

Diversity of Mammals in and around of Koshi Tappu Wildlife Reserve

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Abstract

Though the Koshi Tappu Wildlife Reserve was established for the protection of wild water buffalo, there are other mammals in and around of it due to the presence of different type of habitats like rivers, oxbow lakes, seepage stream, marshlands, floodplains, ponds, swamp forest etc. This paper deals with the study of mammals in and around of Koshi Tappu Wildlife Reserve. Altogether 21 species of mammals belonging to 19 genera and 13 families were found during the study period. Among these 3 occurred commonly, 11 rarely and 7 occasionally at local level.

Key words: Koshi Tappu Wildlife Reserve, diversity of mammals

Introduction

The Koshi Tappu Wildlife Reserve belongs to terai wetlands of Nepal which extends between 86°55'-87°05'E and 26°34'-26°45"N on the alluvial flood plain of the Sapta Koshi River. Due to the presence of diverse types of wetlands, floodplain and large forest area, it consists different types of mammals though it was established for the protection of endangered species, the wild water buffalo (*Bubalus bubalis arnee*).

The reserve covers part of Sunsari, Saptari and Udayapur districts of the eastern development region. It is touched by twelve Village Development Committees (Fig.1). On the south of the reserve is a large expanse of open water, marshes and reed-beds, created by the construction of Koshi barrage between 1958 and 1964. Because of the Koshi barrage, a large expanse of open water remains throughout the year between the barrage and the reserve.

The climatic condition of this area is tropical monsoonal type and experiences three distinct seasons i.e., summer (February to May), rainy (June-September) and winter (October-January).

Taxonomic study on the mammals of Nepal was started by Hodgson (1831, 1833, 1835, 1836, 1837, 1838, 1839, 1841, and 1844). The contribution of Hodgson on the mammals of Nepal and Sikkim actually laid the foundation of Himalaya mammology. Later on, Blyth (1844) and Horsfield (1855) added several species to the list of mammals of Nepal. Hinton and Fry (1923) listed 34 genera and 44 species of mammals from Nepal. Biswas and Khajuria (1955, 1957) collected small mammals from Khumbu region of eastern Nepal and described several species of rodents and pikas. Similarly, Schaller (1977) gave an excellent account of Himalayan mammals in

his book, "Mountain Monarchs". Johnson *et al.* (1980) gave authentic records of doubtful mammals of Nepal. Abe (1982) reported 28 species of small mammals from

Nepal". Shah *et al.* (2002) reported 30 species of mammals including Tibetan wild ass (Kiang), *Equus hemionus kiang* and Tibetan gazelle (ghowa), *Procapra picticaudata*, which were recorded first time for Nepal.

The most notable mammals of terai wetlands are Greater one horned rhino (*Rhinoceros unicornis*), Wild water buffalo (*Bubalus bubalis*), Gangetic dolphin (*Platanista gangetica*), Fishing cat (*Prionailurus viverrinus*), Smooth coated otter (*Lutrogale perspicillata*) etc. All these species are being decreased in number due to the loss of habitat, hunting and shortage of food.

Materials and methods

With the permission of authority of wildlife reserve, mammals were recorded in their original habitat from July, 2002- June, 2004 in every month. The animals were recorded by direct observation method. In addition to the visual observation; the presence of some species was also confirmed by their markings and droppings. Binocular and Zoom camera were also used during observation. Their identification was done by following Shrestha (1981), Corbet and Hill (1992), Shrestha (1997), and Majupuria and Majupuria (1998).

Results

Altogether 21 species of mammals belonging to 19 genera and 13 families were found during the study period. Among these 3 occurred commonly, 11 rarely and 7 occasionally at local level (Tab. 1).

Discussion

The present study area is suitable habitat for different species of mammals due to the presence of wetlands and forest area.

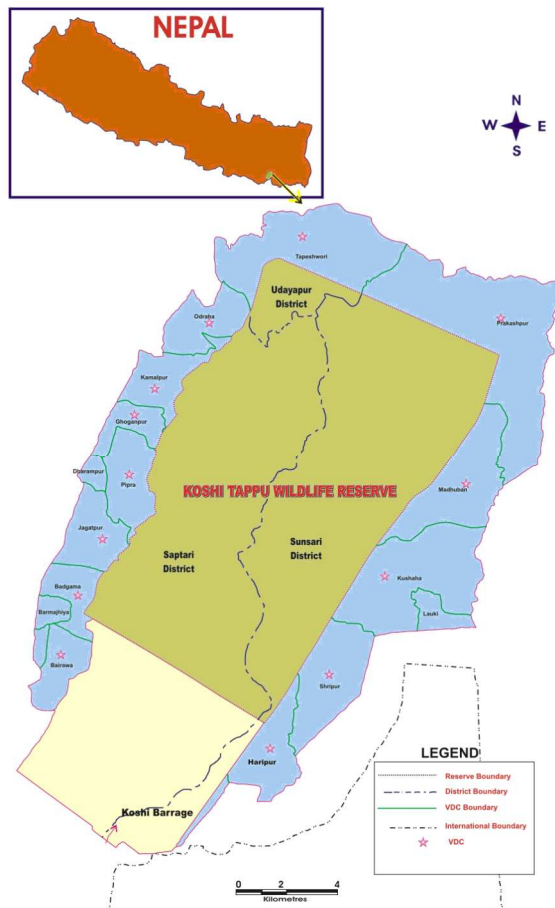


Figure 1. Map showing districts and VDCs around Koshi Tappu Wildlife Reserve.

central Nepal. Suwal and Verheugt (1995) described a comprehensive account of 181 species of mammals belonging to 12 orders and 39 families from Nepal. Shrestha (1997) published "Mammals of Nepal". Majupuria and Majupuria (1998) published a book on Wildlife, "National Park and Reserve of

Table 1. Diversity of mammals in and around of Koshi Tappu Wildlife Reserve.

Family	Scientific name	Common name	Local status
Bovidae	<i>Bubalus bubalis</i> Linnaeus	Wild Water Buffalo	Common
Platanistidae	<i>Platanista gangetica</i> Roxburgh	Gangetic Dolphin	Rare
Pteropodidae	<i>Pteropus giganteus</i> Brunnich	Indian Flying Fox	Common
Cercopithecidae	<i>Macaca mulatta</i> Zimmermann	Rhesus Macaque	Common
Cercopithecidae	<i>Semnopithecus entellus</i> Dufrense	Hanuman Langur	Rare
Sciuridae	<i>Ratufa bicolor</i> Sparman	Black Giant Squirrel	Occasional
Sciuridae	<i>Funambulus palmarum</i> Linnaeus	Three striped Palm Squirrel	Rare
Sciuridae	<i>Funambulus pennantii</i> Wroughton	Five striped Palm Squirrel	Rare
Cervidae	<i>Axix axix</i> Erxleben	Spotted Deer	Rare
Cervidae	<i>Axis porcinus</i> Zimmermann	Hog Deer	Rare
Cervidae	<i>Muntiacus muntjak</i> Zimmermann	Barking Deer	Rare
Mustelidae	<i>Lutra lutra</i> Hodgson	Common Otter	Occasional
Mustelidae	<i>Lutrogale perspicillata</i> Geoffery	Smooth coated Otter	Occasional
Felidae	<i>Felis chaus</i> Gudenstaedt	Jungale Cat	Rare
Felidae	<i>Prionailurus viverrinus</i> Bennett	Fishing Cat	Occasional
Elephantidae	<i>Elephas maximus</i> Linnaeus	Asiatic Elephant	Occasional
Canidae	<i>Canis aureus</i> Linnaeus	Golden Jackel	Occasional
Canidae	<i>Vulpes bengalensis</i> Shaw	Indian Fox	Occasional
Suidae	<i>Sus scrofa</i> Wagner	Wild Boar	Rare
Leporidae	<i>Lepus nigricollis</i> Cuviers	Indian Hare	Rare
Herpestidae	<i>Herpestes edwardsii</i> Geoffery	Indian Grey Mongoose	Rare

Altogether, 21 species of mammals were recorded during this study period (Tab. 1). According to the local people, the Koshi Tappu area was covered with dense riverine forest and tall grasses in the past where large carnivores such as Bengal tiger (*Panthera tigris*) and leopard (*Panthera pardus*) were abundant. But now these mammals could not be observed. However, this area contains Nepal's last surviving population of wild water buffalo (Heinen, 1993). Gaur (*Bos gaurus*) and Nilgai (*Boselaphus tragocamelus*) are not found. Their presence was reported on earlier occasion (Suwal, 1994). The Gangetic dolphin (*Platanista gangetica*) was observed in Koshi barrage area. Besides the

local domesticated elephants, the other Asiatic elephants visit here from India during summer months. According to the local information, except the wild water buffalo, other various species of mammals and their number has decreased in this area after the establishment of reserve and clearing of forest in its surroundings.

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