



Corrigendum: Countergradient Variation in Reptiles: Thermal Sensitivity of Developmental and Metabolic Rates Across Locally Adapted Populations

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A Corrigendum on

Countergradient Variation in Reptiles: Thermal Sensitivity of Developmental and Metabolic Rates Across Locally Adapted Populations

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In the original article, there was a misinterpretation of the results of Tiatragul et al., 2017 and Hall and Warner, 2018, where population-level differences in development time for *A. cristatellus* and *A. sagrei* were incorrectly stated.

These studies did not find any significant effect of habitat of origin on development time – mean incubation times between forested and urban wild populations were similar across temperature treatments. Tiatragul et al. (2017) showed slight differences in incubation duration between forested and urban populations (**Figure 2**), however these were not significant (Table 1). The “Forest” and “City” headings of Table 1 in Hall and Warner (2018) refer to the incubation treatments (forest or city thermal profile), not the population – since no population x incubation treatment interactions were found, data across populations were pooled to estimate mean incubation period for each treatment.

A correction has been made to “**Consequences of Countergradient Adaptation: When and Why Is Thermal Countergradient Adaptation Absent?**”:

Despite the prevalence of CnGV in development time, there are studies that do not show this trend, for example evidence for CnGV was absent across native-non-native ranges for species adapting to hot temperatures. Differences in development time were absent when comparing forested (cool) vs. urban (hot) populations of *Anolis cristatellus* and *Anolis sagrei* under common garden conditions (Tiatragul et al., 2017; Hall and Warner, 2018). Further measures of the relative temperature dependencies of *D* and *MR* in other species are needed to elucidate the temperature-dependent costs of development as a potentially general mechanism for local thermal adaptation to extreme high temperatures.

In the original article, there was a mistake in **Figure 2** as published. Due to the misinterpretation of results by Hall and Warner, 2018 (as per above), effect sizes for development time of *Anolis cristatellus* were incorrect. Since data across populations were pooled for this study, effect sizes were unable to be recalculated. The corrected **Figure 2** appears below.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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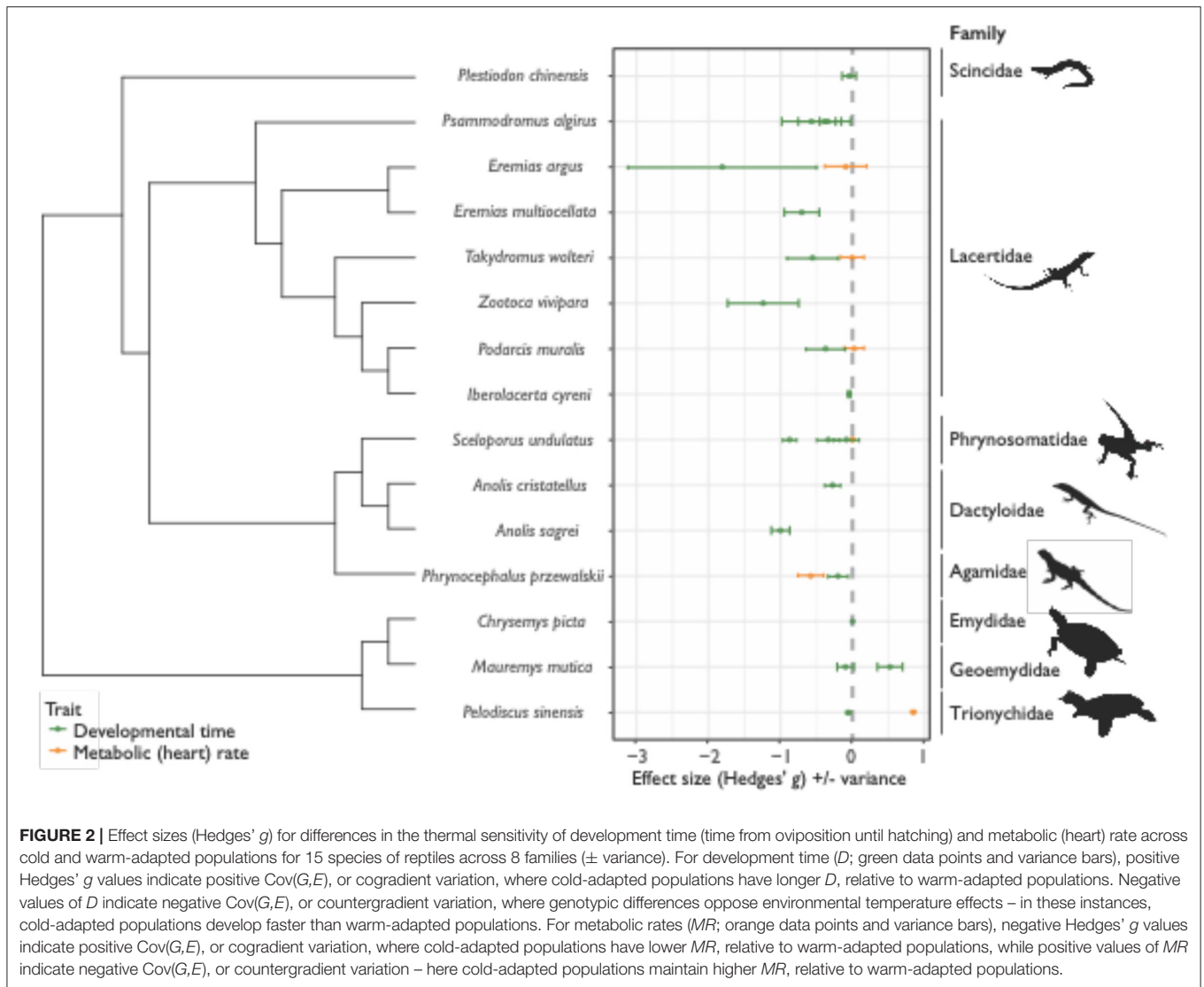


FIGURE 2 | Effect sizes (Hedges' *g*) for differences in the thermal sensitivity of development time (time from oviposition until hatching) and metabolic (heart) rate across cold and warm-adapted populations for 15 species of reptiles across 8 families (\pm variance). For development time (*D*; green data points and variance bars), positive Hedges' *g* values indicate positive $Cov(G,E)$, or cogradients variation, where cold-adapted populations have longer *D*, relative to warm-adapted populations. Negative values of *D* indicate negative $Cov(G,E)$, or countergradient variation, where genotypic differences oppose environmental temperature effects – in these instances, cold-adapted populations develop faster than warm-adapted populations. For metabolic rates (*MR*; orange data points and variance bars), negative Hedges' *g* values indicate positive $Cov(G,E)$, or cogradients variation, where cold-adapted populations have lower *MR*, relative to warm-adapted populations, while positive values of *MR* indicate negative $Cov(G,E)$, or countergradient variation – here cold-adapted populations maintain higher *MR*, relative to warm-adapted populations.

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