## Avifauna of primary and secondary vegetation around Lambir Hills National Park, and indigenous knowledge about birds by the Iban villagers

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Effects of fragmentations of bird habitats have been widely researched, but little is known in Borneo. The Ibans of Borneo are famous in their cultural interactions with birds. For example, they have a highly developed augury system based mainly on the seven specific bird species.

We researched avifauna in secondary vegetation; used by Iban villagers. At first, avifauna was compared between primary vegetation in Lambir hills National Park and secondary vegetation. Secondly, differences in avifauna among the secondary vegetation types were studied. Thirdly, relationships between Iban's indigenous knowledge about birds and their actual habitats were considered.

The secondary vegetation is used by Iban villagers for five different aims; sifting cultivations, rubber plantations, fallows (long term and short term) and isolated primary forests. We set up plots  $(100 \times 10 \text{m})$  in each types of secondary vegetation, and listed up bird species and recorded their population in the morning.

The numbers of bird species in secondary vegetation were less than primary vegetation, especially large sized species like hornbills. However, avifauna of isolated forests was similar to primary forests. The distance between secondary vegetation and Lambir hills National Park is approximately eight kilometer, so we consider that birds can move around.

Avifaunas were greatly different among five types of secondary vegetation. The rubber plantation showed the richest numbers of bird species. Avifauna related with the distance to rivers, and the dominance of bird's favorite fruit trees. Six species were Iban's birds augury were recorded common in the secondary vegetation. Seven species has respectively remarkable characters; the beautiful voice, the strange looking, or the peculiar habitat.

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