THE GREAT RHINO RESCUE

In a last-ditch effort to save its remaining 500 black rhinos, Kenya is relocating as many as possible to special sanctuaries

ARTICLE BY FRED K. WAWERU • PHOTOGRAPHS BY KAREN PETERSEN

BLACK RHINO PROTECTION: A PROJECT OF WILDLIFE CONSERVATION INTERNATIONAL

THERE ARE FIVE SPECIES of rhinos—three in Asia and two in Africa—and all are critically endangered in the wild. Over the past 25 years, drought, disease, habitat destruction, and poaching for their horns and other body parts have reduced the world's rhinoceros populations by 85 percent.

In Africa, the black rhino is hurtling toward extinction. During the nineteenth century, hundreds of thousands ranged over most of Africa south of the Sahara. In 1970, the estimate stood at about 60,000. Since then the numbers have dropped precipitously—from 15,000 in 1980 to about 3,700 today. In the past nine years, Kenya's population has plummeted from 20,000 to 500, despite a ban on hunting and the fact that the country has set aside a large network of national parks and reserves to protect its rhinos and other wild species.

There is still plenty of good rhino habitat left in Kenya, according to David Western, director of the New York Zoological Society's Wildlife Conservation International and chairman of the IUCN's* African Elephant and Rhino Specialist Group. Suitable black-rhino territory—primarily acacia woodlands—is shrinking at a rate of only about 1 percent per year, while the animals are disappearing at a rate of nearly 25 percent. The sharp

*International Union for Conservation of Nature and Natural Resources

Both Kenya and Zimbabwe are moving black rhinos to reserves. In Zimbabwe, a pilot (far left) spots a rhino and signals the helicopter to bring in the tranquilizing team. The ground crew (above and left) stays in contact with the helicopter by radio and, after the animal is darted, races to the site to make sure no harm comes to the drugged rhino.

Black Rhino Survival Status

Scientific Name: *Diceros bicornis*

Estimated Population: 3,700

Historical Range: Open woodlands throughout Africa south of the Sahara, excluding the equatorial rain forests

Current Distribution: Between 70 and 100 small populations scattered throughout former territory

Survival Problems: Drought, disease, habitat destruction, but mainly poaching for its horns

Official Conservation Status:
- CITES—Appendix I (threatened with extinction)
- IUCN Red List of Threatened Species—Endangered (in immediate danger of extinction)
- U.S. Fish and Wildlife Service—Endangered

decline in the black rhino's numbers is due almost entirely to poaching for its horn, which is used to fashion dagger hilts in Yemen (see "From Rhino Horns to Dagger Handles—A Deadly Business," page 44) and in making medicines in Asia.

In addition, the black rhino's social and breeding behaviors work against it. This species of rhino is solitary and the female is sexually receptive for only one or two days during her estrous cycle. Because the remaining black rhinos are scattered, the chances of a male being nearby during the female's short receptive period are very small, a situation contributing to the species' decline. Another factor is the rhino's slow reproductive rate. The gestation period is about 500 days, and the calf nurses for nearly two years. Ideally, one female can produce a calf about every 25 to 27 months during her reproductive years, which begin at approximately six or seven years of age.

I HAD MY FIRST SERIOUS ENCOUNter with the massive, primitive-looking black rhino eight years ago while studying herbivores for my undergraduate degree in zoology. At that time, I had no idea I would be spending countless hours in the field studying this dinosaurlike beast.

During the mid-1980s, much was being reported in the international press about the black rhino's plight. The tragedy of the situation spurred my interest. In an endeavor to better understand the species' natural history, I decided to study the diet and home ranges of the rhinos in Nairobi National Park.

The black rhinos there have escaped poachers mainly because the reserve is small—about 45 square miles—and literally on the outskirts of the capital city. And it is fenced, so it can be more easily patrolled than many larger, more isolated sanctuar-

Left: Once the rhino is sedated, the ground crew takes blood samples for analysis (top), loads the animal into a truck (bottom), and transfers it to a holding facility where it is given an antidote to the tranquilizer.

Opposite: Back to normal in its temporary quarters, this youngster awaits shipment to a sanctuary.

Above and opposite: When the rhinos arrive at the holding facility, guards teach them to enter crates by gradually relocating their food into the crates. As soon as several animals are accustomed to the crates, they are loaded onto a truck and driven to a reserve, where, protected from poachers, they become part of a breeding program.

In Kenya, 17 rhinos were relocated to Lake Nakuru National Park Rhino Sanctuary. The author is studying that group, monitoring their diets and territorial behavior. He has already observed breeding among them.

ies. In the past 20 years, its black rhino population has actually grown and now stands at about 50.

Another protected population has also done well: During the 1960s, about 25 black rhinos were relocated to a private ranch, Solio, which is surrounded by a fence. That population has multiplied to approximately 100.

The obvious safety of such strictly protected areas prompted the Kenyan government to collaborate with conservation agencies to form the Kenya Rhino Rescue Steering Committee, which came up with a plan to save the country's remaining black rhinos. This plan calls for the establishment of a number of special black rhino sanctuaries to protect the animals from poachers and to expand captive breeding programs.

First in the series is Lake Nakuru National Park Rhino Sanctuary. Located about 85 miles northwest of Nairobi, Nakuru encompasses 77 square miles on the floor of the Rift Valley. A shallow alkaline lake covers a third of the sanctuary and attracts huge flocks of greater and lesser flamingos—numbering a million or more—as well as about 450 other species of birds. The remaining two-thirds of the park is swamp and dry savanna inhabited by a variety of herbivores, such as hippos, waterbucks, and rhinos.

In 1987, the government erected a high-voltage solar fence around the perimeter of Nakuru to keep the wild animals inside and poachers and other people out. During that year, 17 black rhinos were translocated to join the two already there. Fifteen of these rhinos came from Solio; one male was transferred from Nairobi National Park and another male from Lewa Downs, a privately owned farm in northern Kenya.

The capture team used a single-engine plane to spot rhinos from the air. The majority of individuals chosen were subadults because they are smaller and easier to handle than adult rhinos and would adapt more easily to captivity than juveniles, who normally remain with their mothers for as long as three and a half years.

Once sighted, a rhino was darted with a tranquilizer from the air and, using air-to-ground communications, the ground team followed the target until the tranquilizer took effect. Then they tied the rhino onto a sledge, loaded it onto a truck, and transported it to specially constructed holding pens about a mile from Solio.

In the holding pen, each rhino was revived and kept there for a week or two until it became accustomed to entering a crate, which is done by gradually relocating the feeding site to the crate. The rhinos were then transported in the crates from Solio to Lake Nakuru Rhino Sanctuary, accompanied by a veterinarian. At Nakuru, the rhinos were released immediately into the southern part of the sanctuary.

Every precaution was taken to ensure the rhinos' well-being. Using tranquilizers, however, is always tricky; as with humans, each rhino reacts differently to even the safest drugs. But overall, the move went well. Relocating the animals has eased the pressure on the browsing vegetation at Solio and reintroduced a breeding group of rhinos to Nakuru.

THE FENCE THAT PROTECTS THE black rhinos in Nakuru Sanctuary also presents challenges to both animals and park managers, and it provides an opportunity to study the isolation and development of an ecosystem. Kenya's Wildlife Conservation and Management Department, which oversees the country's black-rhino rescue efforts, and Wildlife Conservation International are collaborating on a research project to review the savanna ecosystem, monitor the fate of the introduced animals, recommend rhinos and sites for future translocation attempts, and produce a long-term black-rhino management plan.

Shortly after the rhinos were relocated to Nakuru, I began to look at their diets and home ranges. My research is part of my doctoral program and is funded by WCI.

All the rhinos (10 males and seven females) have settled in and have established territories, primarily in the section where they were released. This region has dense *Acacia* woodlands with a thick undergrowth of some of the plants preferred by black rhinos. A shortage of fresh drinking water is a constant problem in the park, so water has been supplied in troughs. The rhinos use the troughs a lot during the dry season but avoid them if they can find water in shallow dams, pools, and seasonal rivers.

During the dry season, the rhinos'

ranges are larger than in the wet months. This is to be expected; the animals must look for food and water over much wider areas.

Other biological and ecological aspects of the translocation project have yet to be studied. Because the fence isolates the rhinos and other animals in the park, it limits migrations, necessitates that population sizes be kept small, and affects breeding, foraging habits, and food availability. A major aim in developing Nakuru and other rhino sanctuaries is to establish breeding stocks that can supply rhinos for reintroduction to protected areas in the species' former range. To overcome the problem of inbreeding, individuals will be moved among the sanctuaries and new animals will be captured from other areas in the wild.

Already, mating has been observed among the Nakuru rhinos, and a pregnant translocated female has given birth.

Another, small, fenced sanctuary has been set aside in Tsavo National Park. Tsavo is the largest and one of the best-known reserves in Kenya; it covers 8,000 square miles of woodlands and savannas in the southeastern part of the country. The rhino reserve—roughly 10 square miles—protects eight animals out of the 100 to 150 that remain in the entire park.

Meanwhile, plans are under way to enclose a portion of Aberdare National Park in Kenya's central highlands. This reserve is heavily wooded, which has impeded attempts to count the rhinos and to protect them from poachers. Ground surveys have placed the rhino population at 39.

Kenya's rhino-translocation program is an expensive, drastic measure designed to halt the catastrophic decline in the country's black-rhino population. The outlook is promising. A similar effort saved the southern white rhino, which numbered less than 100 in the 1920s. Today there are around 4,600, most of them strictly protected in wildlife sanctuaries.

The first seeds have been sown at Lake Nakuru National Park Rhino Sanctuary. We must now closely monitor this group to gain insight for future translocation efforts and to determine if protected populations in nature reserves are the answer to the black rhino's dilemma. □

Besides monitoring the relocated rhinos at Lake Nakuru National Park, Fred Wawern is working with the Tanzanian government to evaluate black rhino sanctuaries in that country.

Help Save the Black Rhino

In 1970, there were 60,000 black rhinos in Africa. Today there are fewer than 3,700. In response to the black-rhino crisis, Wildlife Conservation International created the Rhino Rescue Fund to support a five-point plan of action. To find out how you can help this effort to ensure the species' survival, write to Wildlife Conservation International, P.O. Box 108, Bronx, New York 10460.