

SICB 2016 Annual Meeting Abstracts

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Individual heterogeneity in thermoregulatory behaviour under strict thermal regimes in a tropical skink.

Ectotherms leverage environmental temperature variability in both space and time to thermoregulate behaviourally. Increasingly, we are aware that spatial and temporal variability as well as mean temperature are important: we know that two habitats with the same mean and variance in temperature are not necessarily equal, but how to evaluate this inequality in terms of space and temperature use, and body temperature achieved is still being explored. The spatial and temporal distribution of resources, such as temperature, allow habitat partitioning and niche realisation, and understanding this thoroughly will be important in our understanding of how organisms share the available space, and hence our predictions of how organisms will be affected by climate change. We conducted an experiment using two thermal arenas with 250W of light arranged as either one single patch or five separate patches. We monitored the movements of two sympatric heliothermic skinks in each arena. Using ergodic theory, we ask whether individuals use the same space in the same way, whether they achieve the same limit distribution of body temperature, and at the same rate, and whether this distribution is distinct from expected as estimated by a null model.