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# Regional Assessment of the Status, Distribution and Conservation Needs of Cheetahs in Southern Africa

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A country by country assessment of the status, distribution and conservation needs for cheetah *Acinonyx jubatus* in the southern African region indicates that this area holds a significant proportion of the global population of cheetahs, at least 4 500 adults. The largest proportion of this regional population occurs in four range states, Namibia, Botswana, South Africa and Zimbabwe where it is under threat as a result of conflict with livestock and wildlife ranchers, removal of animals (both legally and illegally) for trade, loss of habitat and prey base due to an increasing human population and possible health and genetic problems. Although more information is required, it appears that cheetahs are present in the other range states, but in low numbers and disjointed populations. No information is currently available regarding threats to cheetahs in these countries.

The cheetah is the only species in a unique genus, and there is concern that it is declining over its range, both in terms of overall numbers and in terms of areas that it occurs. As a result of this concern, various initiatives have started to document where cheetahs still occur, their status in these areas and the threats to their survival. In December 2005 at a meeting of conservationists working in the Southern African region of the cheetah's range, it was agreed that the status, distribution and major threats to the cheetah would be documented for all range states within the region. The findings of these assessments are summarised in this paper, and full reports are included in this Special Issue of Cat News.

## Status and distribution within the Southern African region

**Overall.** It was documented that cheetahs occurred within all the range states included in this assessment, with the possible exception of Malawi where only one protected area was reported to have cheetah, but this report is contested. From the information collected cheetahs occur predominantly in the central area of the southern African region, including the central and western districts of Namibia, Botswana, Zimbabwe (except for the populated north eastern districts, and the northern dis-

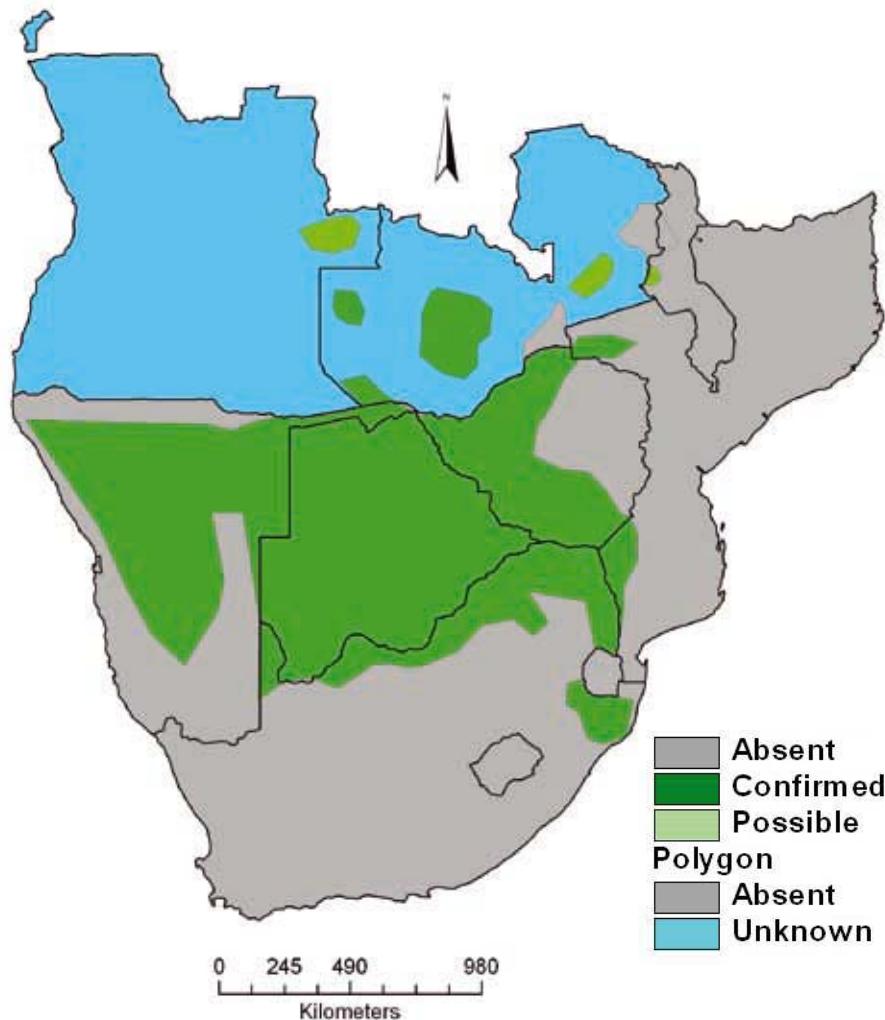
tricts of South Africa (Fig. 1). Cheetahs were also reported as present in one protected area in Angola, from protected areas in the west and central part of Zambia, and from a small area in the Tete province of Mozambique, and also the Limpopo National Park in Mozambique (Fig. 1). There were large areas of Angola and Zambia, for which no information was available, and information from Mozambique was limited, but the indications are that the species is absent from much of the country.

Population estimates for many of the range states were not available, and only rough estimates were given. The minimum population of adult cheetahs in the region can be tentatively estimated to be not more than 5000: Namibia – 2000; Botswana – 1800; Zimbabwe – 400; South Africa – 550; Angola – not known; Mozambique - <50; Zambia – 100; Malawi - <10.

**Major range states within the region.** The major range states within the region are Namibia (with the largest documented population of cheetah ranging from 2000 to a possible 5000). The largest proportion of the population occurs on commercial farmland as these areas provided refuges from competition with other large predators. Numbers in protected areas are relatively low. Overall, it is felt that the population is

increasing. Botswana has the next highest documented population of cheetahs, distributed throughout the country. The highest densities are recorded from the south western part of the country, with the eastern, more populated districts, recording the lowest densities. South Africa's population is well studied and is confined to the northern part of the country. Approximately 250 cheetahs occur in protected areas, with a similar number occurring on commercial farmland. Cheetah in Zimbabwe are also documented to be more common on commercial farmland, especially in the southern lowveld area of the country. Estimates vary enormously depending on the method used, but it is acknowledged that at least 400 cheetahs occur in the country, and possibly as many as 1500. Zimbabwe has undergone significant land use change in the last 7 years, with 90% of farmland being converted from large scale commercial farmland to small scale resettlement farmland. The impact on the cheetah population is not clear, but indications are that the population may be declining due to this increase of human activity and loss of prey.

**Other range states within the region.** Cheetahs were reported as present in protected areas of Angola (Kameia National Park in the north eastern cor-



**Fig. 1.** Distribution of cheetahs in Southern Africa. The most important range countries in this region for the conservation of the species are Namibia, Botswana, Zimbabwe and South Africa. In the other countries, cheetahs have lost most of their ground.

ner of the country); Zambia (Liuwa Plains, Sioma Ngwezi and Kafue National Parks); Malawi (Kasungu national Park, although this record is contested) and Mozambique (Limpopo National Park). Cheetahs were also reported as present in the subsistence farming area around the Caborra Bassa area. However, overall these range states do not appear to have large populations of cheetahs, either reporting that cheetahs have never been common (Zambia) or that cheetahs have disappeared from large areas of the country (Malawi and Mozambique).

#### Major Threats identified

In all the major range states the main threat to the survival of the species is conflict with livestock and wildlife ranchers. In Namibia this has histori-

cally been a major cause of death and removal of cheetahs from the wild, although there is evidence that this threat is reducing. Retaliatory killing was also reported as a major problem both now and historically in South Africa and Zimbabwe. In the other range states no conflict was documented during this assessment, perhaps due to low numbers of cheetahs, and lower densities of livestock. Other threats reported included the following:

- Capture of wild cheetahs for live sales. This is especially a problem in Namibia, Botswana and South Africa.
- Decreasing wild prey base. This is a concern in Zimbabwe.
- Conflict with other large predators in protected areas, reducing the suitability of such areas for cheetah conservation.

- Bush encroachment as a result of historical over grazing. In Namibia this is documented as both a direct and indirect threat to cheetah as it reduces hunting success of the species, as well as reducing the overall productivity of ranches increasing intolerance to livestock depredation by cheetahs.
- Unregulated captive breeding. This is linked to the illegal trade in wild cheetahs as it is known that many of these cheetahs end up in captive breeding centres. This is especially a problem in South Africa.
- Due to the loss of range at the end of the last glacial period the few surviving cheetah experienced at least one severe demographic bottleneck that potentially significantly reduced levels of molecular genetic variation. The bottleneck and associated loss of genetic variation have been linked to several important life history characteristics of cheetah including relatively low levels of normal sperm in males, focal palatine erosion (FPE), kinked tails, and an increased susceptibility to infectious disease agents.

#### Overview of Policy and legislation

Policy and legislation varies across the range states:

- The cheetah is listed as a protected species in Zambia, Mozambique and Malawi where cheetahs cannot be destroyed.
- It is gazetted as protected species in Botswana and Zimbabwe but cheetahs can be destroyed with a permit from the Director of the relevant Wildlife Management Authority.
- It is gazetted as a protected species in Namibia, but can be destroyed to protect life and property without permission from a government authority.
- In South Africa legislation regarding the protection of cheetah is complex as each of the nine provinces has its own legislations, and there is separate legislation for protected areas as they fall under a different legal entity. However, within all the existing legislation there is some degree of protection afforded to the cheetah, and removal or destruction of animals requires a permit.

The cheetah is listed as an Appendix I species under the Convention in International Trade in Endangered Species

**Table 1.** Summary of the status, distribution and major threats to cheetahs in the Southern African region.

Country	Estimated minimum population	Trend	Occurrence (%) of country)	Major threat	Legal status
Angola	Unknown but present	Unknown	Unknown	Unknown	
Botswana	1800	Increasing	100	Conflict with humans	Protected species
Malawi	< 25	Decreasing	5	Habitat loss	Protected species
Mozambique	<50	Unknown	5	Unknown	Protected species
Namibia	2000	Increasing	50	Conflict with humans	Partially protected species*
South Africa	550	Increasing	10	Conflict with humans	Protected species
Zambia	100	Unknown	Unknown	Unknown	Protected species
Zimbabwe	400	Decreasing	60	Habitat loss	Protected species

\* Cheetahs can be destroyed without a permit if threatening life or property

(CITES). All the range states within the region are signatories to this convention and therefore cannot trade in live animals or products with, unless they have been granted a CITES quota. Namibia, Zimbabwe and Botswana all have annual CITES quotas to enable cheetahs to be traded to offset the costs borne by communities living with the species (150, 50 and 5 respectively). In all range states there does not appear to be clear legislation regarding the sale and movement of cheetahs bred in captivity and this of major concern, as it is a loophole for trade in wild cheetahs that are moved to captive centres.

#### Ongoing efforts to conserve the species and recommended solutions

In all the major range states efforts are ongoing to find solutions to the threats mentioned above. Current efforts include:

- Improving awareness of the importance of the cheetah especially within governments and management communities such as commercial and subsistence farmers.
- Improving livestock husbandry to reduce depredation by cheetah and improve tolerance of livestock and wildlife producers.
- Encouraging the formation of conservancies to allow for more effective management of wildlife and cheetahs.

- Relocation of problem cheetah to areas where they are tolerated.

#### Other solutions recommended by each country include

- Effective regulation of captive breeding centres as many of these are conduits for trade in cheetahs caught in the wild.
- Effective policing of borders to prevent the movement of illegally caught wild cheetahs, especially from Namibia and Botswana to South Africa.
- Increased research into the conservation needs of the species, especially the impact of increasing human populations and decreasing wild prey bases, and including an assessment of the minimum area required to sustain a viable population, as well as health and genetic threats.
- Increased education at all levels of society.
- Evaluation of alternative livelihoods for communities currently dependent on livestock to reduce conflict with all predators including the cheetah.

to the survival of the species (Table 1). Trade in live animals is also of concern as many of these animals originate in the wild. Disjointed and unclear policy and legislation in the region hampers efforts to control retaliatory killing and removal of cheetahs in each of the range states, and there is a need for policy and legislation to become more regional (Table 1).

In the four major ranges states conservation initiatives are ongoing to try and reverse these threats, but more support and resources are required. The region already has a history of working across boundaries to try and share experiences and conserve the species, but more transboundary initiatives are required, given that many cheetah populations in the region appear to exist across national borders (see Fig. 1). There is also a need to determine the status and distribution of the species in the poorly documented range states that could have viable populations of cheetahs present that are also under threat.

#### Conclusions

The Southern African region still holds a significant proportion of the overall global cheetah population (Table 1). However, this population is under threat from an increasing human (and subsequently livestock) population resulting in an increase in conflict that is detrimental