

America's First Zoo  
10(3): 3-6 September 1958

# On Breeding Rhinoceroses

by FREDERICK A. ULMER, JR.,  
*Curator of Mammals*

THE MONTH OF AUGUST, 1958, will long be remembered in the Zoo world as "Rhinoceros Month." For during that period no less than three baby rhinos were born in captivity—an Indian rhino in Basel, Switzerland, and African black rhinos in Bristol, England, and Sydney, Australia. A person unacquainted with zoos and their trials and tribulations might well wonder why the excitement over the births of these rhinoceroses.

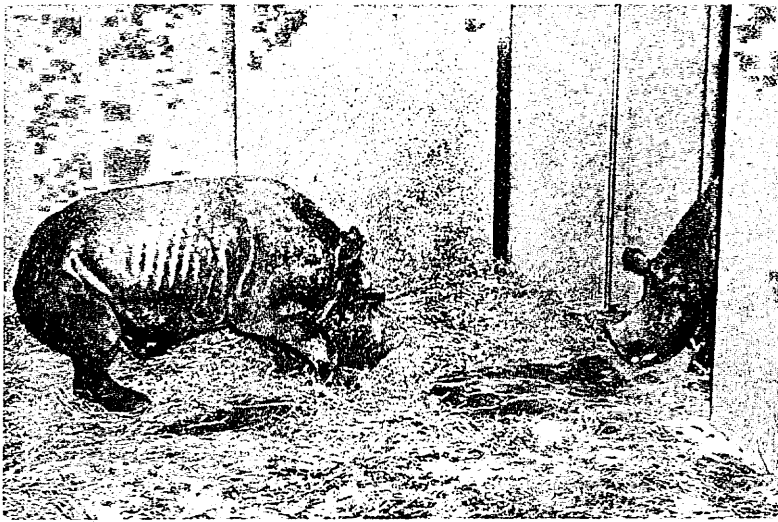
Any zoo man would be happy to explain. Rhinoceroses are rare in nature and getting rarer all the time. They not only look prehistoric, they are indeed ancient "living fossils" that find the competition of modern man and his terrible weapons more than they can cope with. As a result several species are on the verge of extinction. To be able to breed rhinos in zoos may enable us to keep these ponderous, fascinating mammals alive long after they have vanished in the wild state before the tidal wave of human beings that now threatens to engulf our planet.

Until the amazing month of August, the number of rhinos born in captivity could be counted on your two hands. Why were so few born in zoos? Well, as I pointed out in an article on "Compatible Rhinos" (*America's First Zoo*, Vol. 8, No. 4, Dec., 1956), the most obvious reason was that, until recent years, few zoos had been able to afford themselves the luxury of a pair of rhinoceroses. Our pair of Indian rhinos cost \$20,000 and a pair of white rhinoceroses sells for \$25,000. Secondly, I stressed compatibility, and while I still think it is important, this does not mean that they should never squabble. I doubt that any pair of rhinoceroses ever would get along serenely at all times. The family squabbles of rhinoceroses look far worse than they really are and usually the combatants suffer only minor bruises and abrasions. However, occasionally these arguments turn into violent battles when the animals must be separated, their bloodied countenances washed off, and their wounds covered with a healing mixture of lanolin and balsam of Peru. After a cooling-off period, they are put together again and behave as though nothing had ever happened. This has been the experience of most zoos with pairs of rhinos.

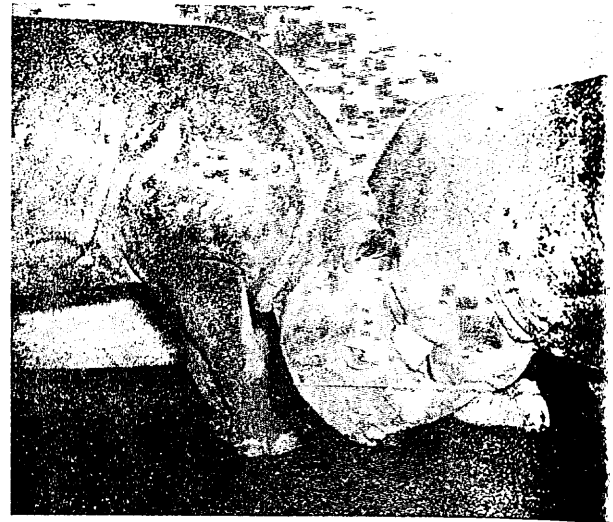


Our African black rhinoceroses, Kilaru and Kenya, are a good example. They came to Philadelphia in 1948, when about one-third grown, and every time we tried putting them together they fought viciously, and fearing that an eye might be destroyed in one of these bloody duels, they were soon separated again. Finally this year a determined effort was made to get them together—first indoors in cages where they could always rub muzzles through the bars. Later, they were allowed together indoors regularly under supervision, and, finally, they were put together out-of-doors in a large moated enclosure. At first, battles were frequent, but now the rhinos get along surprisingly well, often lying down side by side for long periods. If a fight starts, the female usually flees to the pool which the male is reluctant to enter. However, the former can give a good account of herself, and frequently puts the male to flight. The keepers say that the black rhinos rarely fight on sunny days, but seem to have their fallings-out on cloudy or rainy days. We have not yet given up hope that they will produce young ones here at the Philadelphia Zoo.

Our Indian rhinos, Kanakbala and Kanaklota, get along even better than the black ones and usually they are inseparable, lying side by side like a couple of big pigs in their favorite wallowing spot in the outdoor cage. Nevertheless, they too have their brawls and often turn up with nasty but superficial gashes inflicted by each other's sharp tusks or by their horns, although theirs are much shorter and blunter than those of the black rhinos. The female Indian rhino stands sixty-two inches at the shoulder and the male measures sixty-one and one-half inches. He is considerably younger than Kanaklota, and I believe that he is not yet fully mature physically or sexually. I feel confident that it is only a matter of time before these animals produce a young one.



Our pair of Black Rhinos did not seem to appeal to each other on arrival in 1948. Upon meeting, the partly grown newcomers glared. They were presented to the Garden by Restaurateur Frank Palumbo.



By 1954 the African Black Rhinos had become fully reared. They tried together many times, but invariably these experiments ended in violent battles, and the animals had to be separated.

Some vital statistics on the rhinoceroses born in captivity would, I believe, be of interest at this point. To the best of my knowledge there have been twelve rhinoceroses, of three species, bred and born in zoos. Oddly enough the first one born in a zoo was a rare Asiatic two-horned, or hairy, rhinoceros. It was a hybrid between a male of the typical race (*Didermoceros s. sumatrensis*) and a female of the mainland race (*Didermoceros s. lasiotis*), sometimes referred to as the hairy-cared rhinoceros. The calf was born on June 30, 1889, in the Calcutta Zoo, and successfully reared. I am indebted to Sergeant First Class Marvin L. Jones, of Fort Belvoir, Virginia, for this information.

The great one-horned, or Indian, rhinoceros (*Rhinoceros unicornis*) has been bred and born four times in captivity. The first was a calf, stillborn at the Calcutta Zoo in 1925. It was not until September 14, 1956, that the second baby of this species arrived at the zoo in Basel, Switzerland. It was the first rhinoceros to be born in a European zoo and created quite a lot of interest there. The mother, Joymathi, was so tame that the Basel Zoo people were able to weigh the baby (a male) the first day, so that an accurate weight of 144 pounds was attained. They reported the astounding fact that during the first year of its life this calf gained nearly 100 pounds a month! On October 30, 1957, a female Indian rhino calf was born to Mohan and Mohini at the Whipsnade Zoo in England. The gestation period was found to be 488 days, or approximately sixteen months, as ascertained with the Basel baby. In the mammal world this gestation period is exceeded only by the elephant. The fourth Indian rhinoceros was born at the Basel Zoo in late August of this year, and the gestation period was 477 days. Our Director, Mr. Freeman M. Shelly, saw this baby rhino while in Europe recently to attend the meetings of the International Union of Directors of Zoological Gardens. He also saw an amazing moving picture of the birth of this animal, which was trying

to get up on its feet ten minutes after delivery, and was actually walking around in twenty minutes.

For the first time in zoo history Indian rhinoceroses (not one, but two!) are being offered for sale as surplus. The 1956 Basel male and the Whipsnade female are being offered for sale by those respective zoos, and since they are unrelated, would make an excellent pair for some rhinoless zoo to acquire for future breeding.

The commonest species of rhinoceros, both in a state of nature and on exhibition in zoological parks, is the African black, or hook-lipped, rhinoceros (*Diceros bicornis*)—an ill-tempered brute made familiar to many by the late Martin Johnson in his famous big-game films. There are reputed to be at least twenty-seven pairs of these pachyderms now in captivity. It is not surprising, therefore, that more black rhinos have been born in captivity than any other kind—a total of seven.

The first black rhino to be born outside its native Africa arrived in Chicago's Brookfield Zoo on October 7, 1941. That year Brookfield enjoyed a marvelous baby crop, including a hippopotamus, a giraffe, a zebra, a sitatunga, and a sea lion, but Georgie-Joe, the little male black rhino, stole the show and was prominently featured in *Life* magazine. His weight at birth was estimated to be sixty pounds.

On September 21, 1944, the Brookfield Zoo's pair of black rhinos produced a second male baby, whose weight was stated to be only forty-five pounds. Both babies were successfully raised. Georgie-Joe was sold to the Pittsburgh Zoo and has since died. Robert, the second baby, was sold to the Ringling Circus, where I saw him on many occasions, and he was a fine looking specimen reputedly weighing 2500 pounds. Unfortunately a combination of dysentery and pneumonia caused his untimely death in Baltimore, Maryland, on May 31, 1953.

The third baby black rhinoceros was born in the zoo in Rio de Janeiro, Brazil, on February 14, 1951, and weighed forty-four pounds. At first this calf



This past summer, the sight of Kifaru and Kenya sharing their outdoor enclosure without friction became a familiar one. Now fully mature, these massive, powerful animals get along surprisingly well, often lying down side by side for extended periods. If a fight starts, Kenya, the female, prudently makes a retreat to the pool.

would not nurse, and so, incredible as it may sound, the keepers milked the tame mother rhino, placed the milk in a nursing bottle, and offered it to the baby. The little rhino took it at once and soon began nursing from its mother in the normal manner.

Apparently the male rhinoceros was with his mate at the time of the birth. He attempted to kill the baby, and the mother fought him so fiercely to protect her young one that her left eye was badly injured. The male was promptly separated at this point. Since then this pair of black rhinoceroses has produced a second calf.

On Christmas Eve, 1956, the fifth captive-born black rhino arrived at the Zoo in Frankfurt-a-Main, Germany. It was a male and its weight was estimated to be fifty-five pounds. At six minutes after birth the calf attempted to stand up, and four minutes later it was on its feet. Three hours after birth it had found its mother's udder and started to nurse. Like the Rio de Janeiro mother, the Frankfurt female was very tame—so tame, in fact, that the zoo veterinarian was able to make rectal examinations during her pregnancy! The gestation period was found to be somewhere between fifteen and sixteen months.

The births in late August at the Taronga Park Zoo in Sydney, Australia, and at the Bristol Zoo in England, bring the total of black rhinoceroses bred and born in captivity to seven. The caption under a picture of the Taronga Park rhino calf that appeared in a Philadelphia newspaper on August 30, 1958, states that the animal weighed 112 pounds at birth. This seems rather heavy when compared with the other weights I have given, most of which were merely estimates. However, even including the heavyweight from Taronga Park, the average weight of newborn black rhinos is only 63.2 pounds—less than half that of Basel's first baby Indian rhino.

Most breeding female rhinoceroses seem to be exceptionally gentle animals. If this should prove to

be a prerequisite to successful breeding, then the outlook for the Philadelphia Zoo's black rhinos is not so good, for Kenya is a very nasty animal. Curiously enough, Kifaru, the male, is surprisingly gentle.

The next species to produce young in captivity will undoubtedly be the white rhinoceros (*Ceratotherium simum*). The first one to ever be exhibited in a zoo was found deserted by its mother when less than a day old on July 24, 1946, in the Umfolosi Game Reserve in Zululand, South Africa. It was nourished on Klim (powdered milk) and later on fresh cow's milk and, after a trek of about 425 miles the female calf, Zuluana, reached the Pretoria Zoo on July 29, 1946. At sixteen days of age she weighed 105¼ pounds and stood approximately two feet high at the shoulder.

Her front horn button was quite noticeable, but there was no sign of the rear horn. The anterior horn is usually present at birth in all five species as a button or low mound which has a smooth polished appearance. In the three species possessing two horns, the second one is never as well developed as the first. In the Frankfurt black rhino baby, the rear horn was indicated merely by a flat white spot. The skin of a newborn Bornean hairy rhinoceros which I have examined at the Academy of Natural Sciences here in Philadelphia has both horns in evidence. The front horn is prominent as a cute little button, whereas the rear horn is a low shiny blackish mound. This skin is covered with a dense coat of short, stiff blackish hairs and, until you notice the three hooves on each foot and the incipient horns, you would never recognize it as that of a rhinoceros. A. D. Bartlett, former Superintendent of the London Zoo, gave a very similar description of a baby hairy rhinoceros born to a captive female on board a ship docked in London on December 7, 1872. The natives, who had captured the mother in a pitfall a little more than seven months earlier, claimed they had observed a male mate with her

just prior to her capture. This led Bartlett to state that the gestation period of the hairy rhinoceros was similar to that of the hippopotamus—eight months. This is very doubtful, and probably, like other rhinoceroses, the gestation period is in the vicinity of sixteen months.

Pretoria Zoo now possesses three white rhinos—a bull and two cows—and stands a good chance of gaining the honor of producing the first baby white rhinoceros to be born in captivity. However, they are not alone in the field, for the first pair of this species to be exhibited in Europe arrived at the Antwerp Zoo on April 7, 1950. Paul and Chloe are now about ten years old and fully adult, weighing an estimated three tons apiece. Although they have not yet shown any decisive signs of sexual activity, the Antwerp Zoo officials feel that it is only a matter of time before a baby arrives.

Several other zoos now have pairs of white rhinos—namely London, England, Washington, D. C., and St. Louis, Missouri—but these animals are much younger than those in Pretoria and Antwerp. In a few years, when the younger ones have matured, births of white rhinos in captivity should not be at all unusual. Pretoria's three animals are of the southern race of the white rhinoceros (*Ceratotherium simum simum*), whereas all the rest in zoos belong to the northern, or Nile, race (*Ceratotherium simum cottoni*). Incredible as it may seem, the Nile white rhino, possibly the largest land mammal living today save for the elephants, escaped discovery by modern science in its remote home at the head waters of the Nile River until the twentieth century. And now, only fifty years later, they have been seen by millions of zoo visitors in Europe and America.

To the best of my knowledge there are no specimens of the Javan rhinoceros (*Rhinoceros sondaicus*) in captivity today. Such was not always the case. Many were imported to Europe during the nineteenth century but apparently none was ever born in captivity. Probably no zoo was fortunate enough to acquire more than one at a time. A Javan rhino was exhibited at the Liverpool Zoo as early as 1836 and this same animal traveled all over England and Scotland with a menagerie. It was reported to stand four feet eight inches at the highest part of the back. The London Zoo received its first *Rhinoceros sondaicus* in March, 1874, and in 1875 had gathered together, under one roof, living specimens of four of the five modern species. Only the white rhino was absent. The most species that can be seen in a single zoo today is three. Black, white, and Indian rhinos can be seen in both our National Zoo and the St. Louis Zoo. When I was a boy, I used to dream of a building at the Philadelphia Zoo where rhinos exclusively would be housed, and in it would be breeding pairs of all five species. Now that I know a little about the difficulties of operating a zoo I realize how impractical this would be, but just imagine what a fabulous show that would be!

I sometimes fear that the Javan rhinoceros will become extinct before it can be bred in captivity. Today it is definitely known to exist only in a tiny corner of western Java—in a reserve on the Oedjoengkoelon Peninsula, where there are but barely fifty animals alive. A civil war in Java, or general world strife, could quickly spell the end for this tiny remnant. Let us hope that Indonesia's government remains strong and vigilant in guarding this priceless animal treasure and that real peace soon comes to this troubled world—for both men and rhinos.

Even more compatible than the African Rhinos are the rarer Indian Rhinos, Kanaklota and Kanakbala. Being aquatic, the two can often be seen lying side by side in their outdoor pool, or wallowing like a couple of big pigs in a muddy area of their outdoor enclosure. Kanaklota, the female, arrived in 1953. Her mate, considerably younger, came two years later.

