ISSUE 23 - SPRING 2018

Sandscript

An eye on the conservation of the wildlife of the Sahara and the Sahel

The semiannual publication of the Sahara Conservation Fund, only organization dedicated uniquely to the biodiversity of the Sahara and the Sahel

SAHARA CONSERVATION FUND

What's Inside

SAND SCRIPT

ISSUE 23 - SPRING 2018

In a large number of ongoing species conservation projects on the planet, the issues of habitat loss, degradation, and increasing anthropogenic pressure are becoming more and more serious.

After years of focusing solely on the protection and monitoring of the endangered species, an increasing number of organizations is trying to adopt more inclusive approaches, by involving citizens in the protection of their natural heritage and environment,

The initial purpose of the Sahara Conservation Fund, which consisted in highlighting the biodiversity issues facing a whole area rather than focusing on a single species, has allowed the organization to quickly take into account all of the political, environmental, and human realities of the region.

SCF developed its own strategy to adapt to those realities: focus on a relatively small number of key habitats and endangered species, sensitize governments and local populations about what threatens these species today, reinforce technical skills and knowledge about wildlife, particularly in terms of ecological monitoring.

SCF is using more and more what is described as a «landscape» approach, in its widest sense. And with new projects coming along, the organization iwill be relying on this approach even more. Sandscript 23 focuses almost entirely on the so-called «landscape» dimension of conservation projects in the Sahelo-Saharan region.

The many different landscapes of the Sahel and the Sahara reflect its natural and cultural variety. After years of hard work in this unique and underrated region, SCF is still driven by the idea of facing new and fascinating challenges.

We hope that reading this issue will convey to you the passion that has been nourishing the team for so long.

Sandscript

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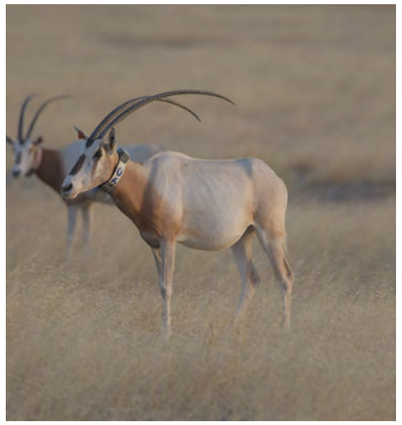
Sandscript 23 will take you to Chad, Niger, Mali, and Burkina Faso, and deal with reserve management, elephants conservation, land restoration in the Sahel... There are so many different topics discussed in this issue!
Have a good trip and enjoy the read!



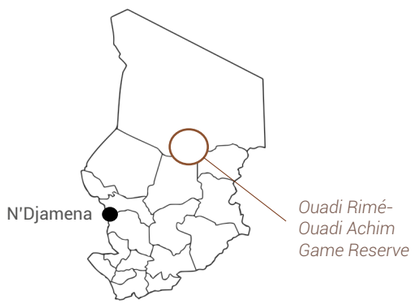
Editorial:

Species And Landscapes In The Desert

After years of working to save species, SCF is more aware than ever of the need for a broader conservation approach, including the protection of ecosystems, technical assistance to the countries of the Sahelo-Saharan area, and more support to the local communities. The good management of the reserves where SCF is engaged through its reintroduction or ecological monitoring initiatives is thus an important condition for their long-term success. That's why SCF is moving towards greater involvement in reserve management.

OUADI RIMÉ-OUADI ACHIM GAME RESERVE. On the left, a view of the reserve showing the presence of a relatively abundant flora, which makes it particularly appealing for wildlife.

BY ***Mark Stanley Price***
SENIOR RESEARCH FELLOW
WILDCRU, UNIVERSITY OF OXFORD
SCF BOARD MEMBER



A DENHAM'S BUSTARD. The Ouadi Rimé-Ouadi Achim Game Reserve is home to many bird species, including the Denham's Bustard, which is currently declining.

SCF is evolving. Its early large-scale survey work through the Pan Sahara Wildlife Surveys has given us a good idea of centres of diversity and hence conservation priority, subject to the ability to work in them safely.
For the last few years, based on this knowledge, SCF has focussed on the dama gazelle, addax and, of course, restoring the scimitar-horned oryx into Chad's Ouadi Rime-Ouadi Achim Game Reserve (OROAGR).
Any species needs habitat, defined as the collective resources of space, food, shelter and all the other species with which it interacts. And here deserts exhibit some rare opportunities... One of the greatest challenges for biodiversity today around the world is loss of habitat, whether, for example, through land transformation (forests bisected by motorways) or through over-use of agricultural chemicals leading to sterile farmlands. Because of their natural physical structure and low biological productivity, deserts are sparsely occupied by people and these people tend to be nomadic.
Given this set of conditions, desert species – while not very diverse in terms of species numbers – have two basic strategies. They can be small enough to live underground (such as the fennec fox), or are able to use the small habitats of woodland which provide shade (such as the aardvark); and in each case their needs are met. On the other hand, the large species, very much of SCF's interest, have all the physiological benefits in hot climates of being large, but they must be highly mobile to take advantage of marginally better conditions; this usually means where there has either been rain or there is perennial pasturage in wadis or woodland.
Given this situation, SCF's efforts to restore the Sahara's large mammals initially needs intense effort on both small remnant populations and reintroduced ones, such as the SHO in Chad and giraffe to be released in Gadabeji, Niger. But this sort on intense effort and oversight has to lead to efforts to ensure there is habitat over the vast areas that these species will require if they are to develop as viable, self-supporting populations, able to cope with the challenges and extreme events that deserts will throw at them, and to which they are adapted.

All these factors are now evident in the direction of SCF's work. We continue to protect the expanding number of SHO, and the security we bring to the area they use is also benefitting the small population of dama gazelle. In addition, with the support of the EU, we will be developing a new project to ensure the whole 77,950 square kms of the OROAGR is managed and protected, providing resources sustainably for the interests of people, their livestock and wild species. This will also be the strategy to re-build the wild population of addax.
The idea that deserts are empty or uniformly boring is completely wrong. Anyone living in one soon appreciates the subtleties of landscapes and geomorphology. Desert species know how to exploit this diversity, and thus effective conservation of these species requires protection of vast areas.
This is why SCF is moving into a phase of helping countries conserve their huge but diverse desert landscapes, which will then support viable populations of the remarkable plants and animals, large and small, that call them home.

A DAMA GAZELLE. In the right-hand corner a dama gazelle – a critically endangered species that makes particularly rare appearances - suddenly stops to note the presence of the photographer before getting back to its business.

REINTRODUCED ORYX. Two reintroduced oryx wander peacefully as if they had always been living there. In the background, a dozen dama gazelles pass by furtively. A perfect scene to SCF!

NOMADS BEST ALLIES. In this semi-arid landscape offering limited comfort and resources, some animals, such as dromedaries or camels, are a great asset for the people. Resistant, long-lived, extremely well adapted to their environment, these animals are present in the reserve, too.

NOMADS. For the pastoralists, there are some important transhumance sites in the reserve.

Ouadi Rimé-Ouadi Achim Game Reserve

A Dream Comes True

The progress of the scimitar-horned oryx reintroduction project in Chad, which started in 2016, is leading SCF to progressively broaden its scope of activities, to ensure the survival of the population of the animals that are now back in the wild. A new program developed in collaboration with the European Union and the Chadian authorities will soon provide SCF with a formal framework to help improve the governance and management of the Ouadi Rimé-Ouadi Achim Game Reserve.

BY ***John Newby***
WILDLIFE BIOLOGIST
SCF CHIEF EXECUTIVE OFFICER

There can be no doubt about it – the oryx reintroduction project in Chad is a roaring success. With 98 oryx currently living freely in the wild, and a further 82 awaiting release from their pens this summer, we are getting ever closer to the 500-animals-in-the-wild milestone we established at the beginning of the project in 2016. And although the oryx are still coming to terms with the realities of a life unsupported in the wild, with the challenging rigors of drought and the seasonal lack of green grazing, they are learning remarkably fast how to cope.

The first couple of years of this ground-breaking project have been exceptionally busy for everyone. From the team in Abu Dhabi managing the nascent world herd and arranging transport to Chad, to the oryx keepers and other SCF staff in Chad responsible for on-site management and monitoring, and the local rangers charged with ensuring the oryxs' protection in the wild.

These critically important jobs, together with the technical inputs to wildlife monitoring from the Smithsonian Conservation Biology Institute and the Zoological Society of London, were recently highlighted at the première in Abu Dhabi of a documentary, entitled "Back to the Wild", commissioned by the Environment Agency. Amongst the VIPs attending the event, Chad's Minister of the Environment, HE Siddick Abdelkerim Haggar, warmly praised both the leadership of EAD and the UAE's founding father, HH Sheikh Zayed bin Sultan Al Nahyan, for their vision and commitment to saving the oryx from extinction and in doing so, making the current project a possibility.

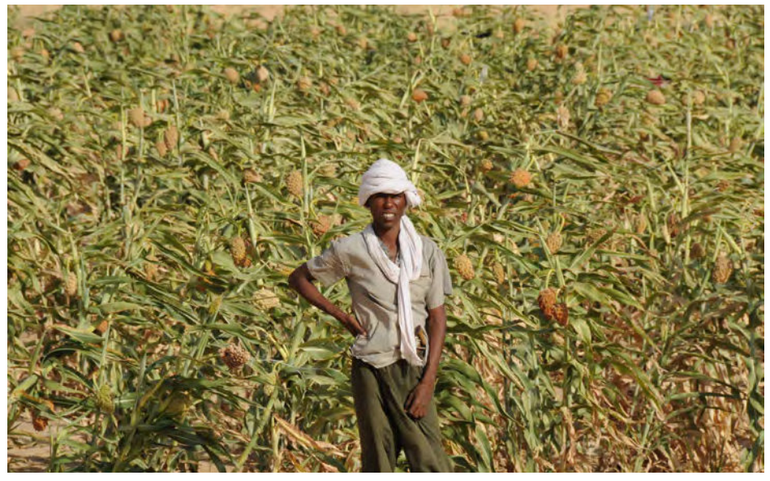
Bringing the project so far has been the result of some extraordinary commitment and coordination from all involved, in Abu Dhabi, Chad and beyond. As we move forward, however, and as more oryx return to the wild, the challenges will change. Thanks to the satellite collars put on new arrivals, we are currently able to monitor almost all the oryx on a regular basis. But as numbers increase and the proportion of wild-born animals grows, the job will become more difficult.

SCIMITAR-HORNED ORYX. The adaptation of these animals to high temperatures becomes obvious as they wisely choose to rest in the shade, and thus save their energy, while waiting for the sun to set.

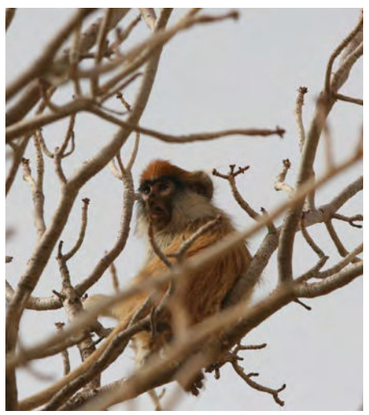
LOCAL RANGERS. They play a particularly important role, given the fact that poaching, which their presence is limiting, is one of the major threats to species.

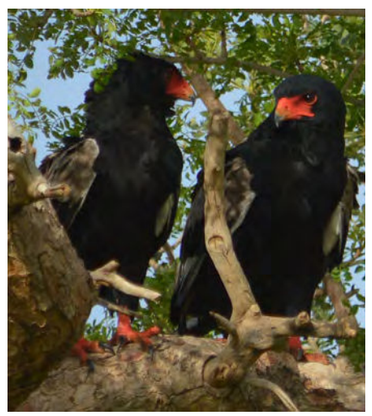
The emphasis will change from individual care and monitoring to larger scale management and protection of a growing, free-ranging population of animals; animals in need of space, in need of grazing, and in need of mobility to exploit and explore the greater environment provided by the vast Ouadi Rimé-Ouadi Achim Game Reserve.

With this reality in mind, and as a complement to the oryx project, SCF, the European Union and the Chadian authorities have joined forces to fund and implement an ambitious program aimed at bolstering the management of the reserve and improving its governance so that it can continue to provide natural resources, living space and sustenance to both its human and wildlife populations. With the vital living space and resources the oryx and other species need to prosper under sound management, the visionary goal of restoring an entire wildlife community to its former range in the heart of Africa is not a pipe dream but a truly alluring and attainable reality.



SORGHUM CULTURE. Agriculture, including sorghum culture, also exists in the reserve.





WOODABE NOMADS IN GADABEJI. Also known as the Bororos, they are traditionally nomadic cattle-herders and traders in the Sahel.

A VERY DIVERSE FAUNA. These pictures of a patas monkey, a young jackal, and two bateleur eagles staring at each other, were taken in the Gadabeji Game Reserve, showing the different kind of species that live there.

Gadabeji Game Reserve

Gadabeji Game Reserve: Back To The Future

Recently, Niger's Gadabeji Game Reserve was made a 'biosphere reserve', a status granted by UNESCO. This acknowledges the good management of the reserve, recognizing its ability to help combine species conservation and sustainable use of natural resources. SCF is happy to see the efforts of its managers rewarded and wanted to use the occasion to tell more about the reserve.

BY ***Thomas Rabeil***
CONSERVATION BIOLOGIST
SCF REGIONAL PROGRAM OFFICER

The Gadabeji Game Reserve was created in 1955 with the objective to conserve large Sahelian mammals, like scimitar-horned oryx, giraffe, dama gazelle, dorcas and red-fronted gazelles, but also the biggest bird on the planet, the North African ostrich. The reserve lies in the Sahelian grasslands of central Niger and at 76,000 ha is relatively small by comparison with other protected areas in Niger. After the extinction of the oryx in the mid 1950's, slowly but surely other species started to decline in the 1970's and the 1980's due to a combination of drought and overhunting. Species like the West African giraffe, dama gazelle and ostrich were extirpated from the reserve, becoming critically endangered with only a handful left in the wild.
During the late 1980's, Gadabeji Game Reserve was a focus of interest as a potential site for re-introduction of scimitar-horned oryx (Dixon and Newby, 1989), which inhabited the area up until at least 1955. Unfortunately, during the civil strife at the beginning of 90's, the area was occupied by the army and most of the remaining wildlife was wiped out.

Afterwards, for many years, the reserve was overlooked by the Nigerien wildlife authorities until a second initiative to restore the scimitar-horned oryx in the reserve was launched unsuccessfully in 2009.
More recently in 2013, the Fauna Corridor Project funded by GEF/UNDP and implemented by the Nigerien wildlife authorities with the help of SCF, worked to rehabilitate and improve the management of the reserve, including wildlife conservation and species restoration. Thanks to the project, the reserve's management unit started to augment the dorcas gazelle population by releasing animals seized by the authorities while combatting illegal trade.
After four-years' hard work improving management and governance, and as proof of success, the protected area was classified as a Biosphere Reserve by UNESCO in 2017.
The reserve was also targetted by the stakeholders in the framework of the national strategy for giraffe conservation as a good site for translocation. This is why the Giraffe Conservation Foundation partnered with SCF to support the Nigerien wildlife authorities to implement the activities of the strategy, and in particular to provide the technical and scientific support for the translocation. In all likelihood, the translocation of a dozen giraffe will occur by the end of this year.
In addition, as part of the North African ostrich recovery project in Niger, SCF plans to reintroduce the species in Gadabeji in early 2019 and create the first founder population of wild ostriches in Niger since the late 1980's.
Although Gadabeji is a small island surrounded by pastoral lands, with additional pressure to increase agriculture, it is becoming a safe zone for wildlife thanks to the different initiatives to restore locally extinct species and reinforce the remaining population of dorcas gazelles. With the expected return of well-managed and iconic species like giraffe and ostrich, the reserve is gaining support everyday from the local population and the national authorities. As a result, Niger's Minister of Defense agreed to become the "godfather" of the reserve and we hope all these initiatives will create a momentum to secure the future of the Sahelian wildlife for the next generations des-

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Lamarque F., Saley H., Chardonnet P., 2009. Etude de faisabilité du projet de réintroduction de l'oryx algazelle au Niger, Environment Agency Abu Dhabi (EAD), Fondation IGF, DGEEF, République du Niger, Paris, 90 p.

LOCAL COMMUNITIES PARTICIPATION. Teams of young men patrol to ensure compliance and conduct manual tasks such as fire-break construction and tree-planting.
Courtesy: Susan Canney

MALI ELEPHANT PROJECT. The Mali Elephant Project (MEP) empowers local people to reverse habitat degradation by uniting multiple ethnic groups to jointly manage the land for the benefit of people and elephants. This photo of a meeting of a local brigade shows the growing potential of such a mission.
Learn more on the project at: https://www.wild.org/mali-elephants/
Courtesy: Susan Canney

ELEPHANTS AT LAKE BANZENA. The presence of water in elephant habitat is crucial as their skin has neither sweat glands nor sebaceous glands and gets dry very easily.
Courtesy: Carlton Ward Jr

Mali Elephant Project

Elephant-centred landscape conservation in the Gourma region of Mali

The Mali Elephant Project, led by biologist and researcher Susan Canney, also a member of the Sahara Conservation Fund's Conservation & Science Committee, vividly demonstrates the importance of considering species conservation in relation to larger scale environmental protection. A real quest for the empowerment of local peoples can then begin.

BY ***Susan Canney***
CONSERVATION BIOLOGIST
DIRECTOR OF THE MALI ELEPHANT PROJECT
MEMBER OF SCF CONSERVATION & SCIENCE COMMITTEE

An internationally important population, the Mali elephants are remarkable for how they have managed to survive when all others around them have disappeared. They make the longest annual migration of all elephants, picking their way through this harsh environment to find the resources they require, finding dry-season water in small lakes that collect in depressions (often at the foot of dunes), surrounded by thicket forest. In the wet season they are to be found in the south of their range where there is a diversity of food sources but no surface water; and all through the year they avoid human activity as much as possible.
After studying their migration for 3 years it became clear that they were at the limit of their ability to adapt further and their migration route needed to be preserved in its entirety, although conflict was rising as human activity was spreading and intensifying throughout the range. As this covered approximately 32,000km (somewhere between the size of Belgium and Switzerland) a landscape approach that involved the local people was essential. An attitude survey and a series of community meetings demonstrated that the majority of the local population regarded the elephants like themselves, as an integral part of the ecosystem.

"If elephants disappear it means the environment is no longer good for us" was the commonly heard sentiment. Further socio-economic studies showed that the multiple ethnicities and clans that inhabit the range all had systems of resource management but were reluctant to respect each other's resulting in degradation and a loss of ecosystem productivity and resilience. However it was also possible that with good management, habitats could be restored.
The award-winning Mali Elephant Project's work is to bring all parts of the community together to create a common perception of the problems they face before determining solutions. These usually involve electing a representative committee of elders to determine the resource management rules (which include protection of the migration route and key elephant habitat); while teams of young men patrol to ensure compliance and conduct manual tasks such as fire-break construction and tree-planting. This is possible because of Mali's decentralisation legislation which gives local communities control over their own natural resources. Empowering local people to prevent outsiders and urban commercial interests from abusive resource extraction is popular and the local benefits of "elephant-centred" resource management have provided the foundation for a successful anti-poaching strategy and the creation of a protected area based on the biosphere reserve model. Providing benefit from elephant conservation, together with reinforcing social norms, represents a strong incentive for most not to poach, greatly facilitating the work of the anti-poaching enforcement unit who can focus on the real criminal element helped by local information.
The local empowerment model also allows resource management and habitat restoration to be finely adapted to local conditions and provide the "bottom-up" basis for a management plan for the new reserve, plus a means of negotiating and enforcing the strictly protected core areas.

Sahelian Forests

Yes, We Can Restore Sahelian Forests

The existence of Sahelian woodlands, mainly composed of acacias, is regularly threatened by drought. Some of the woodlands do not survive such natural disasters. But the motivation of people living nearby to restore these precious ecosystems pushes them to use new sylviculture techniques and to organize themselves differently.

In the 1970's, a severe and long lasting drought destroyed many of the Sahel's natural acacia woodlands. Despite heavy grazing pressure from huge herds of Fulani cattle, wildlife was still present, with ostrich, roan antelope and even lions reaching the Niger river. The Gourma elephants are now the last specimens of a once thriving megafauna.

The drought lasted so long that most of the seed trees also died off and in the end, when rainfall returned, vast plots of land remain barren, other than for some annual grasses where a few goats can graze. Most seeds will not germinate because of a thin impermeable layer of rock-hard top-soil.

To address this, a new technique was developed, opening up the soils in lines with a special tractor and plough, going up and down, and creating shallow depressions in the form of half-moons. Lines created were not continuous so water would drain at first into the half-moon (rains up to 50 mm would be stored) with excess water spilling into the next rank of half-moons and so on. The Sahelian landscape is rather flat, so erosion is less a problem.

Just before the rainy season, the villagers come into action. During the year, they had collected local seeds of trees while herding their livestock, including several species of acacia, Balanites and Ziziphus, to build up a stock in each village. Donkey carts take the sacks of seeds into the fields,where they are mixed with goat dung. Then the whole village, young and old, women and men, sow the seeds into the half-moons. The annual rains fill up each half-moon and many seeds germinate: at least one thousand young trees per ha with extremely good roots going for the deep water layers. The goat dung brings in herb species and rare tree seeds and so the new young ecosystem is a copy of the former woodlands.

After 3 years the young acacias are up to 1.5 m high and limited grazing of them becomes possible again. As herbs such as cassia spread between the lines and ants takes the seeds from the half-moons, now fully covered with local grasses. So, the villagers can use their once-deserted land very quickly again.

Birds, including many palearctic migrants, find the newly-restored land, with wheatears, redstarts and turtle doves in high numbers, but also local species such as plovers, francolins and even guinea fowl, creating extra income and food source when villagers collect the eggs.

In northern Burkina Faso, more then 60 km² of land is restored in this way every year, certainly not enough because many thousands of km² remain open and deserted, but it shows that local communities can change their own environment with a little help funding the ploughing.

BY ***Koen De Smet***
AGRICULTURAL ENGINEER
SCF BOARD MEMBER

COLLABORATING FOR THE TREES. From the villagers to the goats, everyone plays their part in trying to restore the ecosystems of the Sahelian acacia woodlands. No fencing is needed: cows and goats eat grass and generally stay away from the young trees.

We Value Your Support!

SCF would like to thank the readers of Sandscript for their interest and remind them that donations to projects can be made via our website. From the next issue of Sandscript, a French-written will also be available. `

A recent survey we sent you by email, using the occasion of data protection laws recently adopted in Europe, allowed us to assess a little better that part of our audience that would like to receive our content in French. Just drop us a line if you are interested.

In the meantime, do not forget that Sahelo-Saharan wildlife needs your support: do not hesitate to send us your donations!

TO DONATE TO SCF JUST SCAN THE QR CODE
OR VISIT **WWW.SAHARACONSERVATION.ORG/DONATE**

www.saharaconservation.org | **scf@saharaconservation.org**

If you would like to know more about our work and how to contribute to our projects, please do not hesitate to contact us. We would love to hear from you!

SCF is grateful to Mark Stanley Price, John Newby, Koen de Smet, Thomas Rabeil, and Susan Canney, for their photos and contributions to this issue. Sandscript is edited by Yasmina Khaznawi, Communications Officer for SCF. You can reach her for any comments and feedback (contact informations above).We also like to thank the growing chorus of supporters that gives us the precious support that makes our projects and their achievements so tangible.

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Courtesy: Susan Canney

SAND SCRIPT

The semiannual publication of the Sahara Conservation Fund

Launched in 2007, Sandscript has been bringing you news of the Sahara Conservation Fund and its projects for over a decade.

Since its inception, Sandscript articles have been written by the SCF team, their collaborators, and all those who, through their fieldwork, make the conservation of biodiversity a reality. Its primary purpose is to inform the public of our conservation activities in the Sahara and Sahel, to share relevant news items, but also to sensitize the reader to the beauty and richness of this region of the world. Over the years, Sandscript has gone beyond a simple informative role to provide original perspectives on poorly-known areas of Africa and their amazingly diverse, unique and threatened wildlife. It is thanks to its narrative style and its beautiful photos that the publication invites the reader, twice a year, to delve into this universe. Taking readers behind the scenes, Sandscript creates a new perspective on the fauna and flora of the Sahara and the Sahel and the efforts undertaken to ensure its survival.

We are sincerely grateful to all those who have helped make Sandscript one of the first and finest sources of information on the unique but neglected wildlife of the Sahara and the Sahel.

To accompany and complement Sandscript with brief news items, a quarterly e-newsletter is also now available. Subscribe on line at www.saharaconservation.org.

SAHARA CONSERVATION FUND

SCF's mission is to conserve the wildlife of the Sahara and bordering Sahelian grasslands.To implement our mission, we forge partnerships between people, governments, the world zoo and scientific communities, international conventions, non-governmental organizations and donor agencies. A powerful network with a common goal – the conservation of deserts and their unique natural and cultural heritage.