



AFRICAN RHINOS

Studying Endangered Rhinos Helps Combat Increased Threats

IN PERIL

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Translocation of anesthetized black rhinoceros by helicopter in Namibia
(photo: Pete Morkel)

Due to the dedication of hard-working veterinarians, biologists, game managers, and others, the black rhinoceros continues to remain a viable, although endangered species. Increases in poaching over the last few years have threatened African rhino species and have made translocation to safer locations even more critical.

Numbers of African rhinoceros poached in South Africa in 2010 were over 330 animals, up from 90 just 2 years previously. Poaching continues to threaten black rhinoceros in Zimbabwe, Zambia and will eventually reach the largest population of southern black rhinos in the world in Namibia. In order to protect these animals, new technology to track them by placing horn transmitters and obtaining DNA samples of individuals are being used. Populations are being established in historical home ranges although this is an expensive, intensive and sometimes risky venture due to the difficult terrain, requiring hours of transport for each rhino. In order to minimize the risk to these valuable animals, research to understand the physiologic changes of the black rhinoceros during anesthesia after field capture

have been conducted in Etosha National Park, Namibia over the past two years. This has been performed as a partnership between US researchers from Cornell University, the Palm Beach Zoo and others, with the Namibian Department of Ministry of Environment and Tourism staff. Respiratory measurements were taken to evaluate tidal volumes in different position while arterial blood gases were assessed on-site using a Vetscan i-STAT 1 and CG8+ cartridge animal-side. In addition, paired samples were taken from 36 rhinoceros for analyses at base camp for blood chemistries using an Equine Profile Plus and the VetScan VS2. Data obtained from these studies provided invaluable in planning and executing a difficult translocation of anesthetized rhinos to a new location in their historic range by

hanging them by their feet under a helicopter, the only means of transport based on the terrain.

Additional preliminary data indicate that exertion from capture may result in a transitory initial hypoglycemia which the rhinos appear to recover from during the anesthetic period. Creatinine and lactate were also higher at the first sample and decreased over time. These values provide new baseline information for free-ranging anesthetized black rhinoceros that can be used to improve capture techniques to minimize post-anesthetic complications, understand physiological changes that occur with different drug combinations and conditions, and provide immediate feedback to staff during field operations.



Measurement of respiratory and blood gas values in anesthetized black rhino in Namibia (photo: Helge Denker)

The VetScan VS2 was an invaluable piece of equipment in our daily assessment and discussions of each rhino procedure. **The ability to operate the VetScan VS2 from a vehicle cigarette lighter in remote field conditions was a special feature and should not be overlooked for important remote work.** In summary, the information gathered will further aid the conservation of these endangered animals.



Did you Know?

The black rhino remains under threat. Its horn is still in demand for traditional Asian medicines, although the demand for rhino horn for dagger handles in the Middle East may have eased.

The biggest threat to rhinos now is the continuing demand for horn is for the use in traditional Asian medicines. A 2009 report by TRAFFIC and the International Union for the Conservation of Nature (IUCN) says that rhino poaching worldwide is on the rise.

The report says that most rhino horns leaving southern Africa are destined for medicinal markets in southeast and east Asia, especially Vietnam, and also China. The report highlights Vietnam as a country of particular concern - noting that Vietnamese nationals operating in South Africa have recently been identified in rhino crime investigations.

Weight

800 - 1,350 kg
(1,750 - 3,000 lbs)

Height (at shoulder)

1,4 - 1,7 m (4,5 -5,5 ft)

Length (head and body)

3,0 - 3,8 m (10 - 12,5 ft)

Anterior Horn length

0,5 - 1,3 m
(1 ft; 8 in - 4 ft; 4 in)

Posterior Horn length

0,02 - 0,55 m (1-22 in)

Lifespan in wild

30 to 40 years

Lifespan in captivity

35 years. The oldest recorded animal lived 44 years, 9 months in a zoo.

Characterisitcs

pointed hooked upper lip (prehensile lip)

