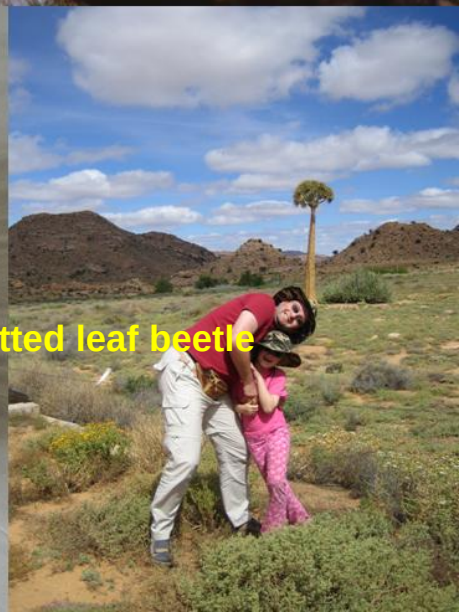
FSM-TIMES

Nr. 10, January to March 2007

FourStripedMouse

Title: Biology of the Father

Mouse portrait: M619
Insect portrait: Ten-spotted leaf beetle



EDITORIAL

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WELCOME TO THE TENTH ISSUE OF THE FSM-TIMES!

My last weeks in Goegap in October were not as nice as I seemed to have picked up some mysterious illness. On the positive side Mike Scantlebury visited us again. It always fascinates me how Mike can collect very interesting data in a short period of time. Of course this was also due to the hard work of the field assistants who monitored the study population and knew each and every mouse of more than 12 groups, where they were and what they were doing.
Just in time for the return flight, the fever disappeared and I was on my way back to Zurich. Apart from Brigi and Apollo, 48 striped mice made the journey with us. In the meantime we established a colony of striped mice in Zurich and more than 50 mice have been already born. Also, two student projects have been conducted, with interesting results: 1. Striped mice have a complex ultrasound communication system. 2. A running wheel is beneficial for keeping striped mice in captivity, as it reduces stereotypic behaviour.
Of course the project in Goegap was going on as well. Ivana and Ed got the help of two new field assistants in November. They were very busy studying the mice and all data of the breeding season 2006 is collected by now. Now the dry season starts and they concentrate on behavioural observations at the nest.
Middle of December Marc Tschudin from a Swiss TV channel visited Goegap. On the 4th of January, a short documentary about the mice will be screened on SF1, and you can watch it on the internet from the 5th on: http://www.sf.tv/sf1/mtw/index.php
I hope you had a great festive season and I wish you all the best for 2007!

Kind regards,

Carsten Schradin

THE DIFFERENT PLACES AND LOCATIONS

South Africa
As the name says, it is the most southern country in Africa. South Africa lies at the Cape of Good Hope. The population of South Africa (40 million) consists of black South Africans (e.g. the Zulu), which represent 75% of the population. 12% are white, 8% coloured, and some are Indian, Malaysian or descendents of the San (bushman). South Africa is the only industrialized country in Africa with a very good infrastructure.

Succulent Karoo
It describes a special vegetation type. It receives low rainfall in winter and is characterized by dwarf succulent shrubs and an amazing wildflower display in spring. It is a desert to semi-desert environment. Succulent Karoo is found in Namaqualand and southern Namibia. In the FSM-TIMES, the words succulent Karoo and Namaqualand are often used as synonyms.

Namaqualand
It is situated in the northwest of South Africa, between Cape Town and Namibia. Famous for its wildflower display in spring, Namaqualand was one of the world's most important copper mining areas at the beginning of the 20th century. Nowadays the diamond mines are more important. Because of its dry desert like climate, agriculture is mainly absent and population density low. Namaqualand is part of the Northern Cape Province.

Springbok
It is the capital of Namaqualand. Although Springbok has only around 20 000 inhabitants, it has shops for nearly everything, including two well stocked supermarkets. At weekends Springbok is very busy, when all Namaqualanders come here to do their shopping.

Goegap Nature Reserve
Pronounced as "Guchap", this nature reserve lays only 20kms outside of Springbok. In spring it is visited by thousands of tourists that are attracted by its wildflower display. During other times of the year it is very quite and mountain zebra, gemsbok, springbok, aardwolf, mice and mice researchers live in peace.

Field Site
This is the place in nature where the scientist collects his data. So our field site is where we observe the mice

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LETTERS

I want to thank you for the interesting scientific information you provide on your homepage. I visit this homepage since years! I also would like to greet all field assistants and students in Goegap as well as Prof. N. Pillay. I have deep respect for their hard work.

M. Ortmann (Jena, Germany)

NAMAQUALAND-WEATHER

By Edward Yuen

The summer has finally arrived in Goegap and together with it the hot weather! The field site has changed quite a lot since the flower season has ended. This come as no surprise since temperatures are soaring by the day. In November we had our hottest day yet: the thermometer went up to 44.9 degrees during the day! However it was not always hot and dry as we had a couple of cold nights and even some rainy days. One morning we were surprised to even find frost on our traps!

The last three months	October	November	December
Minimum temperatures night day	3.7	1.3	7.4
Maximum temperatures night day	40.7	44.9	43.9
Rainfall in mm	2.7	1.4	0.5
Days with rain	4	3	1

THE PEOPLE IN GOEGAP

By Ivana Schoepf

In the beginning of October Mike Scantlebury from the University of Pretoria arrived at the research station. Mike stayed for about two weeks to investigate resting metabolic rate in our striped mice. Mike was not only very enthusiastic about his work, but also about cooking and often prepared foods for us for dinner and even made a cake once!

Soon after Mike left, Carsten, Brigitte and Apollo also left us, as Carsten had to head back to Switzerland to resume his work at the university. Tobias left us shortly afterwards, so Ed and I were left alone here at the research station. However we certainly did not feel lonely, as besides the mice, we also had the many creatures of the night to keep us company! However, the quite times were soon over, as the first of the two field assistants that were to come and keep us company for the next three months arrived in the end of October. Ramona Pötzinger, a student from Germany, came to join us here in Goegap after having spent 3 months working on a giant rat research in Latjuma in the Limpopo Province. Ramona had just completed her A-level and had decided to take a year out to travel before heading to university. However she also wanted to get some experience working in the field, and she was certainly going to get what she wanted here with us! In the middle of November the second field assistant, Mirjam Barrueto, also arrived at the Research Station. Besides helping out in the field, Mirjam also had her own project, and she proved really keen in working on it right from the start. Mirjam is also very sporty (climbing is among her hobbies!), and during her time off, she often went running through the reserve: a good way to both keep fit and enjoy the nature around! In the middle of December, Marc Tschudin came to visit us. Marc works for the Swiss National TV and came to Goegap to film our mice. Marc was really keen to capture not only the life of the mice but also the spirit of Goegap itself, and he spent many hours searching the reserve for creatures great and small that he could use in his film: at some point, as he wanted to portray one of the mice major threats, he became particularly interested in snakes! Soon after Marc had arrived, Christina also landed at the Research Station. Christina has a long history with the mice, as a couple of years ago she used to be field assistant here. Christina was working on a cheetah project in Namibia for the previous months and she was on her way back home to Germany, but had decided that she could not leave Africa without seeing the mice once more. During her stay here, Christina not only had the time to get reacquainted with the mice, but she also was able to reminish about the old times and tell us just how much things had changed, or, as in some cases, had not: something that we thoroughly enjoyed as we all loved to hear her stories!

Christina, Ramona, Mirjam, Ivana and Ed.

Christina, Ramona, Mirjam, Marc and Ivana

FAREWELL NIGHT DRIVE

By Edward Yuen

When field assistant (and Goegap explorer) Tobias Feldt had to leave us and head back to Germany to continue his study in mid-October, we went out for one last night drive. Since I had been in Goegap, we had gone on a few night drives, but, maybe, due to the cold weather we didn't see much. So this time we picked a warm night with no moon and hoped that we would have success in spotting some shiny eyes.

We left the research station at around 8 o'clock. As we drove down the road next to our field site, we stopped not far from the cross road to the tourist route, some bright shiny eyes- had drawn our attention: and, there it was, about 25 meters away, we spotted our first aardwolf (*Proteles cristatus*)!! One of our "most wanted to see" animal in Goegap. With such a promising start, we continued our journey with high hopes of seeing more night life. We continued our trip along the tourist route, and suddenly we spotted something that was standing right in the middle of the road. As it turned around and took off, we realised that it was a spotted eagle-owl (*Bubo africanus*). This was really an amazing sight, as not only the bird was so close to the car that we could almost touch it, but also it was looking directly at us!

As we drew near the top of the hill, we were welcomed by another aardwolf, but this time it was so much closer than the last one (probably only 3 meters away from us!) and we could not believe our luck when soon after we saw yet another aardwolf standing in the field as if it was waiting for us! As we approached the end of the tourist route, and just when we thought that this night drive could not get any better, suddenly we spotted an unusually bright shining eye that was coming from half way up the hill. It was quite far away and normally we would not have been able to make out which animal it was, but luckily we went on this trip well prepared and armed with a pair of binoculars. With anticipation we waited to find out what this unusually bright shining eye really was. When we looked through the lenses we were all surprised and excited as we found out that it was a feline. After long observations and quite a bit of discussions, we decided it most likely was an African wild cat (*Felis libyca*), although it could have very well been a caracal (*Felis caracal*) or at least that is what I wanted to believe. As we reached the crossing where the tourist route is rejoined with the main road of the reserve, we once again spotted some shining eyes coming from far away on the plain. At first we thought it was a herd of gemsboks, as we had seen many that night, but soon we realised that it was in fact a group of mountain zebra (*Equus zebra*). We were very (pleasantly) surprised to see them so close to the main road, because many people had said that they are very shy animals and rarely come down from the hills. As we were heading back to the research station, Tobias told us that there were still two mammals on his "most wanted to see" list that he had not yet seen: steenboks and porcupines. And to our surprise, just 5 minutes down the road we saw a Bambi looking alike creature running across the field: it was a steenbok (*Raphicerus campestris*)!

Later that night, back at the research station, we realised just how amazing that night drive really had been, as we didn't expect that we could see so much in one single night. Maybe the reason was that the field conditions and the temperature of the evening were just perfect for the night life or maybe it was because it was Tobias last night in Goegap and every animal wanted to say goodbye (we even saw a gerbil coming out of the bushes onto the road side on one of our stops!). All in all it was a great experience and at the end of the night it was only the unfriendly porcupine (*Hystrix africaeaustralis*) and the shy aardvark (*Orycteropus afer*) that remained hidden from us.

How to become a field assistant?

Only people with a biological background can become field assistants. These are students of biology, veterinary medicine or related areas. The work of field assistants includes: radio-tracking, trapping and marking of small mammals, behavioural observations, work at the research station, including maintenance, and much more.

People interested in working as a field assistant for 2-3 months write an email to TU*info@stripedmouse.com*UT. Please write a short motivation and attach a CV. You will then obtain more information.

SECOND IMPRESSIONS

By Mirjam Barrueto

To be honest: I've not always been dreaming of going to South Africa. The whole apartheid and racism issue and a general preference for the world's colder places made me ignore the ad, which Carsten Schradin had placed on the notice board to find unsuspicious new field assistants, for quite a while. Anyway, it all happened as it did, and by the beginning of November I was admiring fabulous sandstone crags and other rock formations in the Cape region. These first two weeks in South Africa, which I spent rock climbing, did away with many of my prejudices. And being here at the reserve now, is not really being in South Africa, anyway. I don't think we experience much of the "world around", here. Hot it is, though.

I guess I had the same first impressions as all the other field assistants, who come here for the first time: learning how to avoid the sharp teeth of the mice, trying to

sleep despite of the bugs (I bought a mosquito-net), falling in love with the elephant shrews immediately… I'm spending the morning and evening hours doing nest-observation and trapping mice and trying to find them again in the bushes (the radio-tracking is quite like practicing avalanche rescue), and even more time in front of my computer. It's about growth rates of juveniles and what affects them, and there are tons of bits of data in many different files and worksheets, which I have to put together and convert into meaningful and easily readable graphs. I think, it's the sort of work, which is very interesting if you have done it only a few times, in the beginning of your life as a biologist (I'm in my fourth year). However, it seems that as soon as any scientist gets a few students of his own, bringing order into the data mess becomes their task. For me it's pretty good practicing, and it's a lot more interesting to collect data if one can also analyze them afterwards. And as much as I want to be a field biologist, I prefer not leaving the house during the hot midday hours.

Compared with the place I worked as a field assistant this summer, Coats Island in the Canadian Arctic, Goegap is a very comfortable place, with lots of luxuries like electricity, fridge, nearby town, big house, running water, showers... In both places, though, the work is very hands-on. One really gets to know the study object (striped mice here, thickbilled murres, there), and we also receive a good introduction into field work methods and get to practice them, which is why I'm here, in the first place. However, there is one big difference to Coats Island: in Goegap we don't have to carry shotguns with us (for polar bear reasons), there are not even lions or similar "African threats". This means, that I can go running here. For hours, if I want to. And I want. It's a great way to get around the whole reserve, get up at sunrise also on the days off, "meet the locals" (one of the workers at the reserve is training for marathon, too), and, of course, exercise the zebras, antelopes and ostriches. I actually think, as there are not really any leopards around, they use any excuse to start collectively racing and jumping around the plains. They look as if they thoroughly enjoyed their speed. I wish I had brought a video camera.

FROM MOUNTAINS TO SEMI-DESERTS

By Ramona Pötzinger

To be honest – I had a lot of doubts when I started my journey to South Africa. I recently passed my A-Levels, I wanted to have adventures and see the world and so I decided to take one year off between school and university.

What I didn't want was just simply to backpack (although it would have been tempting as well) but also preparing myself for my future biology studies – as much as possible, because I was not entirely sure whether field work was really the right thing for me.

So I decided to make good use of my time by becoming a field assistant. I have always been interested in Africa and therefore it was easy to choose South Africa as my destination.

I sent my applications to two research stations in a foreign country and I was really surprised when they both chose me. My adventure was about to start.

It was at the end of august when I got on the plane and flew to Johannesburg. I spent the first seven weeks in Lajuma in the Soutpansberg region and worked there on a project about giant rats. At the beginning it was really strange for me to live in the loneliness of the mountains, but it didn't take too long to get used to it. The nearest town (Louis Trichart) was about 60km away and we drove there just once a week for shopping.

Time passed quickly and soon I had to leave again. My new destination was the Goegap Nature Reserve near Springbok. For me it seemed like this would be unbelievably far away and –to be honest- it was a strange feeling to leave green and familiar Lajuma, when dry and foreign Springbok awaited me.

But such things belong to an adventure and so I got on the Intercape Bus and drove for 18 hours about 1200km to the west. I thought a barren and monotonous landscape and unbelievable heat-awaited me (what else do you expect from a semi dessert?!), but I could not have been more wrong about that…

I was pleasantly surprised when Ivana and Ed picked me up in Springbok and showed me around. Springbok isn't big and the locals are maybe right when they say: "what are you doing here? Why Springbok? There is nothing here!"

Ok. Here is really not much going on (they don't even have a cinema!), but nevertheless I liked the town immediately. Louis Trichart was clearly bigger but it couldn't fascinate me at all…

After we finished our weekly shopping, we drove to the research station. I was infinitely excited…As soon as we passed the gate of the reserve I realized that I was really wrong. I was in a semi desert-but nevertheless I was fascinated by the landscape. Of course – it was not as green as in Lajuma, but not less impressive for that. For the first time of my life I was able to watch oryxes and springboks in the wild.

And I fell in love immediately with the most important animal: the four striped mouse. I learned that it is a lot smaller and less aggressive than the giant rat. Moreover they are much more used to people and fortunately active during the day. That is why you don't have to wait for them at night or to set camera traps if you want to see them.

These are some of the reasons why working with the mice is fun (as long as you don't get bitten)! Moreover thanks to them I really learned a lot (radio tracking, nest observation and even how to hold a mouse in the right way)!

And though life here can be quite lonely, there are always things happening that prevent boredom or monotony, like for example a puff adder lying next to the bathroom, a zebra herd galloping over the road

nearly giving me a heart attack or Marc appearing to make a movie about our mice.
I am here now for almost two month and I am going to stay for five more weeks. After that I will travel to Australia. But I know one thing for sure: the research station in Goegap Nature Reserve and the four striped mice are things that I will never forget. I will always have them in a very good memory.

BACK TO GOEGAP

By Christina Keller

After exactly two years I returned to Goegap in December. Goegap, the place where I spend 2 month as field assistant and 6 month during my diploma thesis. Even if it seems a bit overestimated I still think of Goegap as my second home. I was more than curious how it might have changed here, when the bus arrived in Springbok. Springbok itself has not changed that much, but here at the Research station one could see easily that some time has passed. On the first view everything looked all too familiar to me and I guess I will still find every light switch in complete darkness. On the second view however I was more than positive surprised about the many improvements at the station. The new solar panels provide constants electricity and due to the new water tanks there are no water-problems anymore. Therefore the researchers can concentrate on their projects with much less disturbance by time-consuming household-problems. The number of furniture doubled and finally the uncomfortable beds that made many students backs hurting in the morning were substituted by better ones.
All in all the station looks friendlier and I was really happy to enjoy the harmonic, productive atmosphere again that is in my opinion of great value for the project.
And most important: The mice! I couldn't believe my eyes when I walked across the field site and saw a mouse with nearly every step. During my earlier stays 2003 and 2004 the mice where just recovering from a severe drought and I never saw so many mice in one place before. Of course my favorite mouse (F426) is already dead but it was great to observe her great-grandchildren at "my" nest. They were sunbasking at exactly the same spot where her great-grandmothers used to compete for the males attention. I really missed those little guys!
Now I try to get as many impressions as possible during my short stay in the red mountains and I'll try to take home some of the harmony and the beauty of this place. I thank all the researchers here for the more than warm welcome and hope that this will not be my last stay in the land of mice.

Goegap Nature Reserve

Accommodation: Guesthouse, bush hut, camp site.

4x4 routes, tourist route for all cars, two hiking trails.

Tel: +27 27 718 99 06
Fax: +27 277181286

HOMEPAGE: STRIPEDMOUSE.COM

By Carsten Schradin

Homepage Statistics

	October	November	December	**Total last quarter**
Visits of stripedmouse.com	1325	2054	2482	**5861**
Downloads FSM-TIMES, SGM-Spiegel	622	52	393	**1067**

Mouse movie: Namaqualand, in the Land of Mice

An amateur video about the fauna of Namaqualands with the striped mouse in the lead role.
Duration: 45 min.
Available as DVD in English and German.

Costs: 30 Franks + 10 Franks postage (Switzerland).
20 Euro + 10 Euro postage (rest of Europe).
20 Euro + 15 Euro postage (all other countries).

All profits will go into our research in Goegap.
To order please write an Email to: info@stripedmouse.com

TITLE: BIOLOGY OF THE FATHER

By Carsten Schradin and Volker Sommer

More information about animal and human fathers is available in my popular sciece book Die Biologie des Vaters – Was uns die Verhaltensforschung über Väter erzählen kann, *Filander Verlag, Fürth http://www.filander.de/index.html, 29.90 Euro. Unfortunately this book is only available in German.*
We already reported about paternal care in the striped mouse in the FSM-TIMES No. 2, available on our homepage.

Is paternal care in humans natural or cultural? Paternal care does not only occur in humans but in many animal species. Several factors play together in the regulation and evolution of paternal care.

The many patterns of male involvement in the animal kingdom are confusing. It includes the macho behavior of male hamadryas baboons as well as the softie seahorse male, the midwife behavior of the male Djungarian hamster, the infant eating male lion as well as the bottle feeding man from Europe.
The problems males face is whether to invest in paternal care or to seek for additional receptive females for mating. While female reproductive success is often limited by the access to food resources, especially proteins and fat, males can have more offspring when they can mate with more females. This is why normally females forage for food while males search for females. So why should any male at all invest in infant care than seeking more sex partners?
One main factor is whether males can be successful in monopolizing several females, in other words, getting a harem. If not, monogamy is often the second best solution for males, and often the very best solution for females. The simple question whether to have one or many females also has important consequences on male parental behavior.
One good example is the house mouse. Normally the dominant males are very aggressive and defend a territory with several females. These aggressive guys have no time left to take care of baby mice. However, when kept in captivity as monogamous pairs, the macho males become nice fathers, warming their little ones and taking care of them.
Similar is the pattern in the California mouse. In this species, females typically give birth to twins. However, on average only 0.6 pups of a litter survive if the female has to raise them alone, while normally both pups survive when the father is present to help. Thus, a California mouse male that decides to search for females to mate instead taking care of his young would have to inseminate at four females before his reproductive success is higher than that of a good father. This would be a very difficult task to achieve and thus California mouse males are naturally good fathers.

Good Animal fathers

Paternal care in mammals is rather rare. In 90% of mammal species males are much more willing to work hard to get access to several females than to contribute to infant care. This is in contrast to birds: While only about 10% of mammal species show paternal care, more than 70% of bird species do so.
World champion in paternal care are pipefish and seahorses (both family Syngnathidae). In these species, females often compete with each other for the access to males. This is because here the males become pregnant. Male seahorses have pouches in which they carry and nourish the eggs. In some pipefish, up to 12 females lay their eggs in the pouch of one male.
Thus, paternal care is not always contradictory to polygamy then a male mating with several females. In giant water bugs, the females lay their eggs on the back of males. The males have to take care that the eggs neither drown in the water nor dry out. The more eggs a male has on his back, the more likely it is that another female will mate with him as well.

A male giant water bug with eggs on his back.

How to become a good father?

Formerly it was thought that only maternal care is regulated by hormones. But now we know that also in many animal fathers hormone concentrations do change. One important player here is prolactin. While it got its name from its important role in the regulation of lactation in female mammals, it has many other functions too. In fact, prolactin is typically increased in paternally animal fathers, such as many bird species, the California mouse, paternal fishes and even human fathers.

In many cultures males have similar symptoms as their pregnant partners: nausea, back pain and gain in body weight often occur. This so called “couvade” syndrome does not only have a psychological basis, but also a physiological. The stress hormone cortisol is increased as well as prolactin. Stress also has the effect that the becoming father pays special attention to the upcoming event of birth, and he often plays an important role from the beginning on, even being present during birth.

Evolution in Siberia is even more advanced. The male Djungarian dwarf hamster sniffs and licks at the vagina of his partner, he pulls the pups out with his teeth and he cleans them, opening their nostrils such that they can breathe freely.

A male Djungarian dwarf hamster retrieves his pup. Photo: K.E. Wynne-Edwards.

Experience is important

Both human and mouse males are not pre-programmed by nature how to react towards offspring. In house mice, the social and sexual experience of the male determines whether he kills pups or takes care of them. The important influence of the environment already starts in the mother’s womb. In Mongolian gerbils it has an important effect whether a male embryo lies between two sisters or two brothers in the uterus. Already male embryos produce the hormone testosterone and a male lying between two males experiences an increased testosterone dose; the hormone simply diffuses from his brothers to him. Thus, his brain experiences much more testosterone than the brain of a male lying between two sisters, and this influences later adult behavior. A male who was lying between two brothers will be more aggressive and less paternal than a male why spend his uterus time between two sisters.

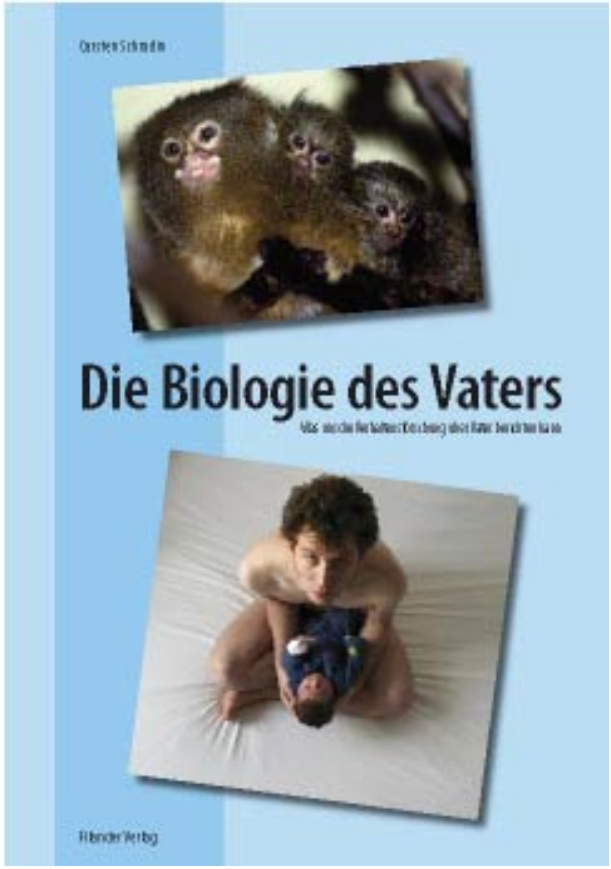
Experiences are important throughout life. For example for voles it is important whether they experienced a good father when they were pups or not. The same is the case in the California mouse. If male pups of this species are raised by a closely related but non-paternal species, they will become less good fathers than naturally.

Similar results have been found for humans. Man that were raised in families with social problems, that was abused as children, poor, had alcoholic parents, are more likely not to become good fathers themselves. But in humans we also have the cases where such men actually become especially good fathers, because they want to do it better than their own parents did.

Studies on different human cultures tell us that a good man does not always have to be a good father. A comparison of 162 cultures showed that in about half of them the father plays an important or very important role. But in many cultures the father does not play an important role, but children are nevertheless raised very well and become self confident and reliable members of their community. Thus, for children it is not important to have a good father, but that there are other adult caretakers apart from their mother that they can trust and that give them love and comfort. In many cultures this are the older siblings, the grandparents, aunts and uncles that live in the same village. However, as in the western society, humans do not live together in large kin groups anymore, but as single mother-father families, thus the role of the father is maybe more important for our culture than for any other. In the western world we will only have children that develop in reasonable, sociable and self-confident adults if fathers are allowed to play an important role.

New release:

Carsten Schradin: Die Biologie des Vaters – Was uns die Verhaltensforschung über Väter erzählen kann.
Popular science book in German about the biology of the father.
Includes many reports about the striped mouse.
Published by Filander Verlag, Fürth (Germany).
http://www.filander.de/index.html. Price: 29.90 Euro



NEWS AND INFORMATION ABOUT PLANTS AND ANIMALS

MOUSE PORTRAIT: MALE 619

By Carsten Schradin

Mother: ?	**Father:** ?
Date of birth: August 2004.	**Date of death:** Mai 2005
Age: 0.7 years	**Cause of death:** unknown, disappeared
Partners: F588, F606	**Immigrant!**
Children: 3 sons, 5 daughters	**Grand-children:** 56

F: Female, M: Male

M619 was originally from the North of our study area. He emigrated, coming down along the dry riverbed which runs through our field site. We do not monitor the mouse groups that do live up there, and so we do not exactly know where he came from. At the end of November 2004 he was at our field site, weighing 45g, thus being fully adult but born in 2004, as the males that overwintered were much heavier. He must have been born at the very beginning of the breeding season 2004 in August, and have decided to leave his natal group to seek his luck elsewhere.
First we trapped him at the grass field of group 3, where the famous F48 was living. But he did not stay long in this area. Next he was trapped at the nest of group 4 of F194, then at the nest of group 6 from F198. But he did not stay there, probably because these groups already had big breeding males.
Only at the beginning of January 2005 was he trapped at B18, the nest of group 12. And here he found his destiny, and decided to stay. And he was lucky, as this group even had two breeding females, not only one like the groups 6 and 4.
M619 was one of these typical nice mouse-guys. When he came back to the nest in the afternoon, he was greeting all other group members enthusiastically. He was not only nice to his female partner, but also to their juvenile and adult kids, his step-children.
The year 2004 was in so far unusual, as the dry season December to April was not so dry at all. Instead, we had heavy rainfall in February and an unusual breeding season. So M619 became the father of quite some mice and he had later many grand-children. However, I trapped him the last time in the middle of May 2005, but did not observe him afterwards during nest observations. We never trapped him again anywhere and thus it is likely that unfortunately he ended up in the stomach of a predator.

INSECT PORTRAIT: TEN-SPOTTED LEAF BEETLE (*CRYPTOCEPHALUS DECEMMOTATUS*)

By Stella Miranda Treffler

Once I saw a reddish beetle with black spots in the field and thought it was a ladybird. But I was wrong once again, for I saw a Ten-spotted Leaf Beetle. It is a small beetle with a body length of just 6mm. Its body is short and compact. The Pronotum is smooth and shiny, with two black patches. The Elytra has widely spaced longitudinal rows of punctures and the other eight patches, which you need to be a ten-spotted beetle. They usually sit on the foliage and stems of their host plants, characteristically dropping to the ground when disturbed. The larvae live on host plants in sac-shaped cases made from excrements and plant debris. Those beetles live in savanna and bushveld nearly everywhere in South-Africa.

CONFERENCES, PRESENTATIONS AND PUBLICATIONS

STUDENT PROJECTS

By Carsten Schradin

From October to December 2006 the yearly “great practicum” was taking place at the Department of Animal Behavior, University of Zurich. For the first time, two groups of students also worked with the striped mouse colony in Zurich. They worked very hard for seven weeks and found quite interesting results. One group studied ultrasound vocalization in striped mice and found a highly complex system of communication, which we did not know before. The other group (abstract below) studied the influence of running-wheel on the well being of striped mice in captivity.

Grasf, S. & Mächler, M. Effects of running wheels on stereotypic behaviour, body weight and food consumption in the African striped mouse (*Rhabdomys pumilio*). Institut für Verhaltensbiologie, Universität Zürich

Abstract. One aim of environmental enrichment is to reduce stereotypic behaviour. Stereotype behaviour is defined as highly repetitive, invariable behaviour patterns without no obvious goal or function. Kept in captive, striped mice (*Rhabdomys pumilio*) show a high frequency of stereotypic behaviour. In addition, the animals have the problem of getting fat very quickly because of the adaptation to its seasonal habitat. There already exist many studies on other rodents which demonstrated positive effects of running wheels in laboratory keeping and so we asked ourselves if this would also apply to the striped mouse. Therefore we experimentally gave one group of mice the possibility for voluntary wheel running, while the control group had no access to a running wheel. During four weeks we daily gathered information about behaviour (especially stereotypic behaviour and wheel running), food consumption and weight gain. The experimental groups did neither differ significantly in food consumption nor in weight gain. But the running wheel group showed significantly less stereotypic behaviour than the control group. Although we couldn’t give an appropriate answer to the controversial question, if wheel running itself is a stereotypy or not, we conclude that the use of a running wheel in captive striped mice is beneficial because it might also have a positive effects on the physical condition and reduction of stereotypies, which involve a high risk of self-damage.

VISITORS

By Carsten Schradin

In October Dr. Mike Scantlebury from the University of Pretoria visited us for two weeks. Mike measured the oxygen consumption of different male classes as an estimate of the Resting Metabolic Rate (RMR). He found that group-living males have a much higher RMR than solitary roaming males. Possibly, a higher RMR is of advantage but as it obviously costs energy, only the group living males can afford this extra cost. Group living males can save energy when sleeping in huddling groups that warms them, while solitary mice have no-one to warm the up night. This has already been shown by Mike during one of his previous visits.

Mike measures the oxygen consumption of a striped mouse to get an estimate of its energy consumption

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STRIPED MOUSE SOON ON TV

By Carsten Schradin

In November Marc Tschudin from the Swiss TV visited us at the University of Zurich to film the mice. In December he went to Goegap for two weeks to do more filming in the field. The result will be a small documentary about our work on the striped mouse on Swiss TV 1 on the 4th of January in the programme MTW. You can see this documentary also on the internet from the 5th of January on under http://www.sf.tv/sf1/mtw/index.php.

FUNDING OF RESEARCH: CALL FOR DONATIONS

REPORT 2006

By Carsten Schradin

We got very few donations last year, in total only 173 Euro (in 2005 it was 898 Euro). No reader of the FSM-TIME made a donation. Four readers of the German SGM-Spiegel made a donation, of which one was from Switzerland, the other three from Germany. Thus, only 2.6% of the subscribers and only 0,2% of readers made a donation.
Apart from donations we got 60 Euro by collecting hair samples for a colleague in Germany. Furthermore, 5 DVDs were sold for 92 Euro (students that participate in the project get the DVD for a lower price).
The only expenses in 2006 was the production of 20 DVDs for sale. In total, we had 2006 an income of 325 Euro, 74 Euro were still available from 2005. Therefore, at the moment only 234 Euro are available. As we have only few money from foundations for 2007, we would be grateful for any future donation.

Category	Income in Euro
From last year	74
Donations SGM-Spiegel	160
Donation box Goegap	13
Samples	60
DVD	92
Sum	399
	Expenses in Euro
DVD production	165
Sum	165
Total	234

SUBSCRIBERS DONATION

We appeal to all subscribers of the FSM-TIMES to donate 80 Rand (10 Euro, 15 dollars) a year for research on the socio-ecology of small mammals in Goegap. Donations of more than 80 Rand are welcome and donors of 400 Rand (50 Euro, 75 dollars) will be mentioned in the next FSM-TIMES.
Donations will be used for the following purposes:
1. Scientific research on small mammals in Goegap, especially smaller research projects such as Diploma and PhD theses, which have difficulties in raising funds elsewhere.
2. Improving the infrastructure of the research station.
In the last issue of the FSM-TIMES of every year we will publish how much we received in donations and how the money was used.

Account details

South Africa
Standard Bank
Branch: Braamfontein
Account name: Wits University Foundation
Account No.: 002900076
Branch code: 004805
Swift code: SB ZAZ AJJ 00480502
Please state L.2112 as reference.

Germany
Carsten Schradin, KSK Esslingen, BLZ 611 500 20, Konto Nr. 7434686

Switzerland (deposits in Switzerland)
Postkonto 80-643-0
Finanzabteilung der Universität Zürich, 8001 Zürich
Reference: Kreditnummer 37202508, Projekt Striemengrasmaus
(it is very important that you state the Kreditnummer)

Switzerland (deposits from abroad)
Zürcher Kantonalbank, Hauptsitz, CH-8010 Zürich
Account No: 1100-0109-594 (BC 700)
Finanzabteilung der Universität Zürich, 8001 Zürich
Swift-Code: ZKBKCHZZ80A
IBAN: CH51 0070 0110 0001 0959 4
Reference: Kreditnummer 37202508, Projekt Striemengrasmaus
(it is very important that you state the Kreditnummer).

ACKNOWLEDGEMENTS

We are very grateful to the following people who donated and whose assistance contributed to the continuation of our research project.

Family Ortmann, Germany: Donation of 90 Euro.

THE MOUSE'S TAIL

NEST OF MOUSE EATER FOUND!

Good news came in November: The nest of the jackal buzzards foraging at our field site was found in the mountains „nearby". While this was too late for the mice that ended here, this increases our chances of getting the expensive transmitters back from the radio-tracked mice that fall victim to these cruel mercy-less mouse eaters.

SWISS STRIPED MICE

In October South African Airways had some very special customers: 48 striped mice were traveling in ten boxes from Goegap to Zurich. All of them arrived alive and in very good conditions, moving in into the new striped mouse room at the Department of Animal Behavior. Twelve breeding pairs were established which very soon took their job seriously.

PUFFADDERS

This year was relatively calm regarding visits of poisonous snakes at the research station. Still, in October a puffadder was found in front of the bathrooms. As puffadders normally do not take baths or showers, the snake was removed and released elsewhere.

COMING UP IN THE NEXT FSM-TIMES

The main story in the next FSM-TIMES will be about the reptiles of Goegap: A Story of Desert-Dragons and Enchanted Princes of Sand –Reptiles and Amphibians in Goegap

SGM-SPIEGEL

The FSM-TIMES is also published in German, as the SGM-SPIEGEL. If you want to receive the German version, write an email to: info@stripedmouse.com, please write„SGM-SPIEGEL Abo" in the subject of your email