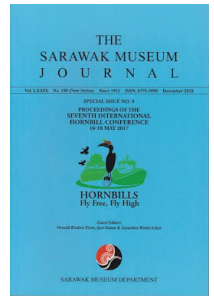




The Sarawak Museum Journal  
Vol. LXXIX No. 100  
December 2018



ISSN: 0375-3050

Citation: *Sarawak Museum Journal*, LXXIX (100) (2018): 117-130

**SEASONAL VARIATION IN HORNBILL DENSITIES IN COFFEE PLANTATIONS IN THE ANAMALAI HILLS, WESTERN GHATS, INDIA**

Pooja Y. Pawar<sup>1,2\*</sup>, Rohit Naniwadekar<sup>2</sup>,  
T.R. Shankar Raman<sup>2</sup> and Divya Mudappa<sup>2</sup>

<sup>1</sup>Post-Graduate Programme in Wildlife Biology and Conservation,  
Wildlife Conservation Society-India, National Centre for Biological Sciences,  
GKVK Campus, Bangalore 560 065, Karnataka, India

<sup>2</sup>Nature Conservation Foundation, 1311 'Amritha' 12th A Main,  
Vijayanagar 1st Stage, Mysuru 570017, India

\*Corresponding author. Email: [pooja@ncf-india.org](mailto:pooja@ncf-india.org)

**ABSTRACT**

Hornbill habitats are shrinking across their distribution ranges. Geographic spread and small sizes of most protected areas are not sufficient to conserve hornbill populations. Human-modified habitats adjoining protected areas could potentially hold hornbill populations depending upon the proximity to the forest, nature of land-use and structural complexity of the modified habitat. An assessment of the use and suitability of modified habitats can inform hornbill conservation beyond conventional protected areas. This study estimated and compared hornbill densities in pre- and post-nesting seasons using point-transect surveys in coffee plantations in the Anamalai Hills, Western Ghats, India. Overall Great Hornbill (GH) density was  $31 \pm 7.7$  (mean  $\pm$  SE) individuals/km<sup>2</sup>. Malabar Grey Hornbill (MGH) density was  $56 \pm 11.2$  (mean  $\pm$  SE) individuals/km<sup>2</sup>. These may, however, be overestimates because of the point count survey method used. Our study shows that coffee plantations adjacent to protected areas have a large potential to support hornbill populations and species conservation.

**Keywords:**

# SEASONAL VARIATION IN HORNBILL DENSITIES IN COFFEE PLANTATIONS IN THE ANAMALAI HILLS, WESTERN GHATS, INDIA

Pooja Y. Pawar<sup>1, 2\*</sup>, Rohit Naniwadekar<sup>2</sup>,  
T.R. Shankar Raman<sup>2</sup> and Divya Mudappa<sup>2</sup>

<sup>1</sup>Post-Graduate Programme in Wildlife Biology and Conservation,  
Wildlife Conservation Society-India, National Centre for Biological Sciences,  
GKVK Campus, Bangalore 560 065, Karnataka, India

<sup>2</sup>Nature Conservation Foundation, 1311 'Amritha' 12<sup>th</sup> A Main,  
Vijayanagar 1<sup>st</sup> Stage, Mysuru 570017, India

\*Corresponding author. Email: [pooja@ncf-india.org](mailto:pooja@ncf-india.org)

## Abstract

Hornbill habitats are shrinking across their distribution ranges. Geographic spread and small sizes of most protected areas are not sufficient to conserve hornbill populations. Human-modified habitats adjoining protected areas could potentially hold hornbill populations depending upon the proximity to the forest, nature of land-use and structural complexity of the modified habitat. An assessment of the use and suitability of modified habitats can inform hornbill conservation beyond conventional protected areas. This study estimated and compared hornbill densities in pre- and post-nesting seasons using point-transect surveys in coffee plantations in the Anamalai Hills, Western Ghats, India. Overall Great Hornbill (GH) density was  $31 \pm 7.7$  (mean  $\pm$  SE) individuals/km<sup>2</sup>. Malabar Grey Hornbill (MGH) density was  $56 \pm 11.2$  (mean  $\pm$  SE) individuals/km<sup>2</sup>. These may, however, be overestimates because of the point count survey method used. Our study shows that coffee plantations adjacent to protected areas have a large potential to support hornbill populations and species conservation.

## INTRODUCTION

Hornbills are flagship birds of Asian tropical rainforests. Their specialised nesting requirements and diet make them vulnerable to large scale habitat modification (Kemp 2001). Across hornbill distribution ranges, increasing landscape modification has led to shrinkage of habitats and their modification under human land uses (Kinnaird & O'Brien 2007). The modified habitats alter the nest and fruit availability thereby affecting the abundance of hornbills (Marsden & Pilgrim 2003; McConkey & Chivers 2004; Datta 1998). Anthropogenic threats like selective logging result in progressive degradation of