

**“POPULATION DYNAMICS AND BEHAVIOURS OF NILGAI
BOSELAPHUS TRAGOCAMELUS(Artiodactyla:Bovidae) IN THE
GANGETIC PLAINS OF INDIA w. s. r. TO NORTH BIHAR”.**

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ABSTRACTS:

The present research work has explained the population dynamics and behaviours of Nilgai in Northern India. The research work has confirmed the population and behaviours of Nilgai and the loss of crops, cereals and fruits through crampling and grazing by Nilgai and their herds.

KEYWORDS:

Population, behaviours, feeding, ranging and the existence of Nilgai.

INTRODUCTION:

Nilgai is the most commonly found wild animals of northern India. It is an antelope belongs to class - mammalia, order Artiodactyla and family Bovidae. It is commonly known as Blue bull in India because of similar appearance of an Ox. Nilgai found wild animal of peninsular India. It is one of the four antelopes found in India. It enjoys complete immunity being regarded as a near relative of the cow which is considered a sacred animal amongst the Hindus. It is a biggest antelope distributed from southern part of Himalayas in the North. State of Karnataka in the South and from Gir forest, across the border of Rajasthan in the West and Assam and West Bengal in the east. It is also found in the regions of Nepal and Pakistan. According to IUCN (2008) report the estimated population of Nilgai is about 1,000,00 in India. As male Nilgai attains maturity, its coat start turning grayish – blue in colour. There are white spots on the cheeks and white colouring on the edges of the lips. Nilgai antelope is a sociable creature, usually found in single-sex or mixed-sex herds. Male Blue bulls, after they reach old age, may be found leading a solitary life. Nilgai is diurnal animal and sometimes nocturnal in habits found in grasslands, woodlands.

Blue bulls or Nilgai are found in the northern plains of India, stretching on from base of the Himalayas in the north, to the state of Karnataka in the South. Their range also covers the area from the Gir forest, all along the entire eastern length of Pakistan, across the border of Rajasthan in the West to the states of Assam and West Bengal in the East.

Nilgai make several low-volume vocalizations, including a short, guttural “bwoah” when alerted. Calves may bawl and may make a runting sound while nursing. In India, Nilgai occur from the foothills of the Himalayas southward to Mysore.

Their habitats are characterized by paths, water holes, defecation sites, and resting covers. Nilgai were common in India during the 1880s and were hunted for sport by the British.

Boselaphus tragocamelus (Pallas, 1766) a herbivores animal, feed primarily on grasses, leaves, buds, and fruits of various agriculture and horticultural crops which cause great economic loss to agricultural crops by means of grazing and trample.

They are found to be capable of causing extensive damage to most agriculture crops viz..., wheat (*Triticum aestivum*), mustard (*Brassica campestris*), sugarcane (*Saccharum officinarum*), paddy (*Oryza sativa*), coriander (*Xorandrum sativum*) and vegetables like pumpkin (*Cucurbita*) species, cucumber (*Crocusynus sativus*), ladies finger (*Abelmoschus esculentus*), cabbage (*Brassica*) species, potato (*Solanum tuberosum*), tomato (*Lycopersicon esculentum*), banana (*Musa species*).

Boselaphus tragocamelus (Pallas, 1766) (*Artodactyla : Bovidae*) in the Gangetic Plains of India w.s.r. to five districts of North Bihar.

DISTRIBUTION:

The genus *Boselaphus* Blainville (1816) represented one species in India, popularly called Nilgai or Neelgai, *Boselaphus tragocamelus* (Blandford, 1888; Pallas, 1766). It is also

known as 'Blue Bull' refers to the bluish color of the adult male, and therefore blue bull is another name for the animal. Nilgai are classified as bovids (family Bovidae), and with their close relative, the Four-horned Antelope *Tetracerus quaclricornis*, are the only living representatives of the tribe Boselaphini. It also distributed from Indus divisions of the Indian sub-region in the Asian Indo-Malayan region (Corbet and Hill, 1992) and almost all of India except eastern Bengal, Assam, east of the Bay of Bengal, (Chauhan, 2011).

MORPHOLOGY

The adult Blue bull has a coarse iron-gray coat, a white ring below each fetlock and two white spots on each cheek The densities of *B. tragocamelus* in India vary widely depending on habitat conditions, competition with domestic livestock, predation, and degree of protection (Berwick, 1974, Berwick and Jordon 1971; Pandey, 1988; Awasthi et al. 1994; Khan, 1997; Khan et al.1996; Biswas and Sankar, 2002). Nilgai are sexually dimorphic. Males always have horns, which are used in ritualized fighting during the mating season.

FEEDING BEHAVIOUR:

Nilgai is a herbivore animals which browses on shrubs and small trees and grazes on grasses and herbs (Blandford, 1888;Chauhan and Ramveer Singh, 1990).They mainly feed on agricultural crops (Prater, 1980; Majupuria, 1982; Schultz, 1986; Rajprohit, 1988). The Nilgais are found mainly feed on wheat, gram, mustard (Chauhan, 2011) and become serious pest of agricultural crops and are competing with resource utilization with domestic stocks (Caughley, 1981; Howard and Dutta, 1982; Ghosh *et al.*, 1987). In the absence of preferred food they readily alter their diet. Dietary selection aries seasonally studied by Khan (1994), Mirza and Khan (1974),

Individuals and groups of nilgai are capable of considerable movement if ambient conditions (e.g. drought) dictate (Berwick, 1974; Dharma kumar Singh ji, During summer, the Nilgai prefer to feed the fruits and leaves of *Acacia nilotica* and *Prosopis juliflora*. Woody vegetation dominates diets of *B. tragocamelus* in dry tropical forest of India (Khan, 1994). Sankar and Vijayan

(1992) noticed that the feces of *B. tragocamelus* contain seeds of 34 plant species from Keoladeo national Park, India.

Table 1: showing the food preference of nilgai during the study period

Sl.No.	Food preference	Food plants			
1.	Most preferred	Coriander	Cabbage	Wheat	Tomato
2.	Preferred	Maize	Banana	Sugarcane	Moong
3.	Least preferred	Pipal	Babool	Kakri	Papaya
4.	Non-preference	Chillies	-	-	-

FOOD PLANTS:

The food plants of *B. tragocamelus* are wheat, gram, mustard (Chauhan, 2011), erassess (*Cenchrus*, *Cynodon dactylon*, *Desmodastachya bipinnata*, *Scripus tuberosus* In the present study the food plants of *B. tragocamelus* are wheat, moog, mustard, coriandor, cabbage, cauliflowers, sugarcane, paddy, and bananas, fruits of *acacia nilotica* and *Prosopis juliaora*. Nilgai is a well known voracious herbivore, which are primarily grazer as well as browser. Nilgais are also prefer cultivated crops such as Ganwar (*Cyamopsis tetragonaloba*), Genhu (*Triticum aestivum*), Chana (*Cicerarie tinum*). Moong (*Phaselus radiates*), Makka (*Zea mays*), Ganna (*Saccharum officinarum*), Kakri (*Cucumis sativys*), Tamatar (*Lycopersicon esculentum*), Bandhgobi (*Brasica oleracea capitata*)

HOME RANGES:

Nilgai live in two types of units- the bisexual herds and all bull herds. The territories and home ranges are neither well defined nor defended. But the present study suggests that shifting of animals from one place to another depending upon the availability of food resources

shelter, protection and little or human interference. It has been found that the reasons of Nilgai shifts are linked with lack of movements and foraging sites in their traditional home range. This is because of over grazing, urbanization and increasing agriculture activity.

Nilgai were observed very aggressive when their calves were disturbed by any other species like dogs, goats etc.

Conclusion:

This study also suggests that their preferences for the natural vegetation and to keep it in undisturbed condition are a usual practice. It is clear from the present data that Nilgai do not want to come in contact with human beings and if they raid agricultural crop and vegetable fields they have to encounter humans and face tough situation not conducive for their survival.

The crop raiding behavior and preferences to certain crop material suggest that this is a recent since they are diverse feeders. That means they reject plant material for which they tgr not developed any taste and eat those parts for which they have developed certain taste.

Their population size in the surveyed 5 district does not suggest any alarming situation because of devoid of large predators, small cat and dogs. This seems to be a major factor for population increase in Nilgai and imbalance in the Agri-ecosystem.

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