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Heart of the Jungle

The Wildlife of Chitwan, Nepal

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With drawings by the author



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3 Ungulates (Hoofed mammals)

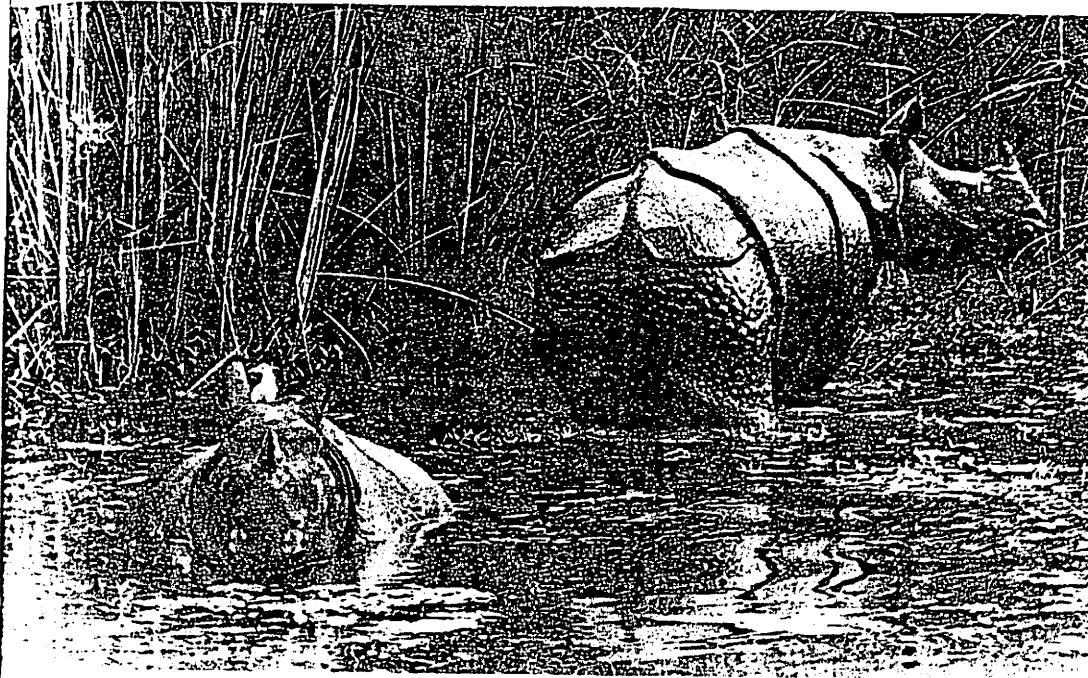
Greater One-horned Rhinoceros (*Rhinoceros unicornis*) Nepali: *gainda*

The rhino is not only the largest animal in the park (apart from the wild elephant, which is now rarely seen); it is also, to local people, a sacred creature, the object of great veneration, and the possessor of many magical powers. Its unique reputation derives from the belief that it got its horn from Parvati, consort of the god Shiva.

Almost every part of the rhino's anatomy is coveted for some purpose or other. A rhino-skin bracelet will protect its wearer against evil spirits. Fumigating domestic stock with rhino-bone powder is thought to keep foot-and-mouth and other diseases at bay. Rhino dung is a laxative, and, when mixed with tobacco and smoked, cures coughs. In *Shraddha*, the Hindu ritual performed on the day of a person's death, a mixture of water and milk is offered to the gods, and if the libation can be made in a cup of rhino skin or horn, it will be that much more effective in bringing peace to the soul of the departed. Both blood and urine are keenly sought after for medicinal purposes.

Sometimes if a rhino has been injured in a fight, lumps of dried, black blood can be found where it has rested along a trail. People collect the lumps, melt them in water, and administer the solution as a cure for menstrual problems or to stop excessive bleeding after childbirth. Urine is collected with equal enthusiasm as a remedy for asthma, stomach pains and tuberculosis. Sometimes the *phanit*, or elephant driver (equivalent of a *mahout* in India) will jump down from his mount to fill a bottle from a recently-deposited puddle. Other people, finding a patch of wet sand where a rhino has urinated, will rinse out the sand with water and drink the strainings.

Rhino meat — even if stinking and maggot-ridden — is collected



and eaten (for health and vigour) with frenzied relish: once villagers are authorised by the park authorities to take the remains of an animal away — usually one that has died of old age or disease — they pour on to and into the carcass with such a rush that they often carve up each other as well as the putrefying hulk.

Yet the part which exercises by far the greatest fascination and commands the greatest price is the rhino's horn. Just as in mediaeval Asia it was believed that cups carved from rhino horn could detect poison by causing the drink poured into them to froth, or by splitting in half, so today the drugstores of the Far East sell rhino-horn products in smart packs as remedies for numerous ailments. The Chinese do not — as is popularly believed in the West — prescribe it as an aphrodisiac. Rather, they use it mainly as a fever-depressant. Only in India — and particularly in the states of Gujarat and West Bengal — is it used as a sexual stimulant.

According to Dr E. B. Martin, who published a report in 1981, the Chinese regard the horn of *R. unicornis* as the best, and it is therefore the most expensive, costing up to 17,000 US dollars a kilo. Martin also discovered that between 1969 and 1976 the Yemen Arab Republic imported over 22 tons of horn (the equivalent of 7,800 dead rhino) for making the handles of *jambias*, or traditional daggers. These weapons are owned by almost all Yemeni males of fourteen or over, and the best ones, with elaborately-carved rhino-horn handles, cost up to 13,000 dollars apiece.

It was to meet the demands of Oriental medicine, and to furnish Yemenis with their status symbols, that the rhino was sent hurtling towards extinction. It is estimated that during the 1970s, 90 per cent of the rhinos in Africa were wiped out, and if the present rate of decline is not checked, they will be extinct by 1990. In spite of vigorous control measures, poaching continues throughout east Africa, and the price of horn has reached an all-time high.

Apart from the greater one-horns, the four species that survive, and their populations, are as follows: the black (*Diceros bicornis*) 10,000-20,000, in Africa; the white (*Ceratotherium simum*) 4,000, also in Africa; the Sumatran (*Didermocerus sumatrensis*) 300, in Sumatra; and the Javan (*Rhinoceros sondaicus*) 50, in Java. The one-horned rhino was once widely distributed over the floodplains of the Indus, the Ganges and the Brahmaputra; today, apart from a few which still survive in national parks and wildlife reserves, the world population is thought to number between 1,000 and 1,500, and of these some 350 live in Chitwan.

Although slightly smaller than the African white rhino, the one-horn is immensely solid and formidable. A big male stands 6 feet at the shoulder (females are smaller); this massive creature, with its uniquely folded and thickly armour-plated skin, has a truly prehistoric appearance — and indeed it has changed little in the last million years. Its short legs, ending in three toes, can carry it fast over small distances, and, contrary to popular belief, it is an agile mover, capable of quick turns. Unlike the African and the Sumatran rhinos (which have two horns, one behind the other), this animal has only one horn, which is a cemented mass of hair growing from the skin on top of the snout and separate from the skull. The average length of horn is about 8 inches (although the record size from India is 24 inches), and the average weight between 1 and

2 lbs. The horns of males are normally broader at the base and frequently broken, cracked or split from fighting and age. Both sexes carry about the same sized horns. (Males can be distinguished by their larger neckfolds and a pronounced bib of skin under the chin.)

The role of the horn is obscure. Evolution seldom produces any feature that has no function, so it is reasonable to assume that the horn must serve some purpose. It is not a weapon: although a rhino may strike with it accidentally, the tusks are the real means of attack. It may be that the horn has some ethological function and, by its appearance, announces something about the physical condition of its owner.

Essentially grazers, rhinos also feed on leaves and twigs, aquatic plants and agricultural crops. They seem to obtain their food and other requirements within a fairly small area, and so occupy small home ranges that vary from season to season. They are solitary animals, except when in cow-calf pairs, but they gather near wallows temporarily in summer, and up to twelve have been seen together in a small stretch of the Old Rapti. During the hot months they spend a lot of their time in the water to cool their large bodies. When they come out, and the coating of mud dries, they change colour completely, taking on the light brown or grey of the river bank.

During the breeding season fights between males are frequent, and these are noisy affairs. The large lower tusks are capable of inflicting severe cuts, and some rhinos have been known to die of the wounds sustained in battle. Scars left from such cuts are permanent, and, depending on their position on the body, can be useful as an aid in the identification of individuals.

Males squirt urine backwards, and it is believed that the dominant males eject their urine the furthest. Copulation between rhinos has been observed a few times during spring: the act itself is quite protracted, often lasting up to an hour. Gestation lasts sixteen to sixteen and a half months and one calf is normally born at a time. At birth the baby is pink and weighs about 150 lbs. The longest association among rhinos is between the mother and her offspring, who stay together for three years or even longer. Young rhinos become sexually mature by the age of ten, and perhaps live fifty years or more.

Very young calves may be taken by tigers, but this happens only

rarely, as a tiger finds it hard to beat the mother's vigilance. Although they have no natural enemies, they are most unpredictable by nature and have been known to charge without provocation, perhaps because of their short sight. One old rhino, peacefully feeding, suddenly charged at and knocked down a bicycle parked nearby, with no human anywhere near it. Their bad eyesight is to some extent compensated for by good senses of hearing and smell. When disturbed or surprised they usually bolt 20 or 30 yards, with a loud snort, and then stand still to investigate the cause of their disturbance. They *have* to stand still to find out what is happening, because when they are on the move, particularly through long grass, they make so much noise that they probably cannot hear anything at all.

If approached by humans either on foot or on an elephant, they generally retreat, but females with young can be dangerous, since they stand their ground and are likely to attack. In fact elephants become visibly nervous when close to an agitated cow-calf pair. They can be trained to remain steady in the face of a charging rhino, but whether they will hold their ground depends on the degree of control exercised by the *phanit*. Rhinos usually charge only to veer away at the last moment — a form of threat-display designed to warn off intruders. Very exceptionally, a rhino may press home its charge: once a male elephant belonging to Tiger Tops was badly gashed in the leg by a female who was with her two-year-old calf. After his recovery, which took several months, he became highly aggressive towards *any* rhino. Nowadays, the Chitwan rhinos have become more and more accustomed to seeing elephants with people on them and are showing increasing tolerance towards them.

Nevertheless they are among the most dangerous animals in the park, and they are responsible for a few human deaths and casualties almost every year, particularly during the period when villagers come in to cut grass and reeds: with people swarming in by the thousand, a few inevitably get knocked down and trampled.

It is pleasant to be able to report that conservation of the rhino has been *the* big success story of Chitwan. In 1950, it is thought, there were still about 800 in the valley, but poaching and habitat-destruction sent the population plummeting to its low point of scarcely 100 in the 1960s. Since the establishment of the park, numbers have gradually recovered. During the study which he

carried out from 1973 to 1976, the Scottish wildlife biologist Andrew Laurie visually identified about 200 individuals by recording details such as scars, skin-folds and the shape and size of horn, and by 1982 the population was thought to have reached 350.

Rhinos are now so plentiful as to be a positive menace to farmers living around the park boundary. There can be no argument but that they get the best of both worlds. By day they stay in the peaceful sanctuary of the park, and at night they sally forth to feast on the crops in the farmland. Villagers are forced to stay up all night to defend their fields with fire-crackers, torches, javelins and tin-can drums, and in spite of their efforts they suffer severe losses: one survey published in 1980 estimated that between 1975 and 1978 villages in the Padampur *panchayat* near Sauraha suffered 80-90 per cent crop damage from rhino and other wildlife. Nor can the people claim compensation, for the Government feels that any scheme would be open to intolerable abuse: if a crop were eaten in the night, how would the owner prove that the damage had been done by wild animals rather than by his own or his neighbour's cattle, which are never properly under control in any case?

The villagers concerned are beginning to realise that living on the fringe of the park is an occupational hazard which they just have to accept. The wildlife authorities can at least point out that a form of compensation does exist — the villagers' right to collect building material from the forest.

The greatest problem facing the wildlife department on the rhino front is that of what to do with the surplus population if the present annual increase-rate of 2-6 per cent is maintained. To make a scientific cull of old or sick animals is one possibility — but not one that recommends itself to any true animal-lover. A more constructive alternative would be to capture some rhinos live and move them either to zoos or to other parks such as Bardia in far western Nepal and Dudhwa in northern India, where re-colonisation projects are already being mooted. The darting and translocation of such large animals is a major undertaking, but it has already been successfully accomplished in Kenya, for instance, and in recent years rhinos darted in Chitwan have been sent to China, Pakistan and Burma.

At present the one-horned rhino exists in strength in only two locations — Chitwan in Nepal and Kaziranga in Assam, India — and if some epidemic were to sweep through either or both of these

pockets, the chance of random extinction would be very high. Translocation of rhinos to other suitable areas would greatly increase their chance of ultimate survival.

Gaur (*Bos gaurus*) Nepali: gauri gai

The gaur is the largest form of wild cattle in the world, a magnificent animal of great strength and distinction. Somehow it is much more sophisticated than the primeval rhino: a big bull, with his jet black hide and curving horns, his strong personality and majestic way of moving, looks like a symbol of power and confidence. The sight of one in the early morning, perhaps staring down at the human



intruder from a misty ridge, is one that nobody can soon forget. Six feet tall at the shoulder and weighing close on 2,000 lbs, he can dominate a scene instantly.

The gaur is distributed from the Himalayan foothills and India to the Malay peninsula and Indochina. Calves are born golden yellow, but they darken to reddish brown as they grow up. Young bulls and cows remain this colour, whereas old bulls turn black. Adult gaur have a conspicuous dorsal ridge (larger in males), a dewlap under the chin, thick horns sweeping up from a whitish forehead, and white stocking feet. The white parts are normally stained yellow, especially in adult bulls, by the slightly aromatic, oily secretion that the body exudes: the purpose of this discharge is not clear, but it seems to play some part in communication.

Gaur are mixed grazers and browsers, and active mainly at night. In the park they mostly inhabit the remote hill forests of the Siwaliks, and for much of the year they are hard to find in that rugged terrain. But during the dry months from January to May, when food and water become scarce in the mountains, they descend to the plains to feed on the luxuriant growth of new grass. In this season herds of ten or twenty are commonly seen around Devi Tal, and solitary bulls are also encountered. When approached by humans on elephants they usually shy away, but on one occasion a cow sheltering a week-old calf stood her ground 10 yards from us and retreated only when her calf was ready to move. In Chitwan gaur herds are usually seen with newborn calves in February and March.

Interbreeding between gaur and domestic cattle occurs in north-east India and northern Burma, and the hybrids are called *gayal* or *mithun*. Unlike the gaur proper, these have straight horns, and they are little valued by local people because they are too big for the plough. Also, they tend to be intractable, and the females give little milk. Being related to the sacred cow, the hybrids have religious protection: because they are useless, and humans may not kill them, they often wander away and go feral.

It seems a pity that the gaur's breeding potential cannot be more profitably exploited. Recently in the Bronx Zoo, New York, a gaur embryo was taken and transplanted into a Holstein cow, which successfully carried to term and bore a male calf. The female gaur was mated again and produced another calf within the same year.

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