



Studies on the Mammalian Diversity of Great Himalayan National Park Conservation Area, Himachal Pradesh, India

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ABSTRACT: The present study has been conducted to study mammalian diversity in Great Himalayan National Park Conservation Area, District Kullu, Himachal Pradesh during 2015-17. About 32 species belonging to 17 families and 05 orders of Mammals has been recorded from the study site and information on their conservation status is also provided. The sustainable use of natural resources, continuous long term monitoring research projects and planned strategies are necessary for conservation of species of fauna and flora in GHNPCA with the help of group experts, local populations, different Governments organizations, NGO's and enforcement agencies.

Key words: Mammals, diversity, Great Himalayan National Park Conservation Area, Himachal Pradesh.

I. INTRODUCTION

The Great Himalayan National Park Conservation Area (GHNPCA) is a protected area in the Kullu District of Himachal Pradesh, India. It includes Great Himalayan National Park (GHNP, 754.4km²), Sainj Wildlife Sanctuary (90km²), Tirthan Wildlife Sanctuary (61km²) and an Eco-zone (265.6km²), altogether with a total area of GHNPCA is 1171 Km² in the lap of Western Himalayas. The park area not only includes the world's highest mountains and associated alpine ecosystems, but also large expanses of lower-elevation of temperate, subtropical forests and grasslands. The park is known for the presence of high percentages of endemic flora and fauna and is home to four globally threatened mammals viz., Snow Leopard, Himalayan Serow, Himalayan Tahr and Musk Deer and birds viz., Western Tragopan, Koklass pheasant and Cheer Pheasant and a large number of medicinal plants. The GHNPCA was inscribed into the list of UNESCO World Heritage Sites during the 38th session of World Heritage Committee meeting held on 23rd June, 2014 at Doha, in recognition of its 'Outstanding Universal Values' for the Biodiversity conservation and exceptional natural beauty in the Western Himalayas (Anon., 2017). The various researchers had worked on exploration of the different aspects of mammalian species in the Great Himalayan National Park such as Caughley (1970), Cavallini (1992), Gaston *et al.* (1981, 1983), Gaston and Gaston (1992), Mathur *et al.* (2004), Pandey and Well (1997) *etc.* The present studies has made a modest attempt to explore the mammalian diversity of GHNPCA and provided information on their conservation status.

II. MATERIAL AND METHODS

The GHNP's lowest altitude is 1,700m above sea level, and its highest peak reaches almost 5,800m. Biogeographically, GHNP is at the junction of the world's two major faunal realms- the Oriental to the south and Palearctic to the north. The climate of GHNPCA has four distinct seasons: spring (April to June); rainy/summer (July to September); autumn (October to November) and winter (December to March). The ambient temperature can vary from -10°C in January to 40°C in June (Anon, 2017). The common eight trekking routes with minimum duration of field visits of 4-9 days were finalized as per intensive and extensive field visits of forest staff, GHNP for the visitors, tourists and researchers on getting entry permit with facilities of Forest Rest houses as per availability during trekking in GHNPCA. The studies were conducted in Great Himalayan National Park Conservation Area to explore the diversity of mammalian species during 2015-2017. The mammalian species were recorded in and around the study area on foot to reach different localities of the GHNPCA. The Nikon Binocular (10mm×25mm) and Nikon D7000 DSLR Camera with Telelens attachment 80-400mm were used to record the mammalian 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 32 species belonging to 17 families and 05 orders of Mammals were recorded from the study site including species as recorded earlier by different researchers such as Gaston *et al.* (1981, 1983), Gaston and Gaston (1992), Mathur *et al.* (2004), Pandey and Well (1997) and as per GHNP, H.P. Forest Department records. The systematic accounts of recorded 32 species of mammals with their Conservation status is given in Table 1.

The native populations of forests across the globe have protected and conserved their environments since time immemorial, and the inhabitants of the GHNPCA are no exception. The GHNPCA forests have historically

supported the very survival of the local residents, who continue to believe in sustainable harvesting, as regulated by social custom and religious belief, practice and myth. The Park's management team is extremely grateful to the local population for its role in conserving GHNP's resources, and hopes to work in partnership with them into the future to protect this jewel of the Western Himalaya (Pandey and Wells, 1997; Anon, 2017). The sustainable use of natural resources, continuous long term monitoring research projects and planned strategies are necessary for conservation of species of fauna and flora in GHNPCA with the help of group experts, local populations, different Government organizations, NGO's and enforcement agencies.

A glimpse of habitats, field methodology and mammalian species recorded in GHNPCA, H.P.

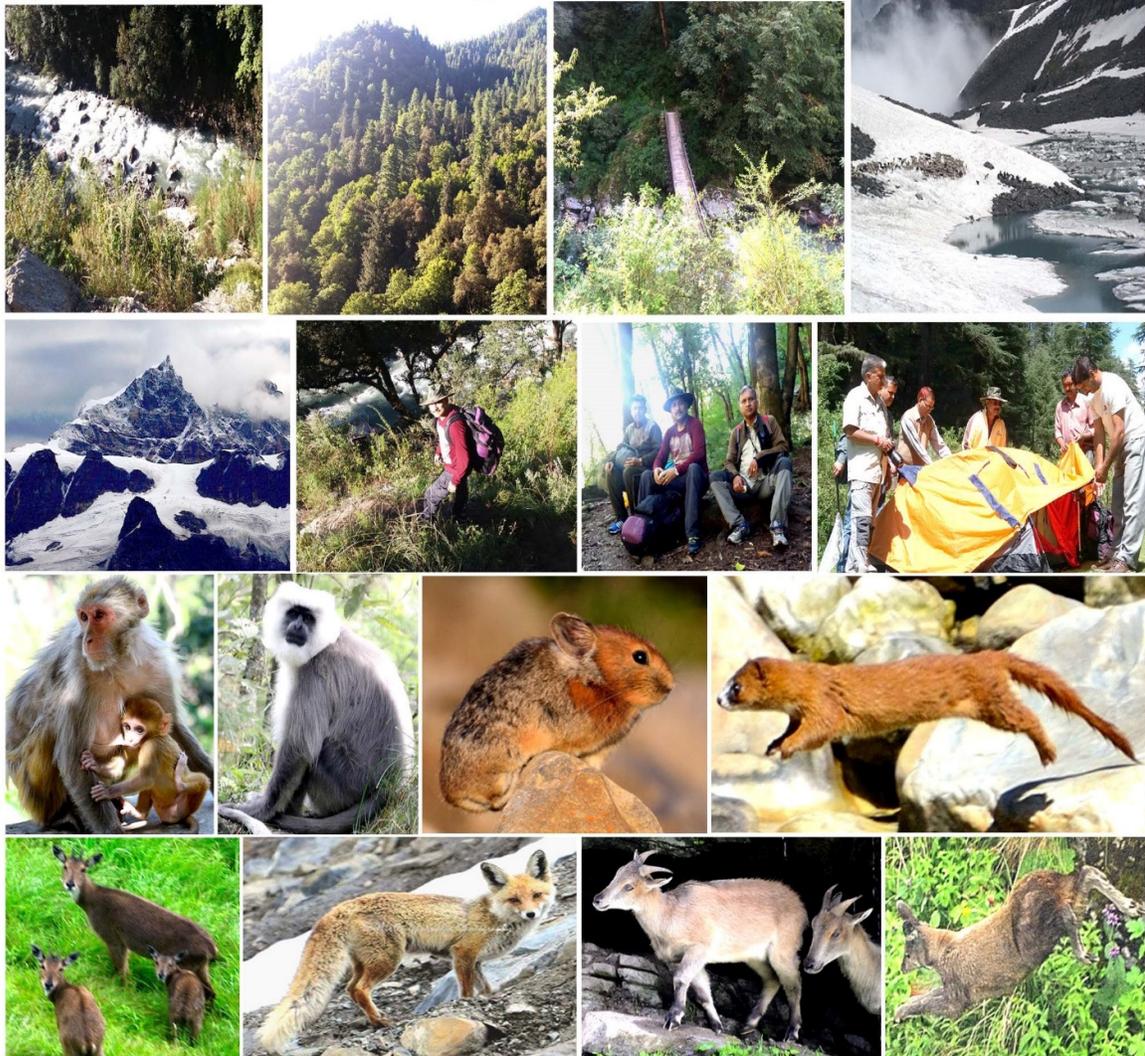


Table 1: Mammals of Great Himalayan National Park Conservation Area, H.P. with their Conservation Status.

Sl. No.	Species/Sub-species (Scientific and Common Names)	Conservation Status		
		IUCN (RLC)	IW(P)A (Schedule)	CITES (Appendix)
I. Order: PRIMATES				
1. Family: Cercopithecidae				
1.	<i>Macaca mulatta</i> (Zimmermann, 1780), Rhesus Macaque	LC	II	II
2.	<i>Semnopithecus schistaceus</i> Hodgson, 1840, Central Himalayan Langur	LC	-	I
II. Order: RODENTIA				
2. Family: Sciuridae				
3.	* <i>Petaurista petaurista</i> (Pallas, 1766), Red Giant Flying Squirrel	LC	II	-
3. Family: Cricetidae				
4.	* <i>Alticola roylei</i> (Gray, 1842), Royle's Mountain Vole	NT	V	-
4. Family: Hystricidae				
5.	* <i>Hystrix indica</i> Kerr, 1792, Indian Crested Porcupine	LC	IV	-
5. Family: Muridae				
6.	* <i>Apodemus pallipes</i> (Barrett-Hamilton, 1900), Himalayan Field Mouse	LC	V	-
7.	<i>Rattus rattus</i> (Linnaeus, 1758), Common House Rat or Black Rat	LC	V	-
8.	* <i>Mus booduga</i> (Gray, 1837), Little Indian Field Mouse	LC	V	-
9.	<i>Mus musculus</i> Linnaeus, 1758, House Mouse	LC	V	-
III. Order: LAGOMORPHA				
6. Family: Leporidae				
10.	<i>Lepus nigricollis ruficaudatus</i> Geoffroy, 1826, Rufous-tailed Hare	LC	IV	-
7. Family: Ochotonidae				
11.	<i>Ochotona roylei</i> (Ogilbey, 1839), Indian Royle's Pika	LC	IV	-
VI. Order: CARNIVORA				
8. Family: Felidae				
12.	<i>Panthera pardus</i> (Linnaeus, 1758), Leopard	VU	I	I
13.	* <i>Panthera uncia</i> (Schreber, 1775), Snow Leopard	VU	I	I
14.	* <i>Prionailurus bengalensis</i> (Kerr, 1792), Leopard Cat	LC	I	I
15.	* <i>Lynx lynx</i> (Linnaeus, 1758), Eurasian Lynx	LC	I	II
9. Family: Viverridae				
16.	* <i>Paguma larvata</i> (Hamilton-Smith, 1827), Masked Palm Civet	LC	II	III
10. Family: Herpestidae				
17.	<i>Herpestes edwardsii</i> (É. Geoffroy Saint Hilaire, 1818), Indian Grey Mongoose	LC	II	III
11. Family: Canidae				
18.	<i>Canis aureus</i> Linnaeus, 1758, Golden Jackal	LC	II	II
19.	<i>Vulpes vulpes montana</i> (Pearson, 1836), Red Fox	LC	II	III
12. Family: Ursidae				
20.	* <i>Ursus arctos</i> Linnaeus, 1758, Brown or Grizzly Bear	LC	I	I
21.	* <i>Ursus thibetanus</i> (G. Cuvier, 1823), Asiatic Black Bear	VU	II	I
13. Family: Mustelidae				
22.	<i>Lutra lutra</i> (Linnaeus, 1758), European or Eurasian river or Common Otter	NT	II	I
23.	* <i>Martes foina</i> (Erxleben, 1777), Beech or Stone Marten	LC	-	III
24.	<i>Martes flavigula</i> (Boddaert, 1785), Yellow throated Marten	LC	II	III
25.	<i>Mustela siberica</i> Pallas, 1773, Siberian Weasel	LC	II	III
V. Order: ARTIODACTYLA				
14. Family: Suidae				
26.	<i>Sus scrofa</i> Linnaeus, 1758, Wild Pig	LC	III	-
15. Family: Moschidae				
27.	<i>Moschus leucogaster</i> Hodgson, 1839, Himalayan Musk Deer	EN	-	I
16. Family: Bovidae				
28.	* <i>Capricornis thar</i> (Hodgson, 1831), Himalayan Serow	NT	I	I
29.	<i>Hemitragus jemlahicus</i> (Smith, 1826), Himalayan Tahr	NT	I	-
30.	<i>Naemorhedus goral</i> (Hardwicke, 1825), Himalayan Goral	NT	III	I
31.	<i>Pseudois nayaur</i> (Hodgson, 1833), Bharal or Blue Sheep	LC	I	-
17. Family: Cervidae				
32.	* <i>Muntiacus muntjak</i> (Zimmermann, 1780), Indian Muntjac or Barking Deer	LC	III	-

Where * indicates species as per Great Himalayan National Park Conservation Area, H.P. Forest Department records.

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