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Cover: Life and death in one night - wolf hunting the hare. Mixed media—gouache, acrylics, pen & colour pencils. © Dupati Poojitha.



## Sightings of Red Goral *Nemorhaedus baileyi* in the community forest of the Upper Siang region, Arunachal Pradesh: an insight into its conservation challenges and implications within a tribal-managed landscape

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**Abstract:** A recent Sclater's Monal survey conducted in the Upper Siang region of Arunachal Pradesh (India) resulted in the sighting of two Red Goral individuals - a young adult and a juvenile. These observations were made within the Mount Eko Dumbing area, which is owned and managed by the indigenous Simong tribal community. The report includes photographic documentation of the observed Red Gorals and provides detailed illustrations of their habitat characteristics, as well as the deep traditional relationships that the Simong people maintain with these species and the surrounding natural environment. Additionally, the study highlights the critical conservation challenges and opportunities relevant to the Red Goral in this ecologically and culturally significant region.

**Keywords:** Adi, Bovidae, highlands, hunting, Mount Eko Dumbing, ritual, Simong, taboo, traditional belief system, traditional knowledge.

Red Goral *Nemorhaedus baileyi* (Pocock, 1914) is an enigmatic small goat-antelope species in the Bovidae family. It is classified as 'Vulnerable' on the IUCN Red List, included in CITES Appendix I (Nijhawan 2020), and receives the highest level of protection in China (Xiong et al. 2013) & under India's Wild Life (Protection) Act of 1972 as a Schedule I species. Red Gorals are one of the geographically restricted species within the

*Nemorhaedus* genus, being geographically confined to the temperate mountain ranges of southeastern China, northern Myanmar, and the eastern region of Arunachal Pradesh, India (Nijhawan 2020).

In Arunachal Pradesh, India, the Red Goral is known to commonly occur in the Mishmi Hills region east of the Siang River (Anjaw, Dibang Valley, Lower Dibang Valley, East Siang, Lohit, and Changlang districts), with the Dibang Wildlife Sanctuary serving as a stronghold for the species. To the west of the Siang River, the species is relatively rare, occurring only sporadically, with its range extending as far west as the Tawang District (Choudhury 2013).

The presence of the species has been confirmed from various locations across the state, including Namdapha National Park (Datta et al. 2008) and community forests beyond Vijaynagar near the border with Myanmar in Changlang (Nijhawan 2020), Kamlang Tiger Reserve in Lohit (Singh & Gupta 2021), Walong in Anjaw (Choudhury 2009; Patgiri et al. 2023), Mehao WS in Lower Dibang Valley (Ahmad & Gopi 2024),

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Dibang Valley and Upper Siang District (Aiyadurai 2014; Nijhawan 2020). Additionally, according to Nijhawan (2020), the Red Goral may also likely to be found in the higher catchments of the Kameng (previously reported by Mishra et al. 2005 and Mishra et al. 2006 from West Kameng District), Kurung, Kumey, and Subansiri rivers within the state.

Here, we report the recent sightings of the Red Goral within the Simong community forest in the Upper Siang District located adjacent to the Dihang-Dibang Biosphere Reserve. While the presence of the species has been reported from this region, these accounts have been based solely on verbal confirmations (Nijhawan 2020), as there are currently no known published records documenting its occurrence from this specific location.

The information on the Simong community's traditional knowledge and their local environment outlined here was obtained through extensive discussions with Simong guides and subsequently validated through informal interviews with the village's

elders, hunters, and shaman.

### THE OBSERVATIONS

A field survey was undertaken from 29 October 2023 to 04 November 2023 to study the Sclater's Monal *Lophophorus sclateri* within the highland regions of the Simong community's forest land, covering an elevation range of 2,500–4,200 m (Image 1). During this survey on 03 November 2023, a young adult Red Goral (Image 2) was observed grazing in the open, undergrowth shrub-and-grass covered habitat within the 'Hadang Edpang' locality of the Mount Eko Dumbing region, situated in the north-eastern part of the community forest. The individual was recorded at an elevation of 3,145 m (28.434°N, 95.084°E) and a slope of ~30–40° angle. Subsequently, within 200 m of the first sighted location, a young fawn (Images 3 & 4) was spotted on a steep, rugged crag with a drop and sparse vegetation, at an elevation of 3,120 m (28.4°N, 95.084°E). Both sightings occurred within the span of an hour, between 1430 h

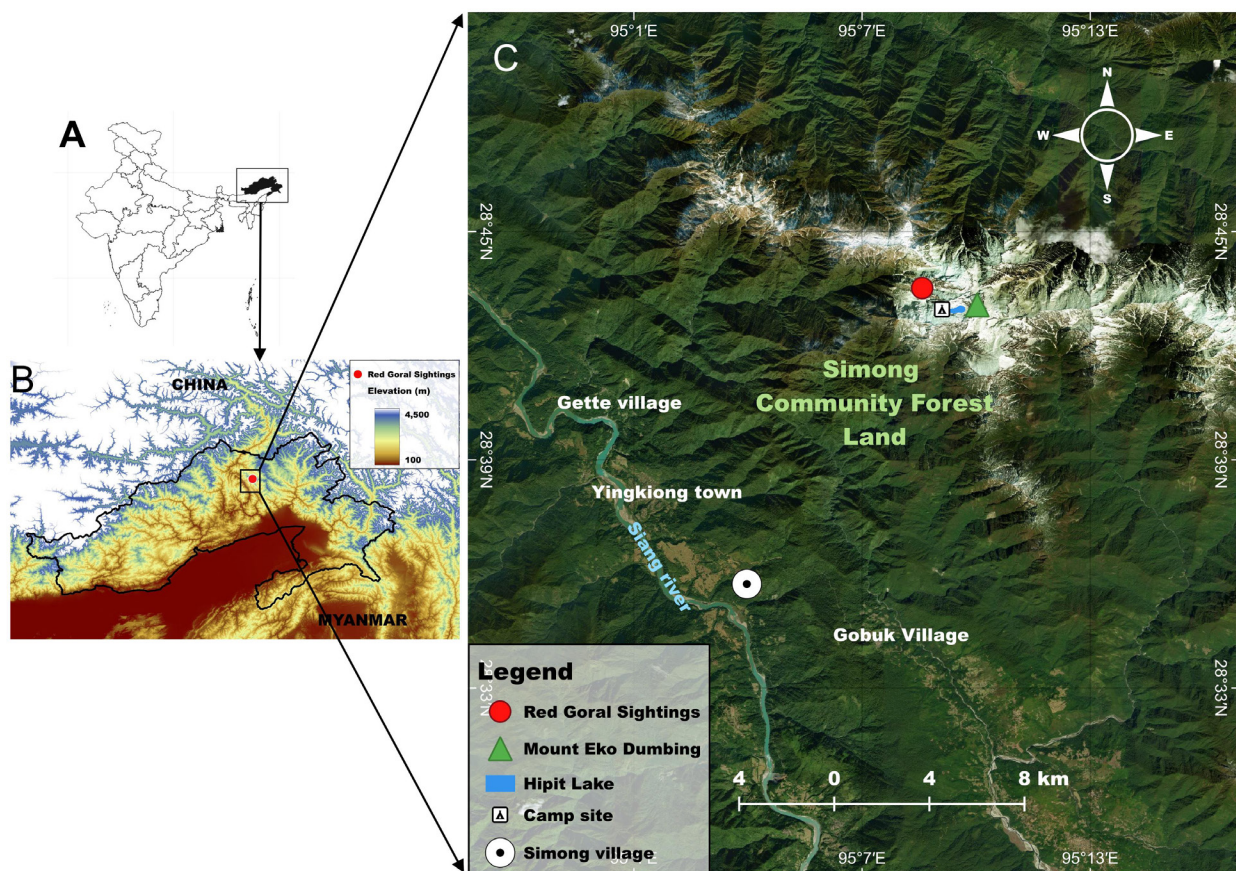


Image 1. A—Map of India highlighting Arunachal Pradesh | B—An elevation map of Arunachal Pradesh showing the study site in the Upper Siang region and Dihang-Dibang Biosphere Reserve (Green) | C—a location map of the Red Goral sightings within the Simong Community Forest (undefined boundary).



and 1530 h, under overcast skies with light drizzle.

### The Simong community, their landscape and its wildlife

The Simong (or Himong) community is a small subgroup within the larger Adi ethnic group, residing in the Upper Siang District of Arunachal Pradesh. According to the 2011 census data, the Simong village consists of 179 households and a total population of 672 individuals. The community maintains ownership of a substantial forested area spanning a wide range of elevations, from approximately 700–4,200 m.

The Mount Eko Dumbing (Image 5), the highest point within their land, is situated at the heart of this territory and is revered as a sacred site, along with the surrounding highland region. Like many other tribal communities in the state, the Simong have their own distinct traditions and belief systems that are deeply integrated with the natural landscape. They are traditional hunters, and their utilization of the forest's resources is directly linked to their traditional practices. While they predominantly extract resources from the nearby forests and fallow lands, they generally avoid the highlands due to taboos associated with these regions.

According to the Simong people's belief system, the high-altitude mountains within their forested lands are believed to be the domain of a spiritual entity known as 'Jimu Tayang', who is regarded as the guardian and owner of the highlands and its wildlife. During certain ceremonial occasions such as 'Unying-Aran' and 'Jihang' when the Simong require access to resources from these highlands, they perform a ritual involving the sacrifice of domestic animals. This sacrificial ritual is intended to appease 'Jimu Tayang' and facilitate the exchange of resources. They believe that failing to uphold proper sacrificial rituals would result in personal misfortunes, as well as the imposition of unfavourable weather conditions throughout their ceremonial journeys.

The Simong people claims that their intricate relationship with their forest land helps safeguard the highland region and its species, including the 'Hiyar' (Simong: Red Goral).

### Conservation challenges and prospects for the Red Goral in the region

As per locals, the once wildlife-abundant highlands that harboured substantial populations of Red Gorals and other wildlife species have been severely degraded due to hunting pressure, particularly from illegal hunting activities targeting Musk Deer *Moschus* sp. They believe that neighbouring tribal clans (probably other than Adi tribe) from the surrounding area illegally trespass into



Image 2. Photograph of the young adult Red Goral observed at the 'Hadang Edpang' area of the Mount Eko Dumbing region. © Kishon Tekseng.



Image 3. Photograph captures a curious Red Goral juvenile, with a distinctive white spot clearly visible on its forehead. © Kishon Tekseng.

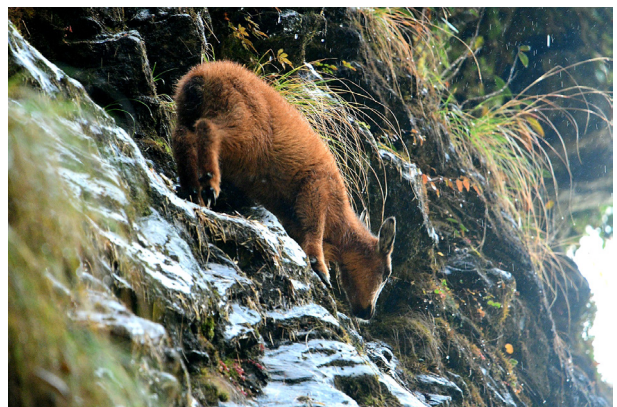


Image 4. The Red Goral juvenile swiftly navigating the steep, rocky slope. © Kishon Tekseng.





Image 5. Camp site with a panoramic view of the Mount Eko Dumbing and the nearby Hipit Lake. © Takhe Bamin.

their community's forest territory to engage in such hunting activities. A study by Datta-Roy (2022) indicates that the inhabitants of the Bomdo village, which is situated around 25 km from the Simong Village and belongs to the same Adi tribal group, also engage in the hunting of Musk Deer and Takin from their surrounding highlands.

During our investigation, we discovered two recently utilized encampments of the potential illegal hunters in the Mount Eko Dumbing region (both of which were later dismantled by our local guides, a resident of the Simong community). The illegal hunters are also known to exploit the Red Goral as well as other wildlife species like Mishmi Takin *Budorcas taxicolor*, Himalayan Black Bear *Ursus thibetanus*, and various pheasant species. These animals are targeted for their meat, organs, and to sustain themselves during their expeditions. As a result, our Simong guides reported, these wildlife populations have become rare, and their sightings have declined significantly within the local area. While the Simong people have implemented a hunting ban within

their own community, some individuals are still likely to be engaged in the practice.

Such instances of the exploitation of Red Goral in conjunction with the hunting of Musk Deer are already a significant issue in Arunachal Pradesh as well as in Myanmar, where hunters have been noted to rely on the meat of the Red Goral to sustain themselves during their extended expeditions targeting Musk Deer (Nijhawan 2020; Rabinowitz & Khaing 1998).

Red Goral is a poorly known species, with limited knowledge regarding its population dynamics, geographic distribution, behaviour, and habitat ecology. Given its restricted range and declining population, unsustainable illegal hunting and habitat loss due to infrastructure development and expansion of monoculture forestry pose serious threats to the species (Nijhawan 2020).

Undertaking comprehensive research on the Red Goral is necessary to address the existing knowledge gaps and conservation challenges associated with this species. Also, it is critical to recognize that although

the Red Goral and its habitat may benefit from the protections provided by the state's designated protected areas, a major portion of the species' geographic range exists outside these delineated zones, on lands owned and managed by local tribal communities. Subsequently, conservation efforts within these tribal-owned and managed landscapes are crucial. To achieve this, it is essential to understand and acknowledge the cultural traditions and belief systems of these indigenous communities, which often play a pivotal role in preserving the species and its surrounding environment, as exemplified by the Simong people. Furthermore, actively engaging the local tribal stakeholders in the planning of future conservation strategies is imperative to ensure the long-term viability of the Red Goral population and its habitat.

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