



# The Meerkatter

The Friends of the Kalahari Meerkat Project Report - [www.kalahari-meerkats.com](http://www.kalahari-meerkats.com) - November 2023

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## Snakes on a Plain Part 1: A survival story

The start of the summer season in the Kalahari marks the return of many species. The quiet of winter is replaced with the echoes of barking geckos and the hum of cicadas. The meerkats' larger and juicier prey items, such as scorpions and solifuges, return in number along with some of their more unsavoury neighbours – the snakes.

Cape cobras and puff adders are often sighted during the summer months at the Kalahari Meerkat Project. When a group of meerkats encounter a snake, they have been observed to surround and continuously mob the snake until it leaves the immediate area. This behaviour likely depends on the snake species, as on other occasions the meerkats may move away or lose interest in the snake. Mobbing snakes is risky business, as cape cobras and puff adders are both highly venomous. Cape Cobras produce a neurotoxic venom which attacks the nervous system causing fatal paralysis, and puff adders produce a cytotoxic venom which causes necrosis. Fortunately for the meerkats, they have a secret weapon of their own: a substitution in the nicotinic acetylcholine receptor [1] (the target of the snake venom toxins). This gives them much higher resistance to these highly venomous toxins, and a snake bite which would fell a full-grown human may leave a meerkat with nothing but a small scratch.



Jaxx mobbing a puff adder. Photo credit: Masondo Mbongiseni (Meerkat observer).

On the 8<sup>th</sup> of November this year, an observer tracked Jaxx to their sleeping burrow in the morning and found the dominant female Baloo (VJXF080) in a very bad state. Baloo had blood covering her neck and chest, her right eye was swollen, and she appeared very weak. From her injuries and symptoms, the observer concluded this was most likely caused by a snake bite from a puff adder. Baloo stayed in a bolt hole by herself that night before re-

joining the group at their sleeping burrow on the morning of the 9<sup>th</sup> of November.



Baloo on the 9<sup>th</sup> of November with a very swollen face likely from a puff adder bite. Photo credit: Masondo Mbongiseni (Meerkat observer).

On the 9<sup>th</sup> of November Baloo managed to keep up with the group when they moved almost 1km to a new sleeping burrow. However, on the 10<sup>th</sup> of November, Baloo did not wake up with the group and observers feared the worst. Furthermore, in a separate incident two more individuals at Jaxx sustained injuries consistent with a snake bite: yearling subordinate female Miss Tick (VJXF173) and yearling subordinate male Hlumelo (VJXF176). Miss Tick, much like Baloo, had a very swollen throat and a wound on her right cheek and Hlumelo had sustained a wound on his chest which had begun to swell. Over the next few days, observers continued to track both the group and Baloo and on the 11<sup>th</sup> of November, an observer found Baloo along with the injured Hlumelo and former Jaxx adult subordinate females Scully (VJXF149), Gray (VJXF150) and Queen Jane (VJXF158).

Observers continued to monitor Baloo's health; her face and eyes continued to swell, and a wound which had opened on her right cheek turned necrotic. Baloo was also struggling to forage, which led to her losing a great amount of weight. Before the bite, observers weighed her at 949g during a lunchtime session on the 5<sup>th</sup> of November, but by the 21<sup>st</sup> of November she had lost almost 40% of her body weight and weighed 573g in the morning. Baloo was also pregnant at the time and therefore part of her weight loss was attributed to her aborting the litter as her body was not able to keep her pregnancy whilst fighting off the venom.

However, even with both eyes almost swollen closed, Baloo was not easily beaten. She continued with her small group and was even observed taking charge and making lead calls. Baloo persevered and day by day led them ever closer to finding the main group.

Since Baloo was no longer acting dominant from the 8<sup>th</sup> of November, the main group was considered to be the dominant male Leonard (VLM221) alongside any individuals with him.

On the 18<sup>th</sup> of November, Baloo, Hlumelo, Gray, Scully and Queen Jane went below in a sleeping burrow just 64m away from the sleeping burrow that Jaxx were using. Finally, on the 21<sup>st</sup> of November, Baloo returned to the group along with Hlumelo. Gray, Scully and Queen Jane who stayed by their mother's side when she was at her weakest did not return to the group.

I am pleased to report that at the time of writing, the wounds that Miss Tick and Hlumelo sustained have fully healed. Baloo steadily put on weight towards the end of November and was back to 689g at lunchtime on the 28<sup>th</sup> of November. Furthermore, most of Baloo's injuries have healed; her eyes are no longer swollen and all that remains of her snake encounter are a few gnarly scabs. Only one question remains: will Baloo reclaim her position of dominance?

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## Snakes on a Plain Part 2: "That may come back to bite you".

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On the 8<sup>th</sup> of November 2023 when observers first noted Baloo's injuries, they also observed that Baloo was no longer acting dominant. Her eldest daughter present in the group at the time, yearling subordinate female Jub Jub (VJXF160), took the opportunity to hip-slam her while she was down and repeatedly asserted her dominance over her own mother. Observers recorded Jub Jub chinning, glaring, hip slamming and even sitting on Baloo. In response, Baloo submitted and thereby relinquished her dominant position.



Jub Jub asserting her dominance over Baloo and Baloo submitting to her on the 9<sup>th</sup> of November. Photo credit: Masondo Mbongiseni (Meerkat observer).

To many meerkat observers, it came as quite a shock to see Baloo not only weakened physically but also in her position in the group. In this way, Baloo's story seems to echo that of Whiskers' former dominant female Swift (VWF176). Swift also sustained injuries from a possible snake bite and temporarily lost her dominant position between the 4<sup>th</sup> and 22<sup>nd</sup> of July 2020. Therefore, if history is going to repeat itself, once Baloo has fully recovered, she could be back in the running for dominant female of Jaxx.

Baloo became the dominant female of Jaxx on the 19<sup>th</sup> of December 2016 and built quite a reputation

to secure her dominance. She had never previously been challenged. In fact, there have been many accounts of Baloo simply walking past a subordinate female and eliciting a direct submission response.

Her dominance tenure up until the 8<sup>th</sup> of November 2023 totals 2515 days, nearing 7 years. She has been a very successful dominant in her time, giving birth to 18 emerging litters and 86 emerging pups, most recently Togepi (VJXF185). However, not only did she produce many successful litters, but she also inhibited the reproductive success of subordinate females through eviction and infanticide. On the 3<sup>rd</sup> of May this year, Jub Jub gave birth to her first litter which was lost before emergence on the 12<sup>th</sup> of May, and one observer witnessed Baloo eating one of Jub Jub's pups. Jub Jub became pregnant again in September this year, however Baloo attacked and evicted her on the 30<sup>th</sup> of September and, although she was accepted back into the group later that day, the stress induced by her eviction was enough to cause Jub Jub to abort her litter between the 4<sup>th</sup> and 6<sup>th</sup> of October.



Baloo and a pup in January 2023. Photo Credit: Laurie Johnson (Former Meerkat Manager).

Whilst Jub Jub remains a subordinate female at Jaxx, her chances of producing a successful litter are reduced. It has previously been shown that subordinate females would achieve a higher inclusive fitness (the ability of an individual to pass on their genes to the next generation including genes shared with relatives) by displacing their dominant mothers than by helping to raise the dominants future offspring [2]. With the position of dominant female available and Baloo weakened reducing the potential costs of challenging for status, Jub Jub has the opportunity to take over as dominant from her mother, Baloo, and increase her breeding success.

From the day that Baloo lost her dominance status, observers have recorded increased dominance behaviour displayed by Jub Jub including anal marking and dominance assertions over other individuals in the group. After Baloo returned to the group, Jub Jub continued to assert her dominance over Baloo. Female dominance at Jaxx remained unsettled at the end of the month. Is Baloo biding her time to fully recover before reclaiming her dominant position? Will Jub Jub prevail over Baloo's vie for dominance? Or is there another competitor ready to fight for the position?

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## Goodbye Runaways

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This month we sadly had to say goodbye to one of our life history monitoring groups – Runaways. The group's territory has moved further onto the Heights farm and, due to very limited access to the site, data collection was inconsistent. Therefore, Runaways were officially abandoned on the 21<sup>st</sup> of November.

Runaways, formerly known as Fake-e-Plan, were first seen on the 9<sup>th</sup> of October 2020 near Sox Dam. The group consisted of six Make-e-Plan meerkats, four adult females: Bigwig (VMPF022), Scylla (VMPF025), Cirilla (VMPF026) and Hope (VMPF029), and two adult males: Kratos (VMPM024) and Mushu (VMPM028). On the 10<sup>th</sup> of October, Bigwig was collared, and the group was able to be consistently tracked.



A photo taken of Runaways when they had just formed in 2020 and had made their way to Matlepanen Dam. Photo Credit: Zoe Turner (Zurich Masters student and former meerkat manager).

Runaways “ran away” and moved further off the reserve until they settled into their current territory around Matlepanen Dam and The Heights farm. Following on from the June 2023 Meerkatter article “Runaways - Yesterday, Today and Tomorrow”, Runaways luck did not seem to improve after Bigwig’s death on the 19<sup>th</sup> of May this year.

Over the next months, Runaways lost individuals regularly. Adult subordinate male Max (VRWM006) and yearling subordinate female Venya (VRWF011) went missing following a group split on the 6<sup>th</sup> of July. On the 28<sup>th</sup> of July sub-adult subordinate female Stokkie (VRWF017) left the group and did not return. Subadult subordinate male Coco (VRWM019) did not wake up with the group on the 8<sup>th</sup> of September.

Adult female Angel (VRWF004) took over from Bigwig and became the new dominant female of Runaways on the 20<sup>th</sup> of September. However, under her leadership the group continued to lose individuals. On the 4<sup>th</sup> of October, yearling subordinate female Feora (VRWF010) did not wake up with the group and yearling subordinate female Adolin (VRWF012) left later that month on the 14<sup>th</sup>. Adolin was later seen at Elrond’s Council on the 30<sup>th</sup> of October having travelled far from her natal group.

However, she was unsuccessful in joining Elrond’s council and perhaps has continued to venture further, as she has not been seen since.

Dominant adult male Shiraz (VJXM122) left the group on the 19<sup>th</sup>. After Bigwig’s death Shiraz’s breeding opportunities in the group decreased as he is possibly related to the remaining females, therefore it is likely he went roving elsewhere.

In Runaways’ final days, the remaining males in the group: yearling subordinate males Ilai (VRWM009), Gonna (VRWM018) and Wiske (VRWM020) left the group on the 20<sup>th</sup> of November. Thereby, with only females remaining, Runaways may have disbanded and become a same sex coalition. It has been a pleasure following, observing, and recording the lives of these Meerkats and now it is time to say goodbye.

### References:

1. Drabeck D H, Holt J, McGaugh SE 2022 Widespread convergent evolution of alpha-neurotoxin resistance in African mammals. *Biol Lett.* 18 (11). (doi 10.1098/rsbl.2022.0361).
2. Sharp S, Clutton-Brock T 2011 Reluctant challengers: why do subordinate female meerkats rarely displace their dominant mothers? *Behav Ecol* 22:1337–1343. (doi 10.1093/beheco/arr138)

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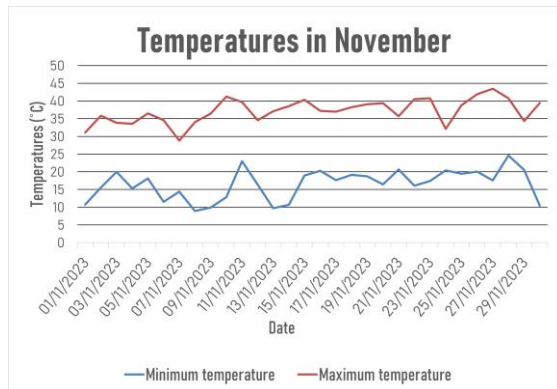
## Pregnancies in November 2023

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<b>Females pregnant in November</b>	<b>10</b>
Females who aborted	1
Females who gave birth, litters lost	0
Females who gave birth, litter emerged	3
Females who gave birth, unknown outcome	3
Females still pregnant at the end of the month	3



## Weather at the KMP



The temperature has stayed in the mid-thirties this month. The average minimum temperature was 16.5°C and the average maximum temperature was 37.2°C. The hottest day was on the 27<sup>th</sup> of November, at 43.4°C. The coldest day was on the 8<sup>th</sup> and was a mild 8.9°C. There was 8.6mm of rain this month.

## November 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.

## Full Data Collection Groups:

### Alba (FDC):

- 11 of 12 individuals were present at the end of November.
- Dominant female Tolkien (VECF019) was made officially pregnant on the 15<sup>th</sup> of November.
- Previously emigrated adult subordinate female Kilie (VECF036) and yearling subordinate females Maya (VALF003) and Madhubala (VALF006) were given their Last Seen this month.
- Adult subordinate male Charlie (VECM031) returned to the group on the 1<sup>st</sup>. On the 2<sup>nd</sup> of November yearling subordinate male Tiramisu (VALM007) and pup Bibu (VALM014) were separated from the group but re-joined later that day.
- On the 10<sup>th</sup> of November yearling subordinate female Tuktuk (VALF001) was evicted and chased away by Tolkien and accepted back into the group later that day. Tuktuk was evicted again the next day on the 11<sup>th</sup>.
- On the 16<sup>th</sup> of November Charlie and adult subordinate male Ozzie (VECM033) left the group and returned the following day on the 17<sup>th</sup>. Tuktuk was also accepted back into the group on the 17<sup>th</sup> ending her eviction. Tuktuk left and returned on the 21<sup>st</sup> and left again later that day. On the 24<sup>th</sup> of this month Charlie, Ozzie and Tiramisu were evicted when the group wardanced at them, however they were accepted back into Alba later that day.
- Yearling subordinate male Nigoni (VALM004) has been emigrated out of the group after 1 month away.
- Tuktuk appeared to the group 7 times on the 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 12<sup>th</sup>, 17<sup>th</sup>, 21<sup>st</sup> and 28<sup>th</sup> of November. Tiramisu and Charlie appeared to the group on the 5<sup>th</sup> of November.
- Tuktuk remained absent at the end of the month.
- The group encountered Brussels Sprouts adult subordinate male Gurke (VHMM036) and yearling subordinate male Chili (VBSM005) on the 29<sup>th</sup> of November.
- Alba had no inter-group interactions this month.
- Alba had a daily split on the 10<sup>th</sup> of November and group split of uncertain duration between the 5<sup>th</sup> and 7<sup>th</sup> of this month.
- All individuals appeared healthy at the end of the month.

### Brussels Sprouts (FDC):

- 5 of 7 individuals were present at the end of the month.
- Male dominance at Brussels Sprouts was settled on the 25<sup>th</sup> of November. Dominant male James Sawyer (VGDM011) received direct submissions from adult subordinate male Gurke (VHMM036) and yearling subordinate male Chili (VBSM005), the remaining eligible males in the group, thereby making James the dominant male of Brussels Sprouts once more.
- James and Chili left the group on the 6<sup>th</sup> and were seen roving at Zulus, they both returned on the 7<sup>th</sup>. Chili left again on the 17<sup>th</sup> and returned

the following morning of the 8<sup>th</sup>. On the 22<sup>nd</sup> of November yearling subordinate female Totoro (VBSF001) was evicted out of the sleeping burrow and war danced by the group but was accepted back in the group later that day. The following day on the 23<sup>rd</sup> Totoro as well as her littermate yearling subordinate female Lyra (VBSF002) were separated from the group during a thunderstorm. On the 24<sup>th</sup>, yearling subordinate female Sien (VBSF008) left in the morning and returned later that day. Chillli also left the group on the 24<sup>th</sup> following an inter group interaction with Zulus. Gurke left the group on the 25<sup>th</sup> and returned the same day. Chillli returned on the 26<sup>th</sup>. Chillli and Gurke both left on the 29<sup>th</sup> and were seen at Alba before returning later that day.

- Totoro appeared to the group on the 22<sup>nd</sup> and again on the 24<sup>th</sup> with Lyra.
- Totoro and Lyra remained absent at the end of the month.
- Brussels Sprouts had an encounter with Zulus' adult subordinate male Tazara (VZUM064) on the 6<sup>th</sup> of this month and Zulus' yearling subordinate male Rain (VZUM067) on the 24<sup>th</sup> of the month.
- There were two inter-group interactions between Brussels Sprouts and Zulus on the 5<sup>th</sup> and 24<sup>th</sup> of November as Brussels Sprouts moved further into Zulus territory and frequented a Zulus sleeping burrow. The groups war-danced towards each other, and Brussels Sprouts retreated.
- There were no group splits observed this month.
- As male dominance has now been settled and dominance competitions and assertions have calmed down and all individuals have fully recovered from their injuries from the previous month and appeared to be in good health.

#### **Elrond's Council (FDC):**

- All 14 individuals were present at the end of October.
- *Male dominance* remains *unconfirmed* at Elrond's Council.
- From dominant female Snoop Kat's (VECF039) most recent litter, three pups have emerged; Khriissala (VECM054), Hoid (VECM055) and Nightblood (VECM056). They are all good with hands and interested in egg.
- On the 17<sup>th</sup> of this month Snoop Kat wandered away from the group whilst foraging but returned later that afternoon. Adult subordinate male Kuzco (VECM040) along with yearling subordinate males Chabal (VECM047), Perceval (VECM048) and Karadoc (VECM049) left the group but returned the same day. Perceval left again on the 22<sup>nd</sup> of November and returned the same day.
- Adult subordinate males Milo (VECM034) and Survivor (VECM042) as well as yearling subordinate male Petit Di Gio (VECM046) were emigrated out of the group however they will not be given their Last Seen until next month.
- Elrond's Council had encounters with three wild meerkats on the 16<sup>th</sup> of November and another

encounter on the 22<sup>nd</sup> with an unknown individual. During both encounters the group war danced and chased away the individuals.

- Elrond's Council had no inter-group interactions or group splits this month.
- All the individuals at Elrond's Council appeared to be in good health.

#### **Gold Diggers (FDC):**

- 12 of 16 members were present at the end of November.
- Dominant female Goldeneye (VGDF007) gave birth on the 27<sup>th</sup> of November and the outcome of this litter remained unknown at the end of the month.
- Adult subordinate female Ricky Baker (VGDF031) returned to the group on the 12<sup>th</sup> of November. She left again on the 19<sup>th</sup> and returned the same day. On the 23<sup>rd</sup>, Goldeneye evicted Ricky Baker attacking and chasing her away. The following day, on the 24<sup>th</sup>, Goldeneye evicted yearling subordinate females Maya II (VGDF039), Dizle (VGDF040), and Mikasa (VGDF042). Dizle was accepted back into the group on the 26<sup>th</sup> but evicted again the same day. Sub-adult subordinate male Captain Patel (VGDM048) was seen away from the group on the 30<sup>th</sup> but returned later that day. Ricky Baker was accepted back into the group on the 30<sup>th</sup> of November following the birth of Goldeneye's latest litter.
- Ricky Baker appeared to the group seven times on the 3<sup>rd</sup>, 4<sup>th</sup>, 7<sup>th</sup>, 10<sup>th</sup>, 12<sup>th</sup> and 24<sup>th</sup> of the month. Maya II appeared to the group with Ricky Baker on the 24<sup>th</sup>. Mikasa appeared to the group on the 25<sup>th</sup> and Dizle appeared to the group on the 27<sup>th</sup> of November.
- Maya II, Dizle and Mikasa remained absent at the end of the month.
- The group had two encounters with Brussels Sprouts male Chillli (VBSM005) on the 6<sup>th</sup> and 7<sup>th</sup> of November. Gold Diggers encountered Zulus' yearling subordinate male Rain (VZUM067) twice on the 19<sup>th</sup> of November. On the 25<sup>th</sup>, the group encountered former Zulus' adult subordinate males Willow and Tazara, who were war danced and chased away. Gold Diggers encountered three unknown adults on the 28<sup>th</sup> of November.
- They had one inter group interaction with Lazuli on the 25<sup>th</sup> of November, both groups were observed to war dance towards each other from either side of the riverbed, after which Gold Diggers retreated.
- They had a daily group split on the 10<sup>th</sup> of November.
- All members of the group appeared to be in good health.

#### **Jaxx (FDC):**

- All 18 individuals were present at Jaxx at the end of November.
- Dominant female Baloo (VJXF080) lost her dominance position on the 8<sup>th</sup> of November, as she was no longer acting dominant after sustaining injuries from a possible snake bite.

Female dominance remained unsettled at the end of the month.

- Baloo aborted her pregnancy on the 12<sup>th</sup> of November, she had lost approximately 230g and there were no signs of lactation or babysitting observed.
- Yearling subordinate female Miss Tick (VJXF173) was made officially pregnant on the 26<sup>th</sup> of November.
- Adult subordinate male The Dude (VJXM142) was given his Last Seen this month.
- Yearling subordinate males Stan (VJXM161), Pretzel (VJXM162) and Hank the Tank (VJXM164) returned to the group on the 3<sup>rd</sup> of November. Adult subordinate male Fred (VJXM146) returned on the 4<sup>th</sup> of November. Baloo left on the 8<sup>th</sup> and returned the following morning on the 9<sup>th</sup>, she left Jaxx again on the 10<sup>th</sup> of November. Yearling subordinate male Hlumelo (VJXM176) left on the 11<sup>th</sup> of November. Baloo and Hlumelo returned to the group on the 20<sup>th</sup> of November.
- Adult subordinate females Scully (VJXF149), Queen Jane (VJXF158) and Gray (VJXF150) were emigrated out of the group.
- On the 5<sup>th</sup> of November Jaxx had two encounters with three unknown adults, Jaxx chased them away. On the 18<sup>th</sup> the group encountered an unknown adult and had another encounter with two unknown individuals. On the 26<sup>th</sup> of November the group encountered an unknown individual and the following day Jaxx had an encounter with an unknown male.
- Jaxx had one daily group split on the 28<sup>th</sup> of this month.
- Baloo, Miss Tick and Hlumelo all sustained injuries from possible snake bites during the month. We continued to monitor their health and Miss Tick and Hlumelo fully recovered from their injuries. Baloo's injuries were almost all healed by the end of this month. All other individuals appeared to be in good health.

#### **Lazuli (FDC):**

- 24 out of 25 individuals were present at the end of November.
- Former Gold Diggers male Rogelio De La Vega (VGDM015) became dominant on the 19<sup>th</sup> of November. Following the death of his main competitor, adult subordinate male Beatrice (VGDM014), Rogelio had received enough direct submissions from the remaining eligible males in the group. Therefore, male dominance is settled.
- Sub-adult subordinate female Za'atar (VLF305) was given her Last Seen this month.
- Former Gold Diggers male Beatrice's remains were found up at tree on the 25<sup>th</sup> of November and he was assumed to be predated.
- Yearling subordinate male Thor (VLM292) left Lazuli on the 1<sup>st</sup> of November. Yearling subordinate female Chicken (VLF289) returned to the group on the 2<sup>nd</sup> of November. Yearling subordinate male Girdle (VLM287) returned to Lazuli on the 5<sup>th</sup> of November. Beatrice left

Lazuli on the 18<sup>th</sup> of this month. Yearling subordinate male Subigubi (VUBM050), sub-adult subordinate male Baba Ghanoush (VLM302) and pup Tapiwa (VLM306) left the group on the 27<sup>th</sup> of November. Baba Ghanoush and Tapiwa returned the same day and Subigubi returned on the 29<sup>th</sup> of November. Adult subordinate female Ma Di Tau (VLF278) and yearling subordinate females Ruby (VLF288) and Brynhildr (VLF293) left the group on the 30<sup>th</sup> and re-joined later that day.

- Former dominant male Odin (VLM266) as well as adult subordinate males Moteck (VLM261), Taco (VLM273), Phar Lap (VLM275) and yearling subordinate males Lord Escort (VLM282), Monster (VLM290) and Fergus (VLM286) have been emigrated out of the group as they have been given enough time for them to be considered not part of the group.
- Girdle appeared to the group on the 5<sup>th</sup> of November.
- Thor remained absent at the end of the month.
- Lazuli had four encounters with Vetkoeks adult subordinate male Zuma (VZUM059) on the 19<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> of November. Former Zulus' adult subordinate male Tazara (VZUM064) encountered the group on the 21<sup>st</sup> of November. On the 25<sup>th</sup> of November Lazuli encountered Ubuntu yearling subordinate male Beans (VUBM053) and Gold Diggers adult subordinate female Ricky Baker (VGDF031). Tazara returned later with former Zulus adult subordinate male Willow (VZUM063) and yearling subordinate male Robin (VZUM066) on the 27<sup>th</sup> of November for three more encounters with the group. During one of their encounters with Lazuli on the 27<sup>th</sup> of November the Zulus males were joined by Gold Diggers yearling subordinate female Mikasa (VGDF042). On the 28<sup>th</sup> of November the group encountered an unknown male.
- Lazuli had an inter group interaction with Gold Diggers on the 25<sup>th</sup> of this month, both groups were observed to war dance towards each other from either side of the riverbed, during which Gold Diggers retreated.
- Lazuli had nine daily group splits on the 2<sup>nd</sup>, 6<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup> and 27<sup>th</sup> of this month. They also had one overnight group split on the 19<sup>th</sup> of November, as well as one group split of uncertain duration on the 15<sup>th</sup>.
- All individuals seemed to be in good health.

#### **Side Quest (FDC):**

- All 16 meerkats were present at the end of this month.
- From dominant female Pumba's (VZUF048) latest litter, four pups have emerged. They are well habituated to hands, and we are now focusing on introducing them to egg and the scale.
- Yearling subordinate male Deltron Zero (VSIM015) left on the 25<sup>th</sup> of November and returned the same day.
- Side Quest encountered one unknown adult on the 16<sup>th</sup> of November.

- Side Quest had two inter group interactions with an unknown group on the 16<sup>th</sup> and 25<sup>th</sup> of November. In both interactions the unknown group were seen approaching and excavating their sleeping burrow and Side Quest war danced towards the unknown group. This was reciprocated until the unknown group retreated.
- At the end of this month all symptoms of ringworm in the group have healed and all individuals appeared to be in good health

#### **Trackie-Daks (FDC):**

- All 12 individuals were present at the end of the month.
- Dominant female Fly (VWF237) gave birth on the 13<sup>th</sup> of November, and three pups have been marked so far, though there may be more.
- Adult subordinate female Hachi (VWF238) as well as yearling subordinate females Sassy Pants (VTDF016), Flatsen (VTDF018), Futret Minor (VTDF019), Mr Peanutbutter (VTDF020) and Jackie (VTDF021) were given their Last seen this month.
- Yearling subordinate male Guardy McGuardface (VTDM012) left the group on the 28<sup>th</sup> of November and was seen at Ubuntu, he returned the following day on the 29<sup>th</sup>.
- Trackie-Daks had one encounter with Whiskers yearling subordinate female Candy Land (VWF256) on the 20<sup>th</sup> of November.
- Trackie-Daks had no group splits or inter group interactions this month.
- The habituation level is currently *Advanced Progress*. Dominant male Coquillet (VTSM014) has been less interested in the scale this month however he has been weighed a couple of times throughout the month. He will come into the scale for water, however at lunchtime he is slightly more wary. Coquillet is most comfortable at the sleeping burrow or if observers stay around 1m away while he is foraging.
- All individuals appeared to be healthy.

#### **Ubuntu (FDC):**

- All 17 individuals were present at the end of the month.
- Dominant female Agazoth (VUBF039) gave birth on the 4<sup>th</sup> of November and four pups have emerged: Scamper (VUBF070), Hotfoot (VUBF071), Vamoose (VUBP072) and Hightail (VUBM073). They are well habituated to hands and are interested in egg.
- Adult subordinate female Masekind (VUBF037) and yearling subordinate female Muffin (VUBF052) were given their Last Seen this month.
- Yearling subordinate male Beans (VUBM053) left Ubuntu on the 4<sup>th</sup> and returned the same day. Beans left and returned the same day on the 23<sup>rd</sup> and 25<sup>th</sup> of this month.
- Ubuntu had five encounters with emigrated yearling subordinate female Evikutty (VUBF051) on the 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 17<sup>th</sup> and 20<sup>th</sup> of this month. The group encountered Zulus adult subordinate male

Tazara (VZUM064) seven times on the 14<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup> 20<sup>th</sup> and 23<sup>rd</sup> of November.

- Ubuntu had no inter group interactions or group splits this month.
- All members of Ubuntu appeared to be in good health at the end of the month.

#### **Whiskers (HAB) :**

- Previously FDC group became a habituation group due to immigrations of wild males. See below HAB section.

#### **Zulus (FDC):**

- 11 out of 13 individuals were present at the end of November.
- There is still no dominant male at Zulus.
- Dominant female Spruddel (VZUF028) was made officially pregnant on the 24<sup>th</sup> of November.
- Yearling subordinate male Rain (VZUM067) left the group on the 19<sup>th</sup> of November and was seen roving at Gold Diggers and Brussels Sprouts. He returned to the group on the 27<sup>th</sup> of November.
- Adult subordinate male Nac Mac Feegle (VZUM075) did not wake up with the group on the 23<sup>rd</sup> of November. Later that day adult subordinate male Baymax (VGDM028) evicted Fritzl Rösti (VZUM074) and chased him away from the group.
- Adult subordinate males Willow (VZUM063) and Tazara (VZUM064) as well as yearling subordinate male Robin (VZUM066) were emigrated out of Zulus and have been sighted roving at other groups.
- Nac Mac Feegle and Fritzl Rösti remained absent at the end of the month.
- The group encountered emigrated adult subordinate male Tazara (VZUM064) on the 5<sup>th</sup> of November. Zulus had an encounter with Brussels Sprouts males James Sawyer (VGDM011) and Chilli (VBBSM005) on the 6<sup>th</sup> of November. Zulus had an encounter with emigrated yearling subordinate male Robin (VZUM066) on the 19<sup>th</sup> of November. The group encountered Chilli again on the 24<sup>th</sup> of November. On the 25<sup>th</sup> of November Zulus had two encounters with Ubuntu yearling subordinate female Evikutty (VUBF051). On the 30<sup>th</sup> of November the group encountered an unknown individual.
- Zulus had two inter-group interactions with Brussels Sprouts on the 5<sup>th</sup> and 24<sup>th</sup> of November. Brussels Sprouts have moved further into Zulus territory and have occupied a Zulus sleeping burrow. The groups war-danced towards each other, and Brussels Sprouts retreated.
- Zulus did not have any group splits this month.
- All individuals in Zulus appeared to be healthy.



## Life History Monitoring Groups:

### Dik-Diks (LHM):

- 12 out of 13 members were present at the end of this month.
- On the 4th of November, when adult subordinate females Juliet (VGDF009) and Shelby (VGDF022) returned to the group they repeatedly asserted their dominance over dominant female Tuna Fish II (VGDF026). Tuna Fish II submitted to Shelby and therefore was no longer considered dominant. Female dominance remained unsettled at the end of this month.
- Former dominant female Fleabag (VGDF005) was given her Last Seen on the 27<sup>th</sup> of November.
- Juliet and Shelby returned to the group on the 4<sup>th</sup> of November. On the 5<sup>th</sup> of November sub-adult male Regis (VDDM004) did not wake up with the group and sub adult male Jaskier (VDDM001) and pup Devil (VDDF005) were left at the burrow when the rest of the group went to forage. On the 20<sup>th</sup> of November Jaskier and Devil returned to the group. Yearling subordinate male Kwame (VUBM047) left on the 26<sup>th</sup> of November and returned on the 30<sup>th</sup> of the month.
- Regis remained absent at the end of the month.
- The group encountered two unknown individuals on the 3<sup>rd</sup> of November but wardanced and chased the individuals away. Juliet and Shelby appeared to the group on the 4<sup>th</sup> of November.
- The group did not have any inter-group interactions or group splits this month.
- Habituation at this group is considered *Advanced Progress*. Juliet, and Shelby are still wary of fast movements but have improved with follows. Jaskier is getting better with hand habituation and is very eager for water and is improving with follows. We will continue to do follow habituation with Jaskier, Juliet and Shelby. All individuals are weighable and eager for water or egg.
- All individuals appeared to be healthy.

### Vetkoeks (LHM):

- All 6 individuals were present at the end of the month.
- Dominant female Mooncake (VHMF053) gave birth on the 26<sup>th</sup> of November and outcome of the litter remained unknown at the end of the month.
- Adult subordinate male Zuma (VZUM059) immigrated back into Vetkoeks on the 14<sup>th</sup> of November, he left the group and was seen roving at Lazuli on the 19<sup>th</sup> and returned on the 21<sup>st</sup>.
- Vetkoeks had no recorded encounters, inter-group interactions or group splits this month.
- All individuals appeared healthy at the end of the month.

## Habituation Groups:

### Cape Crusaders (HAB):

- There were 9 individuals consistently seen at this group.
- *Male dominance* at this group remains *unknown*.
- Dominant female Sky (VSIF003) gave birth on the 5<sup>th</sup> of November, of this litter three pups were seen, and two pups were able to be marked.
- Cape Crusaders had no encounters, inter-group interactions, or group splits observed this month.
- The habituation of this group is classed as *In Progress*. Observers can get as close as 3 meters while standing to the unknown adult males of this group, and at 1 meter while laying down. We will continue movement and distance habituation at the sleeping burrow as well as continuing egg frenzies to encourage interest in egg and the scale. Pup habituation will also be a focus over the next month.
- The individuals of this group appeared to be healthy.

### Hakuna Matata (HAB):

- Hakuna Matata were not seen this month.

### Make-e-Plan (HAB):

- All 15 individuals were present at the end of November.
- Dominant female Bridget (VQLF011) gave birth on the 12<sup>th</sup> of November and of that litter three pups have emerged.
- Adult subordinate female Archie (VMPP057) was given her Last Seen this month.
- Yearling subordinate male Jude (VMPM071) left on the 10<sup>th</sup> of November. Yearling subordinate male Wayne (VMPM087) was evicted by the group on the 17<sup>th</sup> of November and accepted back into the group on the 20<sup>th</sup>. Yearling subordinate male Oozy (VMPM067) left on the 24<sup>th</sup> of November and returned on the 30<sup>th</sup>. Jude returned to the group on the 28<sup>th</sup> of this month.
- Yearling subordinate females Stinky (VMPP063) and Stoney (VMPP065) were emigrated out of the group as enough time has passed since they left the group and even after Bridget gave birth to her latest litter and they were not accepted back into the group.
- Make-e-plan encountered and chased away an unknown individual on the 21<sup>st</sup> of November.
- Make-e-plan had no intergroup interactions or group splits this month.
- The group's habituation is classed as *Incomplete* as there are only specific individuals at this group that require habituation. Yearling subordinate male Jude (VMPM071) is still the focus of habituation at this group. He will forage at 15 meters from observers. He still drinks water from observers and eats egg. We will continue with scale habituation as well as follow habituation on specific individuals, and general hand habituation. Pup habituation is going well, all pups eat egg, drink water and are good with



hands, we will continue to focus on pup habituation next month.

- All individuals in the group appeared to be healthy.

#### **Runaways (LHM):**

- Former LHM group has been disintegrated. See below.

#### **Phoenix (HAB):**

- Phoenix was not seen by observers this month. We continued to burrow sweep their known territory through the month, however they were not found.

#### **Whiskers (HAB) :**

- All 13 meerkats were present at Whiskers at the end of October.
- Whiskers has become a habituation group this month following the immigration of three or four wild males into the group.
- Adult subordinate females Laika (VWF236), Emily Bronte (VWF243), Flake (VWF247), Crunchie (VWF250) and Chomp (VFW251) were given their Last Seen this month.
- On the 4<sup>th</sup> of November dominant female Luna (VWF235) was separated from the group but returned the same day. Yearling subordinate females Candy Land (VWF256) and Archangel (VWF259) left the group on the 9<sup>th</sup> and returned the same day, Candy Land left and returned again later that day. On the 13<sup>th</sup> Candy Land, Archangel as well as yearling subordinate female Black Dragon (VWF264) and sub-adult subordinate females Kylie (VWF265) and Bruce (VWF266) left the group and returned later that day. Vetkoeks adult subordinate male Zuma (VZUM059) was emigrated out of Whiskers on the 20<sup>th</sup> of November. Candy Land left the group on the 20<sup>th</sup> and returned on the 21<sup>st</sup>.
- Adult subordinate male Rollo (VWM240) as well as yearling subordinate males Scrabble (VWM253), Clue (VWM255) and Battleship (VWM257) were emigrated out of Whiskers as enough time has passed for them not to be considered part of the group. They have also recently been sighted far off the reserve with an unknown meerkat group.
- Whiskers had three encounters with an unknown individual on the 3<sup>rd</sup>, 4<sup>th</sup> and 9<sup>th</sup> of November. On the 13<sup>th</sup> of November the group encountered four unknown individuals and later that day that had another encounter with three unknown individuals. We believe that these unknown individuals are wild meerkats who have joined Whiskers.
- Whiskers had no interactions or group splits this month.
- The group's habituation is classed as *incomplete* as three to four wild males have joined the group this month. The wild males are consistently observed waking up with the group and can be approached at the sleeping burrow to between 5 and 20 metres. We will continue

with distance and movement habituation at the sleeping burrow as well as egg frenzies to encourage interest in egg.

- All individuals appeared to be healthy.

#### **Disintegrated Groups:**

##### **Runaways (LHM):**

- On the 21<sup>st</sup> of November the group was officially disintegrated as limited access onto The Heights Farm made data collection inconsistent. In the last days the group appeared to have disintegrated as the remaining males had left the group.
- 4 out of 9 members were present when the group disintegrated.
- We are allowed limited access back onto the farm The Heights, and therefore we have been able to see the group more often and follow their movements.
- The dominant male position of Runaways is unsettled.
- On the 20<sup>th</sup> of November, Yearling subordinate males Ilai (VRWM009), Gonna (VRWM018) and Wiske (VRWM020) did not wake up with the group.
- Runaways had no encounters; inter-group interactions or group splits recorded this month.
- The individuals of this group appeared to be healthy.

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#### **The following authors contributed to this report:**

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