

Table S1: Models used to describe the relationship between temperature (T) and the performance (P) of *Limnodynastes peronii* during embryonic and larval stages.

Model	Function
Quadratic	$P = aT^2 + bT + c$
Gaussian	$P = ae^{-0.5\left(\frac{ T-b }{c}\right)^2}$
Modified Gaussian	$P = ae^{-0.5\left(\frac{ T-b }{c}\right)^d}$
Exponentially modified Gaussian	$P = \frac{ac\sqrt{2\pi}}{2d} e^{(\frac{b-T+\frac{c^2}{2d^2}}{d})} \left[\frac{d}{ d } - erf\left(\frac{b-x}{\sqrt{2c}} + \frac{c}{\sqrt{2d}}\right) \right]$
Weibull	$P = a \left(\frac{d-1}{d} \right)^{\frac{1-d}{d}} \left[\frac{T-b}{c} + \left(\frac{d-1}{d} \right)^{\frac{1}{d}} \right]^{d-1} e^{-\left[\frac{T-b}{c} + \left(\frac{d-1}{d} \right)^{\frac{1}{d}} \right]^d} + \frac{d-1}{d}$
Beta	$P = \frac{a \left(\frac{T-b + \frac{c(d-1)}{d+e-2}}{c} \right)^{d-1} \left(1 - \frac{T-b + \frac{c(d-1)}{d+e-2}}{c} \right)^{e-1}}{\left(\frac{d-1}{d+e-2} \right)^{d-1} \left(\frac{e-1}{d+e-2} \right)^{e-1}}$

Table S2: Comparisons of models fit to the developmental rates of anurans at each ontogenetic interval. For each model, we report both the AIC and the differential AIC (Δ_i), which is the difference between a given model's AIC and the lowest AIC. We also report the Akaike weight (w_i), which is the normalized likelihood that the model is the best one in the set. We used bold font to denote the best-fitting model for each ontogenetic interval, and provided the thermal optimum (T_{opt}) and 80% performance breadth (B_{80}) predicted by this model.

Ontogenetic stages	Model	K	AIC	Δ_i	w_i	T_{opt}	B_{80}
Embryonic stage	G	4	-2842.27	674.65	0.000		
	Q	4	-3162.34	354.58	< 0.001		
	MG	5	-3438.33	78.59	< 0.001		
	EMG	5	-3291.51	225.41	< 0.001		
	W	5	-3249.43	267.49	< 0.001		
	B	6	-3516.92	0	> 0.999	29.6	24.0–33.0
Early larval stages (hatching to stage 25)	G	4	-1680.41	357.33	< 0.001		
	Q	4	-1824.92	212.82	< 0.001		
	MG	5	-1893.00	144.74	< 0.001		
	EMG	5	-1969.64	68.1	< 0.001		
	W	5	-1968.05	69.69	< 0.001		

	B	6	-2037.74	0	> 0.999	28.2	23.1–31.9
Mid-larval stages (stages 25 to 31)	G	4	-2185.23	319.95	< 0.001		
	Q	4	-2443.11	62.07	< 0.001		
	MG	5	-2255.45	249.73	< 0.001		
	EMG	5	-2378.54	126.64	< 0.001		
	W	5	-2386.63	118.55	< 0.001		
	B	6	-2505.18	0	> 0.999	28.5	22.1–32.8
Late larval stages (stages 31 to 42)	G	4	-2119.96	218.16	< 0.001		
	Q	4	-2307.05	31.07	< 0.001		
	MG	5	-2226.53	111.59	< 0.001		
	EMG	5	-2316.27	21.85	< 0.001		
	W	5	-2338.12	0	> 0.999	27.1	24.1–29.4
	B	6	-2270.62	67.5	< 0.001		
Tail resorption (stage 42 to metamorphosis)	G	4	-1580.49	701.51	< 0.001		

	Q	4	-1735.10	381.43	< 0.001		
	MG	5	-1808.82	105.45	< 0.001		
	EMG	5	-1744.69	252.26	< 0.001		
	W	5	-1767.15	294.42	< 0.001		
	B	6	-1826.29	0	> 0.999	26.7	22.5–30.3

Table S3: Comparisons of models fit to the growth rates of anurans at each ontogenetic interval. For each model, we report both the AIC and the differential AIC (Δ_i), which is the difference between a given model's AIC and the lowest AIC. We also report the Akaike weight (w_i), which is the normalized likelihood that the model is the best one in the set. The best-fitting model for each developmental stage is denoted with bold font.

Ontogenetic stages	Model	K	AIC	Δ_i	w_i	T_{opt}	B_{80}
Embryonic stage	G	4	-1905.71	332.04	0.000		
	Q	4	-1905.98	331.77	< 0.001		
	MG	5	-2036.39	201.36	< 0.001		
	EMG	5	-2190.54	47.21	< 0.001		
	W	5	-2136.60	101.15	< 0.001		
	B	6	-2237.75	0	> 0.999	28.5	23.5–31.9
Early larval stages (hatching to stage 25)	G	4	-1420.37	196.55	< 0.001		
	Q	4	-1387.66	229.26	< 0.001		
	MG	5	-1447.95	168.97	< 0.001		
	EMG	5	-1601.44	15.48	< 0.001		
	W	5	-1594.23	22.69	< 0.001		

	B	6	-1616.92	0	> 0.999	27.0	23.1–30.0
Midlarval stages (stages 25 to 31)	G	4	-1141.60	396.69	< 0.001		
	Q	4	-1214.10	324.19	< 0.001		
	MG	5	-1368.26	170.03	< 0.001		
	EMG	5	-1377.11	161.18	< 0.001		
	W	5	-1125.94	412.35	< 0.001		
	B	6	-1538.29	0	> 0.999	27.9	21.4–32.2

Table S4: Parameter values for the best function describing developmental rate during each ontogenetic interval. For all stages except for 31 to 42, these values correspond to the parameters of the beta model. For stages 31 to 42, these values correspond to the parameters of the Weibull model.

Ontogenetic stages	<i>A</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
Embryonic stage	0.024431	29.63653	21.64977	2.194146	1.30143
Hatching to stage 25	0.039652	28.1821	19.24898	2.103637	1.478059
Stages 25 to 31	0.002914	28.54352	19.00752	1.673944	1.271371
Stages 31 to 42	0.002194	27.08064	453.4902	115.672	—
Tail resorption	0.009535	26.68878	19.00027	2.40805	1.880754

Table S5: Parameter values for the best function describing growth rate during each ontogenetic interval. For all stages, these values correspond to the parameters of the beta model.

Stages	<i>A</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
Embryonic stage	0.119177	28.52341	28.40203	3.409165	1.575518
Hatching to stage 25	0.075687	27.00428	39.60741	7.73413	2.444576
Stages 25 to 31	0.070983	27.9008	26.21305	2.305945	1.396007

Table S6: Comparisons of age and size at ontogenetic stages among thermal treatments.

Age at each stage was compared using a Kruskal-Wallis test. Size was compared either by a Kruskal-Wallis test or by ANOVA, depending on whether the data for a particular stage met the assumptions of the parametric test.

Age		df	<i>H</i>	<i>P</i>
	Hatch	5	240.5	<0.001
	Stage 25	5	165.0	<0.001
	Stage 31	5	86.6	<0.001
	Metamorphosis	5	100.9	<0.001

Size		df	<i>H</i>	<i>P</i>	
	Hatch	5	102.7	<0.001	
	Stage 25	5	18.6	0.002	
		df	MS	<i>F</i>	
	Stage 31	5,132	136.3	43.0	<0.001
	Metamorphosis	5,124	138.5	41.8	<0.001