Himalayan Goral camera trapped ShNP 2020.

First report of Himalayan Goral from Nepal's Shuklaphanta National Park

Himalayan Goral *Naemorhedus goral Hardwicke, 1825* belongs to order Cetartiodactyla and family Bovidae. It is listed on CITES Appendix I and classified as Near Threatened on the IUCN Red List and Nepal's National Red List (Duckworth & MacKinnon 2008; Jnawali et al. 2011).

Himalayan Goral is a goat-antelope; an adult with 65–70cm height and 25–30kg weight (Baral & Shah 2008). Both sexes are mostly alike; having a short tail and two about 15cm long brown-grey horns which grow backwards. It has short and coarse grey coat with a lighter white patch of hair on throat; the males have manes from their necks to their chests, and females have four mammae (Baral & Shah 2008). Himalayan Goral has two recognized subspecies, *Naemorhedus goral goral* in Bhutan, China, India, & Nepal, and *N. g. bedfordi in India* & Pakistan (Duckworth & MacKinnon 2008). The recent study shows that the subspecies recorded eastward from Nepal is *N.g. goral* and westward from Nepal is *N.g. bedfordi* (Joshi et al. 2020). Nepal may have held both the subspecies.

In Nepal, the Himalayan Goral is widely distributed on the forested slopes and steep mountainous areas up to the tree-line (Wegge & Oli 1997); however, it is mainly distributed across the Churia and mid-hills between elevations of 300m and 3.000m (Jnawali et al. 2011). It is recorded from Khaptad, Rara, Shey-Phoksundo, Langtang, Sagarmatha, Makalu-Barun, Shivapuri-Nagarjun, Parsa, Chitwan, Banke, and Bardia national parks; Api-Nampa, Annapurna, Manaslu, Gaurishankar, and Kanchenjunga conservation areas; and Dhorpatan Hunting Reserve (Suwal & Verheugt 1995; Wegge & Oli 1997; Poudel 2009; Katuwal et al. 2013; Khanal et al. 2020; Koju et al. 2020). Goral was reported from the Kanchanpur District (Suwal & Verheugt 1995); however, till the

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Map showing Goral presence in ShNP.

early 2019, there was no documented photographic evidence of the record of this species from the Shuklaphanta National Park (ShNP). Here, in this paper, we report sightings and the first photographic record of Himalayan Goral from the park. With an area of 305km², the ShNP is situated in the southwestern Nepal between 28.763–29.047 N latitudes and 80.095–80.361 E longitudes in Kanchanpur District (Poudyal et al. 2020). The altitude ranges 175– 1,300 m.

We walked along the available trail in the Churia foothills to search the species; once we observed the hoof prints of the possible Himalayan Goral on the riverbank, we installed the motion sensor camera with a high likelihood of animals being photographed. We recorded date, time, habitat information, elevation, and geographic locations where the Himalayan Goral were sighted or photographed.

First observation: On

29 November 2019, we observed two individuals at 11.03h from Badepani area (29.038N and 80.361E; 385m) along the stream in the mixed forest of mountain cliff. However, we couldn't get a photograph because of quick response of the species.

Second observation: On 19

October 2020, we observed three individuals at 10.49h at Badepani area (426m) towards north along the stream in the mixed forest and mountain cliff landslide area on the south facing slope of Siwalik Hill; and those were captured on Canon 1300D DLSR camera. The captured photograph was not clear; however it was good enough to recognize the species. This remains the first photographic evidence of the Himalayan Goral captured inside ShNP.

Third observation: On 2 November 2020, we visited the same area. At 12.22h, from where the gorals were

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observed on 19 October 2020, we observed a single goral and the hoof prints in the lower bank of the stream. At the same time, we installed a camera trap (Pantheracam V6) at Badepani Stream bank (29.025 N and 80.350 E; 426m)

Fourth observation: The installed camera was checked on 20 November 2020 for the photographs. Finally, we reconfirmed presence of goral as there were two individuals captured at 11.19 h on 7 November 2020.

As the population and distribution of this species in ShNP is unknown, we recommend studies on distribution and population estimate then harmonize the periodic monitoring. The elevation measured in ShNP for goral presence is lower than currently given by IUCN as the lower elevation limit of 900m (Duckworth & MacKinnon 2008). The current lower elevation for goral presence in ShNP is 426m. This record was approximately 15km farther south than the range map provided by Duckworth & MacKinnon (2008); so we suggest to the IUCN to amend the geographic range map further south touching the northern part of ShNP.

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