

# THE FORMER DISTRIBUTION OF THE INDIAN RHINOCEROS (*RHINOCEROS UNICORNIS*) IN INDIA AND PAKISTAN<sup>1</sup>

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The existence of the rhinoceros in prehistoric times is known from different sites in the Indus valley of Pakistan, and in the Indian states of Rajasthan, Gujarat, Uttar Pradesh, Bihar and possibly Karnataka. There are written and pictorial records testifying to the occurrence of the animal in those regions of India and Pakistan at least until the 16th century. The species concerned is the Indian rhinoceros, *Rhinoceros unicornis* Linnaeus, 1758.

## INTRODUCTION

Three recent species of rhinoceros are known to have occurred in parts of the Indian sub-continent. The double-horned Sumatran rhinoceros (*Dicerorhinus sumatrensis*) was reported from Assam and some regions bordering on Burma before 1880. The Javan rhinoceros (*Rhinoceros sondaicus*) was known definitively from the Sunderbans area of Bangladesh and has been said to exist as far north-west as Assam and Sikkim. The Indian rhinoceros (*Rhinoceros unicornis*) has been recorded in Assam, Nasirabad, Sylhet and Cachar (Rookmaaker 1980). It is still present in various reserves in N. E. India and in Nepal. The rhinoceros also once inhabited other parts of India and Pakistan, as described by Shebbeare (1953: 142): "[it] inhabited the sub-Himalayan tract during prehistoric times, the western limits of its range retreating from Peshawar, in the days of Babur (1505-1530), to Rohilkhand (the Bareilly district) in the mid-19th century and the Nepal terai during the present

century." The distribution of the rhinoceros in Pakistan and India outside the N.E. provinces until the 16th century and its retreat — the last record as far west as the Philibit district near the Nepal border dated from 1876 — has been reviewed or mapped by Lydekker (1907: 30), Guggisberg (1966: 135), Seshadri (1969: 92) and Mukherjee (1963: 45-47, 1974: 339-341). Usually, these records have been assumed to pertain to *R. unicornis*, but the animals rarely have been identified as *R. sondaicus*. Recently, there have been proposals to translocate Indian rhinoceroses from Assam to other areas within their former range. The first pair to be translocated arrived in the Lal Sohanra National Park in Pakistan on 23 March 1982 (Nawaz 1982), while other animals are supposed to be sent to Dudwa National Park in U.P. soon (Baidya 1982).

In view of these plans, it is evidently important to establish the former limits of the range of the rhinoceros as accurately as possible. In this paper I shall review all available data concerning the distribution of the rhinoceros in Pakistan and India (west of Assam). These will be divided in the information on the fossil specimens found in this region, and the literary and iconographic sources dating

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from the 14th to the 17th century. The specific identity of this rhinoceros will also be discussed. Many sources have been quoted extensively, because many are only available with great difficulty to zoologists and because it is useful to compare them all in one place.

#### PREHISTORIC RECORDS

Rhinoceros remains have been discovered in prehistoric sites in several Indian states. Pictorial representations possibly dating from the same period add localities in Pakistan and in Bihar. Few of the fragmentary remains have been described in detail and their identification as *R. unicornis* often has been taken for granted. Guérin (1980) presented extensive descriptions with measurements of the post-cranial skeletons of the five living species of rhinoceros. He observed that specific differences, either qualitative or quantitative, could be found in almost all bones. More specifically, *R. sondaicus* resembled *R. unicornis* osteologically, but they could be distinguished by size, proportions and other qualitative criteria (Guérin 1980: 74). It may be insufficient to compare specimens on paper only, and hazardous to presuppose the same size in prehistoric and recent specimens of the rhinoceros. Nevertheless, I shall compare the published descriptions of the fossil bones found in India with the analyses by Guérin (1980). The locations and ages of the different sites were taken from the publications describing the rhinoceros fragments.

#### PAKISTAN

##### Harappa

(Sihawal district on Ravi river; 2500-1500 B.C.)

Prashad (1936: 31) described a fragment of a right scapula. The stated measurements

(length c. 470 mm, maximum width c. 250 mm) are larger than those of *R. sondaicus* (Guérin 1980: 77). This points at *R. unicornis* (Prashad 1936, Roberts 1977: 159, Nath 1968: 18).

#### Mohenjo Daro

(Indus valley; c. 3000 B.C.)

Several seals and pottery objects representing a rhinoceros were found in Mohenjo Daro (Marshall 1931, I: 72, 205, 348, 353, II: 387). The animal is sometimes depicted "standing over a manger-like object" possibly indicating its keeping in captivity (Marshall 1931, I: 348), while to Conrad (1968: 253) this suggested worship of the rhinoceros. Marshall (1931, I: 348) thought that the species must have been well-known to the people judging "from the frequency with which it is represented, and it was, therefore, likely to have been found in the close vicinity of Mohenjo Daro." Brentjes (1978: 159) identified the animals on the seals as *R. unicornis*.

#### INDIA

##### RAJASTHAN

##### Kalibangan

(Ganganagar district; 3500-400 B.C.)

Banerjee & Chakraborty (1973) reported the discovery in 1965 of four bone fragments referred to *R. unicornis*: a left tibia (distal diameter 125 mm), a right humerus (distal diameter 126 mm), a first phalanx of the 4th metatarsal, and a 3rd metatarsal of the right foot (length 190 mm). In all cases, the measurements are larger than those of living *R. sondaicus* and compare better with those of *R. unicornis* (Guérin 1980: 126, 79, 147; see Nath 1969: 107).

