

SUPPLEMENTARY INFORMATION

Table S1: Lizard parameters used to calculate changes in body temperature (ΔT_b) of a *S. undulatus* lizard.

Description	Value (units)	Source
Size of adults (Snout vent length)	0.063 (m)	our measurements
Body mass	$SVL^3 * 3.55 * 10^{-8}$ (kg)	(Tinkle and Ballinger 1972)
Surface area	$0.0314\pi M_b^{2/3}$ (m ²)	(Fei et al. 2012)
Projected area for direct and scattered solar radiation	0.4 A_L (m ²)	(Porter et al. 1973)
Projected area facing toward the ground	0 (m ²) – laying, 0.4 A_L (m ²) – standing	(Porter et al. 1973)
Projected area that touched the ground	0.35 A_L (m ²) – laying, 0.05 A_L (m ²) – standing	(Bartlett and Gates 1967)
Area facing toward the sky	0.6 A_L (m ²)	(Bartlett and Gates 1967)
Area that is exposed to air	0.9 A_L (m ²)	(Fei et al. 2012)
Thermal absorptivity	0.965 (dec. %)	(Bartlett and Gates 1967)
Convective heat transfer coefficient	10.45 (W m ⁻² K ⁻¹)	(Porter et al. 1973)
Emissivity of skin	0.965	(Bartlett and Gates 1967)
Thermal conductivity	0.5 (W K ⁻¹ m ⁻¹)	(Porter et al. 1973)
Thickness (diameter)	0.02 (m)	our approximation
Heat capacity	3762 (J kg ⁻¹)	(Porter et al. 1973)

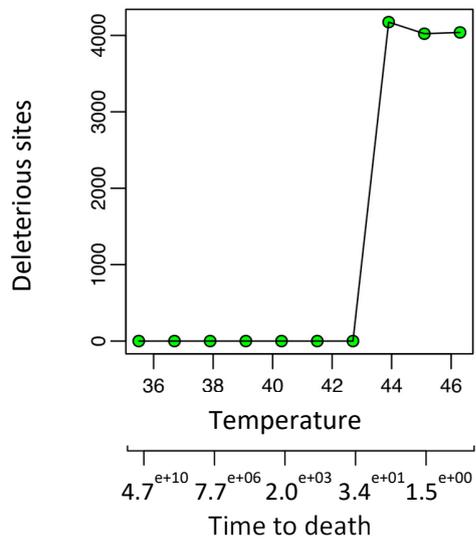


Figure S1. Number of vulnerable sites detected using different temperatures and their respective times needed to kill individuals, as predicted by a TDTC constructed for *Urosaurus ornatus*.

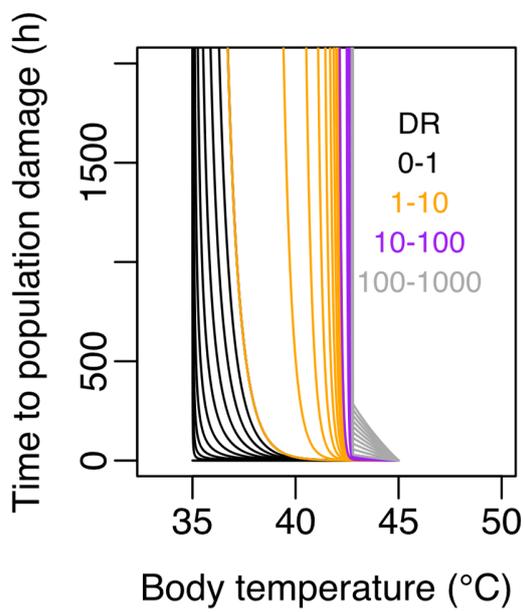


Figure S2. effects of changing the DR value on the shape of a thermal death curve with the parameters of *U. ornatus*. The higher it is, the steeper the curve becomes.

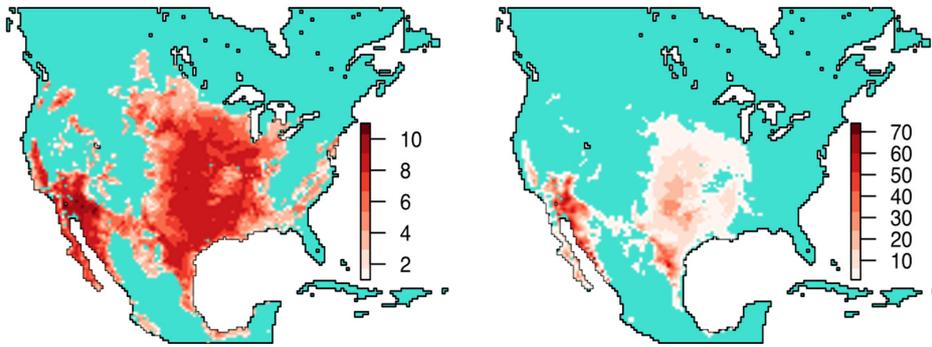


Figure S3. Map of vulnerable sites generated by the VTM (left) with no time to function loss, compared to predicted sites by the VTM with 3h exposures (right), as plotted in figure 2.