MOUSE PORTRAIT
FEMALE 48

By Carsten Schradin

Mother: ?	**Father:** ?
Date of birth: 2002, first trapped in 2003	**Date of death:** End December 2004
Age: 2 years	**Cause of death:** unknown, disappeared
Partners 2003: Sept/Oct: M27; Nov/Dec: M171	**Partners 2004:** M415, M115, M421, M413, M423, M437
Children 2003: 7 daughters, 10 sons. **Children 2004:** 4 daughters, 11 sons.	**Grand-children:** At least 12

F: Female, M: Male

Two things characterized F48: She was fat and she nested at a place very convenient for mice, but very inconvenient for researchers. But I do not want to put her down: When I trapped her for the first time in August 2003, she was anything but fat. Her body weight was skinny 31g. Not much for an adult striped mouse which normally weighs way over 40g. F48 was starving. She was one of the very few mice that survived the devastating winter drought of the year 2003. That she was a tough one was demonstrated in spring 2003, when she got more pups than nearly any other female. And she was the only one that survived until the next spring, when she had more offspring in 2004. She was the fattest and oldest matriarch ever at our field site in Goegap. After the drought she had doubled her body weight to 70g in the late spring of 2003, but lost weight to 50g during the following dry season in May. But still she was the fattest mouse around and still in very good body condition for the season. Next spring, in November 2004, she reached her top weight with 76g. Her high body weight might explain why she had such a large territory: As the biggest female around, she probably could bully all females of neighboring groups.
The nesting site of F48 was also special. Normally mice nest in shrubs that can be easily observed by us, such that we know who is in the group by simply observing who enters and leaves the shrub. However, F48 nested in a large reed field in Goegap, half the size of a soccer field. Difficult to observe and to be sure who is in the same group and who is not. Luckily, most group members basked in the morning together at one spot, and as mice from different groups react highly aggressive towards one another we can be sure they all belonged to the same group. F48 was reliable when we were trapping. For sure she was in one of the traps. She rather seemed to be annoyed to be chased out of a trap than to be trapped. Actually, I did not really like her: She was fat and observing her nest was not much fun. Still, when she disappeared in December 2004, something was missing. Where was the fatty that had accompanied me for two years in Goegap, longer than any other mouse? I do not know what happened to her, but her numerous descendents still live in the reed field.

MOUSE PORTRAIT: MALE 113

By Carsten Schradin

Mother: F48	**Father:** M27
Date of birth: 15. September 2003	**Date of death:** February 2005?
Age: 1.5 years	**Cause of death:** unknown
Partner 2003: F42	**Partners 2004:** F129, 182, 194, 434 (all from the same natal group)
Children: 2003: 4 sons, 2 daughters. 2004: 23 sons, 25 daughters.	**Grandchildren:** At least 54.

In evolution, an individual is called successful if it has many descendants. That was surely true for the old matriarch from the grass, F48, whom we met in the last FSM-TIMES. One reason why she had so many grandchildren was her very successful son M113. M113 did not stay long at home, at his mother's nest, but soon left to live together with F42 and found his own group. However, before the winter of 2004 he left F42 behind and moved to the neighbouring group living in the shrub B18, the most famous nesting site at our field site. The reason for his change might be obvious: Here was not only one female living, but four of them: F129, 182, 194 and F434, all closely related. However, at the start of the breeding season 2004, F194 and F434 left B18 and founded their own group, leaving M113 behind with F129 and F182. But he continued his good relationships with F194 and F434, and he visited both females during the breeding season, spending several nights with them. As no other male was seen at their nest, we assume he fathered their children as well. In 2004, males were either roaming, visiting several single females, or group living, living permanently with 1-2 females together. M113 was the only one who combined both strategies, living with two females in B18, but also roaming to the two other solitary females. This explains his unusually high reproductive success.
Why was M113 so successful with females? Important might have been that he knew all his females since a long time. He was able to establish a good relationship with the females F194 and F434 before they left their natal group to establish their own groups.
For us human observers M113 seemed to be an unusually nice mouse. He was sitting comfortably in front of his nest in the afternoon, enthusiastically greeting each other mouse that came home to the nest. His kind nature might have been another reason why he was so successful with females.

To save space, we only wrote a 13 on the side of M113. Still he was a very lucky mouse.

Beginning of February 2005 M113 was living with a big family group in B44. Next to his females F129 and F182, there were 10 young adult offspring living with them. I observed M113 as always at his nest the first February days. A few days later I trapped at his nest. It was unusual not to find him in the traps, as he was usually very "eager to cooperate" to our scientific project. In fact, I never saw him again and don't know what happened to him. It seems to be another unresolved tragedy in the wilderness of Namaqualand. But his group is still one of the biggest at our field site, in the meantime numbering 28 happy mice.

MOUSE PORTRAIT: FEMALE 406

By Carsten Schradin

Mother: F117	**Father:** M28
Date of birth: 15. November 2003	**Date of death:** Still alive December 2005
Age: >2 years	**Cause of death:** still alive
Partners 2003: M437; M497	**Partners 2004:** M1625
Children: unknown	**Grandchildren:** unknown

Female 406 cautions us not to underestimate the little and inconspicuous ones, regarding them as insignificant and unimportant. Even an obvious loser can become a winner. But I never thought of F406 as a loser. I rather pitied her. As a young adult mouse she had left home, only to settle 50m away in a new nest. And here she was not alone, but joined by her sister F116 and the very kind and extraordinary nice male M437.
Her sister F116 was also a remarkable mouse and F406 seemed to live in her shadow. This was already demonstrated by the fact that F116 was 10g heavier, and this is a lot for a mouse: 45g of F406 compared to 55g of F116. The group was living in a *Lycium* shrub growing nicely directly next to a large rock. Here the mice were basking on their rock veranda every morning. It seemed that F116 was the star, being greeted and groomed by all other mice. In contrast to F116, F406 was rather shy. Often she left the nest first, disappearing in the surrounding shrubs. She was not avoiding the others because sometimes she sat in body contact with F116. However, she was by far not the social centre of the group and she was clearly subdominant compared to F116. She was somehow the ugly mouseling, the black sheep of the group.

F406 left, right her sister F116.

On the first of September 2004, F116 gave birth for the first time. However, F406 did not seem to get reproductively active. Maybe this was because it was the very start of the breeding season and F406 was not yet in a good enough body condition. Or maybe she was reproductively suppressed by her sister F116, condemned to helping raise her sister's offspring. Or was F406 infertile? Curiously we were watching the situation at this nest, asking ourselves whether F406 would breed as well, forming a real communal group, or not.
F406 gained weight during September and it seemed she was getting ready to mate, although she did not become pregnant. But all over sudden she disappeared. What has happened? The students had removed her empty transmitter, and from this day on I did not see her anymore during nest observations. Was there an accident when the transmitter was removed? But the students for sure would have told me if there was an accident, why should they keep it a secret? Still, it was strange that F406 just disappeared the day the transmitter was removed.
I remembered F406 for a long time and thought about her often. Why did she disappear all over sudden? Did she run around happily and carelessly after the transmitter was removed, running into the mouth of a predator? We trapped everywhere at the field site, but there was no sign of F406.
Five months later, nearly an entire mouse life, something very unexpected happened. The diploma students from 2004 were back in cold Germany, while the February in the Succulent Karoo did not spare us any centigrades. There was nearly no day below 30 degrees. It got quiet in Goegap but we kept monitoring the mouse groups. However, not much was happening, as the

breeding season was long over. Apart from Brigitte and I only the field assistant Berrit Kostka from the University of Munster was at the research station. As there was time, I asked Berrit to trap for 1 km along the dry riverbed going through the field site. I wanted to know whether some of our males had dispersed into this area, trying to emigrate into a group. I also wanted to know where the strange males come from, that immigrated into our study area.
Berrit was trapping for an entire week, marking plenty of mice, and finding a few dispersed males from us. But when I looked at her data, something different striked me: There was F406! She was living more than 1km away from the nest she had shared with F116 (who in the meantime had died). And she had developed well. Her body weight was over 60g, she had become a real matriarch. Berrit also trapped plenty of other mice in this area. However, as the breeding season was long over, all were young adults, and I cannot say for sure which mice were offsprings of F406. But one thing was evident: F406 had founded her own group, which seemed to be quite large, and she was living together with some of her adult daughters.
In November 2005, Stella and Julian were again trapping the dry riverbed. And again they found F406, exactly at the same place as in February. She was now way over 2 years old, one of the oldest mice ever recorded in the field. And she was still doing exceptionally fine.
The tale of F406 teaches us three lesions: First, even the inconspicuous ones can become highly successful. Second, it is not only the males that emigrate. It is generally thought that in mammals the females stay at or very close to their natal territory, while the males have to disperse to avoid inbreeding. Third, emigration can be a very good strategy, even for females. F406 dispersed more than 1km away from her natal nest, a really huge distance for a mouse. She must have passed at least 10 strange and hostile mouse groups on her way. For her it must have been the end of the world, when she finally got there. But she flourished, found her own large group, and lived an extremely long life. In fact, she is still living! However, the next time we will trap at the dry riverbed will be end of 2006, when F406 would be more than three years old. I very much doubt that we will trap her again, but I am sure we will find many of her descendents.

MOUSE PORTRAIT: MALE 141

By Carsten Schradin

Mother: F42	**Father:** M29
Date of birth: 15. October 2003	**Date of death:** Middle December 2004
Age: 1.2 years	**Cause of death:** unknown
Partners until Sept. 2003: F174, F420, F430	**Partner Nov./Dec. 2004:** F478
Children: 10 sons, 6 daugthers	**Grandchildren:** unknown

The life of M141 could be called a mouse opera, I mean soap opera: Good times, bad times, keeping to the family, which is destroyed by merciless fate, but unexpectedly at the end a new love!
But lets start at the beginning- M141 was born in October 2003, his mother was Female 42. F42 would be very proud of her son, because no other of her children became as successful as M141. When we started observing the mice in June 2004, before onset of the next breeding season, we found M141 only 100m apart from his natal nest. This was rather surprising, as normally males disperse much farther. But he still lived at our field site, and he was not alone. In a *Zygophyllum* shrub marked as F-2 he was nesting directly next to the dry riverbed. He was a very lucky mouse man, as he live here together with three females: F174, F420 and F430, sisters or halve sisters from the same group. In 2004, no other male had more females than M141. He and his females had a very nice territory with plenty of food and nesting sites. But nobody guessed at this stage that they also had a dangerous neighbor, who could bring death and destroy the little mouse luck.

On the opposite side of the river bed, less than 50m away from the nest of M141, was a large pile of stones, some stones being larger than a car. Under one of those was a little cave. It was stinking here and bones were fading in the sun in front of it.
One late afternoon in August – at least I suppose it must have been like that – when F420 was on her way back to the nest, she was ambushed at the dense reeds. It all went very fast, F420 did not even feel pain, but was immediately death. A few days later we found her transmitter at the entrance of the cave of the African wild cat.
Beginning of September the first pups were born at the nest of M141. The mother was probably F430. who was now lactating and thus had to spend extra time foraging to get enough energy. As her sister F420 she wa always foraging in the cover of the shrubs at the riverbed. But one day while foraging she heard something rustle and that was the last thing she ever heard. The paw of the wild cat killed her fast and also her transmitter was found at the African wild cat`s nest, from where one could see the nest of the mice.
This happened the 20th of September 2004, and from the harem of M141 only one female was left, F174. But three days later she disappeared as well. She did not carry a transmitter, so we do not know for sure what happened to her. But the African wild cat is for sure the main suspect!
Destiny changed the proud harem male M141 into a single parent within a very short time period. One might have suspected that M141 would leave his pups behind and leave to search for other mates. But that was not the case, and M141 spend every night in the nest with his young, and in the morning one could observe him in front of his nest where he was interacting with them. They were already weaned, more than 2 weeks old, such that they did not need their mother`s milk. However, one week after the last female had disappeared, there were additional, even young pups coming out of the nest. They were less than 2 weeks old and it was a miracle how they had managed to survive without their mother. It must have been the caring M141 who rescued their lives and helped them though this very difficult time. But how could they survive without milk? In captivity we observed how fathers can feed their pups with saliva, and this is what M141 must have done to make them survive.
The single parent M141 was living with his young from two different females in his nest. When came home from foraging he happily greeted his young at the nest. In the meantime they had become juveniles and went foraging by themselves during the day. M141 staid for more than one month with his children, until they were 6-8 weeks old. This is the age when a striped mouse becomes a young adult.
At the end of October, all over sudden M141 could not be found at his nest anymore. But it was not the wild cat that had eaten him. He had moved to a neighboring group and became the breeding male there. His sons were still living in his old territory. But M141 became again father, this time with F478. 6 weeks later he disappeared, and we do not know what happened. It his quite possible that a paw was playing a role, as the wild cat was still living at the pile of stones.