

CAMERA TRAPPING WILDLIFE ON MOUNT PENRISSEN AREA IN WESTERN SARAWAK

SALLY SOO KAICHEEN¹ and JAYASILAN MOHD-AZLAN^{1*}

¹Animal Resource Science and Management, Faculty Resource Science and Technology,
UNIMAS, 94300 Kota Samarahan, Sarawak

*E-mail: azlan@unimas.my

Accepted 9 February 2018, Published online 31 March 2018

ABSTRACT

Camera trapping is a useful technique to study larger terrestrial mammals. Intensive camera trap surveys were carried out in Mount Penrisen (1350 asl.) area in order to understand the distribution of many elusive and cryptic species along the elevation gradient. This survey resulted in 45,145 photographs from an effort of 7,382 camera trap days from April 2015 to March 2017 (24 months). This survey recorded 33 species which include 11 birds, two small mammals and 20 larger mammals. Most of the larger mammals were recorded within the elevation range of 900 – 1100 m a.s.l. where mixed dipterocarp forest transit into lower montane forest in Mount Penrisen. Conservation importance species includes the Sunda Pangolin (*Manis javanica*) (critically endangered), Binturong (*Arctictis binturong*), Pig-tailed Macaque (*Macaca nemestrina*), and Bearded Pig (*Sus barbatus*) (vulnerable). Nearly 15% of the recorded species are considered totally protected in Sarawak under the Wild Life Protection Ordinance (SWLPO) 1998 and over 45% are listed as protected. The occurrence of these species in this area suggest that this continuous forest that extend into Kalimantan, Indonesia, may support the long-term persistence and landscape-scale movement of the threatened, sensitive and species of conservation importance in Sarawak.

Key words: Heterogeneity, elevation, detection, occupancy, conservation

INTRODUCTION

Sarawak, a state of Malaysia lies on the island of Borneo covers an area of 12, 445 million hectares. In general there are nine types of forest that occurs in Sarawak with mostly covered by mixed dipterocarp forests with hills and submontane forests, peat swamp forest, followed by *kerangas* forest, mangrove forests, beach forests, riverine forests, montane forests and limestone forests (Hazebroek & Morshidi, 2001). These forests are well known as the most bio diverse that harbours diverse species (Bryan *et al.*, 2013). However, the abundant forest resource in Sarawak has led the state to be dependent on timber resources where approximately 52% of its economy depends on forest reservoir that leads to conversion of habitats or deforestation (Tsuyuki *et al.*, 2011). The dependency had caused a loss of 1.2 million hectare of forest during year 1990 – 2009 which mostly consist of peat swamp and intact forests near Sibul, Mukah, Bintulu, and Miri (Tsuyuki *et al.*, 2011). Additionally, Sarawak

experienced intensive logging since 1970s with poor documentation; most gazetted national parks were logged or selectively logged forests or surrounded by plantations (Mathai *et al.*, 2013; Gaveau *et al.*, 2014). In view of this, it is important to understand the distribution of larger mammals in remaining forests of Sarawak as many mammalian species are considered as important groups which can help to monitor poaching rate and human activities due to their vulnerability and sensitivity (Robinson & Bodmer, 1999).

In order to investigate the richness and distribution of larger mammals we used infra-red censored cameras. These cameras have been used since the 20th century where it was found more dependable than other methods such as line transect and track surveys (Silveira *et al.*, 2003; Mathai *et al.*, 2013). Infra-red sensors camera trap is a quantitative technique which requires lower labour with minimum disturbance to wildlife and enables researchers to record diel activity that can be used to understand niche preference of selected species (Rowcliffe *et al.*, 2008).

* To whom correspondence should be addressed.