

# ENDANGERED SPECIES

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## Black Rhinoceros

Of the five species of rhinoceros in existence, the largest number are black rhinoceroses (*Diceros bicornis*); there are seventeen subspecies and they inhabit the bush steppes of Africa south of the Sahara from Somalia to South Africa and from the Niger to

Ethiopia. Their numbers are estimated at 11,000 to 13,500 (according to B. Grzimek). Three thousand to 4,000 live in Tanzania. According to J. Brand there were in South and Southwest Africa 276 black rhinoceroses in 1964, distributed as follows in the protected areas:

Addo Game Reserve	6
On private farms	23
Etosha	54
Hluhluwe	33
Kaokoveld	58
Mkusi	20
Ndumu	2
Umfolosi	80



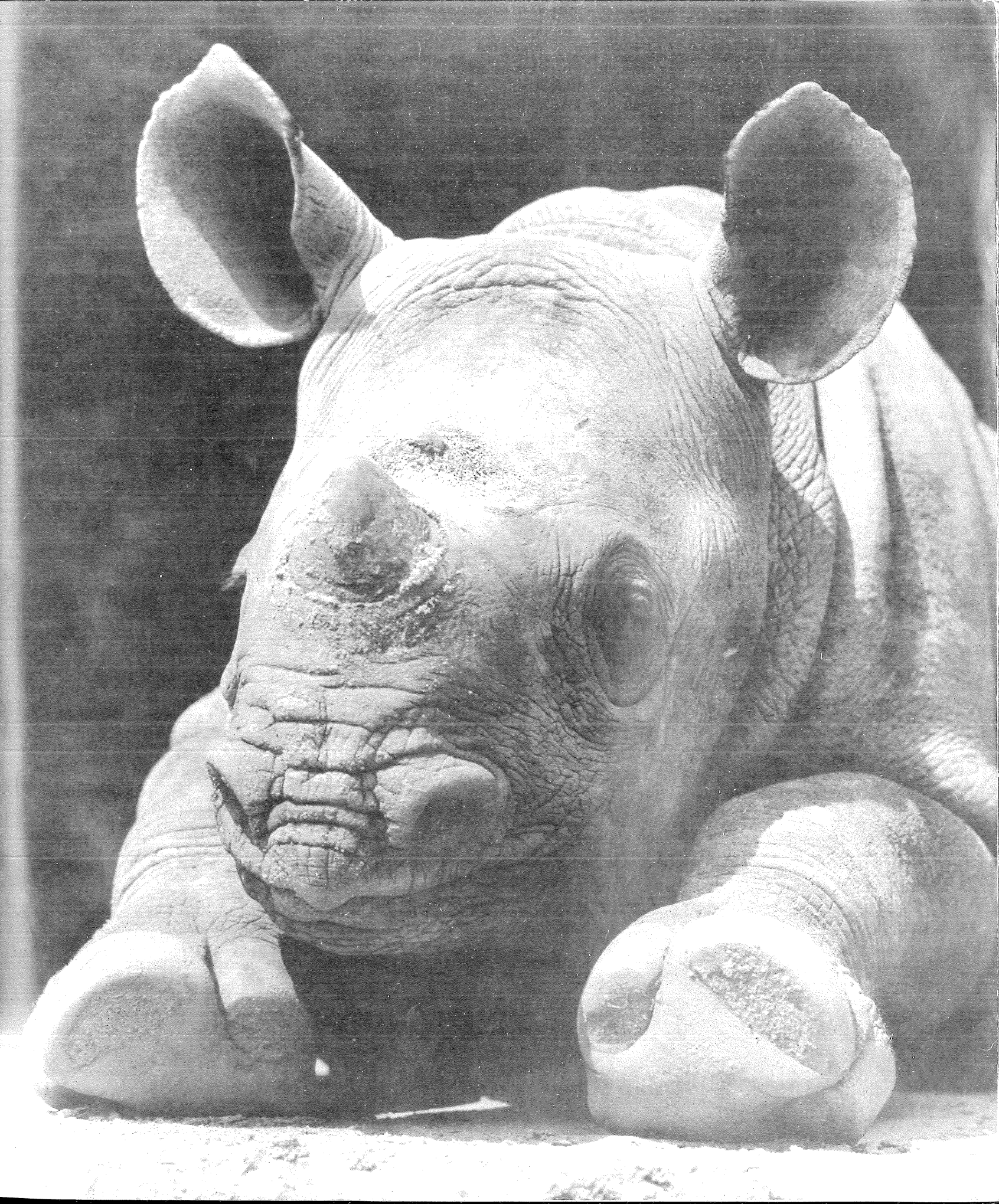
Assuming an annual increase through births of about thirty, there should now be between 350 and 380 black rhinoceroses in South and Southwest Africa. So far, two subspecies have been killed off: the Cape rhinoceros, the biggest and most southerly, *Diceros bicornis bicornis*, according to the original description of the species, and the black rhinoceros of Upper Nubia, *Diceros bicornis atbarensis*.

The first births of black rhinoceroses in zoological gardens occurred in the following cities:

Chicago	1941
Chicago	1944
Rio de Janeiro	1954
Frankfurt-Main	1956
Sydney	1958
Bristol	1958

The gestation period was found to be 540 days.

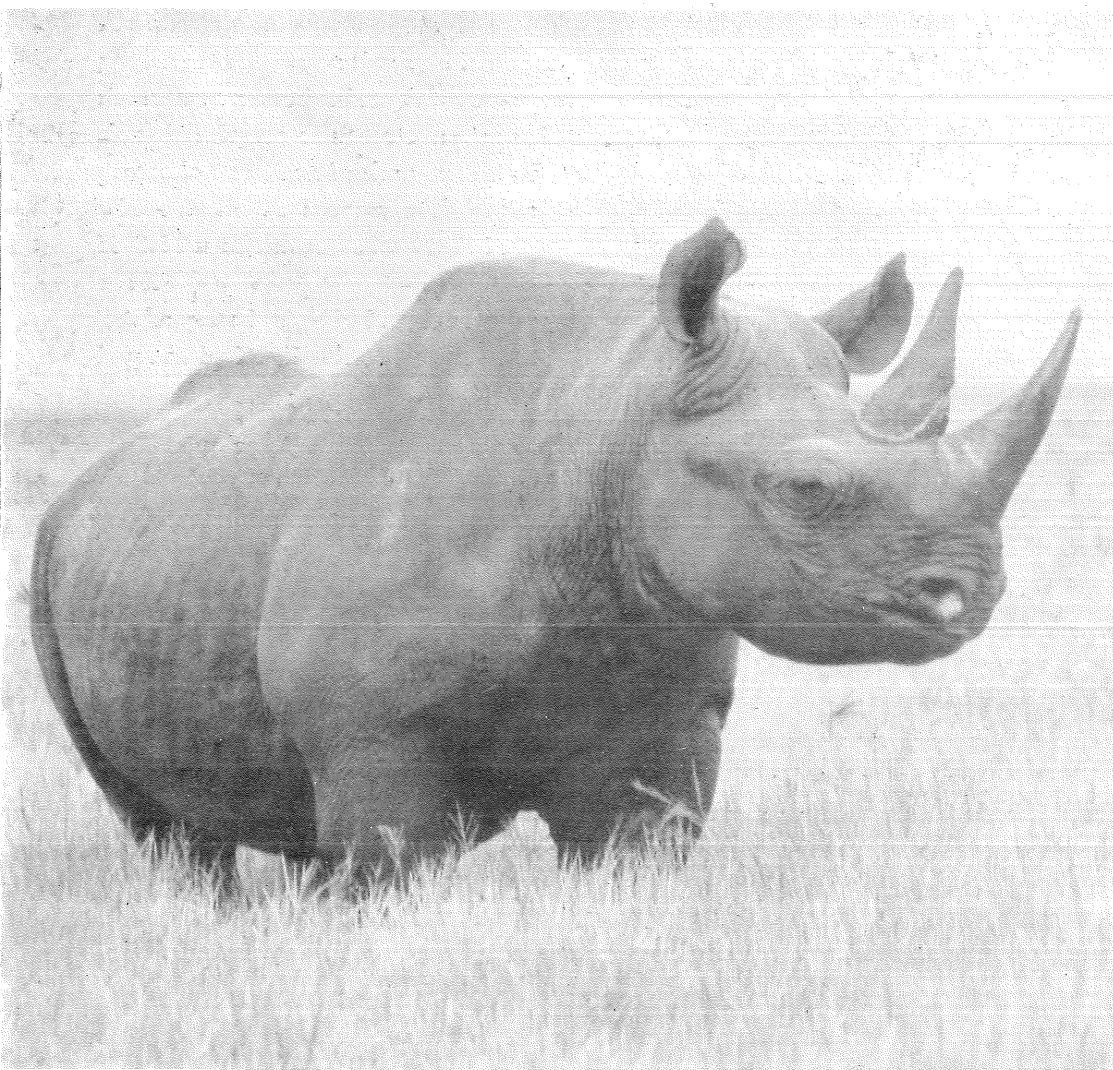
Black rhinoceroses remain in one region, but show no special attitude to territory if this is understood to mean protecting a territory against others of the species. Drinking places, dust baths, mud pools, grazing grounds and runways are used by



various rhinoceroses. Marking out the living area with excreta and urine is part of their sociological behavior. It marks off the living space populated by rhinoceroses for each individual animal. Through the scent markings, contacts are made and maintained between the animals, even if the partner is not present. Thus, in the case of the

black rhinoceros the scents of the individual members of a herd serve to link them up with each other and with all the important places in their living space.

The longest horn of a black rhinoceros ever measured was more than 56 inches long. It belonged to Gertie, a female that lived in the Amboseli National Park in Kenya. Gertie was famous for



her remarkably long and abnormally angled, almost horizontal, front horn.

Unlike the great Indian rhinoceros, the black rhinoceros uses its horns as a weapon. Broken-off horns grow again, but there is no periodic shedding of horns. The young follow their mothers for two years. There have so far been no reports of the birth of twins. The black rhinoceros is today the species of rhinoceros most often to be found in zoological gardens, whereas at the turn of the century it was a great rarity. The first black rhinoceros came to Germany—to the Berlin Zoo—in 1903.

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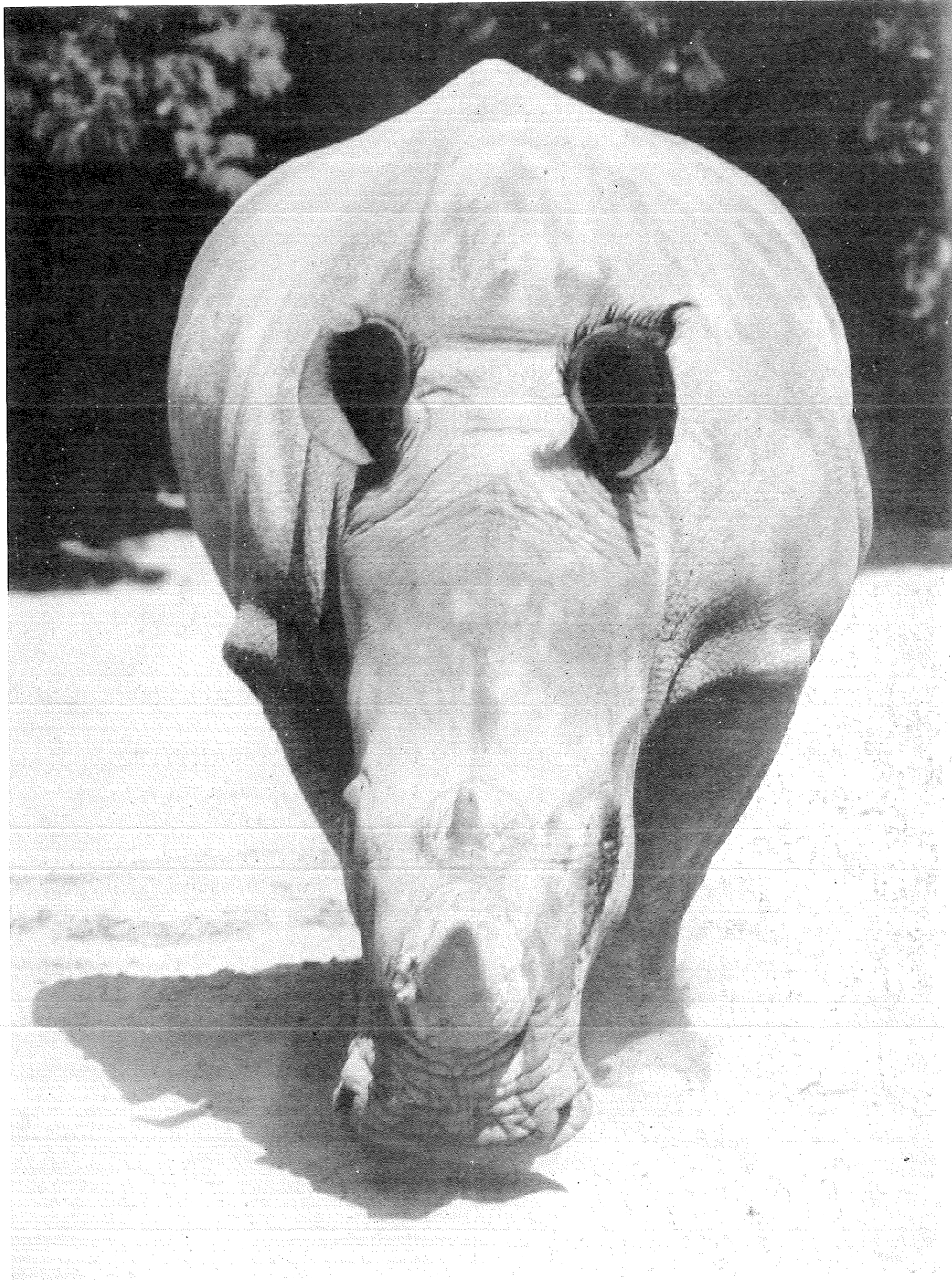
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## Wide-mouthed Rhinoceros

Two subspecies of wide-mouthed rhinoceros, the largest rhinoceros now living, are known to us: the northern subspecies, *Ceratotherium simum cottoni*, found on the upper course of the White Nile and in the Congo forests, and the southern subspecies, *Ceratotherium simum simum*, found in northern Zululand and re-introduced into Rhodesia in 1966. In 1958 it was estimated that a maximum of 1,650 wide-mouthed rhinoceroses were alive in Africa, distributed as follows: Uganda 350, Sudan 800 and Natal 500. It was possible by means of strict protective measures to increase this number considerably within a short time. A count in the Umfolozi Reserve in South Africa already showed a total of 856 wide-mouthed rhinoceroses in 1964. The annual rate of increase is assumed to be about 12.5 per cent. In 1964 the total number of living wide-mouthed rhinoceroses was estimated at about 3,800, distributed as follows:

<i>Region</i>	<i>Estimated Number</i>
Ndumi	18
Umfolozi Reserve	730
Hluhluwe Reserve	3
Corridor between Umfolozi and Hluhluwe ( <i>C. simum simum</i> )	40
Garamba National Park (Congo)	900
Uganda ( <i>C. simum cottoni</i> )	77
Sudan	2,000

The number of rhinoceroses in the two South African National Parks had



increased so much that a considerable proportion of wide-mouthed rhinoceroses had to be caught and resettled in the following reserves: Kruger National Park, Loskop, Krugersdorp, Willem Pretorius, and in the Kyle and Wankie reserves. A beginning was also made in the sale of wide-mouthed rhinoceroses to zoological gardens. That is why most of these animals to be seen in zoos are of the southern subspecies. The Antwerp and Hanover zoological gardens are amongst those which own the northern subspecies. This considerable degree of success in planned protection resulted in the removal of wide-mouthed rhinoceroses from the IUCN list of threatened animals in 1966.

The gestation period of these animals is given by R. Bigalke, director of the



Pretoria Zoo, as between 548 and 578 days. Wide-mouthed rhinoceroses are usually to be met with in family groups or in grazing communities. As is the case with other species of rhinoceros, the nose is the main sensory organ with which it finds its way about in its environment. With lowered head, the bull picks up the scent of the female in heat. Violent fighting between bulls and the unyielding attitude of the females appear to be normal features of pairing time, and this is followed by a longer period during which the bull

drives the female. It may be assumed that the fights increase the bull's desire to reproduce and may in fact provoke it. If this proves to be true, the breeding of wide-mouthed rhinoceroses in captivity will only be successful in large enclosures.

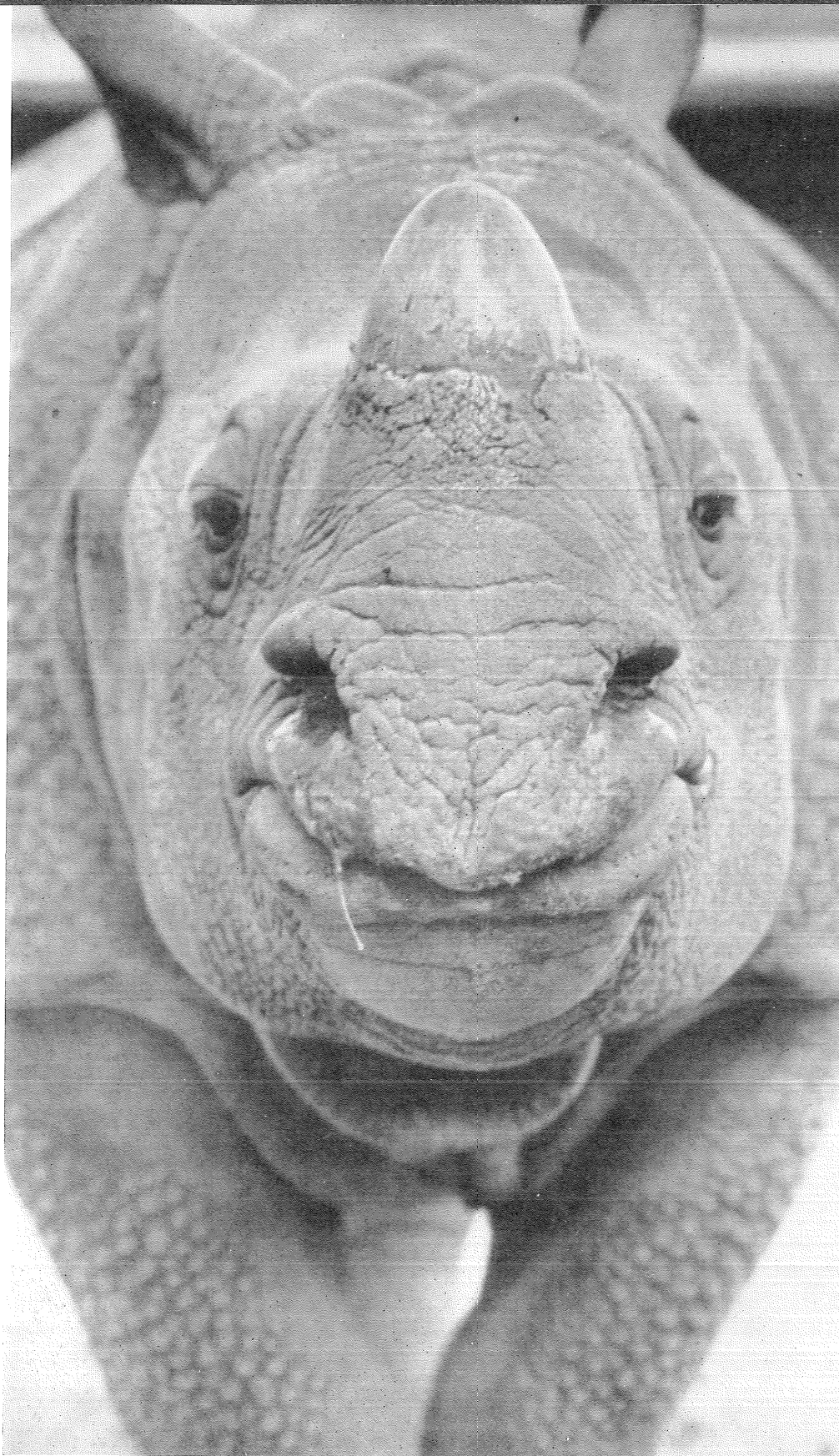
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## Great Indian Rhinoceros

One of the three Asiatic species of rhinoceros threatened with extinction is the great Indian rhinoceros (*Rhinoceros unicornis*). The World Wildlife Fund estimated in 1966 that there were at most 660 of them in Bengal, Assam and Nepal.

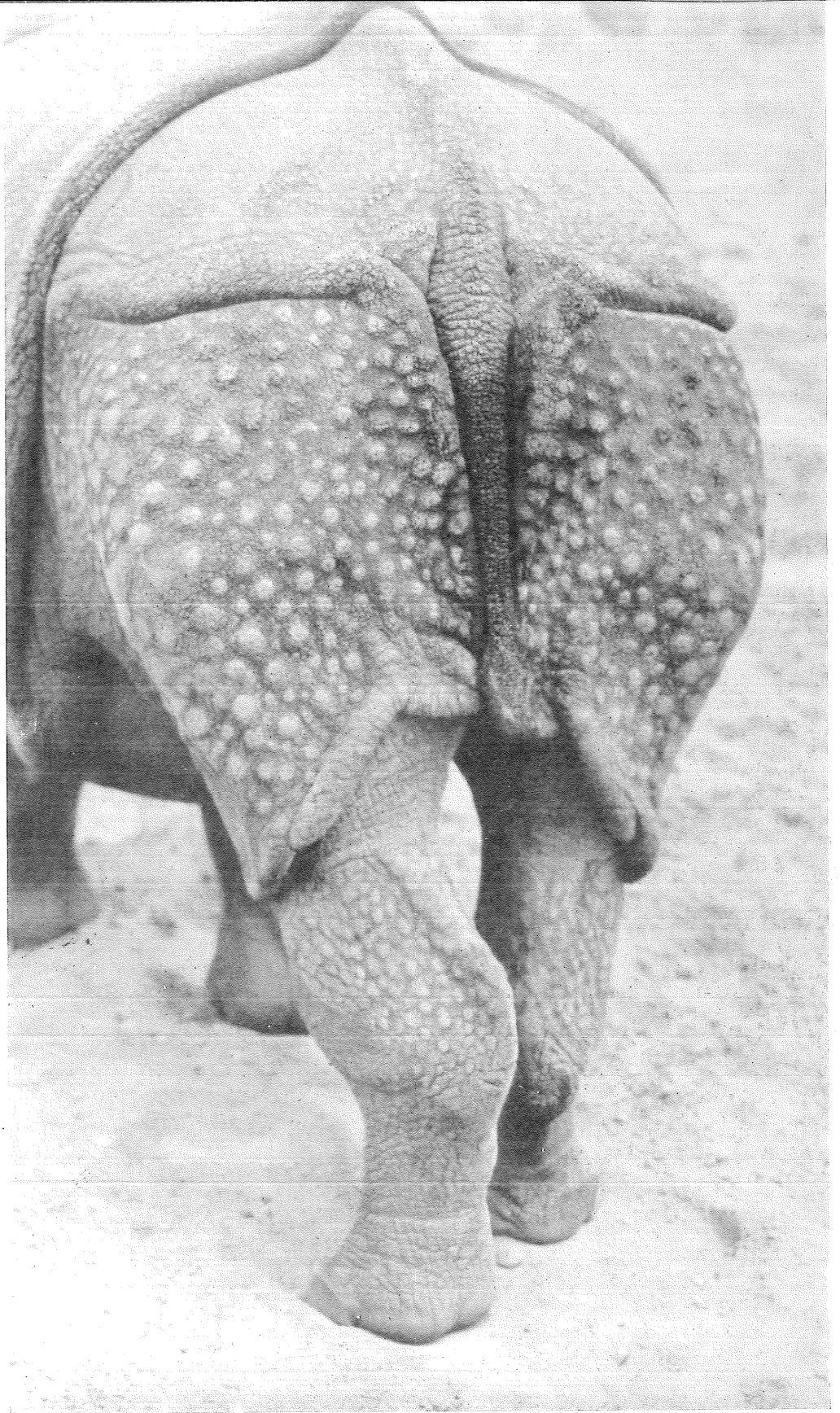
Ninety percent of the great Indian rhinoceroses live on reserves, in the Jaldapara protected area in West Bengal, in the three protected areas in Assam—Kaziranga, Northern Kamrup and Sonai-Rupal—and in Nepal, where a reserve has recently been set up in the Chitawan region, which can be very quickly reached by air from the capital, Katmandu. A tree hotel was built there for tourists in 1966, from which they can observe the great Indian rhinoceroses and tigers. The rhinoceroses, about a hundred in number, get the best protection here in Chitawan, because game-keepers are permitted to shoot at poachers, whereas in India poaching is punished only by fines or imprisonment. That is why the number of great Indian rhinoceroses in India is constantly being reduced. In 1967 thirteen of them were killed in the biggest reserve, in Kaziranga. Twenty thousand rupees per kilo were paid on the black market in Calcutta, in 1968, for rhinoceros horn—the powdered horn is believed to act as a sexual stimulant, although this has been proved untrue.

Great Indian rhinoceroses live together in communal territories and only at rutting time in April and May do the cows with calves leave the rest of the

herd. These animals set up a temporary "mother and child" territory on the fringe of the communal territory and remain there until the beginning of the monsoon season early in July, so as to avoid the violent activity of the rutting bulls which is a preliminary to pairing.

The swampy elephant-grass jungle in which the great Indian rhinoceroses live is furrowed by the 15- to 20-inch wide runways stamped out by them. Where a runway ends on open ground, on a marshy meadow with a low plant growth, by lakes, or wallowing pools, the rhinoceroses place their piles of excreta which can reach a height of 27 inches. These serve as scent signposts to mark the entries to runways for these very short-sighted animals. When the rhinoceroses move through their territory the calves go in front of their mothers, but stay close to them if attacked. Their weapons against enemies and rivals are the lower incisors, which are sharp and slope outwards and with which they can bite and tear wounds.

From sunrise until about 9.30 a.m. the great Indian rhinoceroses graze. Then they go to lakes or pools and rest in the water until noon. Between noon and 3 p.m. they lie in the shade, in the grass which can reach a height of 16 feet and after that they graze again until about midnight. In addition to man, the tiger is the enemy of the great Indian rhinoceros. Tigers sometimes succeed in killing calves. Contagious diseases like anthrax, caught



from domestic cattle, are also a serious danger.

Seals from Mohenjo Daro bear representations of great Indian rhinoceroses at a trough on them; it can be assumed that these animals were

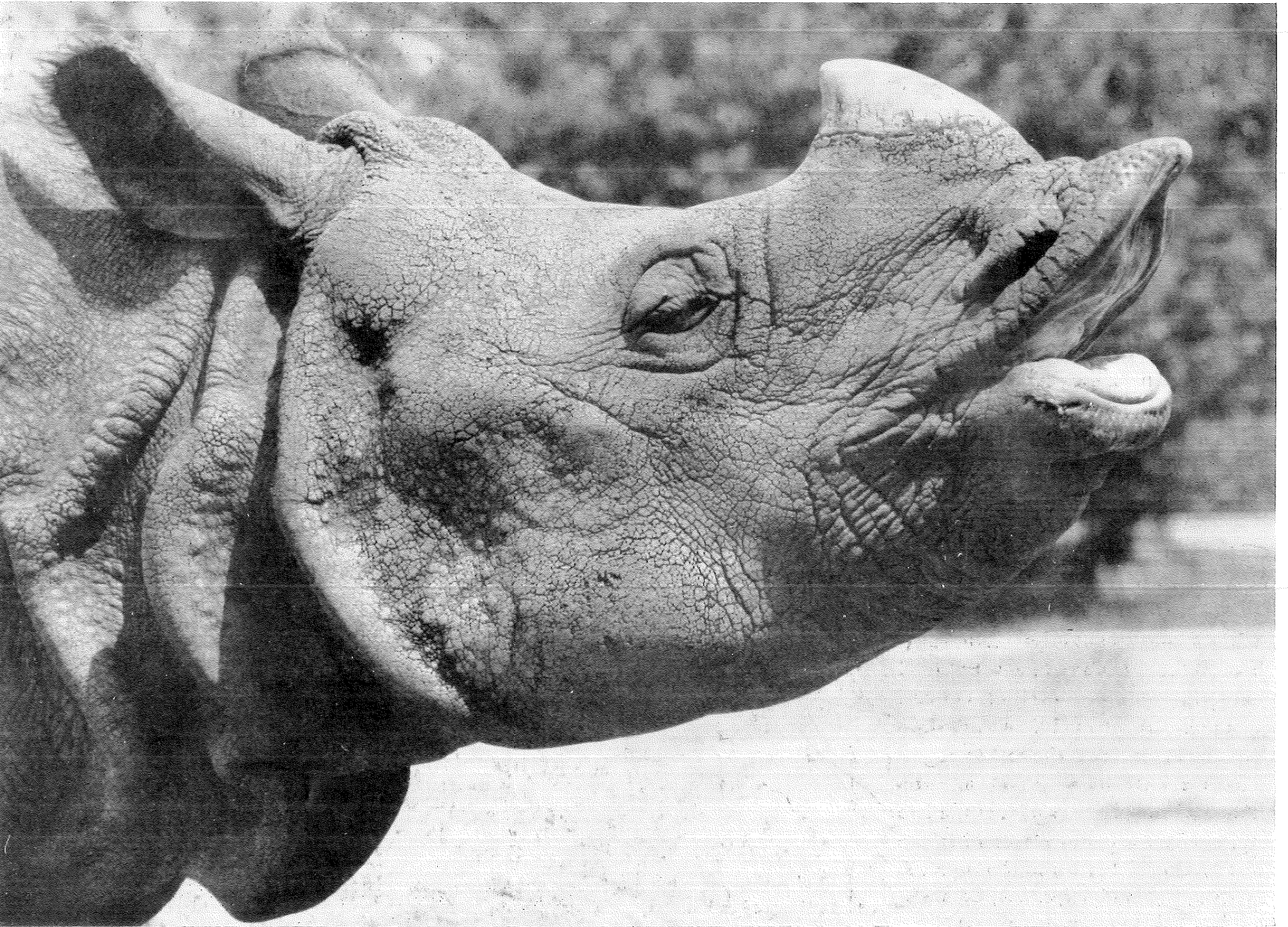
domesticated in India in the third and second millennia B. C.

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## Sumatran Rhinoceros

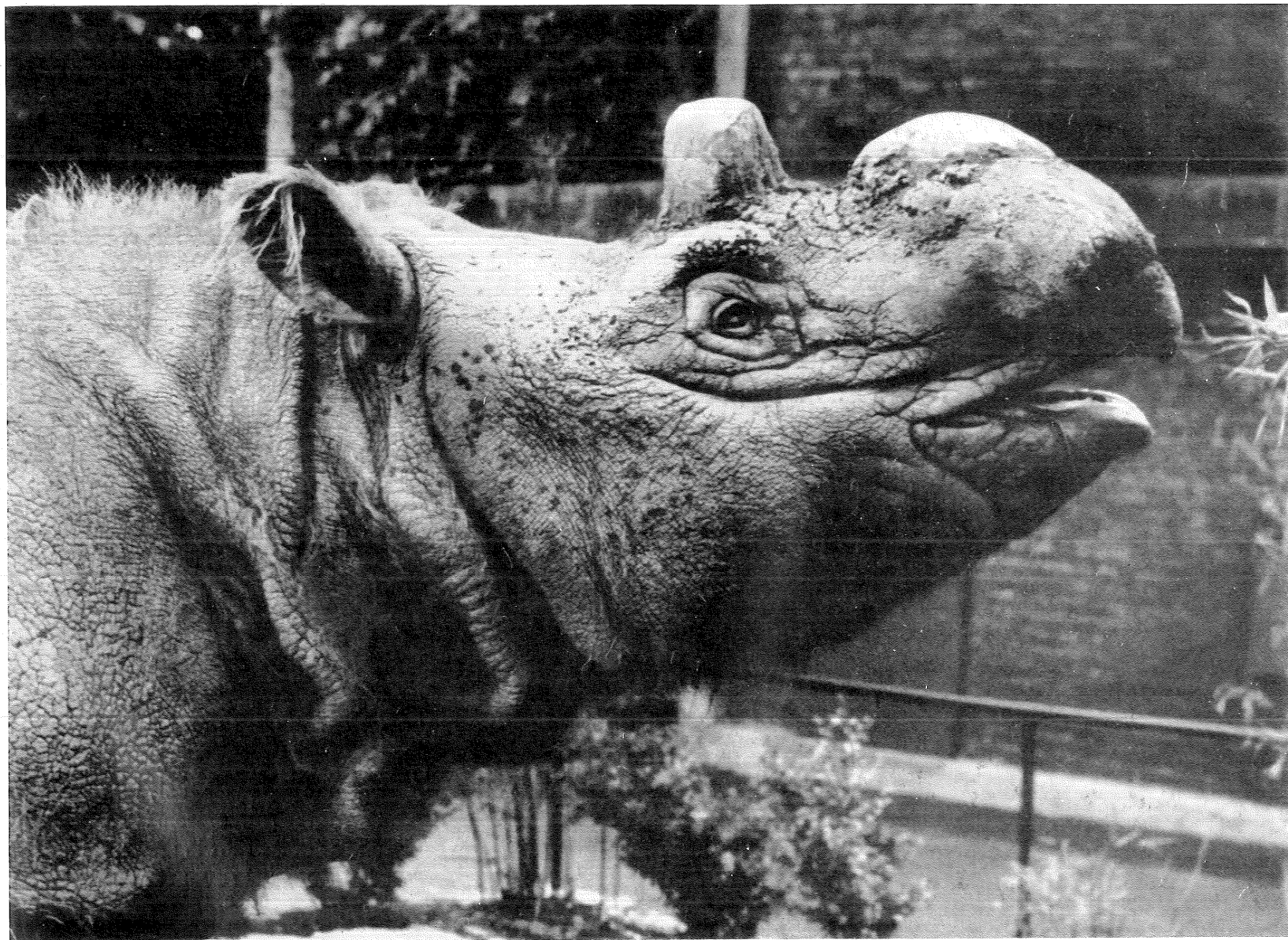
The Sumatran rhinoceros (*Dicerorhinus sumatrensis*) is the smallest species of rhinoceros alive today. Unlike the other two Asiatic species, the Javanese and great Indian rhinoceros, the Sumatran rhinoceros has two horns, but

these are relatively small. The hindmost horn is often only a hump.

It is a matter of discussion whether the Sumatran rhinoceros which lives on the mainland, is in fact a separate subspecies, described as a rough-

eared rhinoceros (*dicerorhinus sumatrensis lasiotis*).

Since 1959, the Copenhagen Zoo has been in possession of the only Sumatran rhinoceros now in captivity. It was caught in the Siak River region





on Sumatra. The first rhinoceros to be born in a zoo was a Sumatran rhinoceros, born on January 30, 1889, in Calcutta. On December 7, 1872, a calf was born on the London docks, on a ship bringing a Sumatran rhinoceros cow to England from Singapore. Unfortunately, the mother killed it three days later. A Sumatran rhinoceros cow and calf were later sent to Hamburg-Stellingen. Hagenbeck sold them to the Barnum and Bailey circus, where they were shown in the menagerie.

In 1928 a mother rhinoceros was killed by a trapper's spear in Langsar, in the Sumatran hinterland. Her calf was captured and fed with milk, pineapple, banana, boiled sweet potatoes and rice. It always left its droppings in the same place. This animal was destined for the Dresden Zoo, but never reached it; it died of a cobra bite before the journey started. This calf had a great deal of hair. Only the cheeks, nose, forehead, the region round the eyes, and the shoulder and belly wrinkles were bare. The Sumatran rhinoceros loses its hair as it grows older.

Unfortunately, little is known of the Sumatran rhinoceros's way of life. We know that it inhabits the densest parts of forests and it has been found at a height of 8,200 feet. It is said to come down to the valleys only towards the end of the rainy season. It often spends all day in a wallowing pool, especially during the hot season. In regions

where there are a number of rhinoceroses it is possible to find heaps of excreta up to 2 feet high. A number of wallowing pools are often found side by side. It will probably remain unknown whether the Sumatran rhinoceros actually lives in such solitude as is assumed. Older reports repeatedly mention meeting small groups of Sumatran rhinoceroses together. When the rhinoceros calf destined for the Dresden Zoo was caught, a bull—as well as the mother that was killed—was said to have been in the vicinity.

It is not known how many Sumatran rhinoceroses are alive today. Estimates vary between 100 and 150. There are also said to be a few small animals such

as the island species on Kalimantan (Borneo), in Burma, Thailand and Malaysia. In the Ulu Bernam region in Malaysia an 18-square-mile reserve was set up in 1964, because some Sumatran rhinoceroses were seen there. Burma is supposed to have 26 of these animals in the Chindwin region. Although the Sumatran rhinoceros is under strict protection in all the countries where it is found, a live one was offered for sale in Bangkok in January, 1970, and another a month later in Singapore. But the IUCN asked zoological gardens some years ago to refrain under any circumstances from buying these seriously threatened animals.

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