



Namibia Giraffe Conservation Programme

QUARTERLY UPDATE

May – July 2018



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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 Northwest Namibia Programme, as well as a continuation of our countrywide giraffe assessments. 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

In partnership with University College Cork (UCD, Ireland) and the Namibian University of Science and Technology (NUST), GCF's Northwest 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. Our work has focused on the ephemeral Hoanib and Hoarusib Rivers, covering an area of approx. 4,500km², but is slowly expanding north to include a total area of >10,000km². The area extends across communal conservancies in the east (which support both wildlife and domestic livestock) into the Skeleton Coast National Park bordered by the Atlantic Ocean to the west.

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, gravel plains, mountains and dry riverbeds, elephant, black rhino, lion, cheetah and a range of antelope including oryx (gemsbok) and springbok, live alongside the desert-dwelling Angolan giraffe (*Giraffa giraffa angolensis*) – a subspecies of the Southern giraffe (*G. giraffa*). GCF's long-term giraffe conservation programme here offers a unique and valuable opportunity to better understand them and, through what we learn, provide conservation and management support for other giraffe populations throughout Africa.





In addition to this long-term conservation research, GCF has been working more generally across Namibia with government, private land-owners, tourism operators and concessionaires, and local communities to better understand the numbers and population dynamics of giraffe in the country. By collaborating with partners in Namibia, we not only determine giraffe numbers and range, but also increase education and awareness for giraffe conservation in Namibia.

Ongoing fieldwork

Over the past three months we have continued to gather a wide range of data on the giraffe population, including new individual records for each giraffe, observational data on herd composition, increased genetic biopsy sampling, range and movements, weather, browse, and vegetation including remote sensing of vegetation indices and ground-truthing of vegetation phenology. All together a broad holistic approach to assessing the ecology and conservation status of giraffe in northwestern Namibia.

The wealth of data we are collecting is due in no small part to the contributions of those that support the project both here in Namibia and all around the world. One special aspect of our work is being able to offer opportunities to people from all over the globe who are passionate about getting out into the field and want to get involved hands on. These opportunities help to collect more data whilst also creating a network of giraffe ambassadors who when they return home are keen to share their experience and help further support saving giraffe in the wild.

Since February 2016, more than 20 conservation research fieldtrips were undertaken as part of our long-term programme area in northwestern Namibia. Many of these trips were attended by conservation supporters from around the world. During this quarter alone, we were joined by people from all corners of the world – Lindsay Banks (Woburn Safari Park), April Turnbull (Wellington Zoo), Jeremy Martin (Saint Louis Zoo), John Carter (Elephant Connections), Murray





Haseler (Australian ecologist), research assistants Denys Lamotte, Oulfa Chellai, Tom Quinn and Max O'Connor, and a host of people from Namibia, in particular staff and guests of Natural Selections and Ultimate Safaris.



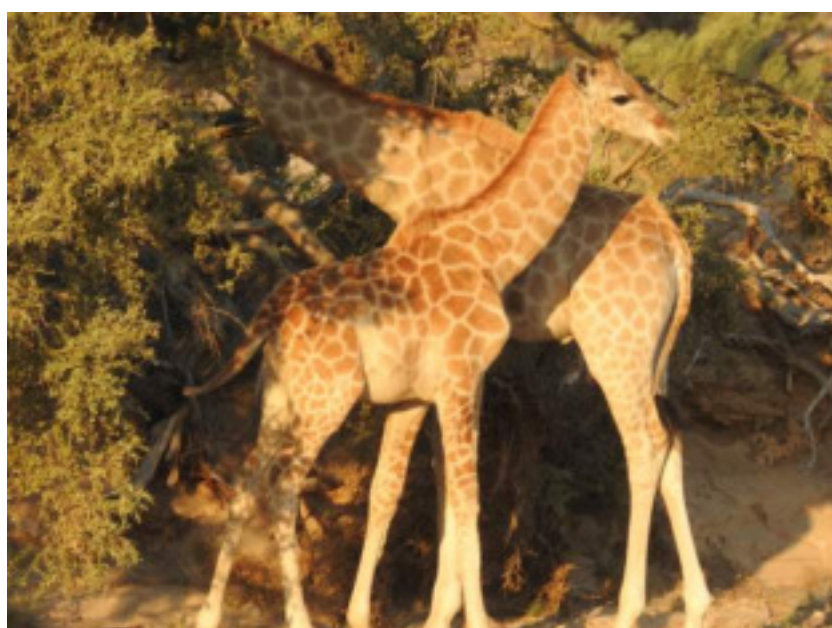
To facilitate long-term and regular data collection, GCF has now teamed up with Natural Selection, a safari company that recently opened a new lodge in our study area. Hoanib Valley Camp is the world's first giraffe conservation research lodge and as such a joint venture between Natural Selection, GCF and the local communities in the area. While the long-term plan is to have a giraffe researcher based at the lodge, our immediate focus is to train the lodge

staff, in particular the guides, in giraffe conservation surveying techniques. In order to promote giraffe conservation and alert tourists to the plight of giraffe, each game drive gives lodge guests the opportunity to get actively involved in conservation research. Guests are encouraged to work with their guide in collecting valuable data on the desert-adapted giraffe they encounter during their drives – just as our research teams during surveys. The data collected is then fed into the long term data set from the area and helps us improve our understanding of giraffe movements and herd composition throughout the seasons.

The field side of our work is of course great fun and exciting as you never know what's around the next corner. More importantly, we are very excited that the data is mounting and we are beginning to see some interesting patterns emerge.

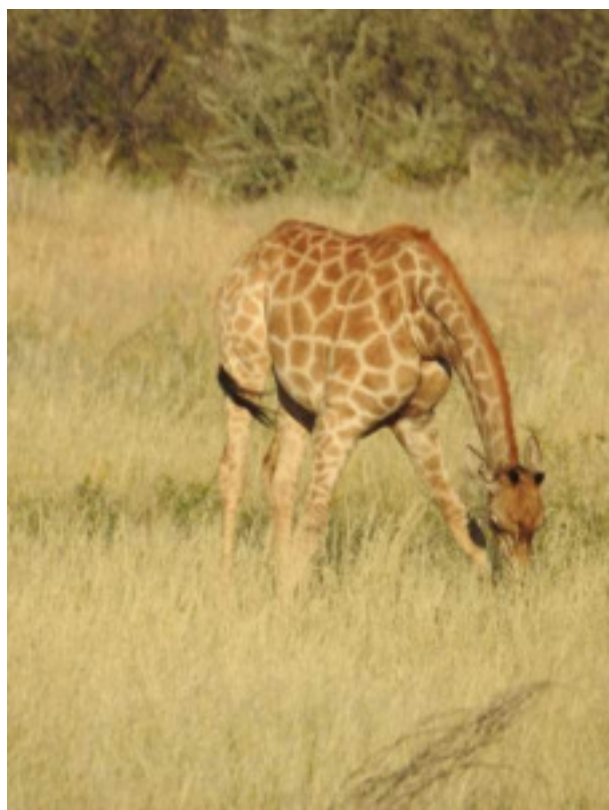
Mating and breeding strategies

One of the research strands we are exploring in northwestern Namibia is mating patterns. So far it has been assumed that giraffe populations throughout Africa do not exhibit regular birthing and/or breeding patterns. While other ungulates often have 'rutting' periods where males and females predictably come together to breed, giraffe are known for breeding and birthing year-round. This theory is supported by the fact that female





giraffe come into estrous every 14 days; a pattern that lends itself to a 'roving male' mating strategy where male giraffe wander across their huge home ranges looking for receptive females. However, our research is beginning to uncover a slightly different pattern in the desert-dwelling giraffe. We have found that, although the giraffe do give birth all year-round, these desert-adapted giraffe are more likely to give birth to their calves during the first few months of the year.



This makes sense ecologically speaking, as this birthing peak coincides with the rainy season in northwestern Namibia. Of course, the rainy season brings with it increased browse availability, which in turn means the optimum browse available for lactating females. This suggests that perhaps giraffe that inhabit less-equatorial (and therefore more seasonal) areas may have adapted to the seasonality of their environments by developing semi-seasonal breeding patterns. This is an interesting result on a number of levels. On a local scale it suggests that perhaps there are periods of the year when human disturbance of giraffe should be kept to a minimum. On a wider scale such results suggest that giraffe may have the ability to adapt their breeding strategies in line with environmental pressures. This could be good news for giraffe as climates continue to change throughout Africa. However, at this stage these results remain preliminary, so watch this space!

GPS Satellite Data

Since July 2016 we have monitored giraffe throughout the study area using cutting edge solar powered GPS satellite technology. Last year, we fitted ten giraffe with the newly developed 'ossi-units', and this number was further increased during our latest fieldtrip in July. This trip was joined by our conservation partner, Ultimate Safaris, and an array of conservation volunteers. With the help of Dr Pete Morkel, one of Africa's leading wildlife veterinarians, we successfully captured and fitted an additional ten giraffe with new and further improved GPS satellite units. This is always a high action operation with little margin for error, so we were delighted that everything went smoothly, and all giraffe were





captured, fit and released without incident. These tagged giraffe will allow us to better understand how desert-dwelling giraffe use and move within their environment over the coming years.

These conservation tools are important to understand how best to manage and conserve giraffe in northwestern Namibia. Together with similar efforts, which are conducted throughout the continent, we will hopefully increase our understanding of how giraffe interact with their habitats in different parts of Africa. In particular, we need to know why giraffe use some areas of their habitats more than others, why they choose particular routes or corridors to traverse their ranges. The data from our GPS satellite units will allow us to explore these questions. This will not only inform our understanding of giraffe movements but the maps we develop on the basis of this data may also give us the knowledge to predict the way giraffe will move in adjoining habitats and similar ecosystems.

Country-wide Giraffe Assessment Update

While our roving research team has been busy training staff at Hoanib Valley Camp, they are also continuing with their giraffe surveys throughout the country. They recently spent some time at Hobatere Lodge located on an 8,808 hectare property to the west of Etosha National Park. Hobatere is home to a large selection of animals including elephant, cheetah, eland, lion and of course giraffe. So far, our team has individually identified 80 giraffe so far and are now looking at setting up a long-term research project on the property involving the team at Hobatere Lodge. This research would be a continuation of the PhD research of Dr Julian Fennessy and would probably show some interesting results, surveying this population again after over 15 years.

In the media

For the July trip we were joined by internal-acclaimed photographer Ami Vitale who has followed and documented a number of GCF's conservation efforts in East Africa over the past year. As part of a broader National Geographic story on giraffe Ami photographed the team fitting the latest GPS satellite units to giraffe in northwestern Namibia and also spent time learning more about the community-based conservation efforts in the country. It will be exciting to see Ami's amazing photography in a National Geographic story on giraffe in the not too distant future.



Last November we hosted a UK team of documentary film-makers from Offspring Films. They documented the research activities and filmed some of the magnificent landscapes that these desert-dwelling giraffe inhabit. The result of their efforts was shown as part of the recently aired documentary 'Big Beasts: Last of the Giants' on Sky1. The cinematography was superb with some wonderful shots of



the giraffe in action. As always, it was great to see giraffe getting some well-deserved airtime.

Le Roux van Schalkwyk (Namibia Tourismus) came along on our recent research trip to document our work in the field together with a local Namibian film crew. We will let you know when and where to look for the coverage, so stay tuned on this too.

Looking Ahead

The Northwest Namibia Programme continues to grow from strength to strength with our long-term monitoring efforts expanding with the involvement of an additional GCF research team (Nat Sullivan and Emma Wells, both from New Zealand) and their training of the guides at the new Hoanib Valley Camp. Additionally, we are initiating new giraffe surveys in the far northwest of Namibia as part of an effort to better understand giraffe and their movements in that area. These surveys are part of a larger effort to advise on potential future giraffe translocation opportunities back into their former range across the border (and the Kunene River) into Iona National Park in southwestern Angola. Exciting times for giraffe conservation!

At the same time, the next few months will mark a transition period for the project as Emma Hart, our PhD researcher, will bring her fieldwork to a close. The below map shows the study transects that Emma has regularly surveyed over the past 2.5 years. Each blue point represents a group of giraffe that was spotted during these surveys, and each red point represents a location point of one of the GPS satellite tagged giraffe. From October, Emma will be turning her attention to analysing and writing up all the field data into interesting and pertinent results in terms of giraffe ecology and conservation, so watch this space!

From a giraffe conservation perspective, the next few months are set to be action packed as we enter the hot-dry field season. We are excited to see where the giraffe with the new ossi-units will move and look forward to keeping you in the loop.

Stay tuned for more news from Namibia as we look forward to keeping you updated.



