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## Tables for manuscript

**Tab 1** Summary of biological and experimental paramaters for individual eels

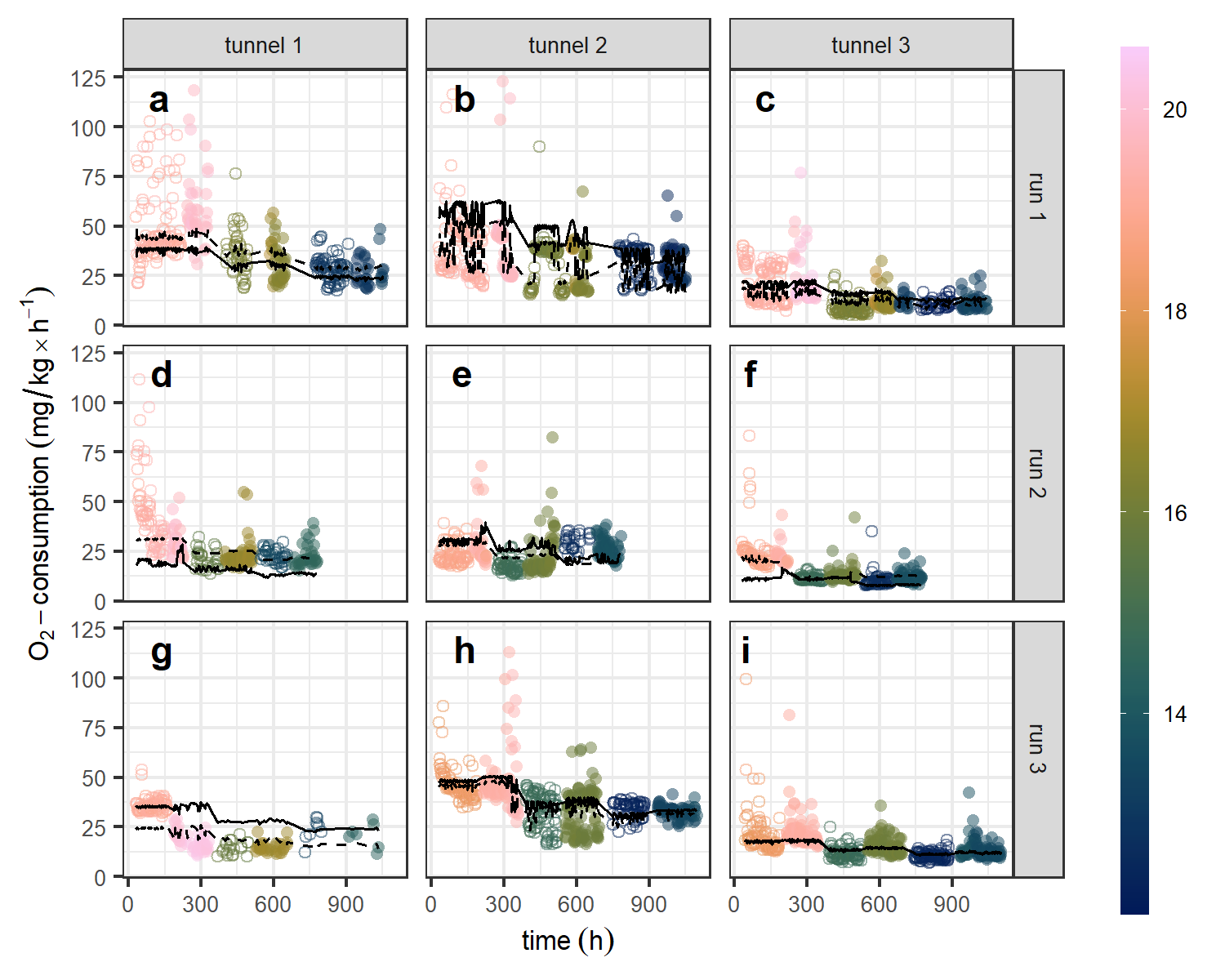
| ID | Length (cm) | Silvering Index\* | Biomass at start (g) | Biomass at end (g) | Fat at start (% WM) | Fat at end (% WM) | Swim time (d) | Swimming distance (km) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | 78 | 4 | 935 | 866 | 17.20 | 18.50 | 44.1 | 1727 |
| B | 74 | 5 | 732 | 701 | 20.85 | 21.65 | 44.1 | 1837 |
| C | 77 | 5 | 908 | 864 | 22.55 | 24.50 | 44.1 | 1814 |
| D | 78 | 5 | 973 | 928 | 19.25 | 17.65 | 32.6 | 1481 |
| E | 83 | 4 | 1045 | 1000 | 18.45 | 20.05 | 32.6 | 1573 |
| F | 90 | 4 | 1142 | 1079 | 21.55 | 20.75 | 32.2 | 1464 |
| G | 87 | 5 | 1345 | 1070 | 17.05 | 20.90 | 43.4 | 1935 |
| H | 81 | 4 | 987 | 947 | 19.15 | 19.15 | 45.8 | 2195 |
| I | 86 | 4 | 1345 | 1247 | 18.35 | 18.50 | 47.0 | 2169 |

\*according to Durif et al. (2005)  
  
  
  
**Tab 2** Short summary of the model statistics for main effects. Note, that value gives the change in the log of O2-consuption rate per change in one unit of the predictor.

| Parameter | Value | Lower conf. limit | Upper conf. limit | p |
| --- | --- | --- | --- | --- |
| Intercept | 3.298 | 2.232 | 4.364 | <0.001 |
| Temperature | 0.069 | 0.062 | 0.076 | <0.001 |
| Pressure | -0.003 | -0.009 | 0.002 | 0.213 |
| Flow rate | -1.719 | -3.567 | 0.129 | 0.068 |
| Tunnel 2 | 0.522 | -0.130 | 1.174 | 0.09 |
| Tunnel 3 | -0.552 | -1.199 | 0.096 | 0.077 |
| Run 2 | -0.494 | -1.135 | 0.147 | 0.099 |
| Run 3 | -0.058 | -0.711 | 0.595 | 0.817 |

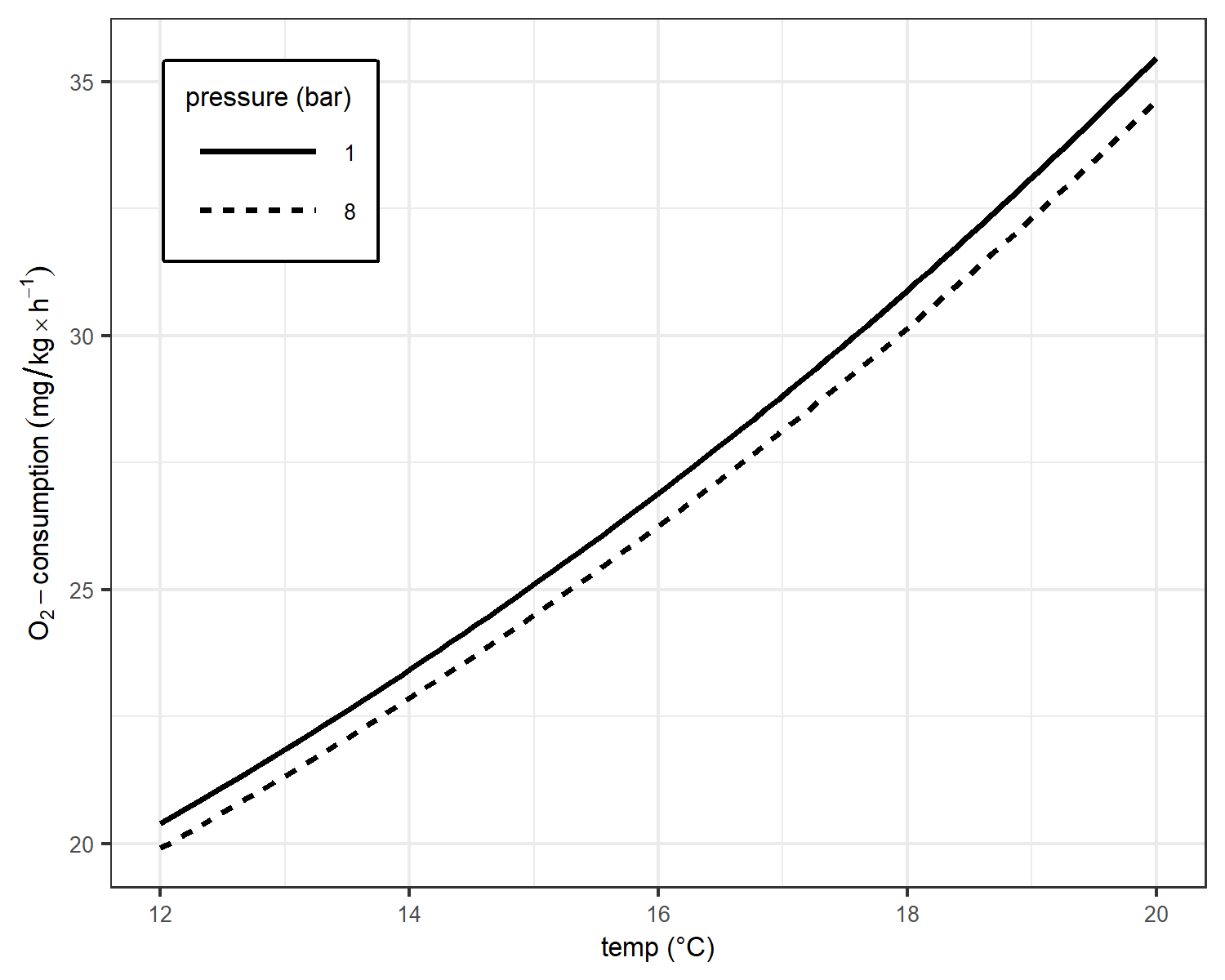
## Graphs for the manuscript

## Warning: `guides(<scale> = FALSE)` is deprecated. Please use `guides(<scale> =  
## "none")` instead.



**Fig 1** Oxygen consumption rate per individual (a-i) over time different at temperatures (color scale) at 1 bar (open circles) and 8 bar (closed circles). Modeled predictions are displayed on the population level (solid line) and for the individual (dashed line). Colour indicates temp in °C

## Warning: `guides(<scale> = FALSE)` is deprecated. Please use `guides(<scale> =  
## "none")` instead.



**Fig 2** Predicted oxygen consumption rate at different temperatures and pressures at a swimming speed of 0.6 BL/s.  Difference between 1 and 8 bar is not significant.

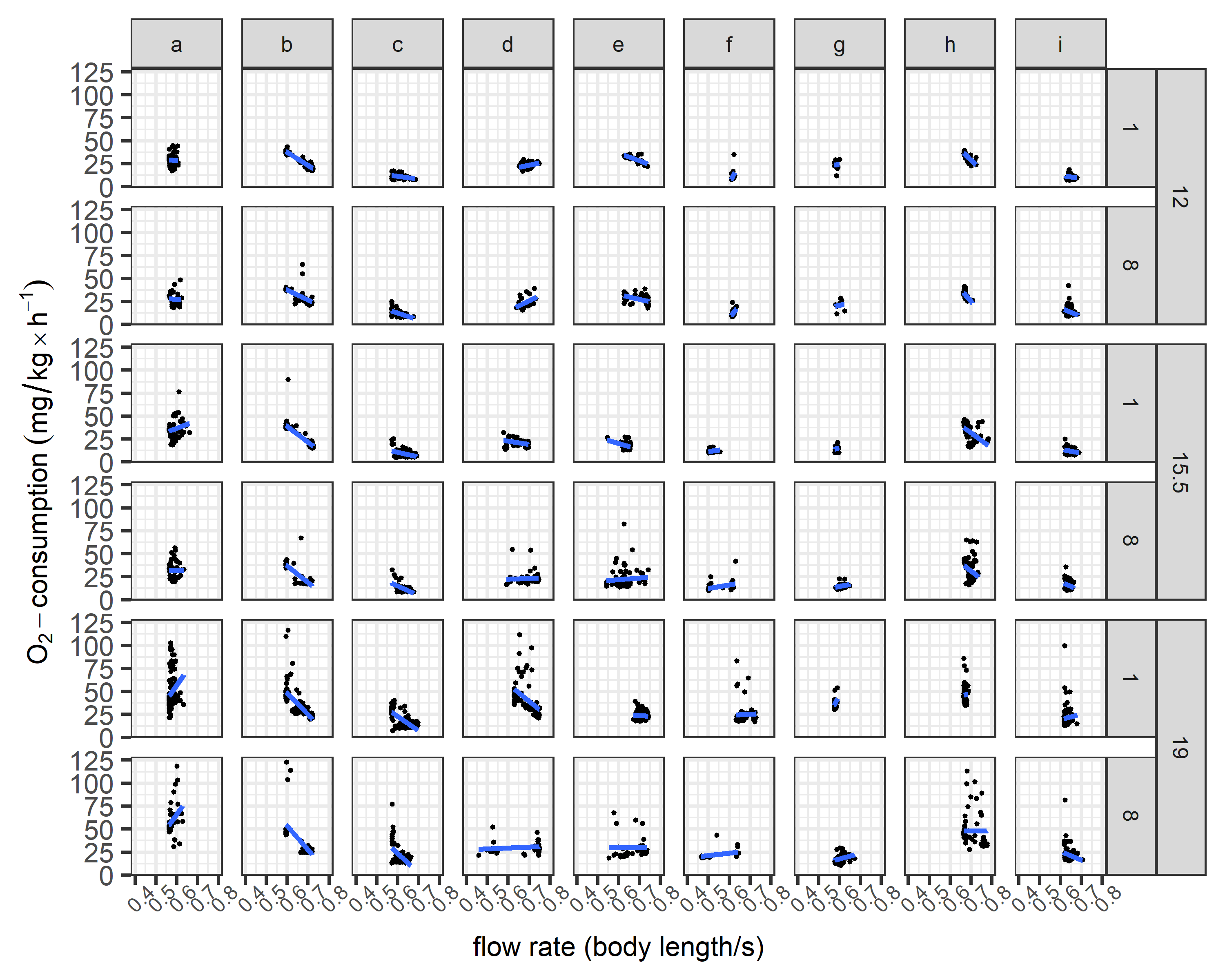
## Graphs/tabs for supplementary

**Tab S1** Summary of

| ID | nominal temperature (°C) | nominal pressure (bar) | swim time (d) | n |
| --- | --- | --- | --- | --- |
| A | 12.0 | 1 | 7.0 | 68 |
| A | 12.0 | 8 | 6.1 | 29 |
| A | 15.5 | 1 | 7.5 | 44 |
| A | 15.5 | 8 | 4.0 | 41 |
| A | 19.0 | 1 | 9.0 | 125 |
| A | 19.0 | 8 | 4.6 | 37 |
| B | 12.0 | 1 | 7.0 | 66 |
| B | 12.0 | 8 | 5.5 | 43 |
| B | 15.5 | 1 | 7.5 | 101 |
| B | 15.5 | 8 | 4.0 | 49 |
| B | 19.0 | 1 | 9.1 | 125 |
| B | 19.0 | 8 | 4.0 | 47 |
| C | 12.0 | 1 | 7.0 | 44 |
| C | 12.0 | 8 | 6.1 | 59 |
| C | 15.5 | 1 | 7.6 | 100 |
| C | 15.5 | 8 | 4.5 | 47 |
| C | 19.0 | 1 | 9.0 | 125 |
| C | 19.0 | 8 | 5.0 | 64 |
| D | 12.0 | 1 | 5.8 | 41 |
| D | 12.0 | 8 | 5.2 | 31 |
| D | 15.5 | 1 | 5.1 | 31 |
| D | 15.5 | 8 | 5.8 | 53 |
| D | 19.0 | 1 | 6.4 | 77 |
| D | 19.0 | 8 | 3.9 | 29 |
| E | 12.0 | 1 | 5.8 | 30 |
| E | 12.0 | 8 | 5.2 | 55 |
| E | 15.5 | 1 | 5.1 | 67 |
| E | 15.5 | 8 | 5.8 | 77 |
| E | 19.0 | 1 | 6.4 | 82 |
| E | 19.0 | 8 | 3.9 | 33 |
| F | 12.0 | 1 | 5.8 | 72 |
| F | 12.0 | 8 | 5.2 | 68 |
| F | 15.5 | 1 | 5.1 | 67 |
| F | 15.5 | 8 | 5.8 | 77 |
| F | 19.0 | 1 | 6.0 | 76 |
| F | 19.0 | 8 | 3.9 | 34 |
| G | 12.0 | 1 | 7.0 | 9 |
| G | 12.0 | 8 | 6.6 | 7 |
| G | 15.5 | 1 | 6.9 | 20 |
| G | 15.5 | 8 | 7.9 | 28 |
| G | 19.0 | 1 | 6.8 | 87 |
| G | 19.0 | 8 | 7.0 | 47 |
| H | 12.0 | 1 | 7.0 | 58 |
| H | 12.0 | 8 | 8.0 | 69 |
| H | 15.5 | 1 | 6.9 | 87 |
| H | 15.5 | 8 | 7.9 | 94 |
| H | 19.0 | 1 | 7.8 | 105 |
| H | 19.0 | 8 | 7.0 | 97 |
| I | 12.0 | 1 | 7.0 | 96 |
| I | 12.0 | 8 | 8.0 | 110 |
| I | 15.5 | 1 | 6.9 | 89 |
| I | 15.5 | 8 | 7.5 | 94 |
| I | 19.0 | 1 | 7.8 | 97 |
| I | 19.0 | 8 | 6.6 | 90 |

**Tab S2** Summary of model AICs

| Intercept | press\_mean | run | speedBL | temp\_mean | tunnel | df | logLik | AIC | delta | weight |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3.32 |  | 1 | -1.76 | 0.07 | 1 | 12 | -1.51 | 27.02 | 0.00 | 0.25 |
| 3.31 | 0 | 1 | -1.73 | 0.07 | 1 | 13 | -0.75 | 27.50 | 0.48 | 0.20 |
| 2.39 |  | 1 |  | 0.07 | 1 | 11 | -3.11 | 28.22 | 1.20 | 0.14 |
| 3.14 |  |  | -1.71 | 0.07 | 1 | 10 | -4.21 | 28.42 | 1.39 | 0.13 |
| 2.40 | 0 | 1 |  | 0.07 | 1 | 12 | -2.35 | 28.70 | 1.68 | 0.11 |
| 3.14 | 0 |  | -1.69 | 0.07 | 1 | 11 | -3.36 | 28.72 | 1.70 | 0.11 |
| 2.15 | 0 |  |  | 0.07 | 1 | 10 | -4.94 | 29.89 | 2.87 | 0.06 |
| 3.08 | 0 |  | -1.68 | 0.07 |  | 9 | -8.29 | 34.57 | 7.55 | 0.01 |
| 3.19 |  | 1 | -1.71 | 0.07 |  | 10 | -9.00 | 38.01 | 10.98 | 0.00 |
| 3.18 | 0 | 1 | -1.68 | 0.07 |  | 11 | -8.17 | 38.35 | 11.32 | 0.00 |
| 2.13 | 0 | 1 |  | 0.07 |  | 10 | -9.74 | 39.48 | 12.46 | 0.00 |
| 4.13 | 0 |  | -1.39 |  | 1 | 10 | -124.27 | 268.54 | 241.51 | 0.00 |
| 3.51 | 0 | 1 |  |  | 1 | 11 | -123.40 | 268.79 | 241.77 | 0.00 |
| 4.09 | 0 | 1 | -1.39 |  |  | 10 | -129.38 | 278.76 | 251.74 | 0.00 |



**Fig S1** Effect of swimming speed on Oxygen consumption rate per Temperature and pressure for each individual