

Studies on the dung piles habit of Nilgai (*Boselaphus tragocamelus*) in the Gopalganj district of Bihar

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Abstract

Nilgai is the largest antelope and also called as Blue bull. The present paper deals with study conducted on the dung piles habit in *Nilgai (Boselaphus tragocamelus)* during december 2023 – june 2024 in the Gopalganj district of Bihar, comprising of different blocks and villages. Direct sighting and observation using camera photography was involved and also conversation with the villagers was done. It was observed that Nilgai has a very distinguished habit of defaecating repeatedly in the same location resulting in the formation of large faecal pile. This faecal pile was used by the villagers as manure in the field which simultaneously repelled the Nilgai from entering the field, thus protecting the crops. Moreover the faecal pile served as signal for social communication as well as territory marking.

Key words : *Nilgai*, Dung piles, *Boselaphus tragocamelus*.

Nilgai is the largest Asian Antelope also called as Blue Bull. It belongs to family Bovidae, Sub-family Bovinae and tribe Boselaphini². It is the only species of Boselaphus. The specific name of *tragocamelus* comes from two greek words *tragos* means (he –goat) and *kamelos* means (camel). The binomial combination of *Nilgai* was first used by English Zoologist Philip Sclater in 1883. It is distributed in India from Himalayan foothills southward through central India to Mysore.⁸ It is categorised as least concern animal by IUCN red data list⁵.

The blue bull has also been reported in Pakistan and Nepal. The present paper deals with the study conducted on the dung piles habit of Nilgai during december 2023 – june 2024 in the Gopalganj district of Bihar.

Nilgai's have a characteristic habit of defaecating repeatedly in the same location . The dung piles of Nilgai have been found to contribute significantly to soil fertility. The seeds present in the dung can easily germinate, aiding in afforestation⁶ Dung piles serve as

communication markers facilitating social interactions and territory marking¹. They influence group dynamics by leading to social cohesion and hierarchy establishment within the population³. The dung piles or latrines of Nilgai antelope are used for communication and territory marking, primarily by dominant bulls, indicating social dominance, status within the population⁹.

In this background the study has been planned to understand the uses of dung piles for any beneficial purpose to local rural mass and further the significance of dung piles habit in Nilgai in determining the social communication, territory marking as well as their reproductive behaviour.

I. Study area — The Gopalganj district is a part of Saran Division and is located in the western north corner of Bihar state covering an area of 2033 KM². (fig. 1) Geographically it is located between 83.54° – 85.56° latitude and 26.12° – 26.39° north longitude. The altitude is 73 feet above MSL. The soil of the district is thick Alluvium deposited by river Gandak. The pH of the soil is mostly alkaline ranges from 7 – 8. The temperature ranges from 4° C. in winter (Dec. to Jan.) and more 44° C. in hot summer (May to June). The average annual rainfall is about 1218 mm. But there is large variation in rainfall over year to year. It is bounded on east by Champaran and river Gandak, on the south by Siwan district and on the north-west Dewaria district of U.P. The river Gandak is supported by tributaries like Khanwa, Jharhi, Daha, Dhanahi etc. Due to this the land of district is fertile and alluvial. So cultivation and irrigation prospects are good. The river Gandak by

depositing the top quality of soil brought from Nepal and plays an important role in the economy of Gopalganj district. This district is an important agricultural centre in north Bihar and has several secondary and tertiary industries based on agriculture. This district is one of the largest sugarcane growing district in India.

II. Animal details – Nilgai was known by name nilghor (nil for blue and ghor for horse) during the period of Mughal emperor Aurangzeb (1658-1707) of India. Nilgai is often marked with white socks thus called white footed antelope also called as blue bull. Females are less aggressive than males. It stands 1 to 1.5 meter at the shoulder. Males weigh 109 – 288 kg. Females weigh 100 – 213 kg. Nilgai has sharp ears and eyes though its sense of smell is not as acute. Sexual dimorphism is prominent. Nilgai calves and cows are light brown in color. the light brown color of male calves begin to darken by tenth month and they develop black legs and brownish grey color by 18 months by the fourth year, adult Nilgai bulls are blue grey in color.

III. Observation of the behaviour— The present study was conducted from December 2023 – June 2024 in the Gopalganj district Bihar, India. The methodology followed was direct sighting of animals from a close distance and observing the behaviour of animal. Photographs were taken with digital camera and necessary information 's were also collected through direct conversation with the villagers especially those residing near the agricultural fields.

After the observation of animal along with direct conversation with the villagers it



Fig. 2. Dung piles in the sathi village in the Gopalganj district

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