



# Aerial Census of black and square-lipped rhinoceros in northern Botswana



The long awaited aerial census of rhinoceros in northern Botswana finally got underway on the 17 September 1992, headed up by project leader Peter Hitchens and a team comprising experienced personnel drawn from the Ministry of Wildlife, Conservation and Tourism, Namibia, the Natal Parks Board, the National Parks Board of South Africa, the Department of Wildlife and National Parks in Botswana and various personnel of the Rhino & Elephant Foundation. Key areas had previously been identified after discussion with the Botswana Department of Wildlife and various people familiar with the Chobe National Park and the controlled hunting areas over which the survey would be flown.

An area covering approximately 15 000 square kilometres was traversed with two single-engine Cessna 210s piloted by Andre Pelser – chief pilot for the Rhino & Elephant Foundation – and Clifford Strydom from Namibia. Anton Walker was responsible for navigation. Peter Hitchens designated the areas to be flown which were divided up into 750 square kilometre blocks. Using two aircraft flying at approximately 50-70 feet above the ground, with the second aircraft 1 000 metres astern and 500 metres to starboard, enabled the observers in the aircraft to obtain extremely good coverage of the 2 kilometre transects that the aircraft flew.



*Andre Pelser, pilot and Anton Walker, navigator, in a steep turn during the survey*

Wake up time was 5.00 a.m. and both aircraft were airborne shortly after 6.30 a.m., heading out to the designated block which took up to three-and-a-half hours flying time to cover. Flying had to be restricted to the early hours of the morning because of the intense heat this time of the year. Added to the dangers were the large numbers of eagles and vultures that were encountered by both aircraft.

The provision of a ground positioning system (GPS) by Century Avionics of Lanseria enabled the navigator to accurately pinpoint the position of the aircraft and all known sightings of rhino.

This enormous area of Botswana has few landmarks by which to position and orientate oneself and the provision of the GPS was obviously essential for such an exercise, apart from its unique ability of being able to record precisely any information fed into it by the operator. After the morning survey flights additional flying was undertaken in the afternoon to return to areas to double check on any aspects that were considered important to the survey.

A total of 7 white rhinoceros were counted. No black rhino were found. It should be borne in mind, however, that rhinos are not easily identified from the air even with the best of teams and the final figure may be higher.

The overall expertise of those on board was considerable and the Rhino & Elephant Foundation would like to express its appreciation for the time and effort put into the aerial census by the various individuals involved.



- Andre Pelser has flying experience in excess of 2 000 hours, of which some 500 hours have been spent on aerial survey work in South Africa and Mocambique.
- Clifford Strydom is a commercial pilot operating both in South Africa and Namibia, with some 2 000 hours flying experience, of which at least 700 hours have been spent on aerial survey work for the Ministry of Wildlife Conservation and Tourism in Namibia.
- Peter Hitchins, the project leader, started his career in nature conservation with the Natal Parks Board in 1961 and has been intimately involved with both species of rhino ever since. He has some 26 scientific publications to his credit, of which 14 are on various aspects of black rhino ecology. He is a member of the IUCN's African Elephant and Rhino Specialist Group since 1981 and is also a member of the Rhino Management Group, apart from being a founder of the Rhino & Elephant Foundation and he has been involved in developments of rhino strategies in several African countries.
- Anton Walker, the youngest member of the team was charged with the responsibility of determining the precise location of the aircraft. This was an extremely demanding task as the survey aircraft had to be accurate in tracking the 22 blocks covering 750 square kilometres each. Anton currently holds a private pilot's licence.

Observers in both aircraft comprised the following people:

- John Forrest has 29 years experience in aerial census in both fixed and rotor wing aircraft as an observer for the Natal Parks Board. He has worked for them for the past 30 years having been warden in charge of Mkuzi, Hluhluwe and Umfolozi and currently holds the position of Regional Conservator of northern Natal.
- Ginger Skinner joined the Natal Parks Board in 1970 as chief pilot and currently has 15 000



flying hours to his credit with some 21 years of aerial census experience in fixed wing aircraft in all variable habitat types in Natal.

- Gordon Smith has worked for the Natal Parks Board for 19 years as a warden. Aerial census experience includes both fixed and rotor wing aircraft – mainly on black and square lipped rhinoceros. He also has been involved in individual identification programmes of the black rhinoceros in Mkuzi Game Reserve.
- Dr Michael Knight has been a research officer in the southern Kalahari for the past six years and is currently employed as a senior scientific officer with the National Parks Board. A pilot with 1 200 flying hours, he has had more than nine years of aerial census experience in the Kalahari, Richtersveld, Augrabies and Vaalbos National Parks, which has also included the monitoring and feeding ecology of black rhinoceros in both Vaalbos and Augrabies National Parks.
- Peter Erb started his career in nature conservation in 1982, with field work on black rhinoceros in Damaraland, Namibia. On completing his university education in 1987, he joined the Ministry of Wildlife, Conserva-

tion and Tourism in 1988 and is currently employed in the Waterberg National Park. He has seven years census experience.

- Jo Tagg has been actively involved in the field of nature conservation since 1979 and is currently officer in charge of east and west Caprivi, Namibia. He has eight years aerial survey experience in both Natal and Namibia.
- Jay Killen works under Jo Tagg in the Caprivi and has extensive knowledge of the terrain adjacent to Botswana where black rhino are known to have inhabited the region in the past.
- Dr Peter Morkel is a Veterinarian with considerable experience in rhino conservation and a former employee of the Ministry of Wildlife, Conservation and Tourism in Namibia. Peter also has considerable experience in aerial census work and volunteered to assist in the survey, taking time off from the dehorning programme currently underway in Hwange National Park, Zimbabwe, where he is assisting Dr Michael Kock.
- Dr George Calef, representing the Department of Wildlife and National Parks, Bots-

*Members of the aerial census team, discussing the morning's flight. From left to right, Peter Hitchins, John Forrest and Dr Peter Morkel.*





wana, has been studying elephants for the past seven years in Chobe National Park, during which time he has been involved in extensive aerial census.

- Clive Walker, chairman of the Rhino & Elephant Foundation, assisted in the second week of the survey as an observer. He has been actively involved in rhino conservation since 1973. A former pilot, he has been involved in aerial census work since 1977.
- Thanks to Johan Kotze, the cheerful flight engineer on whom the safety of all flying personnel depended. He was responsible for the maintenance of the aircraft during the survey.

An operation of this nature could not possibly have been undertaken without the considerable support of many individuals and organisations. The Rhino & Elephant Foundation, on behalf of the Department of Wildlife and National Parks, Botswana, would like to express their grateful appreciation to the following:

World Wide Fund for Nature, Hong Kong, who provided the funding, which enabled the Rhino & Elephant Foundation to carry out the project.



Lieutenant General Ian Khama, Chief of the Botswana Defence Force, for his considerable cooperation and that of his staff.

Mazda Wildlife Fund for the provision of a four wheel drive vehicle, which enabled the Foundation to transport to Botswana all the logistical requirements for accommodating and feeding 15 people over a period of eighteen days. The vehicle proved invaluable during the survey.

Lloyd and June Wilmot, who very generously provided facilities at their base at Savuti, giving logistical support and the much appreciated assistance of their staff.

Century Avionics, Lanseria very generously provided the ground positioning system (GPS), at no cost. A detailed census of this nature could not have been carried out accurately without the provision of this equipment and a special word of thanks goes to the company concerned.

Alan Smith of the Marang Hotel in Francistown for providing free of charge the camping facilities and the generous discounted provisions for the survey.

Wildlife Broking Services for organising all aspects of insurance pertaining to the survey.

Canvas & Tent, Ladysmith, provided tents and camping equipment. The tents were absolutely essential as protection against the vast numbers of marauding hyenas, which took care every evening of any object lying around, especially shoes left out by Gordon Smith.

The assistance of the Carr-Hartleys of Kasane as well as various members of the Chobe Wildlife Trust.

The Foundation is indebted to Dave Tindall and his son Brendan, who provided a third aircraft to enable members of the team to be ferried from Lanseria, together with equipment, to Botswana. This was an extremely generous contribution and one which was greatly appreciated.

Petra Mengel and John Ilsley of the Rhino & Elephant Foundation are to be warmly thanked for all their behind-the-scenes activities and assistance and especially Petra, who took time



off to assist in the driving of the Mazda vehicle to the survey area at Savuti.

An operation of this nature is not unlike an army that cannot march on an empty stomach and here, the culinary skills of Alison Forrest surprised everyone. It was absolutely remarkable that a woman could maintain her sanity for such a lengthy period of time with an all-male survey team.

Special thanks to Natal Parks Board, National Parks Board and the Ministry of Wildlife, Conservation and Tourism of Namibia for allowing the participation of their staff.

It must be obviously clear to everyone that the survey was a team effort. The Rhino & Elephant Foundation could not have carried it out without the assistance of all those people mentioned and, in particular, we would like to thank the Department of Wildlife and National Parks Botswana for their support and for agreeing to this joint project in determining the status of both black and square lipped rhino in northern Botswana.

*The Mazda B26 4x4, which was kindly made available to the survey, en-route to the airfield for refuelling stops off at the main waterhole which was crowded with bull elephants*

