



An unusual photo (circa 1962) of a female Indian rhino and her calf in the snow at Basel, Switzerland Zoo. (Photo by Paul Steinemann courtesy of Basel Zoological Garden).

(About the Author: Richard J. Reynolds is a practicing attorney in Atlanta, Georgia, who became interested in the study of the rhino as a young boy and is a world-renowned authority. He has contributed to zoological publications in England, Germany and Holland as well as in the United States. Because of his profound knowledge of the rhino, he was requested by your editor to do a series of three articles which will appear in KYH. The Asian Rhino is the first. The second will be the rare rhino of Java and the third will be about the rhino of Sumatra.)

## By Richard J. Reynolds

**ASIAN** 

RHINOS

The Asian rhinos are the rarest of the earth's large mammals. The present day predicament of these beasts is largely the result of two factors—the human population explosion in Asia and an oriental belief in the medicinal value of rhino horn. The population explosion has appropriated the most desirable habitat for purposes of agriculture and human settlement. Unlike other luckier forms of wildlife, the Asian rhino has not been left alone in the few secluded, unarable, or uninhabitable pockets he has managed to find. Instead the demand for his horn, and other parts of his body, has caused him to be vigorously pursued and persecuted no matter where he tries to hide.

Scientifically, there is no foundation for the beliefs that rhino horn, rhino blood, rhino urine, etc. can cure, prolong one's sex life, or accomplish any of the other things for which the parts of the animal's body have been pharmaceutically used. Yet these superstitions have managed to persist right down to the present time. The Chinese pay fantastic sums for rhino horn, and the money thus made available by traders to impoverished native hunters has kept the latter hot on the trail of the Asian rhinos. The demand has not abated as the Asian species have been wiped out. Instead, the traders in this commodity extended their tentacles to Africa causing

wide spread poaching of the more plentiful rhinos on the dark continent.

The Asian rhinos are made up of three species: the great Indian one horned rhinoceros (rhinoceros unicornis); the Javan or lesser one-horned rhinoceros (rhinoceros sondaicus); and the Sumatran or Asiatic two-horned rhinoceros (Didermocerus sumatrensis).

Star of all the clan is the great Indian rhino. This mighty beast is, in the writer's opinion, the most awesome looking of all rhinos, African as well as Asian. Its unusual skin, which appears to be arranged in sections and held together by rivet-like protuberances, properly gives it the name armored rhino. It is a huge beast. Big males will commonly stand 6 feet at the shoulder, measure 10 to 12 feet in length, and weigh 4,500 pounds. If we take the maximum dimensions recorded by different authors we find a height of 6 feet 6 inches, a 14 foot length, and a weight of 4 tons. However, I do not believe any one animal of such size has been found. Nevertheless, the Indian rhino ranks just a shade under Africa's white rhino as the largest of the family. The single horn on the Indian rhino is nothing like as long as that of the African rhinos. According to Rowland Ward the record length for an Indian rhino's horn is 24 inches measured along the front curve. The usual length is much shorter, around 8 to 12 inches.

African rhino horns are much longer. The records are 621/4 inches from a white rhino and 54 inches from a black rhino. Both African species commonly carry horns 24 inches long so that what is a record for the Indian is common in the African animals.

Within historical times the Indian rhino ranged all across northern India and Nepal. In the west, the beast was found on the border between India (now West Pakistan) and Afghanistan. According to C.A.W. Guggisberg (S.O.S. Rhino), it was found as recent as 1550 around the city of Peshawar and the Khyber Pass. In this western habitat it ranged as far north as the border of Kashmir and south along the Indus river of present day West Pakistan to the confluence of that stream with the Sutlej River. Archeological discoveries further south along the Indus, in what was once the Indian province of Sind. plainly indicate the rhino was familiar to the ancient civilization which flourished there around 2500-1500 B.C. Hence, 4000 years ago the Indian rhino must have occurred all the way down the Indus to the Arabian Sea.

During the Middle Ages the habitat extended from the aforesaid northwestern area (e.g. Peshawar) in a southeastern curve, following the foothills of the Himalaya Mountains and the plain of the Ganges River. The range passed through India, Nepal, and Bhutan into the Indian provinces of Bengal (including part of present East Pakistan) and Assam, terminating just inside Burma. It is uncertain whether and to what extent the Indian rhino ever existed in northern Thailand and Indo-China. Reports of one horned rhinos in that area probably refer to the Javan rhino. The Indian rhino has not existed, at least in historic times, down the peninsula of southern India. The plain of the Ganges River seems to have been the limitation of its range in that direction.

Rhinoceros unicornis is one of several animals whose anatomical features have, collectively, contributed to the western legend about the unicorn, that fanciful, horse-like creature with a single horn in the middle of its forehead. There are numerous theories about how the body of the unicorn came to be represented as a horse instead of a rhino. To me, the most reasonable explanation is presented by C. A. W. Guggisberg in his 1966 book, S.O.S. Rhino. He lays the blame on an ancient Greek writer by the name of Ctesias. It seems that during the fourth century B.C., Ctesias traveled to Persia and, because of his knowledge of medical matters, secured the position of court physician to the royal family. Now, the western range of the Indian rhino was very close to ancient Persia. That kingdom received many reports and accounts of exotic Indian animals and unusual people. True to man's nature, these stories were no doubt embellished as they were passed around. One of the eager listeners to this blend of fact and fancy was Ctesias whose prolific pen recorded all that he heard, without question or reservation. He dutifully wrote that there lived in India a beast called an "Indian Ass" which had a horn in the middle of its forehead. Ctesias never went to India to see for himself. Thus was born the familiar form for

the unicorn, the horses body which was destined to become a popular figure for heraldic symbols. Later, when other European travelers actually encountered the rhino in its Indian habitat, the "horse's body" idea of the unicorn had become so thoroughly established that the ungainly rhino was not thought to be the same animal.

Living rhinos from Asia, probably the Great Indian, · were exhibited both in ancient Mediterranean Europe and in China. Considering the long distances, rugged country, crude vehicles, and size of the con animal, this required a fantastic transportation feat. Rom Such journeys also speak well for the rhino's ability to survive under very adverse conditions. George Jennison, in his book Animals For Show And Pleasure in Ancient Rome (1937), states that writings of such ancients as Pliny, Strabo, and Diodorus, plainly indicate that the Indian rhino was very familiar to the Mediterranean world. Jennison says that it may have been more common than the more delicate African black rhino which was also well known to the Romans. A "one-horned rhino," according to Pliny, was exhibited in the games of Rome given by the Emperor Pompey in the year 55 B.C. Incredible as it may seem, this rhino probably came to Rome via Egypt after having arrived there from India. In Herbert Wendt's book Out of Noah's Ark (1959), Cha we read that around 300 A.D. the King of Hwangchi sent a living rhinoceros as tribute to the Chinese Emperor Ping Wang Mang. The exact location of the kingdom of Hwangchi is somewhat obscure; but, according to the Chinese chronicle of the event, it was located at a distance of 30,000 li from the Emperor's garden.

After the fall of the Roman Empire more than 1000 years would pass before another living rhino would reach Europe. And, this distinction belonged to an Indian rhino which arrived in Lisbon from Goa in 1513 (one account says 1515). This animal was sent to King Emmanuel of Portugal by Albuquerque, Governor General of India, as a gift from the King of Cambay. In December 1515, Emmanuel shipped it to Rome as a gift to Pope Leo X. The ship bearing the rhino reached Marseilles in January, 1516 where it was inspected by Francis I, King of France. The beast was re-embarked for Italy but never reached its destination. In the Gulf of Genoa the ship was sunk in a storm and the rhino was lost. From descriptions of this specimen, Albrecht Dürer made a now famous drawing which for centuries was the classic impression of a rhinoceros.

The Indian rhino's retreat before man appears to you have proceeded from west to east. The animal is particularly fond of the staple grains grown by the natives. Since food supply has long been a problem in India, the rhino was viewed as a pest. As recent as 1876 the government in Bengal offered a bounty to anyone who shot a rhino. Add to this the slaughter for the horns, throw in unrestrained sport hunting, and we find that rhinoceros unicornis was almost obliterated during the nineteenth century. In 1900 it still occurred in fair numbers in the low lying valleys of southern Nepal and perhaps in Bhutan. But the

• picture in India was indeed bleak. By the turn of the century, the animal was gone from all of India except for small groups found along the Brahmaputra River of Assam and the Tista River (eastern side only) in Cooch Behar and the far northeastern corner of Bengal. A glance at a map will show that this means the rhino had disappeared from all its former range in north-central and northwestern India.

Just in time, the British realized that the Indian rhino was almost extinct in the land from which it takes its name. In 1908 they established the Kaziranga reserve in Assam. This game sanctuary occupies 166 square miles of the swampy, high grass on the south bank of the Brahmaputra River, between the towns of Gauhati and Jorhat. Here there were thought to be no more than 12 rhinos, the largest single group left in India! In 1910 the British outlawed all hunting of the species. Since then a number of other reserves have been located in Bengal and Assam where small pockets of rhinos were located. Game wardens have had serious bouts with poachers, but the efforts to save the Indian rhino appear to have won out, at least for the present. In January, 1967 the Red Book of the International Union for the Conservation of Nature estimated that there were 575 rhinos in India. More than half were living in the Kaziranga reserve. The next largest group (50 animals) could be found in the Jaldapara reserve in West Bengal, near Cooch Behar, and the balance were located in pockets scattered along the Brahmaputra Valley of Assam and in northeastern Bengal above East Pakistan.

The number of Indian rhinos in Nepal has suffered a serious decline in recent years. That mountain kingdom has remained relatively isolated in comparison to India. This helped the rhinos. Until the early 1950's, the Maharaja protected the animals and reserved all hunting and capture for himself and his guests. The strict rule of the royal family kept out the poachers and preserved the rhinos' habitat. According to one source there were no less than 1,000 examples in Nepal as late as 1953. Political change came to Nepal in 1951; and when the Maharaja lost his control, the farmers and poachers moved into the southern valleys or terai where the rhinos lived. The destruction has been terrible. Early this year (1971) the World Wildlife Fund at Morges Switzerland estimated there were not more than 80 rhinos left in all of Nepal. They are all concentrated in the Chitawan area, and efforts are underway to save this last group.

As to temperment the Indian rhino seems somewhat less irascible than the African black rhino but more volatile than the placid giant of the tribe, the African white rhino. Once used to man, the Indian rhino can become amazingly docile. A big male "Mohan," who lived in the London zoo several years ago permitted visitors to ride on his back. Other zoos have had the same experience. An early American showman, Dan Rice, had a male that was made to perform in the ring, this rhino, named "Old Put," was the sensation of American circuses in the late 1850s. He met a tragic end by drowning in the Mississippi

River. On August 18, 1861 the Dan Rice Circus was being moved by river boat up the great river. At a point between Prairie du Chien and La Crosse, Wisconsin, the barge transporting "Old Put" was struck by another steamboat and the rhino cage was knocked into the water. Chained inside his cage by a ring through his nose, "Old Put" had no chance to escape. There are a number of ancient accounts, subject to question, of rhinos being used by Indians as domestic beasts and as weapons of war, no doubt as the first tanks. Guggisberg gives a reliable report, from Col. Pollock, that a native washerman used an Indian rhino to transport his washing around the town of Gauhati.

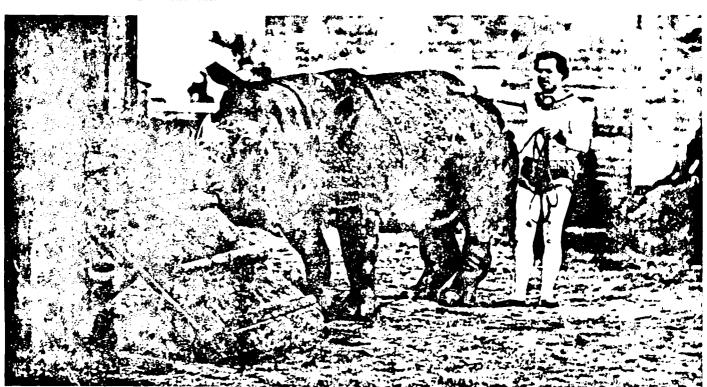
In his book The World of the Tiger (1965) Richard Perry says that the bull Indian rhino is one of two animals (the jackal being the other) indigenous to the habitat of the tiger with which that proud cat is not known to have done battle. Perry reports that even wild bull elephants have been brought down and killed by tigers. Elephants are said to be terrified of Indian rhinos. Those who have hunted rhinos with both gun and camera from the backs of elephants report that their mounts have turned tail and run when encountering unicornis. The rhino is said to have no fear of the elephants and charges the latter cutting the belly and flanks with its teeth. Unlike the African rhino, which uses the horn as the principal method of attack, the Indian rhino rushes forward with mouth open slashing with the powerful and sharp incisors in his lower jaw. Since it was first open to the public in 1937, the Kaziranga Game Sanctuary has become very popular as the place to see Indian rhinos in their natural state. And, it is now visited by large numbers of naturalists and tourists. The only effective way to see and photograph rhinos in the sanctuary's tall grass is from the back of an elephant. Elephant and rhino have now become so accustomed to one another that the rhino seldom charge and the elephants have overcome their skittishness about approaching the former.

How long do Indian rhinos live? This is difficult to determine from wild animals but records from zoos give a good idea. An example died in the Calcutta Zoo in May, 1880 which is said to have lived 47 years in captivity, 45 in a private menagerie in Barrackpore and two final years at the zoo. A male (whose photograph is on the back cover of this magazine) "Jim" lived at the London zoo from July 25, 1864 until his death there on December 12, 1904 or 40 years, 4 months, and 17 days. This animal had been shipped to England from Calcutta and was probably two or three years old upon arrival in London. A male lived at the Antwerp zoo for 40 years, and a female was exhibited at New York's Bronx zoo for 38 years, 9 months, and 1 day. None of the other species of rhino have established such longevity records in captivity. The best record for any of the others belongs to a female African black rhino, "Mary" who arrived at Chicago's Brookfield zoo on June 28, 1935. At last information (February, 1971) she was still living, having been at Brookfield almost 36 years.

The mating behavior of Indian rhinos is more nearly akin to mortal combat than love making. Male and female tear around chasing and crashing into one another and biting with their formidable incisors. The pre-copulative combat is so nerve wracking that zoos fortunate enough to have pairs are often afraid to put them together. The first pair exhibited together in this country arrived at Chicago's Brookfield zoo from Kaziranga in 1948. The male "Kashi Ram" was so rough with his mate "Kamala Rani" that she fell into a moat trying to get away from him. Fearing that the female would be killed, zoo officials finally quit all efforts to breed them, and they spent the last decade of their lives separated from one another. The Los Angeles zoo had the misfortune, this past January, to have a proven captive breeding female die as the result of an attack by her mate. As can be correctly assumed, very few Indian rhinos have been born in captivity. Until the 1950s, the few zoos around the world fortunate enough to exhibit the species usually displayed a single example. A few pairs had been exhibited but they were generally found to be incompatible. The first captive birth took place in 1925 at the Calcutta Zoo but the calf failed to survive. The breakthrough finally came at Basel, Switzerland with a pair imported from Kaziranga in the early 1950s. The first calf was born in 1956 and, at the writer's last information, a total of 10 youngsters had been born there. The gestation period for the Indian rhino ranges between 15 and 16 months, whereas, for the African black rhino, it varies between 15 and 17 months.

Should the reader desire to see an Indian rhino in America he can do so by visiting the zoos at Los Angeles or San Diego, California; Miami, Florida; Omaha, Nebraska; Philadelphia, Pennsylvania; Busch Gardens, Houston, Texas; Milwaukee, Wisconsin; or the National Zoo in Washington, D. C. In the next installment of this paper we will look at the rarest of all rhinos, the Javan.

References: Crandall, Lee S., The Management of Wild Mammals In Captivity, University of Chicago Press, Chicago (1964); Fisher, Simon, and Vincent, Wildlife In Danger, Viking Press, New York (1969); Guggisberg, C.A.W., S.O.S. Rhino, Andre Deutsch Ltd., London (1966); Jennison, George, Animals For Show and Pleasure in Ancient Rome, Manchester (1937); Press, Manchester University Richard, The World of the Tiger, Atheneum, New York (1965); Reynolds, Richard J. "Asian Rhinos In Captivity," The International Zoo Yearbook, Vol. II, The Zoological Society of London (1961); Simon, Noel, Red Data Book-Volume 1-Mammalia, International Union for Conservation of Nature and Natural Resources, Morges, Switzerland (1967); Street, Philip, Vanishing Animals, E. P. Dutton & Co., Inc., New York (1963); Talbot, Lee Merriam, "Stalking the Great Indian Rhino" The National Geographic Magazine, Vol. CXI, No. 3, March, 1957, National Geographic Society; Wendt, Herbert, Out of Noah's Ark, Readers Union, Weidenfeld and Nicolson, London (1959).



"OLD PUT," the trained Great Indian Rhinoceros who was a feature of the Dan Rice Circus from 1855 to 1861. This photo is more than 100 years old and may be the oldest photograph of a living rhino. Note the rope attached to a ring in the animal's nose. This rhino drowned in the Mississippi River on August 18, 1861. (Photograph through courtesy of Hertzberg Circus Collection of the San Antonio, Texas Public Library).