

FSM-TIMES

FourStripedMouse



Frohe
Weihnachten und
einen guten
Rutsch ins neue
Jahr !!!

Merry Christmas
and a
Happy New Year !

Title: Weihnachten Christmas

Reports by students
Meerkats

New series: raptors in Goegap !



EDITORS

Dr. Carsten Schradin, Brigitte Schradin.

IMPRESSUM**ADDRESS**

Goegap Nature Reserve, Succulent Karoo Research Station, Private Bag X1, Springbok 8240, South Africa.

carsten.schradin@zool.uzh.ch

HOME PAGE

<http://www.strippedmouse.com>.

PUBLICATION DATES

The FSM-TIMES is published quarterly, in January, April, July and October. The FSM-TIMES is sent as email-attachment in pdf.

SUBSCRIPTION AND FEES

To subscribe to the FSM-TIMES, write an email to: carsten.schradin@zool.uzh.ch. In

the subject field write "FSM-TIMES subscription". No more text is needed. You will then get the FSM-TIMES four times a year as an email attachment. Subscription to the FSM-TIMES is free of charge. However, we would welcome donations of R 80 (10 Euro, 15 US Dollar) a year to contribute to our research projects at the Succulent Karoo Research Station in South Africa. Larger donations are welcome too. To unsubscribe, write an email to carsten.schradin@zool.uzh.ch, and write in the subject field "CANCEL FSM-TIMES".

COPYRIGHT AND EXCLUSION OF LIABILITY

All rights reserved. Reproduction in whole or in part without written permission of editor is prohibited. The FSM-TIMES and editors are excluded from any form of liability

CONTENTS OF THIS ISSUE	
3	WILLKOMMEN BEI DER 22. AUSGABE DER FSM-TIMES !
4	WELCOME: THE TWENTY-SECOND ISSUE OF THE FSM-TIMES!
5	NAMAQUALAND-WEATHER
5	THE PEOPLE IN GOEGAP
7	International food in Goegap
9	Ungebetener Besuch
10	Unwanted visitor
11	Christmas lights and festive spirits
13	HOME PAGE
13	SOLAR POWER
16	TITLE: WEIHNACHTEN IN GOEGAP
20	TITLE: CHRISTMAS IN GOEGAP
21	NEWS AND INFORMATION ABOUT PLANTS AND ANIMALS
21	The sentinels of Goegap
24	Toktokkies in Goegap
25	Raptors in Goegap
26	Common kestrel (<i>Falco tinnunculus</i>)
27	CONFERENCES, PRESENTATIONS AND PUBLICATIONS
28	FUNDING OF RESEARCH
30	THE MOUSE'S TAIL

WILLKOMMEN BEI DER ZWEIUNDZWANZIGSTEN AUSGABE DER FSM-TIMES!



Liebe Leser,

dies ist die
zweite deutsch-
englische
Ausgabe der

FSM-Times. Seit November bin ich wieder in Goegap, und ich habe die Forschungsstation in sehr gutem Zustand vorgefunden. Allerdings gab es ein Problem: Nicht genügend Strom! Zurzeit sind Solar-Paneels ungewöhnlich günstig, da die Rohstoffpreise (Silizium) sehr niedrig sind und die Nachfrage wegen der Finanzkrise sehr gering ist. Ich habe die Chance genutzt und 6 neue Solar-Module a je 125W gekauft, und damit unsere Stromproduktion verdoppelt. Die Solar-Module wurden durch eine Spende von Dr. Urs Thalmann bezahlt, unserem diesjährigen Golden Mouse Preisträger. Die Kosten der Installation kann die Forschungsstation selber tragen, durch die monatlichen Beiträge ihrer Bewohner.

Vor dem Winter (April auf der Südhalbkugel) müssen wir aber auch noch unsere Stromspeicherkapazität

erweitern. Die Tage werden dann kürzer und es gibt auch Tage mit Regen und wenig Stromproduktion. Deshalb muss die Batteriebank vergrößert werden. Wir wollen hierfür 10 200Amp Batterien kaufen, wobei eine 2400 Rand kostet (Euro 220, CHF 340). Hierfür fehlen uns aber noch die Mittel. Für Spenden, die einen Beitrag dazu leisten können, wären wir also sehr dankbar, auch wenn es „nur“ 10 Euro sind!

Lediglich zwei Artikel sind dieses Mal in Deutsch. Damit diese einfacher zu finden sind, sind deren Überschriften hellblau markiert, im Gegensatz zum dunkelblau der englischen Artikel.

Weiter unten finden Sie einen Artikel von mir über das Solarsystem. Ansonsten lesen Sie, wie wir über die Jahre Weihnachten in Goegap gefeiert haben. Ich wünsche Ihnen ein schönes Fest und einen guten Rutsch ins Jahr 2010.

Carsten Schradin

WELCOME TO THE TWENTY-SECOND ISSUE OF THE FSM-TIMES!



Dear Reader,

since November I am back in Goegap. I found the research station in very good shape, but we had one problem: Not enough power! At the moment, solar panels are very cheap, as resources (silicon) are cheap and demand is low. I used the opportunity to buy 6 more panels, doubling our energy production. The panels were paid by a donation from Dr. Urs Thalmann, this years Golden Mouse prizewinner, and the installation by the rent paid by everybody staying at the research station. However, before winter (April in the southern hemisphere) we also have to increase our power storage capacity, to get through the period

with short days and rainy periods. For this we want to buy a second battery bank of 10 batteries of 200 Amp each. Each battery costs Rand 2400 (Euro 220, US\$ 340), and we welcome all donations helping us to cover these costs.

Two articles in this issue are in German. Their headings are marked in light blue, in contrast to the dark blue of the English articles.

In this issue you will read about solar power and about how we celebrate Christmas in Goegap. I wish you a Merry Christmas and a Happy New Year!"

Carsten Schradin

NAMAQUALAND-WEATHER

By Carsten Schradin

THE LAST THREE MONTHS	October	November	December
MINIMUM TEMPERATURES			
NIGHT	9.1	8.8	9.7
DAY	19.2	17.7	21.5
MAXIMUM TEMPERATURES			
NIGHT	19.3	17.8	22.3
DAY	35.7	34.6	37.2
NIGHTS WITH FROST	0	0	0
RAINFALL IN MM	2.0	16.5	0
DAYS WITH RAIN	4.4	4	0

THE PEOPLE IN GOEGAP

By Ed Yuen

The last three months have been rather busy here at the research station. At the beginning of October, Claudia Menzel, a student from Germany, joined our field team as a new assistant. It wasn't the first time Claudia had been in Goegap. She in fact had visited the reserve a few weeks earlier, in August while on a two-month trip through southern Africa with her mum. Initially Claudia was rather quiet and kept to herself, but after breaking the ice, she became fully integrated in our non-so-little-anymore team. With the arrival of Claudia, we thought the research station had reached its full capacity; after all we were already 9 people. However there was room for more. In the middle of October we received the visit of Prof. Simone Sommer, a friend of Carsten and fellow biologist.

She was on her way to Namibia with her husband for a holiday, but before crossing the border she thought it would be a good idea to drop in on us. It was really nice to meet her and her husband and to hear their stories. They only spent two days in Goegap, but they enjoyed their visit very much: besides getting to know our project they also had the chance of taking many pictures of small mammals. Just a few days after they left, Carsten, Bridgette, Apollo and the new addition to the family, little Zora, arrived in Goegap. There was now a record of 13 people living at the research station! Thought this number doesn't sound that much to many people, for us here is a huge number, considering that normally there is an average of four-five people. However, we did not have to

live for too long under the same roof. After the departure of Erwan, Nino and Stribling in the end of November, the research station just kept losing people. Next to leave was Marta, she had been with us for more than five months and it really was a sad time to

see her leave. We didn't even have the time to get used to the fact that she was gone, that the day after her departure, Claudia also left. After a few crowded months at the research station we are now back to a more normal size of 8 people.



November 2009: Erwan, Sam, Rachel, Carsten with Zora, Claudia, Stribling, Nino, Marta, Apollo, Ivana and Ed.

INTERNATIONAL FOOD IN GOEGAP

By Stribling Stuber

It's International Food Week here at the Succulent Karoo Research Station. We have decided to mine the rich caches of cultural wealth in our little South African melting pot, and are currently in the middle of a week long Tour du World edible extravaganza.

I started the week off with classic American comfort food: two huge pans of baked macaroni and cheese, and two pretty-good-for-my-first-homemade-crust apple pies. I also served a big pile of low country boil, but somehow the combination of sausage, shrimp, corn, and potatoes – a favorite of summertime family gatherings on the southeast coast – didn't quite translate when served in a small pot on a small stove in a small kitchen. Maybe it's because low country boil is just as much about the gathering as the food, and is most often served on humid summer evenings, an indiscriminate pile-o-food on a picnic table covered in newspapers, just a short walk from the ocean. Or maybe it's because I had to substitute the usual fresh-caught wild Georgia shrimp with pre-cooked, shelled, and frozen cocktail shrimp that came party-ready, displayed in an icy pink ring around a tub of sauce. It was not bad -- it just wasn't the same. I think most everyone enjoyed the mac & cheese and apple pie.

The next evening, Ed served up a big bowl of fried rice with eggs and vegetables, and green tea to drink. It really did the job of satisfying my craving for Chinese food, and was

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 CARSTEN.SCHRADIN@ZOOL.UZH.CH.

PLEASE WRITE A SHORT MOTIVATION AND ATTACH A CV. YOU WILL THEN OBTAIN MORE INFORMATION.



fresher and even tastier than the food in US Chinese restaurants.

The following day, we got our Afrikaaner on and went out to dinner! (This is a historical event. It was the first time most of us had been anywhere beyond the research station after dark.) We ate in a real restaurant, with real menus, and real eat-a-kilo-of-steak-and-get-your-name-on-our-wall challenges. I declined the kilo o' cow challenge, but the burger I ordered was as large as my head anyhow. I had to channel my inner snake, unhinging my jaw in order to properly bite it. Three in our

crowd did take on the challenge, however, and two of them actually made it through the whole steak (and side items, a few beers, and a dessert to finish). Determined to get the most out of our night in Springbok, after dinner we headed to the local bar, The Inferno. With such a name, you might imagine tattooed patrons with mutton chops, dark clothes, leather vests, and studded accessories. It was, in actuality, a relatively calm place, with a general mood of alcohol-induced lethargy, despite the frantic and terrible music selection, heavily populated with bad techno remixes. People either mosed around playing pool, sat at the bar and chatted with the drunk, portly bartender who owned a small wiener dog that was the bar mascot, or sat at one of the few tables and chatted. I mostly fell into the latter category. We did get to try a few very South African drinks. The bartender, his generosity increasing suspiciously by the hour, poured some kind of chili-spiced liquor shot, and then broke a big piece of biltong (southern African dried beef) into dippable-sized chunks, gesturing for all of us to try it. As far as bar snacks go, it at least ranks above salted nuts. We tried a Springbok shot; whether named after the animal, town, or the South African rugby team, I'm not quite sure. My money is on the rugby team – the minty sweet shots, layered red, gold and green, share the team's colors. We headed back in the wee hours of the morning, after the bajillionth game of poker. Heads nodded in the backseat as we drove slowly back towards the research station, careful to avoid the gemsbok hanging out in the middle of the dirt road, apparently

unperturbed by the late hour. A real weekend, at last!

Sunday we had a full English breakfast around noon – the grease and salt a perfect antidote to the beers from the previous night. The fantastic spread included sausages, bacon, mushrooms, eggs, tomatoes, baked beans, and toast. Unfortunately, Sam and Rachel, the lovely people who made it for everyone, also happened to be the ones who ate a kilo of meat the night before. They couldn't bring themselves to eat their own breakfast.

Sunday evening was another awesomely-heavy and entirely-worth-it meal. Ivy, the resident Italian, made two giant, delicious pans of meaty, cheesy lasagna with her grandmother's 3-hour sauce.

Claudia, my roommate from Germany, made a comfort food favorite from central Europe the next night: milk rice. It's a creamy, thick rice porridge, served hot with applesauce (which she made from scratch), cinnamon, and sugar. It just so happened that that day had been uncharacteristically cold and blustery, so a warm porridge supper was perfect.

Nino and Marta, the Swiss duo, provided our next supper of mushroom risotto, from Ticino, the Italian region of Switzerland. Creamy and delicious, the dish was such a hit that we've had "risotto" nights several evenings since.

Erwan cooked up a delicious French lunch with a cream based pizza topped with bacon and onions to start, and a simple and very tasty main course of potatoes, ham, and herbed yogurt.

Sam and Rachel proved once again that British food can be appetizing -- they prepared a hearty shepherd's pie for supper. The layers of cinnamon-spiked savory mince, mashed potatoes, and melted cheddar disappeared quickly from the dish. Our international food week ended with one more Swiss meal, with much effort, frustration, and laughter on the part of the cooks, Nino and Marta. We enjoyed freshly-fried Rosti, or huge potato pancakes, with a side of sausage and onions.

With the rosti, our official international food week ended, but our international food experiences did not. Carsten and Bridget invited everyone to a Potjie on a warm Sunday afternoon. Bridget spent quite a lot of time and effort creating, seasoning, and stirring the big pot of stew, and in the end her efforts were well worth it. The stew contained big bits of lamb and more vegetables than I can list. It was a hearty and delicious end to our culinary trip around the world.



Brigi doing the Potjie and everybody enjoying it.

UNGEBETENER BESUCH

Von Claudia Menzel

Es war Sonntag und ich genoss es lange zu schlafen. Gegen acht Uhr sah ich das erste Mal auf die Uhr und ich entschied mich noch ein bisschen weiter zu schlafen. Gegen elf sah ich ein weiteres Mal auf die Uhr und dachte mir „Jetzt ist Zeit

aufzustehen“. Ich warf einen kurzen Blick durch mein Wendyhaus-Abteil. Da war etwas was nicht hierher gehörte. Es gucke genauso verdutzt wie ich: Eine Schlange! Sie war direkt neben meiner Hose, die ich eigentlich anziehen wollte, die neben meinem

Bett lag. Ich war geschockt. Meine einzigen Gedanken waren: es ist keine Kobra und es ist keine Puffotter. Ich hatte bis jetzt keinerlei Erfahrungen mit Schlangen hier in



Goegap gemacht. Die sollte meine erste sein. Ich versuchte mir Muster und Farbe einzuprägen – für den Fall der Fälle. Anschliessend wollte ich ein Foto machen, aber meine Kamera war nicht hier, wie es immer ist in solchen Situationen. Sie war im Haupthaus in meiner Feld-Tasche (für die interessanten Tiere draussen).

Ich wartete.

Nach einigen Minuten entschied sich die Schlange Stribling's (sie war

schon wach und in der Küche) Abteil zu erkunden. Ich nutzte den Moment um mich schnell anzuziehen – natürlich immer die Schlange im Auge. Ich verliess das Wendyhaus um mir Unterstützung und meine Kamera zu holen. Wir gingen geschlossen zurück zum Wendyhaus – mein Finger bereits auf dem Auslöser.

Wir öffneten die Tür zu Striblings Raum. Dort war sie. Die Anderen waren kompetenter und konnten mir schnell Entwarnung geben: eine Karoo-Sandschlange (*Psammophis notosticus*) – nicht giftig. Das war eine grosse Erleichterung. Dennoch war ich immer noch geschockt, genauso wie es die Schlange war, als sie sechs aufgeregte Studenten sah. Ich öffnete die andere Tür des Hauses und die Schlange verschwand schnell im nächsten Busch. Ich habe leider kein gutes Foto machen können.

Immer noch geschockt, ging ich in die Küche um zu frühstücken – wie an einem ganz normalen Sonntag.

NON INVITED VISITOR

By Claudia Menzel

It was Sunday. I enjoyed sleeping late. About 8 o'clock I first checked my watch. I rolled back over. At 11 o'clock I checked my watch again. Time to get up! I glanced around my part of the wendy house. There was something, or better, somebody what was not supposed to be there. It looked nonplussed like me: a snake! Right in front of my bed, next to my

trousers which I wanted to put on. I was shocked. My only thoughts were: it's not a cobra; it's not a puff adder. I had no experiences with snakes here in Goegap yet. I tried to imprint the pattern and the color – just in case. I wanted to take a picture – but my camera wasn't here, as always the case in such moments. It was in the main building in my work bag...

I waited.

After a few minutes the snake decided to explore the other part of the wendy house (Stribling was already awake and in the kitchen). I used this opportunity to quickly put my clothes on— of course, I always kept an eye on the snake. I left the wendy house and got the students support. I fetched my camera and we all went back to the wendy house. My finger was already on the release.

We opened the door to Striblings compartment. There it was. More competent students gave the all-clear: it was a Karoo Sandsnake (*Psammophis notosticus*), not poisonous. This was a big relief to me, even though I was still shocked;

just as the snake was, when it saw six students with cameras. I opened the other door of the wendy house and the snake disappeared into the next bush. I didn't take a proper picture. Still shocked, I went to the kitchen and ate my breakfast, like any normal Sunday.



CHRISTMAS LIGHTS AND FESTIVE SPIRITS

By Rachel Hughes

Christmas in Goegap for me, and my fellow research assistant Sam, is a slightly daunting prospect because it will be the first Christmas we spend away from our homes, friends and family. However, I was pretty chuffed to be here last week to witness the turning on of Springbok's Christmas lights and all that entailed.

In the UK for sure, and I would imagine other parts of Europe too, the Christmas lights being switched on is big news...it usually happens at the end of November and in big cities it is accompanied by huge crowds, sometimes fireworks, and always a local "celebrity" doing the honours of pressing the button and illuminating the city. Even my small rural town in Devon, Colyton, has a night of

Christmas music being played outside the town hall whilst Santa is pulled round the town on a sled-esque motorised float.

But, misguidedly I was not expecting much from the Springbok light switch-on, so when I arrived at the Sports ground behind the Super Spar on a warm Saturday night beginning of December, to find what looked like a festival with marquees, live music and a multitude of stalls I was both pleased and incredibly excited.

The sports ground was packed with people; a large crowd was gathered round the stage, more at the bar and surrounding food stalls, serving a delicious selection of braaied meat, and even more buying or selling flashing devil horns and fibre optic

wands. Wandering around when we first arrived I suddenly appreciated the benefits of a southern hemisphere Christmas as an attempts to have an event as elaborate as this one in December would have been rained off in minutes in the UK.

We drank in the atmosphere for a while, ate and drank, and considered spending our money on some novelty devil horns but in the end settled on spending some at one of the jeweler stores there, a nifty bit of Christmas shopping I think. Then it was time to dance, and the music was perfect for that. Highlights included the winner of the South African equivalent of Pop Idol, and our personal favourite, a reggae band called the Rasta Men. Whilst the rest of the band was relatively youthful, the lead singer was a little older but still had amazing waist length dreadlocks and some incredible dance moves, and their seamless switching into Hero by Enrique Iglesias in the middle of a

song called I'm a Rasta Man was



nothing if not sublime.

So all in all, a thoroughly enjoyable evening and a great way to kick off the festive season here at Goegap. And just in case any of you were wondering, the Christmas lights are just as pleasing as the event for switching them on. An interesting blend of the traditional stars, Christmas trees and presents and some more unusual elephants and sea lions....a truly original Christmas all round for me and Sam.



Marta and Rachel at the festival.

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

HOME PAGE: STRIPEDMOUSE.COM

By Carsten Schradin

	October	November	December	Total last quarter
Visits of stripedmouse.com	5 366	4 589	4 836	14 791
Downloads FSM-TIMES, SGM-Spiegel	284	204	454	942

SOLAR POWER

By Carsten Schradin

We have three ways of creating energy at the research station:

1. Gas for cooking and hot water, previously also for gas fridges.
2. Solar power: Solar radiation is transformed into electricity. It is the energy in all radiation from the sun, not the heat that is used. Thus, solar panels do not create the more power the hotter it is. In fact, power production is best on cold clear days.
3. Wind turbine.

The set up:

Power is produced by the solar panels and the wind turbine to charge a battery bank of 14 car batteries of 100 Amp each. A solar regulator makes sure we don't overcharge them. Two inverters are connected to the car batteries, one providing up to 1000W, the other one up to 3000W. The inverters change the potential difference from 24V of the batteries (they are put parallel and in series) into 220V. The computers, fridges and lights of the research station get power from the inverters.



Left: Solar regulator (grey) and the two inverters (blue). The regulator makes sure we do not overcharge the batteries. The inverters change the 24V from the batteries to 220V.
 Right: 14 car batteries connected in series and parallel. They are charged by the solar panels and the wind turbine.

Some physics:

Watt: is the power or work
 Ampere: Current
 Voltage: Potential difference

$W = V \times \text{Amp}$, or $\text{Amp} = W / V$

We have 14 batteries a 12V and 100 Amp, so our power storage is:
 $W = 12V \times (14 \times 100 \text{ Amp}) = 16\,800 \text{ J/s}$

Or, as we have always 2 batteries paralleled and thus a 24 V system:

$W = 24V (7 \times 100 \text{ Amp}) = 16\,800 \text{ J/s}$.

Another way to look at this is that we have a total of 700 Amp at 24V. In practice, we measure the Amps going

to the batteries and this is why we prefer to refer to everything in Amps than in Watts.

Our power production

How much power we produced depends for the wind turbine of course on the wind speed, for the solar system on period of sunlight and temperature. Below are the values for an average day in winter and summer. In summer, solar panels do not achieve the maximum output, as it is too hot. Also, for the first and last 2h of sunshine, the maximum cannot be achieved. I give the power production in Amperes hours flowing to the batteries, as this is what we measure

Average power production in summer and in winter

	Summer (13h sunlight)	Winter (8h sunlight)
Wind turbine (max 240 W)	20 Amp	40 Amp
Old small solar system (150 W max)	60 Amp	35 Amp
Old large solar system (500 W max)	200 Amp	125 Amp
New solar system (750 W max)	330 Amp	190 Amp
SUM	610 Amp	390 Amp



Left: The old solar system, right our wind turbine.

Our maximum power consumption

This is calculated for a maximum of 10 adults at the research station, all rooms being occupied. Our electric fridges (80W) consume 4 Amp each, and it is assumed that they run 75% of the time in summer, but only 50%

of the time in winter, when it is colder (and less cooling is needed). It is assumed that on average every adult uses the computer for 4h each day (80 W) and in summer 3h of light (20W; often shared) and in winter 5h of light:

Average power consumption in summer and in winter

	Summer	Winter
3 Fridges	216 Amp	144 Amp
Computers	133 Amp	133 Amp
Lights	25 Amp	42 Amp
SUM	374 Amp	319 Amp



The new solar panels have been installed in December.

The problem:

The problem is that on rainy days in winter the solar production decreases by 50% due to clouds. So instead of 390 Amp, we only produce 195 Amp, 124 Amps less than we use. Even worse, when it is raining students tend to be in the house using the computer instead of working outside, such that our power consumption is higher. Thus, we use about 150 Amps more than we produce. (On the positive side, rainy days are cold, such that the fridges use less energy, and rainy days are often stormy, such that the wind turbine produces more

electricity). Rainy periods are up to 4 days long, such that we need about 600 Amps more than we produce. Batteries should not be discharged too much, as otherwise they brake. They should not be discharged more than 50%. Thus, to survive an energy cost of a total of 600 Amp, we need storage for at least 1200 Amp, plus storage to get us through the night with nearly zero power production. At night in winter we use about 200 Amps $((319 \text{ Amps} / 24\text{h}) * 16\text{h})$. So we need storage capacity for a minimum of 1400 Amps, better more to improve battery live.

This is why we want to increase our electricity storage capacity of 700 Amp to 1700 Amp, by adding a new battery system of 1000 Amp at 24V. This new battery system would consist of 10 batteries a 200Amp (12V) each, always two connected in parallel (1000 Amp at 24V). Each battery costs R 2400 (Euro 220, US\$ 340, CHF 340) and we are asking you to donate to help us raise the money. Every little amount helps, and if it is "only" 10 Euro!

Re-charging

After rainy and cloudy periods, the batteries can be recharged as we produce more energy than we need.

In winter, it can be recharged by 71 Amp a day (390-319), and it would take us 8 days to recharge the system.

TITEL: WEIHNACHTEN IN GOEGAP

Von Carsten Schradin

Seit 2001 arbeite ich in Goegap, und dieses Jahr werde ich das sechste Mal Weihnachten dort verbringen. Weihnachten in Goegap ist ganz anders als in Europa: Heiss, weniger stressig, kein Weihnachtsmarkt, dafür überall Weihnachtsbäume aus Plastik. Es gibt weniger Dekoration als in Deutschland oder der Schweiz,

und die Weihnachtsstimmung ist ganz anders, für den unerfahrenen Europäer gar nicht spürbar. Sehr positiv ist, dass es deshalb auch fast keinen Weihnachtsstress gibt. Ok, wenn man Weihnachtsgeschenke nach Europa schicken will, wird es stressig, denn wo findet man etwas Passendes in Springbok, und dann muss man es noch spätestens Anfang Dezember losschicken, damit

es rechtzeitig ankommt. Deshalb war ich sehr froh, 2007-2008 wieder einmal richtige europäische Weihnachten verbringen zu dürfen, mit kaltem Schmuddelwetter, Weihnachtsmarkt, Glühwein und richtigem Weihnachtsbaum. Aber nun, 2009, ist es schön, Weihnachten mal wieder in der Hitze zu verbringen (wir haben zur Zeit fast jeden Tag deutlich über 30°C). Und somit auch Zeit, sich zu erinnern an all die Weihnachten, die ich in Goegap verbracht habe: Tatsächlich war Weihnachten in Goegap für mich doch meist immer mit sehr Persönlichem verbunden!

Weihnachten 2001: Dies war mein erstes Jahr nicht nur in Goegap, sondern in Südafrika überhaupt. Alles war noch neu und spannend. Seit Dezember hatte ich in Ruben Gutzat einen deutschen Feldassistenten. Wir wohnten noch nicht in der derzeitigen Forschungsstation, sondern in einem kleinen Häuschen 2km vom Office, neben der Müllkippe der Miene. Am Heilig Abend braaiten (=grillten) wir, und aus Rotwein und einem komischen Misch-Masch aus Gewürzen hatten wir eine Art Glühwein zusammen gepanscht. Tatsächlich kam eine Kaltfront rein mit kaum über 20°C tagsüber, so dass der „Glühwein“ gar nicht so schlecht schmeckt. Nachts gingen wir auf eine Nachtfahrt, bewaffnet mit viel Bier. Mitten auf der 4x4 Route hielten wir an und packten unsere Schlafsäcke aus. Die Nacht verbrachten wir unter dem atemberaubenden Sternenhimmel Namaqualands und fuhren dann am frühen Morgen zurück. Am ersten Weihnachtsfeiertag schliefen wir vor

allem, am zweiten arbeiteten wir wieder im Feld, da es sonst nichts zu tun gab.



Weihnachten 2001 waren wir noch nicht in der heutigen Forschungsstation, sondern in dem kleinen Häuschen 10km vom Field Site entfernt.

Weihnachten 2002: Eigentlich hätte ich Weihnachten 2002 in Johannesburg sein sollen, um danach meine Feldarbeit im Grasland bei Kamberg zu starten. Zu Weihnachten kam aber eine junge Frau aus Australien zurück nach Okiep (28km von Goegap), um ihre Familie zu besuchen. Diese junge Frau war Brigitte Britz (=Brigi), die ich im Januar / Februar desselben Jahres kennen gelernt hatte, und mit der ich seitdem (nachdem sie nach Australien ausgewandert war) engen E-Mailkontakt hielt. Dies war der Grund für mich, doch länger in Goegap zu verweilen. Heilig Abend lud ich sie zum Essen ein, Weihnachten verbrachten wir zusammen in Goegap. Ansonsten war niemand an der Forschungsstation.



Milchuhu und Erdwolf, gesehen auf einer Nachtfahrt an Heilig Abend.

Weihnachten 2003: Ich war alleine, denn Brigi, die im November zu Besuch da war, war zurück in Australien, und auch alle Feldassistenten hatten die Station Mitte Dezember verlassen. Ich hatte einen Braai und machte natürlich eine Nachtfahrt. Am 25. schlief ich aus und am zweiten Weihnachtsfeiertag arbeitete ich wieder im Feld, da es nichts anderes zu tun gab.

Weihnachten 2004: Brigi war zurück, denn im März 2004 hatte sie Australien verlassen und war zurück nach Südafrika gekommen. Alle regulären Feldassistenten und Diplomandinnen hatten Goegap Anfang / Mitte Dezember verlassen, doch hatten wir mit Daniel und Lars zwei unerwartete Helfer bekommen. Beide wollten in Namibia Daten für ihre Diplomarbeit (Ethnologie)

aufnehmen, doch hatte man sie nicht über die Grenze gelassen. Während sie auf ihr Studiumsvisum für Namibia warteten, halfen sie bei der Mäuseforschung. Heilig Abend fuhren wir zu der Hütte auf der 4x4 Route (Witsand, 30min entfernt) und grillten dort. Wir hatten abgemacht, uns gegenseitig keine Geschenke zu machen, doch hatten wir trotzdem ein paar Päckchen für die beiden. Gerührt gaben sie uns ihre letzte Flasche Rotwein. Als sie dann aber ihre eigenen Bücher und Reisepässe auspackten, die wir für sie verpackt hatten, wollten sie ihren Wein zurück. Am ersten Weihnachtsfeiertag verlobte ich mich mit Brigi.



Eine Zwergmaus an der Forschungsstation erfreut sich des Christmas Braais!

Weihnachten 2005: Inzwischen waren Brigi und ich verheiratet, Apollo war auf dem Weg, und seit Oktober arbeitete ich offiziell für die Universität Zürich. Trotzdem war ich noch in Goegap. Aber „meine“ Fluggesellschaft hatte meinen Flug falsch umgebucht, so dass ich bereits am 18. Dezember zurück nach Europe fliegen sollte, nicht wie geplant am 28! Das hätte bedeutet, ich müsste Weihnachten ohne Brigi und weg von Goegap feiern, was

mich sehr traurig machte. Und auf dem Flug vom 28. war kein Platz mehr. Als ich trotzdem nochmals anrief und einen besseren Berater ans Telefon bekam, fand er einen Platz für mich auf dem Tagflug (anstatt des normales Nachtfluges), und ich konnte Weihnachten doch noch in Goegap verbringen!

Zwei Feldassistenten waren noch da, Stella Treffler und Julian Brenner. Heilig Abend hatten wir unseren traditionellen Braai plus Nachtfahrt. Am 25. schliefen wir aus und nachmittags gingen Brigi und ich nach Okiep, ihre Verwandten besuchen. Am zweiten Weihnachtsfeiertag arbeitete wir wieder im Feld, da es nichts anderes zu tun gab.

Weihnachten 2009: Dieses Weihnachten wird anders, denn es ist das erste Weihnachten mit Kindern an der Forschungsstation. Apollo (3 ½ Jahre alt) wird schon immer ganz aufgeregt, wenn er die Weihnachtsbäume in Springbok sieht, und ich habe etwas gemacht, wovon ich mir sicher war, es nie zu machen: Ich habe einen Plastik Weihnachtsbaum gekauft, 1,80m hoch, Typ Colorado Pine Tree. Im trockenen Namaqualand wachsen keine Bäume, und natürliche Weihnachtsbäume bekommt schon gar nicht. Zum Plastikbaum haben wir

auch rote Weihnachtskugeln, eine Lichterkette aus Engeln und einen Stern. Um den Weihnachtsbaum herum wird ein Zug fahren, und Geschenke gibt es natürlich auch. Dazu haben wir Lebkuchen und Spekulatius Kekse aus Deutschland mitgebracht. An Heilig Abend werden wir natürlich einen Braai haben, aber keine Nachtfahrt. Denn auch unser Baby Zora, 3 Monate alt, ist mit von der Partie, und sie ist dafür noch viel zu klein. Am 1. Weihnachtsfeiertag werden wir nach Okiep gehen, und am zweiten ausruhen.

Noch vier weitere Leute werden da sein: Ed der Research Station Manager, die Doktorandin Ivana und die zwei Feldassistenten Rachel und Sam aus Manchester. Es wird dieses Jahr also so voll sein wie noch nie an Weihnachten!

Das wird wahrscheinlich mein letztes Weihnachten in Goegap sein. Aber wer weiss, ich hatte auch nicht damit gerechnet, dieses Jahr hier zu sein. Nur weil Zora im September auf die Welt kam, kamen wir dieses Jahr so spät, und vielleicht wird es irgendwann doch wieder ein Weihnachten für uns in Goegap geben. Mit Sicherheit werden noch für viele Jahre Feldassistenten und Studenten, welche die Striemengrasmaus untersuchen, Weihnachten an der Forschungsstation verbringen !

TITLE: CHRISTMAS IN GOEGAP

By Ivana Schoepf

Traditionally Christmas day back at home in Europe represents an opportunity to spend some quality time with one's family. For my family, in particular, as many of its members leave rather far apart from each other, Christmas day is the one chance when we get to sit all together in front of a delicious meal – normally cooked by grandma – and celebrate. Mostly the celebrations consist of exchanging small gifts and spending the rest of the day – from noon till late at night – sipping wine, eating sweets and discussing various issues (one of the old-times favorite topics, as many other Italian families, being politics). This is how it normally is, but for the past three years Christmas has been rather different for me, as I have been spending time in the field in South Africa. But luckily I was not on my own. There are always the mice and depending on the year, one or two field assistants. So, how did we celebrate the 25th of December thus far? The first year, there were only four people here at the research station: besides Ed and myself, there were two field assistants: Ramona Potzinger and Miriam Barruento. We started our Christmas celebration on the 24th with a night drive. The drive was really pleasant and we saw a lot of animals, thought it did end up rather unexpectedly. Just 1km before the research station the car broke down (it was still the very old Ford) and we had to push it. Well, it wasn't fun, but it certainly made for a

different Christmas experience! Christmas day itself was rather quite in comparison. We just cooked a large meal and ate all together. Later in the day we got a visit from Willem, who works in the reserve, and its family. We had tea and ate the cake that we made specifically for the occasion. My second Christmas in Goegap was even more quite. It was only three of us here: Ed, I and Gaby Schmol, a master student from Zurich. We all stayed at the research station and spent the day watching 'Everybody Loves Raymond' (an American sitcom). On our third Christmas in South Africa we were again only three people (Ed, myself and Eve Davidian, a field assistant from France), but we decided to do something a bit more exciting. Hence we drove to the Kalahari Transfrontier Park and spent two days there. It was a great decision! On Christmas Eve as we were cooking our meal around the fire, we received a visit from one of the local churches' choir. The choir was made up of about ten people



carrying candles, which went around each camp singing Christmas carols. It was a really magical experience to be sitting around the fire, listening to the carols under the stars. And for Christmas day we were also treated to something special as during our

drive around the park, we were lucky enough to see a brown hyena! Last year in the Kalahari was certainly the best Christmas yet I had in South Africa. Let's see what my fourth year will bring.

NEWS AND INFORMATION ABOUT PLANTS AND ANIMALS

THE SENTINELS OF GOEGAP

By Marta Wasta Wastawino

A few months ago, Ivy and Ed went out with their new Landrover on the 4x4 Route of Goegap. When they came back to the Research Station, we asked them if they spotted something (or someone) interesting and the answer left me very surprised. They came across a meerkats group.

Until that Sunday, when Ed and Ivy had their first "safari" with their white Landy, I did not know that meerkats were actually present in Goegap. I was aware that other social groups of small mammals lived here, like yellow mongooses and dassies, because is not difficult to spot them while trapping our mice or while sitting on the main field site during nest observations. Before I came here I new that some very shy mammals as porcupines, aardwarks and aardwolfes were present in Goegap but that it was really hard to spot them, principally because they are nocturnal living animals. I had no clue

about meerkats. During my whole stay in Goegap (5 months until now) I had the luck to see one aardwolf, but I never, even after Ivy and Ed's sight, saw meerkats. So, from my point of view, In Goegap meerkats are more unlikely to spot than aardwolfes are and I thought they will be an interesting topic for my FSM article. Meerkats fascinate me since I was a child.

Meerkats (the scientific name is *Suricata suricatta*) are a highly social mammal group and their interactions and group mechanisms represent a very interesting topic for researchers. In Southern Africa, meerkats are commonly present in all the semi arid regions. They are small carnivores: their body length can reach the 50-60cm (form head to tail) and their weight varies form 620 to 690g. Their fur is fawn to silvery gray with darker and irregular bars that go transversally across the body. The

head is round and they have dark round spots around the eyes.

Meerkats are observed to feed on different type of food depending. Their food spectrum varies from small insects (that usually constitute the most percentage of their diet), small birds, eggs, and reptiles such as geckos. Meerkats' feeding technique is mostly based on digging: they can displace a large quantity of sand (more than the meerkat's body volume itself!).

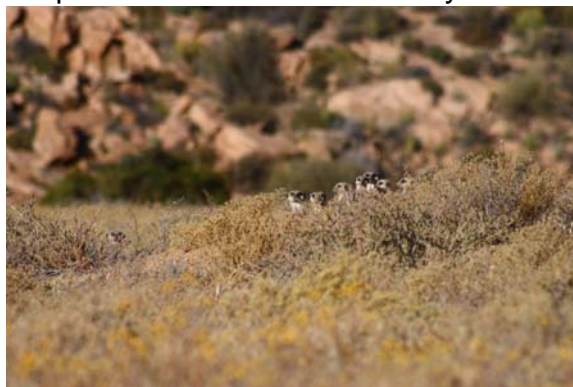
Meerkats live in territorial groups with on average of 10 individual, usually females and males are equally present in the population. Both sexes can disperse once they reached sexually maturity.

Given to their relatively small body size, they are easy preys for other mammals as jackals, wild cats, for snakes and for raptors too. So, meerkats have to defend themselves against predation coming from the ground and at the same time from the sky. The high predation pressure to which they are exposed to is one of the main causes that leads the meerkats to team up and create social groups where each individual is important for the survival of the others. In this way, individuals are able to optimize their foraging time while others are scanning the sky and the surrounding areas to detect in a very quick way possible predators.

Meerkats present two different strategies to protect the group against predation. The first method consist in a vigilant behaviour of each forager individuals: while feeding, each meerkats will stand up on its hind legs every now and than to search and scan for predators. It is proved that in larger groups the individual

scanning rate is considerably lower due to the fact that more individuals are involved in the vigilance, leading to an easier and faster detection of dangers. On the other hand, individuals living in smaller groups have to be more alert and increase their scanning rate.

While the former described vigilance method could be called a "non specific defence" in the way that all



the members of the group are expected to accomplish the same task and at the same time, the second method is more specific and involves a "professional guard". While the whole group is feeding, one individual will patrol the area scanning the sky and the ground from strategic points such as termite mounds or dead trees and producing a reassuring "peep" noise for the other members of the group, so that they will be sure they could keep foraging without any interruption. The sentinel will patrol the area following a precise route and once finished, another individual will start with the next patrolling round.

Besides this two defensive methods meerkats present a more aggressive and intimidating way to defend the group against predators. This will be used once the predator show up and tries to attack them: they will gather together swinging from their forefeet



to their hind feet, producing a “gasp” noise with grinding mouth and with the fur fluffed up, attacking the predator all at the same time. They would look like a giant and dangerous individual and often the adversary retreat the attack.

As to warn the group against predator, meerkats use noises in other aspect of their lives: they can produce a large variety of noises depending on their activity. While foraging, they usually produce a “brrp” call. This is apparently due to the fact that they need to keep contact among each other. As already mentioned, sentinels produce different calls (“beep”) and recent studies are researching the possibility of the existence of different alarm calls depending on which kind of predator the sentinel are signalling (snakes, raptors or mammals). Other calls are used for social interactions

between individuals and they sound more like “chrr”.

Meerkats cooperate not just when predators are involved: breeding females suckles their young on their own but they will be helped by other non-breeding members of the group in raising the pups. For instance, during the day, one helper stays in the nest and take care of the pups while the rest of the group is foraging. Females start to breed when they reach the third year of age and usually during one breeding season (one a year) between 1 and 3 litters may be produced. As in some other mammals species, the quantity of offspring produced is strongly rainfall dependent (January and March present the largest rainfalls).

Meerkats are very territorial animals and despite their highly social level among a group they are very hostile and aggressive towards meerkats' neighbour groups. The sent marking

with faeces (the entire group may defecate communally) and they especially mark boundaries or areas where they find scent coming from neighbours. When two territorial groups meet, they will attack each other in a very similar way as they attack predators in order to defend themselves. The fight can be furious and generally the group with more individuals is the winner.

Reassuring, meerkats are really interesting animals because of their communication patterns especially in order to avoid (or lower) predation rate. Unfortunately, their amazing highly vigilant behaviour make them hard to spot and consequently hard to approach and study. In order to spot them, without Ivy's famous luck, we just have to be hopeful and go hiking as much as we can!

TOKTOKKIES IN GOEGAP

By Sam Lewis

Walking around the main field site, there's a good chance you will stumble across the empty carapace of a small black beetle – the rounded toktokkie, *Moluris pseudonitida*. The toktokkies are part of the Tenebrionidae, the darkling beetles, a large and diverse group comprising more than 10,000 species including the meal worms, the larvae of which are a common food for small animals



Figure 1: toktokkie larva



Figure 2: *Moluris pseudonitida*

kept in captivity. They start out life as yellow larvae (Figure 1) with three pairs of legs, hatching from white,

oval eggs that are laid singly or in batches. The adults are around 15mm in length, with a smooth black carapace and well developed legs (Figure 2). They feed on dead plant or animal material using their biting mouthparts and are predated by birds such as owls and shrikes.

M. pseudonitida, as other toktokkies, possesses an unusual mating behaviour: they rapidly tap their abdomen on the ground to attract individuals of the opposite sex, producing a distinctive knocking sound that gives rise to their common name.

RAPTORS IN GOEGAP!

By Erwan ChereI

Imagine, wide plains surrounded by hills with cliffs. Many bushes are growing upon the plains, the perfect habitat for stripe mouse, bush karoo rat and elephant shrew. On the rocks live rock dassies, lying all day long under the sun while rabbits and hares look for the cool shade of rocks. But in this beautiful landscape full of life the blue sky is omnipresent; this is a real paradise for raptors, abundant prey and nice inaccessible places for nesting. After 6 months in Goegap, I had a lot of experiences with raptors from the small rock kestrel to the huge verreaux's eagle. First of all, it is very important to know that raptors, even the biggest ones, are afraid of humans. This is why they could be difficult to identify or even just to observe. Most of the time, it is only possible to see them soaring far away or perched on trees or rocks. If you want to observe them, you have to be patient and use binoculars, and if you want to take pictures you need a good camera with at least a 300mm lens. They are some tips to find them easier; usually they always use the same perches where you can see whitewash and they hunt in the early morning and the late evening, after the sunrise and before the sunset. Finally, when you spot a raptor, be careful to not frighten it, especially if it is feeding or nesting. Some species could abandon their nest if they are disturbed or leave their prey hardly eaten.

Raptors are easy to recognize because there are no other diurnal birds of prey. They are well adapted to catch prey, with hooked bills and powerful feet which end in sharp toenails. There is a big diversity within raptors in South Africa, from the African Pygmy Falcon (15cm tall, 37cm wingspans) to the huge Martial Eagle (70cm tall, 212cm wingspans), occupying different a diversity of habitats; from deserts to forests. The order of diurnal bird of prey is Falconiformes made up of four distinct families:

Family Sagittariidae: The secretary bird is the only species in this family. This bird, with long bared legs, looks like a stork in its habits and behaviour.

Family Pandionidae: There is also one species in this family which is the osprey.

Family Falconidae: This family is made up of two genera in Africa, Falco and Polihierax. This is the family of falcon and kestrel, small size birds of prey. Their feature is not building nests.

Family Accipitriadae: This family is the biggest one with 19 genera in Africa. Eagles and vultures belong to this family, as well as smaller birds like cuckoo-hawks and sparrowhawk. It is difficult to find a feature shared by all these birds.

Not all of them live in Goegap, only a few of them are able to survive here. In this and the coming issues I

will describe the 7 raptor species I observed here: rock kestrel, pale chanting goshawk, common buzzard,

jackal buzzard, black harrier, booted eagle and verreaux's eagle.

COMMON KESTREL (*FALCO TINNUNCULUS*)

By Erwan Chere



25cm tall, 65-82 wingspans. Maybe the most common raptor in Goegap with the jackal buzzard and certainly the first you would see if you come here, they usually are on telegraph pole on the road to the research station. The body is dark brown and the head is grey, it is the smallest raptor I have seen in Goegap. You can see them hunting, they fly 10 meters above the ground and when they spot a prey, they dive down. Of course they like the taste of the striped mouse, and it happens

sometimes that one of our mice disappears because of them, but it is not the best mouse killer. It is quite easy to approach and to observe. You can also see them in Europe. They breed in hilly countries but also in mountainous countries. They don't build nests, but use cliff-nests of crow or holes in rocks, mainly any place which offers good protection for the clutch. The laying period begins in September and finishes in October. Usually the clutch is made up of 4 eggs mostly incubated by the female.

CONFERENCES, PRESENTATIONS AND PUBLICATIONS

Carsten gave a talk at the University of Basel in October. Otherwise, there are no news for this section for the last 3 months.

FUNDING OF RESEARCH: CALL FOR DONATIONS

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.

You can easily donate money online if you have a PayPal account.

Otherwise, please transfer money to one of our bank account.

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).

Further Development of the Research Station

The research station developed a lot during the last years, but there is still a way to go. We have to improve the power supply, replace gas by solar heaters (warm water), need more storage space, repair the roof and do other renovations. As described

above, most important would be at the moment a new battery bank, Here is a list of what we need, in case you know a foundation that could help us or if you want to make a considerable donation:

	CHF or US \$	€
3x Wind turbine for electricity	8 000	5 500
Battery bank for power	3 400	2 200
Solar geyser	3 000	2 000
Solar pump for water	3 000	3 000
Storage space	5 000	3 500
Renovation roof	5 000	3 500
General renovation	3 000	3 000

ACKNOWLEDGEMENTS

WE ARE GRATEFUL FOR EVERY DONATION MADE TO SUPPORT OUR RESEARCH !

New way to donate money !

Since November last year you can donate money easily online via PayPal! Just log onto our web site www.stripedmouse.com and click onto the PayPal button. We are very grateful for any contribution!

THE MOUSE'S TAIL

FAKE NINO

Before leaving Goegap, Nino had decided that he wanted to sleep outside for at least one night so that he could admire the amazing Goegap night sky. Hence one rather cold evening after a braai, he moved the old sofa's mattress outside and set up camp for the night. In the morning he woke to find a surprise: there was a strange man sitting next to him. After the initial shock of finding somebody

staring at him, he realized that he was looking at himself. Some of the field assistants had constructed a replica of Nino using his clothes and filling them up with plastic bags. They had done a great job, as from behind it looked like a real person! They had done all that just one hour after Nino had gone outside and he did not even notice it! I guess he did not admire that many stars then!

STINGING SCORPION

One Saturday night in December when having a braai, Brigi was suddenly jumping screamingly into the research station: A scorpion had stung her into the big toe, even though she was wearing shoes. But it was only flip-flops, and the scorpion's tail could reach the unprotected toe. Luckily, it was a rather harmless species, resembling "only" a bees sting. We caught the culprit later for inspection.



ST . NIKOLAS VISITS APOLLO AT THE RESEARCH STATION



This year Apollo has been a really good boy. So good in fact that he even received a visit from St. Nicholas. Apollo was very excited and a little bit surprised by St. Nicholas's visit. Initially Apollo was a bit scared and he hid under the cover, but when St. Nicholas handed him a bag full of chocolate and sweets to reward him for his good behavior, Apollo jumped out of the cover and grabbed the chocolate without any fear of St. Nicholas anymore.

GOLDEN MOUSE PRIZE-WINNERS

2009: DR. URS THALMANN

2008: KLEIN GOEGAP

2007: GOEGAP NATURE RESERVE

2006: DR. GUSTL ANZENBERGER

2005: JENS SCHRADIN