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## WREATHED HORNBILL (*Rhyticeros undulatus*) IN MOUNT UNGARAN CENTRAL JAVA: STATUS AND FACTORS THAT THREATEN ITS EXISTENCE

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### ABSTRACT

Mount Ungaran in Central Java is one of the Important Birds Areas (IBA) in Indonesia where one of the Hornbill species, Wreathed Hornbill (*Rhyticeros undulatus*) is found. Based on the IUCN 2016, Wreathed Hornbill has been listed as Least Concern (LC) and listed in Appendix II of the CITES. In order to conduct preservation and *in-situ* conservation planning of Wreathed Hornbill scientific data on ecology is needed. Therefore, the research on the Wreathed Hornbill in Mount Ungaran has been planned since 2010–2016. The results include species identification, early population and distribution, daily behaviour, habitat profile, nest-site characteristics, feeding behaviour, food consumed, habitat suitability and threats. While study on the dynamics of the home range of Wreathed Hornbill in Mount Ungaran is still ongoing. The implementation of this research is jointly pursued with the Forest Department, Natural Resources Conservation Center (BKSDA), Perhutani Central Java, Indonesia Hornbill, and LIPI (Indonesian Institute of Sciences), and IBBS (Indonesian Bird Banding Scheme).

**Keywords:** Mount Ungaran, Wreathed Hornbill, status, threats



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## Abstract

Mount Ungaran in Central Java is one of the Important Birds Areas (IBA) in Indonesia where one of the Hornbill species, Wreathed Hornbill (*Rhyticeros undulatus*) is found. Based on the IUCN 2016, Wreathed Hornbill has been listed as Least Concern (LC) and listed in Appendix II of the CITES. In order to conduct preservation and *in-situ* conservation planning of Wreathed Hornbill scientific data on ecology is needed. Therefore, the research on the Wreathed Hornbill in Mount Ungaran has been planned since 2010–2016. The results include species identification, early population and distribution, daily behaviour, habitat profile, nest-site characteristics, feeding behaviour, food consumed, habitat suitability and threats. While study on the dynamics of the home range of Wreathed Hornbill in Mount Ungaran is still ongoing. The implementation of this research is jointly pursued with the Forest Department, Natural Resources Conservation Center (BKSDA), Perhutani Central Java, Indonesia Hornbill, and LIPI (Indonesian Institute of Sciences), and IBBS (Indonesian Bird Banding Scheme).

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## INTRODUCTION

Hornbills (Family Bucerotidae) are frugivorous birds found in the Old World tropics. There are 13 hornbill species found in Indonesia, making Indonesia one of the richest and the most important countries for hornbill conservation in Asia. Asian hornbill is characterised by large, long and decurved bill, and has protruding casques (Kinnaird & O'Brien 2007). Wreathed hornbill (*Rhyticeros undulatus*) is one of the hornbill species that can be found in Mount Ungaran Central Java Indonesia. Mount Ungaran is

located between Kendal and Ungaran Regency with a total area of around 5.500 hectares. Mount Ungaran is one of the Important Bird and Biodiversity Areas (IBAs) in Indonesia (Rombang & Rudyanto 1999), especially in Central Java that has potential natural forest with high biodiversity. Based on the IUCN Red List of Threatened Species (2017), Wreathed Hornbill has been listed as Least Concern (LC) and on CITES, which belongs to Appendix II.

Hornbills are threatened with extinction because they are specialist with respect to habitat, food source, roosting and nesting sites (Krishna *et al.* 2012). Hornbills play a crucial role in the forest ecosystem as seed dispersers. The previous study from 2010–2016 showed that Mount Ungaran was a suitable habitat with the availability of food resources, water, shelter, perching, and nesting site for Wreathed Hornbill species (Rahayuningsih *et al.* 2011, 2015 & 2016). However, the preservation of Wreathed Hornbill in Mount Ungaran faces conservation challenges such as conversion of forest areas for tea, coffee, clove, and quinine plantation, agriculture, illegal logging, and other infrastructure developments. Other forms of human activities that are directly resulting in the elimination of this wildlife from the natural habitat are poaching and illegal trades. In this case, the research activities are still continuously conducted to develop the strategy of *in-situ* conservation management of wildlife, especially in Mount Ungaran. The objective of the study was to determine the status and factors that threaten the existence of Wreathed Hornbill in Mount Ungaran.

## MATERIAL AND METHODS

Binocular (Nikon 8 x 30, 8.3"CF WF), Monocular (Nikon 20 x 60), GPS (Global Positioning System) Garmyn e-Trex 12 channel, Bird Field Guide: Sumatra; Java, Bali, Kalimantan (Maskinnon *et al.* 2010), camera, tape recorder, stopwatch, tally sheet and stationeries were used to survey this species in the study area.

The research was conducted from 2010 to 2016 in Mount Ungaran area, at five field stations: Gunung Gentong, Banyuwindu, Gadjah Mungkur, Medini, and Kalisid. The secondary data were obtained from interviews with local communities in eight villages around Mount Ungaran; there are (1) Ngresep Balong, (2) Banyuwindu, (3) Kalisidi, (4) Gogik, (5) Indrokilo, (6) Pasigitan, (7) Sumber Rahayu and (8) Gondang. In this survey, forty five informants were selected purposively to respond to questions. Informants were selected