Responses of babblers (Timaliidae) to the forest edge-interior gradient in an isolated tropical rainforest in Peninsular Malaysia

ABSTRACT

The understanding of bird community responses, especially Timaliidae family, to tropical forest edge–interior gradient is limited. In this study, the point-count sampling method was used to determine community composition, abundance and density of babblers along the edge–interior gradient in Ayer Hitam Forest Reserve, Peninsular Malaysia. Environmental variables were measured within a 25 m radius of each point. Babbler species richness and diversity were positively correlated with humidity, distance from edge and the number of palm trees. There was a clear structured gradient in babbler species composition across edge–interior gradient and habitat variables, with abundant edge and interior specialist species. The interior specialist species were positively correlated with distance gradient, humidity, litter depth, canopy cover and the number of palm trees. In contrast, edge-tolerant species were positively correlated with ground cover, light intensity, shrub cover, and per cent of shrub cover between 0.5 and 2 m high but negatively correlated with distance from the forest edge. Changes in habitat structure at the edge of the isolated lowland rainforest may explain babbler species response to edge–interior gradient. From a conservation perspective, edge-avoider species should receive the most attention.

Keyword: Association; Forest isolation; Composition; Density; Diversity