

- SHARMA, S.K. (2001b): Impact of Indira Gandhi Canal on the desert avifauna of Rajasthan. Pp. 1-459. (A study report submitted to Govt. of India, Ministry of Environment & Forests, New Delhi.)
- SHARMA, S.K. (2002): High tension electric poles used as night roost by troops of Hanuman Langur *Presbytis entellus* at Nahargarh Wildlife Sanctuary, Jaipur. *J. Bombay Nat. Hist. Soc.* 99(1): 103.
- SHARMA, S.K. (2004): Electric pylons used as night roost by troops of Rhesus Macaque *Macacca mulatta* at Sariska Tiger Reserve, Alwar district, Rajasthan. *J. Bombay Nat. Hist. Soc.* 101(3): 439.
- SHARMA, S.K. (2007): Study of biodiversity and ethnobiology of Phulwari Wildlife Sanctuary, Udaipur (Rajasthan). Ph.D. Thesis. MLS University Udaipur (Rajasthan).
- SHARMA, S., S.K. SHARMA & S. SHARMA (2000): Notes of mammalian fauna of Rajasthan. *Zoos' Print Journal* 18(4): 1085-1088.
- SHARMA, V., K. JANI, C. BHATNAGAR & S.K. SHARMA (2006): Biodiversity of mammals in Sajjargarh Wildlife Sanctuary, Udaipur, Wildlife Division Udaipur: An attempt to study the habitat preference of some. *Bull. Bio. Sci.* 4(1): 39-44.
- SIVSUBRAMANIAN, C. (1986): A note on the Rhesus Macaque *Macaca mulatta* feeding on *Calotes*. *J. Bombay Nat. Hist. Soc.* 83 (Supp.): 197.
- TEHSIN, R.H. (2006): Effect of Neem *Azadirachta indica* leaves on wounded Common Langur (*Semnopithecus entellus*) (Dufrense). *J. Bombay Nat. Hist. Soc.* 103(1): 95.
- WADA, K. (1984): Rhesus Monkey distribution in the lower Himalayas and secondary forest succession. *J. Bombay Nat. Hist. Soc.* 81(2): 355-363.

2. SIGHT RECORD OF THE INDIAN WOLF *CANIS LUPUS PALLIPES* IN THE RIVER GANDAK FLOODPLAINS

SUSHANT DEY^{1,3}, VIVEKSHEEL SAGAR², SUBHASIS DEY^{1,4} AND SUNIL K. CHOUDHARY^{1,5}

¹Vikramshila Biodiversity Research & Education Center, Department of Botany, T.M. Bhagalpur University, Bhagalpur 812 007, Bihar, India.

²Freshwater & Wetlands Programme, World Wide Fund for Nature-India, 172-B, Lodi Estate, New Delhi 110 003, India.

Email: viveksheelsagar@yahoo.com

³Email: ranadey_vbrec@yahoo.com

⁴Email: subhasisvbrec2@yahoo.com

⁵Email: sunil_vikramshila@yahoo.co.in

The Indian Wolf *Canis lupus pallipes* is categorized as Endangered by the IUCN (an assessment by the Canid Specialist Group of IUCN) and is a Schedule I animal in the Wildlife (Protection) Act 1972 of India. It had once one of the largest natural range of any land mammal (Sheldon 1992). The Indian Wolf is widely distributed over peninsular India (Jhala 2003). Before division, Bihar was amongst the range states of the Indian wolf distribution. Presence of Indian Wolf has been recorded in Chhotanagpur plateau region of south Bihar, presently Jharkhand, since the British times, where it had gained the notoriety of being a child-lifter and even a man-eater (Pocock 1939; Shahi 1982). There are no records of the Indian Wolf being present in the geographic region north of the Ganges river in Bihar. Another subspecies of the wolf found in the Indian subcontinent, *Canis lupus chanco* commonly called the Tibetan wolf, has a trans-Himalayan distribution up to east Nepal and the range extends into Tibet, China, Manchuria and Mongolia (Jhala 2003). There is no record of its presence in the Terai region of India and Nepal.

The Gandak is a mountain-fed river known as the Krishna-Gandaki in its upper reaches. It rises in the high region of Tibet and Nepal, where it drains a large region, before emerging on the plains of the West Champaran district of northern Bihar. It enters India at Valmikinagar (27° 26' 192" N; 83° 54' 429" E) in West Champaran from where it traverses c. 331 km before meeting the Ganges at Hazipur

near Patna (25° 39' 935" N; 85° 10' 643" E). The Gandak river is braided throughout its course between the point where it emerges in the plains to its confluence with the Ganga. A barrage is constructed across Gandak river at the Indo-Nepal border at Valmikinagar to divert the water for irrigation and power generation. The water discharge below the barrage is very low during the summer and winter months making the river extremely shallow downstream of the barrage. From the point of entry, it flows along the Valmikinagar Tiger Reserve in Bihar on the left bank, and Nepal on the right bank, then after entry into Gorakhpur district in Uttar Pradesh along the Soahagi Barwa Wildlife Sanctuary on the right bank in Uttar Pradesh and again enters West Champaran district in Bihar. Extensive farming is done on the floodplains along both the banks where sugarcane cultivation is dominant. Cultivated fields are spread between with large patches and extensive tracts of grasslands dominated by Poaceae species. These grasslands provide ideal habitat for different species of ungulates, namely Nilgai *Boselaphus tragocamelus*, Indian Wild Boar *Sus Scrofa*, the Hog Deer *Axis porcinus*, and the Indian Hare *Lepus nigricollis*. This indicates that the wolf has in fact a wide variety of prey available in this area. This feature is predominant till c. 220 km downstream, after which extensive cucurbit cultivation is practiced till the confluence point in the floodplains and on every available mid-channel island. The Indian Wolf prefers to live in scrublands,

grasslands and semi-arid pastoral/ agricultural landscape (Jhala 2003). They do not prefer heavy forest cover. They are not present in the Valmikinagar Tiger Reserve (pers. comm. with S. Sinha of Wildlife Trust of India, 2010).

We conducted a survey of river Gandak (in India, c. 331 km) from the Indo-Nepal border at Valmikinagar (just after barrage) in West Champaran district in the north, to its confluence with river Ganga at Hazipur in Vaishali district in the south from January 6-23, 2010. The main objective of the river Gandak survey was to record aquatic mega fauna mainly the Gharials *Gavialis gangeticus* and the dolphins *Platanista gangetica gangetica* present in the river. The survey was conducted everyday from 10:00 to 16:00 hrs. Hence, there was ample time (after the completion of the primary survey) to interact with villagers and for surveying the surrounding grasslands for wildlife. The information regarding the presence of different species of wildlife present in the grasslands was gathered opportunistically from local villagers encountered on the riverside, and from the direct and indirect sightings (of pellets, pugmarks, hoof prints) by the survey team members. Local villagers were asked open-ended questions regarding different species without suggesting the profile of the animals. They were later shown field guides and species identification pamphlets and were asked to identify animals they had recently encountered or seen in the vicinity. The field guide was in English and villagers (mostly illiterate) could not read them so their information was based on their experience, hence, unbiased. GPS coordinates of the animals, detected by direct as well as indirect sightings, were recorded and marked in the Occupancy Survey datasheet.

On the morning of the January 20, 2010, at around 08:00 hours, a pair of Indian wolf was seen running in the middle of a patch of wheat cultivation about 15 m from the camp site (26° 06' 945" N; 84° 56' 469" E) at a place called Singhgahi Dhaala, 264 km downstream from the starting point of the survey. This area was semi-isolated and was characterized by patch wheat farming within grassland tract. The nearest human settlement was c. 2 km and metal road about 3.5 km away from the camp site. One large male was seen leading followed by a smaller female about 10 m behind. They ran across the camp site in a relaxed manner, where 10 members of the survey crew and an equal number of villagers were talking, without arousing much curiosity from the villagers or from the wolves. They ran into the grassland thicket and emerged about 100 m north of the campsite, the male scent-marked on the trunk of a Jamun tree and again went inside the grassland thicket. The pair of wolf was circling a herd of Nilgai cows with calves. The survey team had pitched their tents on the elevated river bank at the edge of the river. The wolves were about 30 m from the river waterline. About

30 Nilgais, comprising bulls, cows and calves were seen grazing in the wheat fields, scattered in a radius of 150 m from the campsite and totally impervious to our presence. Two Indian Hares were also seen running across a tractor track in between the grasslands. Previous night, a group of five jackals had sneaked into the campsite in search of morsels and started howling and making a ruckus, and had to be shooed away. About 50 m from the camp site at the waterline of the river, hoof prints of a small sounder of Wild Boar were also seen. Other than Ratwal (91 km downstream, 26° 58' 603" N; 84° 10' 611" E) and Sakmahi Tola (180 km downstream, 26° 29' 424" N; 84° 32' 845" E) along the Gandak river, Singhgahi Dhaala was the third place where villagers were able to describe the Hog Deer and confirm its presence in the grassland of the area.

Public attitude is very tolerant to predators in India (Boitani 1992; Promberger and Schroder 1993; Thiel 1993). During interactions with local villagers, we could come to know that they never harm 'Nilgais' despite the fact that they are destructive to their standing crops. Villagers believe that the 'Nilgais' symbolically represent the Goddess Laxmi (the goddess of wealth and prosperity in Hindu religion) and if they are harmed, their fields will turn barren as a curse. This statement was confirmation of their attitude with an incident observed at Ratwal earlier, when at night a herd of Nilgais raided wheat cultivation, villagers keeping the night vigil started burning big bales of dried grass. Taking cue from the first fire, the neighbouring villagers did the same and so did others. There was no shouting, no beating of drums, no chasing, no bursting of crackers, just burning of the bales of grass. When asked about the incident, the villagers said "Like us, they (Nilgais) also need to survive, so why harm them".

Unregulated exploitation of grassland is the main threat to the wolves as it will have a negative conservation impact. Indian wolf and its prey need grassland for survival. All along the river Gandak, grassland is exploited for local consumption as well as for economic gain and is totally unmonitored and unregulated. The only regulation in place is natural inaccessibility of the place. Bales of grass are transported by bullock carts, tractors and also by large motorized boats for local consumption. The shallow depth of the River Gandak prevents motorized boat from reaching upstream hence preventing large-scale exploitation of the grasslands. The first motorized boat encountered loading grass was at 257 km downstream from the start. This feature has probably prevented the grassland from being totally destroyed.

Discussion

The sighting of Indian Wolf in the wet-grassland habitat of river Gandak floodplains might have two explanations:

1. This new sight record of Indian Wolf in the river Gandak floodplains might be the extension of the known eastern distribution range of Indian Wolf from the Chhotanagpur plateau in Jharkhand to include the region north of the river Ganges. The presence of a variety of ungulates, cover, and access to large source of water represents an ideal habitat suitable for the survival of the Indian Wolf (Jhala 2003). To this, adds the fact that people here seem not to have forgotten the art of coexistence with predators as in other parts of India (Jhala and Sharma 1997).
2. The Indian Wolf *Canis lupus pallipes* and the Tibetan Wolf *Canis lupus chanco* are considered subspecies of the Gray Wolf *Canis lupus*. Recent DNA studies have shown that there is another wolf that is very genetically different from these two subspecies, so much so that researchers are calling it a new species *Canis himalayensis* with population less than 350 and assessed as critically endangered. It reportedly ranges from north-west Jammu through Himachal to eastern Nepal. Our sighting north of the Ganga, south of Nepal could be that of the Himalayan Wolf. There is no way to substantiate it. At the best, we can only say that the wolf sighted by us in the river Gandak floodplains might be either *Canis lupus pallipes* or *Canis pallipes himalayensis*. Moreover, the encounter with the Indian Wolf in Singhahi Dhaala reveals three unique facts for the area, namely

- i) That the immediate behavioural response of the villagers and the wolf show us that this is a common feature in the region, and hence, the wolf is well-established in that area and not new colonization.
- ii) The close and casual approach of the wolves to a sizeable human congregation (20 individuals) in close proximity in broad daylight and no reports of persecution of human beings by the wolves, reveal that there is very little or no man-animal conflict in the area.
- iii) Strong religious sentiments and beliefs of the local community may have helped conserve the wildlife in general and the prey base of the Indian wolf in particular which needs immediate and thorough investigation.

ACKNOWLEDGEMENTS

This work was done during the river Gandak Gharial Survey 2010. The authors are thankful to Dr. P. Gautam of WWF-India, Mr. Vivek Menon of Wildlife Trust of India, and Mr. Samir Whitaker of Gharial Conservation Alliance for organizing fund for this survey. We are also grateful to Mr. B.A. Khan, Chief Wildlife Warden, Bihar, and Mr. J.P. Gupta, Director- Valmiki Tiger Reserve, for their help during the survey.

REFERENCES

- BOITANI, L. (1992): Wolf management in intensively used areas of Italy. Pp. 158-171. In: Harrington, F.H. & P.L. Paquet (Eds): Wolves of the World. Noyes Publications, Park Ridge, New Jersey. 474 pp.
- JHALA, Y.V. (2003): Status, Ecology and conservation of Indian Wolf *Canis lupus pallipes* Sykes. *J. Bombay Nat. Hist. Soc.* 100(2&3): 293-307.
- JHALA, Y.V. & D.K. SHARMA (1997): Child lifting by wolves in eastern Uttar Pradesh. *India J. Wildl. Res.* 2(2): 94-101.
- POCOCK, R. (1939): Fauna of British India. Mammalia Vol. 1, London: 446 pp.
- PROMBERGER, C. & W. SCHRODER (1993): Wolves in Europe: Status and perspectives. Munich Wildl. Soc., Ettal, Germany.
- SHAH, S.P. (1982): Status of the grey wolf (*Canis lupus pallipes*) in India: A preliminary survey. *J. Bombay Nat. Hist. Soc.* 79(3): 493-502.
- SHELDON, J.W. (1992): Wild dogs: The natural history of non-domestic Canidae. Academic Press, Inc., New York. 248 pp.
- THIEL, R.P. (1993): The Timber Wolf in Wisconsin. University of Wisconsin Press, Madison.

3. WILDLIFE MORTALITY FROM VEHICULAR TRAFFIC IN SRIHARIKOTA ISLAND, SOUTHERN INDIA

S. SIVAKUMAR^{1,2} AND RANJIT MANAKADAN^{1,3}

¹Bombay Natural History Society, Hornbill House, Dr. Salim Ali Chowk, S.B. Singh Road, Mumbai 400 001, Maharashtra, India.

²Email: sivaprema3sep@yahoo.com

³Email: ransan5@rediffmail.com

Introduction

Increasing road networks severely affect wild fauna and flora, as is well-documented in many studies around the world (e.g., Mader 1984; Fahrig *et al.* 1995; Reed *et al.* 1996; Gibbs

1998). There have been a few studies on the impacts of vehicular traffic on wildlife in India (Gokula 1997; Vijayakumar *et al.* 2001; Chhangani 2004). This note discusses the wildlife casualties due to vehicular traffic in



Dey, Sushant et al. 2010. "Sight record of the Indian wolf *Canis lupus pallipes* in the River Gandak floodplains." *The journal of the Bombay Natural History Society* 107(1), 51–53.

View This Item Online: <https://www.biodiversitylibrary.org/item/238344>

Permalink: <https://www.biodiversitylibrary.org/partpdf/289935>

Holding Institution

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Sponsored by

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <http://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.