

2009 July Koanaka Hills, Botswana

When Patrick Lewis contacted me from Sam Houston State University in Texas to join them for another scientific trip to the Koanaka Hills in western Botswana, I was not too sure about it. After the liquidation of the Fascination group and us having to start our lives over, I was not sure that I could sacrifice 3 weeks in the bush. The last trip was quite brief but very enjoyable and with all of the headaches that I had worked through in the past seven or eight months, I decided to go. I asked Patrick whether my daughter Melissa could join us and was delighted when he agreed. Melissa was very excited – her very first field trip with her dad and with a bunch of very experienced scientists.

The planning for the trip took several months and from my side I ordered a bunch of chemicals through Wits University and made some accommodation bookings both in Johannesburg and in Botswana. It is not easy arranging accommodation with the lodges in Botswana by E-mail as they



Barking Gecko

seldom respond to any correspondence that you send to them.

Riaana and I met Monte and this crew at O R Tambo International Airport the evening of 8 July. Their flight arrived at 21:30 but they only made it through customs and baggage control by 23:00. The Avis Toyota Twin cab 3 l diesel was ready for them to collect. We were a bit

concerned as they vehicle keys did not have a canopy key attached but

we found it in the glove compartment. I drew them a fairly detailed map to a guest house in Fourways but they very quickly managed to get lost and by the time I called them (they had one of my spare mobile phones) they were halfway to Pretoria on the R24! We met them there and I gave them my Nuvi GPS with the guest house programmed in.

Monte Thies is a professor at Sam Houston State University and a vertebrate natural historian.

Patrick Lewis, who headed up the expedition, is also a professor at Sam Houston State University



Figure 1 Alicia Kennedy skinning a frog.

and is a mammalian palaeontologist. John Garcia, who was with us in 2008, works in outdoor education at Sam Houston, as does Megan Myrick. Alicia Kennedy is a fossil herpetologist, Richard Tutalo a palaeontologist, Nancy Barrickman an anthropologist, Molly McDonough a mammalogist/molecular systematist, Adam Ferguson a mammalogist, Colin “Ant” Wilson an entomologist and Sam Bonge a mammalogist/herpetologist.

They all drove through to our house in Irene the next morning to check out all of the equipment that was left behind the previous year – Monte, Adam, Molly and Megan, who replaced Steve from the previous year's trip. I drove off to Randburg to borrow a Satellite phone from Andre Coetzer. It was a hectic morning and we all drove off to Echo 4 x 4 to purchase a mobile shower and then we were off to Makro for an extra gas stove and groceries. Next was Centurion Mall for an air rifle and more camping gear as well as a visit to a pharmacy and lastly we looked for a hardware store to purchase mosquito wire for funnel traps but no luck.



Richard, Nancy and Patrick

We then packed vehicles until the early hours of the morning and I eventually hurt my back loading heavy plastic crates onto the roof. Everyone then drove off to the guest house while Monte headed for the airport to collect Patrick and the rest of the crew. Avis screwed up and the 4 x 4 that they had booked was already rented out to someone else. They were given a little Mercedes bus in the interim. Patrick, Monte, Alicia, Molly and Adam drove through to Gaborone in the morning as they had to do some talks while the

rest came through to Irene, still in the wrong vehicle. We got to meet Sam, Chris, Richard and Nancy. We packed and re-packed and then headed for a hardware store for the mosquito wire while Nancy drove to Pretoria to exchange vehicles.

10 July 2009

13:30 132604 km. Leaving home in Irene, Pretoria and heading for Gaborone via Zeerust.

14:25 132606 km. Had lunch at the Wimpy in Irene. Now for the long stretch to Gaborone.

17:30 132871 km. Refuelled at Zeerust. Have driven 572 m so far. Everything going well, which is always a blessing – we passed through two SAPS roadblocks but were not stopped, saving valuable time.

18:33 132924 km. Skilpadsnek Border Post. Quite amazing in that there still is absolutely no control over vehicles leaving the country. The only requirement is that I fill out the particulars of the vehicle on a clipboard but nobody actually checks the vehicle registration number or valid licence disk. No wonder so many stolen vehicles leave the country!

At the Lobatse side of the border I had to purchase road insurance for the Twincab (Pula 250.00) and for the Echo trailer (Pula 170).

20:30 133008 km. Got to Gaborone and was grateful for the GPS which took us straight to our accommodation at the Oasis Motel. Patrick, Monte and crew were in the dining room, having just finished their dinner, and soon went off to bed. I barely recognised Patrick from the previous year – he had shaven off his hair and wasn't wearing a hat. It was good to see Alicia. We had a poor meal (very tough T-bone steak that took far too long to prepare) and got to bed quite early. I shared a room with Melissa. Needless to say, she was very excited and bonding with all the crazy Americans. Well, I guess they were not all crazy.



African Red-eyed Bulbul

11 July 2009

07:00 Had a good night's rest – it was very cold but the room was pre-heated and comfortable. The Oasis Motel is typically third-world with adequate rooms, TV with one channel, very old-fashioned bathrooms and no warm water in the wash basin. Had a mediocre breakfast and headed for the shopping mall for some last-minute shopping. I had a Wimpy coffee, read a newspaper and relaxed while Melissa went looking for a belt – she eventually got one on some sort of special for Pula 1!

11:30 133008 km. Leaving Gaborone and heading west for Ghanzi.

13:40 133173 km. Refuelled at Juaneng and about to have some lunch.



16:53 133415 km. Refuelled in Kang. We still had about 3 hours of driving ahead. We saw Yellow Mongoose, Pale Chanting Goshawk, Forked-tailed Drongo, Lilac-breasted Rollers, various Plovers, Guinea-fowl and killed a Yellow-billed Hornbill (accidentally, of course).

20:00 133689 km. Arrived at Tautona Lodge in Ghanzi and booked in.



At Tautona Lodge

going well but, with the heavy load and Echo trailer, changing gears too often at 120 km/h. I noticed that there was quite a difference in readings from the speedometer and the GPS – the speedometer is about 10 km/h out (too low).

We all headed for the restaurant where we had a good meal. I had a T-bone steak with chips and it was much better than my previous meal. Both Melissa and I also had a glass of red wine, which we enjoyed. We saw an owl, a few Steenbok and two Skunks on the road. And, of course, a lot of cattle. Twilight is a bad time to drive in Africa as the cattle are difficult and sometimes near impossible to see. I had to stop to adjust the

spot lights – they were pointing towards the stars with the heavy load. The Toyota was

12 July 2009

07:00 Breakfast at Tautona Lodge and hopefully an early start for our trip to Maun. We stopped at a lion enclosure at the entrance to Tautona Lodge and managed to get some photographs of caged lion, wild dogs and some vultures.



Figure 2 African Wild Dog

11:22 133991 km. At Audi Camp in Maun having driven 1,387 km from Pretoria. Had a burger and chips for lunch at Audi camp and scratched around for some reptiles. We managed to get two Wahlberg's Striped Skinks (*Trachylepis wahlbergii*) in and around the camp where they could be found on logs, in trees and along walls where they would hide in drainage holes. These skinks are very fast and difficult to catch and if you try and get them with a rubber band, you have to use as much force as possible – they are tough.



Adam setting a trap for squirrels

We also got two Bradfield's Dwarf Geckos (*Lygodactylus bradfieldi*). They behave quite similar to the Common Dwarf Gecko (*Lygodactylus capensis*) in that they favour wooden poles that form part of the thatch structures as well as wooden and reed fences. They are diurnal and very quick to run around to the opposite side of the piece of wood or branch that they are on. One of the best ways to get them is to shoot them gently with a rubber band; with just enough force to dislodge them so that they drop down and to then catch them in mid air. They very quickly lose their tails, as Sam leant when we got the first one. Monte got a Tropical House Gecko (*Hemidactylus mabouia*) and I got a large Turner's Tubercled Gecko (*Chondrodactylus turneri*) in the toilets that were made

largely out of reeds. The toads were calling and Sam went down to some water and caught two Olive Toads (*Bufo garmani*). The rest of the crew were running around doing shopping and packing for the trip.



Checking equipment at Audi Camp

17:40 134005 km. Refuelled at Riley's. Did 840 km on the tank (6.5 km/l) which would give us a range of 940 km. Heavy going but a full vehicle with a heavy load and pulling the Echo trailer, the latter filled with 150 l of water. We went across the road to purchase some groceries. It was already dark with a lot of people milling around the parking lot. A person approached me and told me that we had a puncture on the trailer. We all got out

and went ahead changing the wheel. I was on the ground removing the punctured wheel and noticed that all of the people in our vehicle were standing around the right side of the trailer to assist when I quickly got up and went to the left side of the vehicle. A person had already opened the left front door and was eyeing all of the equipment in the front of the vehicle – GPS and cameras, but walked off quickly when he spotted me. Nothing was missing – a close shave! Turned out that someone had stuck a knife into the side wall of the tyre.

Dinner was average – at Oasis – and I had another T-bone meal. John Hancock, a geologist from Johannesburg, had joined us and the folks were tucking into some good red wine.

13 July 2009

06:10 134021 km. Packed and ready to go. We turned right at Sehithwa and then left at the Gcwihaba turn-off. We were stopped at one of the veterinary check-points where all of the red meat (we only had some boerewors) was confiscated but they let the frozen chickens go through.



Veterinary checkpoint

10:30 134265 km. We stopped for lunch in the middle of nowhere on the way to Gcwihaba and I managed to get another Wahlberg's Striped Skink (*T. Wahlbergii*), this time under the bark of a smallish dead tree.

13:27 134355 km. We stopped at a local village where Patrick and crew handed the locals some clothes and stationary. This community kindly supplied us with water for our stay at Koanaka.

14:02 134358 km. Just west of the village and we stopped for lunch. We missed a Ground Agama (*Agama aculeata*) and caught a scorpion – not sure what species.

16:30 134429 km. At Koanaka camping site. The large waterhole is bone dry – quite disappointing! We cleared the area and set up camp with the Echo trailer as a central kitchen. The trip from Maun took the best of 10 hours with a fairly quick breakfast stop and a lunch stop – peanut butter and jam sandwiches with oranges – and Energade to drink. Once we got onto the dirt road it was easy going as the road had been widened and scraped for a fair distance. But it stopped in the middle of nowhere and we had to back up to find the road to Gcwihaba. This road was narrow but fairly good but with a high middelmannetjie.



Sunset at Koanaka Hills

Sunset at Koanaka Hills
John Hancock joined us in our vehicle and I enjoyed chatting to him. Monte drove one of the vehicles and Nancy and Megan alternated as drivers of the other vehicle. We saw quite a few birds on the way – Lilac-breasted Rollers, a Bateleur, Little Bee-eaters, a Kori Bustard, Namaqua Sand Grouse and a Secretary bird.



Camp at Koanaka

While setting up camp we could hear the Barking Geckos (*Ptenopus garrulus garrulus*) calling from the entrances of their burrows. This was interesting as some of the earlier literature states that they do not call in winter. There appeared to be one at least every 10 – 15 meters!

Dinner consisted of pasta with tomato sauce and it was good. Everyone soon gathered around the fire and the chatting started. I took a torch and had a brief but unsuccessful look for a Barking Gecko (we are going to have to work to find some of these). I then walked over to the sandy area to the north and saw a small white-bellied mouse up a dead shrub but it ran off before I could grab it. The mammal folks were already out trapping bats and I had a look at the damage to the trailer. The tap at the bottom of the water tank had ripped off as had the plug for the lights and indicators, as well

as the plug that feeds the batteries on the trailer while driving. I will have to make some modifications when I get back home.

Got to bed just after 22:00 and listened to some music. The roof-top tent on the vehicle is great and very comfortable. The new -5°C sleeping bag was also very effective and a real saviour as the temperature dropped to just above freezing.

14 July 2009

07:00 Up for a meal of raw oats and a cup of Rooibos tea. I took a crowbar onto Koanaka south but again found the rocks to be just too sharp with very few crevices. I did manage to get a few insects for Chris, who I now called Ant. I then joined Adam to put down a trap line with buckets, just south of the camp.



Adam putting in a trap line

Sam helped us but I had not, as yet, made any funnel traps. We made a Y-array with a bucket in the centre and one on each end. Ant was putting out some fancy insect traps – some with white netting and a container with alcohol at the top that the insects crawl into and get preserved. John Hancox took his binoculars and went off birding. I spent most of the day manufacturing funnel traps from mosquito wire.



Ant concentrating

We were joined by Mohutsiwa Gabadirwe, the Principle Curator Geology from the National Museum in Gaborone, Matlhogonolo Tswiio, the assistant curator Zoology and Boikutso Mokotedi. They made themselves a meal of mieliepap with chicken and I ate some of their left-over's. It was delicious. Adam heard a Barking Gecko right outside his tent and I tried to dig it out but it disappeared down some rodent burrows. We had black shower bags that were filled with water and left in the sun for the day - they work very well and I enjoyed a warm shower, using as little water as possible.



Bush shower

I would water myself down, close off the water while I soap and wash myself and then a little more than a litre of water to wash off the soap.



John filling shower bags

We gathered around the fire and John gave me a glass of wine and a Romeo cigar – my third cigar in my lifetime! The temperature dropped quite rapidly and I got to bed just after 22:00.

15 July 2009

06:30 I had a good night's sleep but woke up several times – there were some small mammals, probably jackal, in camp. We all had some raw oats in hot water for breakfast and then I got stuck into some insect photography with Ant helping me. Quite a job! I then continued making funnel traps until Adam brought a little rodent in to photograph.

I took it into a small tent to make sure that it doesn't escape but it was a real mission! The little rodent just didn't stop moving and I eventually managed to get a few acceptable shots. I also photographed Molly and Monte holding bats. I eventually finished off the funnel traps – ran out of mosquito wire. Alicia and I walked off to Koanaka North in search of reptiles. We got a Cape Rough-scaled Lizard (*Ichnotropis capensis*) as we left the camp where Alicia had seen a sand snake earlier. I banded it.



Cape Rough-scaled Lizard

We briefly saw another one but could not get it. We approached Koanaka North from the southern end and I saw a large Western Stripe-bellied Sand Snake (*Psammophis subtaeniatus*) at the edge of a large fallen tree. I got the snake tongs from Alicia and moved very slowly towards the snake and managed to get the tongs within centimetres of its body when the snake gently flickered its tongue but the moment it smelt the tongs it shot off into the thick undergrowth.



Alicia in lion country

I thought that was the end of it but asked Alicia to go to the opposite end of the fallen tree and I climbed onto a thick branch, about a meter off the ground. I was scanning the ground amongst the branches and spotted the snake well off the ground on a branch. It was watching Alicia and I slowly moved the tongs forwards and managed to grab it. It was long and fat, by far the biggest of the species that I have ever seen.



The first Western Yellow-bellied Sand Snake

We headed back to camp and sat around the camp fire, enjoying a cup of Rooibos tea with John Hancox and Patrick.



Patrick on Koanaka Hill

Melissa had her first session in the cave and really enjoyed it, despite the dust. She also got stuck into skinning reptiles with Alicia and gutting bats with the mammal folks. She was fitting in well with all of the Americans.



Melissa processing a rodent

Dinner again consisted of beans and rice and a pleasant chat around the fire place. I got to bed quite early and watched a movie on my iPod.

16 July Thursday

06:30 The temperature drops dramatically in the early hours of the morning and it was quite cold when I got up. I didn't particularly enjoy raw oats in hot water and cooked some oats for Melissa, John Hancox and myself. I enjoyed the hot breakfast and got stuck into some photography, first the Sand Snake and then several insects. Patrick asked me to photograph some stromatolites that they found in the cave.



Stromatolite from Koanaka

The rest of the day was spent around camp, doing photography, refuelling the vehicle from the Jerry cans and I got the generator up and running to charge some laptops, the trailer batteries and the freezer.

A second trap line was put in at the base of the Koanaka Hills, quite close to camp. It was a straight line array of about 7 m with three bucket traps and two

funnel traps and ran parallel to the mountain. I checked it in the afternoon and found two Western

Stripe-bellied Sand Snakes (*Psammophis subtaeniatus*) (male and female) in the same funnel trap on the opposite side of the hill. A few sand snakes have been spotted on the rocks in the vicinity and a few shed skins recovered. Ant got a solifuge in Trap line 1 as well as a mole cricket. The day sort of disappeared but I got quite a lot done.

While enlarging the fire area in camp Megan managed to chop a Striped Blind Legless Skink (*Typhlosaurus lineatus*) in half. We recovered the rear end and a few folks ended up sifting through the sand to find the head which they eventually got. A new species for Koanaka!



Megan in camp

We had an interesting chat around the fire place – politics, movies and religion. And a whole lot more. Hancox was the purveyor of wine again and I enjoyed another good glass around the camp fire. I got to bed just after 21:30 and watched Heartbreak Kid on my iPod.

17 July 2009 – Friday

06:45 I cooked John, Melissa and myself another pot of oats. More and more of the Americans were visiting us when we cooked our oats and I wondered how long it would take for them to realise that it takes a few minutes to do so and is far more pleasant than raw oats in a cup. I photographed the two sand snakes – they took very long to warm up and I initially thought that they were dead. The male lacked the thin black lines between the edges of the dark dorso-lateral band and the yellowish belly. The markings on the side of the head were also not near as dark as specimens from Pilanesberg and Limpopo Province. In fact, they looked a lot like Short-snouted Sand Snake (*Psammophis brevirostris*) heads.

Sam and I walked off to the pan, following the dirt road. We pulled some bark off dead trees but didn't find any reptiles. We got to the pan at around 11:00 and started looking for lacertids but saw no lizard movement. It was still quite cool and I suggested we have an early lunch in the shade of some trees adjacent to the dried-up water hole. The breeze was a little cool and the temperature just over 20°C. I used my stump tipper to clear some fairly thick undergrowth and exposed a hibernating Flap-necked Chameleon (*Chamaeleo dilepis*). It was lying on its side in somewhat of a foetal position.



Flap-necked Chameleon

This specific spot was already in the shade for the rest of the day and the chances of the chameleon warming up were thus zero. After some snacks, including some of Sam's beef jerky, we started looking for lacertids. In the next hour or two I got around 18 Namaqua Sand Lizards (*Pedioplanis namaquensis*) and Sam managed another three.



Namaqua Sand Lizard

We walked from shrub to shrub, looking out for lizards running away from us. When spotting a lizard the strategy was to follow it until it hid on the opposite side of the shrub. Then it was a matter of banding it hard enough to immobilise it without blowing it away. A number of Namaqua Sand Lizards banded in this manner recovered fully and were good for photographs. If in the sun, they lift their legs alternately,

thermoregulating. Some individuals disappeared down holes but usually

emerged within about a minute.

The walk back to camp took us about 30 minutes and no further reptiles were spotted. We did come across some elephant dung and caught a large grasshopper for Ant.

I had a warm shower back at the camp and checked the trap lines but found nothing. Ant had removed a small scorpion from one of the traps earlier. I then tried to photograph a shrew in the tent set-up but it was near impossible. I did manage one or two useable shots.

I was quite tired from the long walk and had a lazy afternoon in camp. I again tried to track down a calling Barking Gecko but without success. They start calling around 16:30 on a warmish winter day and stop around 20:00 but the odd individual may continue calling sporadically until about 20:30.



Dinner consisted of rice and beans (again) and another pleasant evening around the camp fire. It was not that cold and I went to bed fairly early to watch my first episode of House on my iPod.

18 July 2009 – Saturday

07:00 The evening was surprisingly warm and the morning cool and overcast. There was a pot of hot oats for everyone in the makeshift kitchen – a new trend had started. And it was good. I spent a bit of time in camp photographing the previous day's catch, charged some camera batteries with the inverter and also photographed a dead mole rat. Lunch consisted of a variety of crackers and biscuits. It was still overcast and a group of us – Ant, Alicia and Mok walked off to Koanaka North. The first reptile, just north of the dirt road, was a Sundevall's Writhing Skink (*Mochlus sundevallii*) that I found under a rotting log and managed to grab it before it disappeared. I was scratching through the loose soil with a stump ripper and briefly exposed a tail tip. It was quite hard going and the next lizard was a Variable Skink (*Trachylepis varia*) found amongst some loose rocks at the base of Koanaka North.

I opened up a lot of crevices with a crowbar but only got one spider and a scorpion. We moved clockwise around Koanaka North and then Ant and I crossed over the top while Alicia and Mok turned back to the spot where I had previously caught the Sand snake. It was a long way back to camp. There was a lot of excitement back at camp as the mammal folk had trapped a Slender Mongoose. I tried to photograph it in the tent but it was extremely difficult. Adam had also found a Striped Blind Legless Skink (*T. lineatus*) while clearing mole rat mounds to set traps.

I had a warmish shower and dinner consisted of boiled chicken and rice. It was without much flavour and very tough. I had suggested that the cooking team ask the advice of the Botswanans on how to cook chicken but the message wasn't clear. A bit of a waste.

The mammal folks returned quite late from the far-off water hole and had trapped another Slender Mongoose in a Tomahawk trap.

19 July 2009 Sunday

06:45 Another warm night and my -5°C sleeping bag was a bit too warm. Cooked oats for everyone and I got stuck into photographing the previous day's catch. Then tried photographing some rodents in the tent set-up including a live mole rat. Next was a bit of maintenance, washing clothes and sorting out a lot of the equipment. Patrick picked up a spider bite in the cave and it looked like a Violin spider (*Loxosceles* sp) bite.



Violin Spider and Patrick's leg

It was on the back of his left upper leg and within 24 hours there was a big reddish area about the size of a tennis ball. By the second day it was about a cm larger. I called Colin Tilbury and his advice was to take anti-inflammatory medication and for Patrick to just sweat it out. He was to keep the bite covered in plaster to prevent infection.

Adam got back around lunchtime with a trapped honey badger. He was in heaven! The snap trap got the badger behind the head and it managed to pull the trap free from its anchor and still go halfway down a burrow. Very tough animals! Monte had seen a 1 m+ snake near the second trap line and it sounded as though it may well have been a cobra. It disappeared down a termite hole after Monte had gotten quite a good look at it. I took one of the camp chairs and sat outside the hole for about three hours but no sign of the snake.



Monte preparing museum specimens

Had a shower and sat at the fire to enjoy a dinner consisting of tinned potatoes and pasta. Patrick gave us a bottle of red wine (Johannesburger Baron) and it didn't last very long. Ant got a nice Cape Rough-scaled Lizard under a rock.

20 July 2009 Monday

07:00 A cool, windy morning and no hot breakfast – just rusks. Melissa made us some Milo breakfast with Rooibos tea and honey. I spent the morning photographing the Cape Rough-scaled Lizard and a variety of insects, including a large grasshopper, millipede, scorpion and a beetle.

And then I had a session with an Elephant shrew in the tent, followed by a pouch mouse. What a job! And off for some herping.

11:30 I walked south with Melissa, Mok and Ms T. Ant initially joined us but soon disappeared to do his own thing. There were several Cape Rough-scaled Lizards but most of them disappeared quickly in the dense shrubs. We would surround a shrub when one was spotted and it was my job to band the lizard. I eventually managed to get about 6 or 7 Cape Rough-scaled Lizards, one Variegated Skink and a Ground Agama. I turned a lot of logs and found a few scorpions and a solifuge but few reptiles. I did, however, manage to get another Sundevall's Writhing Skink. It ran off on the surface and would dig in the moment it found loose sand. A lot of the logs on the ground were burnt – evidence of veld fires since we last visited the area. We got back to the camp at about 15:30 and the other three had been a great help, especially with their superior vision. Alicia had gone to the northern sandy area and got another Cape Rough-scaled Lizard. At least I had some specimens to photograph in the morning.

21 July 2009 Tuesday

06:45 Another warm night. I got up just after midnight to look at the stars – spectacular once all of the lights are out and it is quiet. Tried to call Riaana, it was her birthday, but her cell was permanently engaged. It was a cool overcast day. Molly and Melissa had prepared us some warm oats. I couldn't photograph the reptiles as there was no sun, so I got stuck into photographing a bunch of insects – the Scorpion spider, a large white Huntsman spider, the solifuge and then some small mammals.

Ant and I went off to repair the trap lines – quite a mission. We had to cut some new stakes and staple the plastic sheeting onto the stakes. As was usually the case, the traps were all empty.



Patrick looking for fossils

Back in camp I had another go at photographing a Slender Mongoose. Had 4 slices of bread with avocado pear for lunch and Ant and I then walked off into the Sandveld area. We spotted an unusual lacertid but it escaped. We saw it a second time and I managed to band it without killing it. It was an adult Bushveld Lizard (*Heliobolus lugubris*), not near as dark as the Steve Spawls pic in Bill's book. But it may just be the way they photograph. We got back to camp around 16:00 and I had a welcome shower. Dinner consisted of "Tuna Mate" but Melissa warmed up two tins of spaghetti with mince balls which we shared with Monte. Melissa pored each of us a glass of Woolworths red wine and the two of us went and sat behind the trailer to watch the stars. Got to bed at 23:00 and watched Samantha Who on my iPod.

22 July 2009 Wednesday

06:30 Up after a cold night. The crazy Americans warmed up some chocolate Pro Nutro for breakfast but I cooked a pot of oats for myself, Monte, Adam and Molly. I then got stuck into another photo

session – first the Bushveld lizard and then the Cape Rough-scaled lizard. Must have filled 20 gigs of disk space with photographs so far. The Sundevall's Writing Skink never made it through the night and froze to death. I tried to download some of the photographs but my camera ran out of battery power. More avo sandwiches for lunch and Alicia and I then walked off to the pan.



Museum specimens drying out

We quickly got our first Cape Rough-scaled Lizard on the way to the pan and then some Namaqua Sand Lizards (*Pedioplanis namaquensis*). We battled banding some of the lizards as they were half under shrubs and I couldn't band them effectively. Then Alicia spotted a Bushveld lizard (*Heliobolus lugubris*) which I eventually banded. We chased after some more Sand lizards and also managed to get a Ground Agama (*Agama aculeata*).



Ground Agama

I saw another Ground Agama disappear down its hole and waited about 5 minutes for it to come out. It just stuck its head out and I managed to get a good shot in with a rubber band but it disappeared down its hole again. Alicia had seen a large skink disappear under a log which turned out to be a beautiful male Wahlberg's Skink (*Trachylepis wahlbergii*) but we couldn't get it.



I jumped into the dried up water hole and got two Wahlberg's Skinks and the corps of a Giant Bullfrog (*Pyxicephalus adspersus*). On the way back to camp I found one of Adam's snap traps (loaded) and left him a rude note in it.

Wahlberg's Skink

The mammal folks had all gone off to the dry water hole to trap bats and whatever else they could get hold of.



Kalahari Round-headed Worm Lizard

Sam and Ant had gone off collecting and they got back with a Ground Agama (*Agama aculeata*) and a Kalahari Round-headed Worm Lizard (*Zygaspis quadrifrons*), a new species for Koanaka. They also got a solifuge, which pleased Ant.

I had a welcome hot shower – and the Barking Geckos were calling all around us. I then sat down with Patrick and spoke about Koanaka:

Back in 2005 at a meeting in North Carolina Pat Holroyd from Berkley offered some fossils that belonged to Blyth Williams, a professor at Duke in North Carolina. They were mainly small mammal fossils that Blyth had found at Koanaka in 1996 – 1997 when a new primate skull was also found. Blyth's interest, at the time, was largely in primate fossils and I sat with the little box of fossils for about 8 months. I then started a new job at Sam Houston and was working with Alicia, who pulled some reptile fossils out of the box. I then made contact with Mohutsiwa Gabadirwe in Botswana, arranged some permits and travelled to Koanaka in 2007. We were a small team with a limited budget - Tim, Alicia, Monte and I and we spent a few days at Koanaka, basically to see how much funding we would require to put a decent trip together. Another trip was put together for 2008 with funding from various sources. Some of the air tickets were already taken care of as some work was also being done in the Free State. In total, the 2008 expedition cost in the region of \$40,000. For the 2009 trip the NSF gave us around \$60,000 and Monte got an internal grant of \$15,000. Richard and Alicia travelled on their own grants. The main objective of the expedition was to see how climate change over the past 2 million years had affected small mammals and the evidence should be in the fossils. For this reason, small mammals, reptiles and birds have to be trapped for comparative material. Owl pellets are also analysed to get a better idea of what is around now.

We had another pleasant night around the camp fire with rice and beans for dinner, but we had two more tins of meat balls which we shared with Ant. The mammal folks, including Melissa, had driven off to the dry water hole to set a bunch of traps and to try and net more bats. Three of the girls at the fire place were playing some sort of dice game but I suspect that there was a bit of liquor involved as they were giggling a lot more than usual. Got to bed quite early and watched another movie.

23 July 2009 Thursday

06:45 Fairly cool morning and had some warm oats before getting stuck into photographing the Agamas, Cape Rough-scaled Lizards, Spotted Sand Lizards and the Worm Lizard. Then Ant, Sam and I went off on a long walk, initially heading north. We got some Spotted Sand Lizards and a Wahlberg's Skink just west of the pan and then swung west to some large trees where Sam got another Kalahari Round-headed Work Lizard (*Z. quadrifrons*) under a large log. I got another Sundevall's Writhing Skink under a log as well as a few Variegated Skinks but missed two Cape Dwarf Geckos (*Lygodactylus capensis*).



Looking for lacertids

Sam headed off to camp and Ant I tried again to get the Dwarf Gecko but no go. We did collect a few Carpenter bees and it was strange to hear their wing beat within the dry log – it sounded a bit like some sort of petrol motor starting up.

We got back to camp and Adam had trapped another honey badger at the dry water hole, this time much bigger than the first one.



Adam with a gennet

They also got another three Slender Mongooses in the Tomahawk traps but one escaped as they opened the traps. The Sherman traps, all 180-odd, only produced about 20 rodents. It is another beautiful late afternoon and the Botswana crowd are making pap on the fire – it smells great! It was a rice and bean evening and Melissa warmed up some meat balls that we shared with Monte (and he shared with Adam). Some interesting chatting around the fire place and I was in bed by 21:30 to watch another episode of Samantha Who.

24 July 2009 Friday

06:45 A very cold morning starting off with Rooibos and honey and then a plate of hot oats with milk. We sat around the fire for a while, warming up like lizards in the morning sun. Quite a bit of photography to do, so I started with the Variegated Skink, then the Sundevall's Writhing Skink and thirdly the Round-headed Worm Lizards.



Sundevall's Writing Skink

We then tried a bunch of insects – a praying mantis, two hairy caterpillars, a few beetles and a solifuge.



Hairy solifuge

Couldn't do the ants, it was just too windy and they were far too warmed up by the time I got to them. I left them for the next morning.

I was planning to go back to the previous day's spot to look for Dwarf Geckos but Megan saved me a lot of effort. She caught a specimen that I suspect came out from beneath the bark of a piece of firewood in camp. At this rate she will have me out of a job!

The mammal crew had caught a Yellow Mongoose which I photographed in the tent set-up. Not easy going but I got at least one useable shot. We had the last bit of bread for lunch – with avo. Also had an apple and a naartjie for desert.

I drove off to the pan with Monte, Patrick, Alicia and Melissa. We had spotted a skink disappearing down a hole under a log and I thought that we could just pull the log free with a vehicle to expose the skink. Two sections of log were pulled out with Monte driving but no sign of the skink.

We spent the afternoon in camp washing clothes, refuelling and getting the generator going so that people could charge their laptops and camera batteries.

The evening was cold and the Barking Geckos were not calling. I had a quick meal and got to bed quite early.

25 July 2009 Saturday

06:30 A very cold morning after a cold night. Oats and rusks for breakfast and off to Gwcihaba to check out the hill, caves and surroundings..

08:30 134429 km. Leaving camp.

10:08 134449 km. The mammal folks ahead of us had spotted a vertical log that they thought may be good for reptiles. I started pulling at the log with my stump ripper and a rodent (*Aethomys* sp.) ran out of the log. We formed a little circle around the log after I had dug the first one out of a hole in the ground and continued to shake the log. A total of 7 mice ran out of the log and we managed to catch five of them!

10:30 At the caves at Gwcihaba. We walked towards the caves through some Sandveld and Alicia saw a Sand Snake disappear under a shrub. We scratched around and I started digging with my stump ripper. The snake eventually surfaced and we managed to get it – a Western Stripe-bellied Sand Snake (*Psammophis subtaeniatus*). I also got another Sundevall's Writhing Skink (*Mochlus sundevallii*) under a log. We were 22.5 km from our camp site at Koanaka.

Alicia saw another sand snake on the northern side of the hill but we couldn't get it. I turned a lot of rocks but only got a few spiders. We went into the cave, met up with the mammal folks and saw a lot of bats. Also saw two species of spiders - Astri Le Roy later informed me they were probably *Loxosceles spinulosa* and *Philodromus* sp. Also a lot of roaches and crickets.

The small bats in the cave were *Rhinolophus edenti* – Dent's Horseshoe Bat and we could get very close to them and even touch them. The very big bats were *Hipposideros commersoru* – Commerce's Leaf-nosed bat. We had to go about 300 m into the cave to find them. It was warm and dusty in the cave – at times like walking through talcum powder. Elsewhere the dung was quite compacted and easy to walk on.

The drive back was bumpy with six people in the vehicle – and no sign of reptiles. I had to rebuild my little roof-top home back at camp, had a welcome shower and settled down for dinner. Rice and beans, for a change. I skipped the beans and added a tin of tuna to the rice. It was another cold and early night for me.

26 July 2009 Sunday

06:30 Up for oats and another photo session. I photographed the Western Stripe-bellied Sand Snake and Writhing Skink, and then the spiders. We also photographed some bats in the hand with Molly and Monte assisting with the handling. Finally I tried to photograph two Red Veld mice – *Aesomys* sp. The mammal people were snowed under processing specimens and Mok was processing het insects.



Ant, Alicia and I went off into the Sandveld area with a hoe and spade with the intention of digging for fossorial reptiles. We moved west banding Rough-scaled lizards and ended up with five specimens. Ant found two

The stinkin mammal team - Sam, Melissa, Molly, Adam, Miss T and Monte

Kalahari Round-headed lizards under a log – a large female and a much smaller male.



Myself with Ant, the bug man

expose some of the frogs and thought that I needed to go back the following morning to do some digging – might just find a live Bullfrog!

We slowly moved towards the pan. Ant spotted a large lizard going down a hole and I waited for it to emerge. It was a large Ground Agama which I banded without killing it. We chased after a few more Sand lizards and then went to the little dry water hole. Both Alicia and Ant spotted two frogs in the dry water hole, amongst the cracks in the clay. I got into the hole and found a total of 18 frogs, most of them *Ptychadena* sp. and about 6 of them *Cacosternum boettgeri*. I had to remove some chunks of dry mud to



Melissa with me in the Bullfrog hole

Another bean and rice dinner but Melissa made us a tuna and tinned tomato mixture which we had with rice. A few barking Geckos were calling.

27 July 2009 Monday

06:45 Started the day with the usual cooked oats meal and a photo session. I took photographs of the Round-headed Worm lizard and the frogs as well as a Tiny Fat Mouse (*Steatomys* sp.) followed by two more *Aethomys* that may well end up being described as a new species.

We drove off to the dried-up water hole with Monte, Sam and Ant and started digging for frogs, hoping to find a Bullfrog. I had the first session with some help from Monte and both Monte and Sam took over while Ant and I went off banding Sand lizards. The hole produced a few *Cacosternum* and a *Ptychadena*. I managed to band 11 Namaqua Sand Lizards (*Pedioplanis namaquensis*) and one Ground Agama (*Agama aculeata*) in about 15 minutes. By the time we got back to the water hole Monte and Sam had dug up a monster Bullfrog (*Pyxicephalus adspersus*)!

We drove back into camp with Monte blowing the horn and everyone clustered around the vehicle while we proudly showed off our trophy. It was a good day! Melissa and I went off digging for Barking Geckos but the maze of rodent burrows fooled us. Monte also went off with a hoe and

returned with a Barking Gecko *Ptenopus garrulus garrulus*, the first specimen from Koanaka. We had another rice and beans meal and gathered around the fire place for a chat.

28 July 2009 Tuesday

06:30 Up for oats, Rooibos tea and another photo session. I had the *Pyxicephalus*, the *Ptenopus* and an *Agama* to photograph. I then photographed a few insects including a rather aggressive little ant from the water hole. I had a quick session with Molly on how to prep small mammals and take the necessary measurements and tissue samples, for future reference.



The stinkin' mammal team - Molly, Adam and Monte

The trip is slowly coming to an end and everyone is slowly packing up. I went to the top of Koanaka hill to get some photographs of the camp and general habitat and had another *Ptenopus* hunt in the afternoon. I managed to get one specimen with a regenerated tail. They come right to the burrow entrances but are extremely quick to retreat. The burrow entrances are quite distinct, somewhat oval-shaped the size of a slightly flattened dove egg and with evidence of fresh sand at the burrow entrance. They called from around 15:30 – 16:30, peaking at sunset with the last calls around 20:00.

Rice and beans for dinner but I opened up a tin of sardines and drained most of the oil before pouring it over my rice. Adam, Ant and Melissa drove off to the large dry water hole to collect the last of the traps and returned with a porcupine which they had run down and shot with the air rifle. Ant was the main participant and Melissa the driver – they were all on a high, explaining the details of the hunt to us.



The porcupine team

29 July 2009 Wednesday

06:30 Up and ready to pack. No hot breakfast – just Weet Bix, which the Americans call Weetybix, but fortunately we had some milk. Packing up was quite a job and sorting out the trailer was a mission. I also had to photograph the Barking Gecko.

10:10 134491 km. Heading

for Maun.

11:20 134510 km. Got an *Agama aculeata* on the dirt road which I banded without injuring it.



Banding lizards

17:23 134793 km. Refuelling at Riley's. Had a welcome shower at Audi Camp – I had my own luxury tent and off to the restaurant for a T-bone steak. Patrick bought me a glass of Tall Horse red wine which I enjoyed.

30 July 2009 Thursday

04:30 Up for a quick breakfast and heading for Moremi Reserve. We left Audi at 05:15.



06:41 134885 km. We were at Moremi south gate but no sign of any staff. We hung around for a while, saw some elephant cross the road behind us, and then headed into the park. We had a lot of good sightings in Moremi and saw a lot of elephant, some giraffe, pygmy geese, buffalo, lechwe, impala, hippo, kudu and a young leopard. We also saw red-billed francolin, yellow-billed hornbill, red-billed hornbill, saddle-billed stork, spurwing geese, Egyptian geese, a martial eagle, fish eagle and a greenback heron.



17:23 135019 km. Leaving Moremi for Maun.

20:00 135099 km. Back in camp – had another poor meal at Audi Camp, this time a lamb curry that was more of a stew than a curry. Burgers are safe at Audi – skip the other meals.

31 July 2009 Friday

05:30 Up and ready for an early start. We had Chelsea buns and Rooibos tea for

breakfast.

06:40 135099 km. Departing for Gaborone.

10:20 135392 km. After a brief stop to change a defective tyre we stopped at Mopipi to refuel. We were on the edge of Makgadikgadi and had a look for *Agama makarikarica* but only found a few *Pachydactylus punctatus*.

15:53 Refuelled at Mahalapje.

18:30 135992 km At the Oasis in Gaborone – it was a long day on the road. We all headed for Linga Longer at the Mall for dinner and met up with the Botswana crowd.



01 August 2009 Saturday

08:22 135002 km. Left the Oasis, heading home.

08:19 135993 km. Refuelled in Gaborone.

We stopped off in Hartebeespoortdam at a Wimpy for lunch – it had been raining most of the way and was quite cold. Got home at about 15:30 – having travelled close on **3,500 km**.

Another great trip!