

The Meerkatter

The Friends of the Kalahari Meerkat Project Report - www.kalaharimeerkats.com - March 2023

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Good Ol' Hab Days

Habituation is a term referred to here at the Kalahari Meerkat Project as the long process of winning the trust of meerkats, gradually making them comfortable with observations and follows by researchers. The reward is an unparalleled insight into the complex social behaviour of *Suricata suricatta*. Of the nineteen meerkat groups that we work with at the Kalahari Research Project currently, five of them are habituation groups. These include Trackie-Daks, Make-e-Plan, Phoenix, Hakuna Matata and more recently, Cape Crusaders.

As described in the September 2022 article, Trackie-Daks is a beloved group that have many great individuals. Adult subordinate female Hachi (VWF238) gave birth to a litter of three pups at the end of last year, and dominant female Fly (VWF237) has given birth to a new litter at the start of this month. At all groups, when new pups emerge, we focus on getting the pups used to observers' hands, egg and water, and the scales. Thus, with Hachi's litter, this strategy was implemented, with great success. We have yet to see Fly's litter but are waiting in anticipation.

Make-e-Plan is a well-documented group and once was fully habituated where we could collect adlib data on them. However, at the end of 2021, current dominant male Sushi (VTSM006) and subordinate male Sketchy Bongo (VTSM019) moved in from Trackie-Daks. When these very skittish males moved in, Sushi became the dominant male, which left Sketchy Bongo to babysit the new pups. He was a very skittish meerkat, and when he babysat the pups, he taught the pups to be skittish around us, so we had to focus extra habituation on the pups as they got older and started foraging with the group. The group's habituation level is quite good, with observers at the stage where we follow the group around for one and a half hours to habituate them to our movement. Sketchy Bongo has since disappeared, but now subordinate subadult Jude (VMPM071) is the meerkat in this group that requires the most attention. He was abandoned as a pup when the group moved burrows but managed to survive as the only member of his litter and make it back to his group. This separation and the fact that we could not do any habituation on him when he was a pup meant that he only allows us to get to five meters at the burrow and more than ten meters while foraging.



Yearling subordinate male Jude (VMPM071) working on his camouflage at Make-e-Plan. Photo credit: Zurich Manager Maahir Jusabani.

One of the groups where we are at a low level of habituation is Phoenix. They are our wildest group of meerkats, and we have dedicated observers who spend time focusing on habituating them to our presence. So far, observers have been able to get to two to four meters from the group's sleeping burrow as they awaken in the morning. Sudden movements are still quite startling to the meerkats, so to continue their habituation process, we will focus on movement and walking around the group. We have not been able to get many of the individuals interested in egg, but constant exposure will hopefully increase their interest. If we get an adult to eat egg, we could potentially capture and collar them so that we can track the group more easily.

We have not seen Hakuna Matata since November 2022 as they have been on the Heights farm (as discussed in the second article of this report). Therefore, we assume that their habituation has decreased tremendously, and when we have access to the group again, we will have to restart the process to get them up to a full adlib group.

A new habituation group has been added to our growing list of groups. On the 2nd of this month, an observer saw three meerkats near Side Quest territory. She approached and the two older females came closer and ate egg, while the juvenile individual was wary. On the next visit to the area, more individuals were seen, and three females were checked for transponders. To our surprise and delight, the meerkats were found to be adult females Timon (VZUF049), Amadu (VSIF002) and Sky (VSIF003)! Timon is Side Quest dominant female Pumba's (VZUF048), littermate. They started the group Side Quest alongside Legolas, but Pumba

chased her off while pregnant. After a few encounters with Side Quest, Timon was last sighted by observers in June of 2022. Amadu and Sky were part of the first litter of Side Quest, with littermate Sam (VSIM001), but they left the group in July of 2022.

When we saw these females at the start of this month, their habituation level had not decreased much. This in turn has increased the speed of the habituation development for the rest of the group. One of the juveniles and one of the adult males has been marked, as well as the pups that have emerged. Before we were completely sure of who the females were, one who was observed to be pregnant gave birth. Of this litter, four pups have emerged. Their habituation is going well, considering the males of the group are very wary of observers, with the pups eating egg and allowing grooms when Timon is nearby.



Four new Cape Crusader pups spotted at the babysitting burrow! Photo credit: Former Zurich Manager Bieke Maex

In conclusion, habituation is an important process that the KMP relies on to collect the data we need. If groups experience habituation from a young age, it helps future generations of meerkats, as well as the observers who collect the life history and adlib data. Therefore, the best and most important part of this job is pup habituation.

Life on the Reserve

Last month, we were finally able to generate a new group territories map (Group Territories 2023.pdf). To celebrate this achievement in technology, for this edition of The Meerkatter we will use that technology to closely examine all the groups within our reserve, their position within the reserve in relation to one another, as well as the shift in their group territory over time. Those who have perused our map will observe that Vetkoeks, Dik-Diks, Cape Crusaders, Make-e-Plan and Phoenix are not represented on the map. This is because the maps are generated by GPS points taken by observers when conducting group follows. Due to these groups being either life history monitoring groups or habituation groups, we do not have enough data to generate territories for these groups.

Out of the nineteen groups we have in our reserve, fourteen have been on our reserve at some point during the past six months. For the sake of brevity, this article will not mention Side Quest, who very briefly have ventured into our reserve in November and January, but then proceeded to head even further North of our reserve, away from the large congestion of meerkats that is the Kuruman River Reserve.

On the fringes of the reserve in the East live Elrond's Council, Alba, Namagua and Make-e-Plan. These groups frequently alternate between staying on our reserve and moving further East into neighboring farms such as Leeupan farm. The most frequent clashes here happen between Alba and Elrond's Council. Alba are a group that was formed when a group of Elrond's Council females splintered from the group and coalesced with Whiskers and Zulus males. Alba's first patch of territory had them firmly wedged between Elrond's Council and Zulus territory. Whenever they would run into Elrond's Council. Alba would retreat and make way but times have changed! Ever since the migration of dominant male Pucky (VECM023) and adult subordinate males Palestrina (VLM211), Charlie (VECM031) and (VECM034) from, ironically enough, Elrond's Council, Alba have been slowly chipping away at Elrond's territory, and are slowly advancing further North. What this means for Elrond's territory in the future remains to be seen.

The other fringe groups are Cape Crusaders to the North, Ubuntu to the South, Lazuli and Vetkoeks to the South-West and Phoenix to the West. We know little about Cape Crusaders' territory. As our newest group, we have only known them for one month during which they have stayed at one burrow due to them babysitting a litter of pups. Likewise, we know little of Phoenix due to their status as a habituation group. As our wildest group, they are not yet comfortable with follows once they have left the burrows and so we know little about where they go once they leave.



Juvenile subordinate female Bruindtjie (VUBF063) and juvenile subordinate male Wobble (VUBM064) watching the sunset before bedtime. Photo credit: Zurich Master student Martina Andersson

Lazuli forage in multiple directions, sometimes further into the reserve, and other times they go in the opposite direction into Heights farm, where we currently are unable to follow them. When they do move further into our reserve, they are prone to

meeting Gold Diggers. They do occasionally run into Vetkoeks and Ubuntu as well. This concentration of meerkat groups around them has meant that their territory has remained quite stationary. The same can be said for Ubuntu; their territory is quite constant, and they are reliably found a few kilometers from the main KRC farmhouse, making them one of the most visited groups at the reserve.

For Vetkoeks, given they were collared in February, we are still learning the extent of their territory. While at first they were seen always heading onto Heights farm, lately they have been staying on our reserve, which could be due to a territory shift or because they currently have a babysitting burrow within our reserve. Hopefully once they leave the burrow they will remain on the reserve, allowing us to habituate their newest litter.

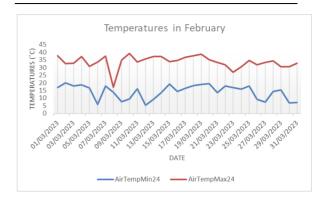
Finally, we have a wide range of groups in the center of our reserve. Brussels Sprouts, Zulus, Gold Diggers and Dik-Diks all occupy central spots within the reserve, with territories consistently shifting between the groups. Dik-Diks, once they were formed, were wedged between Lazuli and Gold Diggers, but once they left their babysitting burrow, they have moved further north to stop coming into contention with the two groups. Brussels Sprouts are another group Gold Diggers displaced. Ever since an inter-group interaction in November between the two groups, Brussels Sprouts have moved further east and are now much closer to Alba, another large group that they should be wary of.

This is all the recent news on the ever-shifting landscape of our reserve meerkat groups. Meerkats command quite an impressively large territory, especially given their size, and their constantly changing territories sometimes elicit an extra effort from observers in order to find them. However, these efforts are always worth it as we continue to delve into their life histories.

Pregnancies in March 2023

Females pregnant in March	17
Females who aborted	3
Females who gave birth, litters lost	2
Females who gave birth, litter emerged	2
Females who gave birth, unknown outcome	7
Females still pregnant at the end of the month	3

Weather at the KMP



As shown in the graph, the temperatures in March have been relatively stable, except for the decrease in temperature at the start of the month. The average maximum temperature for the whole month was 33.7°C, while the average minimum temperature was 14.1°C. The coldest day was the 12th at 5.3°C and the hottest day was 39.3°C, on the 10th. The total rainfall was 19 mm for the month, which is less than last month.

March 2023 Life History Details

Due to the large number of groups we are covering, we have made some changes to the way we are collecting data at the KMP. There are four different levels of data collection, that we will briefly introduce here.

Full data collection group (FDC)

We collect LH data at the group and regularly visit the group for full adlib and weights sessions.

Life History monitoring group (LHM)

Observers tend to visit these groups for shorter amounts of time. We collect LH data and increase our visits when new pups need to be habituated. We do not collect adlib data at these groups but collect morning and evening weights a few times per week.

Habituation group (HAB)

Habituating meerkats to our presence is the main goal at these groups. As the group's habituation progresses, we start collecting LH and weights data as well. In a later stage, we try to follow the group after morning weights, introduce lunch weights and start approaching the group in the afternoon.

Sub-group (SUB)

The amount of data we can collect at these groups depends mainly on whether a radio-collared individual is present. If that is the case, we try to collect LH, weights and adlib data, as it is very interesting to witness group dynamics within these newly formed groups. However, we do not always have a radio collar at these groups. In these cases, we focus on collecting LH data during opportunistic sightings.

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March 2023

Full Data Collection Groups:

Elrond's Council (FDC):

- All 12 individuals were present at the end of March.
- Male dominance is unknown since the former dominant male Palestrina (VLM211) emigrated to Alba on the 26th of January.
- Elrond's Council had no encounters, inter-group interactions and groups splits observed this month.
- All individuals at Elrond's Council seem to be in good health.

Gold Diggers (FDC):

- All 19 members were present at the end of March.
- Pup Panash (VGDP052) left the group on the 14th but was found back with the group on the 16th. Adult subordinate male Rogelio de la Vega (VGDM015) left the group on the 30th and returned on the 31st. Pup Pratchett (VGDM050) left the group on the 16th.
- Pup Pratchett (VGDM050) was given his Last Seen.
- They had no encounters and inter-group interactions observed this month.
- Gold Diggers had 1 daily group split on the 24th.
- Habituation at Gold Diggers is considered Completed. Subadult subordinate female Dizle (VGDF040) has improved considerably and is no longer considered a habituation individual.
- Pup Pain Perdu (VGDF051) has a broken tail.
 The tail seems to not be affecting Pain Perdu too much and is now considered a permanent injury.

Jaxx (FDC):

- 23 out of 25 meerkats were present at Jaxx at the end of March.
- Dominant female Baloo (VJXF080) gave birth on the 11th. 2 pups have emerged as part of her litter, though we have only been able to give 1 pup its markings.
- Adult subordinate female Gray (VJXF150) gave birth on the 28th.
- Adult subordinate female Scully (VJXF149) was evicted on the 10th but found back with the group on the 12th.
- Adult subordinate males Fred (VJXM146) and Cigarette Smoking Man (VJXM153), yearling subordinate male Stan (VJXM161) and Pup (VJXM179) all left the group on the 5th. Fred and Stan both returned on the same day, while Cigarette Smoking Man returned on the 10th and VJXM179 never returned. Pup VJXF182 left the group on the 10th and did not return. Yearling subordinate female Quetzal (VJXF163) left on the 26th, while juvenile VJXM175 left on the 27th. Both individuals are yet to return.
- No encounters and inter-group interactions were observed at Jaxx this month.
- Jaxx had 1 daily group split observed on the 18th.
- All individuals at Jaxx seem to be in good health.

Lazuli (FDC):

- 27 out of 29 individuals were present at the end of March
- Yearling subordinate female Tuna Fish II (VLF283) and subadult subordinate female Mist (VLF294) left and returned to the group on the 22nd and 23rd respectively. Subadult subordinate male Heimdall (VLM295) left the group on the 22nd while juvenile female Freya (VLF299) left on the 30th. Both individuals are yet to return.
- Lazuli had no encounters or inter-group interactions observed this month.
- They had 10 daily group splits this month.
- All individuals seem to be in good health.

Side Quest (FDC):

- 11 out of 13 meerkats were present at the end of the month.
- Dominant female Pumba (VZUF048) gave birth on the 29th.
- Yearling subordinate male Sam (VSIM001) left the group on the 10th while yearling subordinate female Brie (VSIF005) left the group on the 20th. Both meerkats are yet to return as of the end of the month.
- There were no encounters, inter-group interactions or group splits recorded this month.
- All individuals appear to be healthy.

Ubuntu (FDC):

- All 21 individuals present at the end of the month.
- Adult subordinate female Agazoth (VUBF039) and dominant female Cthulhu (VUBF035) gave birth on the 3rd and 6th respectively. Agazoth's litter is considered as lost before emergence with the group moving shortly after her birth. As for Cthulhu's litter, 5 pups have since emerged as part of her litter.
- Adult subordinate male Captain Barbosa (VLM265), after encountering the group multiple times, finally immigrated back into the group on the 30th, but was evicted the following day by dominant male Greebo (VHMM048).
- Captain Barbosa encountered the group 4 times on the 7th, 19th and 21st. The group also encountered an unknown adult on the 27th.
- No inter-group interactions and group splits were observed at Ubuntu this month.
- The meerkats at Ubuntu appear to be in good health.

Whiskers (FDC):

- All 23 members were present at the end of the month
- Yearling subordinate females Crunchie (VWF250) and Flake (VLF247) gave birth on the 22nd and the 28th respectively.
- They had no encounters or inter-group interactions this month.
- They had 3 daily group splits this month.
- All individuals at Whiskers seem to be healthy at the end of the month.

Zulus (FDC):

- 10 out of 10 individuals were present at the end of March
- Pup Sifiso (VZUM069) was given his Last Seen this month.
- The group had no encounters, inter-group interactions or group splits this month.
- All individuals in Zulus appear to be healthy.

Life History Monitoring Groups:

Alba (LHM):

- All the individuals were present at the end of March.
- Dominant female Tolkien (VECF019) aborted her litter on the 28th of this month. This is assumed because she lost weight and there has been no reporting of lactations or babysitting.
- Adult subordinate female Kilie (VECF036) was evicted on the 30th of this month and was accepted back into the group on the same day.
- Alba had no encounters, inter-group interactions or group splits this month.
- All individuals appear healthy.

Brussels Sprouts (LHM):

- There were 8 out of 9 individuals present at the end of March.
- Of the litters born to dominant female Arabella (VMPF035) and yearling subordinate female Lyra (VBSF002), 1 pup has emerged. The pup, named Pocket Dinosaur (VBSP010), was good with hands and drank water when a babysitter was nearby, but skittish when alone. Pocket Dinosaur was foraging with the group near the end of the month but has not been seen since the 31st of March. We are unsure what the outcome is, and if she was possibly predated.
- No encounters, inter-group interactions or group splits were seen this month.
- All individuals at Brussels Sprouts seem to be in good health.

Dik-Diks (LHM):

- All 13 members were present at the end of this month.
- There is still unsettled dominance at this group, with no direct submissions having been observed by observers of either males or females.
- There have been no encounters, inter-group interactions or group splits observed this month, although they forage in an overlapping territory to the group Lazuli, so there may have been encounters or inter-group interactions that we are unaware of.
- · All individuals seem to be in good health.

Namaqua (LHM):

 The group was disbanded on the 22nd of February. Of the males that were left, dominant male Shandy (VHMM023) and yearling subordinate male Love (VBSM003), are still being observed for life history data.

Runaways (LHM):

- 16 out of 16 members were present at the end of March.
- Dominant female Bigwig (VMPF022) aborted between the 9th and 13th of this month. She was observed to have lost a lot of weight. Yearling subordinate female Adolin (VRWF012) was made officially pregnant on the first day of this month.
- Runaways had no encounters; inter-group interactions or group splits recorded this month.
- All individuals seem to be in good health.

Vetkoeks (LHM):

- All 7 individuals were present at the end of the month.
- Dominant female Mooncake (VHMF053) gave birth on the 19th of this month. The outcome of this litter is still unknown.
- Male dominance is still unsettled.
- No encounters, inter-group interactions or group splits were seen this month.
- All individuals appear healthy.

Habituation Groups:

Cape Crusaders (HAB):

- The group Cape Crusaders formed on the 3rd of this month, because they had successfully raised a litter. Currently there are 5 known and 7 unknown individuals. The females of this group are the adults Timon (VZUF048), Amadu (VSIF002) and Sky (VSIF003).
- Dominance at this group is currently unknown.
- Timon was noted as being pregnant in February, and gave birth this month. 4 pups have been observed.
- The habituation level of this group is classed as In Progress. The adult females of this group are already habituated. The adult males are skittish when approached, and the juveniles and pups are more comfortable around observers when the females are present. The pups will eat egg and allow grooms when near the adult females. The group is comfortable with observers sitting at 1m away but will only leave the burrow when observers are 5-10m away. One of the younger adult males is the most skittish and will go down a bolt hole when observers move too quickly.
- The group's individuals appear to be healthy.

Hakuna Matata (HAB):

Hakuna Matata were not seen this month.

Make-e-Plan (HAB):

- All 20 individuals were present at the end of February.
- Dominant female Bridget (VQLF011) is pregnant at the end of this month.
- Adult subordinate females Bonxie (VWPF054), Sophie (VMPF055), Archie (VMPF057) left on the 15th and returned on the 16th of this month.
- No encounters, inter-group interactions and group splits were observed in February.

- The group's habituation is classed as In Progress. The majority of the group has individuals interested in egg and water, but hand habituation is still low. We are looking at following the group for at least 30 minutes after leave time, but more attention needs to be focused here. Subadult subordinate male Jude (VMPM071) is still the wariest individual and will leave the sleeping burrow when observers are at 3 meters away, but forage at 10-20m away.
- All individuals in the group appear to be healthy.

Phoenix (HAB):

- Phoenix have been visited multiple times in February. During those visits we have seen approximately 10-14 individuals within the group.
- Of the litter that was born to the unknown female last month, 4 have emerged. 2 of the 4 eat egg, so consistency is key to their habituation.
- The group's habituation status is still In Progress. This month we are focusing on getting the pups and any older individuals to eat egg so that we can entice them into the cages. This is to put a radio collar on one of the older individuals. The group is fine when observers sit at 3m from the burrow, but any sudden movements cause them to go below. At the sleeping burrow the meerkats are more comfortable with approaches and movements.
- All individuals at Phoenix appeared to be healthy.

Trackie-Daks (HAB):

- 20 out of 20 individuals were present at the end of the month.
- Dominant female Fly (VWF237) gave birth, but the outcome of the litter is unknown at the end of this month. Adult subordinate female Hatchi (VWF238) aborted her litter. We assume this because she was slimmer, there were no lactations and no babysitters were left at the burrow.
- Hatchi left on the 7th and was seen to be foraging with the group again on the 10th of this month.
- There were no encounters, inter-group interactions, or group splits observed during the month
- The habituation level is currently In Progress. Habituation efforts are still currently focused on dominant male Coquillette (VTSM014) and Moon-Moon (VTSM022). They have not been weighed this month and were not interested in water or egg. Coquillette has good habituation days where he will allow observers 2-3m away when followed, but Moon-Moon is unbothered by being followed. We will continue with the habituation of these individuals, and the next focus will be on habituating Fly's litter if they emerge.
- All individuals appear to be healthy.

The following author contributed to this report: