

Table S1. Studies used in the meta-analyses, organized first by reptile Order and then by publication date. “Mean Temp” is the mean temperature (°C) of the constant or fluctuating incubation treatments. “Range” is the daily range of temperatures, where a treatment such as $\pm 3^{\circ}\text{C}$ would equal a Range of 6°C. Treatments with Range = 0°C are the control group for each paper. Treatments were identified as the control if the study referred to the treatment as “constant” or if the daily range of temperatures was presented as $\leq 1^{\circ}\text{C}$. For each response variable, “1” indicates the paper was included in the associated meta-analyses (phenotypic mean and variance), whereas “0” indicates the paper was not included in the associated meta-analyses. Full reference information is found in the References section of the main manuscript.

Paper	Family	Species	Mean Temp (°C)	Range (°C)	Incubation Duration	Survival	Sex	Mass	Length	Speed
<i>Order Testudines</i>										
Bull and Vogt 1979	Emydidae	<i>Graptemys ouachitensis</i> , <i>G. pseudogeographica</i>	25.0	0.0	0	0	1	0	0	0
			25.0	5.0						
Georges et al. 1994	Cheloniidae	<i>Caretta caretta</i>	26.0	0.0	0	0	1	0	0	0
			26.0	6.0						
			26.0	8.0						
			26.0	10.0						
			26.0	12.0						
			26.0	14.0						
			26.0	16.0						
Ashmore and Janzen 2003	Trionychidae	<i>Apalone mutica</i>	30.5	0.0	1	1	0	1	1	1
			30.5	4.0						
			30.5	8.0						
Mullins and Janzen 2006	Trionychidae	<i>Apalone mutica</i>	28.5	0.0	1	1	0	1	1	1
			28.5	4.0						
			28.5	8.0						
			32.5	0.0						
			32.5	4.0						
			32.5	8.0						
Les et al. 2007	Emydidae	<i>Chrysemys picta</i> , <i>Trachemys scripta</i>	28.5	0.0	1	1	1	1	1	0
			28.5	6.0						
Du et al. 2009	Geoemydidae	<i>Chinemys (Mauremys) reevesii</i>	28.0	0.0	1	1	1	1	1	0
			28.0	6.0						
			28.0	12.0						
Les et al. 2009	Emydidae	<i>Chrysemys picta</i> , <i>Trachemys scripta</i>	23.0	0.0	1	1	0	1	1	0
			23.0	6.0						
			31.0	0.0						
			31.0	6.0						
Paitz et al. 2010	Emydidae	<i>Chrysemys picta</i>	27.0	0.0	1	1	1	1	1	0
			27.0	8.0						
			27.0	16.0						
McGaugh and Janzen 2011	Emydidae	<i>Chrysemys picta</i>	28.0	0.0	0	0	1	0	0	0
			28.0	4.0						
Micheli-Campbell et al. 2012	Chelidae	<i>Elusor macrurus</i>	28.0	0.0	1	1	0	1	0	1
			28.0	6.0						
			28.0	12.0						
Li et al. 2013a	Trionychidae	<i>Pelodiscus (Mauremys) sinensis</i>	30.0	0.0	1	1	0	1	1	0
			30.0	6.0						
			30.0	10.0						
Carter et al. 2017	Emydidae	<i>Chrysemys picta</i>	29.0	0.0	0	0	1	0	0	0
			29.0	6.0						
<i>Order Squamata</i>										
Shine and Harlow 1996	Scincidae	<i>Bassiana (Acritoscincus) duperreyi</i>	23.0	0.0	1	1	0	1	1	1

			23.0	7.5					
			23.0	19.5					
Du and Feng 2008	Lacertidae	<i>Takydromus septentrionalis</i>	24.0	0.0	1	1	0	1	1
			24.0	6.0					
			24.0	12.0					
			28.0	0.0					
			28.0	6.0					
			28.0	12.0					
Patterson and Blouin-Demers 2008	Colubridae	<i>Elaphe (Pantherophis) obsoletus</i>	26.0	0.0	1	1	0	1	1
			29.0	0.0					
			26.0	6.0					
			29.0	6.0					
Andrewartha et al. 2010	Gekkonidae	<i>Heteronotia binoei</i>	32.0	0.0	1	1	0	0	0
			32.0	10.0					
			32.0	18.0					
Warner and Shine 2011	Agamidae	<i>Amphibolurus muricatus</i>	25.0	0.0	1	1	1	1	1
			25.0	4.0					
			25.0	8.0					
			28.0	0.0					
			28.0	4.0					
			28.0	8.0					
Días et al. 2012	Lacertidae	<i>Psammodromus algirus</i>	28.0	0.2	1	0	0	1	1
			28.0	8.0					
Lowenborg et al. 2012	Colubridae	<i>Natrix natrix</i>	25.0	0.4	1	1	0	1	1
			25.0	12.0					
Li et al. 2013b	Lacertidae	<i>Lacerta agilis</i>	27.0	0.0	1	1	0	1	1
			27.0	4.0					
			27.0	8.0					
			27.0	12.0					
Qu et al. 2014	Scincidae	<i>Plestiodon chinensis</i>	27	0	1	0	0	1	1
			27	3					
			27	5					
Ma et al. 2018	Scincidae	<i>Sphenomorphus incognitus</i>	25.0	0.0	1	1	0	1	1
			25.0	6.0					
			25.0	10.0					