

## Black-footed Cat Research Project 🐾 Namibia



A young adult male black-footed cat seen with Lace, showing the black sole of a black-footed cat (Martina Küsters).

**The Black-footed Cat Research Project Namibia** was initiated in 2012 to 1) collect more fine-scale distribution records of black-footed cats in Namibia, specifically on farmland and protected areas in Namibia; 2) educate & raise awareness for this little-known wild cat species; 3) investigate & identify threats and to establish its conservation status; 4) find strongholds for its conservation and 5) study the distribution, biology and ecology of this species in Namibia.

This project is a collaborative effort between the Black-Footed Cat Working Group (BFCWG), the Namibia University of Science and Technology (NUST) Biodiversity Research Centre (BRC) and the Ministry of Environment, Forestry & Tourism.

Much has happened since the last update in January 2022! A rather lengthy update this time, it reports on highlights in the months March to August 2022.

**A shout-out to our funders, thank you for your support.** Without you this project would not be possible.

Through funds provided by **Cat Life Foundation**, the project was able to purchase a second-hand Mitsubishi Triton (Fig. 1). We want to thank the **Namibian Chamber of Environment**, for providing a vehicle for temporary use in 2022 and for providing crucial administrative support.

**April Campbell** provided funds to cover costs of vehicle insurance, registration and other related expenses. **ISEC** and its members are thanked for their dedication to long-term funding to the BFCWG. **Naples Zoo** continues to support us and provides vital funds for field work.

**Pupkewitz Foundation**, together with **Agrimark** and **Megabuuld** funded accessories for the vehicle: seat covers, rails, new nudgebar, wheelarch rubbers, mudflaps, 12V wiring, air compressor, tool kit, jumper cables, tyre repair kit, tyre gauge, reflective tape and 540 litres of diesel fuel.



Fig. 1: We thank Cat Life Foundation for funds to purchase a field vehicle, and additional funds for field work!

Three litters were recorded at the end of March. Zola had only one kitten, which had survived since January (Fig. 2) and Prima and Lace had two kittens each, both litters estimated between 1-1.5 months old (Fig. 3). Unfortunately, none of the kittens were seen again at the end of May, when Shipala returned to the field



Fig. 2: Zola's young kitten estimated from January 2022 [left] had survived until 28 March 2022 (camera trap: Shipala Ndele).



Fig. 3: Prima's two kittens [left] and Lace's two kittens at the end of March 2022 (camera trap: Shipala Ndele).

## June 2022 'Not all who wonder are lost, winter kittens and rainfall, and male and female interactions'

Shipala Ndele, the field technician and NUST Masters student, has submitted his proposal in May and is starting to write up the data he has been collecting since 2020. We look forward to having the important and unique data of our Namibian black-footed cats analysed and published.

After returning to the field in June, Prima was once more missing. Shipala could not find her signal on Mickberg or Signalberg farm to which she had located to two years ago shortly after capturing her. Eventually, Shipala heard the signal south-west of Grünau and located her next to the B1 national tar road, in the area she was captured and collared in 2020, more than 25km from where she was last found in April 2022 (Fig. 4).

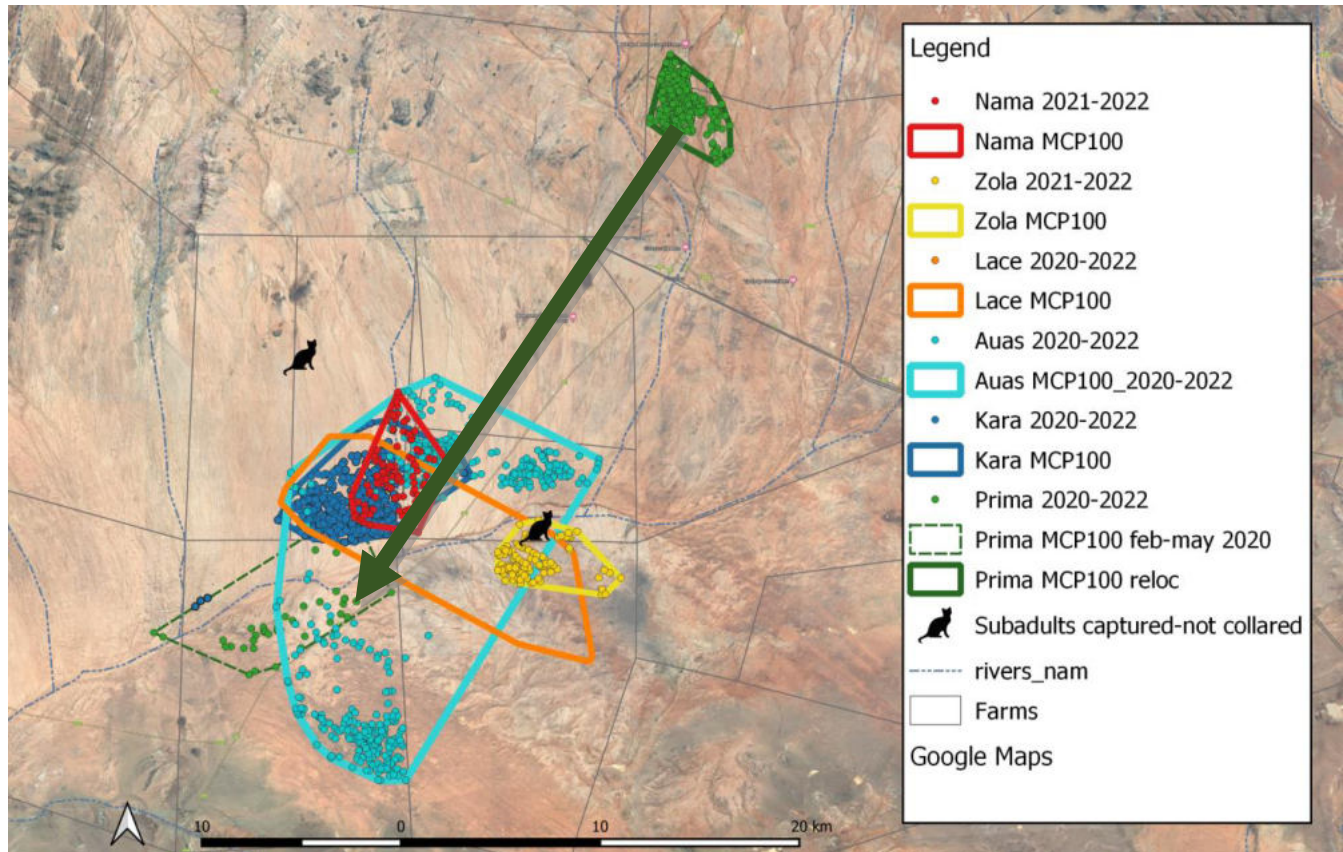


Fig. 4: Map showing home ranges and location data of the female black-footed cats from 2020-2022. Prima dispersed 30km north-east in 2020, occupied a stable home range there for two years but has now returned to where she was captured.



Fig. 5: Prima in early August 2022 emerging from a den. She is in very good condition and gravid (camera trap: Shipala Ndele).

On 10 June, Prima was seen with a male black-footed cat and by August, she looked gravid, in very condition and healthy, with a beautiful shiny coat (Fig. 5). Auas too was seen with two males, chasing, and fighting over her. She too is expected to have given birth in August, as she also looked round and good condition.

Winter kittens are a normal phenomenon amongst the female black-footed cats near Grünau as was observed in 2021, with litters recorded for Lace, Zola, Kara and Nama in June 2022. The usually shy and timid Lace was relaxed and calm with the vehicle. She was very playful, vigorously jumping and running towards the car with her tail raised in the air. Her behaviour was unusual. These were distraction displays to distract from her two kittens, hiding in the grass nearby. Unfortunately, her kittens were not seen again or captured on camera traps set at her den.

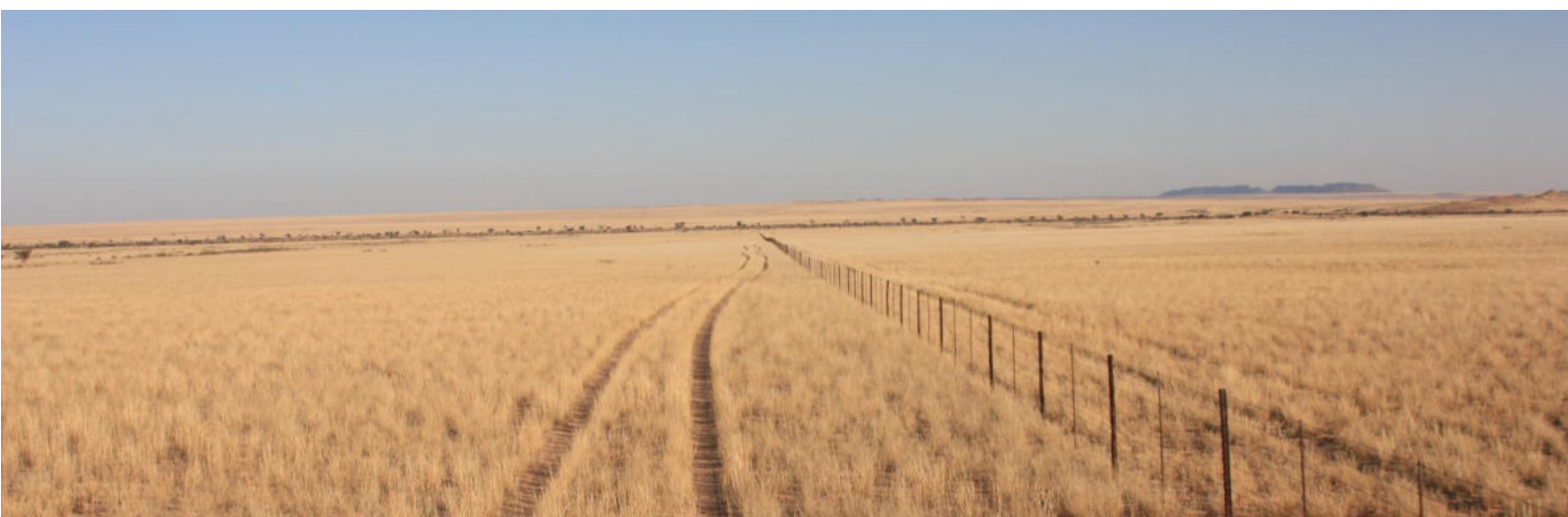
Camera trap footage confirmed Zola had one kitten, estimated at between 14-21 days old (Fig. 6, left). Zola was also seen interacting with two male cats. One of the males chased the kitten away. The males then had aggressive interactions and chasing each other, but no mating was observed. The kitten later returned to Zola once the males had left. In July, the kitten looked healthy and strong (Fig. 6, right).



Fig. 7: Zola and her single kitten on 13 June 2022, estimated at not older than three weeks [left] and the kitten in July, strong and healthy [right] (camera trap: Shipala Ndele).

Before Kara gave birth around 10 June, she looked very round, was restless and was urine spray-marking a lot. The birth of two kittens was confirmed by Shipala hearing them in the den. Unfortunately, they were never seen again. The temperatures did reach  $-4^{\circ}\text{C}$  in the early morning hours during June and may have impacted their chances of survival.

Birth of an unknown number of kittens was also confirmed by Shipala when locating Nama's den one afternoon in early June and hearing the kittens in the den. As with Kara's litter, sadly they were never seen again. We do try and limit disturbance at the den when kittens are very young, especially not if it may result in the female moving the kittens in very cold weather.



The grassy plains of the study area in July 2022 (Martina Küsters).

**July 2022** 'No winter lasts forever and as Billy Connolly said there's no such thing as bad weather, only the wrong clothes. We have made it through the wet winter of Grünau'



Fig. 7: Lace with two male black-footed cats, [top]. The larger and more dominant one [bottom left picture] chasing and preventing the smaller younger male [picture bottom right] from approaching too close to Lace (Martina Küsters).



Lace was observed with two male cats (Fig. 7) for several nights in July 2022. On the first night, Lace was very shy, aggressive and avoiding the persistent males following and approaching her. On the third night however, she was more submissive and tolerant of the males. No mating was observed, but she may have another litter in mid September 2022.

Prima is a very skillful hunter; she has been observed successfully hunting and feeding on larks and rodents (Fig. 8). The conditions of the veldt are good, with a good abundance of prey available.



Fig. 8: Prey items recorded include a spike-heeled lark [left] and Prima feeding on a short-tailed gerbil [right] (Ruben Portas).

Kara is well habituated to the tracking vehicle, and one gets good visual observations and pictures of her hunting (Fig. 9), stalking and grooming behaviour. From a photo, it was possible to see that the whip-antennae of her collar has torn off, reducing the range and distance at which to receive the signal of the collar. Luckily, she is very resident and has had a very stable home range since 2020, Shipala is still able to locate her. This highlights the fact that good monitoring coupled with good observations is important in this study. We plan to capture and replace the radio-collars of all the cats in November 2022.



Fig. 9: A side view of Kara, busy hunting (Miha Krofel).

Each female has her own character and Nama has not habituated well to the tracking vehicle and probably will never, often only observed grooming and resting at a distance. However, she has gotten used to the camera traps set at her den (Fig. 10).



Fig. 10: Nama at her den, stopping for a glance at the camera (camera trap: Shipala Ndele)

## August 2022 'Soek, soek... search, search...'

As we continue to learn more about the population of black-footed cats in southern Namibia, we explore innovative research ideas and methods to gain more information. Scat detection dog surveys were carried out in July and August by Michelle Schroeder (Fig. 11, left), member of the Black-footed Cat Working Group and biologist, and a certified detection dog. Lyka, a female short-haired pointer, was very effective (Fig. 11, middle) and over 100 scats were found. Genetic analysis will confirm whether all these are scats of black-footed cats.

The primary goal of this study is to assess a potential non-invasive and effective method for detecting the presence of and evaluating black-footed cat populations throughout their range, through DNA analysis to identify species, individual cats, and sex of cats. This will also assist with population density estimates. In addition to scat surveys, the team also conducted spotlight surveys to record un-collared black-footed cats. Several sub-adults were seen, indicating relatively good survival rates of kittens.

In addition, Victoria Belle Grant from the Stanford Centre for Conservation Genomics, USA, is collating samples from South Africa & Namibia, to look at population level genetics, i.e., genetic diversity, population structure, and demographic history of the black-footed cat, and importantly to develop a high-quality genome for the black-footed cat.



A freshly deposited scat of a black-footed cat [left]. A dry scat of black-footed cat opportunistically found in the field while following Auas [middle]. A scat found by Lyka [right] (Martina Küsters).

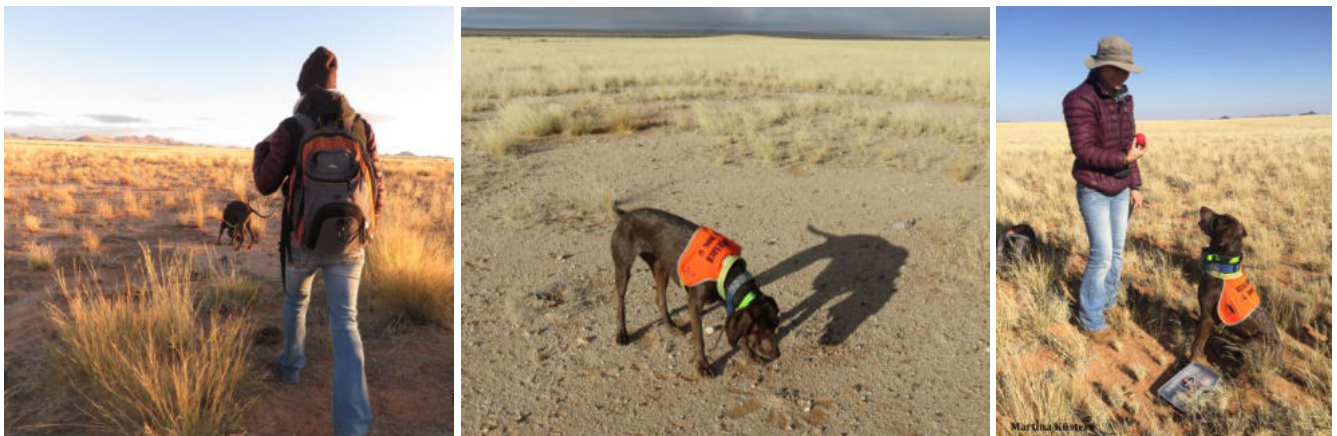


Fig. 11: Michelle & Lyka walking a scat transect [left]. Passive detection and indication of scat by Lyka [middle]. Lyka rewarded with her toy after finding scat [right] (Martina Küsters).

Field work for dog detection activities and analysis funded by **Panthera** and the **Black-footed Cat Working Group**.

We acknowledge the support from the **Black-footed Cat Working Group**, specifically from **Dr Alex Sliwa** and the **Namibia University of Science & Technology**, and in particular from **Dr Morgan Hauptfleisch**.

The landowners' support and co-operation is vital for the success of the project and for the long-term conservation of this unique species in southern Namibia.

We would like to thank the following farmers involved in the research, without their support and co-operation, we wouldn't be able to conduct the research: **Kobus & Margaret van der Merwe; Johandre & Anri van der Merwe; Marisa & Phillipus Fourie; Alwyn Smith; Dolf & Kinna de Wet; Rean Steenkamp & Barend Matheus Swartz**. Francois Swartz is thanked for assistance in the field.

If you wish to support the project, please contact us at [bfootedcat@gmail.com](mailto:bfootedcat@gmail.com) or +264 81 403 0654.



We wish to thank all our collaborators, supporters and funders who continue to contribute to the research and conservation of the unique black-footed cat !!

