

Patterns of activity and thermoregulatory mechanisms in the primitive Chinese Crocodile Lizard

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Abstract

We employed camera traps to collect data on the activity patterns, across a 24 hour period, of three free ranging adult Chinese crocodile lizards (*Shinisaurus crocodilurus*), a primitive reptile and the only lizard species in the family Shinisauridae. Our study demonstrated that during the non-hibernation season, diurnal Chinese crocodile lizard spent 96.73% of their time immobile (rest+sleep), 2.89% moving and 0.26% basking. Individuals regularly woke up around 5:30 AM and rested between 7:30AM to 8:20 PM. Four substrates used by Chinese crocodile lizards with per branch for 47.07±33.3% the ground for 28.34±15.56%, bodies of water for 1.2±0.7% and stem .for 0.9±0.43%. Additional analyses suggest that several factors including the exploitation of a small home range, a high starvation tolerance, extended periods of immobility (sleep + rest), and inhabiting a stable environment, enable the Chinese crocodile lizard to minimize energy costs associated with travel and thermoregulation, promoting its survival over long evolutionary periods.

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