



# Namibia Giraffe Conservation Programme

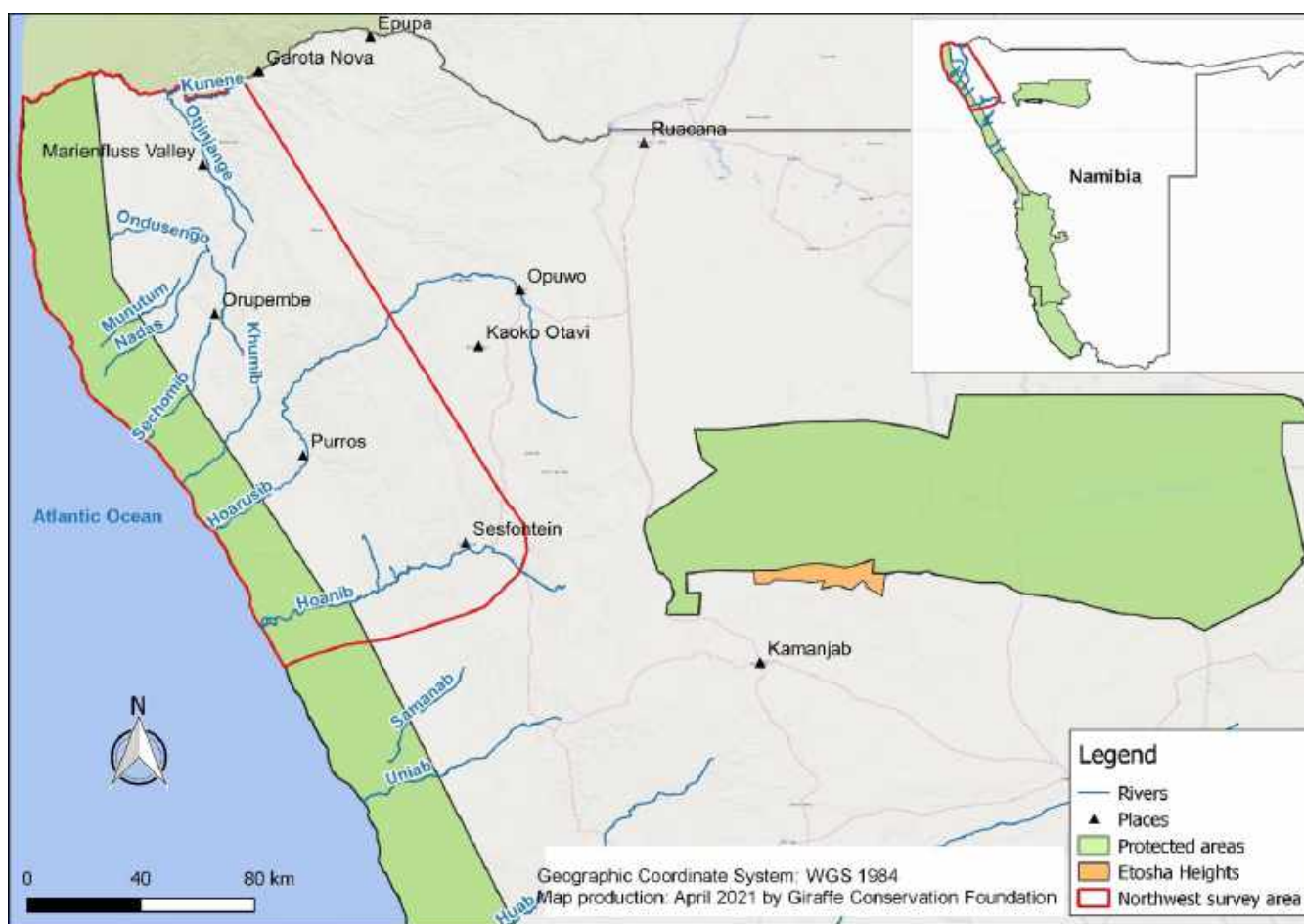
UPDATE REPORT  
January – March 2021



## Background

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/>.

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 and our study area covers a total of approximately 30,000km<sup>2</sup>.



**Figure 1:** Northwestern Namibia giraffe survey area

The survey area mainly includes communal conservancy land in the East and extends into the Skeleton Coast National Park bordering the Atlantic Ocean to the West. It is confined by the Kunene River and the Angolan border in the North and includes the Hoanib River catchment in the South.

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 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 population 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, tourism 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 continues to collect information on giraffe numbers and their distribution throughout Namibia. Working closely with government, private landowners and communal farmers throughout Namibia, we do not only determine giraffe numbers, but also increase education and awareness of giraffe conservation in Namibia and Africa-wide.

### Surveys in Numbers (January to March 2021)

Total known giraffe population in Northwest Namibia	431
New calves observed in the area	5
New identified adult giraffe	3
GCF team field days	19
Collected DNA samples	9



Total giraffe population sampled for DNA	40%
Total giraffe sightings	383
Individual giraffe spotted	200
Percentage of giraffe population spotted	48%
Distance travelled	4,000km

Total giraffe numbers per river system	Male	Female	Juvenile (sex unknown)	Total
Hoanib River	72	70	8	150
Hoarusib River	86	74	2	162
Far North (including Khumib, Nadas, Munutm, Sanitatas and Ensengo Rivers)	68	49	2	119
<b>TOTAL</b>	<b>226</b>	<b>193</b>	<b>12</b>	<b>431</b>

### Special giraffe sightings

With the help of Vulcan’s EarthRanger App, our field team was able to access the latest location of Louise (see picture on the right) and track her wandering up one of the many valleys from the Hoarusib River into the mountains. With the help of this new App that allows for easy data access on the phone, our field teams can design more targeted monitoring of tagged giraffe in the vast landscapes of northwest Namibia and monitor their health, social habits, and habitat use.



Here is an interesting and very encouraging statistic for you: 16 of the 18 female giraffe that we are tracking remotely in northwest Namibia have given birth while sporting an ossi-unit. This means that these females were either tagged before they were pregnant, in the early stages of their pregnancy or while raising a young calf. This high reproductive success rate is a clear indication that fitting or carrying GPS tracking units has minimal impact on giraffe.





We usually see a spike in giraffe births early in the year, and this year has been no exception. One of our tagged females, called Ranger, and her new-born calf were first sighted far West, deep inside the Skeleton Coast National Park in March. We estimated that the calf was less than a week old during this first sighting. As this is Ranger's second known calf, she has some experience raising a calf in this harsh environment. She demonstrated great mothering skills by keeping herself and her calf a safe distance from the monitoring vehicle. Continued monitoring of her movements using the EarthRanger App shows that she is sticking to a small home range for now and only walking up and down the dry Hoanib River in an area of approx. 10km, so her young calf can keep up. As her calf grows over the next few months, we expect to see an increase in their home range. Stay tuned.



We recently spotted some old friends: Keystone is an adult male giraffe that we had not seen for over two years. We found him in February, looking well and in the company of three females. Another familiar face was an older female named Etosha, who Julian had first identified in the early 2000s. Etosha (left) was classified as an adult then (> 5 years old), which makes her at least 23 years old now!

This highlights why long-term, regular monitoring is so important; it allows us to track giraffe throughout their lifetime.

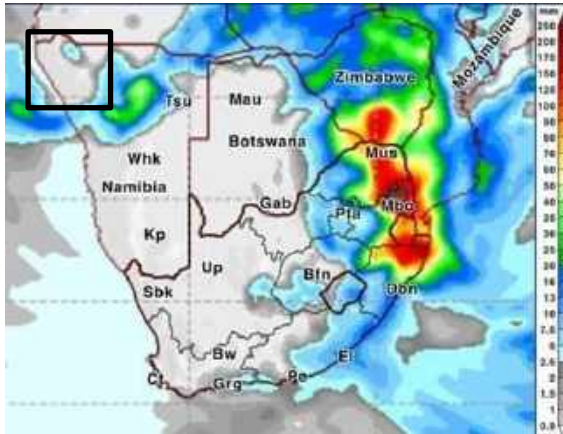
Our March survey trip was somewhat cut short due to flooding rivers. Our team found the Hoarusib River in full flood and was unable to cross to continue their survey in the northern part of our survey area. Unfortunately, the survey area received very little rain and the river only rain due to heavy rains further east in the upper part of the Hoarusib River catchment. It is an amazing sight to see these seasonal sand rivers in full flood and the water made its way all the way to the Atlantic Ocean on 28 March 2021. So, while a spectacular sight, this flooding river only served as a





rather disheartening reminder for local residents on what they were mission out on and that there had been little rain locally.

Most of Namibia has received good rains during this rainy season. However, the northwestern parts of Namibia has largely missed out and not received sufficient rainfall (see the area marked by the black box). The area has not received much rain for the past eight years now and the persisting drought is hard on people, their domestic stock and wildlife. Most of the area only received between 10 and 40mm of rain from August 2020 to mid-February 2021. In comparison, in the capital Windhoek we received over 300mm of rain. It looks like rain also evaded the area again on 24 January 2021 (map by wxmaps.org/GRAD/COLA).



Rain is the lifeline in northwestern Namibia and it is amazing to see the impact a little rain has on the environment. These images were taken from the same elevated viewpoint in the Giribis Plains in April 2018 and March 2021. What a difference three years make. Severe drought in northwest Namibia has changed the landscape dramatically.



Giribis Plains in April 2018



Giribis Plains in early March 2021

While this area teems with wildlife and livestock from the nearby villages after good rains, it looks like a real desert in times of drought. Not a blade of grass can be seen and the fairy circles almost disappear in the vacant dry sandscape. Finally, rain started falling in late March 2021, so we hope to see some green during our next trip in April – fingers crossed.



### Twiga Tracker update

As can be seen in Figures 2 and 3, home ranges (HR) of the giraffe vary greatly. When comparing the HRs of 16 giraffe in northwestern Namibia and nine giraffe in Etosha NP and Etosha Heights Reserve, the HRs of the giraffe in northwest Namibia were larger than those observed in Etosha NP and Etosha Heights Reserve. HR size is influenced by factors such as giraffe density, fences and availability of resources. The smaller HRs in Etosha NP and Etosha Heights Reserve might be attributed to the significantly higher rainfall that these areas experienced resulting in greater vegetation productivity and food availability. In comparison, giraffe living in the arid northwest of Namibia have larger HRs as the productivity of the area is lower and animals have to roam further in search of resources and breeding opportunities.



### Twiga Tracker in Numbers (January to March 2021)

Number of operational tracking devices	27
Number of data points collected	35,105
Largest home range observed	Supergirl: 1,237km <sup>2</sup>
Smallest home range observed	Phyllis: 27.4km <sup>2</sup>
Lonest distance travelled	Ceratops: 892km
Shortest distance travelled	Tisa: 412km
Average distance travelled by each giraffe per month (per day)	200km (7km)
Average distance travelled by each giraffe per day	7km

Two females in the northwestern survey area, Ranger and Vera, showed highly reduced travel distances over the last quarter. Both giraffe were seen with newborn calves in March, which could explain their small HRs. Over the coming months as their calves grow older, we would expect to see their HRs expanding and merging with those of other females.



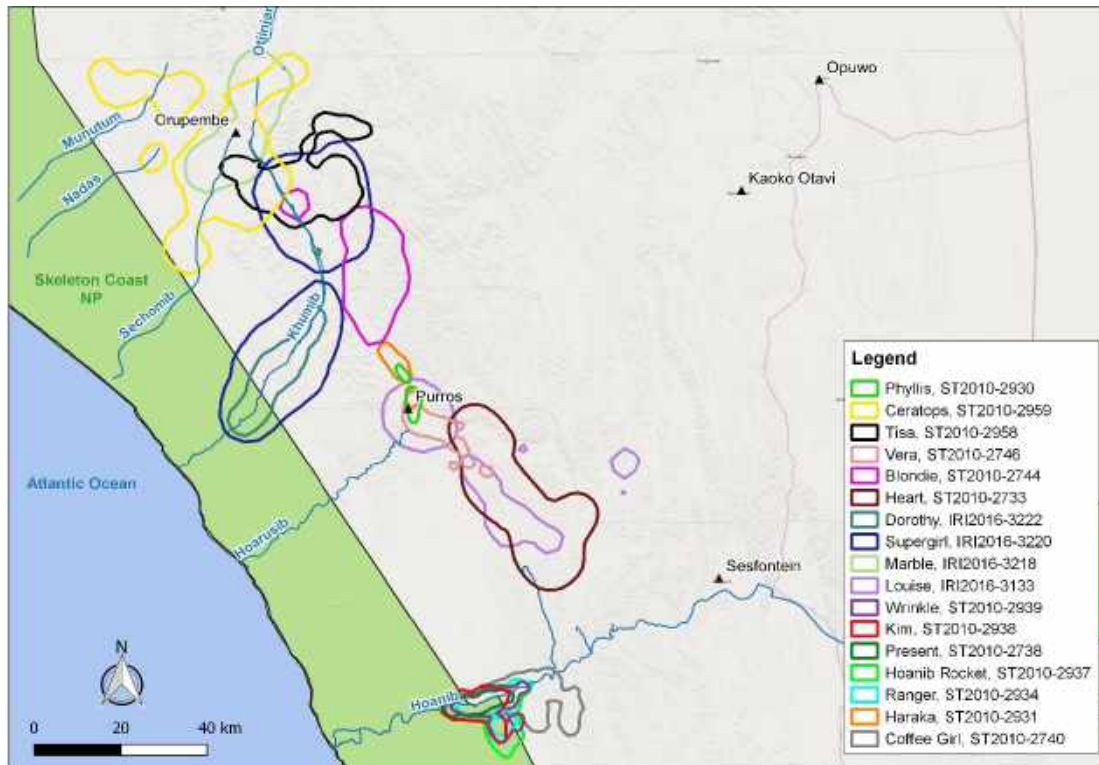


Figure 2: Home ranges of 17 giraffe with tracking units in northwestern Namibia (January-March 2021)

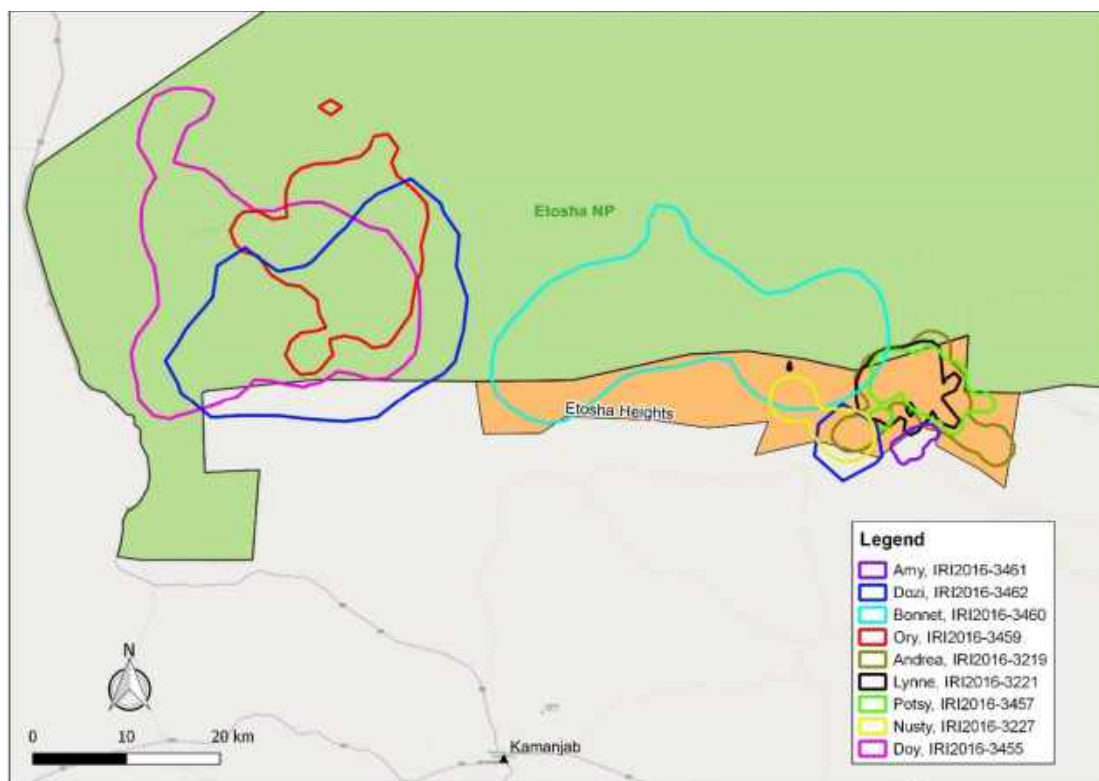


Figure 3: Home ranges of nine giraffe with tracking units in Etosha National Park and Etosha Heights Reserve (January-March 2021)

Is there a direct correlation between HR size and distance traveled? Our ossi unit giraffe suggest that this is not the case. Heart, Coffee Girl and Hoanib Rocket each traveled over 730km during the last three months, but their HRs differed greatly. Heart's HR was three times the size of those of the other





two giraffe as she took long trips into the mountains and back to the river. In comparison, Coffee Girl and Hoanib Rocket mostly moved up and down the dry riverbeds and explored some nearby valleys.

Thank you to our donors and supporters of the northwest Namibia monitoring project!

