



9th Annual Sahelo-Saharan Interest Group Meeting

29th April – 2nd May, 2008

Al Ain Zoo, Abu Dhabi, United Arab Emirates

SELECTED ABSTRACTS



Arabian Oryx Re-introduction Project: one year post release monitoring

Husam El Alqamy & Ahmed Al Daherie

Terrestrial Environment Research Center, Environment Agency, Abu Dhabi, UAE.

As an effort added to those already in the way of conserving the Arabian oryx all over Arabia, Environment Agency - Abu Dhabi has launched a new oryx reintroduction project that started on Feb07. The project involves the reintroduction of 100 animals in three sites over an area of 10000 Km² in the eastern southern corner of the emirate. The release was designed to include carefully selected herds that have different origins to ensure genetic diversity and to assess their adaptability to free-ranging modes. A monitoring program was designed to assess the different aspects of this experiment and to provide definite measurable indicators of its progress. The indicators involve many aspects of the species ecology. Herd demography is closely monitored including survival, recruitments and population growth. In addition, the social structure of the introduced herds is monitored. Foraging ecology is also assessed including home range properties such as size, site fidelity, site expansion, and cumulative home range. The project is only one year old thus results are not yet in full conclusion but more data is expected to build up through the planned five years of the project with an annual release of 100 animals per year. Here we present the post-release monitoring findings collected up till Feb. 08.

Key words: Arabian oryx, reintroduction, post-release monitoring

Ecological monitoring in Termit / Tin Toumma, Niger

Thomas Rabeil & John Newby

Sahara Conservation Fund

The region of Termit/Tin Toumma in Niger is one of the last intact biological hotspots in the Sahara, with emblematic species such as addax, cheetah, Barbary sheep and spurred tortoise. To conserve the biodiversity of the area, Niger's Sahelo-Saharan Antelope project is establishing a large desert protected area. In this context, regular surveys using tools and techniques appropriate to the species present are being undertaken. Censuses based on line-transect methodology are used in vehicles along predefined itineraries and by foot in mountainous areas. Point transects are also used to assess bird distribution, ungulate feeding behaviour, etc.

One of the project's main objectives is to map and understand land-use and natural resource distribution across the entire zone. This will help in reserve establishment and in management of the area. To achieve this, an aerial survey was carried out in November, 2007, with the assistance of French NGO *Aviation Sans Frontières* (ASF). A simultaneous ground survey, aiming to make detailed observations of addax behaviour and ecology in Tin Toumma, was also carried out. The aerial survey method chosen was to fly a constant effort transect survey, sampling the entire study zone at an evenly distributed 10% coverage. The ground survey team drove reconnaissance transects recording all signs of addax and other wildlife following standard SCF/SSIG methods. As a result, estimates of addax, dorcas gazelle and livestock populations were generated.

Key words: addax, protected area, aerial survey, Niger, Termit.

La Biodiversité des zones Sahélo-sahariennes : Cas du Parc National du Banc d'Arguin,

Lemhaba Ould Yarba

Créé en 1976, le Parc National du Banc d'Arguin est devenu site « Ramsar » en 1982 puis Patrimoine Mondial en 1989 et don à la Terre en 2001. Son étendue comparable au delta du Nil (12.000km²) est répartie entre un domaine continental et un domaine maritime égaux. Sa population est de 1500 habitants dont les principales activités sont la pêche (Imraguen) et l'élevage (nomades).

Le Parc a pour mission la conservation de sa biodiversité et le développement harmonieux de sa population. Son climat est de type désertique avec des précipitations rares et irrégulières et des températures constantes grâce à sa localisation sur la côte mais torride vers l'intérieur avec un vent dominant nord-est.

La végétation du littoral est dominée par des espèces halophytes associée à la mangrove alors que celle de la partie continentale est de type désertique. Sa situation géographique lui confère un caractère particulier grâce à sa richesse biologique favorisée par la présence d'un upwelling. Il constitue un milieu de refuge et de reproduction pour avifaune et l'ichtyofaune. Il abrite également des espèces « menacées » (phoques moines, tortues marines) et une faune terrestre représentée par les gazelles, le lièvre du Cap, les fennecs, les gerbilles, la vipère, quelques hyènes rayées et de chacals dorés cantonnés sur le littoral et les îles.

Les résultats du suivi effectué au Parc montrent une adaptation de cette faune dans son milieu naturel, qui vont faire l'objet de la présente communication

Mots clés: conservation, biodiversité, faune, flore, Parc national

Third Survey in the Mauritanian Banc D'Arguin NP and Surroundings, and Recommendations for Antelope Conservation and Recovery in the Continental Area

Mar Cano, Teresa Abáigar & Mirenka Ferrer

A third survey in and around the BANP took place last March-April 2008. Three teams during seven effective field days explored in 4x4 and foot transects the area resulting in Dorcas gazelle's *Gazella dorcas* indirect observations in the extreme south (Agneitir zone) and the extreme north (Tintane zone).

In spite of the dryness after three years without rain with the consequent lack of pasture, dromedaries are abundant, suggesting that there is food for gazelles too. Trails and fresh car-tracks were found everywhere and poaching (that is foreseen as the main cause of antelopes decline) cannot be prevented with the BANP's present resources.

The establishment of two areas empowered for effective protection will be essential to protect the small Dorcas gazelle population still surviving in the continental area of the BANP and allow its recovery: Agneitir, in the south, dominated by sand dunes and Tintane in the north, coincident with the recommended area after the 2005 survey.

Key words: Continental BANP, Dorcas gazelle, protection, recovery.

Ex-Situ and In-Situ Conservation of the Sand Cat (*Felis margarita*) and Future Plans

Ute Magiera,

Coordinator Sand Cat European Endangered species Programme (EEP), Osnabrück Zoo, Germany

The sand cat is a small felid with big ears and a broad and flat face. It lives in sandy and stony deserts and is distributed through the deserts of North Africa and Southwest Asia. The sand cat is listed on the IUCN Red List as "near threatened". Four subspecies of *Felis margarita* are recognized, distinguishable by different pattern and colour of the skin but also by morphological criteria. Every subspecies has different areas of distribution. In the EEP only the subspecies *F.m. harrisoni* is kept with approximately 80 individuals in 22 institutions. From the demographical point of view the population is self sustaining but the close relationship of the individuals and the low breeding success affected the population adversely. The population in the wild is estimated at below 50,000 individuals with a declining population trend due to degradation of its habitat and prey base.

In fact, a full description of the current distribution area for all four subspecies is missing. Furthermore, only little is known about ecology, behaviour and the adaptability to changing environment factors like defragmentation or desertification. Another limiting factor could be the competition for food with other carnivores, because the territories of the sand cat overlaps for example with that of red foxes (*Vulpes vulpes*), rüppell's foxes (*Vulpes rueppelli*), fennecs (*Vulpes zerda*) or wildcats (*Felis silvestris*). To learn more about the ecology, distribution and conservation status of the sand cat in the wild a number of research studies are needed. First step will be to look for cooperation partners in order to start with *in-situ* research in the foreseeable future.

Key words: Sand cat, sub-species, distribution, status

Unifying Regional Approaches for Saving Cheetahs

Laurie Marker

Cheetah Conservation Fund

In the last two years, African nations and specialist groups such as CCF have combined efforts to initiate range-wide conservation planning for carnivores, the cheetah, and ecosystem. Recent meetings for southern and Eastern Africa prompted common discussion on vision, goals, and objectives for conservation strategy. Over sixty five people across twenty-one countries participated in sessions designed to (1) pool knowledge and diversity of experience, (ii) foster an appreciation for cheetah and carnivore conservation, (iii) encourage policy makers to include species conservation requirements into land use planning, (iv) revise and prepare conservation action plans, and (v) devise a process for the collection/collation of information on cheetah population which is continuously updated throughout a region. CCF and SSIG have collaborated towards these goals in Algeria where the focus on sustainable species existence across historical ranges, conservation of habitat and ecological function, and support from incensed stakeholders aligns with the objectives of these cross-regional forums.

Because the cheetah and carnivore territories are transboundary, conservation efforts are necessary across all effected countries. Methodologies and goals reviewed at recent regional meetings suggest inherent similarities and underscore the importance of coordination. Participants of the both workshops acknowledged that capacity development

should be a collaborative effort by the different institutions managing aspects of cheetah and carnivore conservation. Conservation planning and execution across regions will benefit from expertise across diverse backgrounds.

A logical initial step to encourage collaboration involves cross-regional education sessions which will offer value for knowledge sharing and cost efficiency compared to national capacity development throughout each country. CCF will be offering capacity building opportunities over the next three years that will include training at CCF Namibia's International Research and Education Centre for conservation biologists and agriculture extension agents from throughout the cheetah's range countries using a holistic approach and proven methods of cheetah conservation.

With similar visions and strategies, SSIG and CCF have an opportunity to collaborate again on educational opportunities to further mutual goals in a more cost effective and timely manner. CCF's model education programs, in cooperation with the Smithsonian Institution and funded by the Howard G. Buffett Foundation, have experience hosting Conservation Biology, Wildlife Management, Future Farmer's of Africa, and Environmental Education courses, and provides the necessary training infrastructure. Graduates of prior CCF courses are now leaders helping with the conservation of cheetahs and their habitat in different countries. CCF has initiated drafts of two international courses based on identified need from the regional meetings, emphasizing standardization of research techniques for the species across its range. The first course will focus on Cheetah Conservation Biology for professional conservation scientists and the second on Livestock/Predator Management for extension officers. Preliminary course themes include human and the environment, wildlife ecology, research, field techniques and statistics; biomedical; genetics; current conservation initiatives for wildlife; and public policy. Courses will be offered to build capacity in cheetah range countries with a goal of stabilizing and increasing the cheetah populations throughout their remaining range countries.

Regional strategic meetings demonstrated conservation of the species and its ecosystem can be enhanced by unifying efforts through the promotion of knowledge exchange. CCF and SSIG are logical partners in an educational endeavour with synergistic visions and strategies. In addition, further collaboration particularly in the area of capacity building helps build a solid foundation to secure viable populations that are valued by people in the long-term.

Project Update: Recovery and Reintroduction of the North African Ostrich (*Struthio camelus camelus*) in Niger

Kelley Bishop & John Newby
Sahara Conservation Fund

In 2005, the Sahara Conservation Fund (SCF) began supporting a small captive group of ostriches in Iferouane, Niger, the last known population from the country. The first mission was sent to evaluate the health and husbandry status of the ostriches and SCF began sending food and vitamin supplements as a result of the findings.

In July 2006, SCF along with the International Foundation for Wildlife Conservation (IGF) sent a team to investigate the feasibility of an ostrich reintroduction in the plains of the Air Mountains of Northern Niger and immediately following this surveyed the captive population of ostriches around the country. At the end of the year, new enclosures were built to better house the birds and aid reproduction.

Unfortunately, 2007 brought civil unrest to the project region and a new strategy had to be considered. What came out was a project plan more ambitious than originally envisioned. In August SCF surveyed new breeding center and pre-release sites in Niger's pastoral zone to the south of the Aïr. This work identified the village of Gadabeji as the breeding center site, located at the southern point of the Gadabeji Game Reserve, and also identified several potential pre-release sites across the pastoral zone.

In January 2008, working with members of the Association of Zoos & Aquaria Ratite Taxon Advisory Group, Smithsonian's National Zoo and St Louis Zoo, SCF sampled the pre-identified captive ostrich population for genetic and health analyses. The results of these analyses will facilitate the selection of birds for the breeding program. The breeding center design is complete and land has been donated by the local civil administration. While awaiting the launch of the "Reproduction Phase" preparations continue.

An important component of pre-launch activities will be working with private ostrich collections, supporting their husbandry and incubating eggs in an incubator already purchased this year. Staff training is underway in anticipation of launching the "Reproduction Phase" sometime in 2008.

Key words: Ostrich, reintroduction, Niger

Monitoring dorcas gazelle (*Gazella dorcas neglecta*) reintroduction in Senegal.

Teresa Abáigar^a, Babacar Youm^b Marius Niaga^b Jordi Indiano^c Mar Cano^a

^aEstación Experimental de Zonas Áridas (CSIC), Almería (Spain)

^bDirection de Parcs Nationaux (Dakar, Senegal),

^cBarcelona Zoo (Spain)

On April 10th, 20 dorcas gazelles (6 males, 14 females) were reintroduced at the Geumbeul Fauna Reserve (Senegal). The gazelles were located in three acclimation enclosures: 2 holding reproductive groups and 1 with a males group. After 10 months since reintroduction, all the animals have been well adapted to the new space, clima and diet conditions and the social relations are normal for individuals of this species. Two gazelles (1 male, 1 female) died during this time due to a traumatism and an infection. Mating happened immediately after reintroduction and from 22/September to 01/November 2007, there were 9 births of which the first was premature and the fawn did not survive. The rest, of which 3 males and 5 females, born healthful and survived being observed in optimum condition in their enclosures. In addition, a new offspring born at the end of January 2008. In order to maintain maximum genetic variability in this population, the reproductive male was changed in July for future births. At present, 27 dorcas gazelles (5 adult males, 3 young males, 13 adult females, 5 young females, 1 sex unknown) are living in the Guembeul Fauna Reserve.

Key words: dorcas gazelle, reintroduction, Geumbeul Faune Reserve, Senegal.

Scimitar-horned Oryx Behaviour and the Influence of Management in a Fenced Protected Area, Sidi Toui National Park, Tunisia

Renata Molcanova & Tim Wachter

Understanding the impact of management is vital for successful oryx conservation in the network of fenced national parks in Tunisia. This study took place at Sidi-Tou NP (60km²), where the second oldest population of oryx in Tunisia occurs, and aims to provide information on how management may directly effect genetic composition of the population. The paper illustrates direct evidence for the need to improve genetic, health, management facilities and welfare practices for fenced oryx.

A term of social dynamics in this population will provide important information on individual reproductive success and maintenance of genetic health for long term survival of oryx in semi - wild conditions.

It is essential to support this population as part of the national oryx herd and ensure that the population of oryx at Sidi Toui has accurate information to implement the recommendations of the Stratégie Nationale Tunisienne pour la conservation et la Restauration des Anilopes Sahélo-Sahariennes et de leurs habitats.

Key words: Oryx, Tunisia, Sidi Toui, management, population

Impact de la prédation par le chacal (*Canis aureus*) sur l'effectif des Antilopes d'*Oryx dammah* et l'*Addax nasomaculatus* réintroduites dans espace pré-saharien au Sud Tunisien (Cas du Parc National de Bouhedma-Haddèj)

Mohamed Dhaoui¹, Patricia Aissa² & Lazhar Hamdi³

¹ Laboratoire d'Elevage et du Faune Sauvage Dans les Zones Arides & Désertiques, Institut des Régions Arides 6051 Gabes - Tunisie.

² Laboratoire de la bio-Surveillance de l'Environnement, Faculté des Sciences de Bizerte – Tunisie.

³ Arrondissement des Forêts, Commissariat Régional au Développement Agricole de Sidi Bouzid - Tunisie

Dans le cadre d'un programme national de réhabilitation de la faune en Tunisie, la réintroduction des Antilopes, *Oryx dammah* et l'*Addax nasomaculatus* a démarré en 1985. Ces antilopes jouent un rôle essentiel dans la conservation des ressources naturelles.

Le suivi de la prédation par le chacal de ces antilopes (jeunes et des adultes), a été basé sur des observations directes et des observations enregistrées par les brigadiers du parc et la méthode du « Recensement par blocs combinés avec ligne de transect » depuis la réintroduction de ces espèces au Parc National de Bouhedma-Haddej jusqu'à l'année 2007. Les résultats montrent que le taux de mortalité total par le prédation du chacal (*Canus aureus*) chez le troupeau d'*Oryx dammah* est de 35,8%. Chez les jeunes ce taux atteint 57,3%. Le taux de mortalité total par le prédation du chacal (*Canus aureus*) chez le troupeau d'*Addax nasomaculatus* est de 42,7%. Chez les jeunes ce taux atteint 66%. Les principales causes de la mortalité sont essentiellement les accidents, ingestion des sachets de plastique et les combats entre les males de deux espèces d'*Addax* et d'*Oryx*. Les paramètres établis aideraient à déterminer les causes de la mortalité du troupeau et d'analyser certains facteurs qui affectent la reconstitution de la population en vue de faciliter la réintroduction de l'espèce dans d'autres aires protégées en Tunisie.

Mots clés: Antilope oryx, sud tunisien, mortalité, prédation, essentialisation, conservation