



Namibia Giraffe Conservation Programme

QUARTERLY REPORT

April – June 2020



At our home base in Namibia, the Giraffe Conservation Foundation (GCF) runs a comprehensive programme across the country with a focus on giraffe conservation research and environmental education. While this report focuses on the conservation side, you can read more about the environmental education programme in the regular KEEP Update reports online at <https://giraffeconservation.org/programmes/keep/>.

The past few months have seen some exciting developments in our Namibia Programme. If you follow our updates regularly, you might want to skip forward to the brand-new updates and give the background information a miss, but you might also find some interesting information that you were not aware of.



Background

GCF's Namibia programme focuses on monitoring and supporting the long-term conservation and research of Namibia's desert-dwelling giraffe. These giraffe roam throughout the northern Namib Desert in the country's northwest. In 2019 our study area expanded to cover a total area of approximately 30,000km². Our work primarily focuses on the area south of the ephemeral Ensengo, Nadas and Khumib Rivers in the far north, down to the catchments of the Hoarusib and Hoanib Rivers. The area extends from communal conservancies (Marienfluss, Orupembe, Sanitatas, Okondjombo, Puros and Sesfontein Conservancies) in the east to the Skeleton Coast National Park bordering the Atlantic Ocean to the west.

Namibia is well-known for its successful community based natural resource management approach where local people gain management rights to their designated local land and natural resources including wildlife. Approximately 20% of Namibia's surface areas is managed and protected in such communal



conservancies and over 46% of the country is under some form of private, communal or public conservation management. This collaborative conservation approach involving communal and private land as well as national parks has contributed to positive populations trends of most wildlife in the country.

With only a few millimetres of annual rainfall, the programme area is arid to hyper-arid and the wildlife is well adapted to this harsh environment. However, these conditions mean that many species survive at the very edge of their adaptive abilities and as such the ecosystem is fragile and easily disrupted. Grazing for cattle and other livestock, increasing tourism in the region and historical poaching have led to some degradation of the environment and its wildlife. Nevertheless, it remains one of the most beautiful and remote refuges for Africa's remaining mega-fauna.

In this stark landscape of dunes and dry riverbeds, along with elephant, black rhino, lion, cheetah and numerous other species, live the desert-dwelling Angolan giraffe (*Giraffa giraffa angolensis*) – a subspecies of the Southern giraffe (*G. giraffa*). GCF's long-term giraffe conservation monitoring and research programme in this remote part of Namibia offers a unique and valuable opportunity to better understand this giraffe subspecies and, through what we learn, provide conservation and management support for other giraffe populations throughout Africa.

In addition to this long-term conservation programme, GCF also attempts to get a better idea of giraffe numbers throughout the country and we have embarked on a country-wide assessment of giraffe. In this exciting programme, we work closely with government and private land-owners throughout Namibia to better understand the numbers and population dynamics of giraffe in the country. By collaborating with partners, we not only determine giraffe numbers, but also increase education and awareness of giraffe conservation in Namibia and Africa-wide.





News from the field:

As with all major events in history, in 20 years' time, we will all be discussing where we were when COVID-19 struck, how it affected us and the impacts it had throughout the world. Our Northwest Namibia research team will be no exception – they were lucky enough to spend nearly six weeks in the field during Namibia's lockdown. No better way or place to practice social distancing than the remote Kunene Region.

The rains continued to fall during this quarter, again resulting in the flooding of several ephemeral rivers. In mid-May the team found themselves stuck between two enormous weather systems. With lightening and torrential rain coming from all directions, camping became a challenge for a few days and they were stuck on the wrong side of a river not once, but twice! After a particularly large downpour which rapidly morphed roads into raging rivers, even the Khumib River flooded. This river rarely floods and according to local reports had not flooded to this extent for nearly 10 years. Mesmerized by the sight of the flowing water, the GCF team patiently waited for the river to subside enough for a safe crossing. Their navigation skills were put to the test on their way further south towards Puros as the road had completely washed away and the Hoarusib River was again in full flood too. It took another three days before it was possible to cross the Hoarusib River and continue the giraffe survey further south.

While waiting for the rivers to subside, the team contacted the GCF headquarters in Windhoek by satellite phone to request a snapshot map to help locate all giraffe with ossi-units in the area. Figure 1 shows six females giraffe just outside the Khumib River immediately after the flood. Interestingly, two days later when the river had totally subsided, all animals were back browsing up and down the riverbed.



Figure 1: Screenshot of tagged giraffe locations in the Upper Khumib River on the morning of Wednesday 22 April 2020, after the Khumib River had flowed during the night before.



The extended field time provided a lot of interesting data and fascinating giraffe observations. During a normal two-week survey trip, each section or transect of the study area is surveyed once, which in turn means that most Individuals are observed once or maybe twice in one month. In comparison, over the 6-week period, the team completed two full circuits of the normal survey route and was able to survey some areas on multiple occasions. River systems were surveyed several times only days apart instead of just once per trip. As can be seen in Figure 2, there was a higher number of giraffe sightings in the second quarter, despite limited accessibility due to flooded rivers. Since the beginning of 2020, the team has observed well over half the known individuals from each river system (Figure 3). With the rainy season coming to an end, accessibility and sightings in the survey area increases as the giraffe move back into the dry riverbeds. We anticipate to see the majority of the known individuals by the end of the year.

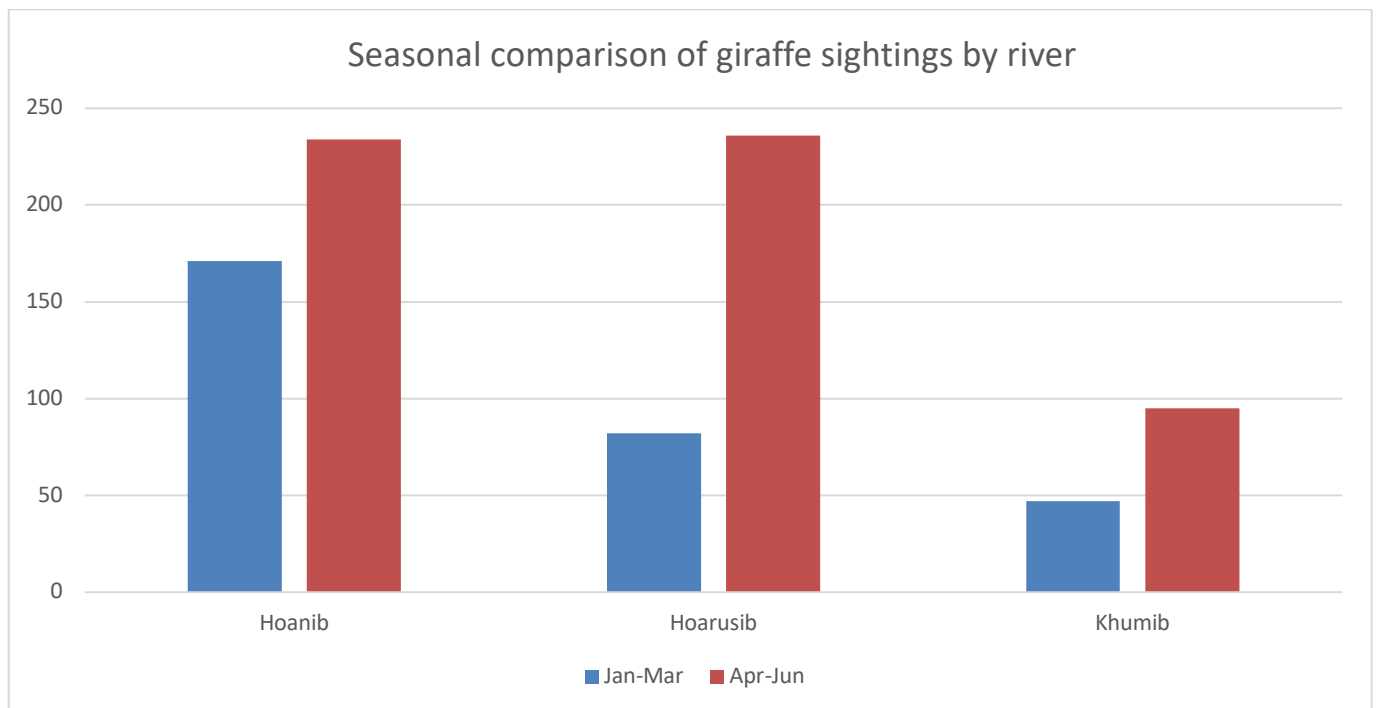


Figure 2: Seasonal comparison of giraffe sightings by river system.

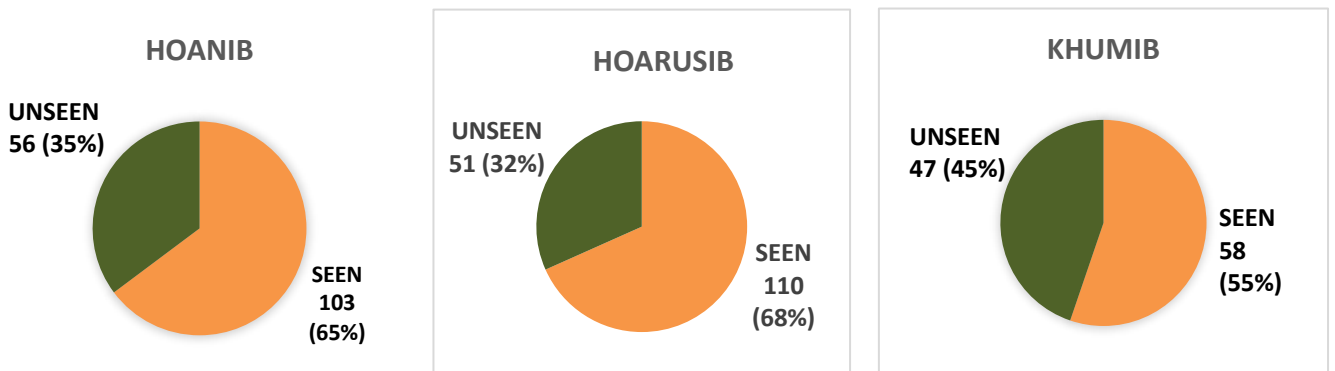


Figure 3: Total number of giraffe by river system and percentage of sightings in first half of 2020.



Observed herd sizes were notably smaller in April in comparison to May (Figure 4), in particular in the Hoarusib River where the flooding river served as a barrier for giraffe movements. While the Hoanib River flooded several times this year and the Khumib River flowed once, both rivers dried up quickly within a matter of days if not hours. In comparison, the Hoarusib River has flowed for many days at a time, subsiding slowly and creating a physical barrier for giraffe, therefore splitting herds and potentially affecting the fission-fusion movements that would be observed otherwise.

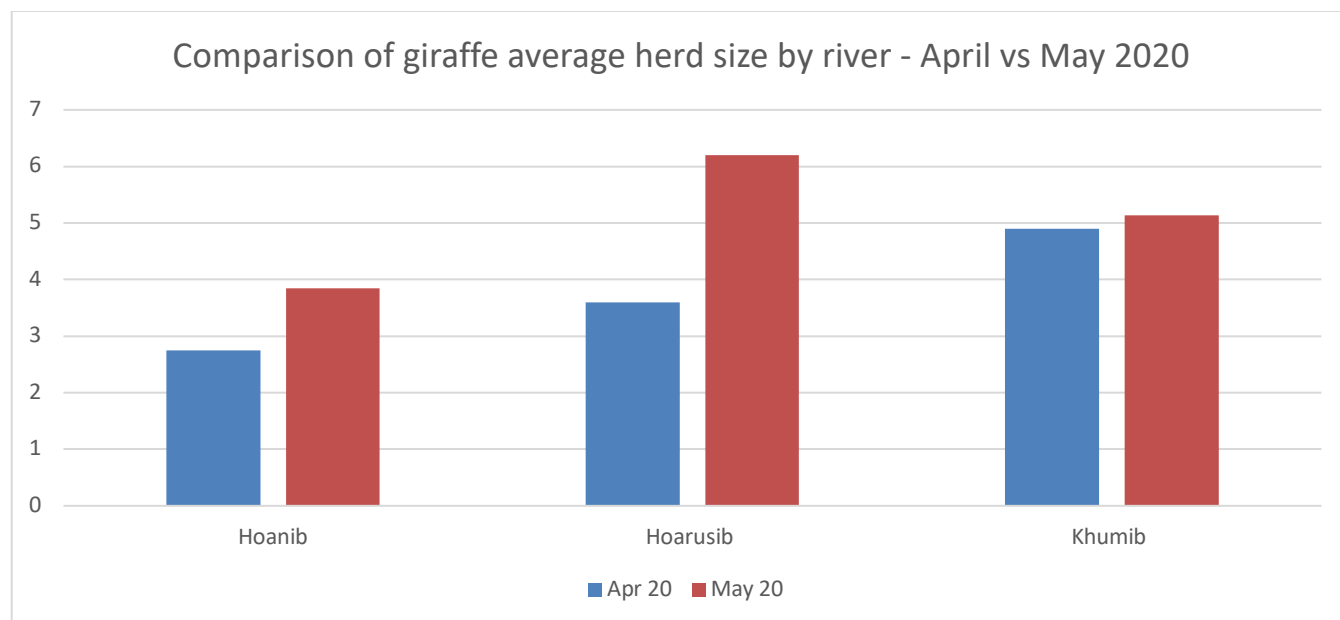


Figure 4: Comparison of giraffe average herd size by river in April and May 2020.

Recent results from a study by PhD candidate Emma Hart suggest that giraffe may seek out individuals they have stronger social bonds with in the evenings, whereas during the day the herd associations are looser and fission-fusion movements are more apparent. This may be indicative of why smaller herds are observed during times of flooding. It is possible that giraffe stay with individuals they are more closely bonded with and as the rivers subside, they mix with those they are less strongly bonded to.

We currently track 19 giraffe in the study area through GPS satellite collars as part of our continent-wide Twiga Tracker programme. Tracking their movements gives us a good insight into how far and where they are moving, however, we cannot see who these giraffe interact with or how frequently. This data only gives us a snapshot of giraffe behaviour. Field observations provide vital information and give us real time fission-fusion giraffe dynamics. Giraffe are social animals, but they do not stay in set herds and often travel long distances to find food or mating opportunities.

Late last year, a female giraffe from the Hoarusib showed us a perfect example of giraffe fission-fusion behaviour: at lunchtime, she was observed with four adult males and three adult females in the Hoarusib River. The following day, she was seen again 15.5 km northwest in a straight line in the Khumib River (Figure 5) in the company of two of the same males, one new male and one new female that we normally see in the Hoarusib River. It is unclear why she travelled to the neighbouring river or why some of her companions joined her while others did not. It is possible she was in oestrus, however, no reproductive behaviour was observed by her or the males in her presence at that time.



Figure 5: Map showing distance travelled by HSBF027 over a 24-hour period.

In contrast, one of the older resident bulls from the Hoanib River was observed on four different occasions over a 7-day period (Figure 6). During that period, he travelled up and down a 25 km stretch of the river. At the initial sighting, he was spotted with an old bull, a cow, and her calf. Four days later, he was in the company of a different bull and on the last two occasions he was observed browsing alone with the closest giraffe seen only half an hour later.



Figure 6: HNBM027 travelled 25 km up and down the Hoanib River over a 7-day period.



Giraffe are known to travel long distances. With their long, seemingly effortless stride, it is easy to see how they can cover such large expanses of ground. Male giraffe will typically roam further around their territory in search of breeding opportunities and food availability. Preliminary data collected by Jackson Hamutenya, an MSc student of the Namibia University of Science and Technology (NUST), suggests that home range sizes male giraffe in the far northwest study area range between 800 and 1,200 km² in comparison to female giraffe's home ranges that only range between 150 and 225 km².

One male giraffe in the Hoarusib River (HSBM044) demonstrated a long-distance travel in late May. He was spotted far north of the Hoarusib River in the mountains east of the Khumib River. Two days later he was seen again. This time 37.5 km south in a direct line in the Khumib River (Figure 7). We do not know the total distance he travelled, but we would assume it was easily double the distance since there is not direct route and he had to travers rough mountainous terrain.



Figure 7: Map showing two locations where male giraffe HSBM044 was spotted within a 48-hour period.

The continuation of frequent field surveys adds valuable data to one of the largest and longest running wild giraffe studies. This information helps us to gain a better understanding of giraffe behaviour, herd structure and socialization, and reproductive tendencies. This data will not only inform popular and scientific articles but shared with governments and other wildlife managers, it will inform future giraffe conservation decisions for wild giraffe management as well as human wildlife interactions.

Namibia-wide giraffe taxonomic assessment

All giraffe are the same. Is that actually true? Not quite ...

For the last 15 years we have collected tissue samples from giraffe throughout Africa for a taxonomic assessment. This study clearly shows that there four different species of giraffe and not only one as previously assumed. So far, we have collected more than 1,000 individual samples from giraffe across



their range in Africa. These samples are then analysed by our partners at Senckenberg BiK-F in Germany. Our work has helped to better understand how many types of giraffe there are and where they live, but most importantly it guides conservation management decisions for giraffe throughout Africa and where we should focus urgent conservation actions.

While samples have already been collected from various parts of Namibia, no comprehensive country-wide assessment has taken place yet. Based on a relatively small sample set, we simply assumed that most giraffe in Namibia are Angolan giraffe (*Giraffa giraffa angolensis*), a subspecies of the Southern giraffe (*G. giraffa*). However, we have already confirmed that there is a small group of South African giraffe (*G. g. giraffa*) residing in Bwabwata National Park in the Zambezi Region, in the northeast of Namibia. This population has naturally moved across borders between Angola and Botswana, but the movement is restricted by the Kavango and Kwando Rivers.



Figure 8: DNA samples.

As the COVID-19 pandemic has temporarily put an end to international travel, the Namibia-based GCF team has now embarked on a comprehensive taxonomic study of giraffe in the country to determine their (sub)species. The team is collecting tissue samples from giraffe throughout the country. This data collection will not only provide answers as to the taxonomy of giraffe in Namibia, but also help us gain a better understanding of giraffe numbers and their distribution in the country.

Giraffe on the move

In June, giraffe were on the move in Namibia. Together with the Namibian Ministry of Environment, Forestry and Tourism (MEFT), GCF translocated 30 giraffe to two communal conservancies and one national park. The translocations were carried out in response to requests by two conservancy committees to boost their existing giraffe populations, to increase genetic diversity, and ultimately to increase the eco-tourism potential and promote social and economic development of rural Namibians. These three translocations have augmented an additional 2 million acres of giraffe range in Namibia.



Figure 9: Giraffe mass capture in a boma.

In a capacity building effort, GCF supported the MEFT game capture unit to work with Du Preez Wild, a professional game capture operator, who carried out the translocations. The MEFT team participated in all aspects of giraffe capture including boma site selection, setting up the boma, giraffe capture and loading, assistance in fitting of ossi-units and release of the giraffe.



Figure 10: MEFT staff observing giraffe in boma during mass capture.



Thirteen giraffe were translocated to Mangetti National Park in Kavango West, three to Okongo Conservancy in Ohangwena and 14 giraffe were translocated to !Doro Nawas Conservancy in the Kunene Region, where our partners Ultimate Safaris are in the process of building a low impact joint tourism venture with the conservancy.

The release in the !Doro Nawas Conservancy was well attended by MEFT staff, conservancy members and local game guards. All were excited at the addition to their wildlife population. Over the coming months GCF will work closely with the team of Ultimate Safaris and community game guards to provide training and ensure effective monitoring of all the giraffe in the area.

Post release the GCF team and Ultimate Safaris monitored the giraffe for two days and were pleased to see the giraffe explore new environment. During the course of the monitoring, three new males and one new female were identified in the area bringing the number of known individually identified giraffe in the conservancy to 18 animals. This number will inevitably grow as monitoring increases and more individuals are identified.

As part of the Twiga Tracker initiative, two female giraffe were fitted with GPS collar units during the boma capture and before translocation. This will enable us to monitor their movements remotely and see how they explore their new environment.

While both tagged females were released in different groups as the giraffe had been separated in different compartments in the truck for safer transport, they met after few days and spent about 24 hours exploring together before going their separate ways again.

It appears that both giraffe got into the spirit of GCF's World Giraffe Day Challenge 2020 and their tracking data shows a pretty cool giraffe pattern for the period they spent together (Figure 11). What an amazing way to #StandTallForGiraffe.

Good conservation needs strong partnerships and this successful conservation initiative is a prime example.

Part of this operation was filmed by the team of Covid-Chronicles, a local Namibian initiative to stay connected with international tourists and Namibia-lovers during times when international travel is restricted due to COVID-19. The Covid-Chronicles is an initiative of Ultimate Safaris Namibia, Travel Channel Namibia, Future Proof Productions and Capture Namibia in collaboration with several conservation initiatives in the country. These videos can be found on YouTube and also GCF's social media channels.

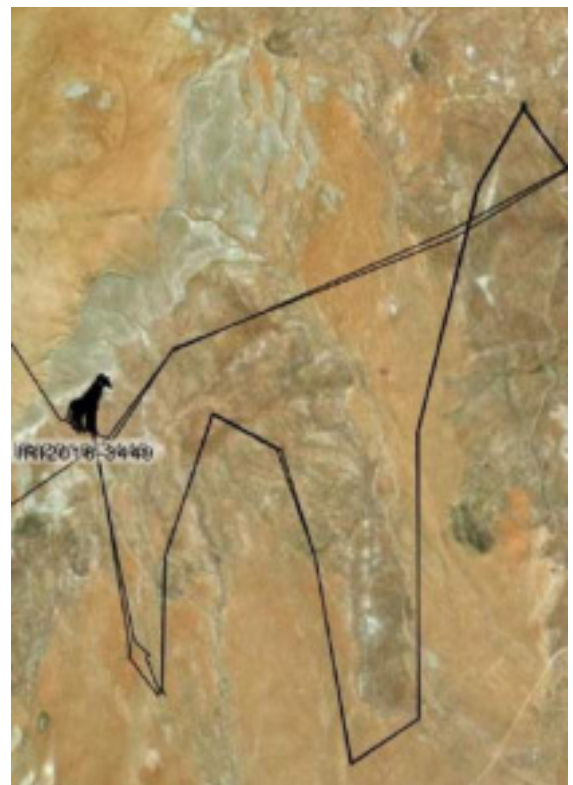


Figure 11: Giraffe tracking pattern of two GPS satellite tagged female giraffe in !Doro Nawas after translocation.



Figure 12: Giraffe released into their new home in !Doro Nawas Conservancy in the Kunene Region.

World Giraffe Day

21 June marked the seventh World Giraffe Day and we were once again overwhelmed by the incredible support shown by the international community. It was great to see the many individuals and organisations [#StandTallForGiraffe](#) in so many different ways to show their support and raise awareness.

Social distancing restrictions this year meant many zoos and other organisations around the world were unable to host events on WGD, however, social media was awash with giraffe hashtags and many of you utilised our new resource page (giraffeconservation.org/world-giraffe-day/resources/) to support World Giraffe Day 2020. We were impressed with the creativity of the online community and overwhelmed by the giraffe love shared that week through posts, hashtags and personal stories. Please contact us if you have any new ideas to share or suggestions for how to further improve our resource page for World Giraffe Day 2021.

World Giraffe Day 2020 was dedicated to *Operation Twiga V* – the next giraffe conservation translocation of Critically Endangered Nubian giraffe to Pian Upe Wildlife Reserve in Uganda. Operation Twiga V is scheduled to take place later this year and we are confident that it will go ahead despite potential travel restrictions.

As with the newly released !Doro Nawas giraffe, Team GCF Namibia took a slightly different approach in celebrating World Giraffe Day 2020. In order to truly leave our mark, we ran/walked/cycled not only in the name of giraffe conservation, but also in the shape of a giraffe. We split our 15km giraffe route up into three segments and enjoyed a giraffe inspired relay!



Team GCF

World Giraffe Day 2020

Distance	Elev Gain	Time
15.46 km	237 m	50m 16s



Figure 13: Watch Team GCF Namibia #StandTallForGiraffe

Together we can make a difference and save giraffe in Africa. GCF and our entire team is committed to securing a future for our long-necked friends throughout Africa.

Thank you for your support!

