Supplementary Material

Comparative biology of the grenadiers *Macrourus caml* and *M*. *whitsoni* in the Ross Sea region, Antarctica

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# Supplementary Data

This document reports the supplementary tables and figures cited in the paper.

## Supplementary Tables

Supplementary Table S1. Results of Kolmogorov-Smirnov tests of length and age distributions between *Macrourus caml* and *M*. *whitsoni* from the Ross Sea region. Longline includes all fish sampled by longlines, including those collected during the winter surveys.

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Test** | ***D*** | ***p*** |
| Total length | *M*. *caml* vs. *M. whitsoni* | 0.41 | < 0.01 |
|  | *M*. *caml* malevs. *M. caml* female | 0.23 | < 0.01 |
|  | *M*. *whitsoni* malevs. *M. whitsoni* female | 0.31 | < 0.01 |
|  | *M*. *caml* longline vs.research trawl | 0.09 | <0.01 |
|  | *M*. *whitsoni* longline vs.research trawl | 0.61 | <0.01 |
| Age | *M*. *caml* vs. *M. whitsoni* | 0.22 | < 0.01 |
|  | *M*. *caml* malevs. *M. caml* female | 0.06 | 0.69 |
|  | *M*. *whitsoni* malevs. *M. whitsoni* female | 0.09 | 0.41 |
|  | *M*. *caml* longline vs.research trawl | 0.16 | < 0.01 |
|  | *M*. *whitsoni* longline vs.research trawl | 0.58 | < 0.01 |

Supplementary Table S2. Sex-aggregated von Bertalanffy growth function (VBGF) parameter estimates ± standard error for unconstrained and constrained (*t*0 = 0) models for *Macrourus caml* and *M*. *whitsoni* in the Ross Sea region.

|  |  |  |
| --- | --- | --- |
| **Species** | **Model** | **VBGF parameter** |
| ***L*∞ (TL, cm)** | ***k*** | ***t*0** |
| *M*. *caml* | Unconstrained  | 82.85 ± 1.85 | 0.056 ± 0.005 | -1.098 ± 0.882 |
|  | Constrained | 81.21 ± 1.18 | 0.062 ± 0.002 | - |
| *M*. *whitsoni* | Unconstrained  | 65.82 ± 1.73 | 0.075 ± 0.007 | -0.822 ± 0.614 |
|  | Constrained | 64.17 ± 1.09 | 0.084 ± 0.004 | - |

## Supplementary Figures



**Supplementary Figure S1.** Histogram of differences in annuli counts (left) and age bias plot (right) comparing annuli estimates from thin sections between the reader of the current study (PMM re-read) and the reference set. Error bars indicate the coefficient of variation (CV) for each age.



**Supplementary Figure S2.** Histogram of differences in annuli counts (left) and age bias plot (right) comparing annuli estimates from primary and secondary reads by the reader of the current study (PMM) for *Macrourus caml* (top) and *M*. *whitsoni* (bottom). Error bars indicate the coefficient of variation (CV) for each age.



**Supplementary Figure S3.** Locations where ripe/running ripe (red crosses) and spent (blue crosses) female *Macrourus caml* (top) and *M*. *whitsoni* (bottom) were sampled in the Ross Sea region.