

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



June 2023, 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 will focus on the habituation of our radio-collared cats and will pay tribute to “Gale”, an energetic female that was first collared in 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.

I am thrilled to announce that all the radio-collared black-footed cats on Benfontein Nature Reserve have been successfully habituated! On arrival at Benfontein in April, observations were extremely tough, since Kazi was the only individual that was habituated. At first, I would only get glimpses of their eye-shine in the tall grass, and then they would disappear. So, I started habituating them to the project vehicle. I stayed at least fifty meters behind them and would slowly increase my distance when they were distracted i.e. by hunting. After three weeks, all four were successfully habituated to the project vehicle.



Kazi:

Our long-term studied female is still going strong! She is full of energy and often found in dwarf shrub vegetation, which makes her the easiest to observe.

She is extremely patient; often using ambush tactics when hunting. I have observed her stalking prey and patiently hiding in the vegetation for over twenty minutes, waiting for an opportunity to strike. On the other hand, I have observed her catching three prey items in as little as thirty minutes.

Recently, I observed her rolling around in the sand, which is oestrus behavior, and she has been observed scent marking frequently, indicating that she might be going into heat soon. Hopefully we can expect another kitten or two in the near future.



Figure 1: Left: Beautiful Kazi, waking up from her slumber, after emerging from her den. Right: Kazi observed elegantly leaping over a small bush (photo credit: Dr. Alexander Sliwa).

Even though these cats are strictly solitary and territorial, I have observed Kazi and Gale together. After following Gale for approximately four hours, I suddenly noticed that there were two cats, and upon switching between the frequencies, I came to the realization that the other individual is Kazi. There was no animosity between the two, both seemed to be resting next to each other, approximately four to five meters apart, for about ten minutes until Gale stood up and continued hunting. We did suspect that the two females might have been related to one another.

Gale: monitored from 9 November 2022 - 12 May 2023

Gale regrettably passed away in May 2023. I located her body in a den, and except for her hind left leg, which barely had any flesh left, her body was still intact. It is unclear whether this was the cause of death or whether her body was perhaps fed on after passing away. Unfortunately, we could not take samples to check for diseases, as her body was only located and dug up, a few days after her death. We proceeded to freeze her body for later preparation of the skeletal parts.



Figure 2: Gale emerging from her den after dark.

This was very unfortunate, she was one of my favorite cats to monitor, at first, she was very shy and resided in tall turpentine grass (*Cymbopogon plurinodis*), making observations difficult. Once she got habituated to the project vehicle, she moved more to the north, closer to Kazi and was often found in dwarf-shrub vegetation, which is ideal for monitoring. When hunting, she would use her agility to her advantage. Frequently stalking her prey and jumping up to two meters into the air to catch her prey. She was fascinating to observe, I have observed her chasing a Cape hare (*Lepus capensis*) at full speed very determined to catch it. Unfortunately for her, the hare escaped her tactics and got away. I am very fortunate to have had the opportunity to observe her in action and she is missed dearly.

Ember:

This fiery character female appears to share her territory with a pair of black-backed jackals (*Canis mesomelas*). I have observed a jackal within twenty meters of Ember on several occasions, and she does not seem bothered by their presence at all. She will lay low when they are close by, and she just continues as normal the moment they are approximately fifty meters away. On one particular evening, a jackal got closer than usual and sniffed her out. The jackal got a fright and jumped back, he then cautiously circled around her a few times, sniffing around the grass she was laying in, but this feisty female stood her ground, and the jackal eventually took off. Hopefully her acute senses and anti-predator behavior will allow her to survive in a territory that overlaps with the pair of black-backed jackals.



Figure 3: Beautiful Ember emerging from her den during broad daylight.

It has been noted that there is an interspecific relationship between black-footed cats and aardwolves (*Proteles cristatus*). In 2016 a black-footed cat was observed entering a den system in the De Aar study area of the BFCWG and upon inspection, an aardwolf was seen occupying the refuge. The cat emerged and left an hour after entering the den and the aardwolf was observed emerging three hours afterwards. Recently, for the first time, we have recorded a black-footed cat denning in the same den as an aardwolf on Benfontein. This is beneficial for the cat, as an aardwolf is adequately equipped to defend itself from other mesopredators. Ember emerged from the den at 13:44, and the aardwolf can be seen stirring around 15:00 and finally emerging from the den at 16:51.



Figure 4 Left: Camera trap footage of Ember emerging from the den around 13:44. Right: An aardwolf emerging from the same den at 16:51.

Rodeo:

Rodeo is still living up to his name, frequently circling around on the hunt for food. Since we are currently in the middle of winter, this muscular male has decided to spend part of his time during the day resting in the vegetation, basking in the sun. This has become possible, after the good rainfall we received in the previous year, which resulted in the dense grass cover. However, I have observed him being harassed by Ant-eating Chats (*Myrmecocichla formicivora*) on two separate occasions. They would fly approximately two meters above him and twitter. In response, he would run into the dense vegetation and lay low until they leave.



Figure 5: Rodeo can be observed resting in the vegetation, here at night, before continuing on his hunt for food.

This handsome male has also been observed scent marking by spraying with urine, indicating that he is a resident male. With a territory that overlaps with Ember, just maybe future observations may include breeding attempts between these two individuals.

Shongo:

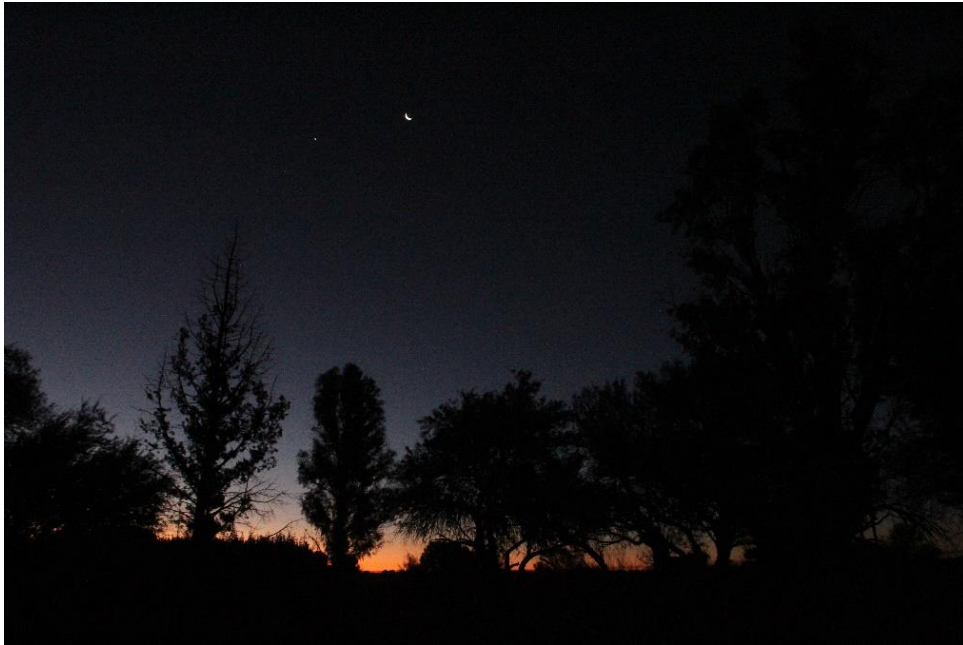
I am happy to announce that Shongo has responded extremely well to the habituation after his initial disappearance from Benfontein for approximately three weeks, after being radio-collared in November 2022. He is a very curious and explorative male, with a bold and assertive attitude.



Figure 6: Shongo emerging from his den.

He sometimes walks right up to the vehicle and hunts all around the vehicle. We suspect that he might be using the sound of the vehicle to mask the sound of his own movements while hunting. On one particular evening, he walked right up to the vehicle and rested right next to the vehicle for ten minutes, before catching a scent of a prey item and he continued hunting all around the vehicle.

I would like to express my gratitude for your support in making research possible on the black-footed cats.



Best regards from the veld,

Michelle Swanepoel