

## East Africa Programme

### Quarterly Report (Jan – Apr 2017)



#### Background

In mid-2016, the Giraffe Conservation Foundation (GCF) opened an East African office, based in Nairobi, to better support giraffe conservation initiatives in the region by establishing a regional base. The efforts focus on collaborations with government institutions, private stakeholders and local and international NGOs. The region is critical for the long-term survival of wild populations of giraffe as it is home to three distinct species of giraffe: Masai giraffe (*Giraffa tippelskirchi*), reticulated giraffe (*Giraffa reticulata*) and Nubian giraffe (*Giraffa camelopardalis camelopardalis*). This report highlights the steps and programmes that GCF has initiated towards conserving the three species in the region.

#### Broad-ranging programmes

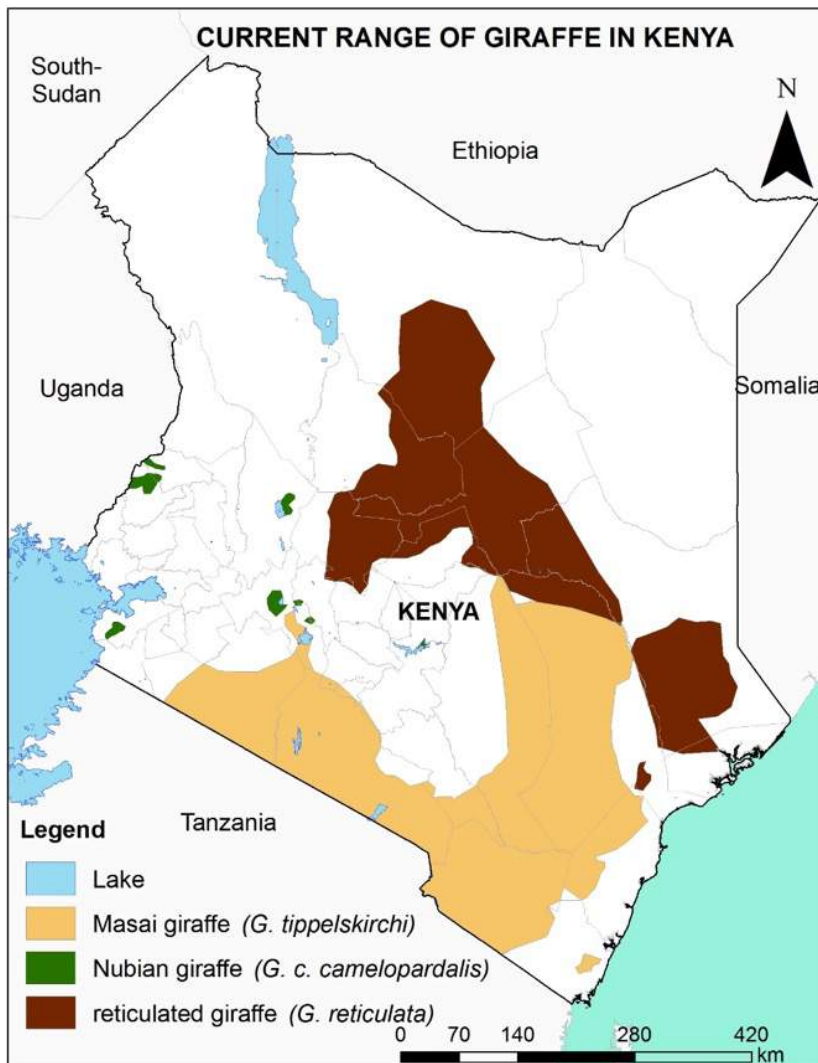
GCF works closely with the Kenya Wildlife Service (KWS) to fulfil the mandate of the draft Kenya National Giraffe Conservation Strategy. In March 2017, GCF was awarded research clearance by the KWS, which allows researchers affiliated to us to study various aspects of giraffe ecology and management in Kenya, all in support for conservation purposes. The permit is the culmination of collaborations between GCF and KWS, via the development of the draft Kenya National Giraffe Conservation Strategy and a draft MoU between the two institutions. Both documents are awaiting commission by the Director General of KWS.

To best support the implementation of the draft Kenya National Giraffe Conservation Strategy and involve local stakeholders, GCF is coordinating the development and launch of three distinct giraffe Working Groups, one for each of the species. The aim of the Working Groups will be to bring together stakeholders from government, private land and NGOs to discuss and support the conservation and management of the different giraffe species in Kenya, including the development of Action Plans and activities for each. The Nubian giraffe Working Group will be the first to be launched given the small population currently remaining in Kenya and much of the population occurring in privately-owned conservancies and on public land. The key points of interest for the Nubian giraffe Action Plan in Kenya include metapopulation management, translocation assessments and opportunities, resource and technical support, standardised conservation research methods, and conservation management issues.

Together with San Diego Zoo Global and Wild Me, GCF has initiated the development of a dedicated citizen science initiative called 'Wildbook for Giraffe'. This software is an online platform using giraffe pattern recognition to assist with long-term monitoring through mark-recapture methods, and will be available freely for interested conservationists, researchers, managers and the general public. Valuable donor support has allowed this first step in the development of a standardised giraffe conservation tool, which will be crucial to their long-term conservation and monitoring in the wild.



In Kenya, GCF has an agreement in place with the KWS Wildlife Forensics and Genetics Laboratory to support sample collection and storage in the country. As part of the technical support, GCF will continue its current partnership with the Senckenberg Biodiversity and Climate Research Centre in Germany to assist KWS in primer development as well as capacity development as appropriate. This support is crucial to better understand giraffe taxonomy as highlighted in our recent collaborative study that showed the existence of four distinct giraffe species with five subspecies (Fennessy *et al.* 2016) as opposed to the currently recognised one giraffe species with nine subspecies. Kenya is a core area for giraffe speciation and evolution (Fig. 1) as the country is home to three giraffe species and has several contact zones/potential areas for giraffe hybridisation. The agreement provides a framework by which KWS will assist in genetic studies and provide access to available (historical) tissue samples from key areas to better understand giraffe taxonomy. This collaboration will inform *in situ* and *ex situ* management of giraffe populations and further inform the IUCN Red List assessment of giraffe (sub)species. Initially, it has been suggested that the northern part of Tsavo East forms a potential hybridisation area between Masai giraffe and reticulated giraffe, while Loisaba Wildlife Conservancy could be a contact zone between Nubian giraffe and reticulated giraffe.



**Fig. 1:** Distribution of giraffe species in Kenya

## Specific programmes

### Masai giraffe

Masai giraffe have declined by >50% over the last 30 years (three generations of giraffe), and GCF is working with partners in the region to raise awareness on the causes of the decline and the conservation action required to mitigate the threats to the survival of this species. Specifically, GCF has recently partnered with the Borderlands Conservation Initiative (BCI), a collaborative network of NGOs and government institutions working in the southern Kenya - northern Tanzania transboundary area to conserve and manage priority species (large carnivores and elephant) that migrate between the two countries.



GCF's involvement has recently resulted in the inclusion of giraffe as a priority species for conservation under the BCI. This means that BCI members in the region will assist and collaborate in collecting data (as needed and appropriate), to identify and mitigate the key threats to Masai giraffe in the area. Further, GCF will partner with BCI members to raise awareness and funds through World Giraffe Day 2017 – a key event on the international calendar for partners to help raise awareness and funding to conserve giraffe in the wild. The goal is to raise US\$100,000 that will go directly into supporting Masai giraffe conservation initiatives in the region, including providing equipment and resources to community and KWS rangers to improve protection of giraffe against poaching and snaring, which is common in the region.

GCF has received critical support from an array of partners for conservation and management of Masai giraffe across the region. The various projects underway include the development of the first-ever Tanzania giraffe Country Profile, which hopefully in time will lead to the development of the Tanzania National Giraffe Conservation Strategy. Currently, Tanzania holds the highest number of Masai giraffe in Africa, its only resident species. The Tanzania Country Profile is expected to be completed in June 2017.

Collaborating closely with partners across the Amboseli-Tsavo transboundary ecosystem, GCF is spearheading efforts to better understand the ecology of Masai giraffe and provide support to mitigating their threats in the region. The Amboseli-Tsavo ecosystem is a stronghold for Masai giraffe and more giraffe-focused conservation and research efforts are required to complement available information and seal the current knowledge gaps. One of the key projects is a human dimensions study, planned to be launched later this year (September 2017) to assess the perceptions and attitudes of the local communities who live alongside giraffe to better understand the threats and provide recommendations on giraffe conservation and management in the area. This project compliments similar efforts by our partners San Diego Zoo Global on reticulated giraffe in northern Kenya and will be a great comparative study. This work is key to mitigating the major threat of poaching in areas where giraffe are illegally killed for bushmeat as well as for their bones, brains and bone marrow, which are incorrectly believed to cure HIV/AIDS.



As part of a preliminary study that was conducted in July 2015 through GCF support, we will work with regional and international partners to collect tissue samples to identify the etiological agent of giraffe skin disease (GSD). Initial studies have assessed the spatial distribution and severity of GSD across Africa (Muneza *et al.* 2016), and shown that there is variation in the manifestation of GSD. What is not clear is whether this variation is due to different forms of the same disease or different diseases appearing in different giraffe populations (Fig. 2). East Africa appears to be a hotspot for GSD, with the highest recorded prevalence rates in Africa; 86% of observed giraffe populations in Ruaha National Park (NP), and 63% in Tarangire NP, both in Tanzania (Muneza *et al.* 2016). Tissue samples from Nubian giraffe in northern Uganda will be collected in August 2017 as part of the *Operation Twiga II* translocation, and similar collection exercises to follow suit in Tanzania and Kenya later in the year to determine the causative agent. Thus, this study will be crucial in understanding the epidemiology and pathology of GSD in relation to the direct conservation management of giraffe. Further, this will inform the management of captive giraffe populations as well since the disease has been recorded in zoos around the world. Importantly, forms of GSD in zoos have been successfully alleviated (Muneza *et al.* 2016).



Fig. 2: Manifestation of severe GSD in Masai giraffe, Ruaha National Park, Tanzania (left) and severe GSD in Nubian giraffe in Murchison Falls National Park, Uganda (right).

### Nubian giraffe

Nubian giraffe are the least abundant giraffe species in Kenya, numbering approximately 450 in Kenya, while Uganda holds >50% of the global wild population with numbers still uncertain in South Sudan and Ethiopia. Given the small number, over the past few years GCF has collaborated with local government, NGO and institutional partners in all four countries to better understand and protect the subspecies.

In Kenya, GCF in collaboration with the African Fund for Endangered Wildlife (AFEW), initiated road-based photographic mark-recapture surveys to estimate the abundance of two relatively unknown Nubian



giraffe populations in Mwea National Reserve (NR, 45km<sup>2</sup>) and Ruma NP (~120km<sup>2</sup>). In March 2017, road transects were identified, mapped and initial surveys undertaken (the results are currently analysed). This will be the basis for future ongoing robust surveys (Fig. 3). Since a large part of the Nubian giraffe population in Kenya is on public land and private conservancies, this study will provide a much-needed baseline to evaluate the success of previous translocations undertaken by KWS and AFEW, as well as document the threats to the two different giraffe populations, which combined will guide future conservation and management efforts. This long-term conservation monitoring project will continue over the coming years, and is used as an opportunity to build capacity and train local researchers in the region.

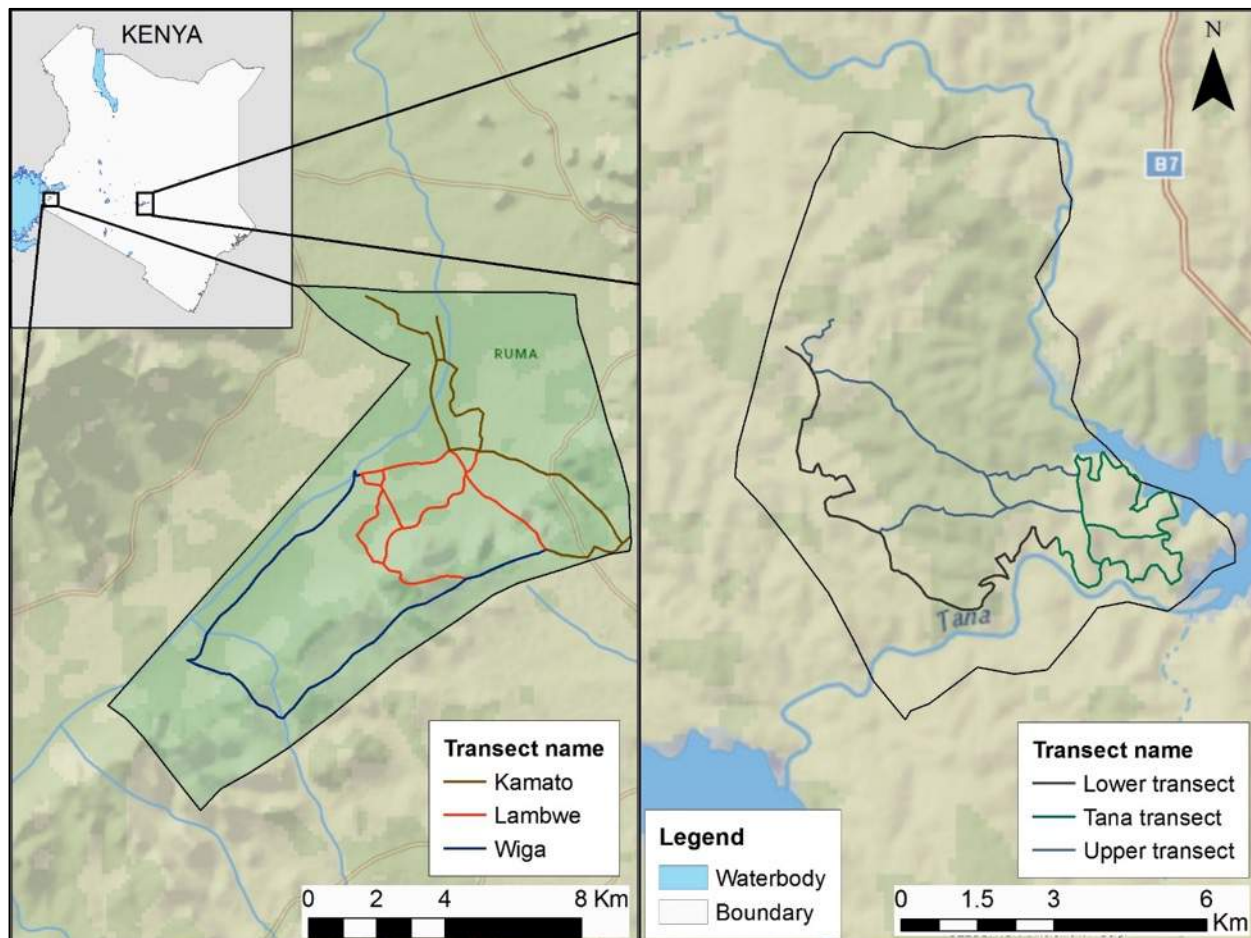


Fig. 3: The different transects that will be used for the surveys in Ruma NP (left) and Mwea NR (right), Kenya.

The establishment of a Kenyan Nubian Working Group to help support the implementation of the draft Kenyan National Giraffe Strategy was initiated during this quarter and the first meeting will be hosted in late May. The targeted inclusion of all government, NGO and private stakeholder partners who manage and conserve Nubian giraffe in Kenya will see this initiative for the first-time bring partners together to discuss and set Action Plans for the management of Nubian giraffe in the country.

In Uganda, GCF has continued to invest considerable support and resources to assist the Uganda Wildlife Authority (UWA) to better conserve and manage giraffe in the country. During this quarter GCF and UWA with partners from the international zoo community undertook an annual Kidepo Valley NP giraffe survey.

The population is looking good, with the birth of six new giraffe in the past year. During the survey, we collected more DNA samples from individuals to build up a baseline of all giraffe in the population, as well as fitted two new trial GPS satellite solar units to giraffe. Stay tuned for the report and updates.

Planning for the development of the first-ever National Giraffe Conservation Strategy has been ongoing and the national workshop including regional and international experts and partners is scheduled for mid-June. The Strategy will be a valuable tool to guide future giraffe conservation and management in the country and with the support of an international IUCN planning expert, key capacity building will also occur with a local Ugandan consultant helping with the facilitation in country. The invaluable funding and support GCF has obtained from its partners sets a solid base for all giraffe conservation efforts in Uganda.

GCF now employs a local Ugandan post-graduate student to assist with critical assessments of giraffe translocation opportunities in the country. Training and capacity development of local Africans is key to a sustainable future for conservation in the continent, and we hope that this opportunity will support giraffe conservation long-term in country.

Ongoing monitoring and field work in Murchison Falls NP continues, as well as post-translocation monitoring of the giraffe in Lake Mburo NP coupled with targeted environmental education to school children and communities surrounding the Park. The outputs from these programmes have been invaluable locally, including support to on ground anti-poaching and monitoring. Additionally, GCF recently helped advise on conservation planning efforts for future oil development in Murchison Falls NP, and our ongoing conservation research will provide valuable baseline information to monitor any potential impacts.

Lastly, we are finalising the renewal of our MoU with UWA and UWEC for a further five-year period, building on our excellent and fruitful conservation efforts over the past three years. Together with the development of the National Strategy and field programmes, we feel that giraffe conservation and management in Uganda has already greatly improved and created an increased focus on giraffe conservation in this short time period.

### Reticulated giraffe

Reticulated giraffe occur in some of the most remote and unstable regions of East Africa. Their range covers north-eastern Kenya, Ethiopia and Somalia, and this has left gaps in ascertaining the number of individuals remaining in the wild and improving the understanding of their ecology. However, the most recent data shows a decline of 77% in the last 30 years. Given these conditions, GCF is working with several partners to bridge these apparent knowledge gaps.

In support of San Diego Zoo Global and local partners, GCF has supported dedicated community-based conservation efforts across northern Kenya, including hiring of and equipping local staff and game guards (Twiga Walinzi). The project is going well and continues to increase awareness and conservation efforts on



the ground, by evaluating and assessing any effects of ongoing development of infrastructure in eastern and north-eastern Kenya, and also implementing a trial of *Wildbook for Giraffe*.

To complement these efforts, GCF with funding from World Giraffe Day 2016, will support San Diego Zoo Global, KWS, Loisaba, the Northern Rangelands Trust, Smithsonian Institute and other partners, to fit 18 GPS satellite solar units to giraffe in northern Kenya in early June. This programme will be the first opportunity to try our new GPS satellite solar units (ossi-units) in Kenya. The results will allow researchers to better understand the spatial ecology, habitat use, movement and extent of range of reticulated giraffe in northern Kenya's communal landscape and areas of proposed development.

GCF in conjunction with the IUCN Antelope and Equid Specialist Groups, Marwell Zoo, San Diego Zoo Global, Addis Ababa University and other local conservation partners, is currently drafting plans to initiate surveys in southern Ethiopia and northern Kenya to better understand the distribution and abundance of reticulated giraffe. Furthermore, GCF is working towards developing a standardised protocol for giraffe surveys that will be shared with partners in northern Kenya to streamline data collection efforts. Specifically, many of the conservancies (Lewa, Loisaba, Ol Pejeta) have shown interest in increasing giraffe monitoring efforts. The region has been subjected to long spells of drought and most of the range of reticulated giraffe is now occupied by indigenous communities whose numbers have increased in recent times due to influx of refugees from areas with conflict.

To mitigate threats to reticulated giraffe in Kenya, GCF is reviewing support to additional community conservation efforts, including Ishaqbini Conservancy in north eastern Kenya, home to some of the last endangered hirola antelope in the world. Last year, a dozen or so giraffe died from the long drought and the rangers opportunistically collected tissue samples, which will be used to better understand giraffe taxonomy.

### **Awareness raising awareness**

GCF has been at the forefront of raising awareness for giraffe conservation in the region. Specifically, two televised local Kenyan interviews/documentaries on giraffe conservation were filmed with NtvWild, as well as numerous articles published in local and international newspapers highlighting the plight of giraffe populations in the region. In addition, the EA Coordinator has given lectures in various forums to raise awareness and build capacity in the region e.g. Imre Loeffler Lecture Series at Karen Country, and seminar talks to Friends of Nairobi National Park and at Giraffe Manor.



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