

CAMERA TRAPPING AND CONSERVATION IN LAMBIR HILLS NATIONAL PARK, SARAWAK

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ABSTRACT. – A rapid assessment using camera traps was carried out in Lambir Hills National Park from February 2004 to September 2004. In 1127 trap nights, six CamTrakker units and one DeerCam unit recorded a total of 225 wildlife photographs, which included seven orders, 11 families and 18 species of animals. *Macaca nemestrina* had the highest frequency of photo records with 63 exposures, while single exposures were recorded for *Arctictis binturong*, *Echinosorex gymnurus*, *Prionodon linsang*, *Rheithrosciurus macrotis*, *Sus barbatus*, and *Macaca fascicularis*. The rare *Neofelis nebulosa* was also recorded during this study. Activity patterns were calculated for five species. Low photo records of large mammals were noted and is believed to be caused by illegal hunting. The conservation of these species is discussed.

KEY WORDS. – Large mammals, Protected areas, Activity pattern, Management.

INTRODUCTION

Borneo, the third largest island in the world, covering approximately 746,337 km² is the biologically richest unit of the Sundaic sub-region and a center of distribution for many genera of the Indomalayan fauna (Mac Kinnon et al., 1996). Wildlife diversity is high on the island, with 221 species of terrestrial mammals (Payne et al., 1985), and about 19% of the mammalian fauna are endemic (Bennet et al., 1996). In Sarawak, forests outside protected areas are currently being utilized for timber extraction, agriculture and various other land developments. Habitat destruction and unsustainable hunting are major threats for many wildlife species (Payne et al., 1985; Bennet et al., 1996; Nowell & Jackson, 1996). Thus species conservation efforts and priority is being concentrated in protected areas. Approximately 36.2% of total land area in Sarawak has been gazetted as protected area. Despite the fact that a substantial proportion is classified as protected, no comprehensive survey has been carried out to assess the distribution of large mammals in most of these protected sites. One of these protected areas, Lambir Hills National Park (LHNP), has the highest reported diversity of tree species in the world (Lee et al., 2002) but little information is available on the park's large mammals.

Observations on large mammals in tropical rain forest are

difficult as many species are either secretive, nocturnal or generally avoid humans (Griffiths & Van Schaik, 1993). Thus, it is difficult to estimate population size, relative abundance or the activity patterns of these species (Silveira et al., 2003). Inexperienced observers using line-transect sampling and track counts sometimes fail to identify or notice the animal's presence, which results in unreliable estimates. The development of camera-trapping techniques has, however, greatly advanced our understanding of animal diversity and provides a means to detect secretive and low-density mammals (Mohd. Azlan & Sharma, 2002; Mohd. Azlan, 2003; Mohd. Azlan et al., 2003; Kawanishi & Sunquist, 2003). In view of this, a camera-trapping exercise was carried out in LHNP to assess the diversity of large terrestrial mammals. This information will provide insight to the species diversity in the park and contribute to the collection of distributional records of large mammals within protected areas in Sarawak.

MATERIALS AND METHODS

Study site. – LHNP was gazetted on 15 May 1975 and it covers an area of approximately 6,823 ha, which is approximately 2.4% of the total protected area in Sarawak. This isolated protected area is surrounded by oil palm