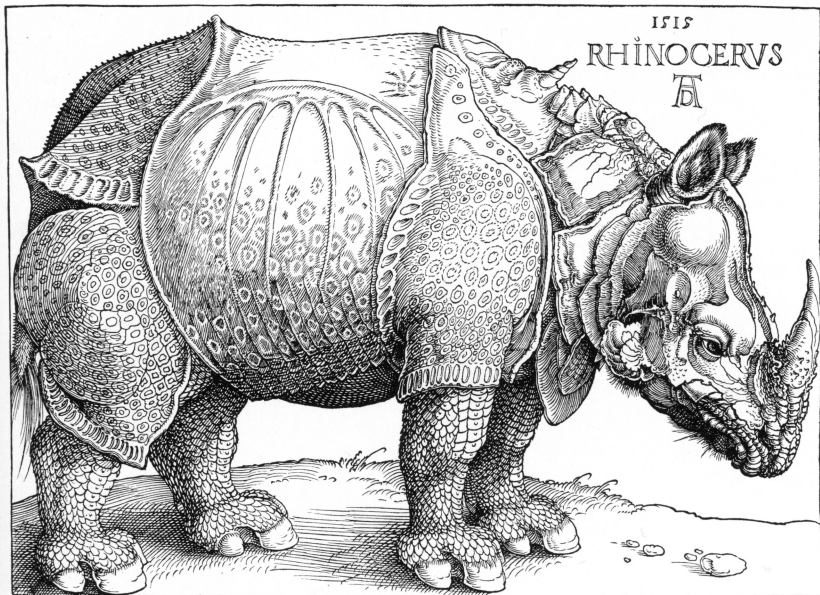


# Vanishing Species

"... when the last individual of a race of living things breathes no more, another heaven and another earth must pass before such a one can be again."

—William Beebe

First curator of birds, Bronx Zoo



Woodcut by Albrecht Durer (Courtesy, Museum of Fine Arts, Boston)

## GREAT INDIAN RHINOCEROS *Rhinoceros unicornis*

Bearing its single stout horn, the great Indian rhinoceros (*Rhinoceros unicornis*) is believed by many to be the basis for the mythical unicorn. Regrettably, this living unicorn is seriously threatened with extinction. Until a century or so ago it roamed the thick grassy jungles of northern India and Nepal. Now much of that habitat is gone, and the Indian rhino, surviving in only a fraction of its range, is limited to eight sanctuaries in India and one in Nepal.

Recent estimates indicate there may be as few as six or seven hundred individuals left in the wild, with three-quarters of them located in the Kaziranga Sanctuary of India. As is the case with most other endangered large mammals, man is responsible for the decline in their populations.

Since ancient times, countless numbers have been slaughtered for their horn alone. As far back as the year 200, a Greco-Roman named Aelian wrote about the magical properties of rhino horn. Even in the twentieth century, many still believe this fibrous tissue to be a potent aphrodisiac. In China, powdered horn commands prices comparable to those of illicit drugs in the United States. In 1965 it sold there for no less than \$1,125 per kilogram (about 2.2 pounds). Strict laws prohibiting

the hunting of rhinos in Asia have slowed the slaughter in recent years. But rhinos are easy to kill, their habitat is difficult to patrol, and the price of horn is higher than gold.

This massive animal has also fallen prey to the telescopic sights and high-powered rifles of so-called sportsmen and trophy hunters. Usually riding trained elephants, the hunters surround a rhino and, from the safety of their mounts, shoot the animal as it tries to escape.

But the most serious and far-reaching threat to the future of this prehistoric-looking beast is the never-ending destruction of habitat as agriculture claims more and more land in a severely over-populated India. Indian rhinos characteristically inhabit the low areas around small lakes and meandering streams, where tall grasses and reeds (often more than twenty feet high) provide food and cover. In recent years people have encroached upon these areas and drastically modified them through burning, stock grazing, and general human disturbance. As turf grasses replace the tall natural vegetation, and as swamps are drained to develop dry pastureland for cattle, rhinos are being deprived of their means of survival.

The great Indian rhino is one of five remaining species in four genera—or groups of species—that originated from the Miocene through the

Pleistocene periods. In earlier geologic epochs, over thirty known genera occurred on the continents of North America, Europe, Asia, and Africa. One of those genera—the baluchitherium—included the largest land mammals of all times.

Two of today's five living species are native to Africa, while the other three are found in Asia. *Rhinoceros unicornis* is certainly the most impressive of the Asians. It grows to a maximum height of six feet at the shoulder and a weight of about two tons. Its hide lies over the body in armor-like plates divided by deep, loose folds at the joints. But the animal's bulk and intimidating appearance are deceptive, since it is non-aggressive unless wounded or with young. Adults are solitary except when breeding, when a mother is caring for her offspring, or when several individuals happen to share limited swimming areas or wallows.

Though it has a normal life span of almost fifty years, the great Indian rhino has a very low reproductive rate. A single young is born after a gestation period of about sixteen months; then it nurses for at least six to ten months. Thus an adult female can breed only about every two-and-a-half years—hardly sufficient to make up for the numbers that are killed.

Zoologists really know very little about the ecology and behavior of this disappearing species. Much of the information available has been gathered from observations of captive animals. If conservation programs are to insure the survival of a species, they must ultimately be based on a thorough understanding of the animal in the wild.

It is the need for this type of understanding that has led the New York Zoological Society to support an intensive three-year study of the ecology and habits of the great Indian rhino in the Chitawan Sanctuary of Nepal. The results of this research, plus proper conservation measures employed by the governments of India and Nepal, may keep *Rhinoceros unicornis* a reality in Asia.

—Mark C. MacNamara