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Selected Abstracts



Dorcas gazelle and Slender horned gazelle Survey between Wadi Es Segguer and Wadi Zergoun in the Great Western Erg (El-Bayadh, Algeria).

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Dorcas Gazelle and Slender Horned Gazelle survey was carried out in Algeria in between wadi Es Segguer and wadi Zergoun in the North-East of the Great Western Erg. The followed route comprises various habitats, wadi, stony plains of the regs, stony and sandy plains of the regs and the dunes. The method used vehicles rolling at a mean velocity of 20-25 km/h. A stop is carried out to each 5 km to note the vegetation characteristics, the presence index of the gazelles as well as the presence of water points, human presence, domestic livestock and wild fauna. Gazelle's tracks were registered by waypoints, to estimate the group size, the group activity and species grazed. 39 contacts were detected for Slender Horned Gazelle with variable presence index according to the type of habitat. There was no Slender Horned Gazelle in wadis and reg, their presence increases from the stony and sandy plains to sandy plains and dunes. The distribution of Slender Horned Gazelles seems less dependent on the nature of the vegetable cover than of the type of substrate. The dominant groups are those composed of 2 to 4 individuals. Two tracks of Dorcas Gazelle were found during the prospection in a stony and sandy plain of the reg.

The results obtained can be regarded as preliminaries and nonfinal considering the reduced time devoted to the prospection, it is however recommended to organize seasonal surveys in the same study area to confirm the results obtained and to carry out research studies in order to obtain more data which will make it possible to define the status of the Slender Horned and Dorcas gazelles in the Great Western Erg in the Algerian Sahara and to take measurements to the gazelles management and the conservation .

Key words: Algeria, *Great Western Erg*, *Es Segguer wadi*, *Zergoun wadi*, *Gazella Dorcas*, *Gazella leptoceros*.

Use of digital camera trapping for wildlife monitoring in Termit

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Within the framework of the establishment of the Termit protected area, wildlife monitoring presents a number of challenges. The massif of Termit is remote and monitoring missions are expensive. The massif harbours a large number of medium sized nocturnal carnivores, such as striped hyena, Saharan cheetah, African wild cat, sand cat, African lynx, honey badger, pale, fennec and Rüppell's foxes and golden jackal, all difficult to observe by road or foot transects. Dama gazelle and Barbary sheep are also difficult to observe because of the nature of the relief and their shy behaviour. Considering these particularities, the use of camera trapping in Termit seems to be appropriate. In the frame work of its Termit/Tin Toumma project in Niger, the SCF field team has implemented the use of camera trapping as a tool for carnivore monitoring. For the moment the field team owns two digital camera traps and has used them in two different ways: one mobile unit that is fixed on a tree or post with bait nearby each night during fieldtrips, and one left in the field for one month without bait. The results obtained in Termit have shown interesting behaviour patterns between two individuals of the same species or between two different species and have also allowed discovery of previously unrecorded species, such as the porcupine or African lynx. These preliminary studies should help in the development of a permanent monitoring system based on a systematic grid where camera traps will be deployed according to a half degree grid layout.

Key words: camera trapping, carnivore, monitoring, Termit.

Host-parasite interactions and environmental factors: applicability for wildlife conservation

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Abiotic factors can influence host-parasite interactions in different ways, determining the distribution of the parasites or their vectors, modifying key aspects of their life cycles, favouring specialization processes... However, our knowledge about the interaction between abiotic factors and host-parasite relations is limited in many basic aspects.

Even though there is increasing evidence that implicates pathogens and parasites in population declines or identifies them as important threats to the conservation of endangered species, the risk posed by these organisms is hard to evaluate in absence of basic information. Moreover, even when such information is present it is uncommon to include it in management and conservation programmes. This is particularly the case of conservation programmes based on reintroduction of individuals kept out of their natural range that may result in increased exposure to parasites both for the focal species as well as for the native, non-managed species.

Here we present a research project whose broad aim is to increase our knowledge of the effect of key abiotic factors (namely temperature, humidity and photoperiod) on the distribution and life cycle of different parasites both in natural and human-managed conditions. More specifically we intend to apply such knowledge to conservation programmes by assessing the risk posed by parasites when reintroduction of captive individuals is required. Our study system encompasses three endangered ungulate species (*Gazella cuvieri*, *G. dama mhorh*, and *Oryx dammah*) with captive and "wild" populations along a broad geographical scale.

Keywords: *host-parasite interactions, conservation programmes, reintroduction.*

Reintroduction of dorcas gazelle (*Gazella dorcas neglecta*) in Senegal. Phase 3: release in the North Ferlo Reserve.

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On April 10th 2007, 20 dorcas gazelles (6 males, 14 females) were reintroduced at the Geumbeul Fauna Reserve (Senegal). The gazelles were located in three acclimatation enclosures: 2 holding reproductive groups and 1 with a males group. Since the reintroduction, the reproduction of this reintroduced gazelles has been controlled in order to promote a quick increase of the population keeping the maxima genetic variability. From September 2007 to March 2009, there were 25 births (9.16). The numbers of gazelles died during this period was 2 offsprings, 2 juveniles and 3 adults. By March 2009, two years since reintroduction, the gazelle population in the Geumbeul Reserve grown until 36 gazelles (13 males, 25 females). Considering the success of the initial phases of this reintroduction project, we afforded the next step of this project which plans the transfer part of the dorcas gazelles from the Geumbeul Reserve to the Ferlo North Reserve and the genetic reinforcement of the Geumbeul's population with new founders from the European captive population. On March 1 26, 6 dorcas gazelles (3.3) from the Barcelona Zoo (Spain) and the Parque de Rescate de la Fauna Sahariana (EEZA/Almería, Spain) were transported until the Guembeul Reserve and, in March 1 29 2009, 23 gazelles (9,14) were transported from the Guembeul Reserve to the Ferlo North Reserve. The gazelles were transported by road into individuals' crates. After 9 hours travelling, the gazelles were released in the Katane enclosure were they are living with other reintroduced species, particularly the Scimitar-horned oryx and the Mhorh gazelle.

Ecology and conservation of Saharan carnivores

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Globally, the distribution and status of Saharan carnivores are very poorly known, with several species listed simply as “Data Deficient” in the IUCN Red List of Threatened Species – meaning that not enough information on their basic biology exists to evaluate their conservation status. The Sahara harbours a rich carnivore guild, including four canids (golden jackal, Rüppell’s fox, pale fox and fennec), two small cat species (sand cat and African wild cat) and larger predators such as striped hyaena and cheetah. The Saharan race of cheetah (*Acynonix jubatus hecki*) is very rare, and one of the most specialized and threatened in Africa. In collaboration with the Sahara Conservation Fund and as part of a major strategy to conserve Sahelo-Saharan wildlife, we are starting a Saharan carnivore project in the Termit/Tin Toumma region of Niger. We aim to improve our understanding of sympatric Saharan carnivores, and evaluate the impact of human activities on carnivore populations, and that of carnivore predation on livestock. Outputs will include an action plan prepared jointly with local land-users to minimize human-carnivore conflict in the Termit/Tin Toumma.

Keywords: carnivores; cheetah, conflict; Niger; Termit

Brezina Gazelle’s Breeding Center (El Bayad, Algeria). Proposal for Improving Genetic & Demographic Management, and for Enhancing Facilities

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A breeding centre for gazelles was created in 2000 in Brezina (El Bayad) by the Algerian National Agency for Nature (ANN). Populations of Dorcas Gazelles (*Gazella dorcas*) (GD) and Slender Horned Gazelles (*G. leptoceros*) (SHG), both founded with animals original of the area (south of the Saharan Atlas to the Grand Erg Occidental) are now breeding there. This first breeding centre for Sahelo-Saharan Antelopes (SSA) in Algeria can play a very important roll in gazelles’ conservation in the area and it might become not only a nuclei to provide animals to other planned breeding centres in the country but also a place from where conservation measures can be exported, so as becoming a place for basic research in both species, mainly for the less known SHG.

Nevertheless, genetic and demographic management of both species must be improved for what the present facilities must be enhanced in order to implement the adequate breeding program for each species. Recommendations for short and medium term breeding programs are given.

Key words: Algeria, Gazelle Captive Breeding Station in Brezina-El Bayad, facilities, genetic management, *Gazella dorcas*, *Gazella leptoceros*.

Genetic characterization of the gazelle´ populations (*Gazella leptoceros*, *G. dorcas*) in the Brezina Gazelle´ Breeding Center (El Bayadh, Algeria).

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The Brezina Gazelle´s Breeding Center (El Bayad, Algeria) was created in 2000 by the Algerian National Agency for Nature (ANN) to preserve and breed the Dorcas gazelle (*Gazella dorcas*) (GD) and the Slender-horned gazelle (*G. leptoceros*) (SHG). Founder population was 1.4 GD and 1.3 SGH captured in the area (south of the Saharan Atlas to the Grand Erg Occidental). Since then, the gazelles are breeding there and numbers in October 2008 were 32 DG and 5 SGH. In order to evaluate the genetic variability and familiar relationships of both species, fecal (for DG) and hairs (for SHG) samples were analyzed. After DNA extraction, samples were genotyped for a set of six microsatellites and two fragments of 375 and 335 base pairs (bp) of the cytochrome *b* (*cytb*) gene were amplified by means of polymerase chain reaction (PCR). The first results of SHG showed a low level of diversity and individuals were all very similar. The mean number of alleles per locus observed was 2.3 and expected heterozygosity in this population was very low, $He=0.344 \pm 0.198$. It was not possible to determine the familiar relationship between samples due to the high degree of similarity between all of them. Two different *cytb* haplotypes were found, though all but one sample had the same haplotype. For DG, microsatellite profiles were obtained for 7 out of 15 samples. Mean number of alleles per locus and the expected heterozygosity was higher than for SHG (4.6 and 0.652 ± 0.212 respectively). Four different haplotypes were found of which only three *G. dorcas* haplotypes were observed because the fourth haplotype was the most common mitochondrial lineage found for *G. leptoceros*; sample contamination or an event of hybridization which has to be investigated could explain this result. These results confirm the necessity to add new founders to the gazelle´s populations in Brezina to assure the long term viability of both species.