

# ZOONOOZ<sup>®</sup>

published monthly since 1926 by the Zoological Society of San Diego, Inc.

MAY 1971 • Vol. XLIV—No. 5

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**Circulation** 31,000. Second class postage paid at San Diego, California, U.S.A. Single copy 50c. Subscription direct order only: \$4.00 per year, \$10.00 for three years. Foreign, including Canada & Mexico, add \$1.00 per year. ZOOONOOZ is included in every Zoological Society of San Diego membership: Dual \$12.00, Single \$10.00 per year. Prompt Renewal: Dual \$10.00, Single \$8.00.

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Address—Box 551, San Diego, California 92112

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as a private nonprofit corporation.

The zoological collection includes 5,400 mammals, birds, reptiles—

1,642 (sub) species, excluding domestic forms, as of June 30, 1970.

The garden in Balboa Park exhibits 5,217 animals comprised of 1,616 (sub) species.

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# SOUTHERN WHITE RHINOCEROS

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CURATOR



Southern White, or Square-lipped Rhinoceros, *Ceratotherium simum simum*. Bird & Leeney Photo

THE REMARKABLE recovery of the Southern White Rhinoceros from the brink of extinction is a classic example of what can be accomplished—the preservation of a threatened species through the application of modern and enlightened conservation methods. Whereas the future of the southern subspecies, *Ceratotherium simum simum*, is assured, its northern cousin, *Ceratotherium simum cottoni*, is for all intents and purposes extinct with less than three dozen animals remaining in the Congo, the Sudan and Uganda.

The White and Black Rhinoceroses, of which the latter is the more primitive form, represent a subfamily originating in the late Miocene or early Pliocene, which is distinct from the other three recent rhinoceros species. *Ceratotherium simum* has often been drawn into relationship with the extinct Woolly Rhinoceros, *Coelodonta*, of the Pleistocene, although as early as 1900 Wüst demonstrated that the two genera simply represent a case of parallel evolution.

*Ceratotherium* is an end form of the subfamily Dicerinae, whereas *Coelodonta* belongs to the subfamily Dicerorhinae which includes the modern Sumatran Rhinoceros. This can be demonstrated from the formation of the skull as well as the dentition. The origin of the modern White Rhinoceros probably goes back to the African form of the early Pliocene, *Serengeticerus germano-africanus*.

The Southern White Rhinoceros formerly enjoyed an enormous range over southern Africa—extending from southern Angola, portions of South-West Africa, Botswana, Rhodesia, the Transvaal, Natal, and at least a portion of Mozambique. It is generally accepted that the species did not extend south of the Orange River. The White Rhinoceros is the second largest of all land mammals, adult bulls reaching up to six and one-half feet at the shoulders, the females being somewhat smaller.

The southern form was described by Burchell in 1812 and almost from the time of its description its elimination from its extensive range was begun. In Angola the animal formerly occurred on both sides of the Okavango River but apparently was extinct there by 1880. Records indicate that they were still relatively abundant ten years prior, in 1870. As for

South-West Africa, Shortridge, writing in 1934, remarks that the White Rhinoceros was already extinct fifty or more years prior to the publication of his work, as he was unable to find any accurate record of its occurrence within the country. However, the Nama Hottentots and local Bushmen had distinct native names for both the Black and White Rhinoceroses, clearly indicating that both species previously existed in the more level parts of South-West Africa.

During Burchell's visit to Litakun in Botswana in 1812, he found the rhinoceros common in that area and was informed by the natives that it was not infrequently found even farther to the south. However, by 1849, it had almost ceased to exist even in areas where Burchell had first met it, as a result of the danger it was exposed to by the introduction of firearms among the Bechuanas. In 1881, Selous records that the animal was apparently rather plentiful twenty years prior in the western half of southern Africa. In 1881, however, unless it was still to be found between the Okavango and Cunene Rivers, it was certainly extinct in that portion of the continent. He goes on to remark that it is no wonder when one considers the accounts in the works of Andersson and Chapman in which they refer to shooting eight of these animals found drinking at a small waterhole one night. It should be remembered that these isolated tanks, at the end of a dry season, represented all the water to be found over an enormous extent of country. Therefore, all the rhinos that were distributed over many hundreds of square miles were, during periods of drought, dependent in many cases on a single pool of water.

Selous remarks that although he found the rhinoceros relatively common on the River Chobe in 1874, he only saw the spoors of two animals after several months of hunting in the same country in 1877. In 1879, during eight months of hunting in the same region, he never saw a single animal and was advised by the Bushmen that the rhinoceros was extinct. Between 1840 and 1850, the majority of travelers who have left records of their journeys, report that the White Rhino was very abundant in all country wherever there was water, to the north and west of the Limpopo between Secheli's Country





While on a Zoological Society Safari to South Africa in 1970, President Anderson Borthwick (with camera) and his tour group participated in the capture of White Rhinos for relocation. These rhinos were part of the herd that reached the San Diego Wild Animal Park in February, 1971. Watching the animals, Mr. Borthwick and his group were reminded of Henry Beston's words (below) cast in bronze at Zambia's Lusaka Airport:

"We need another and a wiser and perhaps a more mystical concept of animals. Remote from universal nature, and living by complicated artifice, man in civilization surveys the creature through the glass of his knowledge and sees thereby a feather magnified and the whole image in distortion. We patronize them for their incompleteness, for their tragic fate of having taken form so far below ourselves. And therein we err, and greatly err. For the animal shall not be measured by man. In a world older and more complete than ours they move finished and complete, gifted with extensions of the senses we have lost or never attained, living by voices we shall never hear. They are not brethren, they are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendour and travail of the earth." From *The Outermost House*, Doubleday, New York, 1928; page 25.

and Lake Ngami. Andersson also found the animals numerous during his travels between 1850 and 1854 in the country to the west and northwest of Lake Ngami. He records killing nearly sixty rhinos of both species during a single season.

Unfortunately, it would seem that although there was a great deal of unnecessary slaughter which

took place at the hands of Europeans, South Africa in its vastness would have provided sufficient areas where these animals could have found refuge had it not been for the rapid spread of firearms among the native tribes. Unfortunately, these easily killed animals were slaughtered even in their remotest retreats. Apparently, 1884 is the year in which the last White Rhinoceros disappeared from the western portion of South Africa.

During Selous' visit to Rhodesia in 1871, he found the rhinoceros to be relatively numerous, and in subsequent visits in 1872, 1873 and 1878, it does not appear that conditions had worsened for the animals. However, after 1880, their numbers commenced to be severely reduced due to the increase at that time in the value of rhinoceros horn. It was during this period that traders in Matabeleland employed natives to shoot rhinos for the sake of their horns as well as their hides, which were used in the production of wagon whips, or sjamboks. It is recorded that one trader alone supplied 400 native hunters with guns and ammunition. As a result, between the years 1880 and 1884, he was in possession of large quantities of rhinoceros horns, often from 100 animals at a time, in addition to those constantly sold to other traders and carried to South Africa on their way to England. It appears that sudden freak fashions, for example in knife handles and combs,



sounded the death knell to all rhinoceroses in areas easily accessible to the Matabele native hunters. By 1899, perhaps no more than a dozen animals survived in Rhodesia. At this point it also became extinct in bordering Mozambique. Selous reports in 1914 that perhaps a few still survived in Rhodesia. However, more recent information indicates that the last specimen was shot near Mazoe in 1895 and is preserved in the South African Museum, Cape Town.

Cornwall Harris, traveling in the Transvaal in 1839, reports frequent sighting of the species. On one occasion, he was able to count no less than 22 White Rhinos in the distance of approximately half a mile. In 1871, it was still abundant in certain portions of the eastern and southeastern Transvaal.

Selous states that, in the opinion of the Dutch and English hunters, the flesh of the White Rhinoceros was always considered to be superior to that of any other game animal in South Africa.

The immigrating Boers first encountered the White Rhinoceros just north of the Vaal River on the open grassy plains where the present towns of Klerksdorp and Potchefstroom now stand. Before the advent of the European hunter, the rhinos were practically without enemies. However, within fifty years of the time when Harris first met with the species, thousands upon thousands were killed by white hunters and natives armed with rifles, resulting in its extinction by 1896 in the Transvaal.

By 1894, only a few animals were remaining in a corner of Zululand—Natal—six of which, according to Selous, were shot in that year.

William Lutley Sclater wrote in 1900 that a few still survived in Zululand where they were strictly preserved, and with proper care they had an excellent opportunity of increasing in number. By 1920, the rhinoceros was found only in the Umfolozi Game Reserve and in a narrow strip of country along the south bank of the White Umfolozi River. There was indication that perhaps four or five adults survived in the dense bush country at the north end of False Bay. It was during the 1920's that the White Rhinoceros came under strict government protection. By 1929, the Society for the Preservation of the Fauna of the Empire recorded that only about 20 specimens of the southern subspecies of White Rhinoceros remained, all of which were confined in the Umfolozi Game Reserve. It was, however, at that time still in danger of extinction due to the neighboring farmers who resented the presence of the rhino and other game, as they ascribed the continued existence of the Tsetse Fly to the native wild life. It is said that five animals were shot in a game drive in 1921; an additional three animals were illegally killed in 1928.

In areas where it is impossible to get a truck, the rhino is injected with a small amount of antidote, enough to get it moving and then be led to the truck.



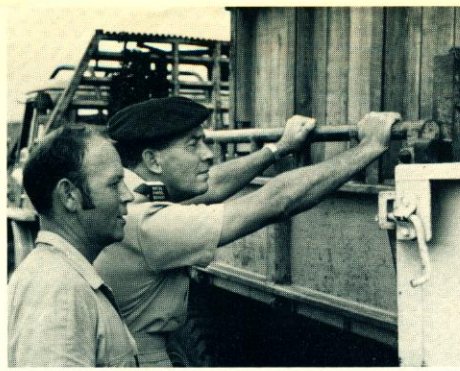


## OPERATION RHINO

had been many months in the planning. It went into its final phase with the journey to Africa of John Fairfield (l.), senior keeper, San Diego Wild Animal Park. At the Umfolozi Game Reserve he worked with Ian Player (r.), chief conservator, Natal Parks Game & Fish Preservation Board.

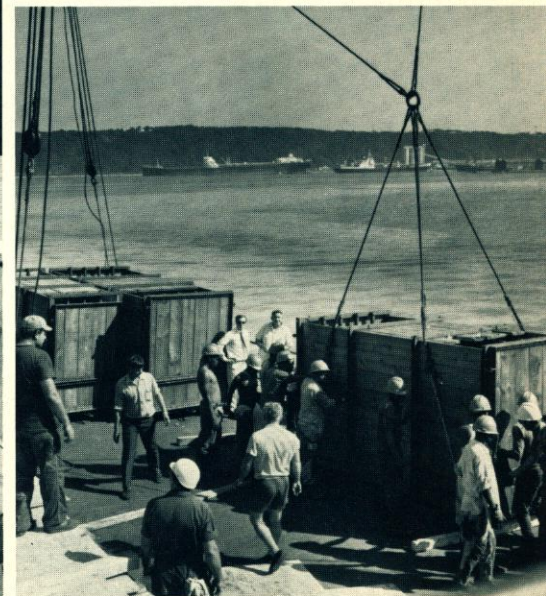
## CAPTURE

The gun is loaded with an immobilization drug (in this instance by Ian Player), and the rhino spotters mount their horses. The horsemen wear canvas jackets, crash helmets and gloves. To protect the horses from thorns, coronet guards and aprons are effective. The dart usually is fired from a Land Rover. Keeping a darted animal in sight is easier when the dart remains in the animal. Those darted in the rump seldom lose it even while plunging through thick brush. The horsemen follow the animal until it stops and can be restrained with rope. The truck, equipped with winch, rollers and crate, is brought up and the crate unloaded in front of the rhino. A steel plate has been placed against the crate as a step to keep the animal from tearing the skin near the toes, a difficult place to treat. After the antidote is injected intravenously, the rhino is able to stand up and walk into the crate.



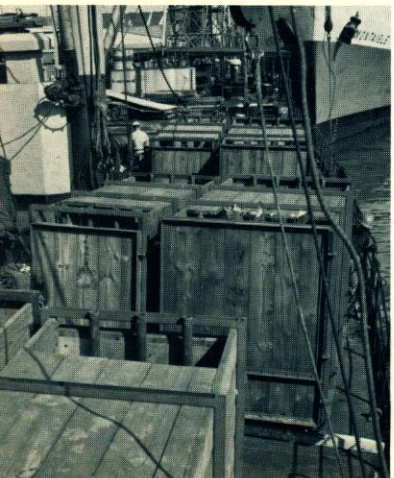
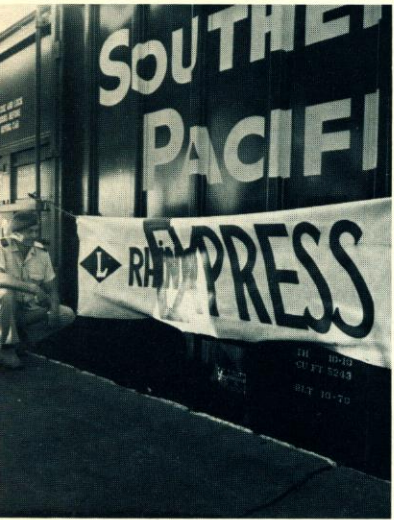
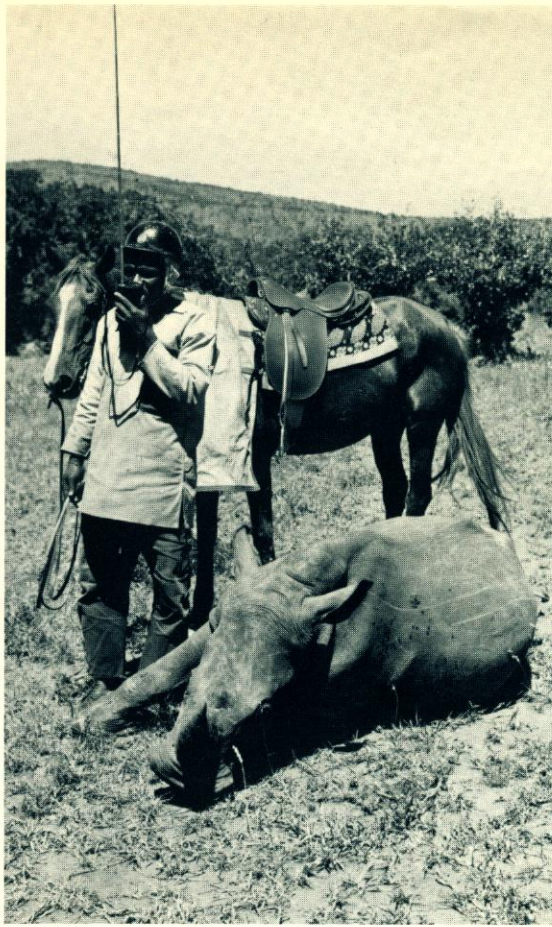
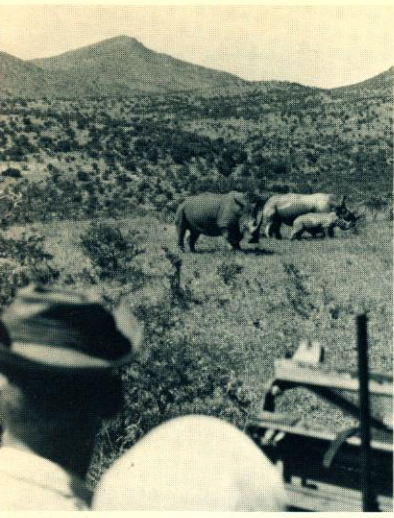
## SHIPPING

Following capture, the rhinos were taken to bomas (pens) at the Umfolozi Game Reserve to acustom them to captive conditions and exotic feeds. Whenever possible the crate in which the animal is to travel is placed in front of the pen and the animal is fed in it. The rhinos were trucked to the Port of Durban, where they were loaded aboard the *S.S. Harry Culbreath* of Lykes Brothers Steamship Company. John Fairfield, senior keeper at the San Diego Wild Animal Park (checking a crated rhino), and Ivan Steytler, of the Natal Parks staff (with Rhino Express banner), made the Atlantic crossing with the rhinos, leaving Durban on January 20, and docking in Houston, Texas, on February 13, 1971. They worked around the clock tending their charges. At Houston the cleaned and disinfected crates were loaded onto railway cars. The "Rhino Express" arrived in San Diego late on February 17. Early the next morning the rhinos in their crates were transferred to flatbed trucks for the last 30 miles of the journey to their new home. Three crates per truck moved up the highways to the San Diego Wild Animal Park in San Pasqual Valley. There the 18 crates were lined up, side by side. The rhinos and the crates were hosed clean with water, and the animals were fed before release.



Capture and shipping photos in this series as far as Durban by Bird & Leeney, Durban; others by San Diego Zoo photographers.







## A NEW HOME

Antelope already in residence at the park watched from vantage points as the 18 rhinos were set free. Mid-afternoon was chosen for the opening of the crate doors in order that the animals would not have too much time before dark to explore their new surroundings. The rhinos headed straight for the nearest waterhole, and then began to wander about in their 93-acre enclosure — two were photographed (opposite) as they roamed up the hillside in their new home.



By 1933, thirteen animals were known to have colonized in the Hluhluwe Reserve. By 1934, the world population consisted of approximately 200 animals with an estimated increase of 30 per year. Some 40 of these animals were living in the corridor between the Umfolozi and Hluhluwe Reserves. An additional 60 were known to be wandering on Crown Lands to the west of Umfolozi. The terrible drought years of 1931 to 1933 did not seem to be of detriment to the rhinoceros population. By 1936, its numbers had increased to between 250 and 300 animals. From that point on, its future through the application of modern conservation methods was assured.

By 1966, there were approximately 1,000 White Rhinos: 800 in Zululand and 200 reintroduced into other reserves and national parks in southern Africa, such as Kruger National Park and the Willem Pretorius Game Reserve in the Orange Free State.

At the present time (1971) Ian Player, chief conservator of the Natal Parks Game and Fish Preservation Board headquartered in Mtubatuba, Zululand, has indicated that it will be necessary each year to remove over 100 animals from the existing reserves so as to avoid overpopulation. A number of animals already have been exported to various foreign zoos. Last year twenty individuals were shipped to London's installation at Whipsnade, and on 17 February 1971, twenty White Rhinos were received at the San Diego Wild Animal Park, where the animals have adjusted well to their new environment. The majority of these animals are juveniles not yet of reproductive capacity. However, it is believed that two of the larger females are pregnant. The animals are free to roam over an area of 93 acres with flat to slightly undulating topography. Having been provided with the proper environmental and nutritional requirements, it is hoped this group of rhinos will be a viable reproducing captive herd. It is interesting to note that this animal, once on the verge of extinction and not exhibited in a zoological garden prior to 1946, is now the most common form of rhinoceros in captivity.



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