Table S1. Details of statistical tests for the curve fitting appearing in Fig. 5.

| Figure | Model                                              | Estimate of $a \pm SE$ | Estimate of $b \pm SE$ | t-value for $a$ | t-value for $b$ | P-value for $a$ | P-value for $b$
|--------|----------------------------------------------------|-------------------------|------------------------|-----------------|-----------------|-----------------|-----------------|
| Fig 5A | $U_{peak\text{(gape)}} = a e^{bL}$                | -0.57 ±0.47             | 3.36 ± 0.55            | 1.2             | 6.12            | 0.29            | 0.003           |
| Fig 5B | $U_{peak\text{(gills)}} = a e^{bL}$               | -1.65 ±0.96             | 1.74 ± 0.39            | 1.7             | 4.37            | 0.16            | 0.012           |
| Fig 5C | $Q_{inlet\text{(gape)}} = a e^{bL}$               | -0.02 ±0.01             | 3.49 ± 0.30            | 2.1             | 11.5            | 0.1             | 0.001           |
| Fig 5D | $Q_{outlet\text{(gills)}} = a e^{bL}$             | -0.15 ±0.006            | 3.16 ± 0.25            | 2.55            | 12.2            | 0.064           | 0.001           |
Figure S1: Velocity profiles along a vertical line close to the center of the second axial length (L2) at an instance where the L2 has the most parallel orientation (immediately after peak mouth opening).