

Ny kunnskap om sjøørret i sør: hva er de viktigste forvaltningsutfordringene?



Esben Moland Olsen

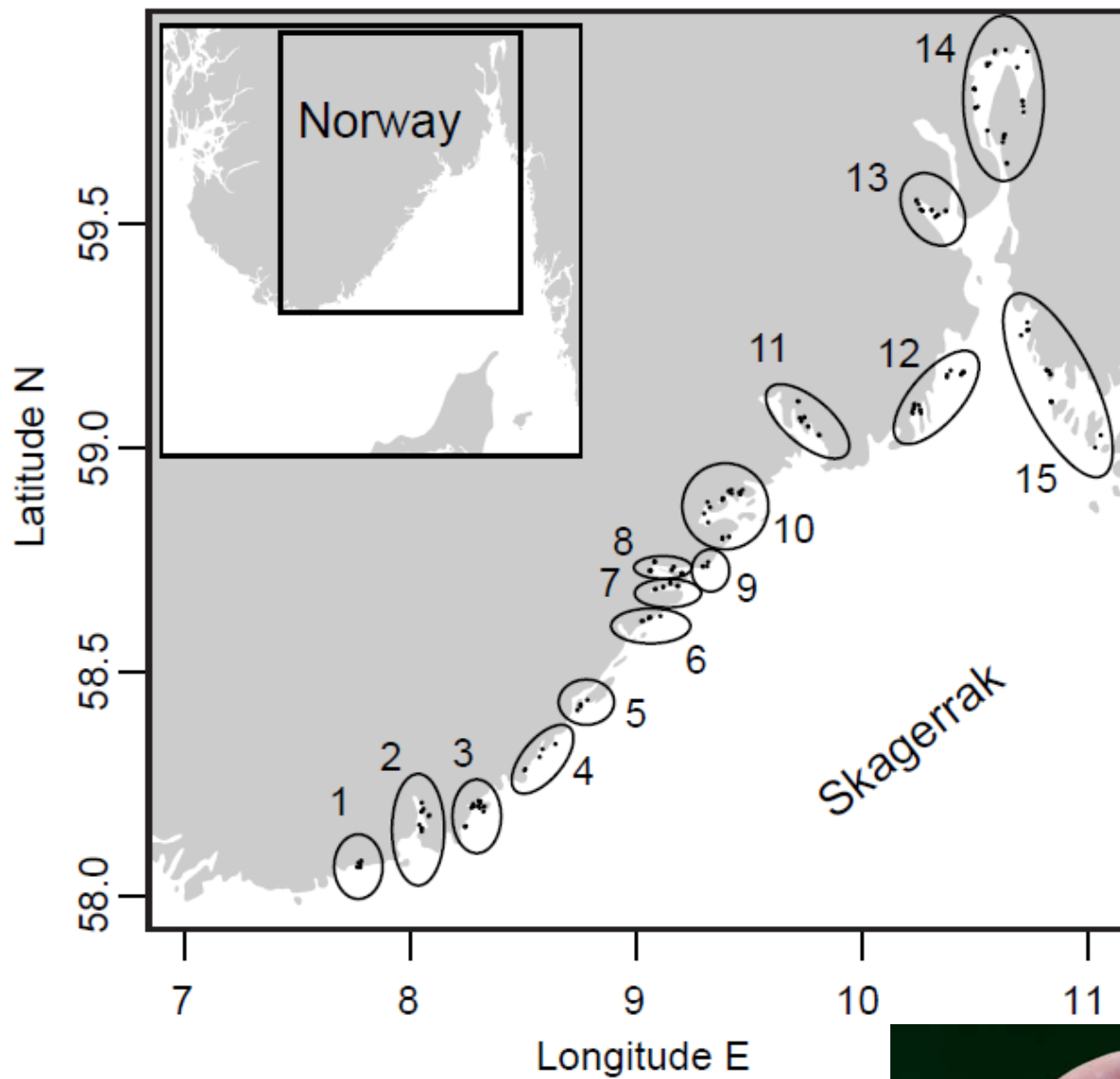


UNIVERSITETET I AGDER

A wide-angle photograph of a lake under a blue sky with scattered clouds. In the background, a large blue and white fishing vessel is anchored. In the middle ground, a small motorboat with two people is on the water. In the foreground, two people are standing on a rocky shore, pulling a long net that forms a large loop in the water. The water is a deep blue, and the surrounding hills are covered in green trees.

Blir det mer eller
mindre ørret i sjøen?

A

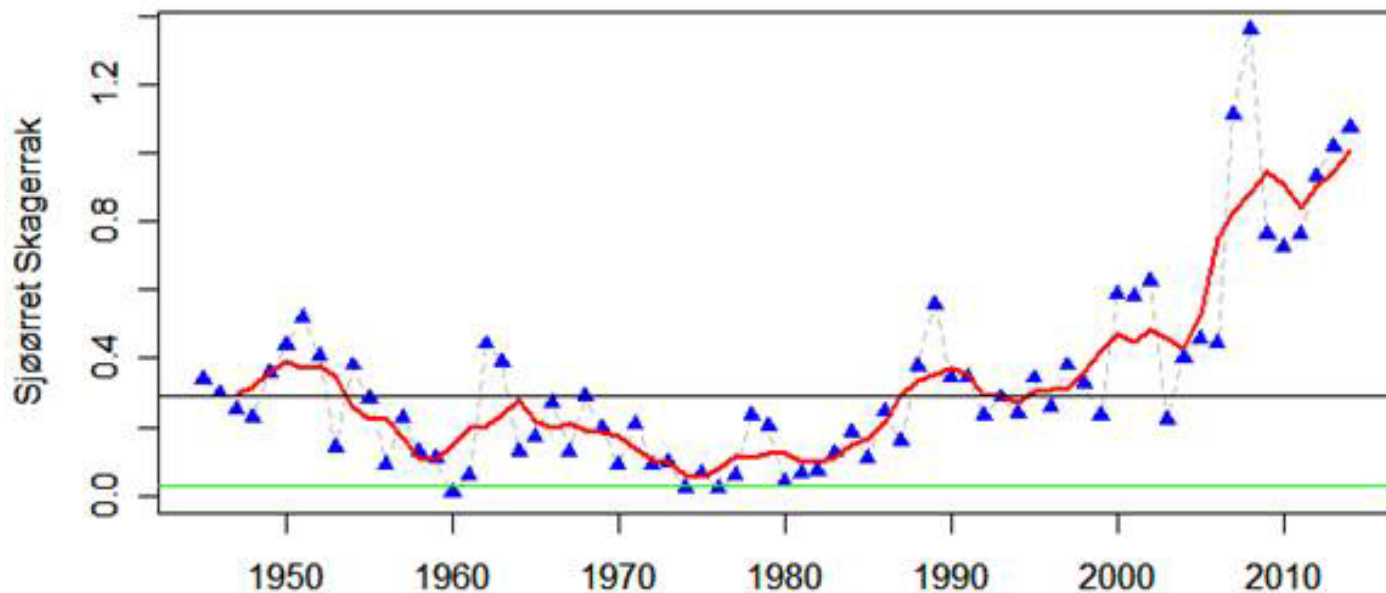


Hvert år i sep-
okt, 1919 – 2014

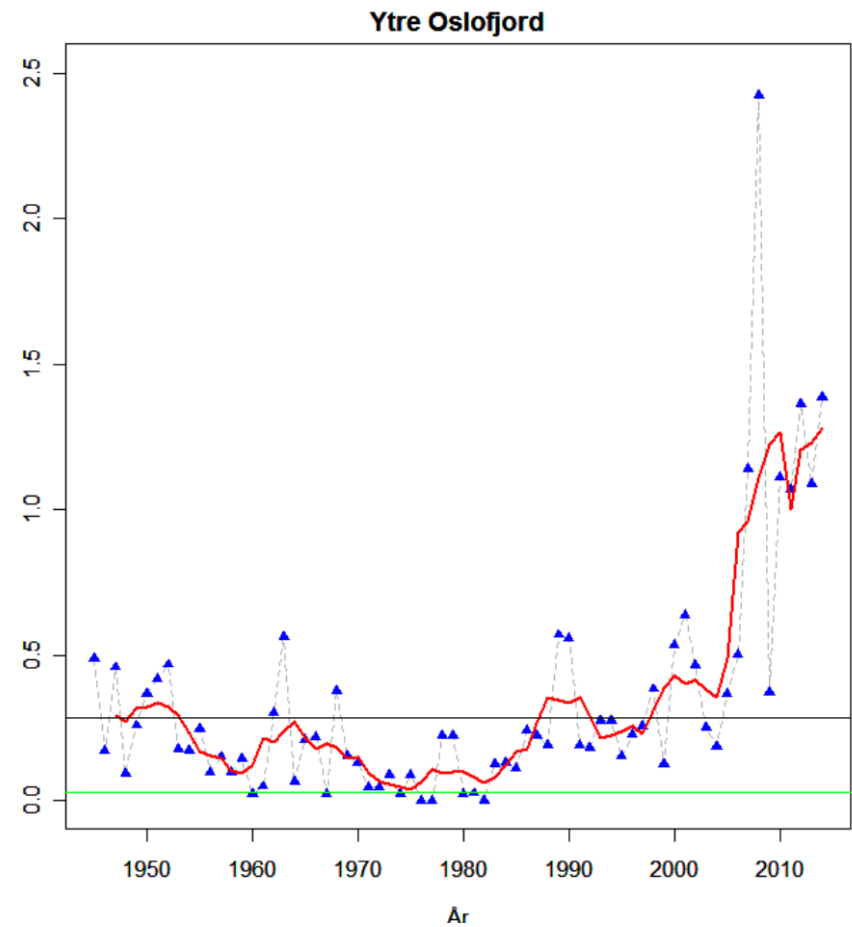
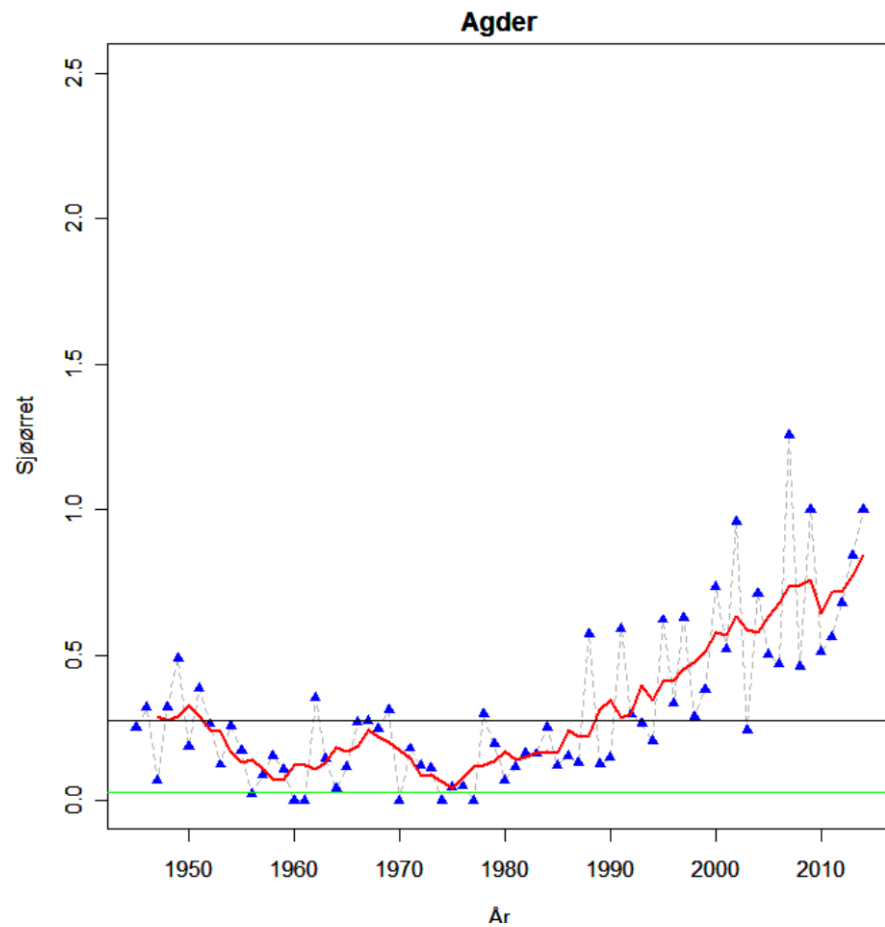
140 stasjoner



Positiv utvikling for sjøørreten



Agder vs. Oslofjorden



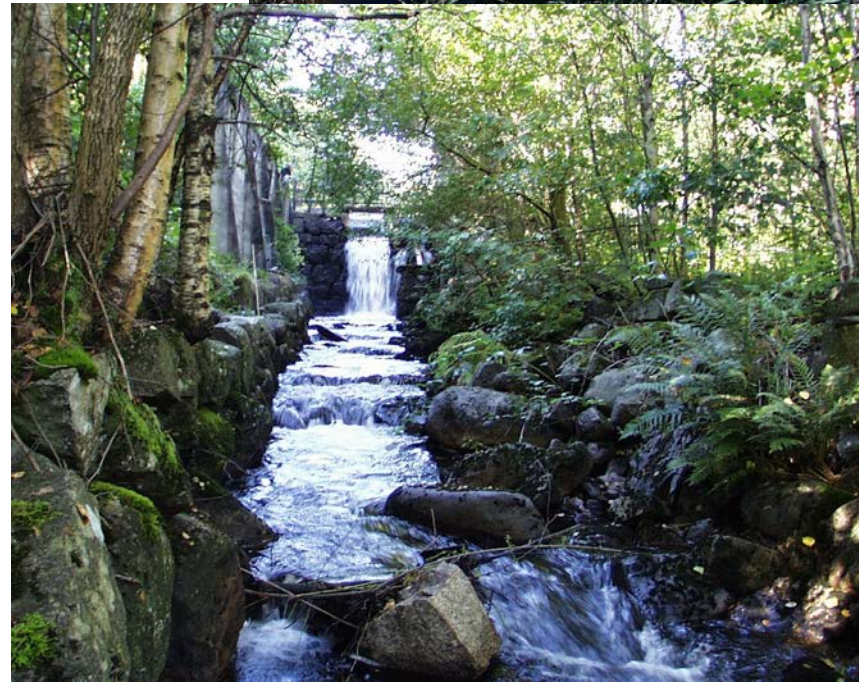
Hvorfor har det blitt mer ørret?

- Bedre gyte- og oppvekstmuligheter i ferskvann?
- Bedre overlevelse og beitemuligheter i sjø?
- Oppgaver for forskning og forvaltning

Restaurering og bevaring av bekker

Etablere tidsserier!

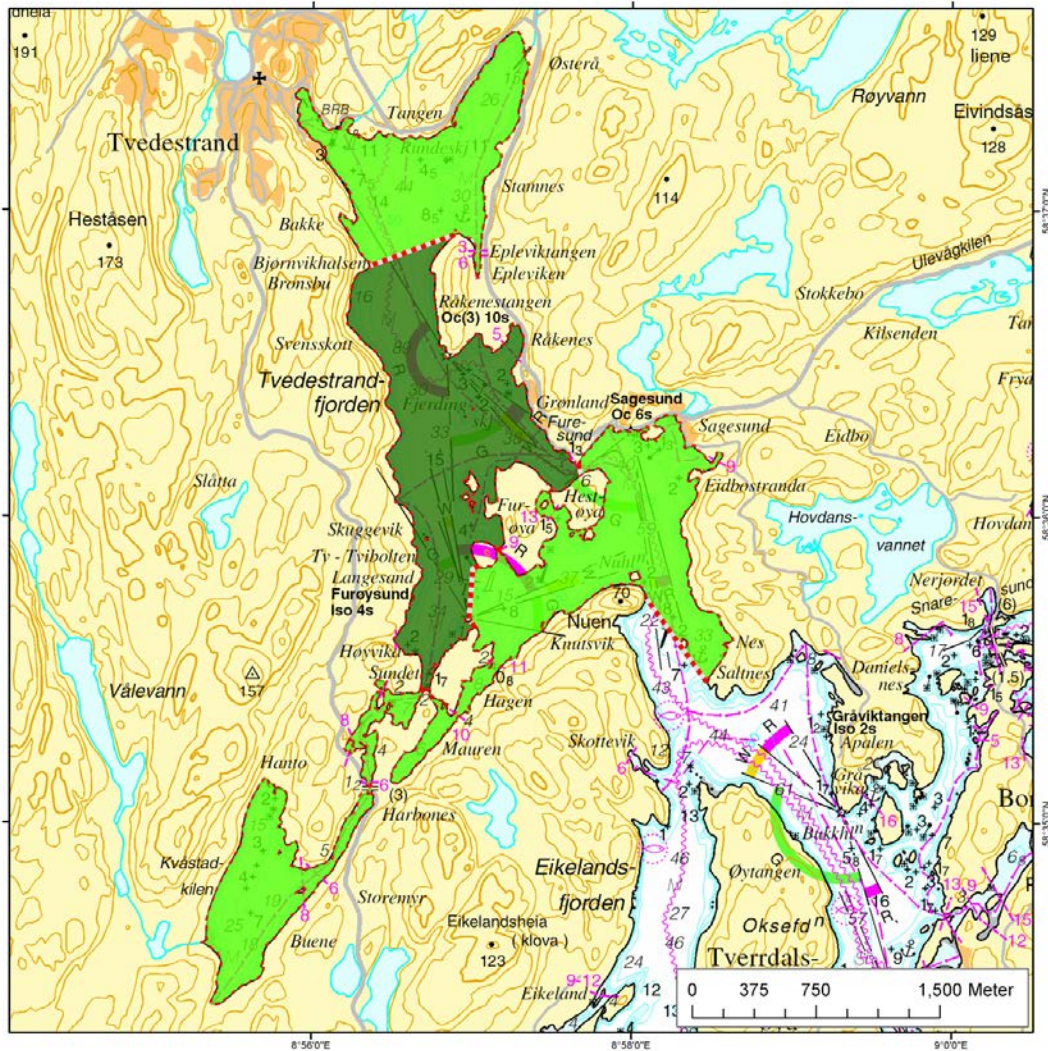
1. Overvåke utviklingen av bestandene
2. Tallfeste effekter av forvaltningstiltak



Forskning og forvaltning knyttet til sjøfasen

- Hvilke områder er viktige for ørreten i sjøen?
- Hva er viktige kilder til dødelighet?
- Hvordan bør vi høste av bestandene?

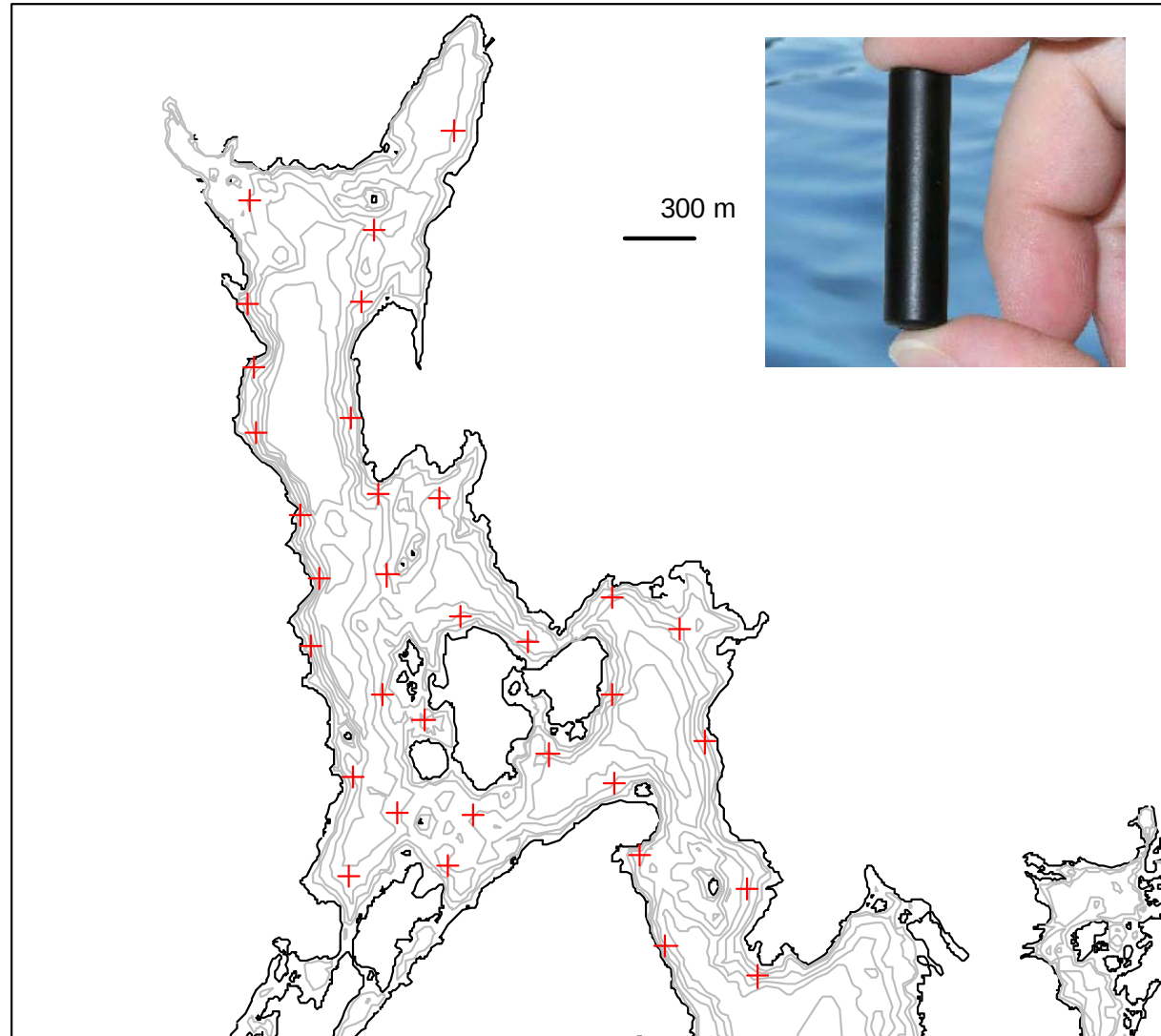
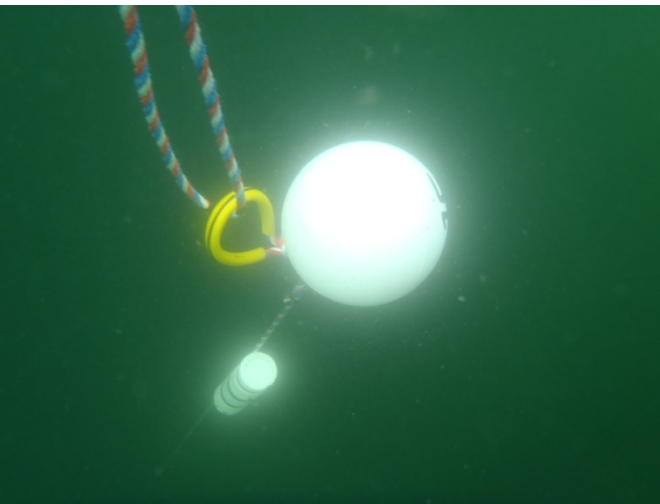


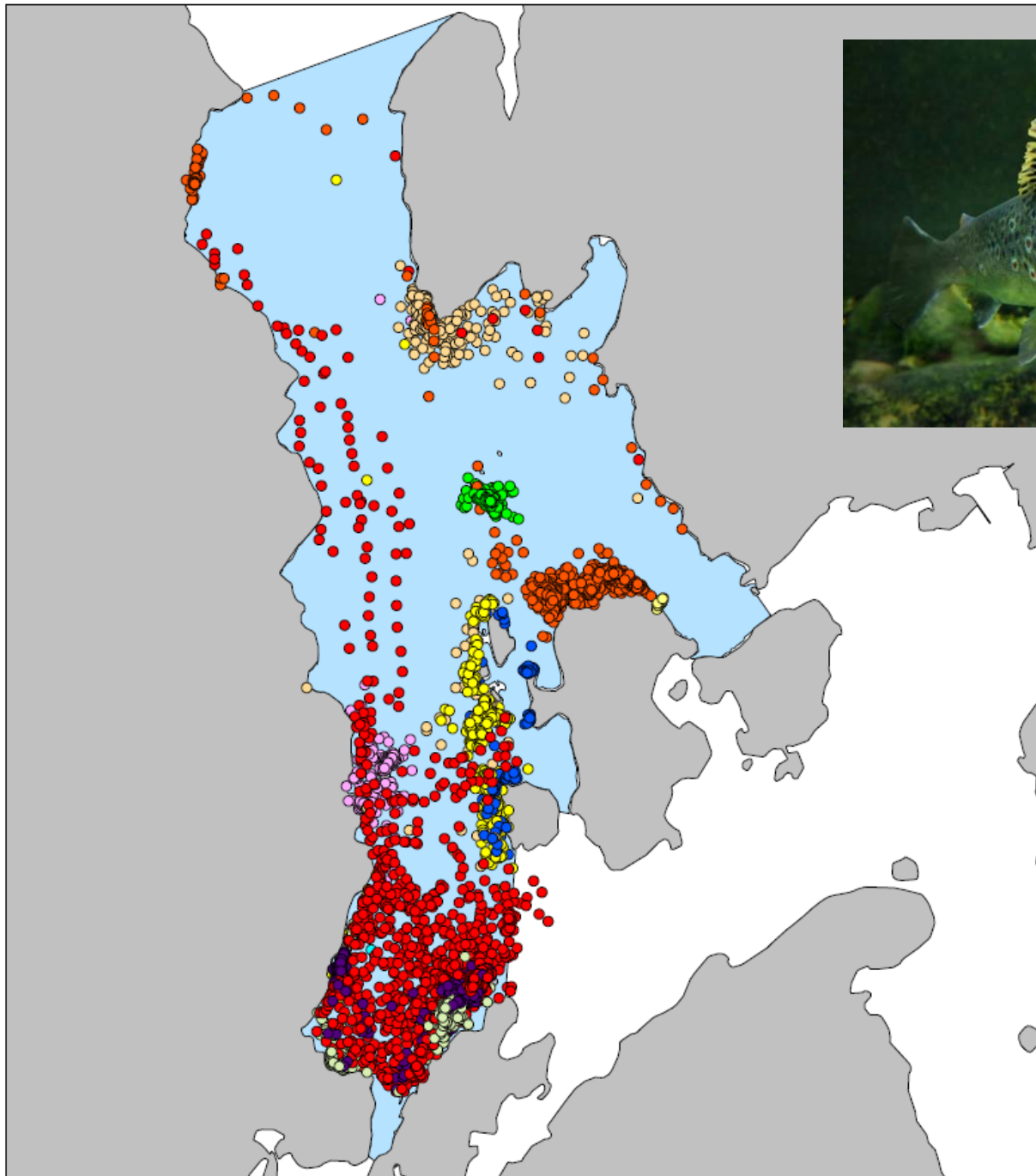




Merking av sjørret i Furøya
bevaringsområde, Tvedestrand

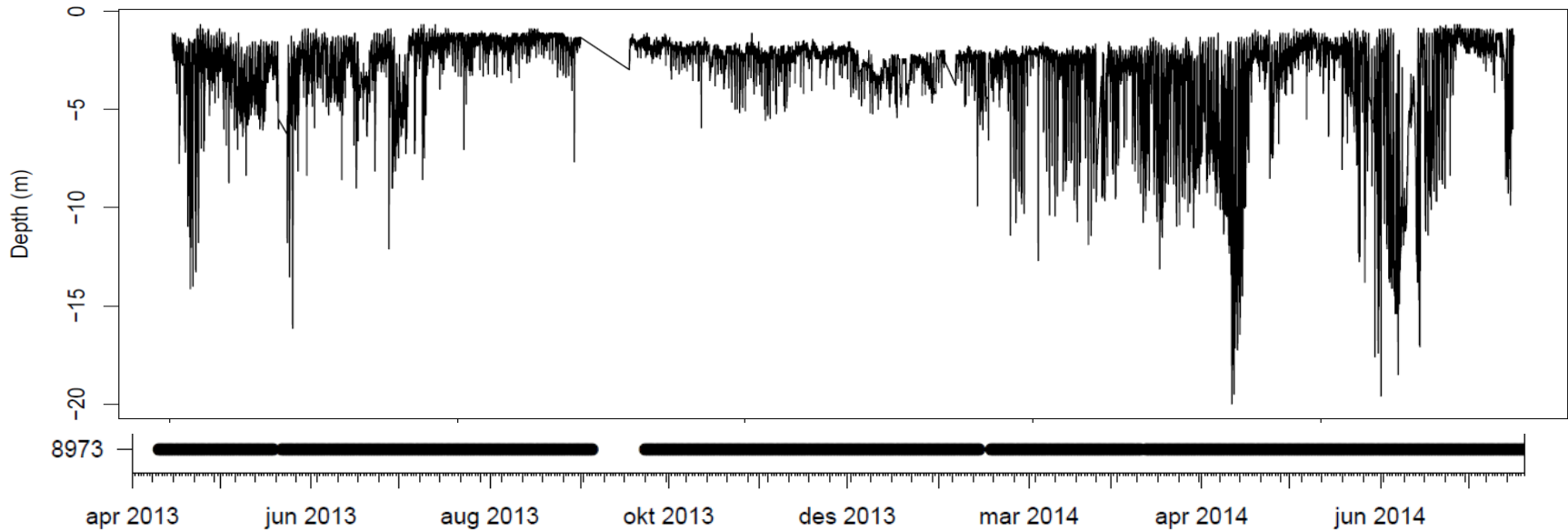
Verktøy: akustisk telemetri





Carla Freitas
Postdoktor
Universitetet i Agder

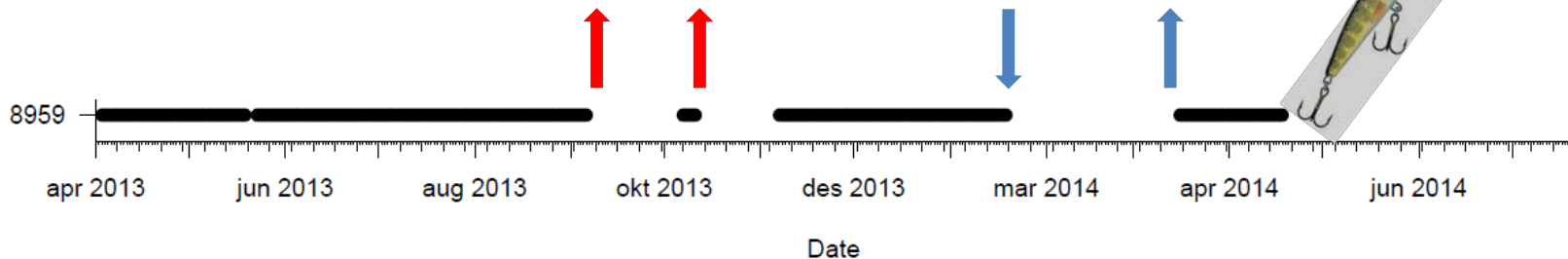
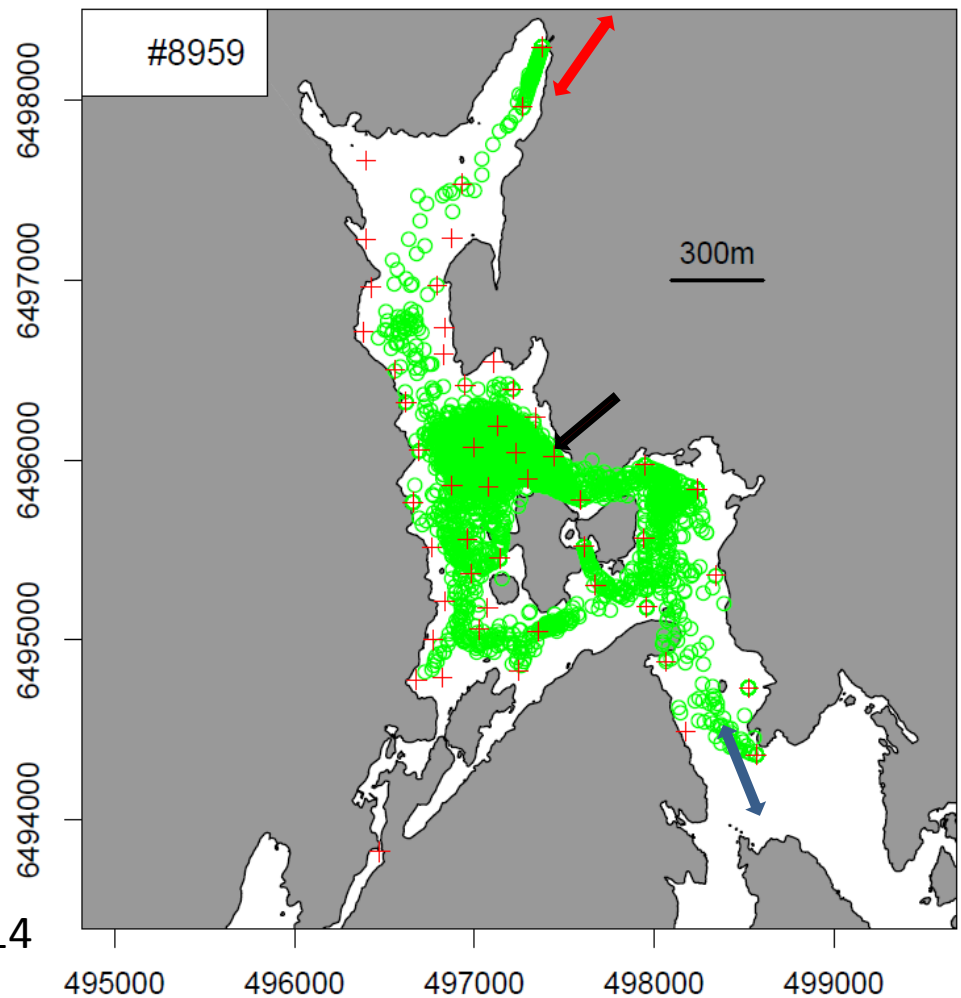
Hvor dypt går ørreten?



A harvested trout

Life and fate of 8959 (35.8 cm FL):

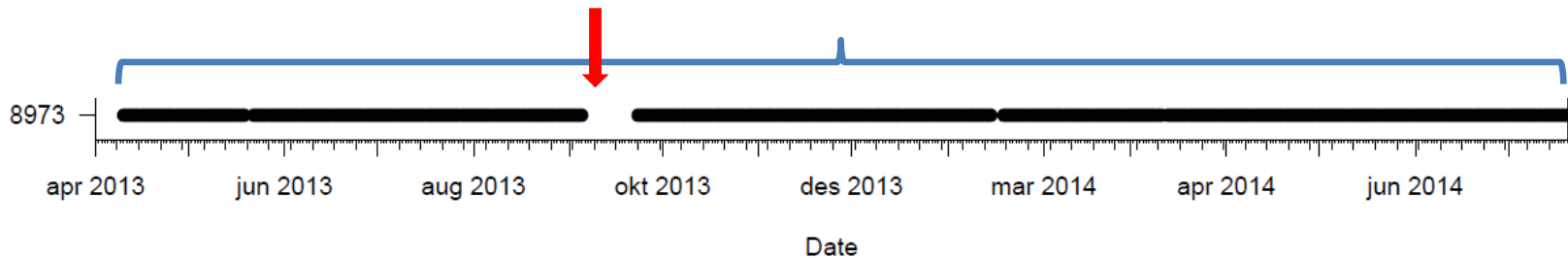
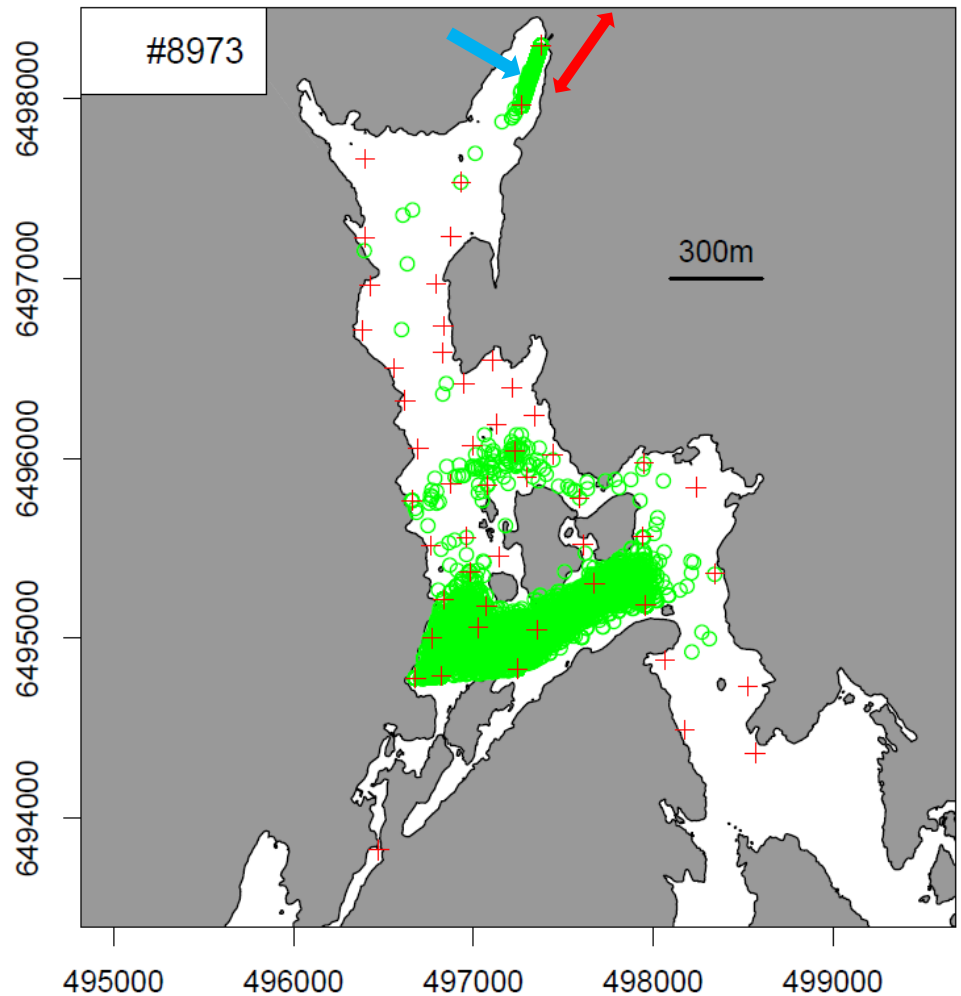
- Tagged on 2 May 2013
- Twice in the river Sept. – Oct. 2013
- Left the fjord on 16 Feb 2014
- Returned on 14 April 2014
- Likely harvested in the NTZ on 17 May 2014 (last detection Grønland)



A survivor

Life and fate of 8973 (38 cm FL):

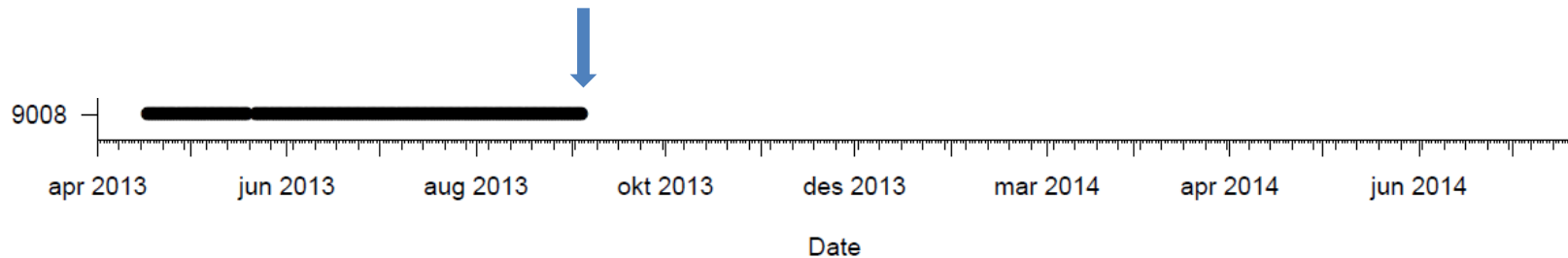
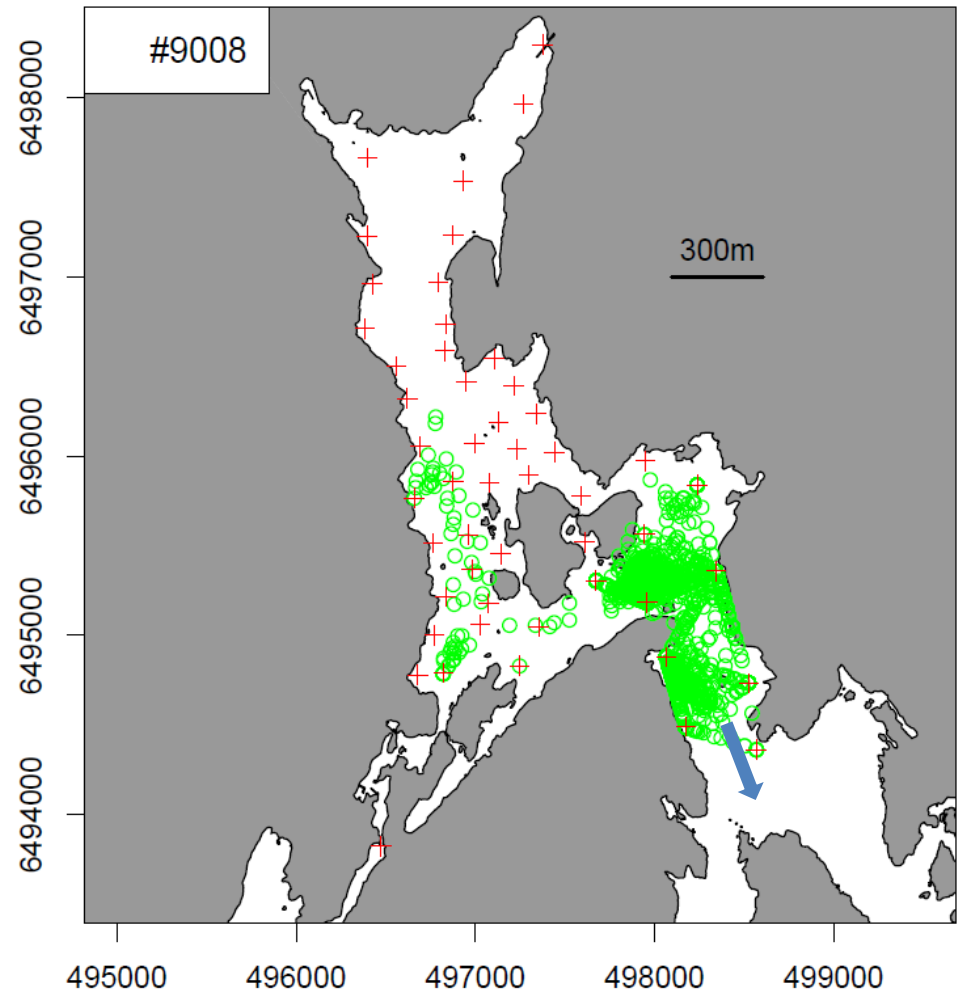
- Tagged on 9 May 2013
- Once in the river Sept. – Oct. 2013
- Alive in Østeråbukt (near river) on 7 Sept. 2014 (time of last downloading)
- Remained within range of receivers (except when in the river)



A disperser

Life and fate of 9008, indet. sex (30.5 cm FL):

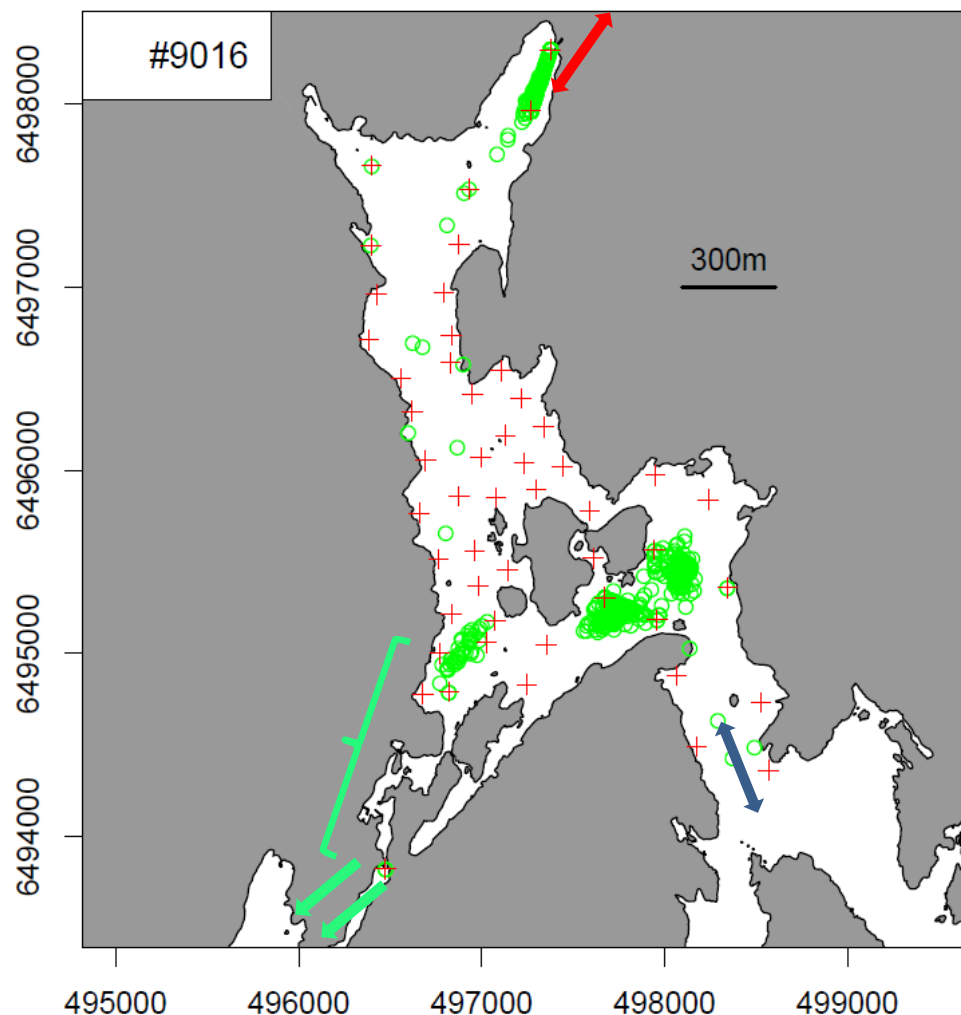
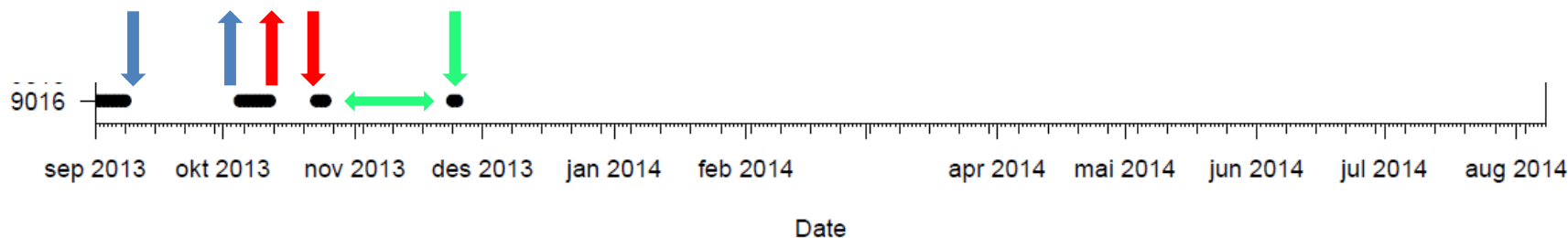
- Tagged on 16 May 2013
- Left the fjord on 3 Oct. 2013 and has since remained outside of detection range



Lost in the fjord?

Life and fate of 9016, a ripe female (46 cm FL):

- Tagged on 11 Sept. 2013
- Left the fjord on 18 Sept. 2013
- Returned on 15 Oct. 2013
- In the Østerå river 23 Oct. – 2 Nov.
- Out of range in Kvastadkilen 29 Nov. – 4 Des.
- Detected on 4 – 5 Des. 2013
- Residing, dead or harvested out of range in Kvastadkilen after 5 Des. 2013



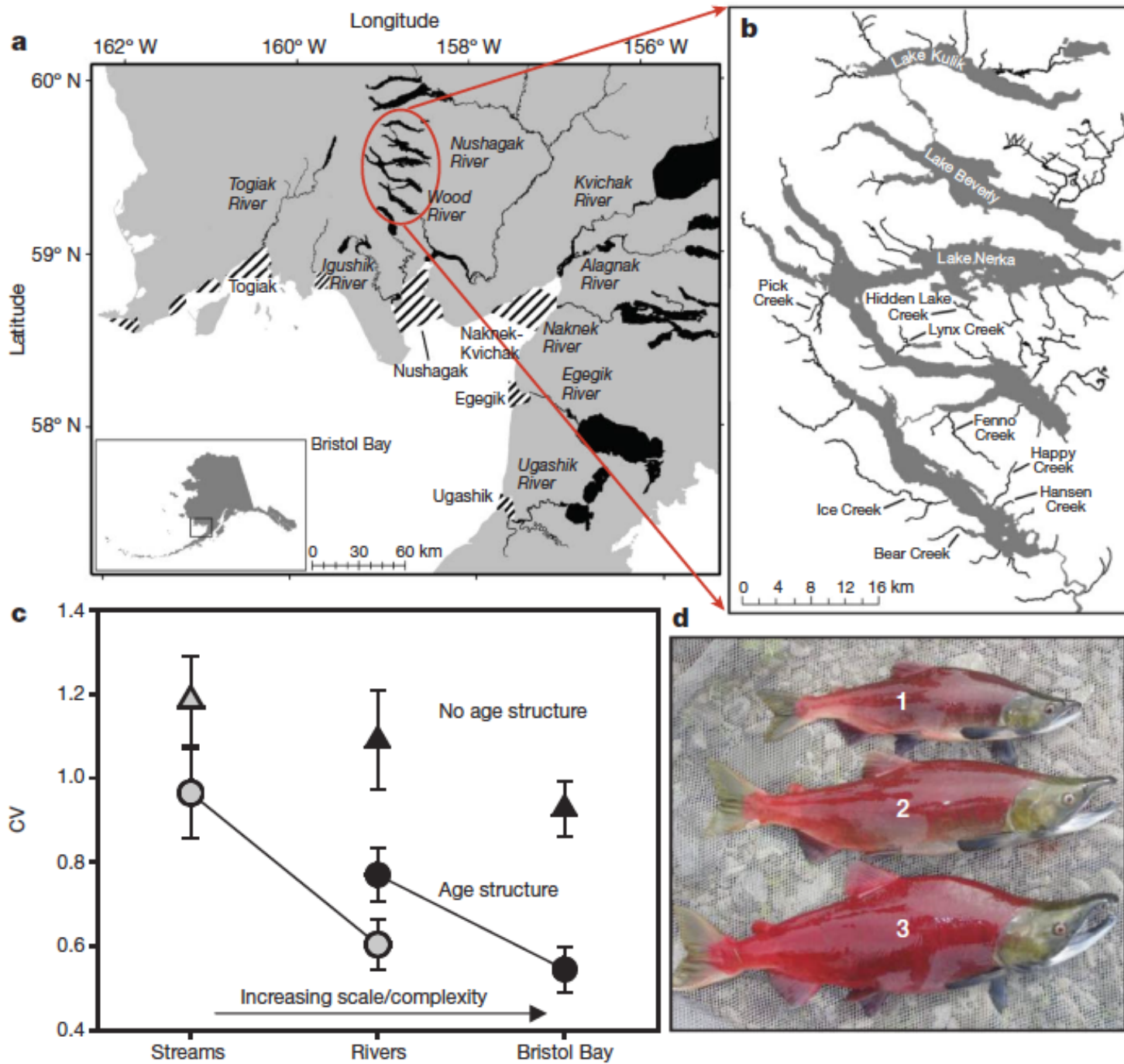
ARTICLES

Why fishing magnifies fluctuations in fish abundance

Christian N. K. Anderson¹, Chih-hao Hsieh^{1,2,3,4}, Stuart A. Sandin¹, Roger Hewitt⁵, Anne Hollowed⁶, John Beddington⁷, Robert M. May⁸ & George Sugihara¹

Population diversity and the portfolio effect in an exploited species

Daniel E. Schindler¹, Ray Hilborn¹, Brandon Chasco¹, Christopher P. Boatright¹, Thomas P. Quinn¹, Lauren A. Rogers¹ & Michael S. Webster²



Bevaring av mangfold for å sikre robuste bestander og et stabilt høstbart overskudd

- Vurdere ulike høstingsregimer
- Bevaringsområder?
- Et mangfold av bekker med ulike miljøforhold



