

Testing for trade-offs in temperature tolerance: individual variation in cold vs. heat tolerance in a lizard

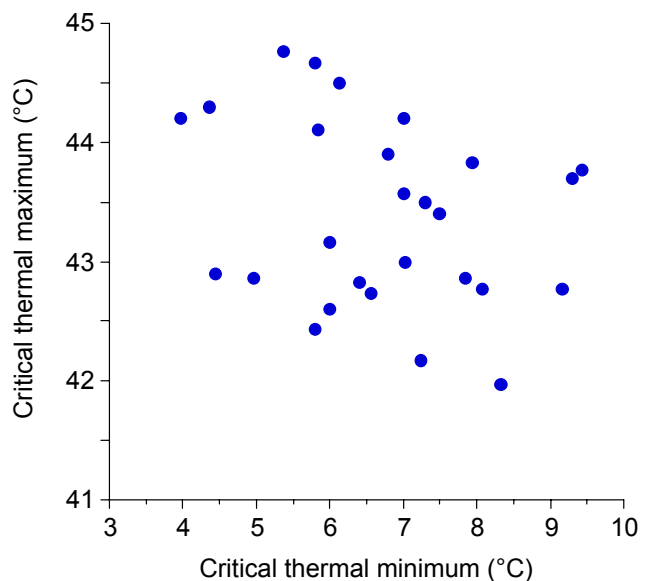
Marc Badger and Steve Adolph

Background: Biochemical studies of the temperature-dependent function of proteins and lipids generally support the notion of trade-offs in performance at high versus low temperatures.

Question: Is cold tolerance inversely related to heat tolerance among individual lizards (*Sceloporus occidentalis*) within a population?

Results: CTMin and CTMax were not positively correlated among individuals ($r = -0.27$; $P > 0.05$). . Instead, our data indicate that individual phenotypic variation in CTMin is unrelated to individual phenotypic variation in CTMax in this population of fence lizards.

Conclusions: Our results suggest that CTMax and CTMin could evolve independently in this species. This is consistent with the results of several comparative studies that found no correlation between CTMin and CTMax among lizard species.



Individual critical thermal maxima vs. critical thermal minima in the lizard *Sceloporus occidentalis*. Each point is the mean of 3 measurements per individual.

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