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Preliminary Checklist of Mammalian Fauna of Poonch, Jammu and Kashmir

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Abstract - This paper presents a preliminary checklist of unique diversity of wild mammalian fauna of district Poonch, located in mighty Pir Panjal range of Himalaya (Jammu & Kashmir), India. Owing to its varied physical diversity, high mountains, steep terrain and low lying valleys, Poonch is home to great diversity of mammalian fauna. The present study is based on random survey during various field trails. Overall 45 mammalian species were identified, 6 orders and 18 families of wild mammals.

Keywords - Mammalian Fauna, conservation, Management, Endangered, Vulnerable, Poonch

I. Introduction

The Jammu and Kashmir state is known for its beauty, climatic conditions, high mountains, water bodies and low lying valleys. Poonch is a smaller district lying in the lap of Pir Panjal range of lesser north western Himalayan region. This district is gifted with rich biodiversity of immense scientific research for global biodiversity infra-structure. It is a highly mountainous area with varied elevation, perennial rivers, lakes & low lying valleys, an ectone zone between between sub-tropical Jammu & temperate Kashmir region. It is home to beautiful mammals like Markhor, Snow Leopard, Black and Brown bear, Musk deer etc which are highly endangered animals and need to be protected.

The present study is a checklist of mammalian diversity of this district which shall help to guide for conservation and management of precious mammalian fauna of this area.

II. Material and Methods

The present paper is the result of random surveys conducted in the district Poonch from 2010-2018 in the diverse habitat, in a different area in the different seasons. The walking tracts available in the area were walked in the morning and evening hours. Topography features such as elevation, slope, waterbodies and humans. Temporary and permanent settlements were marked with GPS. Random ad hoc surveys were carried out in all elevations along with visual encounter and road transect survey protocols. Distribution pattern along with abundance and threat faced by mammalian fauna from overgrazing, development road construction work, live stock grazing, hunting and poaching in different seasons were also listed out. For proper and authentic documentation, photographs of observed species were taken out whenever possible. The local hunters provided some trophies of wild animals killed like teeth, horns, musk pod, claws etc, which proved the presence of various wild mammalian fauna in the study area. The species were identified with the help of various field guides, diagnostic keys & mammalian identification apps.

III. Study Area

District Poonch is border district having its boundary with LOC. Some of its area is in Pakistan occupied Kashmir. The district has a population of 4.75 lakh (2011 Census), it consists of six tehsils, 11 blocks & 173 villages spreading over an area of 1674 sq.km. (1.14 lac (Ha)). It is mountainous hilly district located on the southern slope of Pir Panjal range of Lesser Himalayas. It is bounded on the north by Baramullah and Budgam districts of Kashmir. On the north and Northwest lies (POK) & district Rajouri on its South. The average rainfall in the district is 1200mm-1400mm with 56-73 average rainy days. The temperature ranges from 5°C in winter to 39°C during summer. The altitude varies from 800-450m above the sea level. The area under Poonch's Mendhar Tehsil Largely fall under sub-tropical region and Surankote and Mandi tehsils are fully temperate with most area under snow in winter. Set amidst majestic snow-capped mountains, dotted with lovely alpine lakes and meandering streams. It has coniferous, oak and pine forests along with mixed vegetation shrubs and herbs. Poonch district occupies a pivotal position in J&K owing to its vast forest cover which comprises 58.81% of total area of the district. The vegetation usually comprises chir, pine, broad leaved deciduous forest, high altitude coniferous forests, scrub forest interspersed with frequent grassland patches & agriculture croplands owing to diversity of ecosystem Poonch is rich in avifauna & mammalian fauna owing to good forest cover and alpine peaks a good number of mammalian species are found here, some of which are highly endangered and need immediate protection. The road development work has made it accessible for people to move deep into forest & sub-alpine areas which is cause of human wildlife conflict and disadvantage to wild fauna particularly mammals which are hunted for various purposes. The preliminary checklist of which is presented here along with IUCN status & Indian wildlife protection Act 1972 (Schedule).

Table 1: Preliminary Checklist of Mammalian Fauna of Poonch (Jammu and Kashmir)

S. No.	Common Name	Scientific Name	IUCN Status	Indian Wildlife Protection Act 1972 (Schedule)
Order Primates Family Cercopithecidae				
01	Rhesus Macaque	<i>Macaca mulatta</i> Zimmermann, 1780	LC*	II
02	Himalayan Langur	<i>Semnopithecus schistaceus</i> Hodgson, 1840	LC	II
Order Artiodactyla Family Moschidae				
03	Kashmir Musk Deer	<i>Moschus cupreus</i> Grubb, 1982	EN	I
Family Cervidae				
04	Barking Deer	<i>Muntiacus muntjak</i> Zimmermann, 1780	LC	III
Family Bovidae				
S. No.	Common Name	Scientific Name	IUCN Status	Indian Wildlife Protection Act 1972 (Schedule)
Family canidae				
05	Markhor	<i>Capra falconeri</i> Wagner, 1839	NT	I
06	Himalayan Grey Goral	<i>Nemorhaedus goral bedfordi</i> Lydekker, 1905	NT	III
07	Indian Wild Pig	<i>Sus scrofa</i> Linnaeus, 1758	LC	III
Order Carnivora Family Felidae				
08	Common Leopard	<i>Panthera pardus</i> Linnaeus, 1758	VU	I
09	Snow Leopard	<i>Panthera uncia</i> Schreber, 1775	VU	I
10	Leopard Cat	<i>Prionailurus bengalensis trevelyani</i> Kerr, 1792	LC	I
11	Jungle Cat	<i>Felis chaus affinis</i> Schreber, 1777	LC	II
Family Viverridae				
12	Himalayan Palm Civet	<i>Paguma larvata</i> (Smith, 1827	LC	II
13	Small Indian Civet	<i>Viverricula indica</i> Geoffroy Saint-Hilaire, 1803	LC	II
14	Common Palm Civet	<i>Paradoxurus hemaphroditus</i> Pallas, 1777	LC	II
Family Herpestidae				
15	The Small Indian Mongoose	<i>Herpestes auropunctatus</i> Illiger, 1811	LC	IV
16	Grey or Common Mongoose	<i>Herpestes edwardsii</i> Geoffroy Saint-Hilaire, 1818	LC	II

Family Canidae					
17	Grey Wolf	<i>Canis lupus chanco</i> C.I.Chanco Grey, 1863	LC	J, K, L	I
18	Golden Jackal	<i>Canis aureus</i> Linnaeus, 1758	LC	J, K	II
19	Red Fox	<i>Vulpes vulpes</i> Linnaeus, 1758	LC	J, K, L	II
Family Ursidae					
20	Asiatic Black Bear	<i>Ursus thibetanus</i> Cuvier, 1823	VU	J, K	I
21	Himalayan Brown Bear	<i>Ursus arctos</i> Linnaeus, 1758	LC	J, K, L	II
S. No.	Common Name	Scientific Name	IUCN Status	Indian Wildlife Protection Act 1972 (Schedule)	S. No.
	Family Mustelidae				
22	Yellow-throated Marten	<i>Martes flavigula</i> Bodaert, 1785	LC	J, K	II
23	Eurasian Otter	<i>Lutra lutra</i> Linnaeus, 1758	NT	J, K	I
24	Himalayan Stoat	<i>Mustela ermine</i> Linnaeus, 1758	LC	J, K, L	II
Order Lagomorpha Family Leporidae					
25	Indian Hare	<i>Lepus nigricollis</i> F. Cuvier, 1823	LC	J	IV
Family Ochotonidae					
26	Royle's Pika	<i>Ochotona roylei</i> Ogliby, 1839	LC	IV	
27	Large Eared Pika	<i>Ochotona macrotis</i> Gunther, 1875	LC	Not listed	
Order Rodentia Family Histicidae					
28	Indian Crested Porcupine	<i>Hystrix indica</i> Kerr, 1792	LC	IV	
Family Sciuridae					
29	Long-Tailed Marmot	<i>Marmota caudate</i> Geoffroy, 1844	LC	II	
30	Himalayan Marmot	<i>Marmota himalayana</i> Hodgson, 1840	LC	II	
31	Red Giant Flying Squirrel	<i>Petaurista petaurista</i> <i>Albiventer</i> Pallas, 1766	LC	II	
32	Kashmir Flying Squirrel	<i>Eoglaucomys fimbriatus</i> <i>fimbriatus</i> Grey, 1837	LC LC	Not listed	
Family Muridae					
33	Scully's Mountain Vole	<i>Alticola blanfordi</i> Scully, 1880	DD		
34	Silvery Mountain Vole	<i>Alticola argentatus</i> Severtzov, 1879	LC	Not listed	
S. No.	Common Name	Scientific Name	IUCN Status	Indian Wildlife Protection Act 1972 (Schedule)	

35	Kashmir Mountain Vole	<i>Alticola montosa</i> True, 1894	VU	Not listed
36	Himalayan Rat	<i>Rattus pyctoris</i> Hodgson, 1845	LC	V
37	House Mouse	<i>Mus musculus</i> Linnaeus, 1758	LC	V
38	Indian Long-Tailed Tree Mouse	<i>Vandeleuria oleracea</i> Bennett, 1832	LC	V
39	House Rat or Black Rat	<i>Rattus rattus</i> Linnaeus, 1758	LC	V
S. No.	Common Name	Scientific Name	IUCN Status	Indian Wildlife Protection Act 1972 (Schedule)
	Order Insectivora Family Soricidae	Order Insectivora Family Soricidae		
40	Pale Grey Shrew	<i>Crocidura perigrisea</i> Miller, 1913	DD	Not listed
41	Gueldenstaedt's White-Toothed Shrew	<i>Crocidura suaveolens</i> (gueldenstaedti) Pallas, 1811	LC	Not listed
42	House Shrew or Grey Musk Shrew	<i>Suncus murinus</i> Linnaeus, 1766	LC	Not listed
Order Pholidota Family Manidae				
43	Indian Pangolin	<i>Manis crassicaudata</i> Gray, 1827	NT	I
Family Pteropodidae				
44	Indian Flying Fox	<i>Pteropus giganteus leucocephalus</i> Brunnich, 1782	LC	V
Family Vespertilionidae				
45	Kashmir Cave Bat	<i>Myotis longipes</i> Dobson, 1873	DD	Not listed

*CR = Critically Endangered; EN = Endangered; VU = Vulnerable; NT = Near Threatened; LC = Least Concern; DD = Data Deficient.

IV. Discussions

District Poonch is bestowed with a rich assemblage of wild mammalian fauna. The number of wild animals is reducing because of deforestation & fragmentation of forest ecosystem. Many road projects like Mughal Road and Loran-Tangmarg Road has badly affected the fragile ecosystem of hilly mountains. Large scale landslides and disturbance has affected the mammalian fauna of this area to a large extent. Large scale hunting of wild animals is going on unchecked, the teams of professional hunters have more knowledge about habitat & behaviour of these wild mammals which are killed for various purposes.

Musk deer is killed for meat as well as musk pod, Black Bear is killed for its fats & gall bladder, barking deer and Markhor is hunted for meat along with Himalayan goral. There are many families in immediate vicinity of forest area who are hunting from generations.

In winter when mammalian fauna moves downhill because of accumulation of snow at upper reaches, many teams of hunters go for hunting expedition for weeks where they kill and eat wild mammals and birds and stay in temporary huts of Gujjar & Bakarwal (Nomadic populations) for weeks together.

Because of shrinking natural habitat, many animals come near human settlements & come in direct conflict of human beings like Black Bear, common Leopard with Civits, Martens, porcupine which attack crops & live stock as well as human beings. As a result, many cases of poisoning, trapping & group killing of wild mammals have taken place. As per hospital records many people report injuries caused by bear & leopard attacks, where percentage of bear attacks is more. Himalayan Rhesus monkey & Porcupine causes a considerable damage to maize crops & are in conflict with human beings. Indian wild pig also causes a considerable damage to maize crops. The attacks of Leopard cat on domestic poultry & domestic cats have also been reported. Grey mongoose also kills large number of domestic poultry which is trapped & killed by villagers in revenge.

Eurasian Otter is being killed for its fur along with red fox which is also killed for the same purpose. Barking deer has survived hunting pressure and has wide range, can be found within 2km range of Poonch city in coniferous and oak mixed forests.

The population estimate, home range & distribution of mammalian fauna, along with altitudinal migration require further research for proper conservation & management efforts. Unfortunately, there is no wildlife sanctuary in the district Poonch to safeguard the diversity of mammalian fauna in Dist. Poonch.

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