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The mission had two main objectives:

- Start the ostrich project in Kellé with some representatives of the "commune" (the mayor and the arrondissement chief), the general secretary of the CENRK (*Coopérative d'Exploitation des Ressources Naturelles du Koutous*, owner of the ostriches and the ranch), the CEO of SCF (John Newby), the coordinator of the ASS project (Ibrahim Bello), the assistant director of the protected area department in Niger (Abdoulaye Hassane), the coordinator of environmental projects for the Peace Corps (Yacouba Sangaré) and the volunteer newly settled in Kellé for the project (Dylan Burruss). Other members of ASS project were present as well (Christian Noirard, technical assistant; Bokar Lemine, responsible of animation) and an engineer (Aboubacar Fofana) to assist with planning of the fence design.
- The second objective was to observe the distribution of dama gazelles within the central block of Termit massif from camel-back or on foot. These methods were used so as to minimize disturbance to wildlife.



Antilopes

Sahélo-Sahariennes

Mission in Kellé and Termit – Tin Toumma, February 2010

Thomas Rabeil, Roseline Beudels-Jamar, Arnaud Greth

01/03/2010



Participants

Roseline Beudels-Jamar, CMS
 Arnaud Greth, regional coordinator ASS
 Thomas Rabeil, technical adviser ASS
 Ahmed Oumarou, driver
 Mati Ousseïni, driver
 Agi Mamane, guide
 Abba, camel keeper
 Abdoulaye Boukar, driver

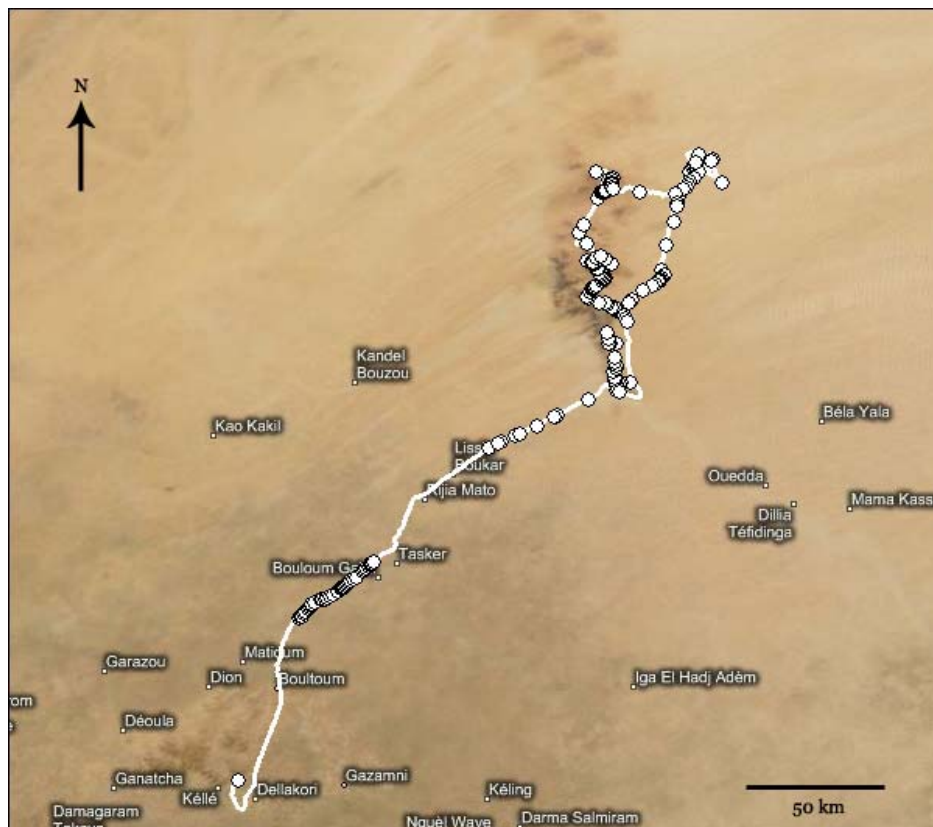
John Newby, SCF CEO
 Ibrahim Bello, ASS coordinator
 Christian Noirard, ASS technical adviser
 Bokar Lemine, ASS community liaison officer
 Mamadou Laouane, CERNK secretary
 Yacouba Sangaré, agriculture program officer PCV
 Dylan Burruss, Peace Corps volunteer (PCV)
 Aboubacar Fofana, engineer

Objectives

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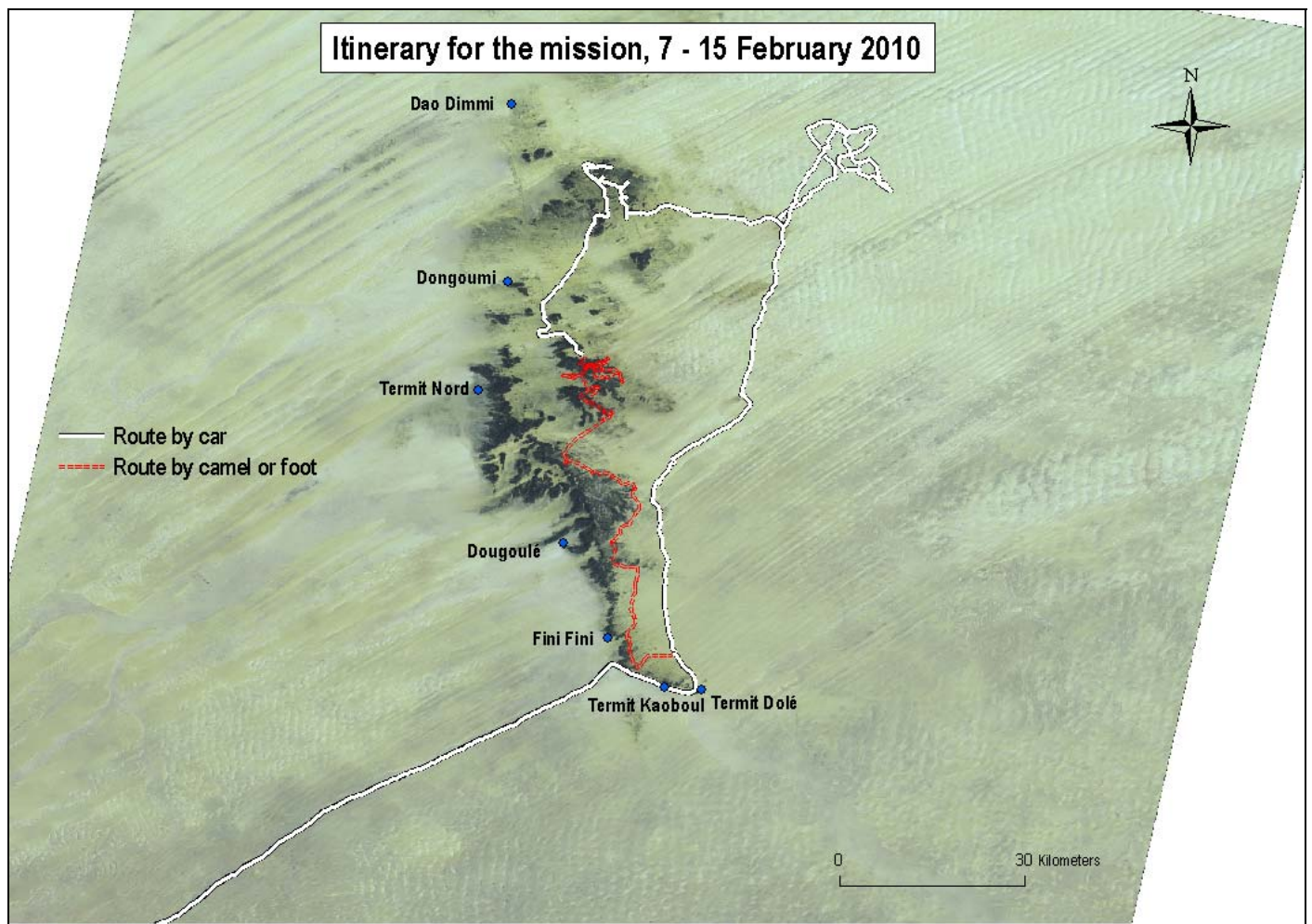
- Start the ostrich project in Kellé with some representatives of the “commune” (the mayor and the arrondissement chief), the general secretary of the CENRK (*Coopérative d’Exploitation des Ressources Naturelles du Koutous*, owner of the ostriches and the ranch), the CEO of SCF (John Newby), the coordinator of the ASS project (Ibrahim Bello), the assistant director of the protected area department in Niger (Abdoulaye Hassane), the coordinator of environmental projects for the Peace Corps (Yacouba Sangaré) and the volunteer newly settled in Kellé for the project (Dylan Burruss). Other members of ASS project were present as well (Christian Noirard, technical assistant; Bokar Lemine, responsible of animation) and an engineer (Aboubacar Fofana) to assist with planning of the fence design.
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Itinerary



The map above shows the route of the entire mission, from Kellé until the Tin Toumma desert. Dots represent ecological observations during the mission; the concentration of points immediately south-west of Tesker refers to a structured line transect, during which human activities, livestock, habitat and wildlife data are observed in more detail.

It was hoped that by walking and riding camels we might be able to avoid disturbing Dama gazelles, and thus observe their behavior. We've found in the past that this method works well. Our route took us from the house of Cokie (our guide) northwards until the end of the central block, which we know from past surveys to be the core area of dama gazelle distribution.. After the exploration of the central block by camel and by foot, we surveyed a wider area by vehicle (cf. figure below).



Ostrich project in Kellé

Our visit to Kellé served to officially begin the project PPI FFEM with SCF and CERNK representatives. John Newby as CEO for SCF, Thomas Rabeil as SCF Niger representative and Laouane Mamadou as the general secretary of CERNK have introduced the project concept to the main authority in Kellé, the *chef de Canton* Maï Salé and the mayor of the town Oussoumane Mamadou. It was also an occasion for representatives of the other partner organizations, ASS and the Peace Corps to experience the area and the breeding center of CERNK (cf. pictures below).



Dylan Burruss, the new Peace Corps volunteer (cf. pictures left), has been assigned to Kellé as his Peace Corps “duty station”. He was accompanied by the person in charge of environmental programs M. Sangaré Yacouba for Peace Corps volunteers in Niger. CERNK in the framework of the partnership with SCF provide the accommodation for the Peace Corps volunteer in Kellé. Project ASS have supplied satellite phone to be used in emergencies. Dylan will be directly supervised by Thomas Rabeil and will have contacts with all CERNK and ASS project members.

During the visit to the breeding center, an engineer (M. Aboubacar Fofana) sketched out a design for the new pens which will be built thanks to fencing provided by SCF and its partners. Long discussions between John Newby, Aboubacar Fofana, Dylan Burruss and CERNK members were held in the field to explain the different issues regarding the design of the pens (cf. picture below).





The second focus of the Kelle ostrich project is to reintroduce red neck ostriches in the wild. A “pre-release” site has been identified by CERNK and we visited the area during this mission. The site, named Tilala, is unique in the region because agriculture has been prohibited until now thanks to local initiatives. Livestock is permitted only to cross the valley. Tilala is a wide valley surrounded by rugged, rocky hills. The habitat within the site (cf. pictures below, a 360° panoramic picture and satellite image from Google©) seems to be perfectly suited to ostriches and oryx, according to John Newby, Roseline Beudels-Jamar and Arnaud Greth. If the site is eventually used for the “pre-release” of ostriches, fencing will have to be brought to close the area to exclude livestock completely and local agreement (supported by local chiefs) will have to be found with the shepherds to avoid encroachments.





Termit – Tin Toumma survey

Methodology

While riding camels and walking we chose routes on the basis of past experience, which has led to a thorough knowledge of the area. This area has been surveyed many times by the ASS team in the field by car, by foot and by camel.



During the survey by car, we used a GPS for orientation and a Pocket PC (with Cybertracker software) for data recording. This monitoring method was developed by the ASS project, based on SSIG/SCF surveys.

The route we followed by camel was mostly straight, with some exploration in the main valleys. However, once in the massif proper (the central block) the route became more complex due to switching between camel riding and trekking. During trekking there was more flexibility in the route used so as to be reactive to interesting observations. At times we split the survey team between camel-riders and walkers so as to increase the area surveyed. We used integrated GPS and VHF radio communication devices (Garmin® “Rhino” model) to maintain contact between members of the team. The Rhino devices allow one to communicate with other members of the team, to navigate, and to send locations between team-members wirelessly.

Solar backpack and regular solar panels were used during the day to charge the different devices (GPS, cameras, Cybertracker). There was a meeting point (previously defined) every night with the support team and two vehicles. However, there was almost 3 days of autonomy with the food and the water carried by the camels.



Results

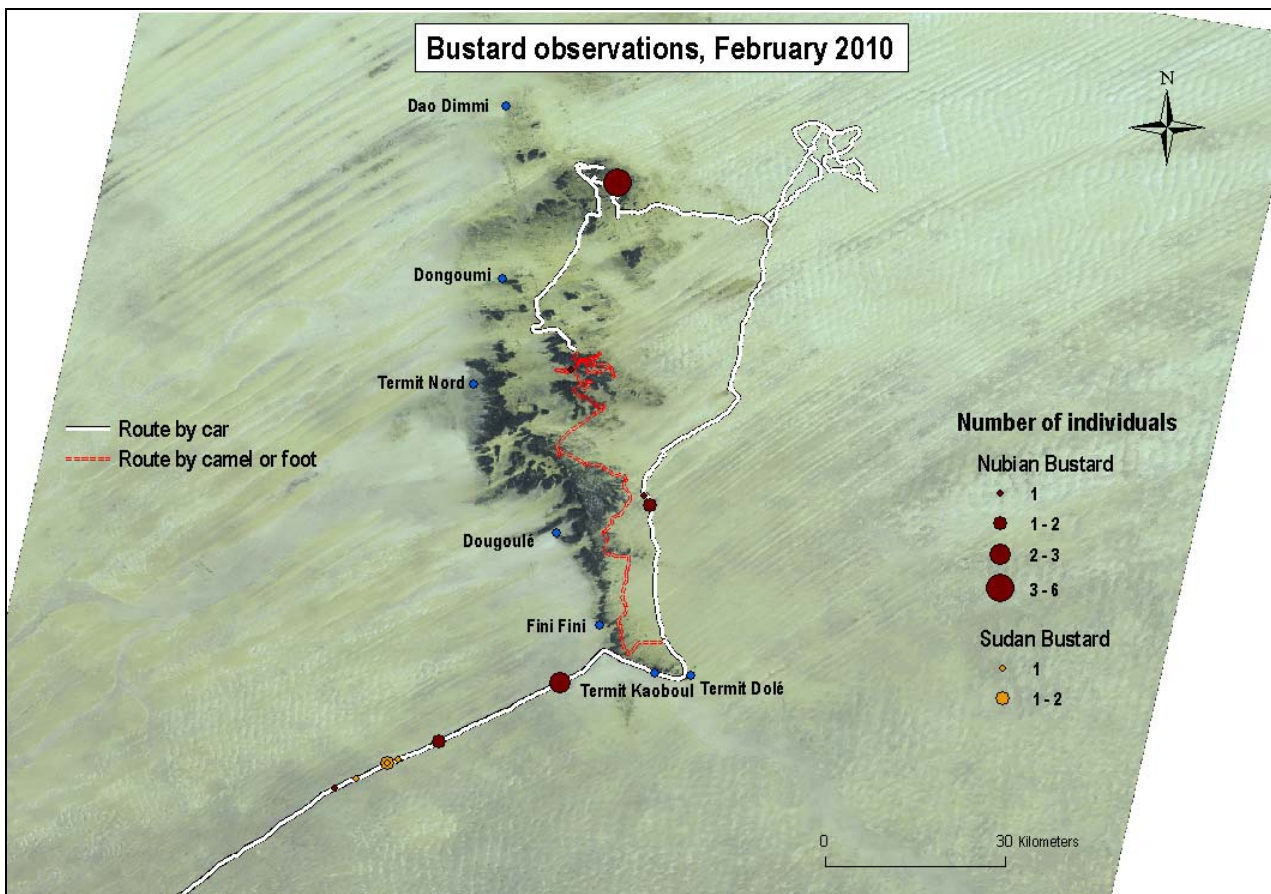
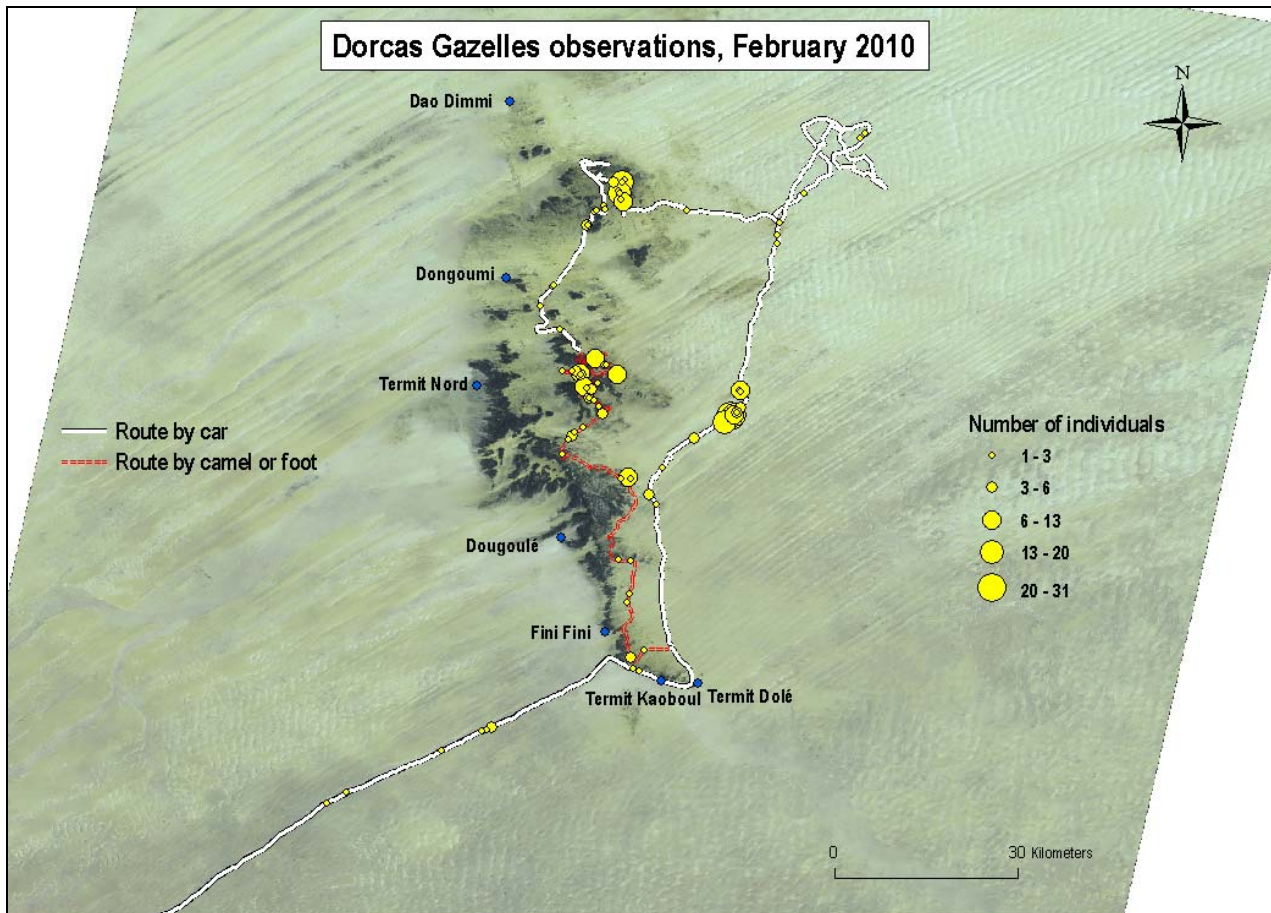
As part of routine monitoring missions by the ASS project, data on dorcas gazelles and bustards are collected (cf. maps below). The observations of these species on this mission has not been particularly notable, with the number of observations more or less conforming to those of past missions (383 dorcas gazelles censused, 98 only during camel patrol / 5 Arabian-Sudan bustards and 20 Nubian bustards). The survey by camel seems to allow one to get closer to dorcas gazelles but in terms of efficiency for counting, the car survey seems to be better considering this specie is not as skittish as the dama gazelle.



Two aspects of our dorcas gazelle observations can highlighted from this mission:

- Several observations close to the military camp in Termit Kaoboul, hinting that poaching might not be prominent in this area and or greatly reduced.
- Many gazelles have been observed in the eastern side of the massif in a sandy pass between the massif and a field of barkhans with green pastures (mainly *Stipagrostis vulnerans*, *Stipagrostis acutiflora*, *Indigofera sp.*, *Tephrosia sp.*) and other annual plants. The distribution map (below) illustrates higher densities of Dama gazelles within the central and northern blocks, results similar to past surveys.







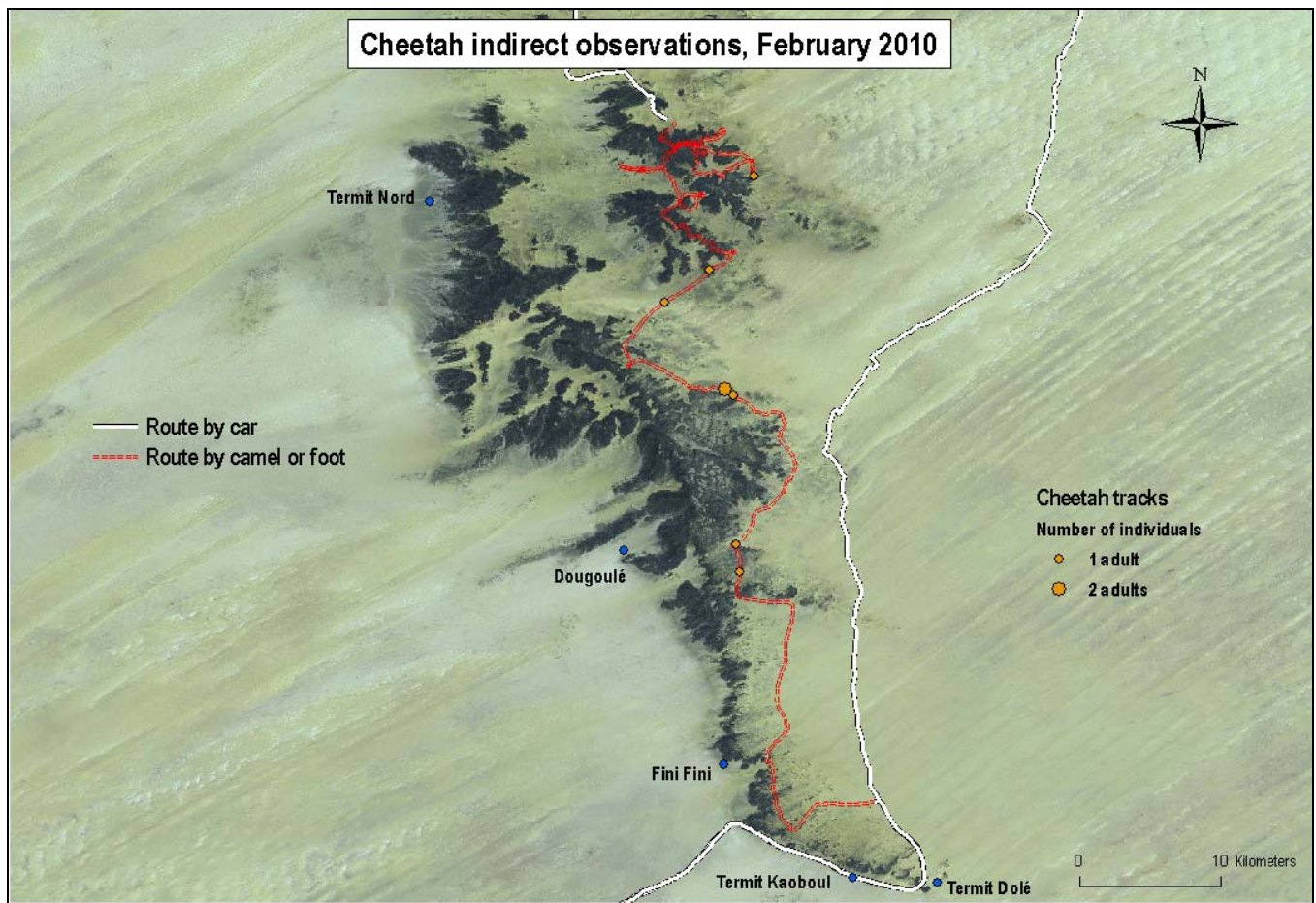
In the fossil valley of Achetnamou we were fortunate to observe and interaction between an Arabian bustard and African wild cat. Our first impression was that the bustard was being stalked, but this is unlikely, probably a coincidence of two identical directions. Four species of carnivore were censed during the day: wild cat, fennec fox, Rüppell fox and golden jackal.



Only fennec foxes and golden jackals were caught this time by the camera trap, which we deployed nightly (cf. pictures below).



Several carnivores' tracks were identified: honey badger, African lynx, striped hyena and cheetah. Surveys by camel and on foot are appropriate for collecting information about cheetah, and several tracks were recorded during this mission, improving the knowledge of status of the elusive, enigmatic cheetah in Termit.



Cheetah tracks were recorded in the central and northern blocks, both occupied by dama gazelles. It seems probable that young dama gazelles are preyed upon by cheetahs, an interesting topic that warrants further study.

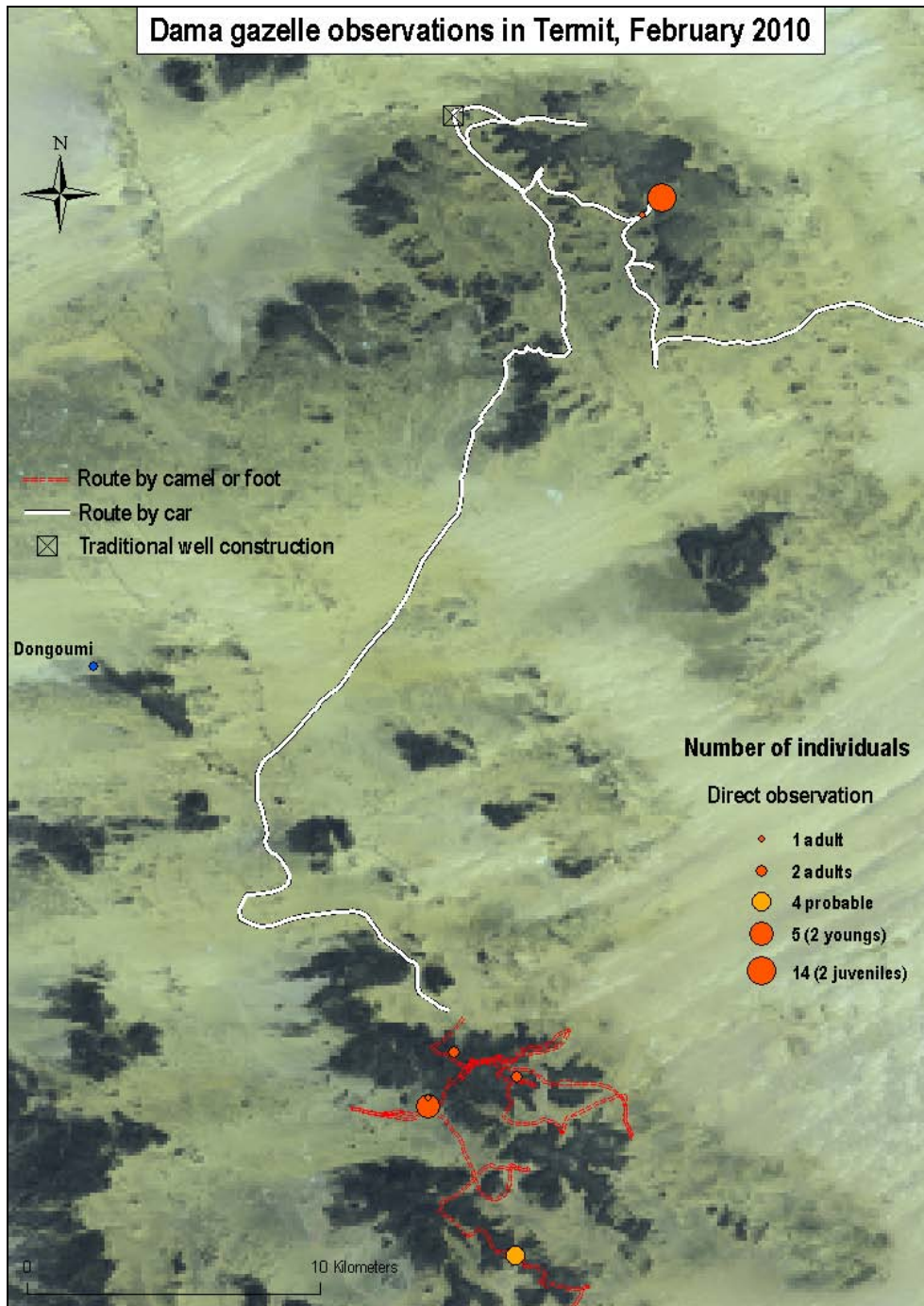
Dama gazelle observation

This mission provided extraordinary insight into the dama gazelles of Termit. Previously the hypothesis (according to previous missions and particularly in April 2009) was:

- The dama gazelles are mainly distributed in two blocks within the Massif which are considered as refuges area for this specie;
- The dama gazelles are mobile and can move from one block to the other according to the vegetation state;
- There are an estimated 30 dama gazelles spread between the two blocks.

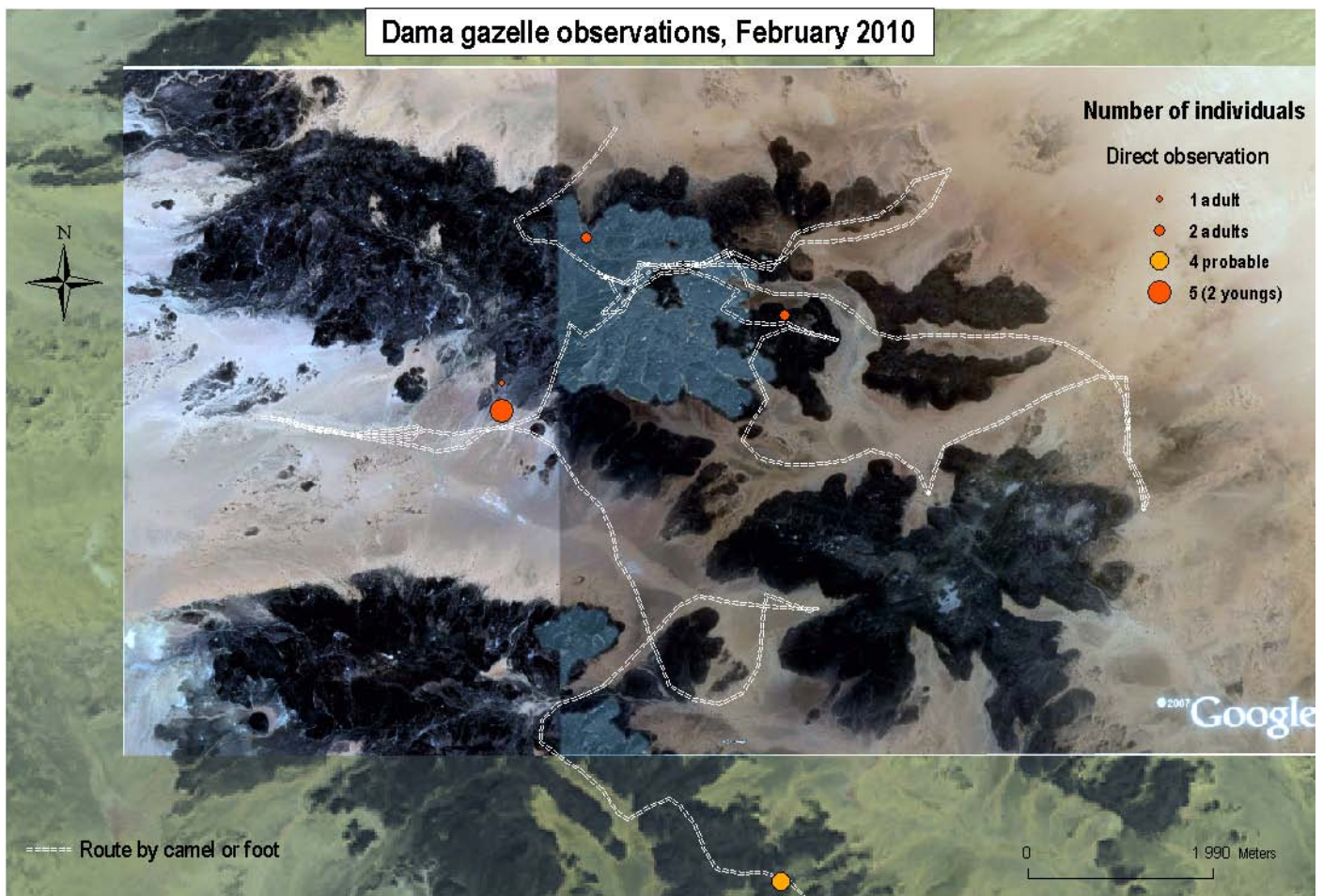
The following map shows direct observations made of dama gazelles during this mission. Locations shown on the map are the exact locations of the animals observed (placed using GIS) and the not sighting locations, which are usually a short distance away.





Most of the observations (4 confirmed and 1 probable) were made while on foot (the red line on the Massif) in the central block. The most numerous group (14 individuals, see below) ever seen by the project was located in the northern block and the observation was made from a vehicle..





The observations made and routes followed within the central block are detailed in the map above. This map shows two levels of satellite image resolution. The background image is Landsat image with 30 meters square resolution for pixels whereas the Google© image (georeferenced manually) overlaid is 2 meters square resolution.



A group of 4 individuals were seen while observers were trekking in the massif. The distance of the animals (around 1 km) and the configuration of the terrain prevented thorough observation. Although both dama and dorcas gazelles use the same habitat, the 4 gazelles were relatively tall and with a specific (unsteady) way of going down in the rocks which is very typical for dama gazelles, leading us to mark them down as dama gazelles. Trekking helped us to understand the occupation of the rocky slopes by dama gazelles. We were able to observe 7 individuals (including 2 juveniles) in the morning (between 8h and 8h30). Micro-habitat seems to be important to

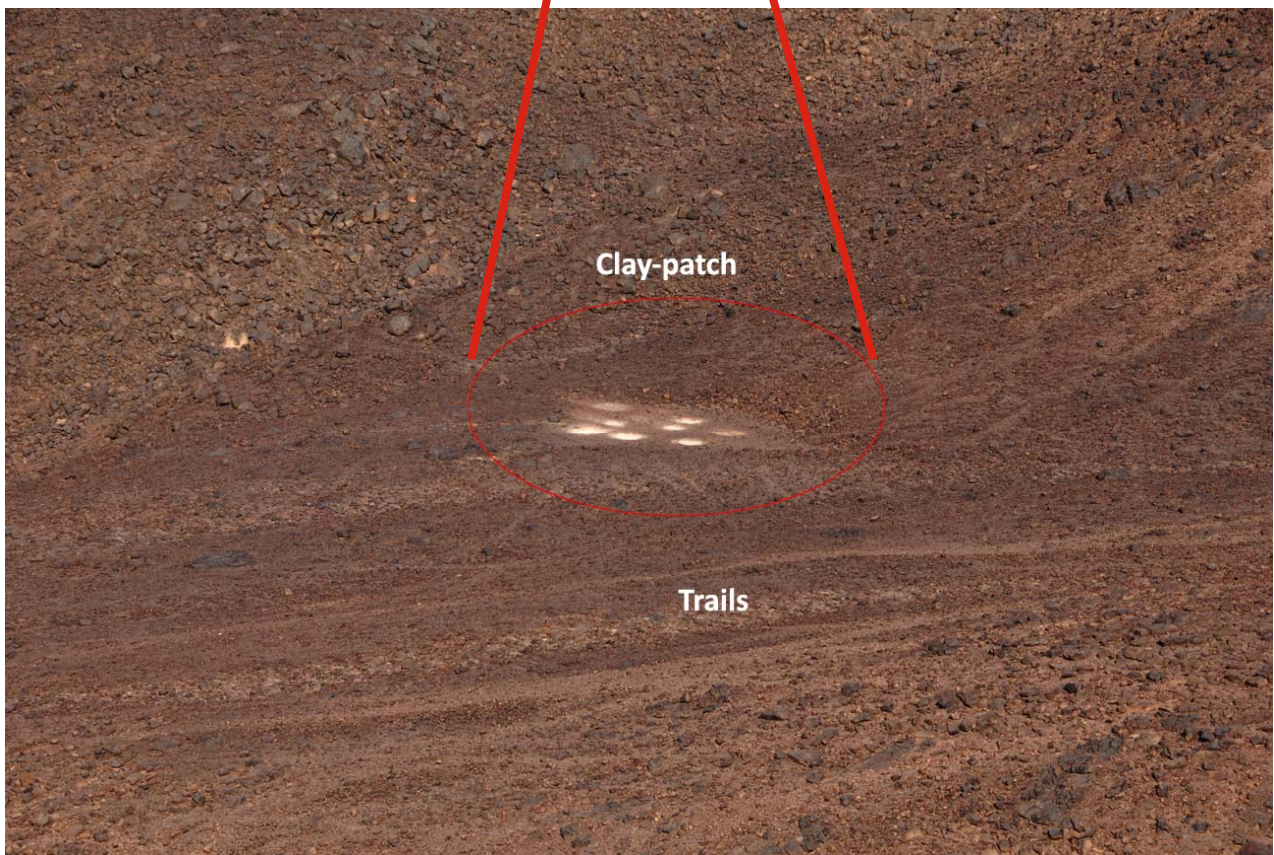
dama gazelles in their resting periods. Several times (4 times since 2009) we observed juveniles and adults resting on the Massif, in a rocky plateau or along slopes on small clay-sandy patches (cf. pictures below and above). Suitable habitat for dama gazelles in Termit could therefore be a combination of well-treed valleys separated by the rocky relief where at some point clay-sandy patches are available.





The pictures above and below show more clearly these clay-sandy patches within the Termit landscape. They appear to be used as resting places during the day and are usually near trails. Juvenile dama gazelles use them as refuges, a theory borne out by our observations of adults grazing in the valley while a young calf or a juvenile is resting not far away in the massif on these clay-sandy patches.



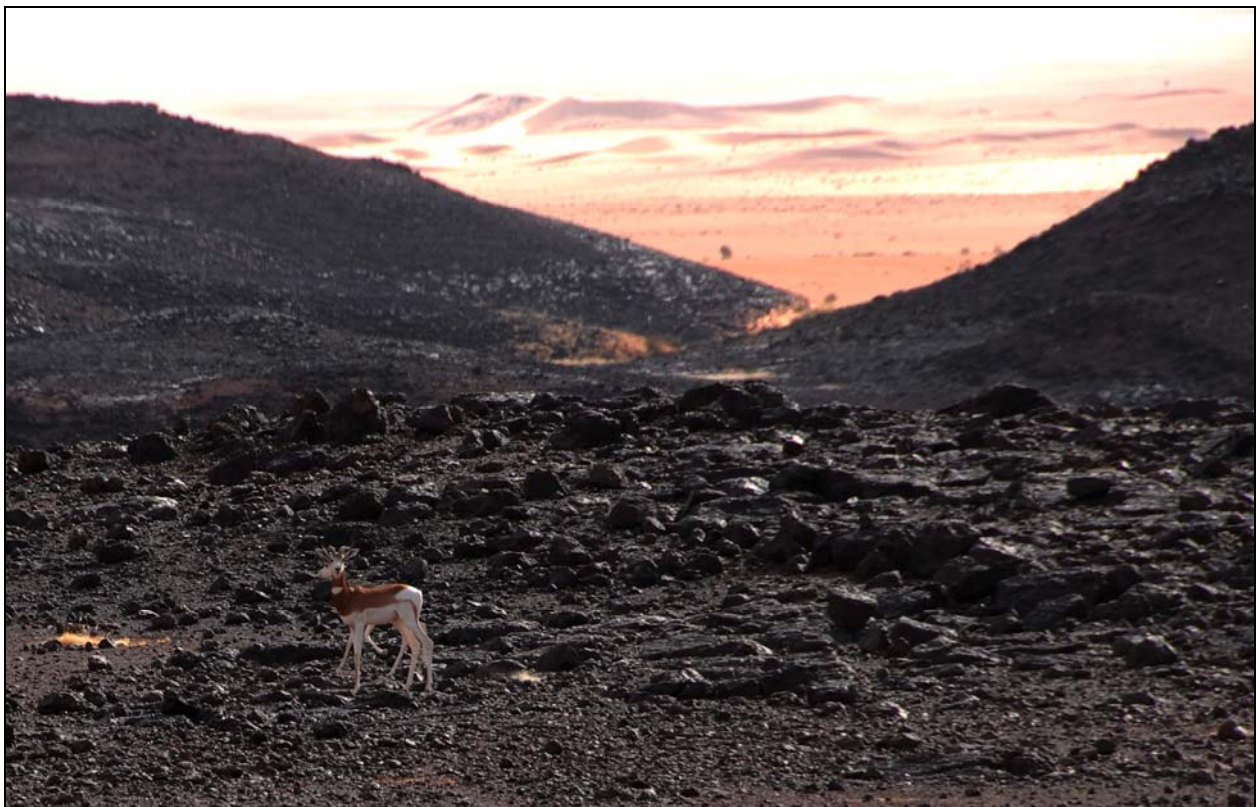


The photo below is an example of another apparently important micro-habitat for Dama gazelles within Termit. In this specific green wadi with many plant patches in the soft slope, dama gazelles have been observed 10 times between December 2008 and February 2010.





We photographed the two dama gazelles (circled in red) (cf. picture below) while we were walking on a nearby plateau. Afterwards they crossed the valley and climbed up the other side of the hill.





As stated earlier in this report , dorcas and dama gazelles can use the same habitat (same trails, same resting areas, etc.) and it is not unusual to see them together (cf. pictures aside and below). The photo (below and inset) gives an idea of how easy it is to distinguish these animals when they are grouped in the field though. Even a swift and distant observation of dama gazelles in Termit can be a reliable record, which supports our certainty of having seen dama gazelles seen in the central block. It is interesting to note that although dama gazelles are more skittish than dorcas gazelles, they have the same kind of flight behavior.



As shown on the map of dama gazelle distribution (above), Tuaregs from Abalak region were contracted by local Tubus to dig a new “traditional-style” well (made with local material and not cement) in the northern area of the northern block. When we visited the site we found that they have reached a depth of 18 meters without getting water. It is possible they may give up if they don’t reach water soon. It is obvious from our surveys that if there is a functional well in the northern block there could be detrimental effects on the distribution of wildlife and in particular of dama gazelles in termit. The ASS field team hopes to engage with the well-diggers and to see if there is a solution that could benefit both pastoralists in the area and wildlife conservation



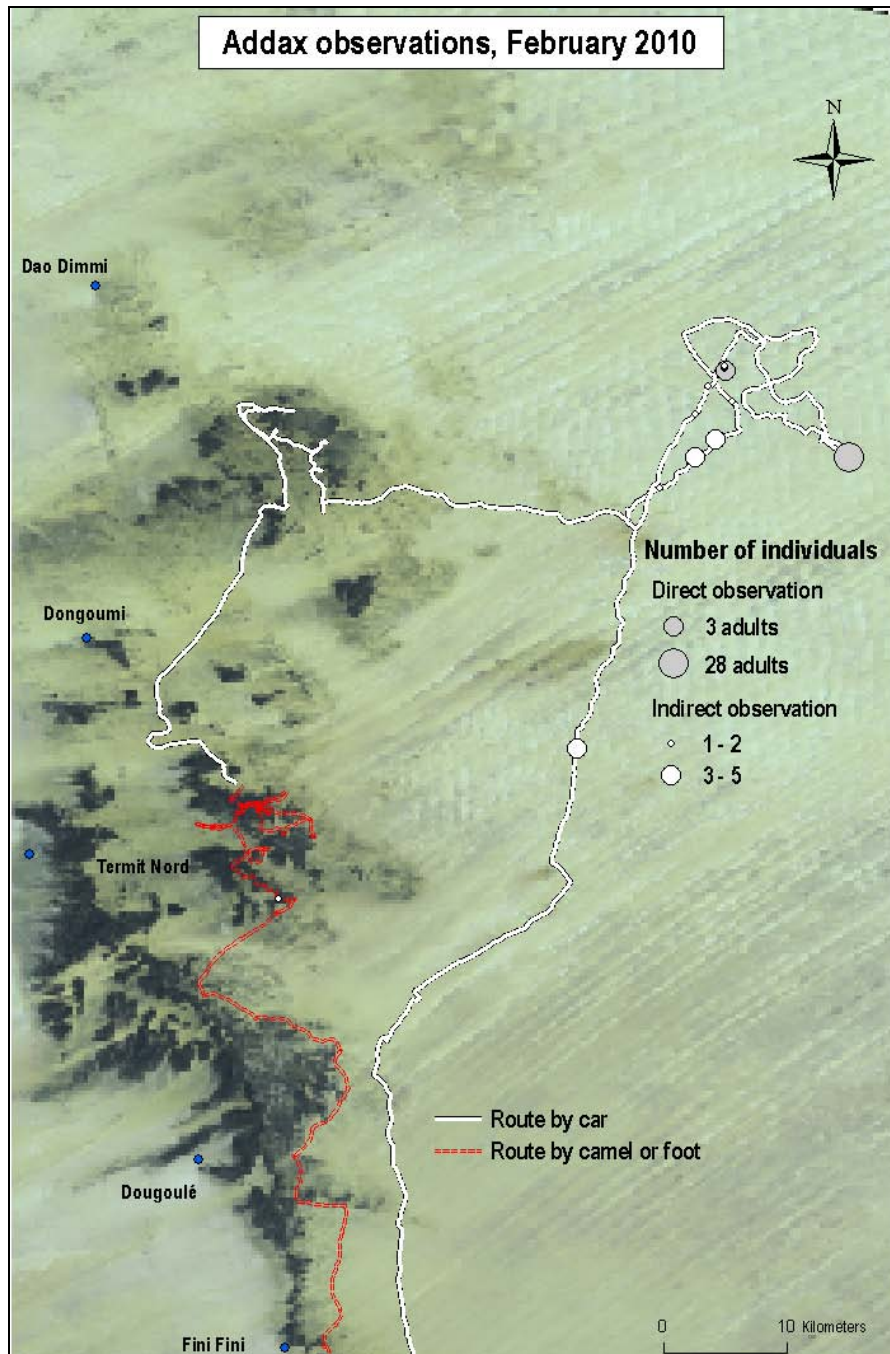


The main outcome of this mission was a better understanding of suitable habitats for dama gazelles. The 2 blocks (northern and central) remain the core area of their distribution, but the population seems bigger than we previously estimated. Indeed, within two days 25 (possibly 29) dama gazelles were observed. This means the previous total population estimate of 30 dama gazelles in Termit was certainly an underestimate. The fact that we observed at least 25 individuals implies a larger population than previously thought, perhaps 40-60 individuals. This is a very positive, encouraging finding for conservation in the area. However, the core area of their distribution is a very sensitive area where shepherds are common during both the wet and the cold seasons because of its palatable vegetation. The disturbance generated by camels and their shepherds there can likely be tolerated by dama gazelles, especially because the area remains quiet during the hot season from March until August. This fragile balance could be upset by a small change such as the construction of traditional wells, which could have a dramatic impact on the density of dama gazelles. It is absolutely essential therefore to implement a strategy with local people for the conservation of this unique specie. A workshop is planned during the hot season (May or June) to discuss landscape management strategies that could be win-win for wildlife conservation and human activities development.

Addax observations

After seeing 15 dama gazelles in the northern block, we travelled by vehicle east into the Tin-Toumma desert to attempt to observe addax observations. This method has proven more time-efficient than walking or riding camels when surveying addax. We observed a group of 13 addax and many tracks within a 10km radius of our observation of the group. We concentrated our effort within this area by following fresh tracks and by zigzagging in the core of good pasture (green *Stipagrostis acutiflora*) area (cf. map below). By chance, we found 3 adults addax running away through the dunes just before dusk.





We camped in the middle of this green area and early in the morning collected information on grazing selection by the addax (using tracks and plant assessment). Three plants were dominants (*Stipagrostis vulnerans*, *Stipagrostis acutiflora* and *Cornulaca monacantha*) and the selection was obvious towards green tussocks of *Stipagrostis acutiflora*, cf. tables below.



	Plants visited Addax 1	Grazed	Plants visited Addax 2	Grazed
1	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	No
2	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	Yes
3	<i>Stipagrostis acutiflora</i>	No	<i>Stipagrostis acutiflora</i>	Yes
4	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	Yes
5	<i>Stipagrostis acutiflora</i>	No	<i>Stipagrostis acutiflora</i>	Yes
6	<i>Stipagrostis acutiflora</i>	No	<i>Stipagrostis acutiflora</i>	Yes
7	<i>Stipagrostis acutiflora</i>	No	<i>Stipagrostis acutiflora</i>	Yes
8	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	Yes
9	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	No
10	<i>Stipagrostis acutiflora</i>	No	<i>Stipagrostis acutiflora</i>	No

	Plants visited Addax 3	Grazed	Plants visited Addax 4	Grazed
1	<i>Cornulaca monacantha</i>	Yes	<i>Stipagrostis acutiflora</i>	Yes
2	<i>Stipagrostis acutiflora</i>	No	<i>Cornulaca monacantha</i>	No
3	<i>Stipagrostis acutiflora</i>	No	<i>Stipagrostis acutiflora</i>	No
4	<i>Stipagrostis acutiflora</i>	No	<i>Cornulaca monacantha</i>	No
5	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	Yes
6	<i>Stipagrostis acutiflora</i>	Yes	<i>Cornulaca monacantha</i>	No
7	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	No
8	<i>Stipagrostis acutiflora</i>	Yes	<i>Cornulaca monacantha</i>	No
9	<i>Stipagrostis acutiflora</i>	Yes	<i>Stipagrostis acutiflora</i>	No
10	<i>Stipagrostis acutiflora</i>	Yes	<i>Cornulaca monacantha</i>	No



After assessing their grazing selection we came across recent tracks of several animals. We decided to follow this trail for no more than 10 kilometers (addax can walk dozens of kilometers during the night and the early morning). After 5 kilometers we found a group of 28 addax. Most of them were adults, with some sub-adults but there were no juveniles or young calves (cf. picture left).

Thus, 31 addax were observed directly, with several indirect observations made, indicating an unexpectedly high number of addax in this relatively tiny zone. Causal factors for this high density could be related to Chinese petroleum activities (prospection and exploitation) or because of the good grazing and quiet conditions, or a mix of these factors. The next transect in the beginning of April and the ongoing analysis of addax distribution should give us soon good indications.





Bird observations

Many birds were noted between Kellé and Termit, and within the Massif and Tin Toumma desert (cf. list below). On many occasions, lappet-faced vultures were seen on their nest (cf. picture below) perhaps sitting on eggs (cf. ASS mission report from January). One unusual observation was made of 2 young brown necked ravens begging for food (cf. picture below).



English name	Latine name	Comments
African Grey Hornbill	<i>Tockus nasutus</i>	
Arabian (Sudan) Bustard	<i>Ardeotis arabs</i>	
Bar-tailed Lark	<i>Ammomanes cinctura</i>	not sure!!!
Black-eared Wheatear	<i>Oenanthe hispanica</i>	In Kellé
Black Scrub Robin	<i>Cercotrichas podobe</i>	
Blackstart	<i>Cercomela melanura</i>	In Kellé
Blue-Naped Mousebird	<i>Colius macrourus</i>	
Brown-Necked Raven	<i>Corvus ruficollis</i>	
Chesnut-Bellied Starling	<i>Lamprotornis pulcher</i>	
Cinnamon-breasted Rock Bunting	<i>Emberiza tahapisi</i>	
Common Chiffchaff	<i>Phylloscopus collybita</i>	
Common Kestrel	<i>Falco tinnunculus</i>	
Cream-Coloured Courser	<i>Cursorius cursor</i>	
Cricket Warbler	<i>Spiloptila clamans</i>	
Desert Eagle Owl	<i>Bubo b. ascalaphus</i>	
Desert Lark	<i>Ammomanes deserti</i>	
Desert Sparrow	<i>Passer simplex</i>	
Desert Wheatear	<i>Oenanthe deserti</i>	
Dunn's Lark	<i>Eremalauda dunnii</i>	not sure!!!
Egyptian Vulture	<i>Neophron percnopterus</i>	
Eurasian Marsh Harrier	<i>Circus aeruginosus</i>	In Kaoboul
Fulvus Babbler	<i>Turdoides fulvus</i>	
Grey Woodpecker	<i>Mesopicos goertae</i>	
Hoopoe	<i>Upupa epops</i>	
Hoopoe Lark	<i>Alaemon alaudipes</i>	
Isabelline Wheatear	<i>Oenanthe isabellina</i>	
Lanner Falcon	<i>Falco biarmicus</i>	
Lappet-faced Vulture	<i>Torgos tracheliotus</i>	
Little green Bee-eater	<i>Meiops orientalis</i>	
Little Swift	<i>Apus affinis</i>	
Northern anteater chat	<i>Myrmecocichla aethiops</i>	
Northern Grey-Headed Sparrow	<i>Passer griseus</i>	not sure!!!
Nubian Bustard	<i>Neotis nuba</i>	
Pied Crow	<i>Corvus albus</i>	
Pigmy Sunbird	<i>Hedydipna platura</i>	
Red-billed Hornbill	<i>Tockus erythrorhynchus</i>	
Rüppell's Warbler	<i>Sylvia rueppelli</i>	
Rufous Scrub Robin	<i>Cercotrichas galactotes</i>	
Sardinian Warbler	<i>Sylvia menalocephala</i>	
Short-Toed Snake Eagle	<i>Circaetus gallicus</i>	
Southern Grey Shrike	<i>Lanius excubitor</i>	
Spotted Flycatcher	<i>Muscicapa striata</i>	
Subalpine Warbler	<i>Sylvia cantillans</i>	
Sudan Golden Sparrow	<i>Passer luteus</i>	
Trumpeter Finch	<i>Bucanetes githagineus</i>	
White-Crowned Black Wheatear	<i>Oenanthe leucopyga</i>	
White-fronted Sparrow Lark	<i>Eremopterix nigriceps</i>	

