Yuthtarpoom Keartumsom 2011: Habitat Use of Great Hornbill (*Buceros bicornis* Linnaeus, 1758) and Wreathed Hornbill (*Aceros undulatus* (Shaw) 1881) by Platform Transmitter Terminals in Khao Yai National Park, Nakhon Ratchasima Province. Master of Science (Forest Biological Science), Major Field: Forest Biological Science, Department of Forest Biology. Thesis Advisor: Assistant Professor Vijak Chimchome, Ph.D. 70 pages.

Platform Transmitter Terminals: PTTs were used as a tracking device for habitat use of 2 hornbill species at Khao Yao National Park. This research has been conducted between May 2009 - December 2010. During monitoring period, PTTs were installed in four hornbills: two for Great Hornbills and another two for Wreathed Hornbills. Coordinates of the tracked hornbills received from Argos-system were used to analyze home range size and the relationship between environmental factors by using Maximum Entropy model of the geographic distribution.

The study showed that when applying PTTS, home range size of Wreathed Hornbills was larger than home range size of Great Hornbill. The same species forages similar food and resources in the breeding season so that the overlap percentage of home range in breeding season was larger than non-breeding season. Movement of hornbills in breeding season was less than in non-breeding and was found the least in April and May as the fact that male has to deliver food to the brood more frequent as chick grows up so the male has to travel less. Dry evergreen forest is the key factor on an appearance of both hornbills in the Maximum Entropy model. However, Great hornbills utilized more kinds of forest type than Wreathed Hornbills did (χ^2 = 159.14, n = 8, P-Value < 0.05).

PTTs can be applied through the whole year. Home range size and habitat suitability map of Great Hornbills and Wreathed Hornbills derived from monitoring their distribution are able to be guidelines to improve and protect area for hornbill conservation in the future.

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