

Low diversity of fruit bats in the East Coast islands of Terengganu, Malaysia

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Abstract : Fruit bats are important pollinators for plants and play important ecological functions and services in the tropical rain forest. Fruit bats are considered more important for the ecological rehabilitation and health of the plant community on islands as other pollinators may not be able to fly across open sea and reach the island. This study was conducted to determine the diversity of fruit bats in three contrasting Terengganu offshore islands, namely, Pulau Perhentian, Pulau Bidong, and Pulau Redang. A total of 40 individuals of four species were captured using 10 mist nets during the 180 mist-net night sampling period from June 27, 2019 until February 29, 2020. Pulau Bidong had the highest number of bats captured (22), followed by Pulau Redang (18) and Pulau Perhentian (0). The most frequently captured species was *Cynopterus brachyotis* in both islands. No yield in Pulau Perhentian may be caused by tourism activity, seasonal movement following flowering and fruiting trees, or inadequate sampling effort in multiple sites. The data can be further used to determine factors in assessing threats and for future conservation by the management authorities.

Key words: Bats, Chiroptera, Terengganu, island population, biogeography, South China Sea

INTRODUCTION

Bats contribute to many significant ecological functions and services and are always regarded as keystone species in the tropical rain forest ecosystem. In both natural and agricultural ecosystems, bats supply some ecological regulating services such as pest suppression, seed dispersal, and pollination that are beneficial for economic growth for humans (Kunz *et al.*, 2011). The pollinating and/or seed-dispersing services by bats, especially in the tropics, benefit up to 289 species of plants in varying degrees (Fujita and Tuttle, 1991). For instance, cave nectar bats, *Eonycteris spelaea*, act as pollinators for economically important plant species such as durian, *Durio zibethinus* (Bumrungsri *et al.*, 2009).

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