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BRINGING THE UNICORN BACK TO THE NORTHERN TERAI

By Somreet Bhattacharya and Mudit Gupta

Raghu, one of the robust males at the Rhino Rehabilitation Area within the Dudhwa Tiger Reserve, grunted before running off into the grasslands, silhouetted against the setting sun near the Sunaripur range in the tiger reserve. More than 40 years after the reintroduction of the one-horned rhino to the Terai landscape, Raghu became the first of his kind to be free-ranged into the wild on November 27, 2024. Two other rhinos – both females – were free-ranged subsequently. The beating heart of the Terai wilderness awoke to the heavy steps of the remarkable beast. The unicorn of India's grasslands marked its full return to the land that was once its home.

Many today might know the one-horned rhino as a mammal exclusive to states such as Assam, where it is a crowd-puller in Kaziranga, living alongside people in the Pobitora landscape (see page 50), and roaming free in the alluvial grasslands of Manas; or to the state of West Bengal, where it thrives in the Dooars region, particularly in Jaldapara and Gorumara National Parks; or associate it to Nepal's Chitwan. There is evidence, however, that the one-horned rhino once occupied a wide range in the Indian subcontinent, extending from the Indus river valley in the west to the Brahmaputra valley in the east. The greater one-horned rhino on the famous Pashupati seal from Mohenjo-daro hints of the presence of this species in northern India. According to the Central Zoo Authority, the rhino ranged from Brahmaputra valley in the East to Indus valley in the West. There are also references to it as a sport animal in

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ABOVE *The Dudhwa Tiger Reserve is dotted with a vast expanse of dense* sal *forest, interspersed with large stretches of grasslands bordered by lakes and wetlands. These areas are home to threatened species such as the swamp deer, Bengal Florican and Swamp Francolin. It is perhaps one of the few habitats that sustains the threatened Terai landscape.*

FACING PAGE *There is evidence that the one-horned rhino once occupied a wide range in the Indian subcontinent, extending from the Indus river valley in the west to the Brahmaputra valley in the east. However, as a favourite among game hunters and colonial military officers, the greater one-horned rhinoceros became locally extinct in parts of northern India.*

Baburnama, the memoirs of the founder of the Mughal Empire, Babur. We learned that the species had occupied the entire stretch of the subcontinent until the more recent 19th century. Considered a favourite among game hunters and colonial military officers, the greater one-horned rhinoceros became locally extinct in parts of northern India.

The release of three greater one-horned rhinos *Rhinoceros unicornis* at the Dudhwa National Park has rekindled hope for this species to thrive once again in its historical habitat.

LOOKING BACK In the 1950s, it became clear to wildlife enthusiasts and conservationists that rhinos were disappearing, as they observed the last remaining individuals in northern India, specifically in the Pilibhit forests in Uttar Pradesh. This decline also impacted the swamp deer population, as their ecosystem was closely tied to the rhinos. Concern was raised among policy leaders, and in August 1979, the Asian Rhino Specialist Group of the IUCN Survival Service Commission (now known as the Species Survival Commission) emphasised that steps must be taken to establish additional viable population units in suitable areas, preferably in the rhinos' former distribution range.

Following up on these recommendations of the Asian Rhino Specialist Group, the Wildlife Status Evaluation Committee of the Indian Board For Wildlife appointed a sub-committee to consider alternative rhino translocation areas in the same year. The Dudhwa National Park was selected to be the most promising because of habitat similarities with Assam's Kaziranga National Park, where rhinos thrived for several centuries, the fact that rhinos had been recorded in this area

COURTESY SOMIREE BHATTACHARYA

TOP LEFT *One of the crates being prepared for the rhino free-ranging programme at the Dudhwa Tiger Reserve.*

till the last century, and the adequacy of the protection available for their survival.

In 1984, a crash of five rhinos was flown in a chartered heavy lift aircraft from Guwahati to Delhi. I remember reading a news article that said that "rhinos indeed can fly".

In *Sanctuary's* July-September (Vol. IV No. 3, 1984) issue, Samar Singh, formerly Joint Secretary (Forests and Wildlife) and Director Wildlife Preservation, Government of India, New Delhi, wrote about the flight of the rhinos: *"Five dust-laden trucks, carrying an equal number of rhinos, rumbled into Dudhwa in the early hours of April 1, 1984, after an 18-hour journey from Delhi. The five rhinos had earlier performed an historic flight in a specially chartered Aeroflot cargo aircraft hired by the Government of India to fly them from Guwahati to Delhi. Accompanying them in flight was a small party headed by the Director (Wildlife), Government of India, who confirmed that the rhinos posed virtually no problems en route and that the two-and-a-half hour journey, sitting within touching distance of the 'armoured' animals, was exciting and memorable. On arrival at New Delhi's Palam airport, the rhinos were given a VIP reception by a crowd of enthusiasts.*

But why the fuss? Why Dudhwa? What next? These very legitimate questions are still uppermost in the minds of many people, and certainly need to be answered. There are four main reasons why this episode must be recognised as historic. First, it is easily one of the largest operation of its kind ever undertaken in the sub-continent. "If is succeeds, it will change the concept of wildlife management in the region," said one wildlife expert. Secondly, it follows soon after the adoption of the National Wildlife Action Plan (which gives priority to the reintroduction of endangered and threatened species) and therefore lends tremendous credibility to the intensions and capabilities of the Government of India. Thirdly, there is world-wide concern about the status of the rhino, leading to an international campaign during 1982, which was called the 'Year of the Rhino'. And finally, the arrival of the rhinos at Dudhwa was a 'home coming' of sorts in as much as they were returning to an area which was once the natural home of the rhino until about a hundred years ago."

A part of the Dudhwa National Park was converted into the Rhino Reintroduction Area (RRA) in the South Sunaripur Range, comprising the Kakraha Block and a part of the Chhota Palia Block. The RRA has nine permanent large and small lakes. The chain of these lakes lies along the damar *sal* and grassland ecotone. These lakes and two *nullahs*, Andhra and Chabakwa, are old courses of the river Suheli, forming the ideal rhino habitat. While the initial project aimed to release the rhinos into the wild once they acclimate with the Dudhwa ecosystem, several factors, including concerns about poaching, led to a delay that consumed over four decades. In the meantime, the number of rhinos in RRA increased to more than two dozen.

Inbreeding was found after a DNA study was conducted under the RhoDIS India programme (Rhino DNA Index system that adopts a molecular approach for rhino forensics and population management). This helps in understanding the genetic status of the existing population for long-term conservation and assessing the probabilities of inbreeding among each individual. Based on this, the Uttar Pradesh Forest Department

The status of rhinos in India

About 81.3 per cent of the global population of the great one-horned rhino is in India. The current number stands at 4,014 individuals that reside within India's national parks and wildlife sanctuaries.

Status of rhino population 50 years ago vs. now: The rhino population has surged by approximately 170 per cent since the 1980s, growing from 1,500 to over 4,000 today.

Conservation threats including range decline and opportunities: Poaching is an omnipresent threat to rhinos, based on the myth of the medicinal properties of its horn in Chinese Traditional Medicine. Throughout their present-day range, their habitat continues to dwindle fast as their preferred grassland habitats are threatened by invasive species, weeds, and natural succession to woodlands. The habitats are also threatened by visible changes in water availability and flow patterns,

How are we ensuring habitat protection for the species in Dudhwa and the landscape? 1. Active grassland management through removal of invasive species such as lantana, and the introduction of palatable species. 2. Managing wetlands by maintaining adequate water levels and the growth of wild grasses. 3. Ensuring active protection of species through GPS and VHF monitoring.

relocated a batch of rhinos to a new Rhino Rehabilitation Area in 2018. However, the decision to free-range the animals took longer since the entire ecosystem had to be prepared around the new rhino presence.

Lalit K. Verma, Chief Conservator and Field Director of the Dudhwa Tiger Reserve, is optimistic that free-ranging rhinos will help revive the habitat and establish a source population in northern India. "We are hoping that the rhinos' range will expand across the Terai gradually; it is their historical range," he adds.

MONITORING THE UNICORNS For Mohammad Irshad, a staff member at the Salukhapur elephant camp within the Dudhwa Tiger Reserve, monitoring the rhinos with his team of *mahouts* forms a significant part of their day-to-day activities. "The animals here are adapted to the environment within the RRAs. Our monitoring involves ascertaining the behaviour of each individual we spot," he says as he climbs onto the back of his elephant, Gajraj. The tracking teams have identified each of the 40-odd rhinos within the rehabilitation area with physical features such as a cut on the lip or a shorter ear and named them for identification, Raghu being one of them. Irshad and his team carry binoculars and have spent almost all day identifying and observing the rhinos within the rehabilitation area. "Now that the animals are accustomed to our presence, it becomes easier for us to spot them even if the elephants go near," Irshad adds.

RHINOS ADAPTING TO THE WILD The free-ranging programme aimed to re-establish a viable population by increasing its habitat range, reducing the risk of inbreeding, and increasing the genetic diversity within the Dudhwa rhino population. The rhinos would be able to interact with others of their kind from Nepal that frequent the tiger reserve, a significant step towards species recovery in the region.

The Dudhwa Tiger Reserve is dotted with a vast expanse of dense *sal* forest, interspersed with large stretches of grasslands that are bordered by lakes and wetlands that are home to threatened species such as the swamp deer *Rucervus duvaucelii duvaucelii*, Bengal Florican *Houbaropsis bengalensis* and Swamp Francolin *Orrygornis gularis*, and is perhaps one of the few habitats that sustains the threatened Terai ecosystem.

NILPANJAN MUKHERJEE/SANCTUARY PHOTO LIBRARY

ABOVE *A growing rhino population is good news for the species and benefits the larger Terai region shared between India and Nepal. The state Forest Department and various NGOs play an important role in making this possible.*

Amit Sharma, lead for the rhino conservation programme at WWF-India, adds that the free-ranging of the greater-one horned rhinos gives a fresh lease to these waterbodies. "Rhinos are mega-species that not only use the wetland but also the wet soil, which engineers the development of new puddles that eventually add to the stagnant water and sustain all other life-forms that depend on it," he says.

WWF-India has been supporting the Uttar Pradesh Forest Department in setting up baseline information on the state of these tall grassland-wetland mosaics. Locally called *phanta* and *taal*, respectively, these eco-regions are essential for other faunal species such as fishing cats. The biggest challenge for the Forest Department and WWF-India team was selecting a suitable habitat for free-ranging the animals. A growing rhino population is good news for the species and benefits the larger Terai region shared between India and Nepal. Known for its robust agricultural productivity, the Terai is the 'food basket' of the area that sustains the largest population of other keystone species such as the Bengal tiger and the Asian elephant. However, the Terai region in Uttar Pradesh also faces extreme ecological pressure because of habitat loss and human activities. The presence of rhinos helps vegetation such as grasses, shrubs, and wetlands thrive, eventually adding to the sustenance of other smaller species such as birds and mammals.

With inputs from Amit Sharma, lead for the rhino conservation programme at WWF-India.

Dr. Mudit Gupta, landscape lead for WWF-India's Terai Arc Landscape in Uttar Pradesh (UP), has been an environmentalist and conservationist for over two decades. He has worked extensively in restoring species and habitats across UP. **Somreet Bhattacharya**, Communications Manager at WWF-India, is a journalist turned conservation communicator with a passion for storytelling and narration.

The Dudhwa National Park was selected to be the most promising because of the similarities of habitat to that of Assam's Kaziranga National Park, where rhinos thrived for several centuries and the fact that rhinos had been recorded in this area till the last century.

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