

Title

Temporal changes in the relationship between condition indices and proximate composition of juvenile *Coregonus artedii*.

Authors

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Journal

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Abstract

The Fulton condition factor (K) and per cent whole-body water content were examined to determine whether these indices can estimate the proximate composition of juvenile lake herring *Coregonus artedii* exposed to a simulated Lake Superior winter over a 225 day laboratory experiment. The K was positively correlated to whole-body crude lipid, crude protein, and gross energy content and negatively correlated to whole-body water content for each sampling period of the experiment (days 75, 150, 225). In contrast, there was only a weak positive correlation between K and whole-body ash content. While per cent water content was negatively correlated with crude lipid, crude protein and gross energy content for each of the three sampling periods, the correlation between this predictor and ash content for each of the three sampling periods, the correlation between this predictor and ash content was only weakly negative. The indices can be used to accurately estimate temporal changes in proximate composition of juvenile lake herring during winter periods.

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