

Aerial census to gauge population trends

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The fifteenth ecological aerial survey of the Kruger National Park was conducted from May to October 1991. This survey forms part of a long-term monitoring programme in the Kruger National Park to study population trends of most of the larger herbivore species and the possible effect of environmental conditions such as rainfall.

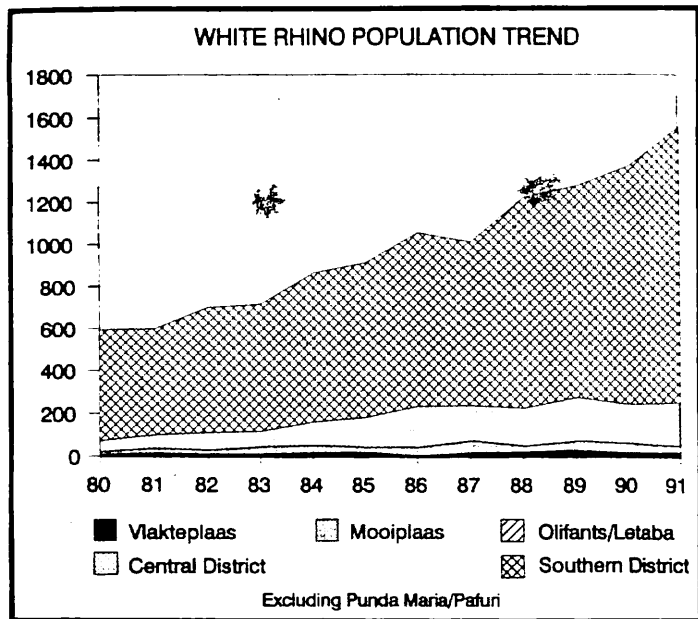
The emphasis of the aerial survey is on gauging population trends rather than determining exact numbers of animals — with the exception of elephant, buffalo and hippopotamus, of which an independent census is taken. Since 1977 the multi-species aerial survey has been conducted annually during the dry season by means of a fixed-wing aircraft at low level during an average 250 hours' flight time. In addition to zoological data, information is also collected on environmental variables which include availability of water and vegetation. Apart from the pilot and data recorder the survey team consists of four observers. The data-collecting technique has been standardised so as to ensure maximum repeatability.

Particularly dry conditions were recorded in parts of the Malelane, Lower Sabie, Olifants, Letaba, Houtboschrand, Phalaborwa, Mahlangeni, Woodlands, Shingwedzi and Pafuri districts. Ground cover was mostly very sparse in these areas. During the aerial survey a large number of seasonal pans in the western part of Mooiplaas West and Vlakteplaas West in the vicinity of the Shingwedzi River had water. This was a result of localised rain towards the end of the

1990/91 rainy season. This increased availability of surface water appears to have had an effect on the local distribution patterns of many herbivore species as reflected in the survey results. The numbers of the majority of herbivore species have declined since the previous survey in 1990 and it appears that the 1990 outbreak of anthrax in the northern part of the park affected the kudu population in particular.

The impala population remained relatively unchanged at 112 000. Increases of impala occurred north of the Letaba River and in the southern district. Impala decreases were recorded between the Letaba and Olifants rivers as well as in the central district. Zebra, the most numerous large herbivore in the Kruger National Park after impala, increased by an average 2,5 percent to a total of 32 700. Population changes in zebra followed a pattern similar to that of impala, with increases north of the Letaba River, although a decline was recorded in the southern district. As in the past, zebra concentrations were particularly noticeable in the Mlondozi area southeast of Tshokwane. Concentrations of large zebra herds northeast of Mooiplaas were most likely caused by late rain showers in the area. From 1980 onwards, the zebra population of the Kruger Park has had an average growth of 3,2 percent.

An overall decrease of 4,4 percent occurred in the blue wildebeest population, which now totals 13 800. The only increase was in Mooiplaas, while the central district's subpopulation, where about 70

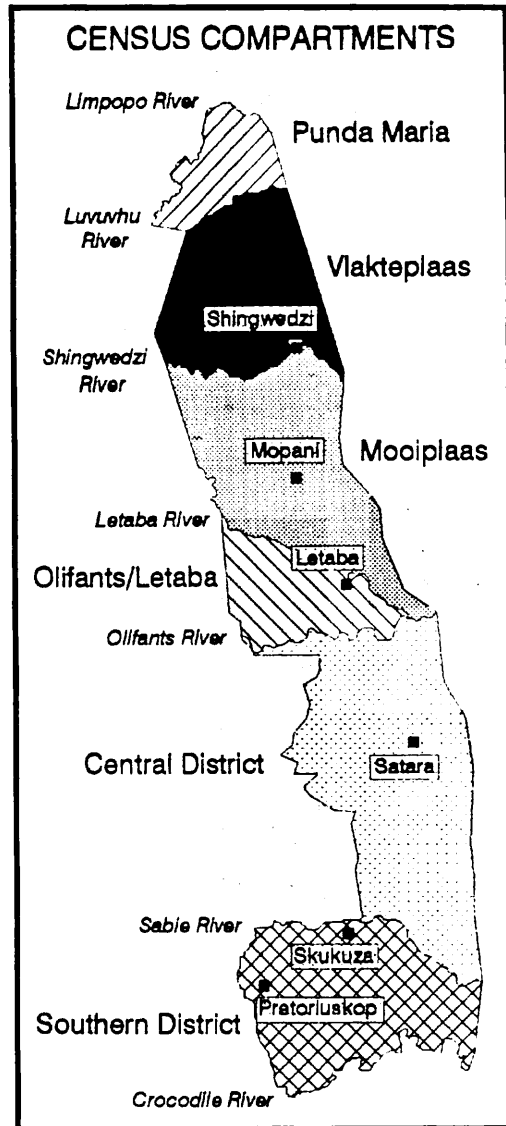


Above: The white rhino population trend. • Bo: Die bevolkingstendens van die witrenoster.

percent of the park's blue wildebeest are to be found, remained relatively unchanged. The roan antelope population continued to decline by a further 7.2 percent to a total of 155. Although the small roan antelope subpopulation in the central district remained unchanged, population decreases occurred in all the other areas.

The white rhino population continued to increase to a new record total of 1 564. Population increases of white rhino were recorded in the southern and central districts where 84 percent and 12.6 percent, respectively, of the white rhino population occur. A single white rhino was also seen northeast of Punda Maria. The average white rhino population growth since 1980 is 8.9 percent.

The 1992 aerial survey started in May and will continue until the end of August. This survey will be of particular importance as changes in population trends, as well as distribution patterns, are expected as a result of the present drought conditions in the Kruger Park.



Above: The six census compartments into which the Kruger Park is divided for the aerial survey. • Bo: Die ses sensusafdelings waarin die Wildtuin opgedeel word vir die lugopname.

Lugsensus hou oog oor herbivore

Die vyftiende ekologiese lugopname in die Nasionale Krugerwildtuin het van Mei tot Oktober 1991 plaasgevind. Dit is deel van 'n langtermynmoniteringsprogram om die invloed van omgewingstoestande op die groot herbivore te bestudeer.

Die klem val meer op bevolkingstendense as op 'n akkurate telling, maar olifante, buffels en seekoeie word in 'n afsonderlike sensus getel. Die eerste lugsensus met behulp van 'n vastevlerkvliegtuig is in 1977 gehou. Tydens gemiddeld 250 vliegure word dierkundige data, asook omgewingsfaktore soos die beskikbaarheid van water en weiding opgeteken. Die sensusspan bestaan uit die vlieënier, die dataversamelaar en vier waarnemers.

In dele van Malelane, Onder-Sabie, Olifants, Letaba, Houtboschrand, Phalaborwa, Mahlangeni, Woodlands, Shingwedzi en Pafuri was dit besonder droog. Die grondbedekking was baie skraal. Gelokaliseerde reën teen die einde van die reënseisoen het veroorsaak dat 'n hele paar van die seisoenale panne in die westelike deel van Mooiplaas-Wes en Vlakteplaas-Wes in die omgewing van die Shingwedzirivier water gehad het. Dit het die

plaaslike verspreidingspatroon van baie herbivoorspesies beïnvloed. Die meeste herbivoortalle het verminder sedert die laaste sensus in 1990. Die uitbraak van miltsiekte in die noordelike deel van die Wildtuin het veral die koedoebevolking nadelig geraak.

Die rooibokgetalle het onveranderd gebly op 112 000. Hoewel hulle noord van die Letabarivier en in die suidelike distrik vermeerder het, is 'n afname in getalle tussen die Letaba- en die Olifantsrivier en in die sentrale distrik waargeneem. Bontkwaggas, wat naas die rooibok die algemeenste groot herbivoor in die Wildtuin is, se getalle het met gemiddeld 2,5 persent toegeneem tot 32 700. Soos in die geval van rooibokke het hul getalle ook noord van die Letaba toegeneem, maar afgeneem in die suidelike distrik. Soos in die verlede was die konsentrasie van bontkwaggas besonder opvallend in die Mlondozi-gebied suidoos van Tshokwane. Die groot konsentrasies bontkwaggas noordoos van Mooiplaas kan waarskynlik toegeskryf word aan die laat reënbuie in die gebied. Die bontkwaggabevolking het sedert 1980 met 3,2 persent toegeneem.

Die blouwildebeesbevolking staan nou op

13 800, na 'n afname van 4,4 persent. Die enigste toename was in die Mooiplaas-gebied, terwyl die getalle van die sentrale distrik, waar sowat 70 persent van die park se blouwildebeeste voorkom, min of meer dieselfde gebly het. Die bastergembokbevolking het met 'n verdere 7,2 persent verminder tot 155. Hulle getalle het oral gedaal, behalwe in die sentrale distrik waar dit dieselfde gebly het.

Die witrenosterbevolking het steeds gegroei tot 'n nuwe rekordgetal van 1 564. In die suidelike en sentrale distrikte waar onderskeidelik 84 en 12,6 persent van die park se witrenosterbevolking voorkom, is toenames aangeteken. Een witrenoster is ook alleen noordoos van Punda Maria opgemerk. Die gemiddelde groei in die witrenosterbevolking sedert 1980 is 8,9 persent.

Die 1992-opname sal van Mei tot Augustus duur. Hierdie sensus word as besonder belangrik beskou omdat dit waarskynlik belangrike verskille in bevolkingstendense en verspreidingspatrone sal toon weens die huidige droogtetoestande in die Nasionale Krugerwildtuin.

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