

SURVEY OF FAUNA IN TERMIT (NIGER)

Françoise Claro

This presentation is an abstract of the results of a field mission organized and performed through a collaboration of the Zoological Society of Paris, the Muséum National d'Histoire Naturelle (MNHN) and the Institut de Recherche pour le Développement (IRD). This field survey was carried out from October 8 to November 15 with two vehicles and a team of eight persons.

The specific objectives of the mission were to:

- perform a survey of Addax and Cheetah in Termit area
- investigate the abundance of Cheetah prey
- describe habitat and evaluate the level of human activities
- collect ethnozoological data in order to have a comprehensive idea of possible threats to Addax and Cheetah
- assess the feasibility of research for conservation of these species

The team was made of 5 members from research and conservation organizations, two drivers and one guide, who was herder in his childhood in the region. We prospected a large area around the Termit mountains, in particular in the east and south of the region, with total respective distances of 1197 and 1715 kilometers for each vehicle (Fig. 1).

The following information is described:

- Habitat
- Survey of wildlife
- Human activities
- Conservation status of fauna species
- Conclusions concerning the feasibility of research
- Proposed recommendations.

Termit area is composed of:

- Rocky mountain (djebel)
- Buttes (garas)
- Large gravelly and sandy areas of herbaceous steppe with more or less woody vegetation
- Ouadi (seasonal streams-runoff)

which are occupied by a variety of animal species.

The team observed 16 species of wild Mammals, of which 11 were from direct observation, 3 cheetahs have been observed directly and 20 signs of occurrence recorded. Furthermore, the survey on local Toubou population indicated the occurrence of cheetah in the northern part of the Termit Mountains, up to Gosso Lolom. This suggests that several dozens, maybe 50 or so cheetahs are living in the Termit region.

- 36 direct sightings of addax were noticed in a 4 day period, while our guide indicated that he personally observed 99 addaxes in July of the same year. Even if it is possible addaxes may have been counted several times from one day to another, it seems reasonable to evaluate the number of individuals of the "population" between 50 and 100 individuals (at this particular period of time). The data recorded from the nomads indicated that the « population was resident in the region since several years, which is probably due to the good rainfall during the former years. When observed, the addaxes were grazing or digging the sand in order to find shade under a tussock of grass. The plants eaten by addaxes were collected and identified as the following species: *Cyperus conglomeratus* Rottb, *Indigofera semitrijuga* Forssk., *Danthonia forskalii* R. Br. (uncertain identification), *Stipagrostis pungens* (Desf.) De Winter et *Stipagrostis plumosa* (L.) Munro et T. Anderson subsp. *seminuda* (Trin et Rupr.) Scholz.
- The survey of dorcas gazelles (*Gazella dorcas*), potential prey of cheetah, gave a number of 765 gazelles directly observed along the 1715 km driven by the mission, which corresponds to a Abundance Kilometric Index of 0,45.

Ethno-zoological survey:

The results of the ethno-zoological survey indicate that the cheetah is not very present in the Toubou culture. Toubou feel indifference or even negative feelings because of its fear of human. Sometimes a herder may hunt a cheetah, if it has killed one goat or a young camel, but this is rare. Furthermore, the cheetah does not seem to consume the poisoning baits with strychnine given for golden jackal destruction. The addax is a much more important animal in the Toubou culture and appears in the songs and tales of the Azza hunters, of which it is a preferred game. The horn of the addax may be used for mystic purposes (« amulettes »), and the skin of young ones is considered as helping to win a trial in court. The species is probably hunted in the Termit region.

Human activities:

Toubou nomads living in the Termit region breed camels, goats and donkeys, and 33% of the transects revealed some form of human activity. Nomads gather in particular around the wells but camels may go very far away out of the dry season. Hunting has traditionally been an activity undertaken by the Azza “forgerons” (blacksmith tradesmen), who constitute a low caste. They traditionally hunted ungulates by using circular traps with radial spines, nets and spears. Nowadays, Toubous hunt with rifles such as AK 47 and sometimes with 4-wheel drive vehicles. During our mission, we found lots of poaching signs, in particular 7 skulls of Barbary sheep and one skin, which had been dried in an old poacher camp.

Conservation status:

Our results indicate a severe competition for space between wildlife and humans in the Termit region. The future of the addax relies on first food resources, depending on good rainfalls, and second on poaching pressure. The poaching seems to be heavy, considering the fleeing distance is one km or more, even when the wind is favourable. Humans do not directly threaten the cheetah. Nevertheless, its future depends on prey abundance, in particular dorcas gazelles, even if we found fur of jerboa and Cape hare in the scats. Furthermore, the cheetah survival may depend on genetic factors, since it is possible that the population is inbred and faces a bottleneck (hypothesis to be explored). The striped hyena has been endangered because of poisoning campaigns and is probably on the verge of extinction. Furthermore, the Barbary sheep, the dorcas gazelles and probably the dama gazelles are heavily poached. Recently, a hunting party of princes from the Gulf is responsible for the killing of hundreds of dorcas gazelles.

Feasibility of research:

Our work indicates that it is very difficult to study the cheetah in this area; chances of observing directly the cheetah are very low, and the species is too sensitive to the stress to think of immobilize one for sampling and /or equip one with a radiocollar. Furthermore, the non-invasive sampling was poorly successful and we could not sample more than 3 scats in one and a half months in the field. This consequently is not enough to perform population genetics analysis.

For the addax, we think that it would be interesting to equip several of them with ARGOS collars in order to follow and track the movements of the group/individuals, and we are interesting in any financial support. We also collected about 50 samples of dung, which we would like to analyse in order to compare the genetic variability of the wild group of addaxes in Termit and captive addaxes. This also has a cost and needs a

specific budget. Furthermore, we think that it is important to monitor populations of ungulates through aerial surveys.

Recommendations:

From our work, we could propose several recommendations to the Direction de la Faune et de la Pisciculture of Niger, which are to:

- Perform an aerial survey of Addax, Dama gazelles and Barbary Sheep
- Create a protected area in Termit
- Study the feasibility of Scimitar-horned oryx re-introduction
- Engage an outreach programme and participative management with the local population
- Develop research in conservation biology
- Stop poisoning campaigns with strychnine against wild carnivores and study alternative measures

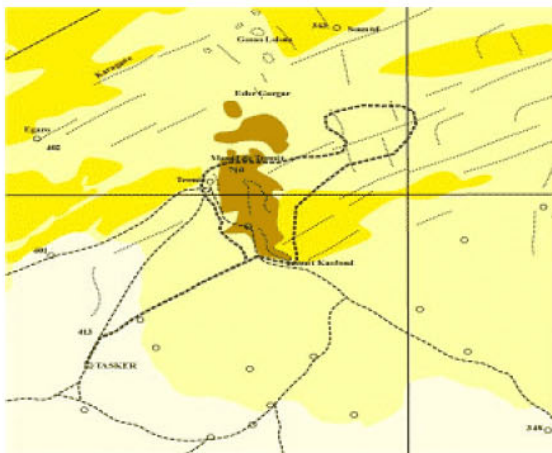


Figure. 1: Prospection area of the Termit mission (within pointillés)

Table 1: Observations of reptiles

Taxon	Direct	Tracks	Indirect	Total
<i>Geochelone sulcata</i>	4	14	1 shell	18
<i>Varanus griseus</i>	3	++	-	>3
<i>Cerastes cerastes</i>	1	NC	-	>1
<i>Eryx muelleri</i>	1 (dead)	-	-	1
<i>Scincidae</i>	-		++	NC
<i>Acantho-dactylidae</i>	-	++	-	NC

NC = not counted

Table 2: Observations of birds of large size

Taxon	# observations
<i>Neotis nuba</i>	75(+ chicks)
<i>Otis arabs</i>	2
<i>Neophron sp.</i>	1
<i>Aegyptus tracheolius</i>	5
<i>Gyps rueppelli</i>	5
Vautour indét.	2
Aigle indét.	2
<i>Tyto alba</i>	1
<i>Ardea cinerea</i>	1(dead)

Table 3: Species of small- and medium-sized birds observed

<i>Circus sp.</i>
<i>Falco ardosiaceus</i>
<i>Corvus ruficollis</i>
<i>Cercotrichas galactotes</i>
<i>Eremopterix leucotis</i>
<i>Motacilla alba</i>
<i>Coturnix coturnix</i>
<i>Cursorius cursor</i>
<i>Caprimulgus sp.</i>
<i>Merops albigollis</i>
<i>Hirundo rustica</i>
<i>Upupa epops</i>
<i>Passer simplex</i>
<i>Lamprotornis chalybaeus</i>
<i>Burhinus senegalensis</i>
<i>Lanius excubitor</i>
<i>Phylloscopus trochilus</i>
<i>Alaemon alaudipes</i>
<i>Oenanthe leucopyga</i>
<i>Oenanthe hispanica</i>

Table 4: species of small and medium size Mammals observed during the mission

Taxon	# of observations
<i>Gerbillus nanus</i>	1
<i>Jaculus jaculus</i>	1
<i>Lepus capensis</i>	7
<i>Xerus erythropus</i>	1
<i>Hystrix cristata</i>	1 (pick)
<i>Mellivora capensis</i>	3 (tracks and den)
<i>Ictonyx striatus</i>	1 skull
<i>Vulpes rueppellii</i>	1 skull
<i>Canis aureus</i>	7

Table 5: observations of large Mammals

<i>Species</i>	<i>Direct</i>	<i>Indirect</i>	<i>Total</i>
<i>Gazella dorcas</i>	765	-	765
<i>G. dama</i>	18	3	21
<i>Ammotragus lervia</i>	2	11	13
<i>Addax nasomaculatus</i>	36	62	98
<i>Hyaena hyaena</i>	3	-	3
<i>Acinonyx jubatus</i>	3	20	23

AcknowledgementsWe would like to thank CEVA, Amneville and Doué la Fontaine zoos, Dr Thierry Petit, The Direction de la Faune, de la Pêche et de la Pisciculture, Ministère de l'Hydraulique et de l'environnement, and Drs Hubert Gillet and Bernard Roussel, for their help

GROUP DISCUSSION:

By extrapolations, it was estimated that there are between 50-100 resident addax in the Termit area (i.e., according to interviews with locals, and due to good rains). Animals were all seen within one kilometer of each other so very localized. A suggestion that satellite collars and aerial surveys could be conducted was strongly disagreed with by Koen on the grounds that local people should be employed to follow the animals. However, John Newby said that as a general principle the areas where cheetah, addax etc were seen were the exact same areas where hunting parties have been operating. Local information, initially paid for by conservationists would be highly valuable to the hunters who would be able to pay considerably more.