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How do people in the "Land of Hornbills" perceive Hornbills?

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Summary

Sarawak is known as the "Land of Hornbills", having the Rhinoceros Hornbill as the state emblem and with hornbills also being closely associated with important cultural symbols and beliefs among various local communities. However, up to date there is limited understanding on the perception, awareness, and beliefs of local communities towards hornbills. This paper aims to describe the aforementioned factors in western Sarawak, in hope of acquiring the socio-cultural information needed to fill the gap, and to clarify misconceptions towards hornbill conservation efforts in Sarawak. Data collection was accomplished using Open Data Kit (ODK). A total of 500 respondents were approached in five administrative divisions in western Sarawak, namely Kuching, Samarahan, Serian, Sri Aman, and Betong. The questionnaire was carefully formulated to control acquiescence bias that might arise. Boosted Regression Tree (BRT) modelling was conducted to evaluate the strongest demographic predictor variables influencing the answers and word clouds were used to visualise hornbill species by the local community. Sarawakians acknowledge the importance of hornbills as a cultural symbol (95%) despite hornbills being used for food, medicine, and decoration. Whilst this study describes the perceptions of hornbills in local communities, a comprehensive assessment throughout Sarawak is recommended for better understanding of hornbill importance in other communities. Such socio-cultural information is vital to ensure the success of conservation efforts and for effective management strategies of hornbills within Sarawak.

Keywords: Hornbills, perception survey, conservation, western Sarawak, Boosted Regression Tree Modelling

Introduction

The hornbills (family Bucerotidae) have been recognised as important ecological indicators for forest health, especially in relationship to forest regeneration and tree diversity preservation (Meijaard *et al.* 2005, Kitamura, 2011). Owing to their relatively large body size, hornbills require habitats with large forest patches, and this has made them useful indicators for forest condition and human disturbance as their habitat preference is towards non-fragmented forest and forest with large fruiting trees for feeding and nesting (Gale and Thongaree 2006).

Understanding the threats faced by a species and relating them to population trends is important for effective conservation planning and to carry out appropriate conservation actions (Abram *et al.* 2015). Habitat loss due to forest conversion is the main concern for the survival of