

BACKGROUND AND STATUS OF AFRICAN LION IN THE ETOSHA NATIONAL PARK  
AND THE SKELETON COAST PARK OF NAMIBIA

ETOSHA NATIONAL PARK

Etosha (meaning "The Great White Place" in the local language), has always been associated with lions in the minds of people. Situated in the north of Africa's newest sovereign state, Etosha presently covers an area of 22270 km<sup>2</sup>, a considerable reduction of its previous huge size of 99526 km<sup>2</sup>. Proclaimed in 1907, Etosha owes its colloquial name to the vast (c.5000 km<sup>2</sup>) saline depression known as the "Pan" which occupies its eastern sector.

The earliest estimate of lion numbers in Etosha was in 1926, when about 200 were said to be present. The natural system was still very much intact at that stage and lions were accordingly forced to migrate with their food supply when the wildebeest and zebra herds trekked long distances to avoid the periodic droughts which characterize this semi-arid part of south-western Africa. Then in 1961 a foot-and-mouth epidemic swept through the country and 2.5 metre-high veterinary cordons were erected along Etosha's boundaries, spanning vast tracts of hitherto unfenced areas. This resulted in the demise of the majority of wildebeest, whilst zebra seemed more resilient to the restrictive fences. Prior to the fencing, two other man-made events had occurred, seemingly innocuous at the time. They were however destined to cause immense changes in the natural system operating within Etosha.

Firstly, a series of artificial waterpoints were built from 1951 onwards to provide tourists with improved opportunities for game-viewing. This provided lions with the chance of colonizing previously uninhabitable areas. The drinking troughs also made hunting and ambush easier, because their small size concentrated prey species into an unnatural configuration when drinking

Secondly, the excavation of hundreds of gravel pits for building tourist roads created a situation in which a lethal disease, namely anthrax Bacillus anthracis could establish itself. Anthrax flourished in the highly alkaline, limestone soils of Etosha and its ability to survive was boosted by the fact that it is a spore-forming bacteria which, when exposed to the air, forms a protective capsule, making it viable for decades. The herbivores (and lions) drank from these numerous gravel pits during the rainy season. Whilst wildebeest and zebra are susceptible to anthrax, Etosha's lions apparently developed an immunity and consequently could feed to repletion on the hundreds of anthrax-infected carcasses which became available for scavenging during anthrax epidemics. Thus prey vulnerability and lion immunity to anthrax favoured the opportunistic and dominant predator-scavenger in Etosha, which responded by increasing significantly in number from the earlier figure of 200 to 500 lions by 1980.

To illustrate the complexity of change in trophic relationships which these man-made changes wrought not only in the lion population, but to the entire spectrum of large carnivores and herbivores, it is worthwhile to note the following. As wildebeest and zebra numbers became decimated, lions shifted their prey preferences to the abundant oryx and eland, causing them to decline. Unlike the plains-loving wildebeest and zebra, oryx occur throughout Etosha, whilst eland's mode of feeding, namely woodland browse, make them relatively secure from the hazards of the anthrax-infected plains. In addition, the lion and spotted hyaena, which is the second most dominant predator-scavenger, competitively suppressed the cheetah and brown hyaena. This in turn, together with the abundance of anthrax carcasses, brought competitive relief for the black-backed jackal which increased dramatically from hundreds to an estimated 2000. The herbivores also showed competitive release from the diminished wildebeest and zebra numbers, when the smaller, relatively anthrax resistant springbok (which also profitted from the demise of its major predator, cheetah), increased significantly from 10000 to 30000. Thereupon, lions began to hunt and kill noticeable numbers of springbok. Moreover, elephant and black rhino began dying of anthrax in large numbers, adding greatly to the food supply of the scavengers. In one period almost 300 elephant carcasses were located, many of which could keep a lion pride in food for up to 10 days. To compound this disease problem, kudu which had increased their numbers greatly because of bush encroachment, contracted rabies and several thousand died in Etosha within 2 years, providing yet more carrion for the scavengers. Through these episodic events, the lion emerged a clear winner and demonstrated its ability as an outstanding and opportunistic predator and scavenger.

The question may well be asked as to what could possibly go wrong for the lions under these ideal food and water conditions? Well, it did and the turning point in this lion paradise came in 1980 with the advent of the worst drought which Namibia has experienced for the past century, a situation still persisting to the present. The failure of the rains caused the plains animals to move off the depleted grasslands, forcing lions to shift their territories to the woodlands, where their living space became progressively more restricted. It is well known that lion pride areas serve as spacing mechanisms and therefore the displaced lions found themselves wedged between a drought-stricken plains system and adjoining farmland. Their choice was predictable and many subsequently trespassed onto farms via fence breaks or by burrowing. Here they found short-lived relief by way of domestic stock, which they proceeded in typical lion fashion to kill in large numbers. (One infamous, nomadic male was responsible for predating well over 100 cattle, horses, donkeys and goats in the space of 2 years before he was tracked back into Etosha by rangers and shot). In the 10-year period (1980-89) at least 320 lions were confirmed destroyed on farms bordering Etosha. The farmers' wrath was great and methods included shooting, gin-trapping, strychnine poisoning and an incident in which a farmer's rifle failed at the critical moment and he resorted to knocking down and driving over wounded lions with his vehicle when they were reluctant to leave a carcass on his farm!

Thus Etosha's lions underwent a macabre culling which reduced their numbers ironically enough to the earlier figure of 200. They have during the past few years again shown their resilience to setbacks and present estimates are that the lion population of Etosha has increased to at least 300. Because drought conditions still predominate, the majority of lions appear to be in the woodlands where the prey is located, instead of on the plains. What the future holds for Etosha's lions will depend on the retention of this conservation area by the incoming Government for Namibia. Fortunately the policy towards conservation and wildlife appears to be one of protecting national assets as indeed Etosha is. This world famous National Park is the single biggest reason why tourists visit the country and when they arrive there, the 2 questions most often asked are : "Where are the lions and where are the elephants ?" That just about sums up the justification for ensuring the survival of free-ranging lions in Namibia.

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