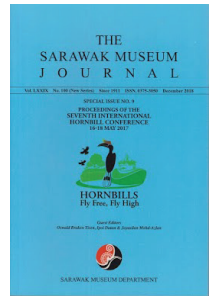




The Sarawak Museum Journal

Vol. LXXIX No. 100

December 2018



ISSN: 0375-3050

Citation: *Sarawak Museum Journal*, LXXIX (100) (2018): 243-252**THE FOREST WITHOUT HORN BILLS: COMPARING THE FOREST BETWEEN BREEDING AND NON-BREEDING SITES OF HORN BILLS IN THE SOUTHERN TENASSERIM WESTERN FOREST COMPLEX CORRIDOR IN THAILAND**Jiraporn Teampanpong¹ and Sukid Ruengrae²¹Faculty of Forestry, Kasetsart University, Ban Khaen Campus, Thailand²The Department of National Park, Plant, and Wildlife Conservation of Thailand**ABSTRACT**

This study compares the two adjacent forest communities in the southern Tenasserim Western Forest Complex Corridor in Thailand. We distinguished the difference between the two forest communities as breeding and nonbreeding sites from the presence of active nests of hornbills where the breeding site is located in the protected area. In 2011–2012, we established a total of 36 plots (20 × 50 m²) covering the sampling areas of 3.6 hectares in each forest site. The species diversity and composition of the two forest communities tended to be similar. However, the availability of potential nest trees (dbh ≥ 40 cm.) and productive-sized known fruit trees for hornbills (dbh ≥ 10 cm.) in the breeding site were more abundant for hornbills to use as breeding and feeding sites than the non-breeding site. The non-breeding site could serve only as a temporary feeding site due to its low density of known fruit trees.

Keywords: Hornbills, breeding and non-breeding sites, protected areas, the southern TWFC

THE FOREST WITHOUT HORNBILLS: COMPARING THE FOREST BETWEEN BREEDING AND NON-BREEDING SITES OF HORNBILLS IN THE SOUTHERN TENASSERIM WESTERN FOREST COMPLEX CORRIDOR IN THAILAND

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Abstract

This study compares the two adjacent forest communities in the southern Tenasserim Western Forest Complex Corridor in Thailand. We distinguished the difference between the two forest communities as breeding and non-breeding sites from the presence of active nests of hornbills where the breeding site is located in the protected area. In 2011–2012, we established a total of 36 plots ($20 \times 50 \text{ m}^2$) covering the sampling areas of 3.6 hectares in each forest site. The species diversity and composition of the two forest communities tended to be similar. However, the availability of potential nest trees ($\text{dbh} \geq 40 \text{ cm.}$) and productive-sized known fruit trees for hornbills ($\text{dbh} \geq 10 \text{ cm.}$) in the breeding site were more abundant for hornbills to use as breeding and feeding sites than the non-breeding site. The non-breeding site could serve only as a temporary feeding site due to its low density of known fruit trees.

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INTRODUCTION

The southern Tenasserim Western Forest Complex Corridor (hereafter referred to as the Southern TWFC) is home to four hornbill species (Bucerotidae): the Great Hornbill (*Buceros bicornis*), Tickell's Brown Hornbill (*Ptilolaemus tickelli*); Wreathed Hornbill (*Rhyticeros undulatus*); and Oriental-pied Hornbill (*Anthracoceros albirostris*). Based on the findings from Teampanpong (2014), Maenam Pachee Wildlife Sanctuary (MPWS) harbours active nests of all four hornbill species, therefore is identified as a hornbill breeding site (BS). Meanwhile, the forest in the Natural History Park (NHP)