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Research Article

Biodiversity assesment in a Sarawak lowland dipterocarp rainforest of Niah National Park

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ABSTRACT

A transect survey was conducted from 2 – 6 December 2004 in Niah National Park to estimate species diversity and relative abundance of birds and mammals. This study was conducted in four forest line transects: Madu Trail (TR1), Sungai Tangap (TR2), Niah Great Cave (TR3), Bukit Kasut (TR4), and one river transect along the Niah River (RT). A total of 521 birds representing 59 species from 23 families were recorded. The Black-Nest Swiftlet (*Aerodramus maximus*) and the Mossy-Nest Swiftlet (*Aerodramus salanganus*) were the most common species in the park. The family Timaliidae (babblers), with nine species, was recorded as the most diverse family, whereas Strigidae (owls) and Hirundinidae (swallows) were the least diverse families with one species in each. A total of 29 mammalian individuals representing seven species from four families were recorded. The family Sciuridae (squirrels) with three species was recorded as the most diverse family, whereas Cynocephalidae (flying lemurs) and Muridae (rodents) were the least diverse families with one species and one individual each. TR1 was recorded with the highest Shannon-Weiner index (diversity index) of H' = 4.75 and H' = 2.20 for birds and mammals respectively. The lowest bird H' = 3.73 was recorded for TR2, whereas the lowest mammal H' = 0 was recorded for TR2 and RT. Although this study does not identify factors that contribute to different species diversity at each transect line, field observations suggest that vegetation and human activities were the major elements that contributed to the observations found at each transect in this study. Studies on the vegetation types and potential disturbances that influence the faunal diversity will provide useful insights in conservation and management planning of this park.

Keywords: Birds, mammals, Niah National Park, relative abundance, species diversity, transect

INTRODUCTION

Extended to an area of only 31.4 km sq (3,140 hectares), Niah National Park is one of Sarawak's smallest National Parks (Bennett, 1992). Its uniqueness for paleontology studies (e.g., Harrisson, 1958, Piper *et al*., 2007) and diverse ecology has attracted visitors, naturalists and scientists. The park is located 16 km inland, on