SPATIAL BIOLOGY OF THE SPINY HILL TURTLE, *HEOSEMYS SPINOSA*



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Despite being on the Endangered species list, the ecology of the Spiny Hill Turtle, *Heosemys spinosa* has remained unstudied. Such fundamental knowledge as spatial ecology, behaviour and habitat use are critical for understanding the conservation and management needs of the species. We employed radio-telemetry to understand its spatial biology, and six individuals were tracked for a period up to 17 months, and data on home range, movement pattern and microhabitat preferences obtained. Two important questions raised on the autecology of *Heosemys spinosa* relevant to its spatial ecology were: 1) how does sexual variation, body size and environmental factors relate to habitat utilization and movement and 2) are there specific spatial zones of importance for its life history and survival requirements. Home range estimates were 1.68–60 (mean 32.58 and 2.85 in males and females, respectively) hectares, using the 100% Multiple Convex Polygon (MCP) method. Although males showed larger mean home ranges compared to females (mean MCP: male 32.59 ha, female 2.85 ha), these differences are not statistically significant (Kruskall Wallis test: p > 0.05), suggesting sex is not a reliable predictor of home range size. Carapace length, here a surrogate of size and mass, correlated with increased mobility (p < 0.05), larger turtles obviously are able to roam over greater distances, presumably for foraging, finding mates or establishing new territories.

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Waypoints of radio-tracked *Heosemys spinosa* at Kubah National Park, Sarawak. Radio-telemetry was used to study movement patterns of free-ranging individuals of *Heosemys spinosa*.