

THE DENSITY OF INVASIVE URBAN BIRDS IN SELECTED AREAS OF WESTERN SARAWAK

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ABSTRACT

Non-native species or invasive species have been a threat to the global biodiversity. Avian communities are widely spread from the forest to the urban areas. Impacts of invasive avian communities in the urban areas have not been greatly explored in Sarawak. This study attempts to investigate the effect of invasive birds towards the native species within the urban avian community. The birds were surveyed using transects from October 2015 until September 2016 (12 months). The common species recorded were Asian glossy starling, Common myna, Eurasian tree sparrow, Intermediate egret, Javan myna, Long-tailed shrike and Little egret, Pink-necked green pigeon, Rock pigeon, Spotted dove, White-breasted waterhen, White-breasted woodswallow, Yellow-vented bulbul and Zebra dove. The invasive species consist of the Eurasian tree sparrow, Rock pigeon, Zebra dove, Common myna. In general, these species became a threat to the native hollow-nesting species. Here we estimated the relative density of exotic species in urban bird assemblage. Proper and careful management of this invasive species is much needed in order to prevent the native species being pushed out or eliminated from the urban bird communities.

Key words: Invasive birds, urban birds, bird density, western Sarawak

INTRODUCTION

Human population are growing and it leads to exploiting land use, which demands the expansion of urbanization area. Study on the newly created and evolving ecosystem would help in having a better management of the increasing bird-human conflicts and upgrading the quality of life in urban areas (Clergeau *et al.*, 1998).

Habitat modification due to urbanization or human activities may bring positive effect towards non-native species or invasive species of birds, which brought threats to the native species that lived at the same place (Peacock *et al.*, 2007) through competition of the nesting sites, roosting area or food sources (Yap & Sodhi, 2004).

Invasive species could have negative and potentially some positive effects towards certain native species (Hernández-Brito *et al.*, 2014) as their presence may reduce predation and help in creating more food sources for other native species that may

result in higher competition for the similar resources with the native species (e.g. food and also nesting areas). Based on the study done by Hernández-Brito *et al.* (2014), the invasive species (Ring-necked parakeet) are outcompeting native species sharing nest-site preferences. The parakeet initiated and won most interspecific aggressions.

Limited information on the density of these invasive species in Borneo may have hindered population monitoring programs. Hence, this study was conducted to determine the effect of invasive avian towards the native species within the urban avian community.

MATERIALS AND METHODS

Study area

Western Sarawak that consists of Kuching and Samarahan Division covered a total area of 9,526.9 km² which accommodate 896,842 people in the year 2010. There are seven districts within these two divisions which are Kuching, Bau, Lundu,

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