

MONITORING AND RECOVERY OF AVIAN DIVERSITY IN AN ABANDONED HUMAN SETTLEMENT AND DRY EVERGREEN FOREST IN WESTERN THAILAND

Prateep Duengkae^{1,*}, Vijak Chimchome¹, Utis Kutintara¹, Anak Pattanavibool², and Sompoch Maneerat³

¹ Forest Biology Department, Faculty of Forestry, Kasetsart University, Bangkok 10900. Thailand.

² WCS Thailand Program 55/259 Muang Thong Proj 5, Soi, 3 Pak Kret, Nonthaburi Thailand.

³ Protected Area Innovation Unit, Department of National Parks, Wildlife and Plant Conservation, Bangkok 10900. Thailand.

* Corresponding author E-mail address: prateep.du@ku.ac.th

Abstract

We monitored avian diversity and recovery in an abandoned human settlement (AHS) and a dry evergreen forest (DEF) in Western Thailand continually from 2000 to 2003, in Thung Yai Naresuan Wildlife Sanctuary, a natural world heritage site. The objective was to monitor the avian recovery based on the Shannon's index (H') of bird species after resettlement. Three permanent transects with a total length of 1.8 km were set in 4 study sites. The line transects ran for 900 m in the AHS and continued for another 900 m in DEF, allowing for 100 meters for the edge effects. The study revealed 255 bird species. Bird species numbers changed from 109 species in the rainy season of 2002 to 149 species in the cool season of 2000. However, the H' changed from 3.758 in the rainy season of 2001 and 3.973 in the cool season of 2000. The H' in the AHS was lower than in the DEF sites and was significantly lower ($P < 0.05$) during every cool season, and in the summer season of 2002. Comparisons of the H' in different aged (6–12 years old) sites indicated that the H' in the AHS from 6 to 10 year-old tended to be lower than sites in the DEF. However, in the 12-year-old AHS, the H' was greater than the DEF during every rainy season, the cool season of 2002, and the summer season of 2003. The study also demonstrated that bird diversity showed a clear recovery pattern after human resettlement. Recommendations are given to limit human disturbances as much as possible to allow for maximum avian diversity to recover.