

Errata for MSc Thesis

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This document solves errors found in the submitted version of Lars Erik Høitomt's MSc thesis Effects of culling on the pelagic whitefish population in Lake Randsfjorden aiming at establishing a commercial fishery.

Empirical growth and predicted back-calculated lengths

Mismatching measuring methods of whitefish lengths caused an error that affected the comparison of empirical growth and predicted back-calculated lengths based on whitefish data from 2007 and 2014. The whitefish caught in 2007 had been measured by total length (from snout to tip of tail) while whitefish caught in 2014 had accidentally been measured by fork length (from snout to mid part of tail). A solution of the problem was to convert the 2014 whitefish lengths from fork length to total length. The fork lengths of whitefish caught in 2014 were converted by using a conversion equation for Coregonids provided by Fishbase 2016. The new compared empirical growth data showed a tendency of increasing whitefish lengths between 2007 and 2014 (Figure 12n). The new predicted back-calculated data shows that there had been a significant increase in total lengths for whitefish between 2007 and 2014 (Figure 13n, Figure 14n). In comparison, the back-calculated lengths with the unconverted data showed no significant increase or decrease in fish lengths between 2007 and 2014. Figure 12n replaces Figure 12 on page 20 in the thesis. Figure 13n and Figure 14n replace Figure 13 and Figure 14 on pages 20 and 21 in the thesis. The measuring error will only affect models comparing empirical growth and predicted back-calculated growth of whitefish caught in 2007 and 2014.

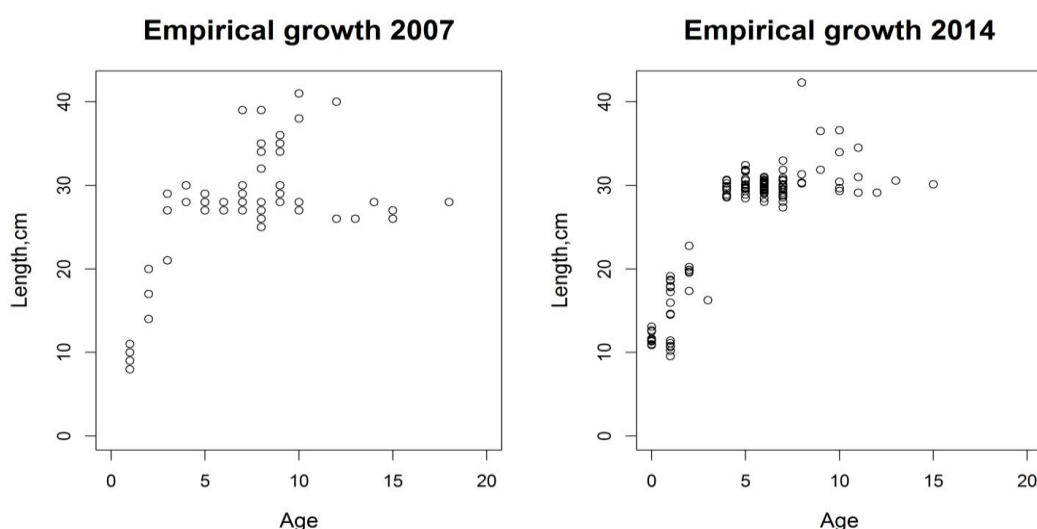


Figure 12n: Empirical growth of the whitefish caught in 2007 and 2014.

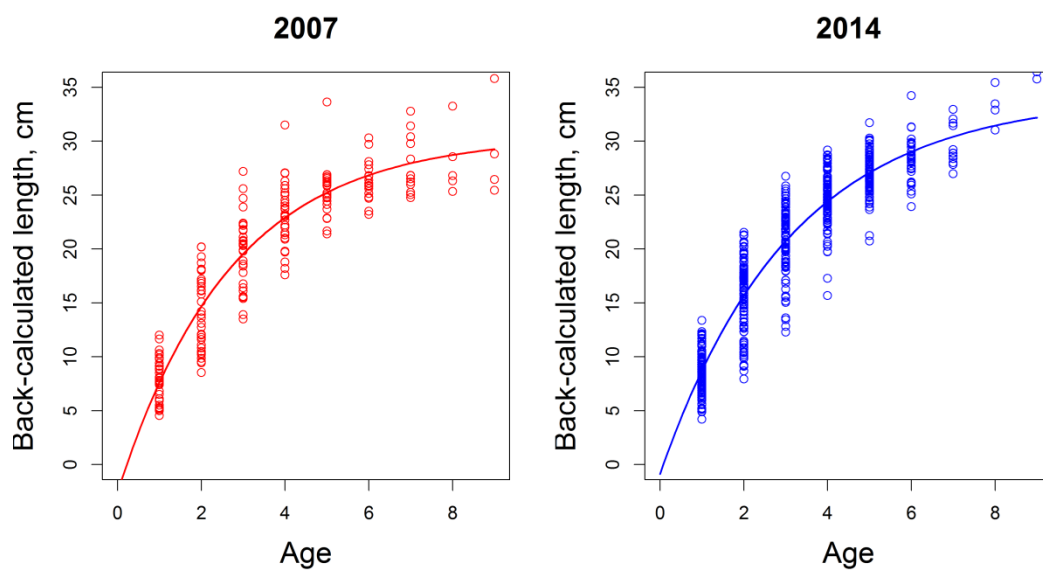


Figure 13n: Back-calculated lengths in cm based on age determination from scales for whitefish caught in 2007 and 2014.

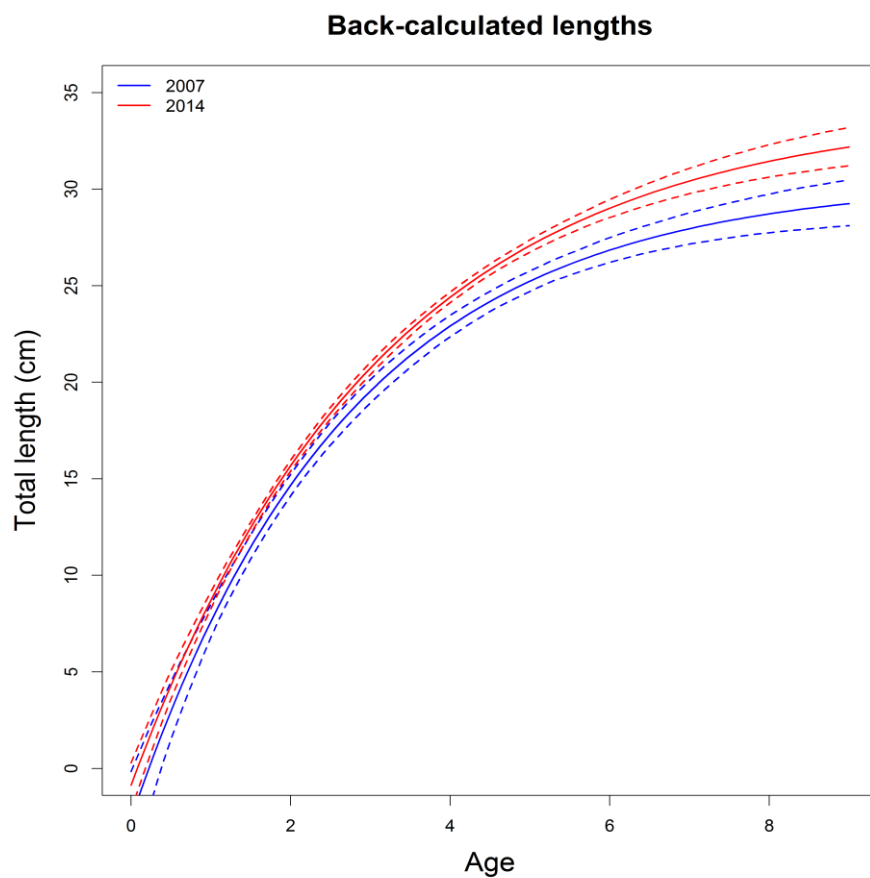


Figure 14n: Predicted back-calculated growth of whitefish from 2007 (blue line) and 2014 (red line), based on age determined from scales. Dashed lines represent 95% confidence intervals.

The new results provide renewed insight in the population dynamics of pelagic whitefish in Lake Randsfjorden. The whitefish caught in 2014 had experienced a more persisted growth and increased maximum lengths compared to whitefish caught in 2007. The increased growth was most prominent for older age groups. The most likely explanation for increased fish lengths might be an effect of less competition for food as a result of an increased mortality rate caused by the intensive trap-net culling. The increase in fish growth might therefore be the first sign of positive effects from the intense culling project conducted in Lake Randsfjorden. Despite the increase in fish lengths, the pelagic whitefish population in Lake Randsfjorden was heavy infected by the parasite *Triaenophorus crassus* and still needs comprehensive treatment before the fish can be utilized for human consumption.

References

FishBase. (2016.) Length-length parameters for *Coregonus lavaretus*.
<http://www.fishbase.se/popdyn/LLRelationshipList.php?ID=232&GenusName=Coregonus&SpeciesName=lavaretus&fc=76> (accessed 14.09.2016)