

## Respiration rates and active carbon flux of mesopelagic fishes (Family Myctophidae) in the Scotia Sea, Southern Ocean

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Marine Ecology Progress Series 610: 149–162 (2019)

Table S1: Length- Mass regressions used for conversion from standard length (SL, in mm) to wet mass (WM, in g). Lower and upper 95% confidence intervals are also given for each coefficient. Regression:  $WM = a SL^b$

Species/Genera Name	<i>a</i>	<i>Lower</i>	<i>Upper</i>	<i>b</i>	Lower	Upper	R <sup>2</sup>
<i>Electrona carlsbergi</i>	2.09 x10 <sup>-05</sup>	9.51 x10 <sup>-06</sup>	4.59 x10 <sup>-05</sup>	2.90	2.72	3.08	0.7214
<i>Electrona antarctica</i>	3.72 x10 <sup>-06</sup>	3.22 x10 <sup>-06</sup>	4.30x10 <sup>-06</sup>	3.27	3.24	3.31	0.9599
<i>Gymnoscopelus fraseri</i>	3.53 x10 <sup>-06</sup>	1.31 x10 <sup>-06</sup>	9.51 x10 <sup>-06</sup>	3.24	3.00	3.47	0.8811
<i>Gymnoscopelus nicholsi</i>	2.87 x10 <sup>-06</sup>	2.02 x10 <sup>-06</sup>	4.08 x10 <sup>-06</sup>	3.25	3.18	3.33	0.9936
<i>Gymnoscopelus braueri</i>	4.58 x10 <sup>-06</sup>	3.60 x10 <sup>-06</sup>	5.82 x10 <sup>-06</sup>	3.11	3.06	3.17	0.9326
<i>Krefflichthys anderssoni</i>	9.05 x10 <sup>-06</sup>	7.49 x10 <sup>-06</sup>	1.09 x10 <sup>-05</sup>	3.02	2.97	3.07	0.9599
<i>Nannobrachium achirus</i>	8.14 x10 <sup>-06</sup>	5.17x 10 <sup>-07</sup>	1.28 x10 <sup>-02</sup>	2.49	1.45	3.54	0.4259
<i>Protomyctophum tenisoni</i>	1.39 x10 <sup>-05</sup>	9.74x 10 <sup>-06</sup>	1.97 x10 <sup>-05</sup>	2.94	2.84	3.03	0.9589
<i>Protomyctophum bolini</i>	1.98 x10 <sup>-05</sup>	1.34 x10 <sup>-05</sup>	2.92 x10 <sup>-05</sup>	2.88	2.77	2.98	0.8926
<i>Protomyctophum choriodon</i>	1.27 x10 <sup>-05</sup>	3.24 x10 <sup>-06</sup>	4.94 x10 <sup>-05</sup>	2.98	2.66	3.30	0.8779
<i>Gymnoscopelus opisthopterus</i>	1.20 x10 <sup>-06</sup>	3.36 x10 <sup>-07</sup>	4.25 x10 <sup>-06</sup>	3.43	3.16	3.71	0.9874
<i>Electrona</i>	3.26 x10 <sup>-06</sup>	2.84 x10 <sup>-06</sup>	3.74 x10 <sup>-06</sup>	3.31	3.28	3.34	0.9563
<i>Gymnoscopelus</i>	4.49 x10 <sup>-06</sup>	3.61 x10 <sup>-06</sup>	5.59 x10 <sup>-06</sup>	3.12	3.07	3.17	0.9351
<i>Protomyctophum</i>	1.24 x10 <sup>-05</sup>	9.89 x10 <sup>-06</sup>	1.55 x10 <sup>-05</sup>	2.99	2.93	3.05	0.9453

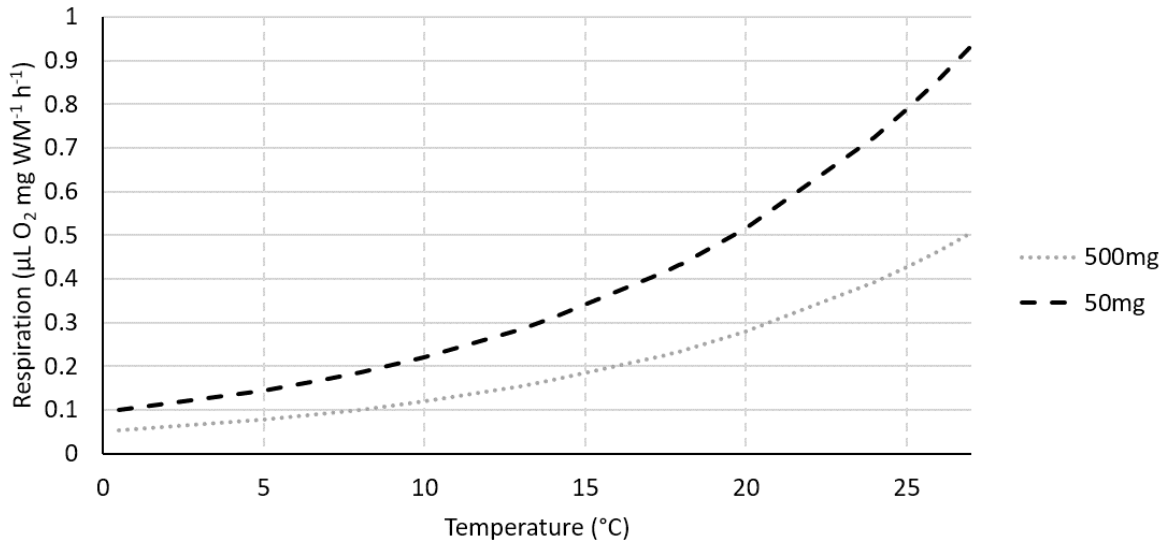


Figure S1: Calculated relationship between temperature (°C) and mass specific respiration rate ( $\mu\text{L O}_2 \text{ mg WM}^{-1} \text{ h}^{-1}$ ) for myctophid fishes of wet mass 50 mg (black dashed line), and 500 mg (grey dotted line).

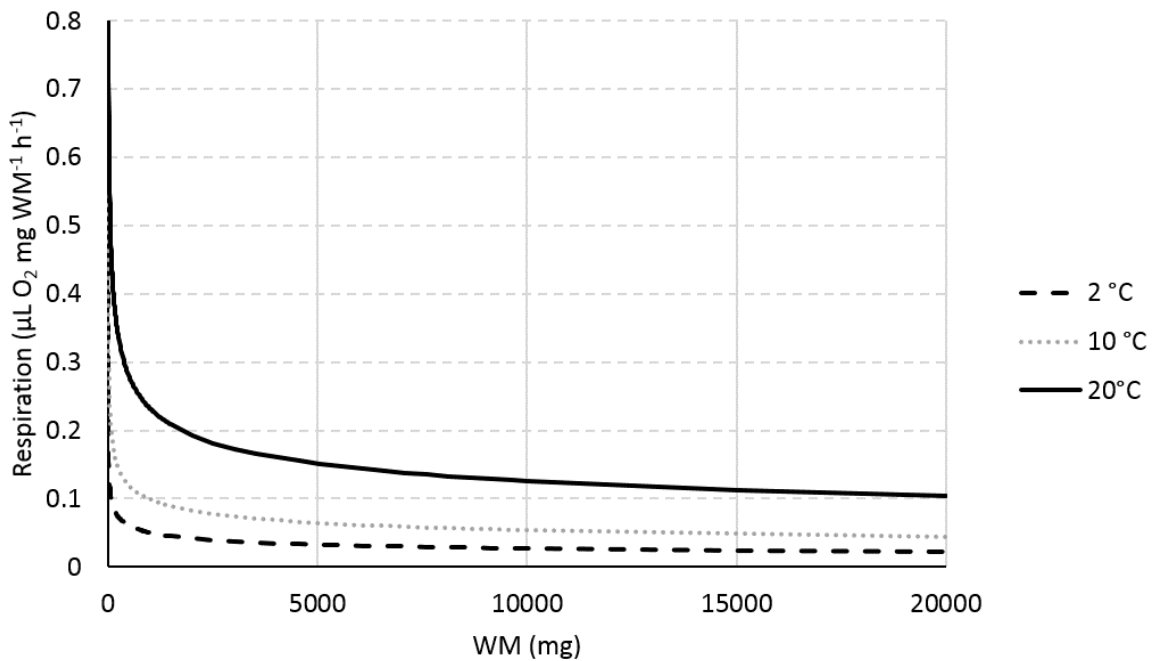


Figure S2: Calculated relationship between temperature (°C) and mass specific respiration rate ( $\mu\text{L O}_2 \text{ mg WM}^{-1} \text{ h}^{-1}$ ) for myctophid fishes at temperatures of 2 °C (black dashed line), 10 °C (grey dotted line), and 20 °C, solid black line.