



The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of participating organizations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. The views expressed in this publication do not necessarily reflect those of any participating organizations.

Notes on front and back cover design:

The watercolours reproduced on the covers and within this book are taken from the notebooks of Brian Houghton Hodgson (1800-1894). For 23 years, Hodgson was posted to Nepal as an official of the British East India Company—at a time when Nepal was virtually terra incognita to Europeans. Hodgson was an energetic polymath who, in addition to carrying out his political and diplomatic duties, published widely on the ethnography, linguistics, architecture, religion and natural history of Nepal and the Himalayas. He published more than 140 scientific papers on zoological subjects, ranging from descriptions of new species to checklists of the fauna. A projected massive volume surveying the birds and mammals of the central Himalaya was unfortunately never completed due to lack of funds, but the present paintings are taken from sketchbooks which Hodgson presented to the Zoological Society of London toward the end of his life. These voluminous collections comprise approximately 1500 pages of drawings, studies and miscellaneous notes. The species depictions were done in watercolours by a cadre of Nepalese traditional artists trained by Hodgson to paint birds and mammals in a natural, lifelike manner surprisingly modern in comparison with European and American artists of the day. Sadly, the names of only two members of this group—Tursmoney Chitterkar and Rajman Singh—are known today. The latter was probably responsible for the majority of these paintings, but he seems to have signed no more than a single bird painting.

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**Hodgson paintings species IDs** (*clockwise from top left*)

**Front cover**

- 1 *Macaca mulatta*  
Rhesus Macaque; Rato Bandar
- 2 *Ovis ammon hodgsonii*  
Argali; Nayan
- 3 *Manis pentadactyla*  
Chinese Pangolin; Kalo Salak
- 4 *Pteropus giganteus*  
Indian Flying Fox; Raj Chamero
- 5 *Cuon alpinus*  
Dhole; Ban kukur

**Ungulates**

- 1 *Pantholops hodgsonii*  
Tibetan Antelope; Chiru
- 2 *Naemorhedus goral*  
Himalayan Goral; Ghoral
- 3 *Axis porcinus*  
Hog Deer; Laguna

**Carnivores**

- 1 *Felis chaus (juvenile)*  
Jungle Cat; Ban Biralo
- 2 *Cuon alpinus*  
Dhole; Ban kukur

**Primates**

- 1 *Semnopithecus schistaceus*  
Nepal Grey Langur; Kalomukhe Bandar, Lampuchhre Bandar, Phetawal Bandar
- 2 *Macaca mulatta*  
Rhesus Macaque; Rato Bandar
- 3 *Macaca assamensis*  
Assam Macaque; Pahare Bandar

**Small mammals**

- 1 *Lepus nigricollis*  
Indian Hare; Khairo Kharayo
- 2 *Cannomys badius*  
Bay Bamboo Rat, Lesser Bamboo Rat; Sano Tame Bansmuso
- 3 *Manis pentadactyla*  
Chinese Pangolin; Kalo Salak
- 4 *Caprolagus hispidus*  
Hispid Hare; Laghukarna Kharayo

**Bats**

- 1 *Pteropus giganteus*  
Indian Flying Fox; Raj Chamero
- 2 *Hipposideros armiger*  
Great Himalayan Leaf-nosed Bat; Thulo Golopatre Chamero

**Back cover**

- 1 *Naemorhedus goral*  
Himalayan Goral; Ghoral
- 2 *Petaurista petaurista*  
Red Giant Flying Squirrel; Rato Rajpankhi Lokharke
- 3 *Felis chaus (juvenile)*  
Jungle Cat; Ban Biralo
- 4 *Hipposideros armiger*  
Great Himalayan Leaf-nosed Bat; Thulo Golopatre Chamero
- 5 *Semnopithecus schistaceus*  
Nepal Grey Langur; Kalomukhe Bandar, Lampuchhre Bandar, Phetawal Bandar

# The Status of Nepal's Mammals: The National Red List Series

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Laminchane, B.R., Griffiths, J., Khatiwada, A. P., Subedi, N., and Amin, R. (compilers) (2011)  
The Status of Nepal Mammals: The National Red List Series,  
Department of National Parks and Wildlife Conservation  
Kathmandu, Nepal.

Preface by Simon M. Stuart  
Chair IUCN Species Survival Commission

10) ***Rhinoceros unicornis*** (Linnaeus, 1758)

**Common Names**

Greater One-horned Rhino (English); Gaida (Nepali)

**Species Description**

Skin is hairless and slate grey, ashy when encrusted with mud, or black when wet. Large folds of skin across the flanks and tubercles resembling plates of armour. The most distinctive feature is the single horn at the end of the animal's nose.

**Species Ecology**

Greater One-horned Rhino are found in alluvial plain habitats throughout their present range. This habitat consists of tall floodplain grasslands and swampy areas, bordered by riverine woodlands sometimes extending to drier Sal or Terminamia forests. Greater One-horned Rhino feed on a wide variety of plants (up to 183 different species observed in Chitwan National Park) with a strong seasonal variation: grass (about 80%, mainly *Saccharum spontaneum*, *S. bengalensis*, *Narenga porphorocoma*, *Arundo donex*, *Phragmites karka*, *Cynodon dactylon* etc.), fruits (*Trewia nudiflora* and *Ficus* spp.), leaves and branches of trees (*Litsea monopetala*, *Ficus glomerata*, *Ehretia laevis*, *Dalbergia*, *Acacia*) and shrubs (*Murraya paniculata*, *Colebrookia oppositifolia*, *Callicarpa macrophylla*, *Coffea bengalensis*), sedges and ferns, aquatic plants and agricultural crops (rice, wheat, maize, lentils).

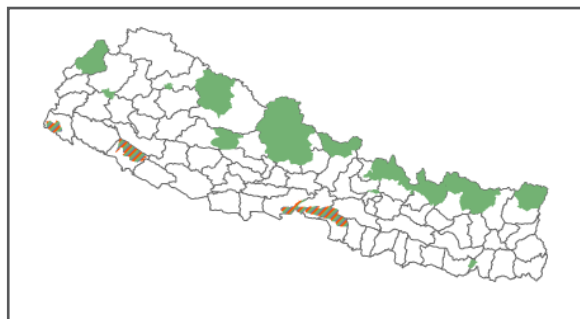
Sexual maturity is reached at approximately five to seven years in females who produce a single calf after a gestation period of approximately 16 months. In a healthy rapidly breeding population, inter-calving intervals average two and a half to three years.

**Conservation Status**

Global Status: Vulnerable

National Status: Endangered C1

Rationale for assessment: The Greater One-horned Rhino (*Rhinoceros unicornis*) has been assessed as Endangered under criterion C1 because of a small population which is fragmented and restricted in Shukla Phanta Wildlife Reserve, Bardia National Park and Chitwan National Park. The populations within Nepal are not able to move between these protected areas due to loss of connecting habitat.



The population in Suklaphanta is no longer genetically viable by IUCN standards and the population in Bardia is close to the minimum viable population. The main threats to this species continue to be poaching, habitat loss and degradation due to invasive alien plant species *Mikania micrantha*, *Lantana camara*, *Chromolaena odorata*, *Eichhornia* and *Pistia stratiotes* and human encroachment and conversion of land for agriculture. Greater One-horned Rhino exist in neighbouring areas of India, however significant movement across the border has not been observed.

**Legal Status**

CITES Appendix I

Listed in the National Parks and Wildlife

Conservation Act 2029 (1973) as protected priority species.

**National Population Size**

Total: 435

Adult: 293

Trend: Stable

The 2008 survey counted 435 individuals (408 in Chitwan National Park, 22 in Bardia National Park and 5 in Suklaphanta Wildlife Reserve). Of these, 293 were mature individuals. The global population is estimated at 2,575 individuals.

### National Distribution

This species occurs in three locations: Bardia National Park, Chitwan National Park and Shukla Phanta Wildlife Reserve with occasional movement into Parsa Wildlife Reserve from adjoining areas of Chitwan.

### Distribution outside Nepal

India.

### Main Threats

- Poaching for trade in body parts mainly horn.
- Habitat degradation due to invasive plant species including *Mikania micrantha* and *Lantana camara* (grassland and riverine forests), *Chromolaena odorata* (Sal forests), *Eichhornia* and *Pistia stratiotes* (lakes and river systems).
- Habitat Loss as a result of clearing for agriculture and livestock grazing and human encroachment.
- Human-wildlife conflict.

### Conservation Measures in Place

Terai Arc Landscape Strategy Plan (2004-2014). National Greater One-horned Rhino Conservation and Management Strategy (2006-2011). Law enforcement and constant monitoring of sub-populations. Research on the invasive species *Mikania micrantha*. In Bardia National Park, efforts are being made to secure the area beyond the Karnali floodplains so that potential translocations in the future will not be at risk from poaching or encroachment. In Shukla Phanta, efforts are being made to increase the capacity of reserve staff for scientific surveys so that a consistent monitoring system can be established.

### Conservation Recommendations

- i) Continue effective anti-poaching initiatives (informant networks, dedicated armed and trained anti-poaching units).
- ii) Establish/continue regular intensive block

monitoring system in all three rhino protected areas.  
iii) Establish/continue integrated standardised monitoring and reporting system; capacity building of field staff through training in rhino monitoring using the IUCN Asian Rhino Specialist Group accredited training programme; setup and maintain population master files and rhino database system.

iv) Continue the use of standardised reports for informed decision making such deployment of patrols.

v) Set up a common Bardia-Katerniaghat monitoring system.

vi) Produce park population status reports and synthesise into a national / regional report for metapopulation management.

vii) Develop a rhino recovery plan for Shukla Phanta Wildlife Reserve.

viii) Translocate rhinos to Bardia National Park and Shukla Phanta Wildlife Reserve to create viable, growing populations.

ix) Develop and implement an effective management programme for invasive plant species particularly the primary invasive species *Mikania micrantha*. The management plan should incorporate several types of control: these need research to validate the approaches. The plan needs to include controls that can be used in the short to medium term in priority conservation areas.

x) Maintain floodplain habitat including ox-bow lakes, by preventing spread of woodland, safeguarding wetlands through appropriate water management, implementing rotational grassland patch burning with effective firebreaks and limiting the extent of grazing by domestic livestock.

xi) Enhance community engagement, education and awareness programmes.

xii) Implement an effective human-wildlife conflict mitigation strategy in the buffer zones of the rhino protected areas.

### References

Nowak 1999, Amin *et al.* 2006, Amin *et al.* 2009, Sectionov *et al.* 2007, DNPWC 2008, Jnawali *et al.* 2009, Kandel and Jhala 2008, IRF 2009.

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