

CONTRIBUTION OF REGENERATED FOREST IN CONSERVATION OF BATS IN PENINSULAR MALAYSIA

RMD Mohd-Hanif¹, *, MT Nur-Aida¹, AR Zahirunisa², AR Mohd-Ridwan³ & MT Abdullah⁴

¹Department of Zoology, Faculty of Resource Science and Technology, Universiti Malaysia Sarawak, Kota Samarahan, 94300 Sarawak, Malaysia

²Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 Serdang, Selangor Darul Ehsan, Malaysia

³Centre for Pre-University Studies, Universiti Malaysia Sarawak, Kota Samarahan, 94300 Sarawak, Malaysia

⁴Kenyir Ecosystem Research Centre, Universiti Malaysia Terengganu, 21030 Kuala Terengganu, Terengganu Darul Iman, Malaysia

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Contribution of regenerated forest in conservation of bats in Peninsular Malaysia. Surveys of bats were conducted at six regenerated forest sampling sites, namely, Sungai Dusun Forest Reserve (FR), Fraser Hill FR, Lata Bujang FR, Tasek Bera FR, Endau–Kluang FR and Endau–Kota Tinggi FR. A total of 289 individuals representing 35 species of bats were recorded. Endau–Kota Tinggi FR was the most diverse (Fisher's $\alpha = 9.95$) while Endau–Kluang FR, the least diverse (Fisher's $\alpha = 3.17$). Six species of bats, namely, *Dyacopterus spadiceus*, *Nycteris tragata*, *Rhinolophus sedulus*, *Kerivoula intermedia*, *K. pellucida* and *Myotis ridleyi* are listed as near threatened. Two species of bats, *Hipposideros ridleyi* and *Arielulus societatis*, are listed as vulnerable and facing high risk of extinction in the wild. The diversity of chiropterans in generated forest was high and was underestimated because of lack of information on those high flier species in and above canopy levels.

Keywords: Chiroptera, species diversity, species conservation, forest type

INTRODUCTION

Habitat disturbance is a major conservation issue. Despite having high diversity and significant ecological services and benefits on wild animals, tropical forests are being destroyed in every part of the world and continue to decline at alarming rates (Nakagawa et al. 2007). Therefore, scientific documentations are inevitably important to describe species diversity and their response to anthropogenic disturbances. Tropical rain forests are the epitome of richness for many taxonomic groups including bats. They are important in shaping the pattern and process of biological diversity (Wilson 1992). Bats help maintain the genetic diversity of tropical rainforest by cross pollinating many species of plants and dispersing the seeds of many others (Fujita & Tuttle 1991). On the other hand, insectivorous bats are major consumers of nocturnal-flying insects (Jones et al. 2002).

Bats are often termed as good biological indicator due to the fact that they are ubiquitous,

diverse, abundant in the ecosystem and taxonomically well known. Being the second largest order of mammals in terms of species richness, they are relatively easy to sample using cost-effective techniques. Bats play a substantial role in controlling the population of insects as well as pollinating agents to certain plants. As bats are sensitive to changes within their habitat, they tend to reduce in population and will find new places to colonise; thus, they function as a measure of habitat integrity (Noss 1990, Blair 1999).

In the present assessment, six regenerated forests were chosen as sampling sites, namely, Sungai Dusun Forest Reserve (FR), Fraser Hill FR, Lata Bujang FR, Tasek Bera FR, Endau–Kluang FR and Endau–Kota Tinggi FR. To date, no detailed research on bat diversity in the selected sampling sites has been documented. Therefore, results obtained from this survey will be valuable to assist the Department of Wildlife

*hanifridzuanmd@gmail.com