



Namibia Giraffe Conservation Programme

UPDATE

November – December 2019



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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:

After some long-awaited rains, splashes of colour have started returning to the stark Namibia landscape and the northwest of the country is no exception. Heavy rains in the Hoanib and Hoarusib Rivers' large catchment areas in the eastern part of the Kunene Region resulted in both rivers flooding in late December. In early January, the Hoarusib River made its way all the way to the Atlantic Ocean $\frac{1}{3}$ a



spectacular and rather rare. While our study area and the entire country has far from recovered from the drought, good rains in some parts of Namibia and the large torrents of water flooding down several rivers will go a long way to replenishing the water tables and sustaining plants, animals and humans alike.



Figure 1: Hoarusib River after the flood.

Research can only be as good as the tools of the trade and our vehicle, just like our GPS unit and camera, is an important tool that help us do our job – we cannot collect good data without reliable and good equipment. Northwest Namibia is often referred to as the last wilderness and the terrain is incredibly hard on our researchers and also our research vehicle. For the last few years ‘KT’, our trusted Toyota Hilux, has done an amazing job and she has the battle scars to prove it – one due to a small nudge by a curious young elephant! As we extend our surveys further north, the tracks do not get easier to negotiated and in combination with the recent rains, some routes got even more challenging.

‘KT’, named after her donors Kathy and Tom Leiden, has served the research team well over the last few years. She traversed thousands of kilometres throughout some of the most remote parts in Namibia in search of giraffe and was a major player in deploying 22 ossi-units in northwest Namibia. She has also been pivotal in introducing giraffe enthusiasts from around the world to these majestic animals up close and inspiring them to conserve giraffe and other wildlife.

Over the past year, ‘KT’ underwent major engine repairs and many, many puncture repairs. During the team’s October trip, Director Steph had to arrange for parts to be sent up to Puros village at short notice, where a bush mechanic from one of the local lodges helped to get her back on the road. Following this trip and after looking at the financial spreadsheet, it made sense both financially and for the health and safety of our team to retire ‘KT’ and look for a replacement.

And so, the final onset of the rains was not the only thing we were pleased to welcome at the end of 2019. After three and a half years, and 90,000km of hard driving through the mountains, rivers and dunes



in the Kunene Region, GCF retired the trusty research vehicle 'KT' and in her place, we welcomed 'Betty' a 4.0L 2013 Toyota Landcruiser. We would like to express our gratitude to our amazing donors who made this purchase possible. Many research trips are planned for 2020 and we are excited to take many new Conservation Supporters in the field to share our passion and use their help with data collection. 'Betty' has just returned from her first field trip where she has proved her worth on remote tracks and crossing flooding rivers after good rains in the Kunene Region. The extra power that a Landcruiser brings compared to a Hilux is just invaluable in this terrain. We are looking forward to many adventures with 'Betty' in the coming years.



Figure 2: Retired research vehicle 'KT' pm the left and new Landcruiser 'Betty' on the right.

In 2019, GCF also bid a fond farewell to PhD candidate Emma Hart from the University College Dublin in Ireland. Emma conducted research in northwest Namibia and collected data for GCF and her PhD in for three years. She left Namibia for the green grass of Ireland where she is hard at work analysing her data and writing papers for her PhD. Emma with GCF's Dr Julian Fennessy as one of the co-authors, recently published a paper in the Journal of Mammalogy showing that 'Habitat heterogeneity and social factors drive behavioral plasticity in giraffe herd-size dynamics'. As Emma is preparing additional papers for publication, we look forward to reading them all in due course and wish her well for her future endeavours.

2019 Year in review

2019 was busy year for GCF's northwest Namibia giraffe conservation research team and here are some of the highlights:

- In 2019 the study area was extended to cover a total area of approximately 30,000 km². Surveys primarily focus south from the ephemeral Ensengo, Nadas and Khumib Rivers in the far north, to as far south as the Hoarusib and Hoanib Rivers.
- These extended surveys also help to assess the current conservation status of the Angolan giraffe in far northwest Namibia in support of the SCIONA project and the Skeleton Coast-Iona Trans Frontier Conservation Area.
- A translocation assessment of giraffe into Iona National Park in Angola was met with positive feedback from local communities who are eager to see giraffe back north of the Kunene River where food resources are plentiful.



- Giraffe survey data that was collected by GCF Director Dr. Julian Fennessy in 1999-2003 was merged with the current dataset. Amazingly, twenty years on, we still regularly observe 30% of the original giraffe in the study area. Our age categories are: Adult (5 years and older), Sub Adult (1-5 years) and Juvenile (1 year and younger). See Figures 3 and 4 for 1999 vs 2019 total numbers of giraffe.

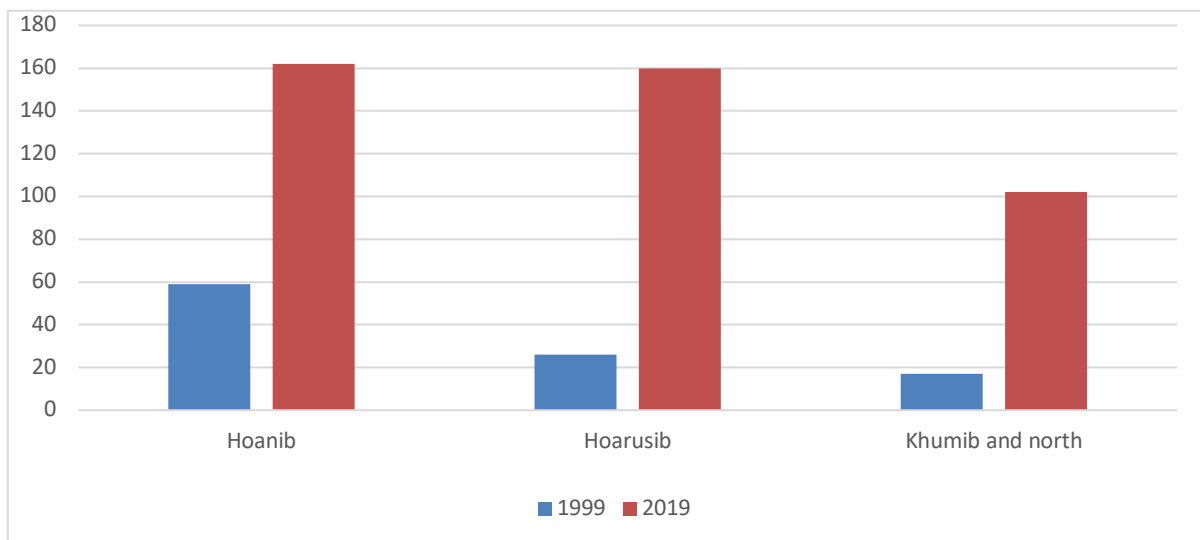


Figure 3: Comparison of total giraffe numbers by river in northwest Namibia (1999 vs 2019).

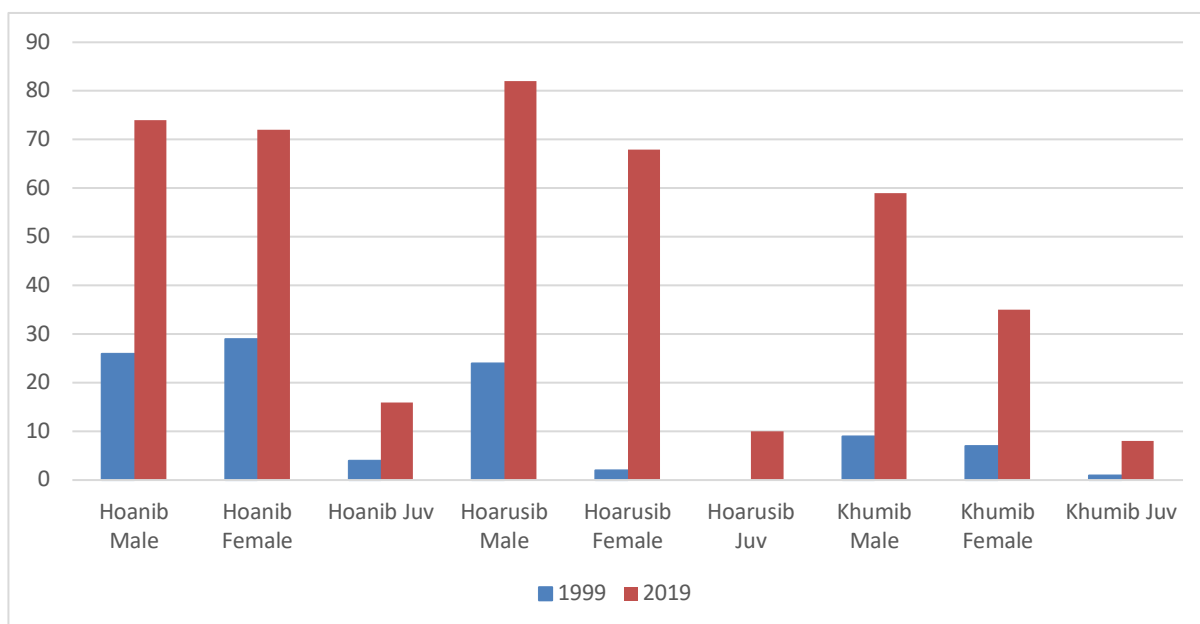


Figure 4: Comparison of giraffe numbers by sex and river in northwest Namibia (1999 vs 2019).

- In 1999, there were 101 known giraffe in the lower Hoanib-Hoarusib-Khumib study area. This number has almost quadrupled to 425 individually identified giraffe throughout the study area. See Table 1 for the number of individually identified giraffe in the study area.



Table 1: Numbers of individually identified giraffe in Northwest Namibia (December 2019)

	Male	Female	Juvenile (sex unknown)	Total
Hoanib River	74	72	16	162
Hoarusib River	83	68	10	161
Far North (including Khumib, Nadas and Ensengo Rivers)	59	35	8	102
Total	216	175	34	425

- As part of the Twiga Tracker initiative, an additional nine solar-powered GPS satellite tracking units (ossi-units) were fitted to giraffe in northwest Namibia, bringing the total number of giraffe with tracking units to 22 in northwest Namibia.
- Seven of these newly fitted ossi-units were part of a collaboration with the Namibia University of Science and Technology (NUST) and the SCIONA project. The units were deployed in the Khumib and Nadas Rivers, the northern-most reaches of the study area.
- One of the female giraffe that was recently tagged was first identified and documented in the late 1990s. She is estimated at least 28 years of age, which makes her one of (if not) the oldest known giraffe in the study area and possibly in Africa.
- Another female, fitted with an ossi-unit in July 2019, gave birth to a healthy calf in October. Both animals were spotted when the calf was approximately two weeks old. For the first month or so after giving birth, the giraffe remained in the Khumib riverbed, utilising a span of only approximately 8km. Three months on, mother and her calf are still in the Khumib River, however, they are now ranging along a 27km-stretch of the riverbed. See Figure 5.

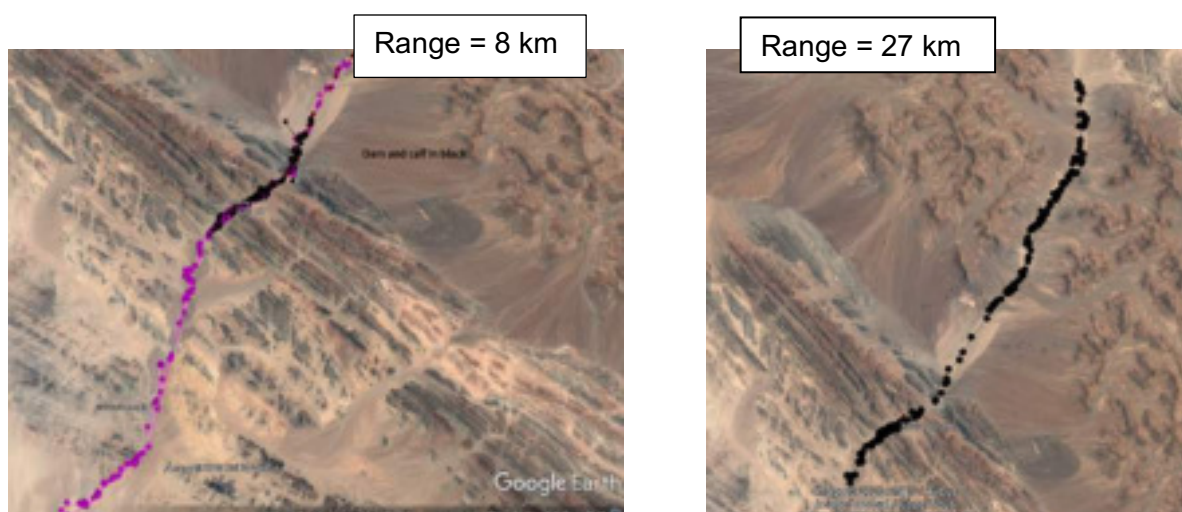


Figure 5: **Left:** 8 km range of cow with newborn calf (black dots) in comparison with another adult female in Khumib River (purple dots). **Right:** 27 km range of same cow and 3-month-old calf (black dots).



- Working again with our partners Namibia University of Science and Technology (NUST) and Natural Selection an additional five ossi-units were fitted in Etosha Heights, a privately-owned reserve bordering Etosha National Park. NUST is tracking and collecting data on a range of species in the area and this research feeds into study of comparative wildlife movements in different land uses.

- While surveying the Hoanib River on World Giraffe Day (21 June), a heavily pregnant 'Windy', one of the original study animals was sighted. She was seen again in January 2020 with a full udder. We did not spot her calf, but this is not usual as many giraffe cows will hide their calves for several hours while they browse. At approximately 22 years of age, Windy is one of the oldest known wild giraffe to give birth.

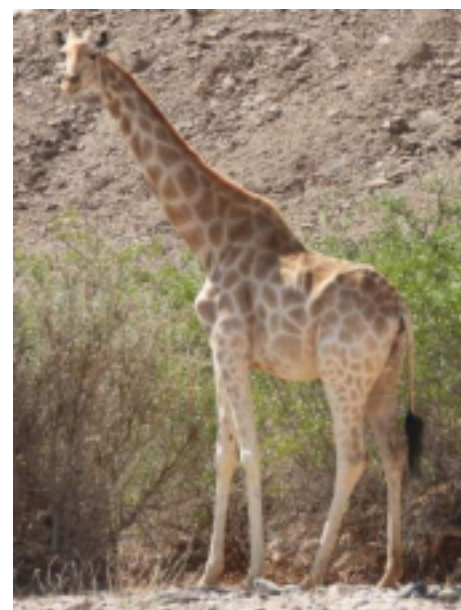


Figure 6: Left; sub adult 'Windy' in 1999. Right: heavily pregnant 'Windy' in October 2019.

- A male giraffe ('Goober'), also one of the original study animals, was observed with some form of skin disease on his left hind leg for almost two years. He showed a marked limp in his gait, but despite this inhibition, he regularly moved between the Hoanib and Hoarusib Rivers (approx. 70km each way) crossing inhospitable plains and mountains. Most recently, the skin lesions appear to have healed naturally. had hindered his movements markedly during this period (Figure 7).

- In 2019, we recorded a total of 1,600 individual giraffe sightings (Figure 8).

- 354 of these individual giraffe sightings were recorded by guides of Natural Selection's Hoanib Valley Camp.

- The Hoanib and Khumib Rivers support significantly smaller average herd sizes (three individuals), in comparison to the Hoarusib River where it is not unusual to see herds of 20+ individuals and an average of six giraffe. Food resources appear to be the factor in differing herd sizes (Figure 9).

- 36 giraffe births were recorded in 2019

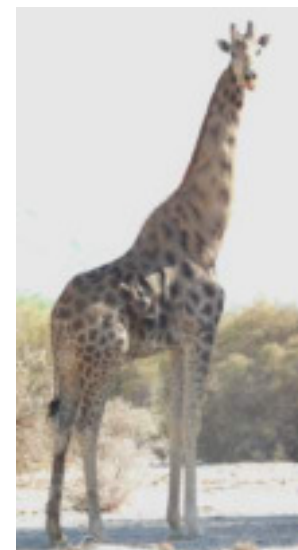
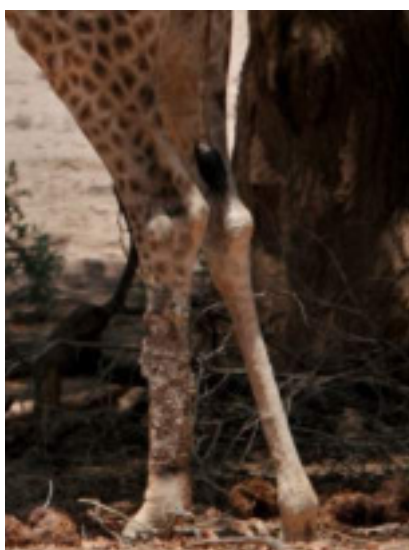


Figure 7: Left: 'Goober' with skin disease, October 2018. Right: 'Goober' with healed left hind leg, October 2019.



- In recent years the data shows an impressive 69% calf survival rate for giraffe in northwest Namibia. This is much higher than the Africa-wide survival estimate of 50%.

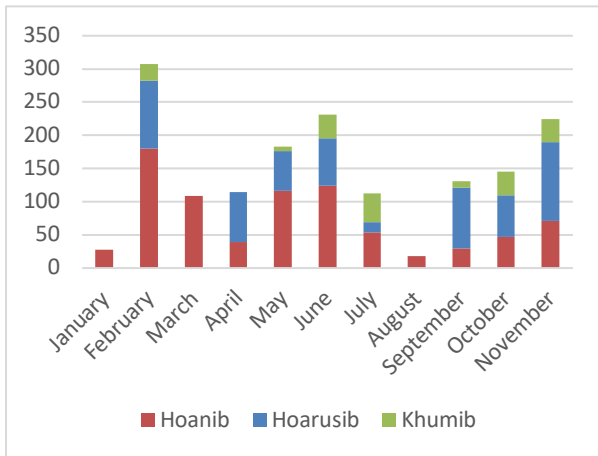


Figure 8: Individual giraffe sightings by river.

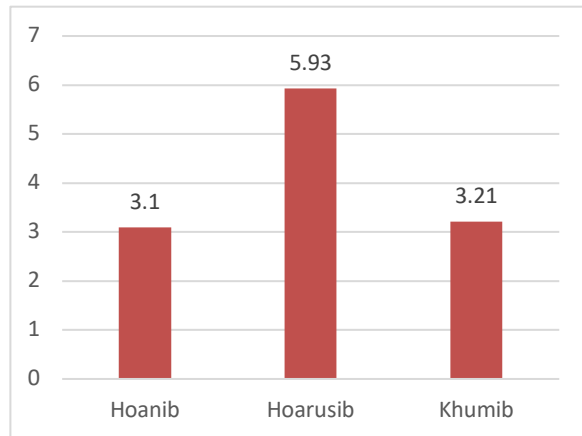


Figure 9: Average giraffe herd size by river.

- In May 2019, a German TV production team joined GCF on a tagging trip to film GCF's work for a German documentary series. The documentary is scheduled to air in the first half of 2020 on German public TV channel ZDF in their popular series Terra X.
- Welcomed the newest member of the team, Katie Ahl, a former giraffe keeper from Woodland Park, Seattle



Overall it has been another amazing year of many new as well as strengthened long-term collaborations with great partners. After a relaxing break over the festive season, we are excited to start off a new year and in fact a new decade of giraffe conservation in the field. 2020 is shaping up to be another busy and exciting year for GCF and giraffe conservation, so stay tuned for more news from Namibia soon. We look forward to bringing your more news from the field in the coming months.



Thank you for your support!

