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Abstract: The aim of the Global Cheetah Project is to assess the cheetah's status all over its range and to propose a plan for the conservation of the species, including technical solutions to be used. During the phase I of the project, five southern African countries have been surveyed, in a five months period: Malawi, Botswana, South Africa, Namibia and Zimbabwe. The survey has covered the geographical location of populations and their size, and the identification of the threats. The survey was done through a questionnaire.

GLOBAL CHEETAH PROJECT  
PHASE I

CHEETAH STATUS IN SOUTHERN AFRICA  
Preliminary report

I. Aims of the survey.

The aim of the Global Cheetah Project is to assess cheetah's status all over its range and to propose a plan for the conservation of the species, including technical solutions to be used.

During the phase I of the project, five Southern African countries have been surveyed, in a five months period: Malawi, Botswana, South Africa, Namibia and Zimbabwe. The survey has covered:

- the geographical location of the cheetah populations and, for each of them, an estimation of their size and a collection of the ecological parameters of its environment;
- the analysis of the threats existing on these populations and a first approach of the technical options that could minimize them;
- the meeting with the officers in charge of wildlife and the scientists who could help to develop the future conservation strategy.

II. Methods.

1. Creation of a connections' network.

On arrival in each country, meetings are organised with the major wildlife officers and scientists to collect the data locally gathered on cheetah and its prey and be aware of the pressures the species suffers and the conflicts it may generate. The willingness to take part in a overall strategy for cheetah conservation is assessed as well as the infrastructures available.

## 2. Interviewing campaign and visit to key areas.

After the first meetings, an interview campaign is launched all over the country. It is aimed at every person in contact with some part of cheetahs' habitat within the country, either showing a direct interest for the species (like scientists, hunters, tourist guides or photographers) or an indirect one (like farmers, taxidermists, forestry officers). The aim of these interviews is to collect:

- as many cheetah's observations as possible, from which a distribution of the species in each country will be build, and obtain data on the structure of the cheetahs' groups (size and sexes) and some ecological parameters about the environment where these sightings were made;
- all the local opinions about the need and ways to conserve cheetahs

Some particular cheetah populations are discussed, prior arrival or during the meetings, as especially valuable for the species conservation either for the high number of animals that they hold or for their position connecting two other cheetah groups or because they are highly threatened. Particular attention is devoted to their study.

## 3. Questionnaire.

The launch of a written questionnaire follows, where possible, the interview campaign and, considering the broader number of people contacted, improves the accuracy of the results. This method of data collection has, unfortunately, not yet been authorized in all the countries surveyed.

## III. Cheetah's status country by country: executive summary.

### III.1. Malawi.

Cheetahs have never been numerous in Malawi because of a high human density (locally 300 people per km<sup>2</sup>) giving little free areas of miombo savannahs that hold a low prey density. The only potential habitats still available for cheetahs are the three protected areas along the country's western boundary. Reliable sightings of solitary animals have been recently made in Nyika national park (1986) and Vwaza Marsh game reserve (85/86). Considering the highly populated regions that border these protected areas on Malawian side it is very likely that these animals came from Zambia.

Sightings are more regular within Kasungu national park and a small resident group (of about 10 individuals) may still live in the extreme South of the park around Chipiri area.

Despite some individuals being still present, the cheetah is nearly extinct in Malawi but the recent observations of vagrant animals proves that some communication still exist between the Western Parks and areas holding cheetah populations in Zambia. It is of prime importance for the future of cheetahs in the region that these linking ways are maintained to reinforce the population living along the border in Zambia and up to Luangwa valley (by conserving for Zambian cheetahs an access to Malawian space and prey and keeping an open area for future reintroductions in Malawi).

### III.2. Botswana.

Botswana holds one of the largest cheetah population of the continent, second only to Namibia in Southern Africa with approximately 1500 (1000-2000) animals. This is due to a very low human density (2.4 people/km<sup>2</sup>) and a low level of disturbance at least until 10 years ago when the country suddenly begin to develop. Cheetahs are now under three pressures, the shrinkage of sustainable habitat due to the development of cattle raising, the poaching of their prey and the direct killing for domestic herds protection. Cheetahs are found in all the protected areas of the country (that represent 18% of the territory) and everywhere out of the protected network except within the human concentration area stretching from Lobatse to Francistown and the driest part of the Kalahari "desert" holding to few prey to sustain them. The distribution has not changed very much during the next 15 years (cf Myers 1975 report), except that it has shrunk near human settlements; but the density of cheetahs within this distribution area seems to be much lower. Despite the fact it is legally protected as a conserved animal that cannot be hunted, cheetah can be shot for livestock defence even before any damage has been noted. This provision leads to abuses and systematic destruction of cheetahs that occur near the cattle-post.

It is an interesting point that big groups of cheetahs (5 to 10 and up to 13) are often reported in Botswana especially in the areas free of lions and hyenas. Botswana is a key country for cheetah conservation in Southern Africa because it holds the second largest concentration of cheetahs of the area and because it sits in the middle of the other countries and it therefore supplies these other countries with some animals. There are still vast undisturbed areas that shelter viable cheetah populations and can be managed to improve the species conservation before the country gets more developed (ie by setting up corridors between the cheetah groups and creating multiple use areas including a wildlife exploitation side).

### III.3. South Africa.

In the past, cheetahs were present all over South Africa; they are now restricted to protected areas except for the last free ranging population of Northern Transvaal. The total number of cheetahs range from 600 to 800. Only three of the protected areas hold significant populations of cheetahs, Kruger national park (around 250), Kalahari Gemsbok national park (around 50) and Hluhluwe-Umfolozi (around 40); the other reserves contain isolated groups too small to be considered for long term conservation. The ex Northern-Cape population is reduced to some scarce vagrant. In the Northern Transvaal, the free ranging cheetahs occur in a horse shoe territory stretching from the Botswana border to the Kruger park western boundary, on extensive farms. They are very badly tolerated by farmers and many of them are destroyed legally and illegally, sometimes as hunting trophies.

If nothing is done to conserve this quickly declining free living population, South Africa is going end up with cheetahs only in small and unrelated populations within protected areas.

Reintroductions have been attempted in the late 70's and early 80's, to reinforce the populations in protected areas where the cheetah density was thought to be too low as well as introductions where the species was absent.

Unfortunately, where cheetahs were already present the residents chased the reintroduced cheetahs away on non protected areas where they have been killed. In small reserves previously free of cheetahs, the introduced animals either disappeared or thrived so well that they heavily preyed on the herbivores and had therefore to be removed. The failure of these operations gave the feeling that the carrying capacity for cheetahs in the protected areas was reached. These problems and, at the same time the success of the South African captive breeding programmes, have contributed to the current opinion that conserving cheetahs is no longer a priority in the country.

### III.4. Namibia.

Namibia is the country that holds the biggest cheetah concentration in Southern Africa and very likely all over the continent. Estimates in the last ten years have reached up to 6000. Despite this, the population is not safe because 95% of all these cheetahs live on private farmlands. Very few are found within protected areas because some of these are set up in the driest part of the deserts and holds low prey density (Namib Naukluft, Kaondom) and the other contain high predators concentrations (Etosha).

Cheetahs are generally considered as vermin by the farmers who charge them to severely damage their herds. Namibian law allows to capture or kill predators that threaten the livestock, providing that it is reported later on to the wildlife department. Namibian farmers know a very efficient method of capturing cheetahs in cages and because the species has no value to them (it is a protected species that cannot be hunted; exportation of live animals is very limited and exportation of skins prohibited) they have caught and killed cheetahs on a very large scale (up to 50 per farm and per year).

The conflict cheetah-farmers has worsened in the late 70's with the explosion of cheetah numbers on farmland due to the combination of the following factors: eradication of lions and hyenas that limited cheetahs numbers on farms, bush encroachment in response to overgrazing that has given more protection to cheetahs and their litters, increase of prey density with bush encroachment and game ranching development. Therefore cheetah numbers are now thought to have been reduced to 2500 and despite the rate of destruction has now slow down, the threat is still important. The current switch from traditional (cattle and cheep) farming to game farming can re-accelerate the depletion rate because cheetahs are more willing to catch game than domestic animals.

### III.5. Zimbabwe.

Cheetahs are much less numerous in Zimbabwe than in Namibia, between 500 and 1000, but the conservation status is quite similar because 80% of them are living on farmland where they are subject to destruction.

Cheetahs that are currently under "protected animal" legislation are about to be downgraded to "restricted species" status that will authorize the exploitation of the species under governmental control. The wildlife department wishes to open cheetah hunting in 1990 countrywide and think this decision will push the farmers to manage their cheetahs rather than destroy them. The effect of hunting on cheetah populations is supposed to be monitored by the "hunting returns" analysis.

## VI. Conclusion and next steps.

The overview on cheetah status in Southern Africa given above is very brief. The analysis of the data collected will give:

- A revised map of cheetah distribution in Southern Africa and more accurate estimates of their number for each country;
- An ecological description of cheetah's habitat whose analysis will enlighten the factors determining cheetahs' presence and density;
- A status evaluation for each population, detailing each threat region by region;
- Detailed recommendations for the cheetah metapopulation's conservation (especially trying to preserve the movement between the groups with corridors);
- A knowledge of the administrative and scientific will and logistical structure existing in each country to help developing the conservation plan.

The large countries of Southern Africa share the following characteristics (probably also applicable to Zambia that will be visited during the second phase of the project): large cheetah number compared to the rest of the continent, subsistence of the species out of protected areas, existence of communication between most of the cheetah groups.

In the short term, the following points will be researched in order to be in a position to manage cheetah's populations for their conservation in Southern Africa:

1. Work out an index of cheetah density for small areas, like a reserve or a group of farms, to be able to manage local populations;
2. Develop in each country a monitoring program following numbers and demography of cheetahs. The method must be the same for all Southern Africa with ideally one coordinator per country and a regional person in charge;
3. Improve the farmers tolerance towards cheetahs through technical measures to limit the predation, estimation of the real damages suffered by the farmers, increasing of farmers awareness of interest and potential financial returns of cheetah conservation;
4. Discover and maintain the existing corridors between the different groups of the metapopulation of Southern Africa;
5. Make the reintroduction technique efficient;
6. Study the interactions between the predators, especially lions and spotted hyena, and the cheetah to establish the number of cheetah that must be expected in a territory knowing the density of the two other species. Verify the hypothesis of an increase in the size of adults groups and litter where no superpredator occur and investigate the eventual social changes connected;

7. Fundamental studies on the size of territories, demography and social structure of cheetahs living in marginal habitat like desert, swamps or densely vegetated areas to assess the minimum size of an efficient reserve in each case and the number of cheetahs it must protect.

The second phase of the Global Cheetah Project will consist of a survey similar to the Southern African one, this time in Eastern Africa, Zambia and Zaire. The two regions of Southern and Eastern Africa hold the large majority of the viable cheetah populations. After analysing the data gathered in these two regions, we should be in a position to decide what has to come next: either carrying on the survey in the remaining countries of cheetah range or working out the technical solutions to help cheetah conservation. In the long term both aspects will be treated, as part of the Global Cheetah project.



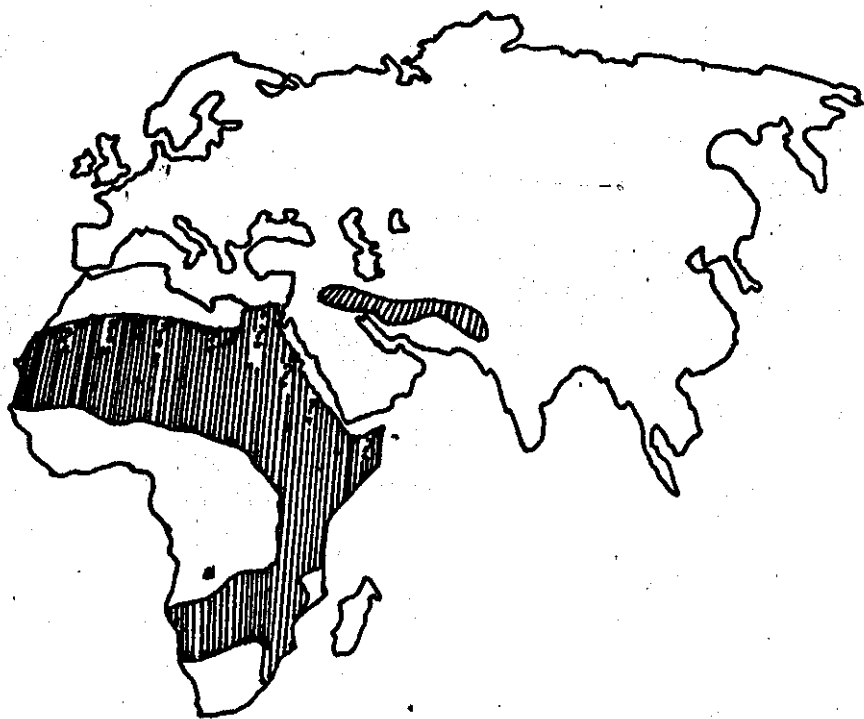


FIGURE 1. AIRE DE REPARTITION DU GUEPARD.

ZAMBIE

LOANSSA VALLEY

RESERVE  
LUANENYA VALLEY  
NORD

RESERVE  
LUKUSUZI

PARC NATIONAL DE NYIKA PLATEAU

RESERVE DE YWALA MARSH

LAC HALAWI

PARC NATIONAL DE MASUNGU

MOZAMBIQUE

MOZAMBIQUE

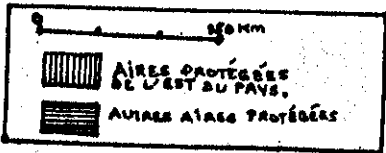
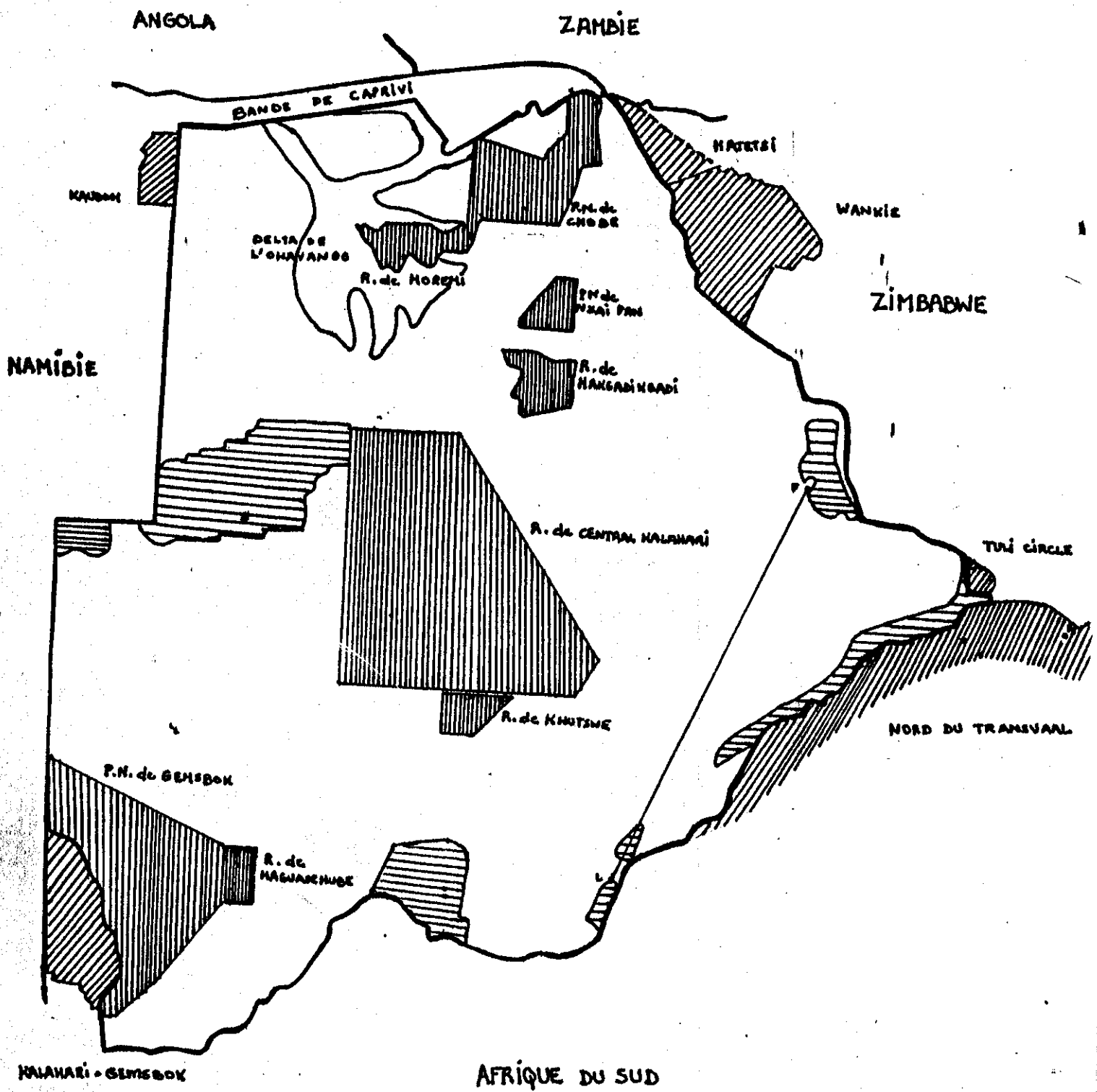


FIGURE 2. SITUATION DU COMPLEXE D'AIRES PROTÉGÉES DE L'EST DU HALAWI: UN REFUGE POTENTIEL POUR LES GUÉPARDS.



 AIRES PROTÉGÉES DU BOTSWANA

P.N. = Parc National,  
R. = Réserve.

 POPULATIONS DE GUÉPARDS LIMITOPHES DU BOTSWANA.

 FERMES COMMERCIALES

0 400 Km

— " ligne " LERATHE - FRANCISTOWN.

**FIGURE 3.** ILLUSTRATION DU RÔLE DU BOTSWANA DANS LA COMMUNICATION ENTRE LES POPULATIONS DE GUÉPARDS DE LA RÉGION D'AFRIQUE AUSTRALE.

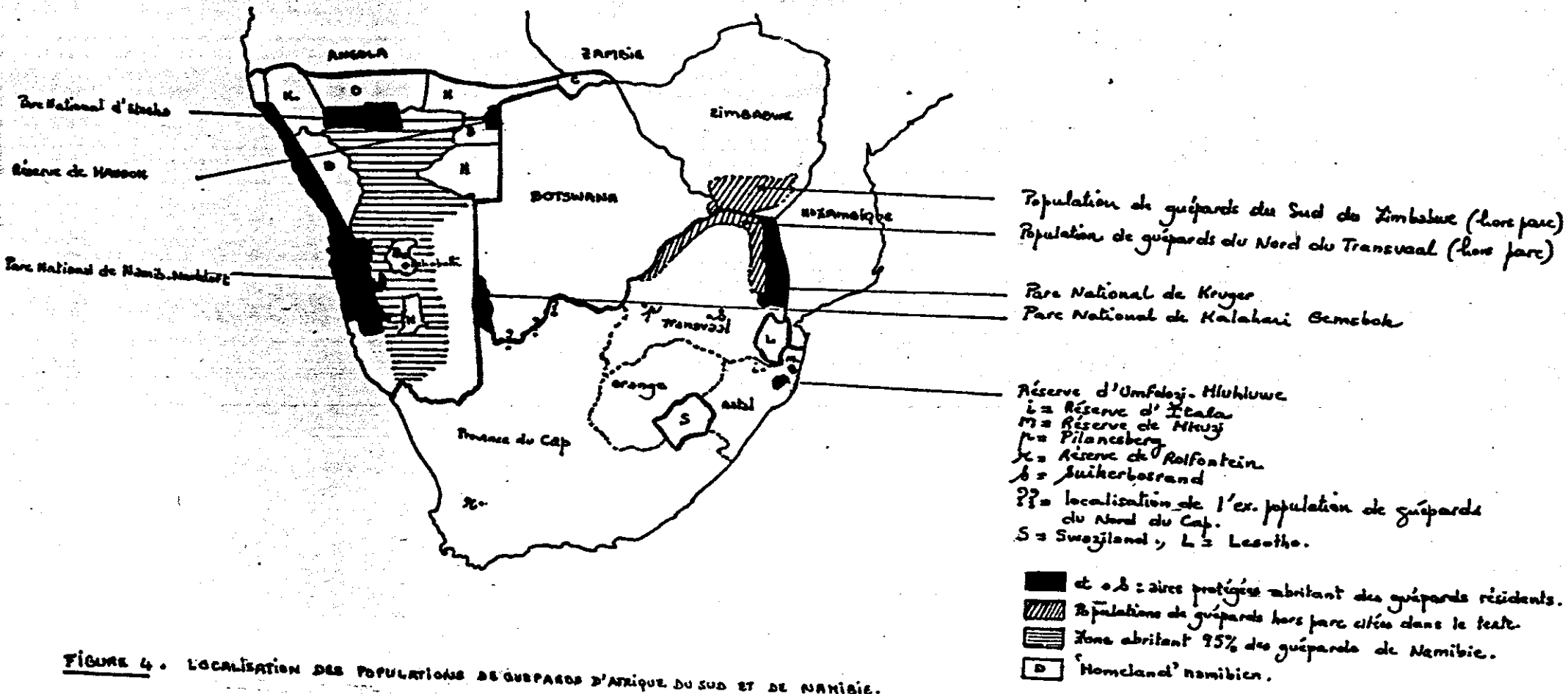


FIGURE 4. LOCALISATION DES POPULATIONS DE GUÉPARDS D'AFRIQUE DU SUD ET DE NAMIBIE.

0 500 Km