

SOME EVIDENCES OF SUMATRAN RHINOCEROS PRESENCE IN TEMENGOR FOREST RESERVE, PERAK.

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ABSTRACT

A study was conducted at Temengor Forest Reserves between 2007 and 2008 with the main aim to investigate the presence and distribution of large wildlife species primarily Sumatran Rhinoceros. Two study methods were employed namely trail survey and camera trapping. Field survey recorded a total of 29 species of mammals which include 5 species of primates, 14 species of carnivores, 9 species of ungulates (including Sumatran Rhinoceros) and one species of rodents. Camera trapping captured 19 species of mammals which the most common were the Malayan Tapir, followed by the Malayan Sun Bear, Barking Deer, Gaur and the Yellow-throated Marten. Pictures of Sumatran Rhinoceros were also present. At the same area, Sumatran Rhinoceros sighting also were reported in the previous studies in 2000 and early 2007. Recent evidence of Sumatran Rhinoceros were based on signs of fresh footprints, debarking of tree mark, scraped on ground and strong smell of urination at the ridge close to Sungai Talang. Evidence of the presence of Sumatran Rhinoceros at the study area is important for conservation of this species.

INTRODUCTION

In the recent times, there are very few records or reports of Sumatran Rhinoceros available despite several wildlife inventories, full time surveillance in Taman Negara, and camera trapping technique were conducted. The current situation is critical, given that, this rhino is considered one of the most endangered species of rhinos in this earth. Habitat destruction through logging, agricultural development, human settlement and shifting cultivation; and poaching for its horn and nails are the main threat. At present, the Sumatran Rhinoceros exist in small pockets of population and perhaps in small isolated sub population. Comprehensive efforts needed to ensure and maintain the existence of the animal in its natural habitats.

The outcome of Rhino Patrolling Unit's patrolling and monitoring activities in 1999, a record of Sumatran Rhinoceros discovered in Bukin Ramin. Another new discovery was in Mac 2005. Information from the aborigines, there was a sign of rhino found in Sungai Mendelum, Temengor Forest Reserve. In 1998 and 2002, other records were obtained in upper Sungai Singor area. Since 2005, there were two comprehensive wildlife survey were conducted especially in the Main Range complex. During the first survey, signs (footprints) of rhinos were discovered at the Sungai Perias, Sungai Panis and Sungai Bering all in the main range. Preliminary survey was carried out by the Sumatran Rhinoceros Taskforce Team in accordance with the sighting of some fresh rhino signs in Main Range during inventory of wildlife in Mei and early Jun 2007. At least three patrols were conducted after the reports to collect more and new information of rhinos signs in the areas.

METHODS

Study Area

The study was conducted at the Temengor Forest Reserve in state of Perak. The habitats mainly primary forest with some areas actively logged. The topography of the study area are mountainous with several highest point that up to 1300 m asl. Several wildlife inventories were conducted in this area mainly by the Wildlife Department. The inventory program in 2005 was made together with the arm forces and the recent was in the middle of 2007.

Wildlife Survey

Several field surveys by teams of DWNP staff were conducted along pre-determined trails between July 2007 to July 2008. The trails were selected based on their accessibility and based on the previous records of Sumatran Rhinoceros. The form of the terrain also considered as a factor for determining the trails. Some parts of the survey areas are steep and mountainous. The survey trails followed by the team pass through some valleys and streams as well as both lowland and highland areas. Both direct and indirect signs of wildlife found on and alongside the trails were recorded. As for rhino, track identification were based on it tracks shapes and size. Other signs were the feeding signs, wallows, twisted twigs and mark on the ground. Tracks of other wildlife were identified and measured according to the method fixed in the inventory form provided. GPS (Garmin 12XL) reading was used to determine the precise location of signs.

Camera Trapping

Placement of camera traps was based on result from previous inventory, which identified main trails and main ridges that provides track for the animals to move around. A total of four camera trapping major programs were carried out in the study areas where the first group had set up nine camera traps in research area in July 2007 and another two additional camera traps were set in November 2007. In 2008, the programs were started in March 2008 to August 2008. A total of 8 camera traps (Cam Trekker) were deployed in the study areas. The batteries used were Panasonic, and 512G capacity of Sony memory cards. All cameras were set for 24 hours operational, and the delay between two snaps was 10 second. Every eight weeks, the battery and the memory card were replaced. The locations of camera traps are varied in terms of altitude and site, often depends on the active animal trails. The camera traps were set up about 50cm from the forest floor and tied on a tree along the animal trails. Each trip comprised of 5 to 8 staffs from the DWNP.

RESULTS & DISCUSSION

The surveys recorded a total of 29 species of mammals including 5 primate species (Table 1). The most common species, recorded was the Siamang (*Sympalangus syndactylus*), followed by the Banded Leaf-Monkey (*Presbytis melalophos*) and White-handed Gibbon (*Hylobates lar*). A total of eight species were only spotted once and giving least common species. The species were the Bear Cat (*Arctictis binturong*), Malayan Wild Dog (*Cuon alpines*), Sumatran Rhinoceros (*Dicerorhinus sumatransis*), Marbled Cat (*Felis marmorata*), Flat-headed Cat (*Felis planiceps*), Banded Linsang (*Prionodon linsang*), Gaur (*Bos Gaurus*) and the Malay Weasel (*Mustela nudipes*). Among the primates, the Siamang (*S. syndactylus*) with 34% recorded with the highest percentage followed

by the Banded Leaf-Monkey (*Presbytis melalophos*) and White Handed Gibbon (*Hylobates lar*) with the 22% and 20%, respectively. Other record of wildlife especially the large mammals group were the Elephant (*Elephas maximus*), Gaur (*Bos gaurus*), Malayan Tapir (*Tapirus indicus*) and Sambar Deer (*Cervus unicolor*). As for carnivores, the Malayan Sun-Bear (*Helarctos malayanus*), Malayan Tiger (*Panthera tigris*) and Black Leopard (*Panthera pardus*) were recorded with the same percentage of observations. In addition, the images of the first two species were captured through camera trapping.

Observation of large mammals namely the Asian Elephant, Gaur and Sambar Deer were comparatively less in the study area. A few old marks such as drops and footprint of Asian Elephant and Gaur were recorded however, the findings were almost similar.

Camera trapping captured a total of 1030 photographic images from 2813 trap nights during the study period. The most common images of mammals captured were the Malayan Tapir (318 trap nights), followed by the Malayan Sun Bear (93), Barking Deer (42), Gaur (42) and the Yellow-throated (30). Other species were 20 or less photographic images captured. There are 19 species of animals captured on camera trapping, a promising number as compared to other camera trapping study areas.

Table 1: List of wildlife species recorded during the survey

Order	Family	Common name	Scientific name	Image captured	
Primate	Hylobatidae	White-handed Gibbon	<i>Hylobates lar</i>		
		Black-handed Gibbon	<i>Hylobates agilis</i>		
	Cercopithecidae	Siamang	<i>Symphalangus syndactylus</i>		
		Banded Leaf Monkey	<i>Presbytis melalophos</i>		
		Long-tailed Macaque	<i>Macaca fascicularis</i>		
Carnivore	Ursidae	Malayan Sun-bear	<i>Helarctos malayanus</i>	√	
	Felidae	Malayan Tiger	<i>Panthera tigris</i>	√	
		Black Leopard	<i>Panthera pardus</i>		
		Clouded Leopard	<i>Neofelis nebulosa</i>	√	
		Marbled Cat	<i>Felis marmorata</i>	√	
		Golden Cat	<i>Felis temmincki</i>	√	
		Flat-headed Cat	<i>Felis planiceps</i>	√	
		Leopard Cat	<i>Felis bengalensis</i>	√	
		Mustelidae	Yellow Throated Marten	<i>Martes flavigula</i>	√
	Viverridae	Malay Weasel	<i>Mustela nudipes</i>	√	
		Smooth Otter	<i>Lutra perspicillata</i>		
		Canidae	Malayan Wild Dog	<i>Cuon alpinus</i>	√
	Viverridae	Banded Linsang	<i>Prionodon linsang</i>	√	
		Bear Cat	<i>Arctictis binturong</i>	√	
	Proboscidae	Elephantidae	Asian Elephant	<i>Elephas maximus</i>	√
	Perisodactyla	Tapiridae	Tapir	<i>Tapirus indicus</i>	√
		Rhinocerotidae	Sumatran Rhinoceros	<i>Dicerorhinus sumatrensis</i>	√
Artiodactyla	Suidae	Wild Pig	<i>Sus scrofa</i>	√	
		Barking Deer	<i>Muntiacus muntjak</i>	√	
		Sambar Deer	<i>Cervus unicolor</i>	√	
	Bovidae	Serow	<i>Capricornis sumatraensis</i>		
		Gaur	<i>Bos gaurus</i>	√	
	Tragulidae	Greater Mouse-deer	<i>Tragulus napu</i>		
Rodentia	Hystriidae	Large Porcupine	<i>Hystrix brachyura</i>		

Traces of Sumatran Rhino

As stated earlier, the sighting of signs of Rhino was initially recorded during the wildlife inventory in 2007. The indirect observations were based on the mark of twisted saplings of undergrowth vegetation reported by Zainal Zahari *et al* (2000). The discoveries have led to another few surveys carried out in the same locations and its surrounding in Temengor Forest Reserve. More surveys were carried out to get new information, data and details of the findings where signs of Sumatran Rhinoceros were recorded from the ridges close to Sungai Talang. The signs were the fresh footprints, debarking of tree mark, scraped on ground and strong smell of urination. Other than that, a partial body part of Sumatran Rhinoceros was photographed during the study period

indicating that Sumatran Rhinoceros still exist in fragmented forests in Peninsular Malaysia and crucial conservation steps should be taken to ensure the survival of this endangered species. The rhino's marks are showed on the Photographs 1 to 5 below.



Photograph 1: A fresh footprint found on the ridge in Sungai Talang, area. The size was 19 x 8 cm.



Photograph 2: Scraped ground was also found in the same location where the footprint were discovered



Photograph 3: Debarking of tree, another marking method found during one of the survey



Photograph 4: The Average length of fiber content of faeces was more than 2 cm.



Photograph 5: Photographed image of suspected Sumatran Rhinoceros in Temengor Forest Reserve, Hulu Perak during the study period.

The study area is considered high in wildlife diversity. The sighting of rare and critically endangered wildlife species can still be found in the area namely the Sumatran Rhinoceros, Serow and the Wild Dog. Since this area is inhabited by high number of wildlife species, it is suggested that these areas should be monitored regularly. Thus, it should be considered a high priority site, and regular monitoring and patrolling should be conducted to stop encroachment and poaching activity.

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