

CHAPTER THIRTY-SEVEN

RHINOCEROS UNICORNIS, THE INDIAN RHINOCEROS

37.1 THE LIVING ANIMAL

37.1.1 *Zoology*

The greater Indian one-horned rhinoceros, or simply the Indian rhinoceros, is a large, heavily built animal with an average male shoulder height of 1.7 m; females are somewhat smaller (Plate 39). It is the one but largest animal of the South Asian subcontinent. The Indian rhinoceros has a long boat-shaped head with one horn on its nose, measuring 20 cm on average. The horn is nothing more than a closely-matted mass of horn fibres issuing from the skin. It grows throughout life and if lost is produced again. The Indian rhinoceros has short stumpy legs and a thick folded skin with tubercles. This skin is divided into great shields by heavy folds before and behind the shoulders and in front of the thighs. The fold in front of the shoulders is not continued right across the back. On the flanks, shoulders and hindquarters, the skin bears rounded tubercles. Rhinoceroses are odd-toed ungulates, related to horses and tapirs, bearing three toes on each fore- and hind foot.

Indian rhinoceroses are as fond of mud-baths as water buffaloes and pigs are (fig. 467). As a result of this habit, their bodies are always coated with a cake of mud to protect against insects. They are good swimmers. Indian rhinoceroses live a solitary life and are notoriously bad-tempered, especially when with calf (fig. 468); they are even reported to attack an elephant. When escaping, a rhinoceros burrows its way through the dense undergrowth, leaving large tunnels hollowed through it.

The Indian rhinoceros eats practically speaking only grass. They often enter grain and grass fields of the villages to graze. Once, they were common in riverine grasslands with grass up to 8 m tall, and in the adjacent swamps and forests of much of northern India (the doab), Pakistan (Indus valley), Nepal, northern Bangladesh and Assam. Today, the Indian rhinoceros is restricted to parts, mainly national reserves, of Nepal, West Bengal, Uttar Pradesh, the Doars, and Assam, where it managed to extend its natural habitat into wood jungles up ravines

and low hills, cultivated areas, pastures and modified woodlands in an attempt to survive. Nevertheless, its numbers decline steadily.¹ At present, the species is endangered.²

During the third and second millennium B.C.E., the Indian rhinoceros still abounded in the Indus valley. Remains of *Rhinoceros unicornis* are recovered from several archaeological sites: Lothal in Gujarat, Nausharo in Pakistan, Harappa and several other sites in the Indus valley of Pakistan.³ The climate in the region was much wetter than it is today, but around 2,000 B.C.E. both summer and winter precipitation started to decline;⁴ probably, the number of rhinoceroses declined simultaneously. During Timur Lenk's reign in India (1398–1405) though, the Indian rhinoceros was still common in Jammu and Kashmir, where Timur is reported to have hunted it.⁵ In the early Mughal period, the rhinoceros still extended as far west as the Punjab foothills, Peshawar, Sindh and the lower Indus.⁶

The earliest evidence in India of a one-horned rhinoceros in a work of art seems to be a rock painting in a Mesolithic cave (c. 6,000–1,000 B.C.E.) at Bhimbetka near Bhopal, Madhya Pradesh.⁷ The dating is, however, by no means certain, and the painting may in actual fact be even younger than the seals from Mohenjo-daro, Pakistan (2,300–1,750 B.C.E.; see section 37.2.1 below).

¹ P. Scott, ed., "Section XIII. Preliminary List of Rare Mammals and Birds," in *The Launching of a New Ark. First Report of the President and Trustees of the World Wildlife Fund* (London: Collins, 1965), 15–207.

² Asian Rhino Specialist Group 1996, "*Rhinoceros unicornis*," in *2007 IUCN Red List of Threatened Species*, op. cit. Currently, only a mere two thousand individuals are counted in the wild; see T. Foose and N. van Strien, eds, *Asian Rhinos. Status Survey and Conservation Action Plan*, IUCN/SSC Asian Rhino Specialist Group (Gland, Switzerland: IUCN, 1997).

³ For Lothal, see Nath, op. cit. (1968), 1–63; S. Banerji and S. Chakraborty, "Remains of the great one-horned rhinoceros, *Rhinoceros unicornis* Linnaeus from Rajasthan," *Science and Culture* 39 (1973), 430–431; Chitalwala and Thomas, op. cit. (1977–8), 14. For Nausharo, see Von Zabern, ed., op. cit. ed. (1987), 261. For Harappa, see A. Mukherjee, *Extinct and vanishing birds and mammals of India* (Calcutta: Indian Museum, 1966). For other Indus Valley sites, see H. Rao, "History of our knowledge of the Indian fauna through the ages," *JBNHS* 54 (1947), 251–280; Mukherjee, op. cit. (1966); Banerji and Chakraborty, op. cit. (1973).

⁴ Kajale and 1997, *Journal of Quaternary Science* 12, 5 (1997). 405–412.

⁵ De Clavijo, op. cit. (1859). Timur Lenk is also known as Tamerlane.

⁶ Rao, op. cit. (1947).

⁷ Y. Mathpal, "Prehistoric rock paintings of Bhimbetka, central India," Ph.D. University of Poona (Pune, 1978).

37.1.2 *Related Species*

Two more rhinoceros species inhabited the subcontinent until recent: the smaller one-horned or Javan rhinoceros (*Rhinoceros sondaicus*) and the Asiatic two-horned or Sumatran rhinoceros (*Dicerorhinus sumatrensis*), both, however, had a very limited range in India (West Bengal, Bangladesh, Assam south of the Brahmaputra). Today, they have disappeared entirely from the subcontinent.

Until the end of the 19th century they were still seen regularly; the Javanese species in the mangrove forests of the Gangetic delta and the Sumatran species in the Chittagong Hills of Bangladesh. The Javan rhinoceros disappeared when its habitat, the mangrove forests of the Gangetic delta, was transformed into cultivated lands with rice and jute.

Both rhinoceros species are smaller than the Indian rhinoceros. The Javanese rhinoceros further differs from the Indian rhinoceros by its curious mosaic-like pattern on the skin instead of the tubercles and a shoulder fold which carries across the back. The Sumatran rhinoceros differs from the Indian rhinoceros by the presence of two horns on its nose and a coat of coarse bristles instead of tubercles.⁸ Unfortunately, both rhinoceros species are at present critically endangered.⁹

37.1.3 *Role of Rhinos in Society*

The Indian rhinoceros was a favourite game animal of all times; at present it is intensely protected in India and Nepal and therefore forbidden to hunt. It was hardly hunted for its meat, but the more so for its keratin horn. The horn is, apart from being an impressive trophy, supposed to have magical qualities. The wide-spread superstitions woven around this animal drove it to near-extinction. Not only the horns are believed to possess magical or medicinal powers, but also the blood, flesh, testicles, urine and other parts are considered thus. In Nepal, high caste Hindus and most Ghurkhas are said to have used rhinoceros blood as libation; on some occasions, a mixture of water and milk is poured from a cup made out of a rhinoceros horn as offering to the gods. The ancient

⁸ The Sumatran rhino is the only descendant of the woolly rhinoceros (*Coelodonta antiquitatis*) of the Pleistocene of Eurasia. Another unique feature is its habit to sing while taking a bath.

⁹ Asian Rhino Specialist Group 1996, "*Dicerorhinus sumatrensis*," and "*Rhinoceros sondaicus*," both in *2007 IUCN Red List of Threatened Species*, op. cit.

medical treatises describe the meat of a rhinoceros as having a positive effect on one's health: it gives strength and longevity.¹⁰ The legal texts recommend rhinoceros meat as the pre-eminent food at an ancestral offering, as it will satisfy the ancestors forever.¹¹ The custom of eating rhinoceros might go back to protohistoric times as is indicated by the findings of rhinoceros bones at archaeological sites of the Harappan period, for example at Langhnaj (c. 2,495–2,180 B.C.E.),¹² where the long bones of rhinoceros (and of other mammals) appear to have been split for the extraction of marrow.¹³

Contrary to what most people think, the Indian rhinoceros can be tamed, and even trained for work. There are, for example, reports that they were used in war by the kings in pre-Mughal India¹⁴ and to pull ploughs in Assam.¹⁵ Experiences in zoos confirm that the Indian rhinoceros can indeed be tamed and trained.¹⁶

The first reference to the existence of the one-horned rhinoceros in India was given by the Greek physician Ktesias, who lived at the Persian court of king Artaxerxes at the end of the fifth century B.C.E.¹⁷ Ktesias describes the 'unicorn' (*monokeratos*) as a kind of wild ass with a horn on its forehead.¹⁸ In actual fact, Ktesias was not far from the truth, because the rhinoceros is indeed related to the wild ass, and its whole appearance is an immense exaggeration of a short-eared ass to which one horn has been added on its nose. Much later, the unicorn

¹⁰ *Charaka Samhita* 1.27.84 and *Sushruta Samhita* 1.46.53, respectively.

¹¹ *Apastamba* 2.17.1, *Gautama* 15.15, *Manu* 3.272, *Yajnavalkya* 1.260, *Vishnu* 80.14; cited from Olivelle, op. cit. (2002), 25.

¹² G. Possehl and P. Rissman, "The chronology of prehistoric India: from earliest times to the Iron Age," in *Chronologies in Old World Archaeology*, ed. R. Ehrich (Chicago: University of Chicago Press, 1992, 3rd ed.), 465–479.

¹³ K. Kennedy, *God-Apes and Fossil Men. Paleoanthropology of South Asia* (Michigan: University of Michigan Press, 2000), 209.

¹⁴ C. Guggisberg, *S.O.S. rhino* (London: André Deutsch, 1966).

¹⁵ R. Schenkel and E. Lang, "Das Verhalten der Nashorner," *Handbuch der Zoologie* 8, 46 (1969), 1–56.

¹⁶ E. Lang, "Beobachtungen am indischen Panzernashorn (*Rhinoceros unicornis*)," *Zoologischer Garten* 25 (1961), 369–409.

¹⁷ Pliny the Elder (23–79), *The natural history of Pliny*, transl. J. Bostock and H. Riley, 5 vols., Bohn's Classical Library (London: Henry G. Bohn, 1855). Ktesias is said to have returned to Greece around 398 B.C.E.

¹⁸ Other wild animals Ktesias may have referred to are the Arabian oryx with its long and virtually straight horn in side-view, the aurochs or a wild goat like the ibex seen from the side and the markhor with its spiralled horn. However, the Arabian oryx lives not further eastwards than the Arabian peninsula, and the aurochs, ibex and markhor occurred also in Persia, and could therefore not have been exotic for the people at Artaxerxes' court.

gradually got transformed from the horned wild ass to a hairy one-horned goat and finally to the elegant one-horned horse in medieval Europe, very unlike the plump and real ‘unicorn’.

37.2 RHINOCEROSES IN STONE

37.2.1 *Early Evidence*

The earliest depictions in stone of a rhinoceros originate from the Indus Valley, Pakistan, where they were made during the Harappa period of the Bronze Age (2,300–1,750 B.C.E.) in the form of steatite seals. Most of them, if not all, originate from Mohenjo-daro (fig. 469). The rhinoceroses differ between the various seals, but share the characteristic tubercles on the skin. The skin folds are sculpted very precisely; the front part of the shoulder fold indeed does not extend onto the back. The animal is portrayed very accurate on all seals, indicating that the artists were well acquainted with the rhinoceros. At that time, rhinoceroses must have been common in the Indus valley as is evidenced not only by these seals but by bone remains from archaeological sites as well (see section 37.1.3 above).

The so-called Pashupati seal from Mohenjo-daro figures a rhinoceros as well (see Introduction, fig. 12). The tubercles on the skin are missing here, but this is best explained by the tiny size of the carving. Here, the rhinoceros is one of the animals surrounding a horned male figure, also described as Pashupati, lord of beasts, or as a yogi, based upon his posture. The function of the seal and the meaning of the depicted figure are unknown, because of the still undeciphered script.¹⁹ The combination of the wild animals, a buffalo, an elephant, a tiger and a rhinoceros, indicate that the ecology of the lower Indus was comparable to that of Bangladesh today.

The image of the Indian rhinoceros appears to have travelled to the west as is evidenced by a glazed steatite cylinder seal from the Sumerian

¹⁹ Many attempts have been made to decipher the script, but at present there is a lot of controversy on this matter. The only remaining clue as to unravel the meaning of the images is offered by comparison with similar subjects. Superficial resemblance of the yogic figure surrounded by wild beast with Shiva or Rudra as Pashupati lies behind a similar designation of this seal, but this may be far from the truth. The rhinoceros has, as far as I know, no relation with any form neither of Shiva nor of Rudra. See further sections 8.2.1 (buffalo), 12.2 (ibexes), 17.2.1 (elephant), and 35.2.1 (tiger).

site Tell Asmar, the ancient city of Eshnunna, Iraq (c. 2,000–1,800 B.C.E.; fig. 470), a city along the ancient trade routes between Iran and Mesopotamia.²⁰ The rhinoceros depiction on this seal is very similar to that of the ‘Pashupati seal’, where the tubercles are missing as well. However, the whole image of the Tell Asmar seal is less precise. Not only the tubercles are missing, but also the folds are just linear, straight subdivisions of the animal. They seem to have been interpreted as large scales. Furthermore, the head is triangular and not boat-shaped as is done so marvellously on the seal as depicted in fig. 469 (below). The rounded belly is not rendered either. The fact that the rhinoceros on the Tell Asmar seal lost its details may indicate either that this seal was carved on the spot based upon an Indian seal or that the seal is imported but of a much later date than the other Mohenjo-daro seals. The other animals, the Indian elephant and the gavia, are equally carved imprecise, indicating that the seal was carved on the spot after examples.

37.2.2 *Rhino Statues*

A beautiful pair of rhinoceros statues is found in Nepal, where they flank the steps leading towards the brick podium of the Nyata Poul or Siddhi Lakshmi temple at Bhaktapur (seventeenth century, Malla period; Plate 40). The animals are portrayed in much detail, and especially the nose and mouth are evidence of acquaintance with the animal. The rhinoceroses are chained, but whether that is proof of any kind of use, be it in war or to plough the fields, is very uncertain. Two of the other animal pairs are domestic animals (horses and dogs) but two others are not (mythical figures and sloth bears),²¹ which does not provide us any further clue. The rhinoceros pair stands on the third level, the middle one of the in total seven levels, preceded by a pair of horses and followed by a pair of human-faced lions.

²⁰ The Tell Asmar depiction cannot have been based upon one of the African rhinoceroses, neither the black rhinoceros (*Diceros bicornis*) nor the white rhinoceros (*Ceratotherium simum*) because these two African species bear two horns, not one.

²¹ For the sloth bear statues, see section 29.2.1.

37.2.3 *Rhinos in Narrative Reliefs*

Hardly any rhinoceros relief is known from post-Harappan periods. A modern rhinoceros sculpture is provided by the Peace Stupa (Shanti stupa) on the Dhaulagiri near Bhubaneswar, Orissa (1972; fig. 439).²² The rhinoceros carving is part of a narrative relief, illustrating the Visit of Indra to the Buddha, known as Indrashailaguha Visit. The gods, led by Indra, float on clouds towards the Buddha, while five monks or disciples pay homage to him on another (part of the) mountain. Several animals are depicted on the mountains, amongst others a rhinoceros in the left corner. The skin foldings of the rhinoceros are incorrect, which is not amazing considering the total absence of this animal from Japan and the greater part of India alike. The other animals are all realistic, and obviously better known.²³

37.3 CONCLUDING REMARKS

Rhinoceros sculptures are extremely rare and limited to regions where rhinoceroses once were abundant: the Indus Valley three to four thousand years ago and Nepal until the twentieth century. The sculpted rhinoceroses are all very naturalistic with carefully rendered details. An exception is provided by a modern carving at Dhaulagiri, Orissa, where the rhinoceros is not very realistic. A seal from Tell Asmar, Iraq, shows an Indian one-horned rhinoceros, further evidence for the travel to the west of the rhinoceros seals.

²² The stupa is built as one of a series (e.g. in Darjeeling, New Delhi and Vaishali) through an Indo-Japanese collaboration with the aim to spread the message of peace. Dhaulagiri was chosen because in 261 B.C.E. emperor Ashoka is said to have converted to Buddhism after witnessing the massacre of the Kalinga war on the plains of Orissa below him. See further section 33.2.8.

²³ These animals are a lion and a lioness, a taurine cow (not a zebu), an elephant, a hare, a hedgehog, a squirrel and pig or boar.



Fig. 467. The greater Indian one-horned rhinoceros (*Rhinoceros unicornis*). Nepal.
Photograph: courtesy J. Kamphorst



Fig. 468. Rhinoceros calf, lacking the characteristic horn. Photograph:
courtesy J. Kamphorst



Fig. 469. Three steatite seals with a rhinoceros from Mohenjo-daro, Pakistan, c. 2,300-1,750 BCE. National Museum, Karachi. Photographs: Above: The John C. and Susan L. Huntington Archive of Buddhist and Related Art, The Ohio State University, Columbus, Ohio, USA. Below: ASI, 1925-1930, courtesy Kern Institute, Leiden, the Netherlands



Fig. 470. Cylinder seal from Tell Asmar, Iraq, c. 2000-1800 BCE, glazed steatite. Indian Museum, IM 14674, Calcutta. Photograph: ASI, 1925-1930, courtesy Kern Institute, Leiden, the Netherlands