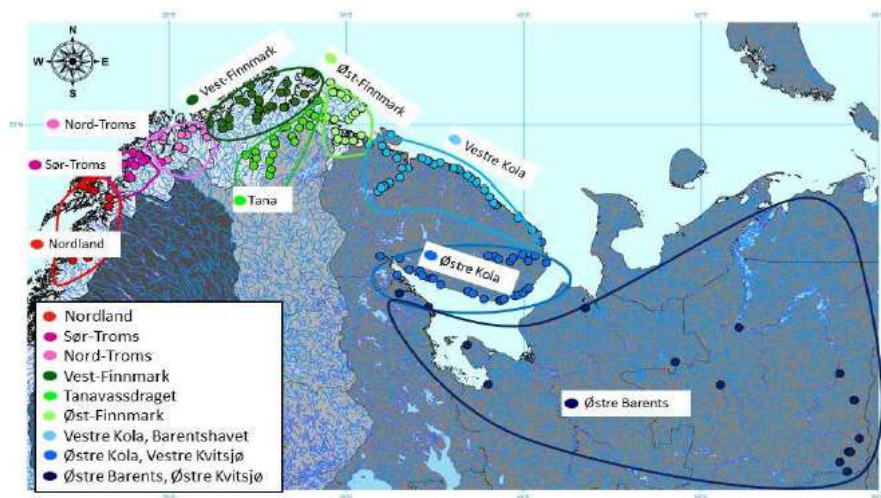


Distribution of Atlantic salmon in marine systems

- Pink salmon and also Atlantic salmon observed along the coast of Svalbard during the last 15 years
- Some information about Atlantic salmon migration and distribution in the sea
- No or very little information about pink salmon migration and distribution in the marine system



Figur 6. Opprinnelsesregion (hjemregion) for 69 laks fanget i Isfjorden på Svalbard i 2014



Figur 7. Inndeling av regioner, basert på den genetiske databasen som er benyttet for å finne hjemelv til laks fanget på Svalbard i 2013. Hvert punkt representerer elver som inngår i databasen. Hentet fra Vähä et al. 2014.

Atlantic salmon on Svalbard

- Genetic study of Atlantic salmon from Svalbard coast indicates that the Atlantic salmon has its origin from Kola Peninsula and Eastern Barents rivers.
- So maybe pink salmon from Kola and eastern Barents area also use the same migration routes and utilize the same food sources as Atlantic salmon
- However they appear on Svalbard at different time of the year
 - Pink salmon – summer
 - Atlantic salmon - autumn



Photo: Lydersen

Pink salmon project on Svalbard

Project established in 2015

Central questions in the project

- Distribution of pink salmon in marine system on Svalbard
- Time trends in Svalbard waters
- Is there a competition between pink salmon and anadromous Arctic charr
- Genetics
- Parasites
- Contaminants
- Do the pink salmon migrate up rivers and spawn



Investigation areas, methods and preliminary results

- Combine with other projects
- Gillnets in the littoral zone (shoreline)
- June – August
- The amount of pink salmon seems to increase along the Svalbard coast (2015 – 2017)
- Registered on the west and north part of Svalbard
- All fish mature, 1,2 – 3,1 kg
- Yes – pink salmon migrate into some of the Svalbard rivers
- Yes – pink salmon and Arctic charr are feeding on some of the same species in the marine system (300 stomachs)
- Do pink salmon spawn and are there any recruitment of pink salmon in Svalbard rivers?



New project 2018 - 2020

- Continue monitoring using test fishing in the fjord system and river investigations – start early spring 2018
- Continue to take samples of pink salmon and Arctic charr – age, contaminants, genetics, stomach content, stable isotopes and lipids
- Citizen Science – use of local people to collect data
- Use environmental DNA, or eDNA, to detect if Pink salmon have been spawning in Svalbard rivers. Detect the presence of species finding a small fragment of their DNA in an environmental sample.

Thank you!

New food coming?



Photo: Guttorm C.