



# East Africa Programme

UPDATE REPORT  
April – July 2020



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## Background

The Giraffe Conservation Foundation (GCF) East African office, based in Nairobi, was established to increase collaborative giraffe conservation efforts with government institutions, private stakeholders, along with local and international NGOs with respect to giraffe conservation and management. In 2019, the office expanded and now has a regional base in Uganda to help increase our support in the country. The East African region is critical for the long-term survival of wild populations of giraffe as it is home to three distinct species: Masai giraffe (*Giraffa tippelskirchi*), reticulated giraffe (*G. reticulata*) and Nubian giraffe (*G. camelopardalis camelopardalis*) – all of them threatened with extinction in the wild. This report is the second of the year 2020 and highlights the steps and programmes that GCF has initiated and supports towards conserving the three species of giraffe in the region between April and July 2020.

## Indirect effects of Covid-19

The first cases of Covid-19 in Kenya, Tanzania and Uganda were recorded in mid-March. Subsequently, governments of these three countries implemented various levels of local and national lockdown measures. Particularly in Kenya, movement was restricted in and out of the Nairobi Metropolitan area and all public assemblies were halted. Consequently, this has affected our planned field activities for 2020 including reviewing and updating the various giraffe species working group action plans, giraffe surveys and tagging operations, and conservation outreach efforts together with Giraffe Manor and the Rukinga Wildlife Sanctuary.

Despite a similar lockdown in Uganda, our Uganda Conservation Coordinator Dr Sara Ferguson was able to continue her fieldwork relatively unhindered with the Uganda Wildlife Authority (UWA), whilst the Twiga Walinzi team in northern Kenya has resumed fieldwork at full capacity. In addition to this, international travel is planned to resume soon throughout most of East Africa (except Uganda) albeit under specific conditions. As such, we are following all government directives to implement our planned activities as soon as it is possible to safely do so.

While the lockdowns restricted movement, the Kenya Wildlife Service (KWS) continued to raise awareness for giraffe conservation. On World Giraffe Day (WGD) 2020, KWS held a small gathering with conservation stakeholders to highlight the activities that have been implemented to support the *National Recovery and Action Plan for Giraffe in Kenya 2018-2022*. The WGD celebration event was led by the Cabinet Secretary for the Ministry of Tourism and Wildlife, Hon. Najib Balala at Nairobi National Park. As a proud KWS conservation partner, GCF was invited to participate and provided copies of our Giraffe Conservation Guide Booklet to all attendees. Of relevance to this, KWS currently reviews the draft Nairobi National Park Management Plan 2020-2030 and GCF participated in virtual meetings to provide technical support and information on giraffe ecology relevant for future management. These small efforts contribute greatly to conservation and increasing the profile of giraffe due to the fact that research has shown that scientists, and the public at large, are largely unaware of the threats that giraffe face in the wild despite their status as such a charismatic species.



**Fig. 1:** GCF East Africa Coordinator (second from right) with the management team of Nairobi National Park at the World Giraffe Day 2020 celebrations held at the park and led by Hon. Najib Balala.

## Specific programmes

### Masai giraffe in Tanzania

Preliminary findings from the GPS satellite oxi-units that were deployed on Masai giraffe in northern Tanzania in early 2020 together with our partners Tanzania Wildlife Research Institute (TAWIRI) and Tanzania National Parks Authority (TANAPA) indicate that there is variation in the size of their home ranges. We found that giraffe in Tarangire National Park (NP) moved less compared to those in Serengeti NP. However, we are still collating data to further expound on the factors that may impact this, although terrain as well as climatic conditions could have influenced the size of the area that the giraffe have accessed.

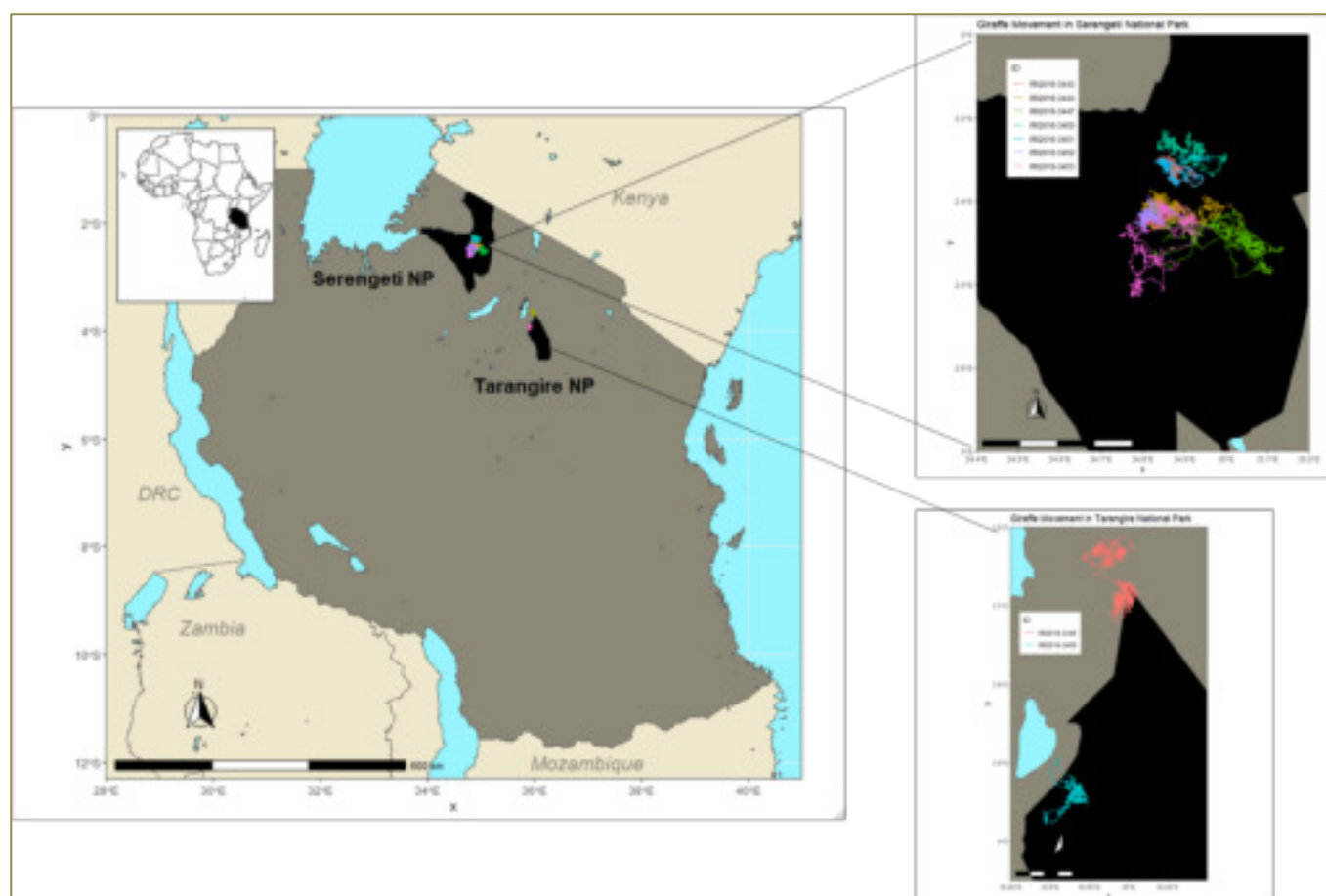
Moreover, we only have data from two giraffe in Tarangire NP as one unit depowered while another is currently transmitting data at inconsistent intervals, limiting robust analysis. Our preliminary findings also show that giraffe with GSD may have smaller home ranges and cover less ground compared to individuals that do not have external symptoms of the disease. Our continued tagging efforts in Tanzania will elucidate on the spatial ecology of GSD and assess whether there are apparent differences in the movement patterns of healthy and infected individuals.



**Table 1:** Average distanced travelled (sum of hourly step lengths over 24-hour period) and average size of home range used by the GPS satellite tagged giraffe between May and July 2020 in Serengeti and Tarangire NPs, Tanzania.

Tag ID	Location (National Park)	GSD severity	Average daily distance (km)	Total distance traveled (km)	KDE 50 (km <sup>2</sup> )	KDE 95 (km <sup>2</sup> )
3443	Serengeti	FR: mild	3.79	295.89	13.00	61.64
3444	Serengeti	None	6.24	487.46	45.26	192.02
3447	Serengeti	None	7.79	607.99	95.48	419.39
3450	Serengeti	None	4.16	324.54	33.60	137.58
3451	Serengeti	None	3.91	269.98	14.76	88.15
3452	Serengeti	None	4.69	365.57	11.70	53.58
3453	Serengeti	None	6.85	527.76	116.20	419.26
3446	Tarangire	FR: mild	5.69	444.19	16.04	60.81
3456	Tarangire	FR: mild + FL mild	3.04	237.28	3.27	17.47

**Note:** KDE utilisation distribution estimate with 50% isopleth is analogous to the core home range, whereas KDE 95 represents the area within the 95% contour of the park.



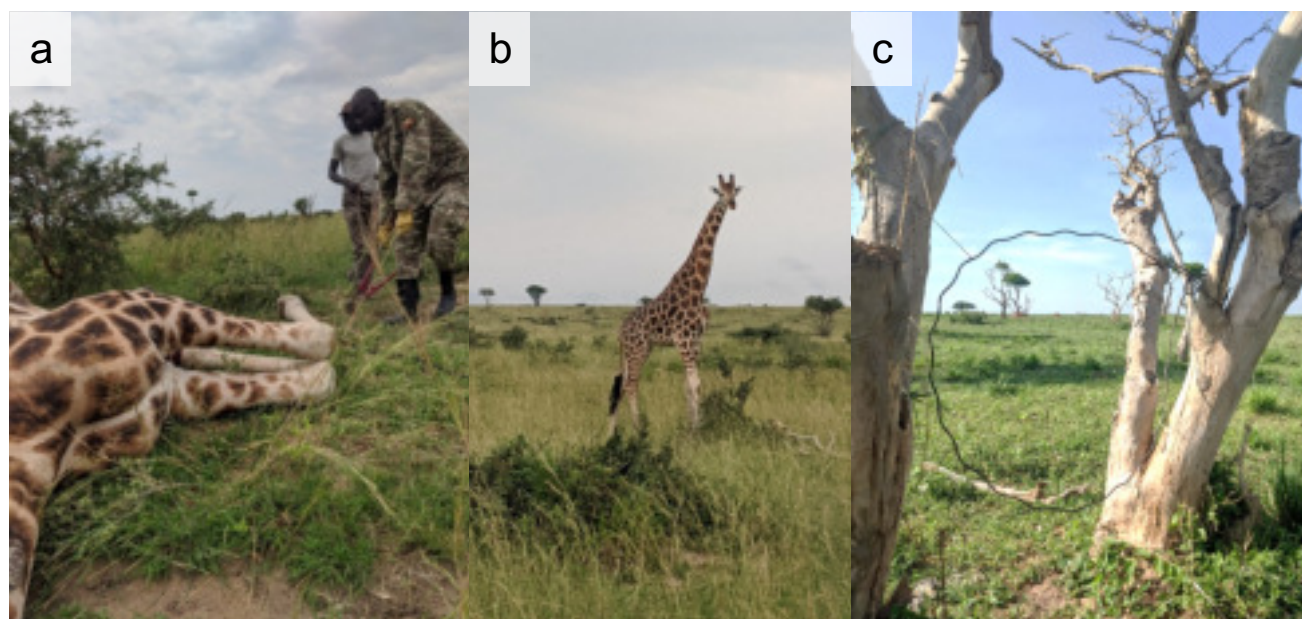
**Fig. 2:** Map showing movement of the GPS satellite tagged Masai giraffe in Serengeti and Tarangire NPs between 15 April and 30 June 2020.



### Nubian giraffe in Uganda

Most of the 2<sup>nd</sup> quarter was dominated by a Covid-19 enforced country- (and world-) wide lockdown. All national parks in Uganda closed on 31 March 2020 and were only re-opened on 5 June 2020. Luckily after a meeting with the Uganda Wildlife Authority (UWA) Head of Research and Monitoring and the Chief Warden of Murchison Falls NP, the UWA/GCF mobile vet team was able to continue working in the field throughout the lockdown period. Being able to continue this important work proved invaluable with an incredible number of animal rescues performed as well as helping UWA Law Enforcement combat the presence of poachers within the park. It is a great concern that poaching activity within the national parks across Uganda would increase due to the economic impact from Covid-19, in particular due to the loss of tourism and shutdown of private businesses. The UWA/GCF team continue to closely monitor the situation and work together to react to any poaching in the country.

This past quarter the UWA/GCF team found and rescued a total of 68 animals, including 47 Nubian giraffe (77% of the cases). This is a rather astounding number for our small team. Other species treated include Defassa's waterbuck (*Kobus ellipsiprymnus*), Jackson's hartebeest (*Alcelaphus buselaphus lelwel*), Cape buffalo (*Syncerus caffer*), African elephant (*Loxodonta africana*), and warthog (*Phacochoerus africanus*). Most wire snares were removed from the animals before any significant damage was inflicted while those with more severe wounds received supportive care that will help with their recovery. In addition to treating animals with wire snares, the team also removed 54 snares that they found in the bush prior to entrapping any animals. The team has definitely kept busy and continued to have a large impact on conservation in Murchison Falls NP.



**Fig. 3:** (a) Male Nubian giraffe that had been trapped in a snare. (b) Along with the UWA vet team, the giraffe was successfully desnares and walked away in good health. (c) Wildlife snaring is a big problem in Murchison Falls NP and removing the snares across the landscape is a big part of the UWA/GCF team's work.

In Lake Mburo NP, GCF continues our support of *Giraffe Education and Research (GEAR)* in partnership with UWA and Kacheera Camp. As for many, the Covid-19 pandemic restricted GEAR's operations and movements, however, the team persevered and managed to achieve a few key objectives. Through discussions and negotiations with the park management, GEAR was allowed to resume monitoring activities in the park in May.



The team was excited to find five new calves in the park that were born since the start of lockdown. Effectively, from the initial introduction of 15 giraffe in 2015, the population has now doubled to a total of 30 giraffe that now reside in Lake Mburo NP. This initial growth is definitely a sign of success of this conservation translocation into the park, which has helped to expand the numbers and range of Nubian giraffe in the wild.



**Fig. 4:** Two of the five new calves in Lake Mburo NP: Valentine's calf (left) and Ru's calf (right).

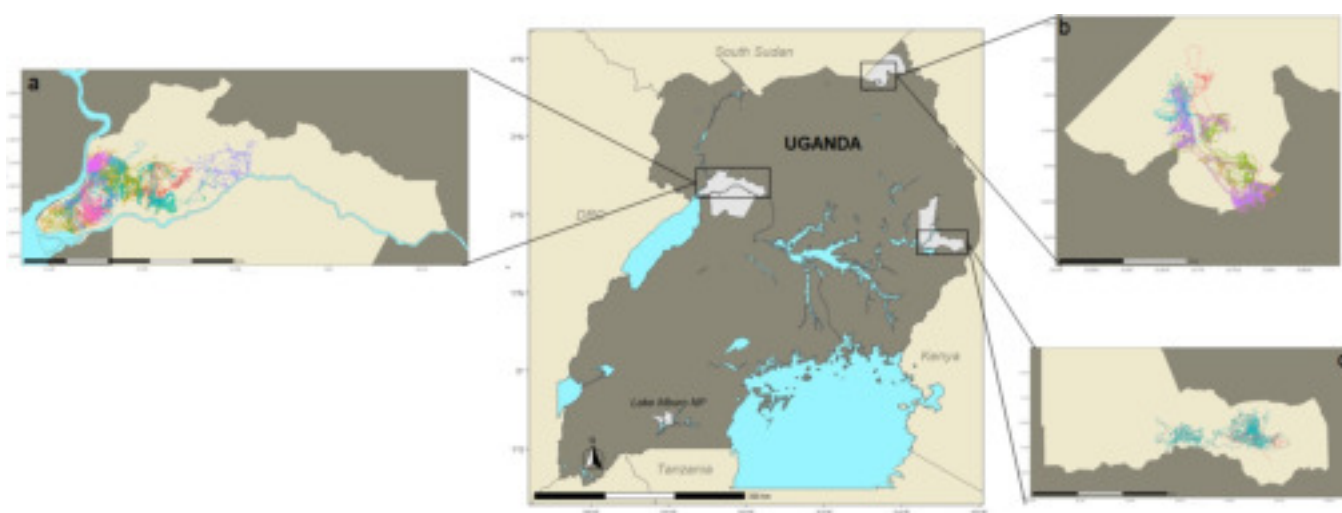
Due to the Covid-19 pandemic all schools in Uganda remain closed. As such GEAR was unable to conduct any school trips this year, an activity that is normally a crucial part of the programme in and around Lake Mburo NP. In an effort to explore alternative options to continue environmental education, GEAR discussed with the UWA Community Conservation team other effective education projects. Recently, they printed and distributed educational flyers for local students. Additionally, GEAR also managed to conduct a second radio chat show on 30 June with researcher Natamba Jotham and UWA Warden of Research & Monitoring Kirumira Dorothy. The show offered an opportunity to discuss giraffe conservation throughout Uganda as well as focusing specifically on giraffe conservation efforts in Lake Mburo NP. In addition, the show informed the local audience tuning in on Lake Mburo NP and issues, such as poaching, facing the park's wildlife. This talk show has proven to be an effective avenue for reaching the communities surrounding the park and highlighting the importance of the park and wildlife conservation as well as providing a platform for local communities to actively engage by providing phone numbers individuals can phone with questions.

Our Twiga Tracker programme continued to collect data from 16 ossi-units that transmitted at regular intervals: four in Kidepo Valley NP, two in Pian Upe Wildlife Reserve (WR), and ten in Murchison Falls NP. These ossi-units were deployed as part of our ongoing collaborative work with UWA to better understand the spatial ecology of giraffe and post-translocation monitoring as well as part of our continent-wide Twiga Tracker programme. Ongoing post-translocation monitoring is particularly important, especially as we intend to build on the success of previous efforts including Operation Twiga IV whereby 15 giraffe were reintroduced to Pian Upe WR in 2019 after they were locally extirpated more than two decades ago. From our observations and preliminary data, the giraffe appear to adapt well and spend more time in the eastern portion of the park (Fig. 5). Our data show that the movement of the two GPS satellite tagged giraffe overlapped considerably, possibly for safety and/or because this part of the park has good forage and a lot of water during the rainy seasons. Based on the initial movements of the introduced giraffe, we believe that further reintroductions of giraffe would also be successful.



In Kidepo Valley NP, giraffe recently spent more time in the southern portion of the park though we previously recorded giraffe venturing north into South Sudan, where there is limited monitoring. However, throughout Kidepo Valley NP, there are UWA rangers who conduct regular monitoring with technical support from and in collaboration with GCF.

In Murchison Falls NP, the GPS satellite tagged giraffe represent the longest tracked individuals in East Africa. As part of our Twiga Tracker programme and based on some baseline analysis, we have observe movement patterns that are similar to seasonal migrations. Most recently, the giraffe spent most of their time in the western portion of the park. While this area of the park is more suitable (more *Vachellia (Acacia)* trees and less biting insects), giraffe have been observed migrating into the eastern portion of the park during other times of the year.



**Fig. 5:** (a) Map highlighting movement of GPS satellite tagged giraffe in Murchison Falls NP, (b) Kidepo Valley NP, and (c) Pian Up WR between April and July 2020. The ossi-units are powerful tools for studying the spatial ecology of giraffe throughout the country and post-translocation monitoring as the country builds on previous conservation translocations to re-introduce giraffe in their historical range.

### Reticulated giraffe in Kenya

The Twiga Walinzi team in northern Kenya coordinated by San Diego Zoo Global was able to resume activities in June after the lockdown in the country eased up. Despite the challenges, the team was able to resume photo monitoring, camera trap monitoring, road and vegetation surveys (for the Namunyak team), and other species surveys in Loisaba Wildlife Conservancy and in Namunyak Wildlife Conservancy. Due to World Health Organisation and the Kenyan Ministry of Health regulations, the team was forced to postpone community outreach and camera trap security sensitisation efforts until social distancing measures are relaxed. However, the team was able to meet with a few local Moran (Maasai warriors) who were recently initiated to familiarize them with the Twiga Walinzi Initiative in a bid to raise conservation awareness amongst the new generation. Fortunately, the area chief, community leaders and conservancy managers were also present to accord it valuable importance. Findings from the road surveys indicate that there has been a reduction of road kills of wildlife due to the restriction of movement at night. The previous findings of the Twiga Walinzi team showed that most road kills occur at night but the introduction of the dusk to dawn curfews and ban of night travel as precautionary measures to reduce the spread of the pandemic drastically decreased road kills. In fact, only two road kills were recorded in July along the Isiolo – Merille A2 road.



**Fig. 6:** Twiga Walinzi researcher at Namunyak Wildlife Conservancy addressing the recently initiated Morans from the nearby communities.

In September 2019, 28 reticulated giraffe were fitted with GPS satellite units as part of the Twiga Tracker programme and since then we received interesting insights into their movement and habitat utilisation. To ensure consistency with the data, only the units that are still transmitting reliable data were factored into current analyses. Initial preliminary analysis shows that males travelled on average over 738 km, while females averaged ~756 km since the units were deployed. Based on the same data, we currently estimate the home range for female reticulated giraffe at ~250 km<sup>2</sup>, while male giraffe utilise ~ 1,250 km<sup>2</sup>. This means that while female giraffe on average walk more than male giraffe, their movements are restricted to smaller areas, while males utilise five times the area. However, it is important to note that these are preliminary results and as additional data are collected, the estimates will be refined further. However, visualising the movements of all the tagged giraffe indicates that these giraffe seem to have different movement patterns across different areas, seemingly moving less in the more mesic Laikipia plateau, and moving further in the more arid Samburu and Marsabit counties. Interestingly, there does not seem to be movements between Laikipia, Isiolo and Samburu countries and further north. However, the majority of giraffe are utilising multiple reserves and conservancies, re-enforcing the need to keep connectivity in northern Kenya, and between conservancies. Also given that ~95% of reticulated giraffe are found outside of formally protected areas, it underscores the importance of private and community conservancies for these giraffe and the importance of maintaining sustainable co-existence between giraffe, pastoralists and livestock. However, it still remains unknown whether the Covid-19 pandemic has affected the movement of giraffe in northern Kenya. At least some of the tracked giraffe repeatedly cross the A2 highway just north of Archer's Post and prior to Sere Olipi. Future research will investigate potential reasons for giraffe crossing the highway in these areas. It is our goal to use the data collected from these giraffe to determine how we can reduce the impacts of planned infrastructure routes such as LAPSSET on giraffe populations.





In other exciting news, a Twiga Tracker App has been developed in partnership with Vulcan and the Smithsonian Conservation Biology Institute using the EarthRanger platform. The App shows the movements of the collared giraffe in near real time and is currently available on iOS devices and through a web browser. In the default setting the giraffe movements of last two weeks can be viewed.



**Fig. 7:** Female giraffe with GPS satellite unit as part of a giraffe herd observed in Loisaba Wildlife Conservancy. © Jenna Stacy-Dawes, San Diego Zoo Global

### Partners & Supporters

