

ISSUE 27 – SPRING 2020

Sandscript

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



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



SAND SCRIPT

ISSUE 27 – SPRING 2020

This issue of Sandscript is largely dedicated to the dama gazelle, as you can see from the majestic aerial cover photo taken by Marc Dethier, our Project Oryx leader in Chad. It captures a small group of these graceful creatures dashing through the OROAGR. The focus of this issue of Sandscript also stems from the redoubled efforts of the SCF and its partners to save the species. With the situation growing ever more dire, we launched a high-risk rescue mission in February to bring some isolated individuals in the Manga region of Chad to safety, in accordance with recommendations from the Dama gazelle conservation strategy 2019-2028 (Al Ain Zoo, IUCN/SSC ASG & RZSS, 2019). The team conveyed three dama gazelles safely to the OROAGR, and on the way back even managed to capture a male of the same species in the reserve and add him to the group.

Though this mission can be counted as a success, we unfortunately had to mourn the loss of two dama gazelles a few weeks later. This heartbreaking setback arose from a sudden deterioration in the health of the animals coupled with a lack of available veterinary specialists due to the COVID-19 pandemic. We remain hopeful that the population will rebound and preserve some of their wild genes, thanks to the good physical condition of the remaining breeding pair.

We would, however, like to acknowledge the outstanding work of our partners in the successful rescue mission. This 27th issue of Sandscript features a two-part article commemorating these accomplishments. As the story will show: these missions take detailed planning, smooth collaboration, and meticulous attention to every action.

In Niger, intensive research is currently underway on the dama gazelle micropopulation in the Air mountains, on Mount Takoloukouzet. In this issue, we are delighted to share this exciting news with you.

The Ouadi Rimé-Ouadi Achim Game Reserve (OROAGR) in Chad continues to acquire new species thanks to the SCF's local oryx and OROAP projects. After welcoming the scimitar-horned oryx and addax, in the spring of 2020 the reserve managed to obtain some North African ostriches – a species with very few members left in the wild. We will return to the story of this vital and amazing new development for the OROAGR.

Finally, this issue catches up with the eight West African giraffes reintroduced to the Gadabeji Biosphere Reserve in Niger. Their small group is doing well overall and may even add new members soon.

Happy reading!

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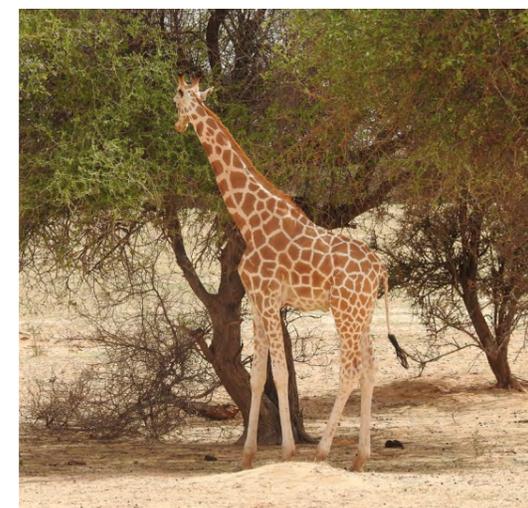
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Mission Manga Dama 1/2

DEVELOPING A CAPTURE PLAN

FOR YEARS, THE DAMA GAZELLE (NANGER DAMA) HAS BEEN OF GREAT CONCERN TO THE INTERNATIONAL CONSERVATION COMMUNITY AND NOW STANDS AT THE BRINK OF EXTINCTION. GIVEN THE URGENCY, THE SAHARA CONSERVATION FUND (SCF) MOBILIZED A TEAM OF NATIONAL AND INTERNATIONAL EXPERTS IN LATE JANUARY 2020 TO SUCCESSFULLY RESCUE A FEW OF THE REMOTEST AND LEAST PROTECTED DAMA GAZELLES IN THE WILD, BUT ALSO MOST GENETICALLY DIVERSE KNOWN TO SCIENCE. WELCOME BEHIND THE SCENES OF THIS UNPRECEDENTED SPECIES SURVIVAL OPERATION - A STORY SCF IS EXTREMELY HAPPY TO SHARE FROM OUR PARTNERS' PERSPECTIVE, WHO PLAYED A PIVOTAL ROLE IN THIS ACHIEVEMENT.

In May 2019, Dr. Pete Morkel, a renowned, experienced, wildlife capture veterinarian from Namibia, traveled to the U.S. with the aim of establishing capture and holding protocols for damas. This effort focused on learning from dama facilities in Texas that have a proven track record of raising and capturing damas in a large landscape setting. The first portion of this trip was spent at Fossil Rim Wildlife Center. In addition to learning current protocols from the staff at Fossil Rim, discussions were held about the overall project structure and plan, and the various options for keeping the animals calm during the transport to their destination in the Ouadi Rimé - Ouadi Achim Game Reserve (OROAGR).

Following the visit to Fossil Rim, Dr. Morkel and Gavin Livingston visited five Texas ranches (Steve Forrest Ranch, Natural Bridge Wildlife Ranch, Austin Savanna, Cross Bar C Ranch, and Safari Enterprises) that are members of the Source Population Alliance, one of SCF's partners. Ranches were selected that maintain and capture damas in large areas that would simulate conditions similar to those in Chad. They recommended the use of helicopters to dart damas as the most practical option in Chad. Additional advice and insights were sought from exotic hoofstock veterinarian, Dr. Pat O'Neil of Pedernales Veterinary Center.

Dr. Morkel returned to the U.S. in August 2019 and spent a couple of days with the team at White Oak Conservation. During this time, Dr. Scott Citino helped refine the protocols that would be utilized in this mission. The team gathered all the information learned and synthesized it into a report with recommendations for the capture process and post-capture care. This report would later be used as the framework for much of the capture mission in the Manga region of Chad.

An important part of determining the appropriate sedation protocol to use was performing a sedation trial in a controlled setting. Since Fossil Rim held a number of dama gazelles in captivity, one of these animals would be utilized to test out the protocol prior to use in the wild. The animal chosen was sedated with the proposed protocol and monitored for five hours, with excellent results. The level of sedation achieved allowed for safe transport of an awake, but calm, gazelle without the need for a crate.

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Photo © Julie Swenson / Fossil Rim Wildlife Center

Landscape in the Manga region, Chad, seen from the helicopter used for the dama gazelles rescue mission.



Photos: Left page © Julie Swenson / Fossil Rim Wildlife Center; Right page top right corner © Tim Wachter / Zoological Society of London; upper left corner © Julie Swenson / Fossil Rim Wildlife Center; lower photos © John Newby / Sahara Conservation Fund.

These few photographs show how much good coordination was required for the ground and helicopter teams, as well as careful and expert handling of animals, patience and precision.

Mission Manga Damas 2/2

The Capture

It was clear that nothing could happen without a helicopter, pilot, and skilled capture specialist. Following unsuccessful research, SVS—Société de Voyages Sahariens, let us know that they had a client that wanted to utilize a helicopter in Northern Chad, and there was a potential that we could use the heli-copter as well. The pilot, Hoho Andrew, was experienced with animal capture, and did an excellent job. The fixed wing was also a challenge early on, but ultimately MAF (Mission Aviation Fellowship) came through with a Cessna 182 that proved extremely useful.

As part of the mission preparation, Noé Conservation recruited nomads and herders to report any dama activities in their area. This precious information was mapped by Tim Wachter, allowing the helicopter to then survey specific, identified hot zones. When the ground team was on confirmed fresh tracks, the helicopter, with our team onboard, went in to dart the dama. We found a group of four ga-zelles and darted three of them in a few minutes. The fourth one broke

away and we could not follow her as the three darted ones were starting to show signs of the anesthesia. They went down within five minutes post darting. We managed to load and bring back to base camp all three damas within 2 hours. Once at base, they were reversed from the anesthetic, tranquilized, and placed in dark crates.

About 36 hours later, we handled the damas carefully out of the crates in order to blindfold, hobble, tranquilize, place an intravenous line, and load them for a 2-hour flight to OROAGR's boma when the Manga dama arrived in OROAGR, it was decided to capture an adult male from the protect-ed area and place him in the same boma. The ground crew found a herd of 12 damas and identified a suitable male, then called in the helicopter to dart him and bring him back to the boma. Once all in the boma, the damas showed very good signs of adaption within a few days, eating, drinking and even mating (as observed by camera traps).

Now that the Manga females are in OROAGR, they will have the opportunity to breed with the male captured from the reserve and produce offspring that will preserve the genetics of some of the most genetically diverse dama still remaining on earth.

This mission has shown the value of visionary thinking and having the fortitude to accept the high level of risk involved in an undertaking of this kind. The participants were from all over the globe—United Arab Emirates, Chad, France, South Africa, England, Namibia, Kenya, and the United States. Everyone had special skills necessary to make the project work, and no people or animals were injured. The pilots, capture specialists, vets, animal care team, organizers, laborers, cooks, mechanics, outfitters, and every person involved in the capture were critical and worked very well as a team. To work in such remote areas, to get all the experts and knowledge together, and to succeed in bringing the most endangered gazelle to safety is an incredible achievement.

The operation took place in January with the strong support of the Chadian authorities. It was conducted with the use of a ground crew, light aircraft and helicopters. The team of this vitally important initiative was composed of staff members from the department Chadian Wildlife Service, the Abu Dhabi Environment Agency, the Zoological Society of London, the Fossil Rim Wildlife Center, the Smithsonian Conservation Biology Institute, the Gulf Breeze Zoo, and Noé Conservation. The capture of individuals from the Manga was also the highest priority under the Dama Gazelle Conservation Strategy 2019-2028 (Al Ain Zoo, IUCN/SSC ASG & RZSS, 2019). SCF is extremely grateful as well to the Segré Foundation, Rewild and the Zoological Society of London for their support.

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IN THE AÏR AND TÉNÉRÉ NATIONAL NATURE RESERVE. These shots (above and on the right) came from the SCF camera traps installed at Mount Takolokouzet in 2017. Uniquely, they show the species evolving, in the wild, in a mountainous habitat where it has taken refuge, but that is quite foreign to it – a clear sign of human pressures on its ecosystems.



Photos : on top © Abdoul Razack Moussa Zabeirou ; above © Cloé Pourchier



ABOUT THE AUTHOR OF THE THESIS AND THE ARTICLE. Abdoul Razack Moussa Zabeirou, shown here on a field mission monitoring various species, has been with the Sahara Conservation Fund and the Giraffe Conservation Foundation since 2017. After earning his degree in Biodiversity and Environmental Management, he had the opportunity to work with various conservation stakeholders in Niger. He has a passion for fieldwork and an interest in technology and its conservation applications. Abdoul Razack submitted his thesis project on the Air dama gazelles to the University of Prague in 2019. It was accepted and received funding, largely from SCF and its partners, the Al Ain Zoo and San Diego Zoo.

Dama gazelle conservation in Niger

Better Understanding the Air Damas

BY

**Abdoul Razack
Moussa Zabeirou**

PROJECT OFFICER IN NIGER
SCF/GCF

THE PRESENCE OF DAMA GAZELLES IN THE AÏR CAUGHT OUR ATTENTION IN 2014. WE KNEW SOME LOCALS HAD SPOTTED DAMA GAZELLES IN PAST YEARS, BUT THE HERD WAS NOT BELIEVED TO HAVE SURVIVED. HOWEVER, A RECENT SIGHTING BY AN ECO-GUARD THAT YEAR REKINDLED OUR INTEREST. OUR NEXT MISSION WAS TO OBSERVE THE DAMA GAZELLE, EVEN IF ONLY INDIRECTLY. OUR EFFORTS QUICKLY BORE FRUIT – WE OBSERVED EIGHT, DIRECTLY. THE TEAM MANAGED TO CLEARLY IDENTIFY THREE FEMALES AND ONE MALE IN THE GROUP. WE DECIDED TO CREATE A DEDICATED ‘AÏR DAMAS’ PROJECT, TAKING THE 2014 MISSION AS THE STARTING POINT. IN 2017, THE PROJECT CONTINUED WITH THE INSTALLATION OF CAMERA TRAPS IN THE TAKOLOKOUZET MASSIF. EVERY SIX MONTHS, WE SET OUT INTO THE FIELD TO COLLECT DATA, MOVE THE CAMERAS AS NEEDED, AND CHANGE BATTERIES.

I am passionate about wildlife. I did a shadowing internship in the Termit and Tin-Toumma National Nature Reserve a few years ago. That is when I really became aware that the dama gazelle was disappearing from the wild. I started to think about the best way to use the data from the camera traps. Getting the most out of this kind of information will

give us the best shot at saving the species. The research I hope to conduct would produce more detailed descriptions and maps of the different dama gazelle habitats and identify the factors that influence their distribution. This could result in creation of a model and a redrawing of dama conservation areas.

I work with several different species, but I chose to study the Air dama because they have received relatively little attention given the urgency of their situation (the dama gazelle is critically endangered and appears on the IUCN Red List). The complexity of the subject matter and of the area deters researchers. In fact, one odd feature of the Takolokouzet massif is that it is not the dama gazelle's natural habitat. A proper understanding of how and why they took refuge there, and especially how they have survived in numbers likely in the dozens, could yield invaluable insights for conservation science for the species.

Taking a traditional biology approach, I tried to determine the composition of their diet and the nutrients they live on, using methods like faecal analysis. The most recent batch of data, spanning September 2019 to March 2020, shows the presence of four fawns, which gives us hope that this small group can sustain itself somewhat under the living conditions on the massif. On the other hand, it would be highly useful to have a better estimate of the carrying capacity of the area. Is the dama gazelle population growing slowly, or has it already peaked?

Current methods do not allow us to calculate the relative species abundance accurately. Therefore, a more reliable estimate could be based on the long and arduous work I am starting by individual identification, which is now more feasible thanks to analysis of the camera trap images.

But I also hope to harness the human side of conservation, by surveying local populations, because I am convinced that including the local level is essential to the development of relevant conservation models and to achieving the related objectives. I would like an optimal understanding of their collective knowledge of the species and awareness of its situation. We are still lacking these pieces.

In any case, my main goal is to improve our general understanding of this species' situation and its resilience, with the ultimate aim of attracting more targeted initiatives and resources to save the dama gazelle from extinction. You can receive the latest updates on our research in the Sahara Conservation Fund news!



NEW INHABITANTS OF THE OUADI RIMÉ-OUADI ACHIM GAME RESERVE. The ostriches brought as very young chicks from Zakouma National Park in southern Chad are now living at the oryx reintroduction project site.

Oryx project / phase II

Ostriches in the OROAGR

SCF'S ACTIVITIES IN CHAD INCLUDE REINTRODUCTION OF THE NORTH AFRICAN OSTRICH TO THE OROAGR, AS PART OF BOTH THE ORYX AND POROA PROJECTS (PHASE 2). THE TWO TEAMS LAUNCHED A JOINT OPERATION, SUPPORTED BY EXPERT ADVICE FROM THE TECHNICAL PARTNERS FROM BOTH PROJECTS. 2019 SAW DISCUSSIONS ON THE STRATEGY AND SUBSEQUENT ACTION PLAN, IN WHAT IS NOW KNOWN AS THE 'OSTRICH' WORKSHOP. AT THIS WORKSHOP, THE PARTNERS, IN PARTICULAR THE AFRICAN PARKS NETWORK (APN) – THE ORGANISATION THAT OPERATES IN THE PARKS IN QUESTION, AND A POROA'S ASSOCIATE – EXPLORED THE IDEA OF RELOCATING NORTH AFRICAN OSTRICHES FROM ZAKOUMA NATIONAL PARK IN THE SOUTH OF CHAD TO THE ENNEDI AND OROAGR IN THE NORTH AND CENTRE OF THE COUNTRY. APN WANTS TO REINTRODUCE THE SPECIES INTO THE ENNEDI, AND SCF HOPES TO ACCOMPLISH THE SAME AT THE RESERVE. THIS COULD SOON GIVE CHAD A RELATIVELY ABUNDANT NATIONAL OSTRICH POPULATION.

In June of 2019, APN invited Willem Burger, a South Africa-based veterinarian specialising in ostrich breeding, to inspect the area in the Ennedi and draft recommendations on reintroduction of ostriches at this location. This veterinarian also visited the ostriches at Zakouma. Following these visits, APN presented an ostrich reintroduction strategy for the Ennedi at a meeting of the teams from APN Ennedi, APN Zakouma, and SCF, just before the ostrich workshop. It was decided that members from APN Ennedi and SCF teams in Chad would go to South Africa to receive training from Willem Burger in ostrich chick handling, nutrition, certain care tasks, and the necessary watering.

Therefore, in October of 2019 in South Africa, I learned how to catch ostrich chicks, teach them to peck grain, and encourage them to drink. The first few months of an ostrich chick's life involve continuous learning and demand the constant presence of its mother, or in her absence, the breeder. At that time, we also realised the importance of the right diet, with various special amino acids, and we set out to find the necessary ingredients. After some back and forth between a Chadian veterinarian and South African nutritionists, we successfully perfected the right mix of locally available nutrients. To facilitate our task, we imported a millet grinder from Niger, with the help of our colleague Mainounatou Ibrahim, as the sorghum grinders used in Chad have proven too weak for our needs.



FROM REINTRODUCTION TO REWILDING. As the sun sets on the OROAGR, the North African ostrich chicks have already left a remarkable imprint on the landscape, recreating a picture once thought to be lost forever – species classified as extinct or endangered living together again in harmony.

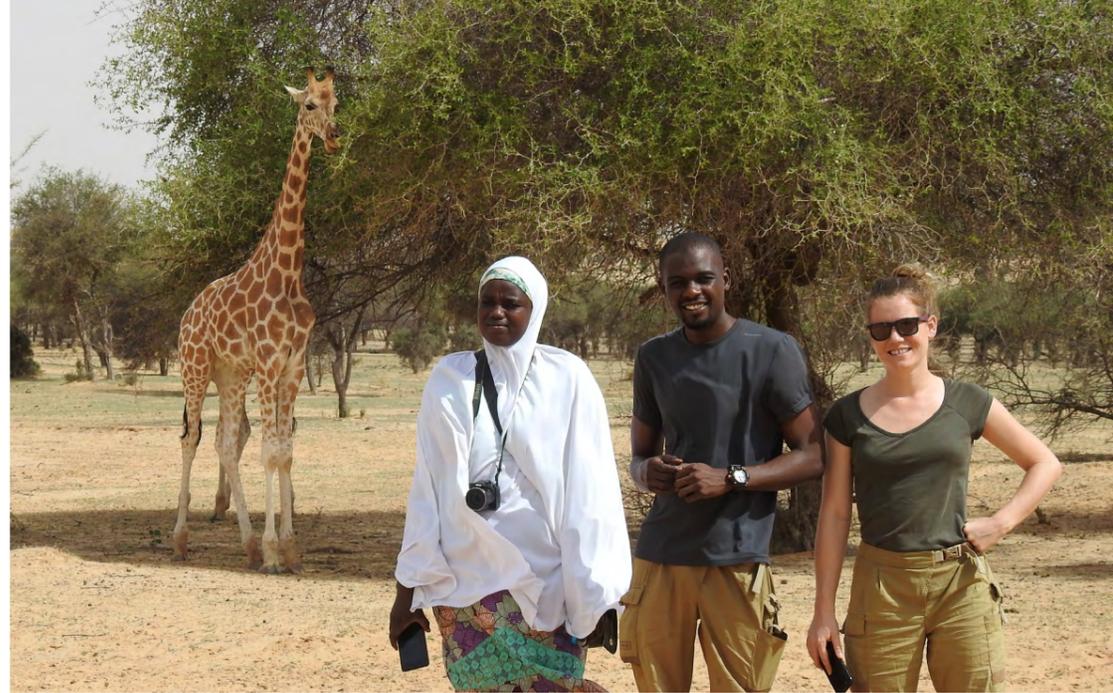
Special pens were set up in OROAGR. We planted alfalfa over half of the enclosure to stimulate the chicks – they must stay active to strengthen their legs as they grow. Next, the Zakouma team quickly contacted us for the first ostrich chick transfer. In four trips completed over the first few weeks of 2020, we delivered a total of 34 ostrich chicks: 16 to Ennedi and 18 to OROAGR. The plane flew from Zakouma to the runway prepared at OROAGR, near the oryx base camp. The next day, the animals least worn out and stressed from the journey were selected for transport to Ennedi. All necessary precautions were thoroughly understood and strictly applied, with support from Willem Burger, who monitored operations to ensure optimal health and well-being for the animals. Transporting these chicks was a delicate operation, but thanks to the precautions taken and expertise applied, we succeeded in completing the journey with a low mortality rate.

Today, the ostriches are in top form. The exact conditions for their release are still under study. SCF and APN remain in contact with relevant experts to iron out all of the details for the operation, and the two groups are actively collaborating to maximise the chances of a successful reintroduction of North African ostriches to central and northern Chad.

BY
Marc Dethier
CHAD ORYX REINTRODUCTION
PROJECT LEADER

SAHARA CONSERVATION FUND

Double page photos © Marc Dethier



BY **Abdoul Razack Moussa Zabeirou**
PROJECT OFFICER IN NIGER SCF/GCF

Cloé Pourchier
PROJECT OFFICER IN NIGER SCF/GCF

WITH THE GIRAFFES OF GADABEJI. Maimounatou Ibrahim, Abdoul Razack Moussa Zabeirou, and Cloé Pourchier, of our team in Niger, during the latest monitoring mission of West African giraffes reintroduced into the Gadabeji Biosphere Reserve.

Photos: left page © Abdoul Razack Moussa Zabeirou; above © Cloé Pourchier

West African giraffes

Latest Updates on the Gadabeji Giraffes

IN NOVEMBER AND DECEMBER 2018, THE FIRST TRANSLOCATION OF WEST AFRICAN GIRAFFES TOOK PLACE IN NIGER. THE LAST POPULATION OF THIS GIRAFFE SUBSPECIES WAS SO FAR ONLY FOUND IN THE KOURÉ AREA, ABOUT 60KM SOUTHEAST OF NIAMEY. AS BOTH HUMAN AND GIRAFFE POPULATIONS WERE INCREASING, AND IN ORDER TO SECURE THIS LAST POPULATION OF WEST AFRICAN GIRAFFES, IT WAS DECIDED IN OCTOBER 2015 (THE NATIONAL GIRAFFE CONSERVATION STRATEGY WAS BEING DEVELOPED IN PARALLEL) TO MOVE SOME OF THE ANIMALS AND CREATE A SECOND POPULATION.

At the request of the Government of Niger, and using the expertise of the Giraffe Conservation Foundation (GCF) and other international partners, and with the support of the Association for the Valorization of Ecotourism in Niger and the UNDP-funded Niger Fauna Corridor Project, eight animals, including five females and three males, were moved from the Kouré area to the Gadabeji Biosphere Reserve. Located in the Maradi region of central Niger, this area was home to giraffes until the early 1970s. In order to closely monitor these newly translocated giraffes, two community agents were recruited by GCF, in addition to those recruited by the Niger Fauna Corridor Project. They were trained to correctly identify each animal and study their behavior and movements using “Cybertracker” data collection software. The development of a dedicated data collection protocol permits optimal monitoring and reporting.

The eight translocated giraffes are gradually adapting to their new environment. Following their transport in two separate convoys, the giraffes quickly regrouped and now remain together most of the time. After a phase of exploration going

beyond the limits of the core area of the reserve, the group now remain within the reserve, although a few journeys outside the reserve in search of better feeding have been noted.

In addition to monitoring the giraffes, the community agents also liaise with the local population to raise awareness for conservation and protection of the giraffes. In general, the local communities were in favor of the return of this emblematic species. Collaboration with the surrounding populations is good, with local people helping the community agents by sharing information on the giraffes' position, for example.

So far, the translocation has been a real success. There are even positive signs of reproduction between one of the males and the oldest female.

Based on this success, another translocation to reinforce this embryonic satellite population is planned for late 2020. Stay tuned for more news!



How you can help

Until very recently, the silent crisis of extinction in the Sahara and the Sahel has been largely overlooked and underfunded by the international conservation community and aid agencies around the world. In 2004, a small group of committed individuals and institutions launched the Sahara Conservation Fund (SCF) in response to an urgent call to action: "If not us, then who will speak for Saharan wildlife?"

SCF is now leading a rapidly growing Sahelo-Saharan wildlife conservation movement to protect and restore a unique and exquisitely adapted assemblage of species, including

addax, scimitar-horned oryx, Saharan cheetah, North African ostrich and dama gazelles.

As a fully registered NGO in the U.S and France, SCF relies on donations, grants and other funding from individuals, corporations and organizations to help drive its mission and to give voice to the Sahara and the plight of its wildlife.

We invite you to add your voice to the growing chorus calling for the protection and restoration of Sahelo-Saharan wildlife through your support of SCF.

TO DONATE TO SCF JUST SCAN THE QR CODE OR VISIT :

WWW.SAHARA CONSERVATION.ORG/DONATE



www.saharaconservation.org | comms@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 John Newby, Gavin Livingston, Adam Eyres, Julie Swenson, Tim Wachter, Charlotte Moueix, Cloé Pourchier, Abdoul Razack Moussa Zabeirou, Marc Dethier, for their photos and contributions to this issue. Sandscript is edited internally by SCF. You can contact comms@saharaconservation.org for any comments and feedback (contact informations above). We also would like to thank the growing chorus of supporters that gives us the precious support that makes our projects and their achievements so tangible.

SAND SCRIPT

The biannual 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, an e-newsletter is also available. Subscribe online at www.saharaconservation.org.



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.

