

The Influence of Perch Height Selection on Vocalization of Pied Triller, *Lalage nigra* (Aves: Campephagidae) in Suburban Landscapes, Sarawak

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ABSTRACT

Understanding how birds utilised songs and calls to communicate among conspecifics is crucial for their survival, yet it remains an understudied area in bird ecology. We studied the influence of perch height selection on the vocalisation of Pied Triller, a common garden bird, in two suburban landscapes namely Pustaka Negeri Sarawak Recreational Park, Kuching and Universiti Malaysia Sarawak campus, Kota Samarahan from October 2018 to February 2019. Using a Marantz recorder connected to a parabolic reflector, we recorded calls and songs during morning (0630-1030 hr) and late afternoon (1600-1830 hr). Perch object, tree species, roost substrate and perch height from the ground were identified and measured. Clear and good quality spectrograms were used directly to describe song and call types. Photos and video recordings were analysed to describe perch behaviour. The vocal output representatives were then matched to the corresponding behaviour displayed. Our results revealed that Pied Trillers emit four different vocal outputs namely (i) song type, (ii) call type A, (iii) call type B and (iv) call type C. A total of nine behaviours were observed, of which the perch-hop behaviour was observed the most from both male and female Pied Trillers (33.71%), followed by perching (29.21%), foraging (20.22%), preening (7.78%), defecating (2.25%), eating (2.25%), roosting (2.25%), bill wipe (1.12%) and flight (1.12%). They prefer to roost on high perch to emit calls compared to songs. This probably suggest that Pied Triller prioritised vocal transmission and signalling to avoid being masked by surrounding anthropogenic noises and to avoid being conspicuous to potential predators. The most frequently visited perch object was the Weeping fig tree, *Ficus benjamina*.

Keywords: Call, perch height, Pied Triller, song, suburban landscapes

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INTRODUCTION

Pied Triller, *Lalage nigra* (Family: Campephagidae) is a common resident in the lowlands of Borneo and a familiar garden bird (Smythies, 1999). This cuckoo-shrike is also often seen foraging for insects in foliage of small trees of open habitats, urban gardens, coastal Casuarinas, and mangroves (MacKinnon & Phillipps, 1993; Phillipps & Phillipps, 2014). They are sexually dimorphic with males having black upperparts with white wing bar and white edges to wing coverts and outer tail feathers, broad white eyebrow with black eye-stripe and grey rump (MacKinnon & Phillipps, 1993). Comparatively, females are similar but brown instead of black and the breast are finely barred with black.

There are two types of bird vocalisations which are calls and songs (Welty & Baptista, 1988). Calls

tend to be shorter, simpler, and produced by both sexes throughout the year (Catchpole & Slater, 2008). They are also less spontaneous and often related to specific function such as flight, threat, and alarm. A song on the other hand is more complex than a call and occurs spontaneously (Welty & Baptista, 1988). Songs also constitute a group of notes separated from another group of notes by a pause longer than the pauses between the notes themselves (Welty & Baptista, 1988). When illustrating a song, sonograph is used to analyse, measure, classify and recognise the different sounds produced by the birds (Catchpole & Slater, 2008). Therefore, discrimination between different species, population, individuals, song type within individuals and renditions of the same song type from an individual bird was possible (Catchpole & Slater, 2008).

A Pied Triller's call can vary from a distinctive