### Update from the field: Black-footed Cat Working Group, South Africa



#### November 2024, Michelle Swanepoel, field technician

These are notes from the field by the Black-footed Cat Working Group (BFCWG) technician at the Benfontein Nature Reserve study site near Kimberley, South Africa. Black-footed cats (*Felis nigripes*) are fitted with radio collars and monitored as part of a long-term study on the ecology and demography of this elusive little felid. This update pays tribute to two remarkable individuals: "Fibo," an elusive male collared in June 2024, and "Shongo", another male who had been a vital part of our research since November 2022.



Special thanks to Hannes Mans and DeBeers Consolidated Mines for study site access and long-term support of the BFCWG at Benfontein Nature Reserve.

In my previous update, I shared that in June we successfully captured and collared two new black-footed cats, in addition to replacing Shongo's collar. Since then, my primary focus has been on habituating Ultro and Fibo. At first, I could only catch fleeting glimpses of their eye shine in the tall grass before they vanished from sight. To facilitate their habituation, I maintained a distance of at least 100 meters behind them with the project vehicle. This approach allowed them to acclimate to the sound and lights of the vehicle without feeling threatened. I gradually reduced the distance as they became distracted, particularly during their hunting activities. While vehicle maintenance issues extended the timeline for this process, I'm pleased to report that both cats became fully habituated.

# Ultro:



Figure 1 – Ultro sitting down infront of the camera trap after emerging from his den.

Ultro is an incredibly stealthy hunter, crouching low to the ground and inching forward on his belly with such precision that he barely disturbs the grass around him. Once he is about 1 to 2 meters away from his target, he launches into a swift and decisive pounce.

What sets Ultro apart is his clever use of termite mounds. Unlike the other males, he frequently climbs onto these mounds, using them as vantage points to scan the area for potential prey. I observed his first kill after he became habituated, and it perfectly showcased his unique hunting strategy. Ultro positioned himself behind a termite mound, repeatedly peeking over it to track a lark in the distance. Once he locked onto the bird, he crouched down and began his silent, stealthy approach. Then, with a sudden burst of speed, he pounced from behind the mound and successfully captured his prey.

His ability to use the environment to his advantage, combined with his stealth, makes Ultro a highly efficient and resourceful hunter.



Figure 2 – Ultro emerging from his den, with an impressive stretch

On the evening of September 19th, just after sunset at 19:04, I spotted Shongo sitting quietly in the dense, tall grass. His eyes reflected in the vehicle's headlights, as he remained still. At 19:13, another pair of eyes caught my attention—another black-footed cat was just 1 to 2 meters in front of Shongo. Due to the thick vegetation, I wasn't able to observe their interaction, but moments later, both cats bolted into the long grass, disappearing from sight.

Though I couldn't witness the details of their encounter, it was clear that Shongo had come across another feline, an occurrence that is always fascinating given the mostly solitary nature of black-footed cats. The brief interaction left me wondering whether it was a territorial standoff, a mating pursuit, or a simple passing in the night. Unfortunately, the dense vegetation shielded the full scene, leaving the nature of their engagement a mystery.

# Fibo:



Figure 3 - Fibo emerging from his den.

Fibo proved to be a bit more challenging to habituate compared to the Ultro. He spends most of his time in scrubby vegetation, which leaves him more exposed and likely feeling vulnerable when being followed by the vehicle. Because of this, I took a much slower approach to his habituation than I did with Ultro.

I stayed further back and waited longer before trying to get closer, especially when he was distracted. Anytime he turned around to look at the vehicle, I would immediately stop and give him space, waiting a few minutes before resuming. This helped minimize stress and allowed him to gradually get used to being followed.

Out of all three cats, Fibo has been the most elusive when it comes to capturing photos. He hasn't been using dens during the day, opting instead to rest in the scrubby vegetation, where he remains incredibly well-hidden, particularly with the cooler winter temperatures.

So far, I've only managed to set up one camera when I located him resting in a den, and his reaction was surprisingly positive, quickly realizing it posed no threat. This was an encouraging sign, and I couldn't wait to spend more time with him to gather more valuable data.

An unexpected family emergency required me to return home to Gauteng for 10 days. When I came back, I was devastated to discover only remnants of him—his collar, some fur, and his teeth. Given the evidence and the circumstances, we have strong reason to believe he fell victim to a black-backed jackal *(Lupulella mesomelas)*. This tragic loss highlights the constant risks and challenges these animals face in the wild.



Figure 4 - Fibo emerging from his den just after sunset.

## Shongo:



Figure 5 - Shongo emerging from his den in broad daylight.

A week after discovering Fibo's collar, I was devastated to find Shongo's fresh carcass. From the injuries, it appeared he had likely been mauled, highly likely by a caracal (*Caracal caracal*). Shongo had first been collared in November 2022, and since March 2023, I had the privilege of monitoring him closely. Over time, I grew incredibly fond of him—not just as a research subject, but as a unique individual with his own personality and behaviors. I will miss him dearly. He provided invaluable data, and his adaptability, especially after the wildfire that ravaged much of his territory, offered key insights into how black-footed cats survive and thrive under challenging conditions. Losing him is a profound loss both personally and scientifically, as we were only beginning to unlock the wealth of information he could provide.



Figure 6 – Shongo greets the dusk with a full body stretch, shaking off the days rest.

Shongo, was initially camera-trap-shy. He would go to great lengths to avoid the camera traps, often seen peeking out of his den only to quickly disappear—leaving just the back end of his body or his tail on photo, frequently blurred by his quick motion.



Figure 7 – Shongo being camera shy back in 2023 before the wildfire.

But in September of last year, a wildfire devastated approximately 25% of the reserve, including around 85% of his territory. That didn't stop Shongo; he quickly adapted and persevered. He began using the den systems and surroundings strategically to hunt rodents and reptiles, demonstrating his resilience.

These dens, which consist of several interconnected burrows, became Shongo's hunting grounds. He would crouch at the entrance of one den, waiting for a rodent to exit another, and then with lightning speed, he would dart forward and pounce. Other times, he would position himself a meter or two in front of a den, patiently waiting for his prey to emerge before making his move. He honed this technique, running from one den system to the next, adapting to the post-fire environment.

He would move from one den system to another, using this method to feed on their rodent populations—a reason why farmers would find Shongo an ideal predator on their land.

In another hunting approach, Shongo would move slowly and deliberately through the vegetation, using his keen senses to detect rodents or birds. Once he locked onto a potential target, he would meticulously creep forward, often taking as long as 30 minutes to get within striking distance. His patience was remarkable. He would pause frequently, making sure not to disturb the vegetation around him, taking breaks in moving to remain undetected. When he was just 1-2 meters away from his prey, he would launch a precise and often lethal pounce.



Figure 8 – Shongo pouncing on a bird after emerging from his den.

Shongo's quick reflexes also came into play unexpectedly at times. As he moved through the bush, he sometimes flushed out birds he hadn't initially been hunting. With incredible agility, he could leap up to a meter in the air, capturing birds in mid-flight. This blend of patience, stealth, and agility made Shongo an exceptionally skilled and effective hunter.



Figure 9 – (left) Shongo inspecting the camera trap. (Right) Shongo lying in front of his den grooming himself.

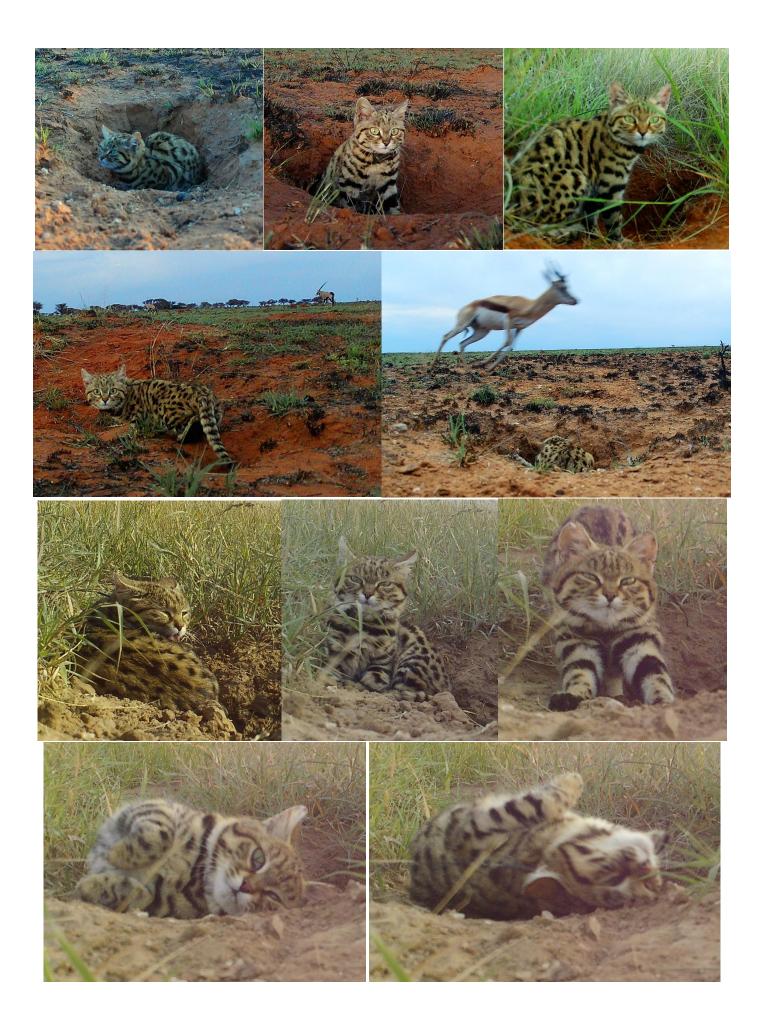
It was only after the fire that Shongo seemed to grow curious about the camera traps. He inspected one and, realizing it posed no threat, began to appear in front of them regularly. Ever since, we've captured thousands of images of him at his den, often emerging, grooming himself, and resting in front of the camera until sunset. This breakthrough opened up new research opportunities for us, including the confirmation of a prey behavior first speculated by Dr. Alex Sliwa in 2021. Shongo was caught on camera capturing a Cape skink (*Trachylepis capensis*) and carrying it back to his den for consumption, providing valuable insights into his diet and hunting habits.



Figure 10- Shongo capturing a Cape skink during broad daylight right in front of the camera trap.

Losing Shongo is a profound setback not only for the research but also on a personal level. He was more than just a subject—he had become a familiar presence, a testament to the adaptability and resilience of these elusive cats.





## Vehicle Maintenance:

I'm introducing a new section in this quarter's report, as requested by Dr. Alex Sliwa. As previously mentioned, the habituation process for the cats has taken longer than anticipated, largely due to unforeseen vehicle maintenance issues. Given the critical role that the vehicle plays in our fieldwork, without it, conducting research becomes nearly impossible.

While the vehicle has performed admirably so far this year, it currently has already over 270,000 kilometers on the odometer. When combined with the demands of off-road driving, this naturally leads to occasional mechanical issues. Over the past two months alone, we've incurred approximately R40,000 (~2.250 US\$) in maintenance costs. These expenses covered the replacement of the shocks, ABS sensor, right engine mounting, and an entire steering rack.

The impact of these issues became particularly pronounced in August. For 15 days, I was unable to carry out research as usual, since we were waiting for the new steering rack to arrive. The part was ordered on the 1st of August, but only arrived on the 12th. I had the vehicle booked in for repairs on the 13th and it was ready by the 15th. During this time, I was advised by the mechanics to drive with extreme caution, so I limited my trips to every second or third day to check on the cats. These visits were brief, about 20 minutes each, just to ensure the cats were in good health, while avoiding any further strain on the vehicle.

This delay has undoubtedly affected our progress, but now that the repairs are complete, we hope to resume normal operations and get back on track.

#### Sailing on waves of gratitude:

As we embark on our quest for new discoveries, your support and sponsorship have been the wind in our sails. We're thankful for your continued support, helping us make significant breakthroughs.



Best regards from the veld,

**Michelle Swanepoel**