Spatial Variation in the Abundances of Threatened Resident Avifauna across Sabah: A Meta-Analysis

ABSTRACT

Threatened resident bird species are dependent on local habitats for survival, and then habitat degradation can lead to the extinction of these avian species in Sabah. Henceforth, this paper intends to utilise meta-analysis in examining the spatial variation in abundances of these species, plus the influences of habitat conditions towards this matter across Sabah. A total of 16 past articles that reported the count data on threatened resident species in Sabah were selected, where 21 species and 475 individuals were included in the meta-analysis. The findings of this paper indicated that only certain species and groups of species showed spatial variation in abundances between different managements, forest types and forest conditions, such as Chestnut-necklaced Partridge (Arborophila charltonii) that was significantly more abundant at commercial forest reserves, while the Hook-billed Bulbul (Setornis criniger) was significantly more abundant at state lands, compared to other habitats with different management. Then, Rhinoceros Hornbill (Buceros rhinoceros) was significantly more abundant at the mixed lowland dipterocarp forests compared to other forest types in Sabah. This research excludes the assessment onto the interrelated influence of these three parameters, and also the effects of elevation and other forest types towards spatial variation in abundances of these species across different habitats. Therefore, further research is required to fill-up these research gaps and provide a much holistic understanding on the effect of habitat conditions towards spatial variation in abundances of threatened resident bird species across Sabah in future.