Tracking reticulated giraffe in northern Kenya

A collaborative community-based conservation and research effort

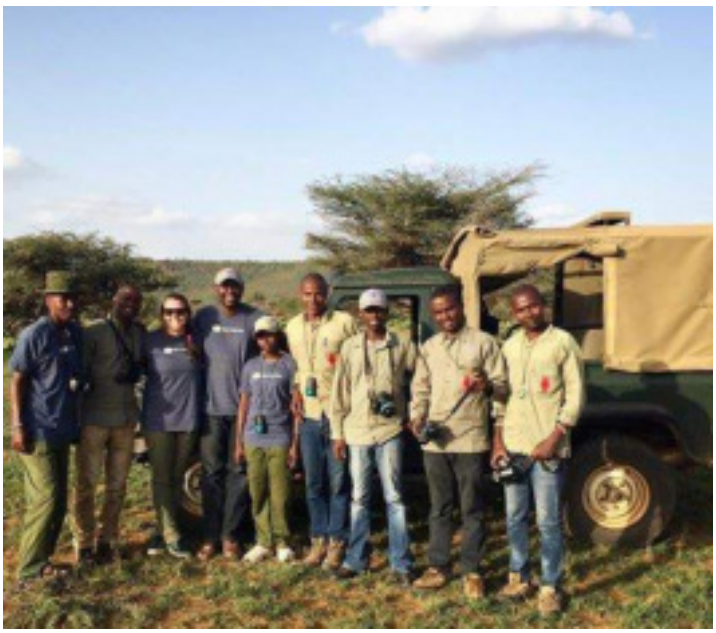
June 2017

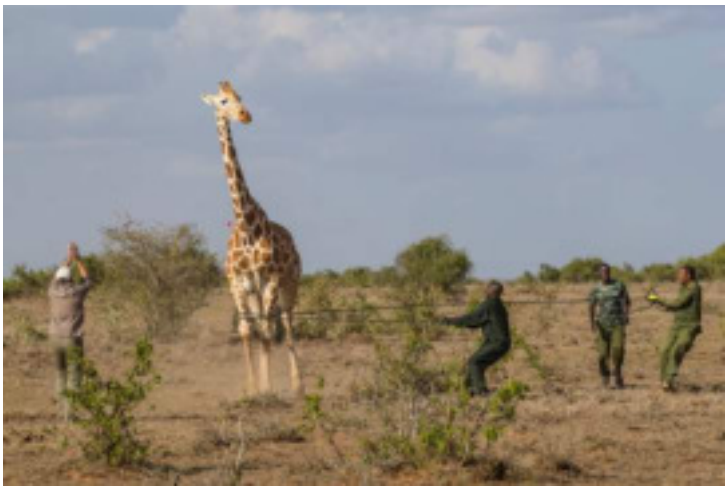
Reticulated giraffe (*Giraffa reticulata*) is a highly threatened giraffe species occurring only in northern Kenya, and maybe in small numbers in southern Ethiopia and Somalia, but little is known about their range in these countries. A recent IUCN Red List assessment announced that these giraffe have declined drastically over the past three decades (by almost 80%) due to habitat loss and degradation in combination with increased poaching pressure. However, we are still rather unsure of their exact numbers, as well as their ecology and spatial movements. As such, it is challenging to make informed conservation management decisions based on solid facts.

Across the vast frontier land of northern Kenya, we see positive developments in giraffe and other wildlife conservation, highlighting how local communities and conservancies together with private landowners, National Parks and Reserves can contribute to wildlife conservation and security through multidimensional programmes and conservation benefits. Thanks to the innovative conservation efforts led by Northern Rangelands Trust community conservancies, private conservancies and the Kenya Wildlife Service, these examples show that wildlife, people and livestock can positively co-exist.

For over a year now, GCF has collaborated closely with our partner San Diego Zoo Global and others on supporting giraffe conservation efforts on reticulated giraffe. The Twiga Walinzi (Giraffe Guards) initiative was launched by San Diego Zoo Global in the Loisaba Conservancy and Namunyak Community Conservancy in northern Kenya with other partners and communities working closely.

Eight community members currently make up the Twiga Walinzi team (TWT), who are using camera traps and pattern recognition techniques to gather baseline data on the giraffe across parts of their range. In addition, they are gathering human dimensions data through questionnaires to learn more about community-members' views of giraffe and conservation, existing traditional knowledge about giraffe, and to determine the hotspots for giraffe poaching and product consumption. The TWT also works closely with rangers to remove snares and thwart poachers, and importantly, assists injured or orphan giraffe in partnership with Reteti Rescue Centre in Namunyak Conservancy.

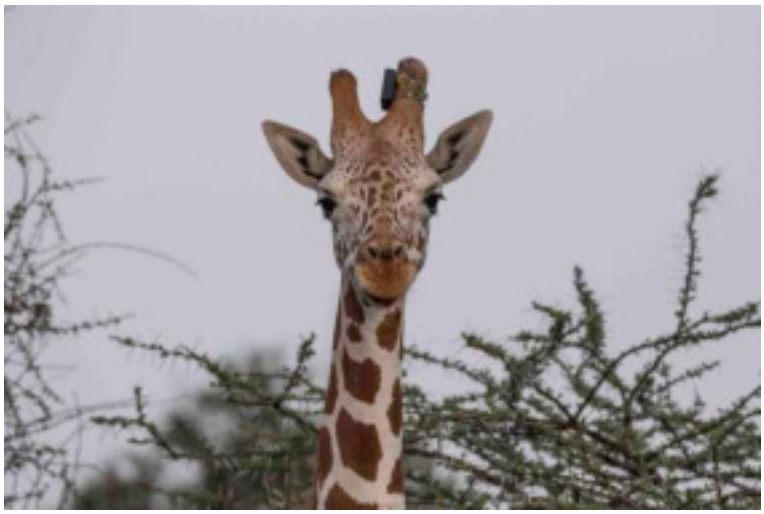




Building on the TWT's ground-work, we have now launched Phase II of the programme, which uses newly designed GPS satellite units to track in real-time the movements of individual giraffe for the next two years – and hopefully beyond. Designed and built in Kenya by Savannah Tracking, these innovative units are solar powered and use an Iridium satellite connection. About the size of a pack of cards, the units attach to a giraffe's ossicone (boney, horn-like structures atop their heads) and will record GPS positions once every hour over the coming years.

For the first time ever on this scale in Africa, and more specifically in Kenya, we aim to better understand the spatial movements and habitat requirements of reticulated giraffe – particularly important as infrastructure development is booming in the region. This work will be critical for their long-term sustainability, especially considering increasing development across the region. It will answer several basic ecological questions such as: Where are the critical core and periphery habitats and how large are their home-range? Which areas do giraffe depend on in the wet and dry seasons? Do they engage in migrations, or use movement corridors? Are some individuals sedentary and others not? What are the drivers of their use of the landscape? Currently, we do not have answers to these questions, so understanding what areas are vital to giraffe survival and how they move across the landscape will help land managers and communities make effective and efficient decisions about which habitats to preserve and how to manage land, livestock and future development to maintain the peaceful coexistence between giraffe populations and human livelihoods. Especially important, as in several of these areas, anecdotally they are recording improvements in reticulated giraffe population numbers.

Northern Kenya's rangelands are wild, open places and bold action is required to successfully navigate any challenges relating to the landscape and animal handling/capture. As evidenced by the list of partners and supporters below, an immense collaborative effort from across the world was required to fund, provide expertise, knowledge and support on logistics and safety for this monumental project.



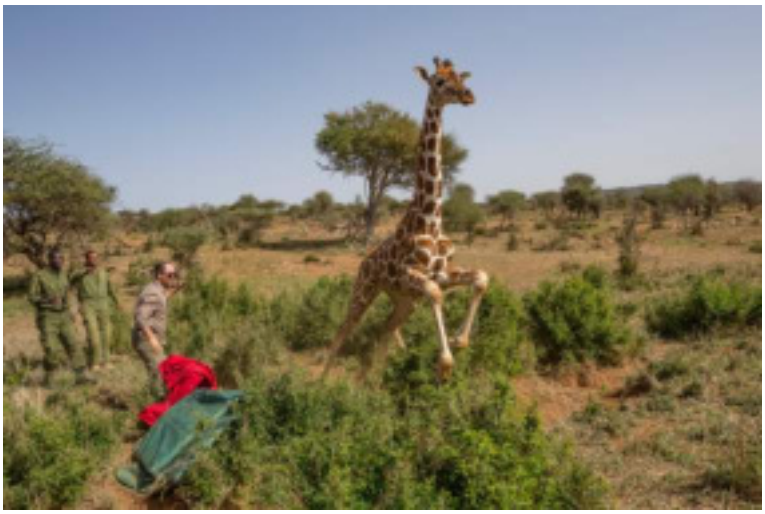
The team led by KWS veterinarians, Drs. Mathew Mutinda and Bernard Rono, safely immobilised seven giraffe from vehicles in Loisaba Conservancy. When safely secured during capture, the team attached the tracking units to the

individual giraffe and took valuable biodata measurements before releasing them. It took no more than 20 minutes from darting to releasing every individual giraffe, and it was incredible to see passionate, talented people come together for this work.

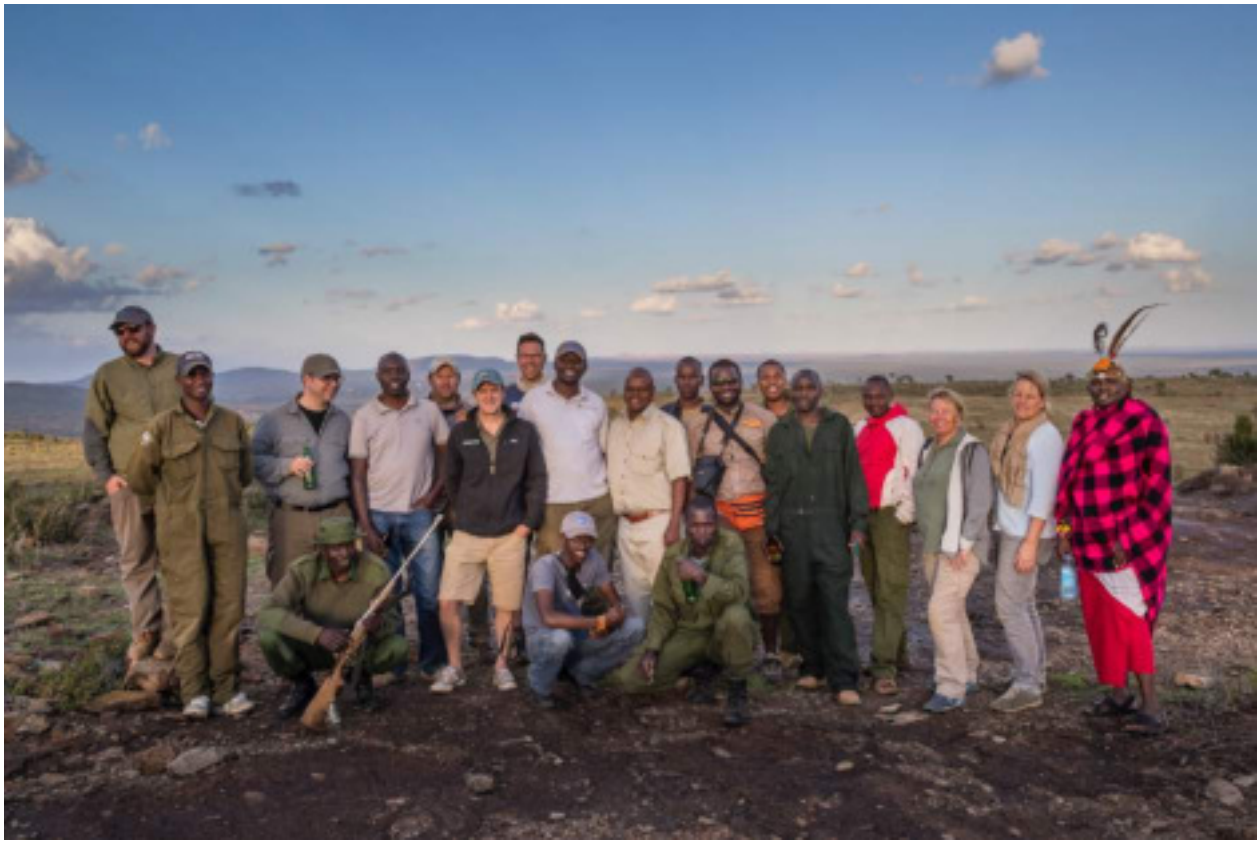
After a successful first effort in Loisaba, we moved to the second site, the Northern Rangelands Trust Leparua and Nasuulu Community Conservancies. This second phase was more challenging due to drier conditions, thicker stands of Acacias and limited road access. In this harsher landscape, we had to use a spotter plane to first locate the giraffe and then employ a helicopter to dart the giraffe from the air. Supported by the Leparua Manager and community rangers, giraffe were spotted and the chopper immediately lifted off to the area. With a marksman's accuracy, the safely-harnessed KWS vet, leaning out off the side of the open helicopter door, darted the giraffe quickly, so the helicopter could immediately gain altitude to monitor the animal while minimising stress.

As the giraffe calmed, we waited for the drug to take effect from a distance. After 5-10 minutes, the giraffe would start "high-stepping", like a Lipizzaner horse, indicating the drug was taking affect. The chopper then landed in an area open enough to allow the free movement of the rotor blades and the 4-person team plus pilot was dispatched toward the giraffe, carrying all the equipment across unrelenting terrain and through vicious thorny bush. Once close, we quietly approached the giraffe to bring it down safely using ropes and the team would swing into action to stabilise the giraffe and attach the unit. It took approximately 10 minutes to attach the GPS tracking unit, collect biodata, and safely release the giraffe. Each time, the team emerged looking like they were returning from a rugby match, a little battered and bruised, but elated. We safely attached four GPS units to giraffe in these Community Conservancies during this exciting phase, leading to a total of 11 giraffe equipped with tracking units in northern Kenya.

For the first time, we are getting glimpses into the spatial movement and habitat use by these iconic animals in the dynamic northern Kenya landscape. Who knows what fascinating insights we will discover about these incredible, tenuous, rugged and graceful animals. Importantly, this movement data will underscore the value of community conservancies in the arid north and how they manage their lands to the future survival of giraffe and other wildlife that are struggling outside of these conservancies.



Photos by Ken Bohn, San Diego Zoo Global.



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