# Immediate effects of selective logging on the feeding guilds and species composition of understorey birds in Ulu Muda Forest Reserve, Peninsular Malaysia.

## Abstract

A study was conducted in a hill dipterocarp forest covering an area of 791.2 ha in Ulu Muda Forest Reserve, Kedah, Peninsular Malaysia. It was logged using selective logging method in February 1998 and completed in December 2000. The objective of this study was to determine the changes in the feeding guild structures of the understorey bird species before and immediately after logging using mist-netting method. Results indicated that before the forest was logged 72.4% of the number of understorey birds were dominated by insectivore followed by insectivore/frugivore (18.2%) and nectarivore/insectivore/frugivore groups (4.1%). However, immediately after the forest was logged the insectivore/frugivore became the dominant group (47.3%) followed by insectivore (28.5%) and nectarivore/insectivore/frugivore groups (13.2%). Analysis of feeding guild also showed that before logging the forest was dominated mainly by the species that belong to arboreal foliage gleaning insectivore guild (30.0%) and it decreased to 26.5% immediately after logging. In terms of number of individuals, the insectivore recorded 123 individuals (46 species) before logging, compared to only 106 individuals (37 species) immediately after logging. The arboreal foliage gleaning insectivore/frugivore was found to be higher in terms of number of species (17 species; 25.0%) and individuals (176 individuals; 47.3%) immediately after logging. Only 20.0% (14 species) of the species and 18.2% (31 individuals) of individuals from the guild were recorded before logging. Therefore, this study indicated that logging changed the feeding guild structures of the understorey bird species. Alteration of the food sources and microclimate of the logged forest has been suggested to be the main causes for the changes in the feeding guild structures.

**Keyword:** Selective logging; Feeding guilds; Understorey birds; Microclimate; Food sources.