

Is domestication of nilgai possible?

All species on earth have some unique ecological function, and we need to explore their use for better well-being. In recent times, nilgai or blue bull (*Boselaphus tragocamelus* Pallas) is one of the most studied animals after cow in the agrarian society of India. Nilgai shares the fodder of domestic animals and also damages the crops in Bihar and adjoining states. This has forced the government to declare this animal as vermin (pests or nuisance animals that spread diseases or destroy crops or livestock)¹. Maximum damage to crops was reported in the Kaimaur, Buxar, Bhojpur, Vaishali, East-Champaran, Supaul, Nalanda and Patna districts of Bihar. In 2017, farmers demanded immediate action and forced the officials of Vaishali and Nalanda districts to permit the killing of nilgai (Table 1)². Although nilgai is the only member of the genus *Boselaphus*, the largest Asian antelope has an Indian sub-continent origin³. This animal was first described and named by the German zoologist Peter Simon Pallas in 1766 (ref. 4).

In India, nilgai is placed under Schedule III of the Wild Life Protection Act, 1972 (ref. 5). Presently, this animal is Red-listed under endangered species by the International Union for Conservation of Nature⁶. Nilgai prefer cultivated fodder and hence are found near human habitation and crop fields. They are also found in a variety of habitats from cultivated plains to undulating hills with thin bush and scattered trees, but not in dense forests and steep hills⁷ (Figure 1).

Domestication of species cannot be considered as natural. However, increase in human population and developmental activities have resulted in shrinkage of natural habitats, thus forcing the wild animals like nilgai to move to nearby human habitats. Basically nilgai is diurnal⁸, but some degree of nocturnal activity

has also been reported⁹. It has been observed that nilgai migrate for food towards agricultural lands during dusk and return to places with less human activities during dawn. Close observations of the animals and discussions with farmers and villagers in the Dumraon area of Buxar district, revealed that there is no human-animal conflict. Nilgai were also found grazing with other domesti-

cated animals like buffaloes, cows and goats without any social conflict in the studied area (Figure 2) which indicates that domestication of this animal may be possible.

There is little knowledge about the characteristics and utility of nilgai, which demands detailed studies that could be utilized in future. The domestication of animals since ancient times is

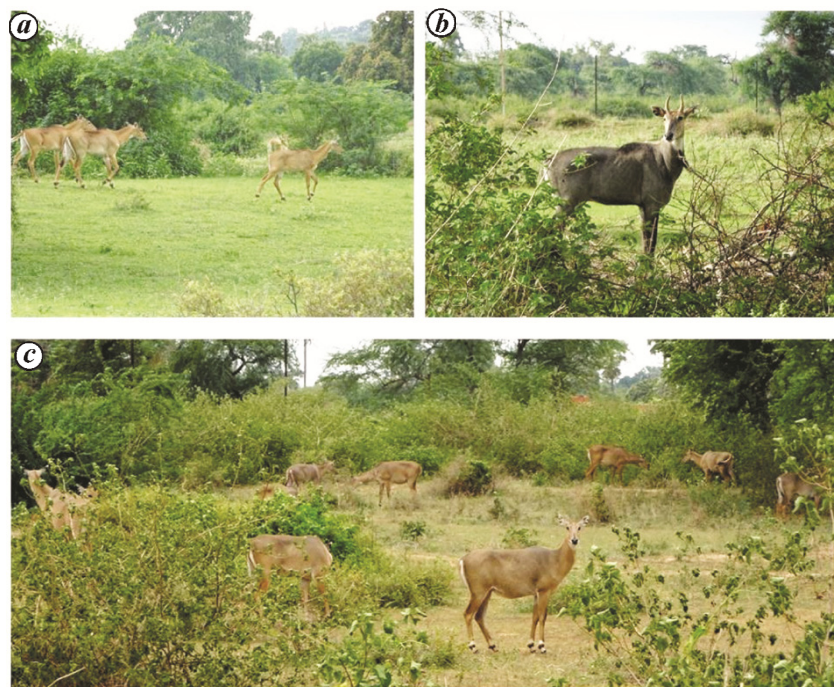


Figure 1. Nilgai at bushy land in the surrounding areas of Dumraon, Bihar. **a**, Young males; **b**, Adult male; **c**, Flock of nilgai.



Figure 2. Nilgai grazing along with buffaloes, cows and goats in Dumraon.

Table 1. Killing of nilgai in different districts of Bihar during 2017–18

Districts	2017	2018	Total
Nalanda	601	75	676
Saran	1163	0	1163
Patna	380	0	380
Vaishali	509	100	609
Total	2653	175	2828

Source: Ref. 2.

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based on mutual benefits and symbiotic relationships with humans. Some studies have reported the possible use of nilgai as farm animal, as it is stronger than the bullock. But in the era of mechanization, use as draught animals seems ineffective. The provisions to allow wild/neglected animals to be killed can be misused and are against the Wildlife Protection Act, both nationally and internationally. Body parts of nilgai such as skin, teeth, nail and meat are sold in the black market in Uttar Pradesh¹, which needs to be stopped.

All the above situations force us to think about its domestication for its milk and meat and other bio-molecules for therapeutic use, export, etc. Therefore it is important to study the quantitative and qualitative parameters of their products so that the value of nilgai and their

domestication can be determined and their products could be used for human consumption and for therapeutic uses.

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