



East Africa Programme

UPDATE REPORT
April – July 2019



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Background

The Giraffe Conservation Foundation (GCF) East African office, based in Nairobi, was established to increase collaborative efforts with government institutions, private stakeholders, along with local and international NGOs with respect to giraffe conservation and management. 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*). This report highlights the steps and programmes that GCF has initiated towards conserving the three species in the region between April and July 2019.

Broad-ranging programmes

Following the successful first-ever Giraffe Conservation Science Symposium held in May 2018, GCF partnered again with San Diego Zoo Global, Bik-F Senckenberg and the Smithsonian Conservation Biology Institute to coordinate a second meeting at Columbus Zoo and Aquarium in May 2019. The Giraffe Conservation Science Symposium discussed and outlined short- and long-term conservation efforts that have and/or need to be undertaken by stakeholders across four main thematic areas: ecology, health, human dimensions, and genetics/taxonomy. Given that this was the second meeting, stakeholders discussed in detail the challenges encountered since the original symposium, progress made towards completing the priority actions that were identified, and establishing a framework for subsequent Giraffe Conservation Science Symposiums. The second symposium was well attended by experts from across the world, including many who are living and working on the African continent. The report from this important meeting will be shared with key stakeholders shortly and used as a blueprint for ongoing work to save giraffe in the wild.

Specific programmes

Masai giraffe

As part of our ongoing initiative and collaboration with the Kenya Wildlife Service (KWS) to support the implementation of the National Recovery and Action Plan for Giraffe in Kenya (2018-2022), GCF supported the annual Masai Giraffe Range Committee Meeting in Naivasha. Stakeholders represented at the workshop ranged from various protected areas managed by KWS to NGOs such as Wildlife Works, Big Life Foundation, Masai Mara Conservancies Association, African Wildlife Foundation, Tsavo Trust, Mayer's Farm, and Taita Taveta Wildlife and Mount Suswa Conservancies Associations. The workshop was timely given that Masai giraffe were recently listed as 'Endangered' on the IUCN Red List of species threatened by extinction. As such, stakeholders outlined priority actions for the conservation of Masai giraffe in Kenya in line with the recently launched national strategy. One of the key threats discussed at length was the impact of habitat loss and land fragmentation. Stakeholders expressed concern at the growing number of fences in the Masai Mara ecosystem, especially within the community conservancies, where giraffe are more abundant compared to the Masai Mara National Reserve (NR, Fig. 1). This has in turn restricted the movement of giraffe (and other wildlife) into dispersal areas though more research is needed to better understand giraffe habitat use in the Masai Mara ecosystem. Preliminary results from our partners (more below) show that there is extensive movement of giraffe between the Mara Conservancies and maintaining connectivity between the areas is key to ensuring the population's



survival. Stakeholders discussed the use of technology, i.e. GPS satellite collars, to better understand habitat use of giraffe in light of emerging infrastructural developments in southern Kenya e.g. major roads, standard gage railway and human settlements. Priority areas to better understand Masai giraffe movements and subsequent impacts were the Masai Mara, Tsavo and Athi-Kapiti ecosystems. Athi-Kapiti in particular has not been surveyed for giraffe since 2008 despite rapid urban expansions. As a result of these discussions it was recommended to conduct a survey to update the numbers and distribution of giraffe in the area. Additionally, where possible GPS satellite tags should be fitted to giraffe for more detailed movement data. GCF is excited to further facilitate this work with KWS and partners in 2020.

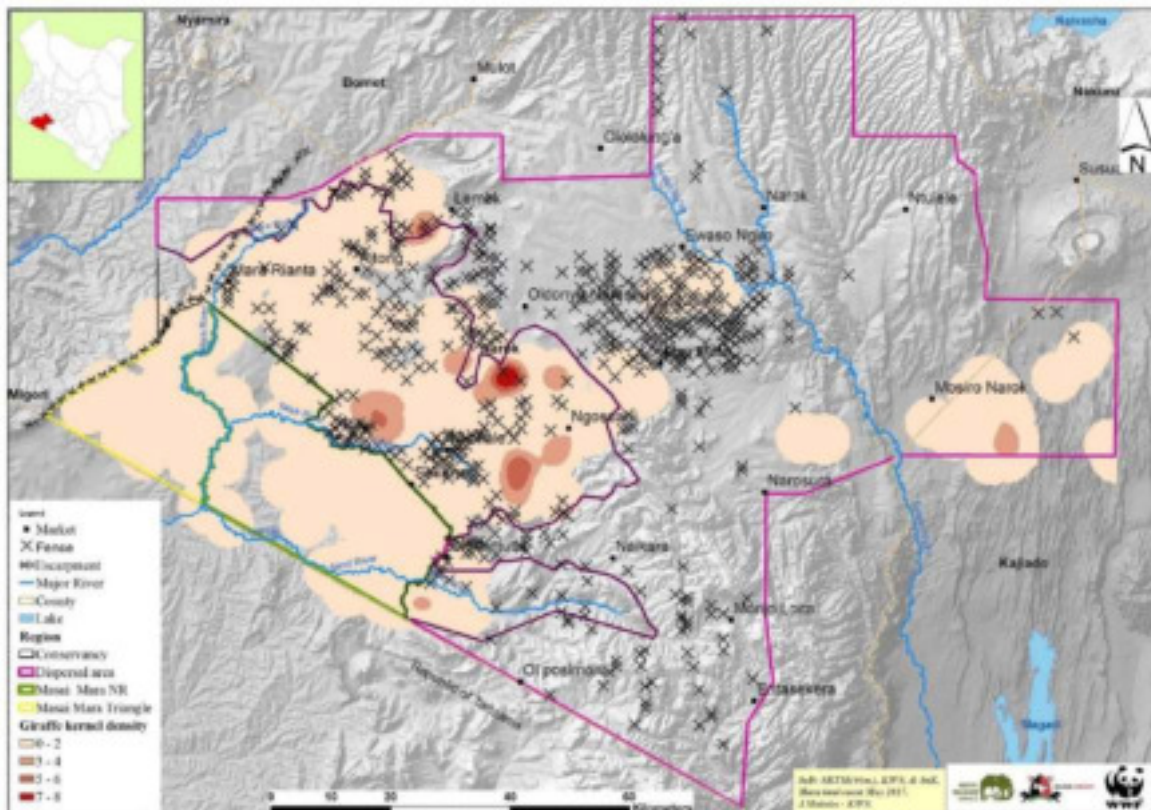


Fig. 1: Map depicting placement of fences in the Masai Mara Ecosystem, where increasing human activities are exerting pressure on wildlife habitats and restricting movement into dispersal areas. © KWS

Building on our relationship with Wildlife Works in southern Kenya, we have completed the data collection part of our expansive human dimensions study in southern Kenya. The target was to survey a total of 350 households, however, after cleaning the data, only 331 households were suitable for analysis – still a great effort. We collected data on the perceptions and attitudes toward giraffe and wildlife in general from community members living adjacent to Tsavo West and East National Parks. This in turn will be linked to demographic and available land-use data to assess the socio-economic and cultural values of wildlife in the region. Of particular importance, while large sections of the study area are considered to be part of the 'Masai steppe', anecdotal data shows that over time it has become increasingly diverse with a range of land use types including large-scale farming, private and community wildlife ranches, and pastoral land. Similar to the Masai Mara ecosystem, fences are proving to be a threat to giraffe in the area also due to habitat fragmentation. In this region, fences are usually installed to demarcate parcels of land and keep away nuisance animals, but field observations indicate that giraffe



get entangled more than any other wildlife species. At the same time, data from KWS indicate that a large portion of wildlife lives outside protected areas. In the Amboseli ecosystem, more than 95% of the giraffe population occurs in community lands, further highlighting the need to better understand the human dimensions of wildlife conservation and develop policies that promote the coexistence of wildlife and communities that share the same landscape.



Fig. 2: Giraffe calf entangled in a fence in Southern Kenya. Such occurrences are becoming common with increasing land use changes and habitat fragmentation © Moses Kinaiya

Continuing our partnership with the National Geographic Society, we held an education event in Rukinga Wildlife Sanctuary in collaboration with Wildlife Works to mark World Giraffe Day – 21 June 2019. The ‘BioBlitz’ event brought together 30 school-aged children from six different schools in the neighbouring conservation areas. The goal of the event was to develop the data collection skills of the children and promote their interest in wildlife conservation. As such, the participants were divided into five groups and asked to choose a name for their respective group based on any plant or animal that they closely identified with. The different groups were named Buffalo, Giraffe, Lion, Warthog and Zebra. The students were then tasked with identifying and counting wildlife species during game drives and walks in Rukinga Wildlife Sanctuary. The event was structured in a way that allowed the students to learn about the different interactions between wildlife and their environment. All group members were able to observe their symbolic animal in the wild except for team Buffalo. The highlight of the event was when we encountered four lions feeding on a fresh warthog kill, which fuelled a lively discussion on the food web. This environmental programme will continue to build and present opportunities for students in the region to learn more about wildlife conservation and habitat preservation in a bid to raise awareness on local conservation issues.



Fig. 3: *Left: Participants of the BioBlitz on one of the game walks at a wildlife drinking point in Rukinga Wildlife Sanctuary where they identified more than 20 different animal species and were trained on data collection. Right: Pride of lions spotted during a game drive feeding on their prey of warthog in Rukinga Wildlife Sanctuary.*

Our conservation partners, Drs Petra Campbell and Felix Patton completed another round of photographic mark-recapture giraffe surveys in Olare Motorogi Conservancy, which covers an area of 150 km² in the Masai Mara ecosystem. Olare Motorogi remains unfenced though it is surrounded by Naboisho Conservancy in the east, Masai Mara NR in the south, Mara North Conservancy in the west and local communities living in small fenced areas to north (Fig. 4). During a 19-day period, the accessible road network was divided into different transects measuring 55km on average. The survey team observed 980 separate sightings of giraffe where the group size ranged between 1 and 37 individuals (average = 7). Out of these sightings, the observers identified 313 unique giraffe. Seventy four individuals were sighted only once whereas one giraffe was sighted eight times. Additionally, the age structure of the population in Olare Motorogi Conservancy is 13% calves [20 males; 22 females], 19% subadults [33 males; 25 females] and 68% adults [41 males; 172 females]. The high female ratio in the conservancy is likely due to higher rates of movement of male giraffe in search of mates and forage. Other neighbouring conservancies that have been surveyed also by the team show a higher number of male giraffe in comparison. The 313 giraffe recorded in Olare Motorogi Conservancy account for 17.45% of the 1,794 giraffe that have been identified from the surveys in the Mara ecosystem to date. Importantly, some individuals have been observed across different conservancies further highlighting the crucial need for maintaining the connectivity between the habitats. The highest rate of movement was observed in Naboisho Conservancy, which has 441 unique individuals, in addition to 120 individuals shared with Ol Kinyei Conservancy, 33 shared with Olarro Conservancy (includes north and south), and 22 giraffe shared with Olare Motorogi Conservancy (Fig. 4). Prevalence of skin lesions was very low, recorded in one male, though we are continuing to monitor any further signs. This is particularly important given Serengeti National Park has an incidence rate of 23%. Four female giraffe, all sighted within Olare Motorogi, had deformed ossicones, though the cause for this remains unknown. The project aims to cover all the conservancies within the Masai Mara ecosystem in addition to the national reserve. This work will provide deeper insights into the conservation status, threats and number of Masai giraffe in the ecosystem, which is particularly important given that the project has already identified a total of 1,794 unique giraffe, well above the initial estimate of 1,682 giraffe previously estimated to occur across the Mara Conservancies.

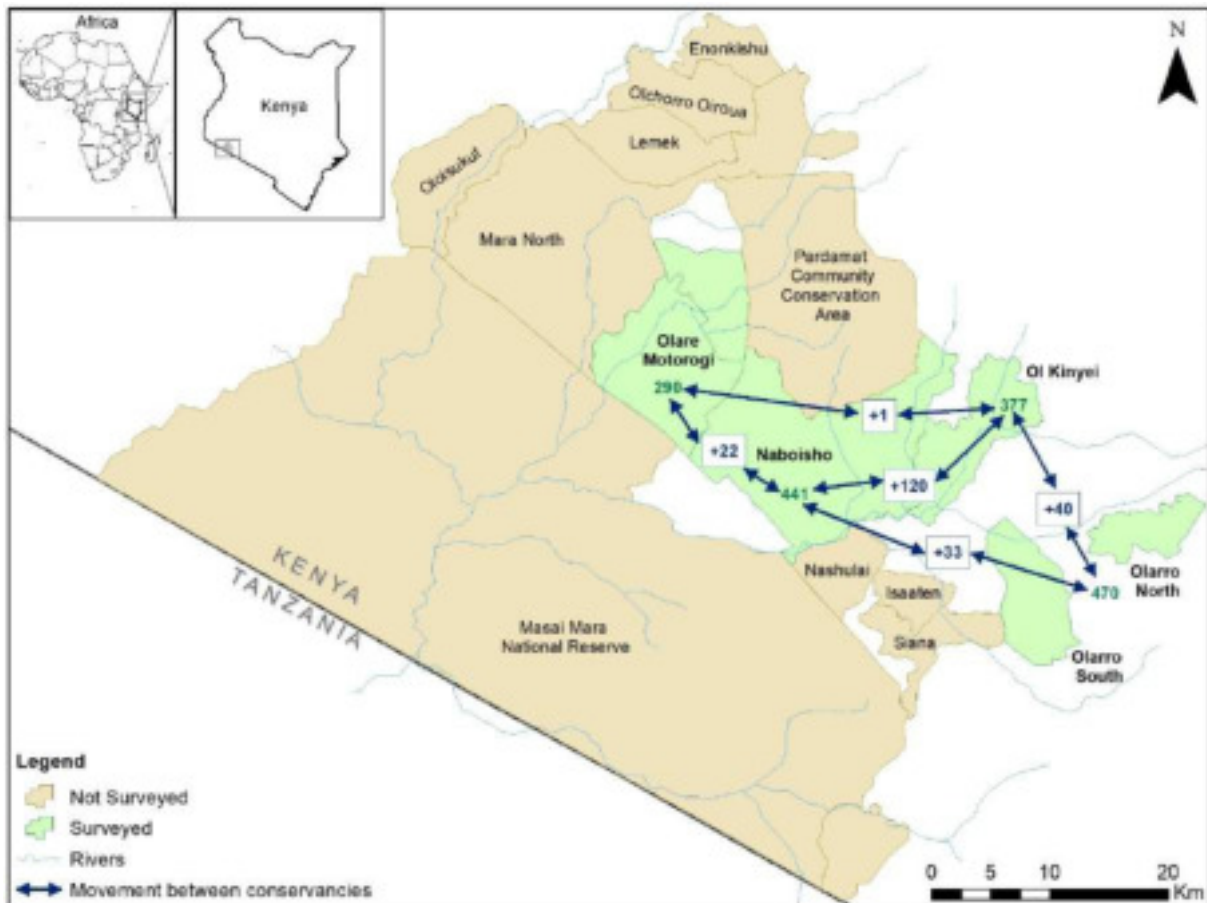


Fig. 4: Movement of giraffe between the surveyed areas within the Masai Mara Ecosystem; the green numbers indicate the number of unique individuals within each conservancy whereas the blue numbers show the number of shared individuals that have been identified in the respective conservancies.

In Tanzania, we continue to strengthen our collaboration with both Tanzania National Parks Authority (TANAPA) and Tanzania Wildlife Research Institute (TAWIRI). Our East Africa Coordinator held a series of meetings with officials from both institutions in July 2019 to plan details relating to giraffe conservation efforts in the country. Specifically, GCF is working to support DNA sampling to better understand the genetic taxonomy and relatedness of giraffe populations throughout Tanzania. The sample collection will be carried out collaboratively by TANAPA and TAWIRI, with support from GCF. Additionally, GCF is coordinating plans to deploy GPS satellite units in northern Tanzania early next year. In addition to understanding general giraffe movements and habitat use, the deployment of the GPS satellite units will be key to understanding whether giraffe with skin disease (GSD) move to the same extent as those that do not have any external symptoms of the disease. Additionally, we will work collaboratively with both TAWIRI and TANAPA to collect samples to further assess the potential etiological agent of the disease. Both TANAPA and TAWIRI have identified the Tarangire-Manyara and Ruaha-Rungwa ecosystems as the priority areas with 63% and 86% incidence rates of GSD respectively.

Furthermore, GCF will continue to work collaboratively with the USAID Tanzania PROTECT initiative to finalise and support the launch of the first-ever National Giraffe Conservation and Action Plan for Tanzania. The Strategy is currently in the final rounds of edits and barring any major hurdles, it should be launched in late 2019.



As part of implementing key objectives identified in Tanzania's Strategy and Action Plan as well as those of other East African countries, GCF has worked with Wildlife Capture Africa to support the training for an East African wildlife veterinarian to attend the prestigious Wildlife Capture Course in Chemical and Physical Restraint of African Wildlife at Malilangwe, Zimbabwe. So far, GCF has supported three wildlife veterinarians to attend the course, with Dr. Dominic Mijele from KWS attending in early 2019. This is part of a larger initiative to enhance wildlife management capacity in the region and help directly grow conservation and management initiatives of giraffe.

Nubian giraffe

Between May and June 2019, we completed photographic mark-recapture surveys of Nubian giraffe in Lake Nakuru National Park in collaboration with KWS and African Fund for Endangered Wildlife (AFEW). The goal of this study is to assess the conservation status of Nubian giraffe. Specifically, we set out to establish an individual identification database of Nubian giraffe in the park; assess the health status of the giraffe; examine the severity of the threats to giraffe in Lake Nakuru NP; and enhance the giraffe research and monitoring capacity of KWS staff. Analysis of the surveys is ongoing but preliminary results indicate that Lake Nakuru National Park has an estimated 112 giraffe; an increase from the previous estimate of 74 individuals. Part of the reason for this increase could be due to the movement of giraffe between the national park and the neighbouring Soysambu Wildlife Conservancy. In July 2019, GCF field researcher Matthew Wachira spent five days with the Soysambu Wildlife Conservancy team collecting updated data on their giraffe and led a workshop on using WildID for individual identification. As part of the analysis, Matthew is comparing the photos of the giraffe identified in Lake Nakuru National Park against the database from Soysambu Wildlife Conservancy dating back from 2009 to determine the extent of giraffe movement between the two sites. This is the first-ever detailed assessment comparing movements of giraffe between the properties and highlights the need for increased collaborative management between both areas.



Fig. 5: Tower of Nubian giraffe in Lake Nakuru National Park, Kenya during the dry season surveys.



In Uganda, the second quarter of the year brought the successful registration of GCF East Africa as a regional NGO in the country. This status not only continues to strengthen the partnerships with the Uganda Wildlife Authority (UWA), but also allows for greater on the ground support for giraffe conservation in Uganda in the future. Dr Sara Ferguson, GCF's Ugandan Conservation Coordinator, has been instrumental in facilitating the process and we are excited to see how this collaborative conservation efforts will further flourish.

Over the last few years UWA and GCF have identified poaching, and in particular illegal wire snare traps, as a major conservation threat to Nubian giraffe, as well as other wildlife, especially within Murchison Falls National Park. Building upon previous data collected over the years documenting the prevalence of wire snare traps (routinely affecting approximately 3% of the giraffe population) and to determine the effect wire snare traps have on giraffe morbidity and mortality, GCF decided to take an active role in supporting veterinary response and other anti-poaching operations together with UWA earlier this year. GCF continues to support UWA's surveys for identifying snared giraffe (and other wildlife), however, Dr Ferguson is now based fulltime in Uganda and with a focus on Murchison Falls National Park, GCF can now also provide technical and physical support for quick and appropriate veterinary interventions. Her position is made possible through the generous funding of Naples Zoo at Caribbean Gardens. Through this work we aim to reduce the impact of wire snares on giraffe (and other wildlife) by facilitating early identification and removal of wire snares ideally before any significant damage is caused or by providing appropriate treatment and supportive care. From April to July 2019 the UWA/GCF team de-snared and treated over 50 animals. During regular patrols, GCF also supports UWA in removing snares from the environment, with over 500 snares removed. In addition, GCF is evaluating other avenues to aid in ongoing anti-poaching efforts within and around the park to decrease the presence of wire snare traps (and other illegal hunting implements) in the park.

GCF continues to conduct monthly surveys of the Nubian giraffe population on the southern bank of Murchison Falls NP. This population was re-established during Operations Twiga I and II in 2016 and 2017 respectively. This population has proven difficult to survey as giraffe spend the majority of their time across the Mupina River Valley – an area inaccessible to vehicles during the wet season. However, we have been able to observe a herd of 14 giraffe with three calves from this year, demonstrating the success of the population. It is hoped that our regular surveys will help determine the overall growth in this population.

In March 2019 the GCF team supported by partners (Chester Zoo, San Diego Zoo Global, Naples Zoo) spent two days in Pian Upe Wildlife Reserve (WR), located in the Karamoja Region in eastern Uganda, to support UWA in evaluating the potential for future giraffe translocations. Pian Upe WR was formerly a key part of giraffe natural range in Uganda before they became locally extinct. Pian Upe was established in 1965, at 2,043km² it is the largest wildlife reserve in the country and the second largest protected area (after Murchison Falls NP) in Uganda.

Since the 1960s with the introduction of automatic weapons for traditional cattle raiding in Karamoja, the region has suffered from a breakdown in law and order. While this resulted in a decrease in cattle numbers which allowed the reversal of negative vegetation changes associated with overgrazing, it also



caused the effective abandonment by the Game Department of all of the region's reserves from the late 1970s which lead to uncontrolled poaching and a dramatic decrease in wildlife. Nubian giraffe historically ranged within the wildlife reserve and throughout the entire region, however, there have been no documented giraffe sightings since 1996. Today, the number of other species in Pian Upe is low but slowly increasing as the habitat remains in good condition.

UWA has identified translocations as an important approach in conservation management in Uganda to minimise the impending adverse impacts from oil and other developments, and to help develop key satellite populations of a threatened population. The first translocation in Uganda was carried out in 1997 and involved moving five Nubian (then Rothschild's) giraffe from Lake Nakuru NP in Kenya to Kidepo Valley NP. More recently, GCF has been integrally involved in providing technical and financial support to more recent translocations in 2015 to re-introduce 15 giraffe to Lake Mburo NP from Murchison Falls NP. In 2016 and 2017, 18 and 19 giraffe respectively were moved across the Nile River from the northern to the southern bank of Murchison Falls NP. And in 2018, 14 giraffe were translocated from Murchison Falls NP to Kidepo Valley NP to augment the small existing population. All these new and augmented populations are doing well with increasing numbers resulting from the introduction.

Pian Upe WR has been identified as the obvious next location as it was home to the largest population of Nubian giraffe in the last century. The ground assessment was started by driving the preferred route from Murchison Falls NP to Pian Upe to identify potential obstacles like low hanging powerlines. The route was found in good condition except for the last 100km. It was therefore decided that translocations along this route could only take place during the dry season and that another reconnaissance trip was necessary prior to the actual move. Furthermore, the team assessed potential core giraffe areas within the reserve and held initial preparation discussions were held to identifying potential additional hurdles that need addressing prior to translocating giraffe. Overall it was a successful trip and a great start to the preparations for the proposed translocation that is scheduled to occur later this year – stay tuned.

In Lake Mburo National Park, GCF continues supporting our partners at Giraffe Education and Research (GEAR), a collaborative programme of the Uganda Wildlife Authority, Kacheera Camp, Lake Mburo Communities and GCF. The monitoring team continues to undertake two trips to the park per week to provide regular updates on the Nubian giraffe population that has grown to 24 individuals. In addition to keeping count of the giraffe, this monitoring also helps to identify medical issues that require veterinary interventions swiftly and relevant UWA staff can be alerted. Additional activities include facilitation of school trips to the park as well as raising awareness for giraffe conservation by hosting a soccer tournament to celebrate World Giraffe Day – 21 June.

Reticulated giraffe

Our collaborative partners in northern Kenya continue to build relationships with local communities to raise awareness and facilitate management on reticulated giraffe conservation in the area. This is particularly important given that a large portion of the reticulated giraffe population occurs outside formally protected conservation areas. Specifically, through the *Twiga Walinzi* project run by San Diego Zoo Global, the community scouts held community outreach and engagement meetings in various locations to raise awareness on giraffe conservation and discuss planned GPS satellite tagging efforts in



the region for the second half of 2020. Additionally, the *Twiga Walinzi* scouts visited a number of schools to celebrate World Giraffe Day – 21 July. The event brought together students from Waso, Kirimon and Laboshereki Secondary Schools. Such targeted outreach efforts, in combination with the ongoing face-to-face interviews conducted by the *Twiga Walinzi* team continue to raise awareness for the overall decline of giraffe and help to build community pride in the uniqueness of northern Kenya's giraffe species.



Fig. 6: *Twiga Walinzi* scouts Symon Masiaine (bottom row left) and Lexson Larpei (bottom row right) with the students from various schools in northern Kenya at the World Giraffe Day and Community Day celebration.

Awareness raising and capacity enhancement

To enhance and raise awareness on the giraffe conservation status in the region, we continue to build partnerships across the globe and to give invited lectures. A delegation of GCF staff and conservation partners attended the 2019 Giraffid International Conference held at the Columbus Zoo and Aquarium in May 2019. The delegation contributed to the conservation day of the conference by giving six presentations covering the range of conservation efforts with a focus on East Africa ranging from spatial ecology, human dimensions, and strategy development and implementation. Additionally, GCF Director Steph Fennessy gave an overview on the different partnerships established globally by GCF to move forward giraffe conservation efforts while Dr Julian Fennessy gave the keynote address at the conference to highlight the current conservation status of giraffe and ongoing work to protect Africa's gentle giants. All of these efforts highlighted the amazing work that GCF and conservation partners are involved in and help to cement GCF at the forefront of giraffe conservation and management in East Africa and beyond.



Fig. 7: GCF East Africa Coordinator Arthur Muneza (left) with San Diego Zoo Global's Twiga Walinzi Initiative Coordinator Symon Masiaine at the 2019 International Giraffid Conference, Columbus Ohio.

PARTNERS & SUPPORTERS

