



E-ISSN: 2320-7078
P-ISSN: 2349-6800
JEZS 2017; 5(4): 1962-1965
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Received: 14-05-2017
Accepted: 15-06-2017

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A contemporary checklist of mammals at Pakke Tiger Reserve in Arunachal Pradesh

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Abstract

Pakke Tiger Reserve (PTR) a protected area in Arunachal Pradesh has rich species diversity located in the Eastern Himalayas a biodiversity hotspot. The present evaluation is a record of mammals of the Pakke Tiger Reserve that was documented opportunistically during a field survey conducted in December 2015. The survey was undertaken from Langka Village to Nameri Camp of the PTR. The mammals encountered through direct observations were photographed and the number of individuals, occasions of sighting observed were recorded during the present survey. A total of eight species comprising of five terrestrial (*Panthera pardus*, *Elephas maximus*, *Rusa unicolor*, *Sus scrofa*, and *Muntiacus muntjak*) and three arboreal (*Trachypithecus pileatus*, *Callosciurus pygerythrus* and *Ratufa bicolor*) belonging to five orders and six families were recorded.

Keywords: Pakke Tiger Reserve, Mammals, Arunachal Pradesh, Elephant

1. Introduction

Arunachal Pradesh has the rich biodiversity largely due to its location in the transitional zone between the Indian and Indo-Chinese sub-regions; this enriched biodiversity has earned it the status of a global biodiversity hotspot. Arunachal Pradesh perhaps has the highest diversity of mammals among any Indian state constituting 65% of the total mammalian species found in the country^[3]. There are eight Wildlife Sanctuaries, one Orchid Sanctuary and two National Parks in the state of Arunachal Pradesh covering an area of 9,488.48 sq km (http://arunachalforests.gov.in/protected_areas.html). The Pakke Tiger Reserve (PTR) (26°54'– 27°16' N and 92°36'–93°09'E) lies in the Eastern Himalayas in East Kameng District of Arunachal Pradesh (India) with a total area of 862 km². The PTR is surrounded by a confluence of rivers; the Pakke river flowing East Kameng river in the west and Papu river towards the northern margin. The area is characterized by lowland semi-evergreen, evergreen and Eastern Himalayan broadleaf forests on undulating hilly terrain with altitudes ranging from 200 m to about 2000 m above sea level^[6]. This Protected area was declared as the 'Pakhui Wildlife Sanctuary' in 1977 and due to its large tiger population composition it was declared as 'Pakke Tiger Reserve' in 2002.

The list of mammals in PTR is cited up to 60 species (https://tourism.webindia123.com/tourism/wildlife/tigerreserves/Pakke_Tiger_Reserve/index.htm) and thirty three documented with ten species of global importance^[8]. The present record of mammals is based on a random survey undertaken in PTR.

2. Materials and Methods

The present record on mammals was done using a convenience sampling approach by foot during 01st December 2015 to 10th December 2015. The observations were done during 5:00 - 12:00 hrs and 19:00-21:00 hrs every day. The area covered during the present survey is the southern margin adjoining Nameri National Park in Assam. The survey was undertaken from Langka Village to Nameri Camp of the PTR (Map 1). The mammals encountered through direct observations were photographed using Nikon-D7100. The number of individuals, occasions of sighting of the mammals observed was also recorded (Table 2). Tracks and signs of mammals photographed during the survey that could not be identified are not included in this manuscript. The species were identified using appropriate identification guide^[7].

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Map 1: The area surveyed during the present survey indicated in the map of the Pakke Tiger Reserve (Courtesy:<https://www.google.co.in/maps/>)

3. Results and Discussion

Sighting mammals in tropical forests are pure chance and during the present survey, eight mammals five terrestrial (*Panthera pardus*, *Elephas maximus*, *Rusa unicolor*, *Sus scrofa*, and *Muntiacus muntjak*) and three arboreal (*Trachypithecus pileatus*, *Callosciurus pygerythrus* and *Ratufa bicolor*) belonging five orders and six families were recorded in PTR (Table 1). Mithun, *Bos frontalis* Lambert, 1804 (Semi-domesticated bovine) the state animal of Arunachal Pradesh is found in the tropical rain forests of other North Eastern hilly states viz., Nagaland, Manipur and Mizoram was also recorded in the reserve area. They move freely in the jungles close to the habitation of their owners in the settlements in and around the reserve.

Rich faunal diversity including mammals has been reported by different workers from PTR [5], Primates [1] and Carnivores [9]. However, literature on survey focusing only on mammalian diversity in PTR is minimal. Although the present survey is a short duration random survey, eight species of mammals were recorded. The reserve also faces major land use pressures by habitants in and around the protected area in the form of encroachments for agriculture (Shifting/Jhum)

and permanent settlements adjoining PTR [4]. In terms of conservation status, two each, endangered (*E. maximus* and *T. pileatus*) and vulnerable mammals (*P. pardus* and *R. unicolor*), one near threatened species (*R. bicolor*) have been recorded indicating the fragile and sensitive ecosystem. Elephants, wild boar and leopards were observed near water sources, Capped Langur troop was observed resting and grooming. Both the deer and squirrel species were observed foraging. With regard to the number of occasions of sighting, the Malayan giant squirrel was spotted maximum number of times on ten occasions in three spots (West bank-02, Khari-03, East Nameri camp to Mobusa II- 05). The total numbers of individuals were five, one each in three spots mentioned above. Capped Langur and the Assamese macaque are the most abundant species [2]. A part of capped Langur troop with eleven individuals comprising of adults and juveniles were spotted, this was the highest number of Mammals spotted on a single location during the present survey (Table 2). A detailed survey to assess conservation initiatives including involvement of local communities and the current status of species diversity-abundance-distribution needs to be undertaken.

Table 1: List of mammals recorded during the present survey

Sl.no	Common name	Scientific name	Order : Family	IUCN Conservation status*	Fig. nos
Carnivores					
1	Common Leopard	<i>Panthera pardus</i> (Linnaeus, 1758)	Carnivora: Felidae	VU	1
Herbivores					
Large herbivore mammals					
2	India Elephant	<i>Elephas maximus</i> (Linnaeus, 1758)	Proboscidia: Elephantidae	EN	2
3	Sambar	<i>Rusa unicolor</i> (Kerr, 1792)	Ungulata: Cervidae	VU	3
Medium sized mammals					
4	Wild Boar	<i>Sus scrofa</i> (Linnaeus, 1758)	Ungulata: Artiodactyla		4
5	Barking Deer	<i>Muntiacus muntjak</i> Zimmermann, 1780	Ungulata: Cervidae	LC	5
6	Capped Langur	<i>Trachypithecus pileatus</i> (Blyth, 1843)	Primata: Cercopithecidae	VU	6
Small herbivore mammals					
7	Hoary-Bellied Himalayan Squirrel	<i>Callosciurus pygerythrus</i> (I. Geoffroy Saint Hilaire, 1832)	Rodentia: Sciuridae	LC	7
8	Malayan Giant Squirrel	<i>Ratufa bicolor</i> (Sparman, 1778)	Rodentia: Sciuridae	NT	8

LC=Least Concern, NT=Near Threatened, VU=Vulnerable, EN=Endangered

*<http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T15954A50659089.en>

Table 2: Details of sighting the mammals during the present survey

Date	Camp	Mammal(s) sighted	Number of	
			Occasions of sighting	Total Individuals sighted
01.12.2015	Jungle Camp	-Nil-	Nil	Nil
02.12.2015	West Bank	Malayan Giant Squirrel	02	02
03.12.2015	Langka village	-Nil-	-Nil-	-Nil-
04.12.2015	Khari (Rest House)	Leopard	02	02
		Hoary-bellied Himalayan Squirrel	01	01
05.12.2015	Khari	Malayan Giant Squirrel	03	03
		Capped Langur	01	11
06.12.2015	East Nameri Camp	Wild boar	01	01
		Elephant herd	02	09
		Sambar	01	03
07.12.2015	East Nameri Camp	Sambar	01	04
		Barking deer	01	01
08.12.2015	East Nameri Camp to Mobusa-II	Malayan Giant Squirrel	05	05
09.12.2015	Mobusa II	Hoary-bellied Himalayan Squirrel	02	02
10.12.2015	Jungle Camp	-Nil-	-Nil-	-Nil-

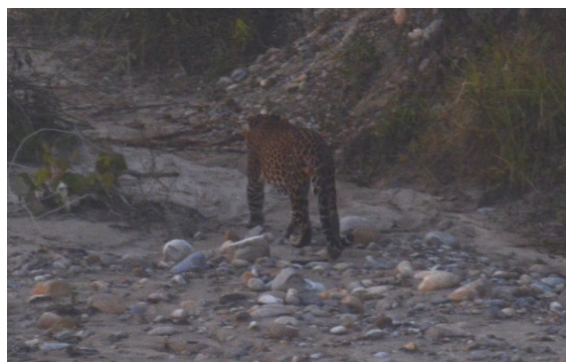


Fig 1: *Panthera pardus*



Fig 4: *Sus scrofa*



Fig 2: *Elephas maximus*



Fig 5: *Muntiacus muntjak*



Fig 3: *Rusa unicolor*



Fig 6: *Trachypithecus pileatus*



Fig 7: *Ratus bicolor*



Fig 8: *Callosciurus pygerythrus*

4. Acknowledgements

The author is grateful for the support and encouragement provided by The Director, ZSI, Kolkata, Dr. K.A. Subramanian Scientist-D, South Regional Centre (SRC), Chennai during field survey and Dr. M. Jayashankar Scientist-C, Arunachal Pradesh Regional Centre (APRC) in preparing the manuscript.

5. References

1. Chetry D. Primates Status Survey and Conservation Priorities in Namdapha National Park, Arunachal Pradesh, India. ASP Report. 2002, 10-11.
2. Choudhury A. Primates in Northeast India: An Overview of their Distribution and Conservation Status. In Envis Bulletin: Wildlife and Protected Areas, A.K. Gupta (Editor). 2001; 1(1):92-101
3. Choudhury A. The Mammals of Arunachal Pradesh. Published by: Published by Regency Publications. 2003, 140.
4. Das N, Biswas J, Bhattacharya, Nekaris AK. Observations on the Bengal Slow Loris *Nycticebus bengalensis* in Pakke Tiger Reserve, Arunachal Pradesh, India. Asian primates Journal. 2016; 6(1):27-32
5. De JK, Mandal AK, Ghosh MK. Mammals In: Fauna of Arunachal Pradesh (Part I). State Fauna Series. (Published – Zool. Surv. India, Kolkata) 2006; 13:21-68.
6. Kumar A, Solanki GS. Population status and conservation of Capped Langurs (*Trachypithecus pileatus*) in and around Pakke Wildlife Sanctuary, Arunachal Pradesh, India. Primate Conservation. 2008; 23:97-105
7. Menon V. Indian Mammals: A Field Guide Hachette Book Publishing India Pvt. Ltd. India, 2014.
8. Mishra C, Datta A, Madhusudan MD. The high altitude wildlife of Western Arunachal Pradesh: a survey report. CERC Technical Report No. 8. Nature Conservation

Foundation, International Snow Leopard Trust, and Wildlife Conservation Society (India Program), Mysore, India, 2004.

9. Sethy J, Samal D, Chauhan NPS. Occurrence of Small Carnivores in Gandhigram Range of Namdapha National Park, Arunachal Pradesh, India. Journal of Wildlife research. 2014; 2(3):11-17
10. <http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T15954A50659089.en>
11. https://tourism.webindia123.com/tourism/wildlife/tigerreserves/Pakke_Tiger_Reserve/index.htm
12. <https://www.google.co.in/maps/>
13. http://arunachalforests.gov.in/protected_areas.html