

S1 Table. Parameter values and 95% confidence intervals for functions describing the relationships between temperature and *Ae. aegypti* life history traits. Functional forms are shown in Equations 8-11 in the main text. It should be noted that for parameters taken for Mordecai et al. (2017) (adult fecundity and juvenile survival), 95% credible intervals are given due to the Bayesian framework used to derive parameters. 95% confidence intervals are not given for juvenile mortality because juvenile mortality was calculated using Equation A in S3 Text before fitting a polynomial function. The variability in $\mu_J(t)$ is therefore captured by the 95% confidence intervals on parameters describing $S_J(t)$ and $\tau_J(t)$. Where parameters are determined by equations in the main text, this is denoted by “Eq.” followed by the equation number as used in the main text.

Trait	Parameter	Value	95% CI		Source
			2.5%	97.5%	
Adult fecundity, b	c_b	8.56×10^{-3}	3.78×10^{-3}	1.41×10^{-2}	Reference [1] & Eq. 8
	T_{0b}	14.58	8.08	20.60	
	T_{Mb}	34.61	34.00	35.77	
Adult mortality, μ_A	k	36.55	32.27	23.85	References [2–10] & Eq. 9
	γ	25.17	23.85	26.50	
	σ	7.31	5.90	8.71	
Juvenile development time, $\tau_J(t)$	β_{0g}	133.53	113.45	153.61	References [2,7,9–18] & Eq. 10
	β_{1g}	-8.29	-9.90	-6.69	
	β_{2g}	0.14	0.10	0.17	
Juvenile survival, S_J	c_S	5.99×10^{-3}	6.82×10^{-3}	5.13×10^{-3}	Reference [1] & Eq. B in S3 Text
	T_{0S}	13.56	12.56	14.51	
	T_{MS}	38.29	37.54	39.02	
Juvenile mortality, μ_J	$\beta_{0\mu}$	3.37×10^{-3}	-	-	Eq. 11
	$\beta_{1\mu}$	-5.88×10^{-2}	-	-	
	$\beta_{2\mu}$	4.05×10^{-3}	-	-	
	$\beta_{3\mu}$	-1.26×10^{-4}	-	-	
	$\beta_{4\mu}$	1.47×10^{-6}	-	-	
Density-dependent Juvenile mortality, $\delta(t)$	K	Eq. 12			Reference [1] & Eq. 12
	λ	7.5×10^8	2.5	7	
	ω	4	-	-	

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