



The Meerkatter

The Friends of the Kalahari Meerkat Project Report – www.kalahari-meerkats.com – September 2024

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Parental care...?

Breeding season in the Kalahari is finally upon us. Lasting from September to March, observers at the Kalahari Research Centre are eager at the prospect of spending time with the coming pups. This month, three pups have emerged from their sleeping burrow at Side Quest and joined the group on their first forage. Truffle (VSIM039), Rolo (VSIF040) and Freddo (VSIM041) are growing quickly, they are good with observers' hands and are also keen on egg. Adult female Helga (VZUF052) at Hogwarts has given birth on the 17th, she is reportedly lactating and there is observed babysitting at the sleeping burrow suggesting the pups are alive. The outcome of Helga's litter is yet to be determined as observers have not seen any pups, and although observers are excited to see minuscule additions to the groups, we do need to be prepared for the eventuality of lost litters as well as unsuccessful pregnancies.



Helga and Salazar at Hogwarts on 23rd of September
Photo credit: Sofya Melnikova, Life History Coordinator.

If we are to go by previous years, we could be expecting some this breeding season - abortions are an unfortunate reality in the animal kingdom and affect *Suricata suricatta* alike. During wintertime, environmental stresses such as lack of food availability most likely explain the low numbers of pregnancies and high numbers of unsuccessful litters and abortions. However, during breeding season there can be other factors causing a pregnancy to end. Social stresses such as the eviction of a pregnant subordinate female could cause the evicted female to abort, but sometimes the social stresses

causing abortions can be more complex than a straightforward eviction. A good example of this would be Whiskers, where this month our observers have reported adult female Archangel (VWF259) as well as yearling females Bruce (VWF266) and Kylie (VWF265) pregnant – a situation reminiscent of December 2023 when former Whiskers dominant female Luna (VWF235) disappeared leaving the female dominance position vacant. The lack of female dominance in the group meant no stress related reproductive suppression¹ for the remaining females and at that time four females were recorded as pregnant (all of which resulted in unsuccessful pregnancy). This time around, the high number of pregnancies can lead to other issues for the group. The prospect of arrival of three litters would put a large strain on the group as lactation and babysitting are resource heavy duties.

To make the situation in Whiskers worse for the pregnant females, on the 14th of September, Black Dragon (VWF264) was found dead, reducing the group number by one adult female, spreading the resources on helpers in the group even thinner. We will keep close eye on these pregnancies over the coming weeks. However, we can speculate that the repression of mating behaviors in subordinate females is not only positive for the dominants, securing their own litter's future, but also positive for the overall group, with lower demands for resource allocation when it comes to pup care behaviours.

The most recent abortion was reported on the 13th of July when dominant female Cleopatra (VALF008) from Alba lost 100g overnight. This weight loss came too soon into the pregnancy to be considered a birth, and as she was not lactating and there were no babysitters left at the sleeping burrow, the pregnancy was deemed terminated. Most of the time, abortions are not witnessed by our observers but reported as a sudden weight loss early into the pregnancy. There are times, however, when observers witness abortions.

On the evening of the 16th of September, an observer following the group Jaxx was preparing for an evening weight session while the group allo-groomed at their sleeping burrow. At the time pregnant dominant female Jub Jub (VJXF160) was busy self-grooming when suddenly the observer noticed a bloody clot appear from her genital area. She proceeded to eat what was later confirmed to be her foetus. The group did not react to this (none of the individuals attempted to eat the foetus) and went below as normal. The following morning, an observer reported Jub Jub as still being pregnant, which made us wonder whether Jub Jub's abortion was only a

partial. The following session on the 20th confirmed that Jub Jub was no longer pregnant as she lost 66g overnight and neither her nor any other females were lactating.

Observers have previously witnessed the consumption of pups by adult meerkats, this is most often done for competitive reasons, for instance: the consumption of pups during inter-group interactions such as Ubuntu eating Vetkoe's dominant female Mooncake's (VHMF053) litter in March this year. We have also witnessed, at the time, Zulus' subordinate female Helga eating one of Zulus' dominant female Spruddel's (VZUF028) pups in December 2023. The act of consuming one's own offspring, however, is something entirely different.

When covering the topic of offspring care, one would think of pup feeds, grooming and babysitting. On top of these standard acts of pup care, meerkats are also known to allo-lactate – females who have not given birth produce milk to feed the pups² – for example adult female Salazar (VZUF051) recently started lactating for Helga's newborn litter. There is however, an altogether different form of offspring care not much spoken about, perhaps due to the fact it contradicts our perception of the term 'offspring care'. Filial cannibalism – the consumption of one's own offspring was not previously seen as a form of childcare until recently where a study conducted in 2019 concluded: "if parents can reduce the density, and thereby the overall mortality, of their young through filial cannibalism or abandonment of young, cannibalism or abandonment might themselves function as parental care. Indeed, some previous research suggests that filial cannibalism can improve the survival of remaining offspring."³ Although counterintuitive on face value, this form of offspring care aims to reduce the overall size of the litter to maximise the survival chances of the remaining individuals within the litter.

In the case of Jub Jub's foetus consumption, filial cannibalism would not be applicable as there is a distinction between filial and foetal cannibalism. The distinction is that the former can be understood as an active act to increase the chances of survival of a certain number of young offspring and the latter could be seen as a passive act done for energy conservation purposes. The fact remains, we do not know what might be happening in the sleeping burrows and report on the frequency of such events (whether a mother meerkat always consumes her foetus post-abortion), but we do know that the end of a pregnancy is bloody, and as much as we do look forward to the pups, we are realistic about the potential loss of litters in the near future.

We currently have six official pregnancies in five groups, all of which are reaching delivery date soon. The Kalahari is a harsh terrain, but we remain optimistic that most litters will be successful and look forward to welcoming new pups to the world.



Pregnant Whiskers female Archangel and two Whiskers individuals. Photo credit: Sofya Melnikova, Life History Coordinator.

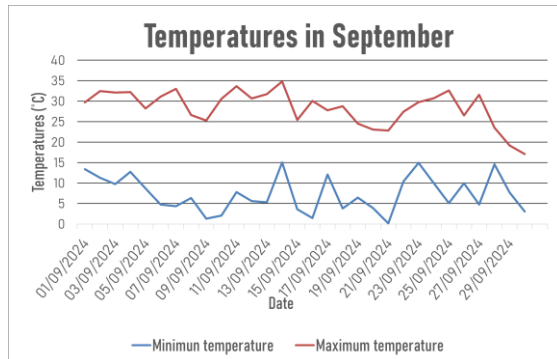
References

- ¹ Young et al, 2006. Stress and the suppression of subordinate reproduction in cooperatively breeding meerkats.
- ² Macleod et al, 2013. Factors predicting the frequency, likelihood and duration of allonursing in the cooperatively breeding meerkat.
- ³ Davenport, M.E., Bonsall, M.B. and Klug, H. (2019) Unconventional care: offspring abandonment and filial cannibalism can function as forms of parental care.

Pregnancies in September 2024

Females pregnant in September	10
Females who aborted	1
Females who gave birth, litters lost	0
Females who gave birth, litter emerged	0
Females who gave birth, unknown outcome	2
Females still pregnant at the end of the month	7

Weather at the KMP



The warmth is now starting to settle in and is slowly on the rise. The average minimum temperature was 7.3°C and the average maximum temperature was 28.4°C. The hottest day was on the 14th of August, at 34.8°C. The coldest day was on the 11th with a temperature of 0°C. It did not rain throughout this month.

September 2024 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):

- 10 out of 11 individuals were present at the end of August.
- Dominant female Cleopatra (VALF008) was confirmed as officially pregnant this month.

- Juvenile subordinate female Yumi (VALF022) left on the 29th and is yet to return.
- Alba had no group splits, encounters or inter-group interactions observed this month.
- All individuals appeared healthy at the end of the month.

Brussels Sprouts (FDC):

- All 5 members of the group were present at the end of the month.
- There were no encounters, group splits or inter-group interactions this month.
- All members of the group appeared to be in good health.

Elrond's Council (FDC):

- 12 out of 13 members of the group were present at the end of the month.
- *Male dominance* remained *unconfirmed* at Elrond's Council.
- Dominant female Snoop Kat (VECF039) was made officially pregnant this month.
- Adult male Perceval (VECM048) was not seen with the group on the 24th and re-joined the group on the 25th. Adult subordinate female Mojo Jojo (VECF038) was not with the group on the 30th - she appeared at the group's sleeping burrow and foraged 50m away from the group. She went below the same sleeping burrow but came up multiple times before remaining below for the night. Mojo Jojo is yet to return to the group.
- The group had one daily group split on the 6th of this month.
- There were no encounters or inter-group interactions observed this month.
- All members of the group appeared to be in good health.

Gold Diggers (FDC):

- 12 out of 14 members of the group were present at the end of September.
- Adult subordinate female Fernet Branca (VGDF046) did not wake up with the group on the 6th. Adult subordinate female Mikasa (VGDF042) was not found with the group on the 11th.
- Fernet Branca and Mikasa are yet to return to the group by the end of the month.
- Gold Diggers had two encounters with Zulus adult subordinate male Rain (VZUM067) on the 21st. The group war danced and chased Rain away who retreated and stayed at 20m from the group. He was seen approaching yearling subordinate female Manchego (VGDF054) and sub-adult subordinate female Shambles (VGDF066) who both chattered back.
- There were no inter-group interactions or group splits observed this month.
- All members of the group appeared to be in good health.

Jaxx (FDC):

- All 13 individuals were present at Jaxx at the end of September.
- *Male dominance* remained *unconfirmed* at Jaxx.

- Dominant female Jub Jub (VJXF160) aborted a litter on the evening of the 16th - she was seen consuming one of the foetuses at the sleeping burrow.
- Adult subordinate female Baloo (VJXF080) was given her Last Seen this month.
- There were no encounters, inter-group interactions or group splits observed this month.
- Habituation at Jaxx is in *Advanced Progress*. Adult subordinate male Sneaky (VJXM170) can be followed at a 2m distance, he can now be groomed and is interested in water. He has also climbed into the scale multiple times this month.
- All individuals appeared to be in good health.

Lazuli (FDC):

- 20 out of 21 individuals were present at the end of this month.
- Yearling subordinate male Meeko (VLM300) did not wake up with the group on the 4th, he is yet to return to the group by the end of the month.
- Adult subordinate male Vegeta (VGDM038) was given his Last Seen this month.
- The group had a daily group split on the 14th.
- Lazuli had no observed encounters or inter-group interactions recorded this month.
- All individuals seemed to be in good health.

Side Quest (FDC):

- All 18 members were present at the end of September.
- Dominant female Pumba's (VZUF048) pups Truffle (VSIM039), Rolo (VSIF040) and Freddo (VSIM041) have had their first emerge, move, and forage with the group this month.
- Side Quest had four encounters with an unknown adult male this month. On the 14th the group saw and ignored an adult male who appeared at their sleeping burrow. Sub-adult subordinate male Cacao (VSIM033) chased the male away from the group who retreated and returned multiple times. On the 24th, an unknown adult male was seen going below using the same sleeping burrow as the group after the group went below. The next morning the unknown adult male emerged from a different entrance, the group war danced and chased the unknown adult male who retreated.
- The group had no observed inter-group interactions this month.
- Side Quest had one daily group split on the 2nd this month.
- All individuals appeared in good health.

Trackie-Daks (FDC):

- 7 out of 12 individuals were present at the end of the month.
- Dominant female Boubou (VTDF028) gave birth this month. Babysitting and lactation have been reported suggesting the litter is alive.
- Adult subordinate males Guardy McGuardface (VTDM012) and Kroket (VTDM022) were seen roving at Ubuntu on the 1st and both woke up back with the group on the 4th. Dominant male Coquillet (VTSM014) was not with the group on arrival on the 4th but returned and went below

with the group the same day. On the 9th, Kroket left the group during a morning session. Kroket appeared to the group who alarmed at him. He went below the same sleeping burrow as the group the same evening and was seen back with the group on the 12th. Kroket did not wake up with the group on the 18th and returned to the group the same evening. Kroket left the group on the afternoon of the 19th and returned on the same afternoon. Coquillet was not with the group on the 23rd and woke up with the group on the 24th. Yearling subordinate male Gary (VTDM033) was not with the group on arrival on the 26th. Coquillet, Guardy McGuardface and Kroket were seen roving at Ubuntu on the 29th. Sub-adult subordinate male Kanto (VTDM036) was not with the group on arrival on the 30th.

- Coquillet, Guardy McGuardface, Kroket, Gary and Kanto are yet to return to the group by the end of the month.
- Trackie-Daks had two encounters this month with an unknown adult. Both times, the group war danced at the individual who retreated from the group.
- Trackie-Daks had no inter-group interactions or group splits this month.
- The habituation level is currently *Advanced Progress*. Coquillet drinks water and gets into the scale but remains vigilant and jumpy when followed closer than 2m.
- All individuals appeared to be healthy by the end of the month.

Ubuntu (FDC):

- 17 out of 18 individuals were present at the end of the month.
- Yearling subordinate female Scallywag (VUBF067) was given her Last Seen this month.
- Yearling subordinate male Wobble (VUBM064) left the group on the 21st and is yet to return by the end of the month.
- The group had 19 encounters this month with Trackie-Daks male individuals. On the 1st, adult subordinate males Guardy McGuardface (VTDM012) and Kroket (VTDM022) were seen roving at Ubuntu. The group war danced and chased the individuals away who retreated but returned multiple times. A physical fight broke out between yearling subordinate male Hooligan (VUBM068) and Guardy McGuardface who retreated and sub-adult subordinate male Vamoose (VUBM072) chased both individuals away who retreated in the end. On the 2nd, Kroket was seen roving at Ubuntu, he approached Ubuntu dominant female Agazoth (VUBF039) who chattered, rolled and retreated while Kroket followed her, eventually retreating. On the 29th and the 30th, dominant male Coquillet (VTSM014), Guardy McGuardface, and Kroket were roving at Ubuntu, the individuals approached the group who war danced and chased the individuals away multiple times and stayed foraging at a 20m distance from the group.
- Ubuntu had no inter-group interactions or group splits this month.

- The group appeared to be in good health at the end of the month.

Zulus (FDC):

- All 6 individuals were present at the end of August.
- Adult subordinate male Rain (VZUM067) was seen leaving in the mornings of the 2nd and the 21st, both times he returned later in the day.
- The group had two encounters this month with adult male Perceval (VECM048) from Elrond's Council. On the 25th, Perceval approached the group multiple times and was chased away multiple times by Zulus dominant male Baymax (VGDM028) and yearling subordinate male Sweep (VZUM072).
- Zulus had no inter-group interactions or group splits this month.
- All individuals in Zulus appeared to be healthy.

Life History Monitoring Groups:

Dik-Diks (LHM):

- All 10 individuals were present at the end of the month.
- Yearling subordinate male Scramble (VDDM007) left the group in the morning of 4th and was seen back with the group on the 7th.
- Dik-Diks had no encounters, inter-group interactions or group splits this month.
- Habituation of the group remains in *Advanced progress* at the end of the month. Both dominant female Juliet (VGDF009) and adult subordinate Shelby (VGDF022) drink water and get into the scale occasionally. This month Juliet has shown interest in egg and Shelby is comfortable with neck grooms.
- All members of the group appeared to be in good health at the end of the month.

Nightwatch (LHM)

- 4 out of 5 individuals were present at the end of September.
- *Male dominance* at this group remains *unknown*.
- Adult males Oozy (VMPM067) and Wayne (VMPM087) as well as sub-adult subordinate female Maggie (VMPF093) were given their Last Seen this month.
- Adult males Oozy (VMPM067) and Wayne (VMPM087) as well as sub-adult subordinate female Maggie (VMPMF093) left on the 4th as part of a group split of uncertain duration. Sub-adult subordinate female Graciekin (VMPF094) left on the 10th and is yet to return to the group by the end of the month.
- The group had no observed encounters or inter-group interactions this month.
- Nightwatch had one group split of uncertain duration on the 4th this month.
- Habituation of the group is in *Advanced Progress* as of the end of the month. Adult male Waxillium (VMPM083) drinks water and gets in the scale following the water bottle. He is comfortable with 2m distance follows.
- All members appeared to be in good health and the end of the month.

Vetkoeks (LHM):

- All 4 individuals were present at the end of the month.
- Yearling subordinate male Blackjack (VVKM002) left the group on the 27th and returned to the group later the same day.
- Vetkoeks had no observed encounters, inter-group interactions or group splits this month.
- All individuals appeared healthy at the end of the month.

Habituation Groups:

Cape Crusaders (HAB):

- The group was not searched for this month as previous searches were unsuccessful. We are hoping to resume searching for the group in the coming months and hopefully fit a current member of the group with a new radio collar in order to resume habituation of the group.

Hogwarts (HAB):

- All 4 individuals and an unknown male were present at the end of the month.
- *Female dominance* at the group remains *unknown*.
- Adult female Helga (VZUF052) has given birth this month. Both Helga and adult female Salazar (VZUF051) are lactating and there is observed babysitting at the burrow indicating the pups are alive at the end of the month. The exact number of pups remains unknown.
- The group had no observed encounters, inter-group interactions or group splits this month.
- Hogwarts were visited 13 times this month. The group's habituation is classed as *In Progress*. Both Salazar and Helga, as well as sub-adult male Nkosana (VHWM001) are comfortable with hands, observers sitting and moving next to them, are interested in both egg and water and are easy to weigh. Nkosana has been fitted with a transponder this month. Sub-adult male Buckbeak (VHWM002) drinks water and has been weighed three times this month. He is easy to mark and is comfortable with hand grooming as well as movement at a metre distance. The habituation of the unknown adult male is getting better. The individual is comfortable with observers sitting at 1.5m distance but movement makes him go below. He is interested in water but has not approached the scale or eaten egg.
- All members of the group appeared in good health at the end of the month.

Mandalore (HAB):

- The group was visited six times this month, in addition the group were found to be on Heights three times this month.
- Habituation is classed as *In Progress*. The group seems to be made up of four individuals - adult male Floki (VWM241), two unknown adult females and one unknown adult but the exact group composition still remains unknown. Floki and one unknown adult female respond to yum

yum calls, and all the individuals are interested in egg frenzies and have been seen eating egg. The group will leave to forage in the morning with observers present at an 80m distance.

- We will continue visiting the group in the coming months to get them used to observers sitting and moving at a closer distance.

Phoenix (HAB):

- The group was visited seven times this month, three times the group was not found.
- A group of two adult males, two sub-adult females and one sub-adult male have been using a sleeping burrow formerly used by Phoenix.
- Habituation is *In Progress*. Observers are able to get as close as 25m sitting away from the sleeping burrow. The individuals stayed up at 25m, but movement made them go below. The group leaves to forage when observers sit at an 80m distance from the group. None of the individuals were seen eating egg during egg frenzies.
- We will continue visiting the group in the coming months and attempt to improve their comfort distance.

Whiskers (HAB) :

- All 8 individuals were present at the end of the September.
- *Female* and *male dominance* remains *unconfirmed* at Whiskers.
- Adult female Archangel (VWF259) and yearling female littermates Kylie (VWF265) and Bruce (VWF266) were confirmed as officially pregnant this month.
- Adult female Black Dragon (VWF264) was found dead on the 24th this month. The cause of death remains unknown, her skull and intestines were found 20m from a sleeping burrow.
- Whiskers had no encounters, inter-group interactions or group splits observed this month.
- The group's habituation is classed as *In Progress*. Habituation of adult males Guido (VWM275) and Gojo Satoru (VWM274) is going well. Both drink water, can be groomed occasionally and are comfortable with 1m distance sitting distance and 2m standing distance. Neither have eaten egg and were not see approaching the scale this month. Habituation of the unknown adult male is getting better, he is drinking water and is comfortable at 3m standing distance and 2m sitting distance but goes below with movement. We will continue visiting the group and increasing their comfort distance as well as potentially getting their weights.
- All members of the group appeared in good health.
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