



Published by
www.researchtrend.net

Studies on the Mammalian Diversity of Kaziranga National Park, Assam, India with their conservation status

Gaurav Sharma

Zoological Survey of India, High Altitude Regional Centre, Solan (Himachal Pradesh), India

*Corresponding author: drgaurav.sharma@gov.in

| Received: 18 January 2018 | Accepted: 23 February 2018 |

ABSTRACT

The present study has been conducted to study mammalian diversity in Kaziranga National Park, Assam during 2015-16. About 54 species belonging to 23 families and 11 orders of Mammals recorded during present study and earlier records including Eastern Swamp Deer, *Rucervus duvaucelii ranjitsinhi* (Groves, 1982).

Key words: Mammals, diversity, Kaziranga National Park, Assam, India.

INTRODUCTION

The park celebrated its centennial in 2005 after its establishment in 1905 as a reserve forest. In 1916, it was redesignated as the 'Kaziranga Game Sanctuary' and in 1950 the Kaziranga Game Sanctuary was renamed as the 'Kaziranga Wildlife Sanctuary'. In 1968, the state government passed the Assam National Park Act of 1968, declaring Kaziranga a designated national park. The 430 km² national park was given official status by the central government on 11 February, 1974. In 1985, Kaziranga was declared a World Heritage Site by UNESCO for its unique natural environment (Bhaumik 2005; Lahan & Sonowal 1972; Mathur et al. 2005; Talukdar 1996). The studies were conducted on different aspects earlier by different workers in the Kaziranga National Park and other habitats in India (Alfred et al. 2006; Anon 1995; Lahan & Sonowal 1972; Mathur et al. 2005; Prater 1971; Sharma et al. 2014; Sharma et al. 2015a&b; Sharma & Kamalakannan 2017; Sharma et al. 2017; Talukdar 1996). The present study was carried out to provide the diversity of mammalian species recorded during the present study, earlier recorded by Assam Forest

Department and other workers in the Kaziranga National Park, Assam.

MATERIALS AND METHODS

The studies were conducted in Kaziranga National Park, Assam to explore the diversity of mammalian species during 2015-16. Kaziranga is located between latitudes 26°30' N and 26°45' N, and longitudes 93°08' E to 93°36' E within two districts of Assam, the Kaliabor subdivision of district Nagaon and the Bokakhat subdivision of district Golaghat. The park is approximately 40 km in length from east to west, and 13 km in breadth from north to south. Kaziranga covers an area of 378 km², with approximately 51.14 km² lost to erosion in recent years. A total addition of 429 km² along the present boundary of the park has been made and designated with separate national park status to provide extended habitat for increasing the population of wildlife or, as a corridor for safe movement of animals to Karbi Anglong Hills. Elevation ranges from 40 m to 80 m. The park area is circumscribed by the Brahmaputra River, which forms the northern and eastern boundaries, and the Mora Diphlu, which forms the southern

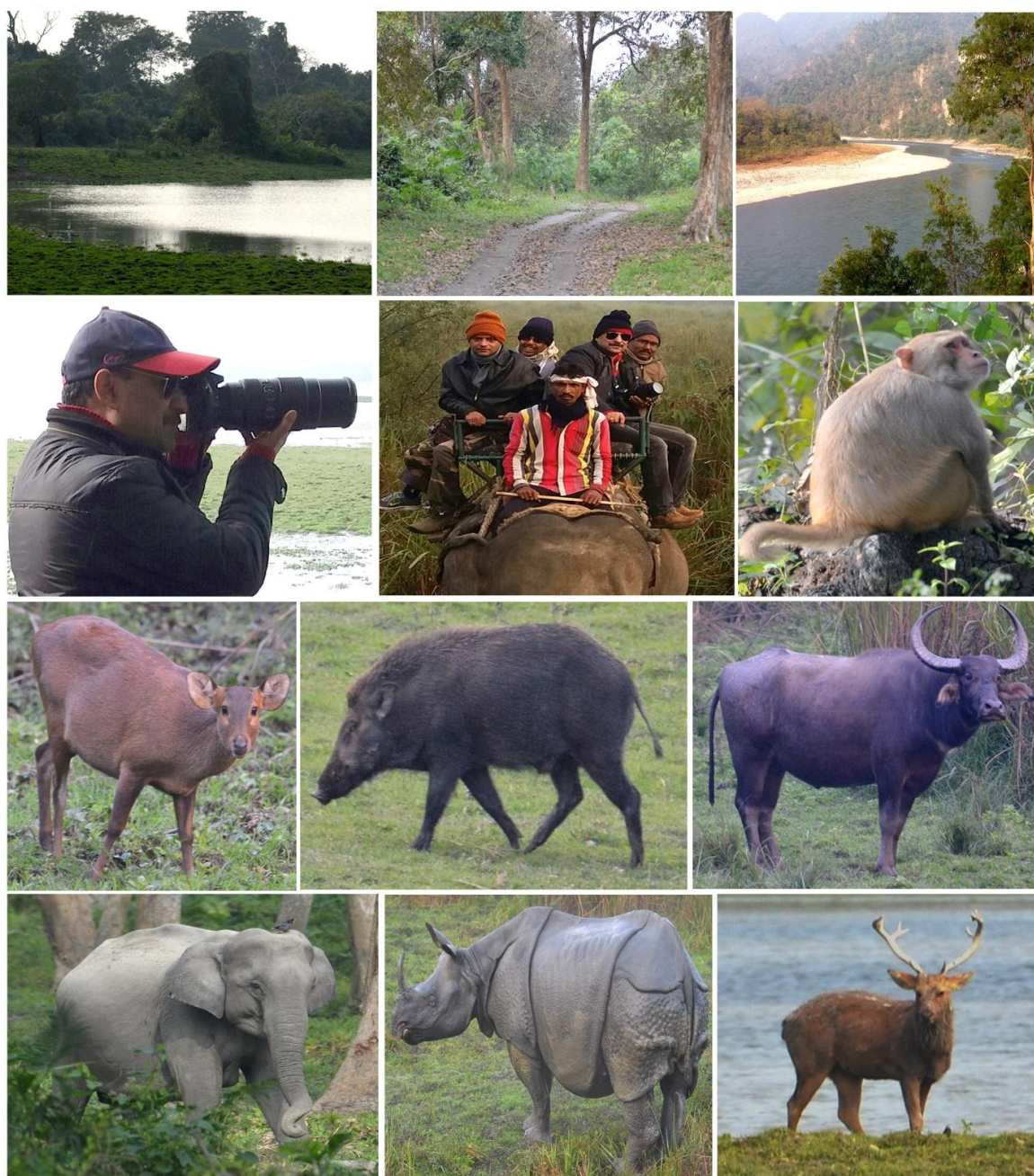


Fig.1. A Glimpse of habitats, methodology and mammalian species of Kaziranga National Park, Assam.

boundary and other notable rivers within the park are the Diphlu and Mora Dhansiri (Lahan and Sonowal, 1972; Mathuret *al.*, 2005; Talukdar, 1996). The mammalian species were recorded in and around by using hired vehicle Gypsy and Elephant to reach different localities of the study area (Fig. 1). The Nikon Binocular (10mm×25mm) and Nikon D7000 DSLR Camera with Telelens attachment 80-400mm were used to record the mammals species in the field. The presence of some mammals species is ascertained on the basis of interview with forest officials, guides and villagers residing around reported locality, from earlier literature and record of forest department. The identification of mammalian species were also

done by studying pugmark on the forest track and near water body.

RESULTS AND DISCUSSION

About 54 species belonging to 23 families and 11 orders of Mammals recorded from the study site during study period and as per record of Assam Forest Department including Eastern Swamp Deer, *Rucervus duvaucelii ranjitsinhi* (Groves 1982). The systematic accounts of mammals recorded during present study and earlier studies of 54 species of mammals with their Conservation status is given in Table 1.

Kaziranga has been the target of several natural and man-made calamities in recent decades. Floods

caused by the overflow of the river Brahmaputra, leading to significant losses of animal life. Encroachment by people along the periphery has also led to a diminished forest cover and a loss of habitat. The park has the distinction of being home

to the world's largest population of the Greater One-Horned Rhinoceros, Water Wild Buffalo, Eastern Swamp deer, Asiatic Elephants and Sambar (Lahan & Sonowal 1972; Mathur et al. 2005; Talukdar 1996).

Table 1: Mammals of Kaziranga National Park, Assam with their Conservation Status.

Sl. No.	Species/Sub-species (Scientific and Common Names)	Conservation Status		
		IUCN (Red list Category)	IW(P)A (Schedule)	CITES (Appendix)
I. Order: PROBOSCIDEA				
1. Family: Elephantidae				
1.	<i>Elephas maximus</i> Linnaeus, 1758, Asiatic Elephant	EN	I	I
II. Order: PRIMATES				
2. Family: Cercopithecidae				
2.	<i>Macaca mulatta</i> (Zimmermann, 1780), Rhesus Macaque	LC	II	II
3.	* <i>Macaca assamensis</i> (Mc Clelland, 1840), Assamese Macaque	NT	II	II
4.	* <i>Trachypithecus phayrei</i> (Blyth, 1847), Phayre's Leaf-monkey	EN	I	II
5.	<i>Trachypithecus pileatus</i> (Blyth, 1843), Capped Langur	VU	I	I
3. Family: Lorisidae				
6.	* <i>Nycticebus bengalensis</i> (Lacepede, 1800), Bengal Slow Loris	VU	I	I
4. Family: Hylobatidae				
7.	* <i>Hoolock hoolock</i> (Harlan, 1834), Western Hoolock Gibbon	EN	I	I
III. Order: RODENTIA				
5. Family: Sciuridae				
8.	<i>Ratufa bicolor</i> (Sparrmann, 1778), Black Giant Squirrel	NT	II	II
9.	* <i>Hylopetes alboniger</i> (Hodgson, 1836), Parti-Coloured Flying Squirrel	LC	-	-
10.	* <i>Tamiops maccllellandii</i> (Horsfield, 1840), Himalayan Striped Squirrel	LC	-	-
11.	* <i>Callosciurus erythraeus</i> (Pallas, 1779), Pallas's Squirrel	LC	-	-
12.	* <i>Dremomys lokriah</i> (Hodgson, 1836), Orange-bellied Himalayan Squirrel	LC	-	-
6. Family: Muridae				
13.	* <i>Micromys minutus</i> (Pallas, 1771), Harvest Mouse	LC	V	-
14.	<i>Mus musculus</i> Linnaeus, 1758, House Mouse	LC	V	-
15.	* <i>Bandicota indica</i> (Bechstein, 1800), Greater Bandicoot Rat	LC	V	-
7. Family: Hystricidae				
16.	* <i>Hystrix brachyura</i> Linnaeus, 1758, Himalayan Crestless	LC	II	-
17.	<i>Hystrix indica</i> Kerr, 1792, Indian Crested Porcupine	LC	IV	-
IV. Order: LAGOMORPHA				
8. Family: Leporidae				
18.	* <i>Caprolagus hispidus</i> (Pearson, 1839), Hispid Hare	EN	I	I
19.	<i>Lepus nigricollis</i> F. Cuvier, 1823, Indian Hare	LC	IV	-
V. Order: EULIPOTYPHLA				
9. Family: Soricidae				
20.	* <i>Crociodura attenuate</i> Milne-Edwards, 1872, Asian Gray Shrew	LC	-	-
21.	* <i>Suncus murinus</i> (Linnaeus, 1766), Asian Musk Shrew	LC	-	-
VI. Order: CHIROPTERA				
10. Family: Pteropodidae				
22.	<i>Pteropus giganteus</i> (Brünnich, 1782), Indian Flying Fox	LC	V	-
VII. Order: PHOLIDOTA				
11. Family: Manidae				
23.	* <i>Manis crassicaudata</i> E. Geoffroy, 1803, Indian pangolin	EN	I	II

24.	<i>*Manis pentadactyla</i> Linnaeus, 1758, Chinese Pangolin	CR	I	I
VIII. Order: CARNIVORA				
12. Family: Felidae				
25.	<i>Felis chaus</i> Schreber, 1777, Jungle Cat	LC	II	II
26.	<i>Panthera pardus</i> (Linnaeus, 1758), Leopard	VU	I	I
27.	<i>Panthera tigris</i> (Linnaeus, 1758), Tiger	EN	I	I
28.	<i>*Prionailurus bengalensis</i> (Kerr, 1792), Leopard Cat	LC	I	I
29.	<i>*Prionailurus viverrinus</i> (Bennett, 1833), Fishing Cat	VU	I	II
13. Family: Viverridae				
30.	<i>Paradoxuruserma phroditus</i> (Pallas, 1777), Asian Palm Civet	LC	II	III
31.	<i>*Viverra zibetha</i> Linnaeus, 1958, Large Indian Civet	NT	II	III
32.	<i>*Viverricula indica</i> (E. Geoffroy Saint Hilaire, 1803), Small Indian Civet	LC	II	III
14. Family: Herpestidae				
33.	<i>Herpestes edwardsii</i> (É. Geoffroy Saint-Hilaire, 1818), Grey Mongoose	LC	II	III
34.	<i>*Herpestes auropunctatus</i> (Hodgson, 1836), Small Indian Mongoose	-	-	III
35.	<i>*Herpestes urva</i> (Hodgson, 1836), Crab-eating Mongoose	LC	II	III
15. Family: Hyaenidae				
36.	<i>*Hyaena hyaena</i> (Linnaeus, 1758), Striped Hyena	NT	III	III
16. Family: Canidae				
37.	<i>Canis aureus</i> Linnaeus, 1758, Golden Jackal	LC	II	II
38.	<i>Vulpes bengalensis</i> (Shaw, 1800), Bengal Fox	LC	II	III
17. Family: Ursidae				
39.	<i>Melursus ursinus</i> (Shaw, 1791), Sloth Bear	VU	I	I
40.	<i>*Ursus thibetanus</i> G.[Baron] Cuvier, 1823, Asiatic Black Bear	VU	II	I
18. Family: Mustelidae				
41.	<i>*Lutrogale perspicillata</i> (I. Geoffroy Saint Hilaire, 1826), Indian Smooth-coated Otter	VU	II	II
42.	<i>Lutra lutra</i> (Linnaeus, 1758) European Otter	NT	II	I
43.	<i>*Melogale moschata</i> (Grav, 1831), Chinese Ferret-badger	LC	II	-
44.	<i>*Arctonyx collaris</i> F.G. Cuvier, 1825, Hog-badger	VU	I	-
45.	<i>Martes flavigula</i> (Boddaert, 1785), Yellow-throated Marten	LC	II	III
IX. Order: PERISSODACTYLA				
19. Family: Rhinocerotidae				
46.	<i>Rhinoceros unicornis</i> Linnaeus, 1758, Indian Rhinoceros	VU	I	I
X. Order: ARTIODACTYLA				
20. Family: Suidae				
47.	<i>Sus scrofa</i> Linnaeus, 1758, Wild Pig	LC	III	-
21. Family: Cervidae				
48.	<i>Rucervus duvaucelii ranjitsinhi</i> (Groves, 1982), Eastern Swamp Deer	VU	I	I
49.	<i>Rusa unicolor</i> (Kerr, 1792), Sambar	VU	III	-
50.	<i>Muntiacus muntjak</i> (Zimmermann, 1780), Indian Muntjac	LC	III	-
51.	<i>Axis porcinus</i> (Zimmermann, 1780), Hog Deer	EN	III	-
22. Family: Bovidae				
52.	<i>Bos gaurus</i> C.H. Smith, 1827, Gaur	VU	I	I
53.	<i>Bubalus arnee</i> (Kerr, 1792), Water Wild Buffalo	EN	I	-
XI. Order: CETACEA				
23. Family: Platanistidae				
54.	<i>*Platanista gangetica</i> (Roxburgh, 1801), Ganges River Dolphin	EN	I	I

Where * indicates species as per Kaziranga National Park, Assam Forest Department records & earlier studies.

ACKNOWLEDGEMENTS

The author sincerely thanks to the Director, Zoological Survey of India, Kolkata and to the Director, DFO and Forest Staff of Kaziranga National Park, Assam for providing necessary permission and support during study period. Special thanks to Dr. M. Kamalakannan, Mr. Subir Guha, Mr. Bidyut Chakraborty, Mr. Krishna Kumar Singh and Ms. Debashree Dam, Mammal and Osteology Section, Zoological Survey of India, Kolkata for their help during survey and in the laboratory.

REFERENCES

- Alfred JRB, Ramakrishna, Pradhan MS. 2006. *Validation of Threatened Mammals of India*. Published by the Director, *Zool. Surv. India*, Kolkata, 568pp.
- Anonymous 2010. *The Wildlife (Protection) Act, 1972 (as amended up to 2006)*. Wildlife Trust of India, New Delhi. Published by Natraj Publishers, Dehra Dun, 236pp.
- Bhaumik S. 2005. Kaziranga's centenary celebrations. BBC News on 18 February 2005.
- CITES 2017. Convention on International Trade in Endangered Species of Wild Fauna and Flora Appendices I, II & III, www.cites.org
- IUCN 2017. *The IUCN Red List of Threatened Species. Version 3.1*, www.iucnredlist.org
- Lahan P, Sonowal R. 1972. Kaziranga Wildlife Sanctuary, Assam. A brief description and report on the census of large animals. *J Bombay Natural History Soc* 70(2): 245–277.
- Mathur VB, Sinha PR, Mishra M. 2005. UNESCO EoH Project South Asia Technical Report No. 4–Kaziranga National Park World Heritage Site. UNESCO-IUCN-WII. 1-54.
- Prater SH. 1971. *The Book of Indian Animals*. Bombay Natural History Society. *Oxford University Press*, 324pp.
- Sharma G, Dhatwalia N, Ram K. 2017. Studies on the Mammalian diversity of Great Himalayan National Park, Himachal Pradesh, India. *International J Theoretical App Sc* 9(2): 274-277.
- Sharma G, Kamalakannan M, Dam D, Husain A. 2014. Status and Conservation of Mammalian Diversity in Indian Himalaya. *Biol Forum – An International J* 6(2): 284-310.
- Sharma G, Kamalakannan M, Guha S, Chakraborty, B., Singh, K.K. and Dam, D. 2017. Studies on the Mammalian diversity of Dudhwa National Park, Uttar Pradesh, India. *Bio Bulletin* 3(2): 54-56.
- Sharma G, Kamalakannan M, Venkataraman K. 2015a. A Checklist of Mammals of India with their distribution and conservation status. ZSI e-publication. Published by the Director, *Zool. Surv. India*, Kolkata, 107pp.
- Sharma G, Kamalakannan M, Venkataraman K. 2015b. An identification Manual of Scheduled Mammals of India [Indian Wildlife (Protection) Act, 1972]. Published by Director, *Zool. Surv. India*, Kolkata, 1-64 + 48 colour plates.
- Sharma G, Kamalakannan M. 2017. Characterization of bristle hair of the Indian pangolin *Manis crassicaudata* E. Geoffroy, 1803 and Chinese pangolin *Manis pentadactyla* Linnaeus, 1758 (Manidae: Pholidata). *Biol Forum – An International J* 9(1): 122-126.
- Talukdar BK. 1996. Status of Swamp Deer in Kaziranga National Park. *Deer Specialist Group News* 13: 11-12.
- Wilson DE, Reeder DM. (Eds.) 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference- Third Edition* Johns Hopkins University Press, Baltimore, MD 2: 1-2141.