**S\_table 1** Size, and bioenergetics data for Northeast stock Pacific chub mackerel individuals examined in the previous study including experimental temperature (°C), fish mass (*W*, g), fork length (*FL*, cm), maximum sustainable swimming speed (*U*max, cm s−1) and activity dependency *d*R which estimated from exponential regression equations of mass-specific *Ṁ*O2(*R*, gO2 g fish−1 day−1) versus *U* (cm s−1): . Size and *U*max data at 24 °C and 18 °C were originally obtained from Sepulveda & Dickson (2000), and Dickson et al., (2002), respectively while size and *U*max data at 14 °C and estimated value of activity dependency *d*R were obtained Guo et al. (2019).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Temperature (°C) | Mass (g) | Fork length (cm) | *U*max (cm s-1) | *U*max (*FL s*−1) | *d*R (s cm−1) | *r*² | *P* |
| 24 | 25.6 | 14.0 | 82.5 | 5.9 | 0.026 | 0.962 | <0.001\*\*\* |
| 24 | 38.3 | 16.6 | 90.0 | 5.4 | 0.012 | 0.963 | <0.05\* |
| 24 | 45.4 | 17.0 | 70.0 | 4.1 | 0.028 | 0.884 | <0.001\*\*\* |
| 24 | 52.5 | 17.5 | 80.0 | 4.6 | 0.038 | 0.912 | <0.001\*\*\* |
| 24 | 64.0 | 19.0 | 100.0 | 5.3 | 0.027 | 0.954 | <0.001\*\*\* |
| 24 | 97.2 | 21.0 |  |  | 0.025 | 0.909 | <0.05\* |
| 24 | 102.7 | 21.3 | 80.0 | 3.8 | 0.029 | 0.905 | <0.01\*\* |
| 24 | 108.2 | 21.5 | 90.0 | 4.2 | 0.023 | 0.738 | <0.001\*\*\* |
| 24 | 129.5 | 23.3 | 120.0 | 5.2 | 0.011 | 0.954 | <0.001\*\*\* |
| 24 | 144.0 | 24.7 |  |  | 0.026 | 0.973 | <0.001\*\*\* |
| 24 | 146.8 | 23.4 | 100.0 | 4.3 | 0.017 | 0.980 | <0.001\*\*\* |
| 24 | 155.6 | 24.0 | 110.0 | 4.6 | 0.017 | 0.962 | <0.001\*\*\* |
| 18 | 34.2 | 15.6 | 60.0 | 3.8 | 0.037 | 0.955 | <0.001\*\*\* |
| 18 | 38.2 | 15.8 | 67.5 | 4.3 | 0.019 | 0.962 | <0.001\*\*\* |
| 18 | 49.6 | 17.7 | 67.5 | 3.8 | 0.028 | 0.992 | <0.001\*\*\* |
| 18 | 49.8 | 18.0 | 75.0 | 4.2 | 0.024 | 0.975 | <0.001\*\*\* |
| 18 | 53.6 | 19.2 | 52.5 | 2.7 | 0.028 | 0.965 | <0.001\*\*\* |
| 18 | 71.2 | 19.3 | 67.5 | 3.5 | 0.023 | 0.862 | <0.001\*\*\* |
| 18 | 77.0 | 19.8 | 75.0 | 3.8 | 0.024 | 0.818 | <0.005\*\* |
| 18 | 106.6 | 23.0 | 67.5 | 2.9 | 0.026 | 0.809 | <0.05\* |
| 18 | 145.3 | 24.8 | 97.5 | 3.9 | 0.020 | 0.937 | <0.001\*\*\* |
| 18 | 161.5 | 25.6 | 82.5 | 3.2 | 0.018 | 0.870 | <0.001\*\*\* |
| 18 | 170.3 | 26.2 | 82.5 | 3.1 | 0.010 | 0.729 | <0.001\*\*\* |
| 18 | 178.9 | 26.3 | 67.5 | 2.6 | 0.008 | 0.832 | <0.001\*\*\* |
| 14 | 43.4 | 17.1 | 61.0 | 3.5 | 0.029 | 0.977 | <0.005\*\* |
| 14 | 45.6 | 17.4 | 106.0 | 6.1 | 0.022 | 0.992 | <0.001\*\*\* |
| 14 | 54.1 | 17.7 | 61.0 | 3.5 | 0.028 | 0.954 | <0.001\*\*\* |
| 14 | 56.3 | 18.9 | 74.0 | 3.9 | 0.029 | 0.942 | <0.005\*\* |
| 14 | 94.0 | 22.5 | 97.0 | 4.6 | 0.031 | 0.995 | <0.001\*\*\* |
| 14 | 114.0 | 24.2 | 82.0 | 3.7 | 0.025 | 0.982 | <0.001\*\*\* |
| 14 | 123.8 | 24.9 | 81.0 | 3.5 | 0.025 | 0.987 | <0.001\*\*\* |
| 14 | 149.7 | 25.3 | 87.0 | 3.4 | 0.021 | 0.936 | <0.005\*\* |
| 14 | 252.0 | 28.8 | 89.0 | 2.9 | 0.021 | 0.979 | <0.001\*\*\* |