

The effects of logging on understorey bird diversity of a hill dipterocarp forest in Peninsular Malaysia

ABSTRACT

This study examined the effects of habitat disturbance on understorey bird species due to logging in hill dipterocarp tropical rainforest in Peninsular Malaysia. Understorey bird species richness and between primary and logged forests were determined using mist-netting while habitat characteristics were surveyed employing 10mx10m quadrant plot method. A total of 431 individuals of 60 bird species representing 23 families were captured in both logged and primary forests (212 individuals of 34 species from primary forest and 219 individuals of 42 species from logged forest). Spectacled Bulbul and Cream-vented Bulbul (each 3.48%) were the two most dominant understorey bird species captured in logged forest. In contrast, Rufous-Collared Kingfisher (4.64%) and Grey-Headed Babbler (3.71%) were the most abundant bird species captured in the primary forest. The results indicated that understorey bird species of primary forest was significantly different from that of the logged forest ($F_{1, 120} = 1.95, P < 0.05$). In addition, a total of 66 tree species representing 22 families were recorded from the primary and logged forests. Out of the total, 53 tree species of 22 families were sampled from primary forest and 14 species belong to 10 families from logged forest. Comparison of analysis indicated that the mean vegetation relative abundance of primary forest was significantly different from the logged forest ($F_{1, 134} = 10.5, P < 0.005$). The findings of this study showed that primary forest harbours a higher understorey bird species diversity than logged forest, and that logging altered the microclimate habitat which in turn affected the understorey bird's diversity.

Keyword: Habitat; Logged forest; Primary forest; Understorey birds