

# Endangered Wildlife Species in Botswana

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## Introduction

The conservation of rare and endangered wildlife species is an integral part of the policy of the Department of Wildlife, National Parks and Tourism in Botswana. The Fauna Conservation Proclamation of 1961 provides for the gazetting of species as conserved animals. As such they enjoy full protection and may not be hunted except in the defense of life and property. The appendix lists all species included in the category of conserved animals.

Realizing that the protection and conservation of wildlife is also dependent upon the protection of appropriate types of habitat, the Botswana Government has declared approximately 17 percent of the country's surface as National Parks and Game Reserves. These Parks and Reserves cover a cross section of all the major habitat types and thereby ensure that rare and endangered species have adequate refuges for their continued survival.

## Definition of terms

Prior to discussing the status of various wildlife species located in Botswana, it is necessary to consider the definition of terms which collectively refer to the relative scarcity in actual numbers and/or distribution of different species of wildlife.

Since relative scarcity is a function of the area considered, it is particularly important that one specify clearly the perspective from which one views the problem. For example, a species which may be perceived as very scarce on a worldwide scale may be quite abundant and in no danger on a national scale. Similarly, a species which is widely distributed and abundant on a worldwide scale may be viewed as very scarce within a particular nation. It is, in fact, this relative perspective which accounts for the variation in 'conservation ethic' among people in different parts of the world. For example, although Americans cherish their few remaining grizzly bears, many Africans still fear what they perceive to be the all too abundant and dangerous lion. The will to conserve wildlife, or any natural resource for that matter, is then directly related to one's awareness of the relative scarcity of that particular resource.

The terms proposed in the IUCN Red Data Book (Fisher *et al.*, 1969, as quoted by Bothma, 1975) take into account the importance of specifying the geographical area considered when discussing the scarcity of wildlife. For this reason, this paper uses the following four categories, which are based on those outlined in the IUCN Red Data Book and further discussed by Bothma (1975) in his paper describing the conservation status of larger mammals in the context of southern Africa. Unless specified otherwise, the area considered is limited to Botswana.

**Category 1. Extinct:** Taxa occurring in the area (i.e., Botswana) in recent times but no longer found there.

**Category 2. Threatened with extinction:** Corresponds with the terms 'endangered' and 'vulnerable' as used by Fisher *et al.* (1969), (i.e., taxa in immediate danger of extinction: continued survival unlikely without the implementation of special protective measures).

**Category 3. Rare:** Taxa with small populations which are not at present threatened with extinction but which are not at present threatened with extinction but which are at risk due to

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## Section II

## Notes

their localization within a restricted geographical area or habitat or thin scattering over a more extensive range.

**Category 4. Safe:** Taxa apparently safe from extinction because of conservation measures and population status.

#### Discussion

The reasons why a particular species may be scarce in Botswana are manifold and can be listed as follows:

- 1) Limited distribution within Botswana due to scarcity of adequate habitat.
- 2) Displacement of the species from suitable habitat by competing land uses and man's activities.
- 3) Excessive hunting of the species in the past combined with natural or man-induced changes in habitat.

In most cases a combination of all three factors has contributed to the scarcity of the species.

#### Categories 1 and 2: Extinct and Threatened with Extinction

Although numerous species have become extinct throughout the world, all species which occurred in Botswana in the recent past still inhabit the country. The white rhinoceros, however, deserves special attention since it was probably exterminated in Botswana around the turn of the century due to excessive hunting and habitat changes (von Richter, 1973). Smithers (1971) summarizes accounts of its former distribution. Through Botswana's participation in an international translocation program, the species has been re-introduced and from preliminary evidence appears to be reviving. The first four white rhinoceroses from Zululand reserves in South Africa were re-introduced into Chobe National Park in 1967. Approximately 50 more were translocated into Chobe National Park and Moremi Game Reserve during 1976. Although preliminary evidence indicates that the population is increasing, the white rhinoceros will continue to be categorized as 'threatened with extinction' in Botswana until conclusive evidence suggests that its survival has been ensured.

#### Category 3: Rare

Species which are not at present threatened with extinction, but which are classified as 'rare' in Botswana, because of localization within a restricted geographical area of habitat, include the puku, oribi, klipspringer, mountain reedbuck, waterbuck, black rhinoceros, crocodile, cape vulture, yellow spotted dassie, cape clawless otter and the spotted-necked otter. All of the species listed as rare are gazetted as conserved animals under Botswana law, with the exception of the crocodile.

The entire population of puku in Botswana, amounting to approximately 120, is limited to a narrow belt of suitable habitat along the Chobe River in Chobe National Park. The waterbuck is confined to the riverine vegetation of the major rivers, parts of the Okavango Delta in northern Botswana and the Limpopo River in the east. Oribi are confined to suitable open grassland habitat in north-eastern Botswana, extending in a narrow belt westward to the Kwando River.

The mountain reedbuck is restricted to rocky hillsides in south-eastern Botswana. As this part of Botswana is heavily influenced by human populations, past hunting pressures and alternative land uses have greatly reduced the population of mountain reedbuck. The klipspringer is also confined to rocky hills and kopjes located in south-eastern Botswana,

while the yellow spotted dassie is restricted to rocky habitat in the east-central portion of Botswana. Both the spotted-necked and cape-clawless otter are limited in their distribution to the permanent waterways of northern Botswana, including the Okavango-Kwando-Linyanti-Chobe system.

Although the black rhinoceros did not incur the same fate in Botswana as its relative, the white rhinoceros, it is nevertheless a very rare species. According to records of earlier travellers, hunters, and missionaries, the species was once widespread (Smithers, 1971). Today its distribution is confined to northern Botswana in the vicinity of the Kwando River (near the Caprivi), the Selinda Spillway, isolated parts of Chobe National Park and the Okavango Delta, including Chief's Island. Although Smithers (1971) estimates approximately 20 animals, no detailed survey has been conducted to assess the total population and present distribution of the black rhinoceros in Botswana (von Richter, 1973).

The crocodile, which is highly acclaimed as an endangered species on a worldwide scale, and was put on Appendix 1 at the Washington Convention signifying its rarity, is presently categorized as 'rare' in Botswana. Under Botswana law the crocodile is currently listed in the third schedule of the Fauna Conservation Proclamation (i.e. it may be hunted on a supplementary license). A small number are taken annually by sport hunters, and tribesmen will occasionally shoot the animal in defense of their property. The species is widely distributed in the Okavango River and Delta area and is also found in the Kwando-Linyanti-Chobe system; occasionally it is reported in the Boteti and the Limpopo rivers. A detailed study of the biology and ecology of the crocodile is presently being conducted in the Okavango River and the Delta. Preliminary results indicate that the population is recovering from past excessive hunting. In restricted areas the species suffers from the destruction of suitable breeding habitat.

Although Botswana remains one of the few strongholds in southern Africa for the Cape vulture (*Gyps coprotheres*), only four breeding colonies have been identified: Manyelanong, Manyana, Otse, and Baratani — all on cliffs located in south eastern Botswana. These colonies are under continual surveillance by Ledger and Mundy (1975). The colony at Manyelanong (near Otse) will be gazetted shortly as a sanctuary; efforts are also being made to proclaim the colony at Manyana as a reserve. A fifth colony was recently discovered at Tswapong Hills (Beesley, personal comm.).

#### Category 4: Safe

With the exception of the species listed previously as 'threatened with extinction' or 'rare', all other species in Botswana are classified as 'safe' in the context of this report. The cheetah and brown hyaena, however, deserve special consideration as they have been acclaimed as endangered on a worldwide scale.

Although presumably scarce in absolute numbers, the cheetah is widely distributed throughout Botswana. In addition, cheetah occur in all the major national parks and game reserves, and their survival in those protected areas seems to be guaranteed. Outside protected areas, the cheetah, being a conserved animal, seems most affected through displacement from suitable habitat by competing land uses.

The brown hyaena is distributed throughout the dry open scrubland and woodland savanna of Botswana and its existence appears secure in two protected areas — the Central Kalahari Game Reserve and Gemsbok National Park. Relatively little is known about the brown hyaena due to its secretive nature, and the species is presently the subject of a detailed study in the Central Kalahari Game Reserve.

Depending on one's perspective, the roan and sable antelope may be classified as either 'safe' or 'rare' in Botswana. Based on the infrequency with which they are contacted, they might be considered rare; the populations of both species are probably small. Both species,

however, are widely distributed over the northern third of Botswana, and some of this area is protected in the form of Chobe National Park, Nxai Pan National Park, Moremi Game Reserve, and the Makgadikgadi Pans Game Reserve. The species suffers primarily from the alienation and degradation of suitable habitat.

A number of additional species are also gazetted as conserved animals; with few exceptions, however, these animals are by no means endangered or rare in Botswana. The giraffe and hippopotamus have been hunted excessively in the past, and together with changes in the habitat, their distributions have been curtailed considerably in Botswana during the last few decades. With their gazettement as conserved animals and the protection of suitable habitats, their survival appears secure. The serval, black-footed cat, aardwolf, civet, honey badger, pangolin, lesser galago (night ape), and the antbear are considered 'safe' as they are relatively common in areas of suitable habitat. Their inclusion in the list of conserved animals is primarily due to the fact that some of the species were hunted rather indiscriminately in the past for their furs and skins. It was feared that the export of these skins would eventually contribute to significant reductions in the populations.

Similarly, the inclusion of many bird species on the list of conserved animals was primarily a precautionary measure to stop the destruction of nesting-breeding sites and the killing of these birds. The fishing owl (*Scotopelia peli*), however, has a very restricted distribution in the riverine forest along the Okavango River and on the wooded islands on the Okavango Delta; for this reason the species might be considered rare in Botswana.

Greater and lesser flamingoes are reported seasonally in very large numbers at Lake Ngami (Dawson and Jacka, 1975) and the Makgadikgadi Pans (Parker, 1975). Parker estimated a total of approximately 1.7 million flamingoes of both species. A considerable number appeared to be flightless, immature lesser flamingos, indicating that the pans are used as breeding grounds. White and pink-backed pelicans are reported to use Lake Ngami seasonally in large concentrations, where the former species has been breeding successfully (Dawson and Jacka, 1975). In the southern African context both flamingos and pelicans should probably be considered rare. Taking into account the few known breeding sites in the area, it may indeed be justified to call their survival threatened with extinction. A more detailed survey of the whole region is, however, required to adequately determine their status.

### Summary and conclusion

The conservation of endangered wildlife has received much attention by people throughout the world. Viewed from the international perspective, Botswana appears to be especially fortunate in that all of the species which have inhabited the country in the recent past continue to find the area favourable to their existence.

From a national perspective only the white rhinoceros, which was recently re-introduced after its extermination at the turn of the century, is presently considered 'threatened with extinction.' Eleven additional species are classified as 'rare' in Botswana due to their small populations and restricted distribution. All other species existing in Botswana, including those receiving special protection are considered 'safe.'

Three main reasons account for this relatively fortunate situation. First, prior to the last few decades the impact of man on wild animals and their habitats has been relatively insignificant compared to that occurring in many other countries. Second, in an effort to protect those species which are especially vulnerable, the Botswana Government provides for the gazettement of species as conserved animals. Third, a cross section of all the major habitat types, amounting to approximately 17 percent of the country's surface area is protected as National Parks and Game Reserves - thus ensuring that rare and endangered species will continue to have adequate refuges for their survival.

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### APPENDIX

#### Conserved Animals of Botswana

Antbear	Yellow-spotted dassie
Aardwolf	Waterbuck
Black-footed cat	All cranes
Brown hyaena	All eagles
Cheetah	All egrets
Civet	Fishing owl
Giraffe	All flamingoe
Hippopotamus	Hammerkop
Honey Badger	All herons
Klipspringer	All jacanas
Mountain reedbuck	Kgori bustard
Night-ape (lesser galago)	All pelicans
Oribi	Secretary bird
Otter	Spoonbill
Pangolin	Stanley bustard
Puku	All storks
Rhinoceros (black and white)	All vultures
Roan Antelope	
Serval	
Vaal rhebok	