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Abstract: In the 1980s, I spent several months with the aim to search and observe the North African's cheetah (*Acinonyx jubatus hecki*) in Niger. I found 42 tracks, but I encountered only 8 individuals. I prospected an area of 275000 km<sup>2</sup>, from the Aïr mountains to Talak and Azaouak plains and the sandy areas of Ténéré. Signs of their presence were found everywhere, but in small numbers. In a 9700 km<sup>2</sup> sector of the Ténéré desert, I estimated a population of 50 individuals, giving a cheetah density of about one individual per 194 km<sup>2</sup>. 90% of the signs indicated coalitions of cheetahs. I found a group of 6 individuals and two times a group of 5 individuals, but the mean number was 3 cheetahs. The behaviour of the cheetah in this region was quite different from the southern part of Africa and it appears that the stress of a close encounter with people can cause severe trembling and even the death of an animal. Populations in open areas appear to be more vulnerable, while cheetahs in mountainous regions are more protected from easy access by people. The local fauna is perceived in a very simplistic way and predators are killed at the first opportunity.

# The Cheetah of the Sahara

## A Cat lost in Hell

Translated from *La vie sauvage au Sahara (Wildlife in the Sahara)*  
by Alain Dragesco-Joffé. 1993. Delechaux et Niestle, Lausanne

### 1. How to recognise the Saharan cheetah and where to observe it:

The cheetah (*Acinonyx jubatus*) is the biggest and heaviest representative of the Felidae still living in the Sahara today, after the extermination of the lion. The cheetah, however, is not a cat like the others: does it not have the appearance of a dog with a cat's head? In the classification of the felids, it is always placed apart, in a special sub-family, that of the Acinonychinae, because it has a number of characteristics which distinguish it from all the other cats.

The most interesting difference for us field observers between the cheetah and the other cats, is the shape of its paws. They resemble those of a dog more than a cat: they are narrow, with claws that are hardly curved, not very sharp and not completely retractable. These claws are adapted for fast running and provide supplementary traction when the animal has to accelerate suddenly. We know that the cheetah is the only cat whose claw print can be seen on the tracks. The track of a cheetah is in fact difficult to recognise in the Sahara: it can always be confused with that of the saluki, the Arab hunting dog. The cheetah's morphology is even better adapted to the chase than that of the swift hound: exceptionally long legs, an extremely long body with a flexible spine and, especially, a very long tail to balance its speed.

The Saharan cheetah seems to be very different from those of the rest of Africa, both in size and coat colour. They are certainly smaller and more stocky. I was able to measure the bodies of two adult males which had just been killed by the Toubou in the Ténéré. These animals were only 65 cm in height at the shoulder and measured 1.69 m and 1.70 m respectively (including the tail of 65 cm). The head of a military post proudly showed me the skins of two other cheetah, which he had shot in the same region; they were of about the same size as the first two. In comparison, the cheetahs of Eastern and Southern Africa easily measure 80 cm at the shoulder, more than 2 m in length (up to 2.30 m), including the tail of 80 cm, and weigh 40 or 45 kg. Those of open regions have a coat with little contrast, especially blending with the habitat in which they live: does this help them to remain unnoticed when they approach their prey? All the cheetahs which I observed in areas where sand prevails, had light beige coats and ochre, instead of black, spots.

There are further differences: the black line between the eye and the mouth, the black rings at the end of the tail, characteristic of ordinary cheetahs, are very muted in the Saharan cheetah, often even non-existent. Some of these cats are even called "white cheetahs" by the Toubou. They are not albinos, but only very light individuals. It is believed that these animals - in any case, fairly rare - are even faster in running and better hunters than the others. They are probably only a little better camouflaged! I noticed, moreover, that cheetah living around mountain chains (Aïr Massif, Tiguidit cliffs), where black rocks prevail, have much more contrasting coats and darker spots.

Taxonomists distinguish as many as six subspecies of cheetah in Africa. The subspecies of the steppes and deserts of North Africa is called *A. j. hecki*. I spent several months researching the cheetah in Niger and found their tracks 42 times, but I only succeeded in following these tracks eight times to find these cats and record them on film. Observing these animals remains a privilege that is rare even for the most experienced Saharan naturalist.

How many cheetahs remain in the immensity of the Sahara? A plausible number seems to me to be between 300 and 500, most of them living in Mali, Niger and Chad. Some cheetah probably remain in Algeria, in the north of the Hoggar, but there are not enough recent data about them. It is hardly surprising: naturalists able to recognise a cheetah track in the field could be counted on the fingers of one hand, and the desert today is mainly traversed by lovers of the mechanical. However that may be, the Saharan cheetah are so difficult to find that we tend to underestimate their true numbers in the Sahara.

In Niger, out of the 275,000 km<sup>2</sup> which I actively prospected in the Aïr Mountains and the plains of the Talak and of the Azaouakor, and in the sandy wastes of the Ténéré, I found signs of the presence of cheetah almost everywhere, but always in very small numbers. It was only in a limited sector of the Ténéré, of 9,700 km<sup>2</sup>, that cheetah were still relatively well represented. In this area, I was able to estimate their population at 50 individuals, giving a density of one cheetah per 194 km<sup>2</sup>. In comparison, the average density in East Africa is one cheetah per 30 km<sup>2</sup>.

Reading the tracks in the sand enables bands of cheetah to be found in the Sahara and the number of animals composing them to be counted. Nine times out of 10 I found these animals in a group. I found six cheetah hunting together only once, and bands of five cheetah twice, but on average groups were made up of only three cheetah. In an area of 400 km<sup>2</sup>, which I studied more closely, they seemed to me to be fairly sedentary: in the course of three consecutive years I found them in exactly the same places. It must be emphasised that dorcas gazelles are abundant in this region. About 25 kilometres away there was a camp of about 100 nomads. The cats did not seem disturbed by the occasional comings and goings across their hunting grounds. But in the fourth year I saw some families putting their tents right in the middle of the cheetahs' territory. The cheetahs then immediately left the sector; it was impossible for them to remain near people and especially their saluki hunting dogs. Despite a month of intensive

to the leg, even slight.

Solitary cheetah are the exception. On 27 July 1983, in a depression in the South Ténéré, I came across the track left by one of them in its morning hunt. I picked up this trail at 08.00 and followed it on foot for nearly three hours, covering more than 12 km, before abandoning it. This enabled me to ascertain that solitary cheetah are sometimes compelled to travel long distances to hunt prey.

I saw that this animal followed a line from tree to tree, from bush to bush, and that it used the slightest fold in the terrain to move ahead without showing itself too much. In this way, the cat had some chance of surprising a gazelle or a bustard from close by, as these have the custom in the hot season of remaining hidden in the densest patches of vegetation during the hottest part of the day.

When they are starving, cheetahs resign themselves sometimes to attacking flocks of goats and sheep. But they are frightened by man and only approach flocks that are not guarded. This is rare. In the camp of the Toubou Hamadié, established near the area where cheetah were most abundant - only three goats were killed by cheetah in a period of 10 months in 1983. This was negligible, compared with the very great damage caused, in the same period of time, by jackals and striped hyenas.

The Saharan cheetah undoubtedly never drinks any other liquid except the blood and urine of its prey. None of my 16 collaborators has seen the cheetah drink in a pool during the rains, nor in the puddles which are always found around wells which are in use. Only once have I seen cheetah tracks on the edge of a pool frequented by dorcas gazelles. The cat had probably only come there to hunt.

Reproduction of the East African cheetah is well known. It is an animal that is still relatively common and easy to observe. The Saharan cheetah, on the other hand, is so rare and so secretive that I have been reduced to analysing the rare indications found on the terrain and quoting the accounts of my Touareg and Toubou companions. It is interesting to compare the two sub-species. In East Africa, stages of the rut are spread over a good part of the year. This is doubtless also the case in the south of the Sahara, where it seems to me that the desert cheetah go into rut in the hot season (April-June) as well as in the rainy season (July-August). During these few months my collaborators have seen male cheetahs fighting violently for the right to mate. This corresponds with what happens in the savanna, where only the dominant males, victors in the contest, can mate with the females.

As gestation lasts about three months (91-95 days), births in the southern Sahara take place between July and November. At the end of September 1990, a young nomad shepherd of the Ténéré showed me the bodies of two young cheetah, aged about 2 1/2 months (born towards mid-July) which he had just killed, after having killed their mother several days earlier for stealing goats. In the same week, my team was again able to observe a female cheetah, accompanied by three young, which did not seem to be older than one month: they must have been born during the rains in the month of August.

In East Africa, female cheetah give birth to between one and six young (exceptionally as many as eight), but most often three or four, in a borrowed den. In the Sahara, the females seem to be less prolific because of the extreme climatic conditions. My guides say they generally found two young when they were looking for them to sell to Europeans in the Sahel. I myself found cheetah families nine times between 1980 and 1984. My observations were as follows: the mother or the couple were accompanied five times by two young, and four times by only one. The observation of three young, which we made in 1990, thus seems to be a little outside the norm.

The young weigh 300 g at birth. They are ashy grey with long woolly fur. Their growth is fairly quick: at 10 days they weigh 800 g and begin to stand. At six weeks they reach 3 kg and can accompany their mother when she travels. The young have a long light grey mane which spreads over the nape and part of the back and their coat is spotted. This mane disappears at the age of 2 1/2 months. Young cheetah are weaned from three months onwards and their claws cease to be completely retractable at around six months.

Mortality is very high among the young. In East Africa, G. Frame concluded that more than two-thirds of the young die before reaching adulthood. The same author also observed that the female, being very cautious, moves her young from one hiding place to another every day. In the Ténéré, in 1983, I saw a female cheetah put her young into safety in the hole of a spurred tortoise (*Testudo sulcata*), for whose possible emergence I was waiting. The hole was 60cm in diameter. Mamane, my Toubou guide, who was very thin, wanted to go inside, but I dissuaded him as there were also numerous tracks of the horned viper.

According to Cade, the female in East Africa does not bring food to the hide: she leads her young to the prey she has killed, so that the family refuge remains unknown to predators. I saw the very opposite on 7 April 1982, in the south of the Ténéré. By chance, I came upon a couple of cheetah and their offspring. The animals were lying next to a den which must have served for bringing up their two young. The female took refuge in the hole, and the male disappeared with the young under the low branches of a thorn bush. In front of the mouth of the den I found the bones and skulls of a baby camel, a goat, four dorcas gazelles and even of a jackal and a young striped hyena. A vulture had made its nest on top of the nearest tree, so as to be able to benefit from the prey brought by the cats.

Young cheetah remain a long time in the company of their parents - or of just their mother - because their apprenticeship in the technique of hunting is particularly long. At the age of one year, they weigh 25 kg and from a distance it becomes difficult to distinguish them from adults. They only leave their mother at 15 to 17 months and are sexually mature only towards 21 or 22 months.

My feelings for Saharan cheetah are a mixture of tenderness and emotion, because they manage to survive in surroundings that are too difficult for them. I have often asked myself: "Whatever are these wretches doing in this

in which a nomad was wounded on the wrist and has a partial paralysis of the hand.

On festive occasions a cheetah skin can sometimes be seen as a saddle cloth on Touareg horses. But it is only a substitute: the traditional cloth ought to be of leopard skin! Cheetah skins are also found among Marabouts, who use them as prayer rugs.