

COMPARATIVE DISTRIBUTION AND DIVERSITY OF BATS FROM SELECTED LOCALITIES IN SARAWAK

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ABSTRACT

Surveys on the chiropteran diversity were conducted at eight different localities in Sarawak to document the bat diversity as well as to estimate the composition of bats in these areas. The major finding of bat surveys shows that montane areas have distinct chiropteran composition compared with those in lowland and logged areas. Disturbed habitats do pose a threat to the overall diversity of bats, with the generalist bats been more successful in colonising altered area than those with specialised habitat requirements. Sampling of bats targeted at different site and vegetation type from several protected areas in Sarawak have revealed the current record of bats in Sarawak and its diversity can be monitored for better management of biodiversity in this important region.

Keywords: Diversity, chiroptera, forest types, montane, habitat disturbance, Borneo

INTRODUCTION

Borneo holds high chiropteran diversity. There are at least 94 species from eight families that occur in Borneo (Payne *et al.* 1985). Studies on the Bornean chiropteran diversity were pioneered by various authors and these have shaped the current knowledge of this fauna in Borneo. Documentation of mammals in Malaysia, specifically Borneo, has come a long way starting on the 15th century through European travelers, traders, colonial officers, museum collectors, curators and biologist who have documented various species accounts and sightings of mammals in the region (Abdullah 2006). From 1923 to 1932, F.N Chasen and C. Boden Kloss had published several papers documenting mammals in the Peninsular Malaysia, Singapore and Borneo (Abdullah 2006). Later, Chasen published a monograph in 1940 entitled 'A handlist of Malaysian Mammals' in the Bulletin of Raffles Museum which was considered as the primary literature for mammals of the Malay Peninsula, Sumatra, Java, Borneo and their adjacent small islands (Chasen

1940, later revised by Ellerman & Morisson-Scott 1955). Their pioneering works had contributed immensely on our knowledge of the taxonomy and distribution of mammals in this region. From 1938 to 1974, Tom Harrison and J.E Hill further studied on taxonomy, distribution and ecology of mammals in Borneo (Abdullah 2006). Later, Davis (1958) published a list of mammals from the Kelabit Highlands, followed by Medway (1958), Harrison (1964), Lim (1965), Lim *et al.* (1972), Start (1975), Lim & Muul (1978) and Francis *et al.* (1984). Lord Medway later published a hand list of mammals in Borneo (Medway 1977) and this was later revised in a book entitled 'A field guide to the mammals of Borneo' by Payne *et al.* (1985). All of these studies on mammals from abovementioned scientists have provided an early understanding of the chiropteran diversity in Borneo.

Beginning from the late 1980s to present various bat surveys has been published from various expeditions conducted by local and foreign researchers. Studies from Francis (1989, 1990, 1994), Hall (1996), Nor (1996, 1997) and Tuen *et al.* (2002a, 2002b) have concentrated in Sabah whereas

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