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 km², 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 km² sector of the Ténéré desert, I estimated a population of 50 individuals, giving a cheetah density of about one individual per 194 km². 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.
1. How to recognize 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 felines, it is always placed apart, in a special subfamily, that of the Acinonyinae, because it has a number of characteristics which distinguish it from all 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 recognize in the Sahara: it can always be confused with that of the saulobb, the Arabian hunting dog. The cheetah's morphology is even better adapted to chase than that 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 Touareg 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 off the skins of two other cheetahs which had been shot in the same region; they were of about the same size as the first two. In comparison, the cheetahs of the 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 40-45 kg. Those of open regions have a coat with little contrast, especially blending with the habitat in which they live: does this stop them to remain unnoticed when they approach their prey? All the cheetahs which I observed in areas where sand prevails, had light beige coats or brown 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 Touareg. They are not albino, 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 cheetahs living around mountain chains (Air Massif, Tiggidi-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 steppe and deserts of North Africa is called A. j. jubatus. I spent several months researching this cheetah in Niger and found their tracks 42 times, but I only succeeded in following these tracks right in front to find these cats and record them on film. Observing these animals remains a privilege that is rare even for the most experienced Sahara-naturalist. How many cheetahs remain in the immensity of the Sahara? A plausible number seems to me to be about 300 and 500, most of them living in Mali, Niger and Chad. Some cheetahs probably remain in Algeria, in the north of the Hoggar, but there are not enough recent data about them. It is hardly surprising: naturalist able to recognize 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 cheetahs are so difficult to find that we tend to underestimate their true numbers in the Sahara. In Niger, out of the 275,000 km² which I actively roamed in the Aïr Mountains and the plains of the Tahak and of the Azaouak, 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 km², that cheetahs 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 km². In comparison, the average density in East Africa is one cheetah per 30 km².

Reading the tracks in the sand enables bands of cheetahs 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, not an average group were made up of only three cheetah. In an area of 400 km², 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 place. It must be emphasized that these 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 loud hunting dogs. Despite a month of intensive...
Solitary cheetahs see the exception. On 20 July 1983, in a depression in the South Transvaal, I came across the track left by one or two of them in my morning hunt. I picked up this trail at 6:00 and followed it on foot for nearly three hours, covering more than 12 km, before abandoning it. This enabled me to ascertain that solitary cheetahs 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 about without showing itself too much. In this way, the cat had some chance of surprising a gazelle or a bison 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 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 Tombouctou Hamada, established near the area where cheetahs were most abundant - only three goats were killed by cheetahs in a period of 10 months in 1983. This was negligible, compared with the very great damage caused, in the same period, 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 dromedary 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 unable to analyze the age indications found on the sand and quoting the accounts of my Touareg and Tuareg companions. It is interesting to compare the two sub-species. In East Africa, stages of the rut are spread out over a good part of the year. This is doubtless also the case in the South of the Saharan, where it seems to me that the desert cheetahs go into rut in the hot season (April-June), as well as in the rainy season (July-August). During those 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, visitors in the territory, can mate with the females.

As germination lasts about three months (9-55 days), births in the southern Sahara take place between July and November. At the end of September 1980, a young nomad shepherd of the Tentére 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: these must have been born during the rains in the month of August.

In East Africa, female cheetahs give birth to between one and six young (exceptionally as many as eight), but most often three or four, in a hurried 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 market. I myself found cheetahs 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 totally 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 5 kg and can accompany their mother when she travels. The young have a long light grey mane which spreads over the nape and paws of the back and their coat is spotted. This manes disappears at 4 1/2 months 1/2 months. Young cheetahs are weaned from three months onwards and their claws are to be completely retractable at around six months.

Morality is very high among the young. In East Africa, a female 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 Tentére, in 1983, I saw a female cheetah put her young into safety in the hole of a sparrow tortoise (Pelodiscus macropterus), for whose possible emergence I was waiting. The hole was 60 cm in diameter. Moreover, my Tombouctou guide, who was very thin, wanted to go inside, but I dissuaded him as there were there were also numerous tracks of the horned vulture.

According to Cade, the female in East Africa does not bring food to the hide: she leads her young to the prey site that has killed, so that the family ranging results unknown to predator. I saw the very opposite; on 7 April 1982, in the south of the Tentére. By chance, I came upon a couple of cheetahs and their offspring. The animals were trying to feed to a cat that had must have served for bringing up their 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 hollyhocks and skulls of a baby calf, a goat, four dromedary gazelles and even 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 caps.

Young cheetahs remain long time in the company of their parents - or of just their mother - because their apprenticeship in the techniques of hunting is particularly long. At the age of one year, they weigh 15 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 cheetahs is a mixture of admiration and esthism, because they manage to survive in surroundings that are too difficult for them. I have often asked myself: Whatever are these wily creatures doing in this...
in which a nomad was wounded on the wrist and lost a partial paralysis of the hand.

On festive occasions a cheetah skin can sometimes be seen as a saddle cloth on Tschokor horses. But it is not a substantive; the traditional cloth ought to be of leopard skin! Cheetah skins are also found among Marakots, who use them as prayer rugs.