

The Spider Club News



December 2020 – VOLUME 36, No.4

"The Spider Club provides a fun, responsible, social learning experience, centred on spiders, their relatives, and on nature in general."

SUMMER EDITION



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About the Spider Club

The Spider Club of Southern Africa is a non-profit organisation. Our aim is to encourage an interest in arachnids – especially spiders and scorpions – and to promote this interest and the study of these animals by all suitable means.

Membership is open to anyone – people interested in joining the club may apply to any committee member for information.

Field outings, day visits, arachnid surveys and demonstrations, workshops, and exhibits are arranged from time to time. A diary of events and outings is published at the end of this newsletter.

Contact us

WEBSITE: <http://www.spiderclub.co.za>

EMAIL ADDRESS: info@spiderclub.co.za



at “The Spider Club of Southern Africa”

Your committee; always available and ready to help:

| | | |
|--------------------------------|--------------|--|
| Astri Leroy (chairperson) | 073 168 7187 | astri@spiderclub.co.za |
| Jackie Collier | 084 311 4849 | jacky.collier@vodamail.co.za |
| Caren Neal (social secretary) | 083 753 2946 | caren@nicholsonsmith.co.za |
| Rudolph Steenkamp (newsletter) | 084 626 8182 | rudolphsteinkampf@gmail.com |
| Desiré Pelser (webmaster) | 076 926 1121 | des@earthandoceans.co.za |

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- All the photographers of the photos used in this edition. Without you, these pages would be very dull.
- Norman Larsen, for helping me fill the pages.
- Astri Leroy, of course, for all her contributions, and informing me of any new content.
- Caren Neal, for taking on the responsibility to write the reports on the Spider Walk and other events.
- Everyone on SCSA and its sister groups for all the interesting content.
- All the readers of this newsletter, and all the positive feedback we receive. Of course, keep the negative feedback coming, so that we can improve on this newsletter.



Frozen webs on 8 December in England, photos Nota Leroy

BREAK OUT

Despite becoming accustomed to the “new reality” in a frightened and frightening world, life goes on, as it must. One outcome has been enthusiasm among many people to get outdoors; another is a growing public interest in small creatures. From the Spider Club point of view, it has meant extraordinarily increased numbers attending our field trips. Have a look at Caren’s report (see page 7) on our walk in Norscot Koppies Nature Reserve on 18 October but it was very hot and even the most enthusiastic flagged. Anyway, there were almost no spiders to be seen. The next one was the night walk at Meyersdal Eco Estate (see page 8) and there must have been more than 50 people. Caren and I took one look at the crowd and decided it would take too long to fill in the attendance register, so we can’t say for sure how many there really were, but the September record was broken! Our most recent walk was on 6 December at the Modderfontein Nature Reserve. One of our new and very enthusiastic members, Jarrod Michael Todd, wrote his report on this (see page 9).

HANDLE SPIDERS OR NOT?

The Facebook page has, as usual, been busy, as have “sister” arachnid and other creepy-crawlies pages in our region. I’ve been a bit bothered that our page seems to encourage people to hold spiders. In my opinion, it is irresponsible to show someone holding any of the *Latrodectus* (button spider) species; I’m not particularly happy about *Loxosceles* on people’s hands either. In the normal course of events, I’m pretty sure most spiders hardly notice us, but if we grab them, squeeze them or hurt them, it could be mightily bad for the spider and possibly bad for the grabber. I know from bitter experience that a baboon spider’s abdomen can rupture if it is dropped from a height, as they are not equipped to land on their feet like rain spiders, nor can they bungee like many smaller spiders. Anyway, if they are frightened and defensive, they CAN bite and their fangs are large, sharp and (again from experience) a bite initially really hurts.

Another worry on the Facebook pages, ours and others, is that it is often emphasised that the venom of the local long-legged sac spider (*Cheiracanthium* spp.) is harmless to humans and that research has been conducted on their venom. There has been no direct research on the venom of our *Cheiracanthium furculatum* so it may be best if we so-called experts are as non-committal as possible and try to stay out of discussions.

OFFICIAL MEETING

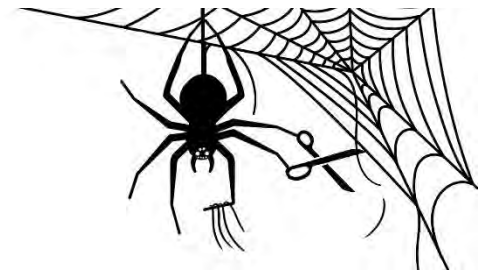
Lastly, I would like to put it on record that in the new year we need to have a general meeting. I wish to resign as chairperson; I’ve been involved in the running of the club since 1975, sometime more involved and sometimes less so. We now have a very capable group of people (the admins) and duties need to be

allocated for efficient running of the club. In the new year I will send out an agenda, get a suggested date from the other admins, and we can invite members to register for a Zoom general meeting.

Regards
Astri

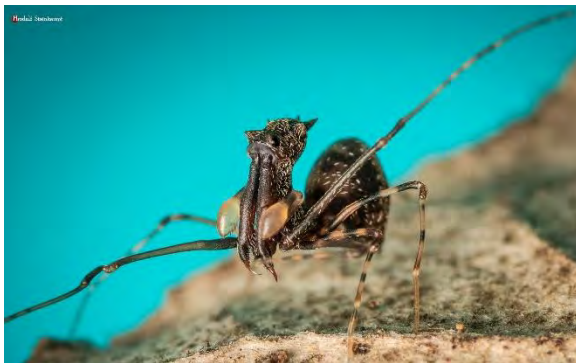
EDITOR'S NOTE: You might have noticed that this is a MUCH longer newsletter than usual. That's mostly because it's filled with so many photos, especially of my field trip with Ruan to KwaZulu-Natal. Even if you might not read much of this newsletter, there are at least some pretty pictures to look at :) I hope you enjoy the photos as much I did taking them!

Snippets



SCSA Spider of the Year

We started the Spider of the Month (SOTM) back in December 2019, and decided to include all 12 SOTMs in a poll so that members can choose our very first Spider of the Year (SOTY). The winner was this horned pelican spider (*Afrarchaea cornuta*), which was November's winner. The admins pitched in for a first, second, and third prize. The first prize, however, went to Ruan Booysen for finding this spider, and not to the photographer (me). We're not sure what prizes we will offer next year, but we will certainly continue this tradition from now on.



Spider Club of Zimbabwe issues first newsletter

The Spider Club of Zimbabwe recently issued its first newsletter (the club was only recently founded). The first issue displayed some great content and very professional layout and formatting, so we're looking forward to future editions.

SANSA photo guides

The South African National Survey of Arachnida (SANSA) is still busy with its first drafts of photo guides. If you want to be put on the mailing list, send an email to Prof. Dippenaar-Schoeman at DippenaarA@arc.agric.za. If you want to contribute photos to the guide, please send them to the same address, together with the

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location and, if possible, the identification. They are still searching for photos of the following families:

Bemmeridae, Clubionidae, Corinnidae, Entypesidae, Gnaphosidae, Idiopidae, Linyphiidae, Liocranidae, Lycosidae, Microstigmatidae, Migidae, Mimetidae, Miturgidae, Mysmenidae, Nesticidae, Oonopidae, Penestomidae, Pholcidae, Phyxelididae, Pycnothelidae, Salticidae, Stasimopidae, Symphyognathidae, Telemidae, Theraphosidae, Theridiidae, Theridiosomatidae, Trachelidae, Zodariidae, and Zoropsidae.

Serket latest edition

Serket, or *The Arachnological Bulletin of the Middle East and North Africa*, was established in 1987. The word "Serket" is ancient Egyptian for "scorpion".

For people interested in spiders and other arachnids from North Africa and the Middle East, you can download the latest edition at the link below.

http://www.mediafire.com/file/eutdi3afwbv2i6x/Serket_17%25283%2529_November_2020.pdf/file

Pirate spider egg sacs

The Mimetidae are a family often called "pirate spiders" due to their tendency to prey on web-dwelling spiders. While the following descriptions of their egg sacs written by Tone Killick apply to the UK *Ero* spp., this genus can also be found in South Africa, with three recorded species.

"The *Ero* genera are arguably my favourite group of spiders and I've spent many 100s of hours observing them in natural and captive habitats over several years. I've wrote a small piece to help with identification of *Ero* egg sacs.

Ero furcata/cambridgei: pear shaped, thin hanging thread, copper colouration including

lattice threads. The egg sacs of *E. furcata* and *E. cambridgei* are identical and cannot be identified to species in the field.

*Ero apha*na: pear shaped, thin hanging thread, gold colouration including lattice threads. Colouration alone allows for *E. apha*na egg sacs to be easily identified from that of *E. furcata/cambridgei*.

Ero tuberculata: pear shaped, thick hanging thread, substantial attachment at the apex of the egg sac, usually by several thick threads, white colouration with yellow/gold lattice threads. In Britain's Spiders: A Field Guide, *E. tuberculata*'s egg sac is described as cigar shaped. I believe the description originates from W.S. Bristowe's World of Spiders and the line drawing of a distinctly cigar-shaped egg sac; a depiction I believe is incorrect. I've seen numerous *E. tuberculata* egg sacs and in my opinion, none have remotely resembled a cigar."



New species of Zodariidae in KZN

Back in 2015, Rudy Jocque and Arnaud Henrard¹ described a new genus of the Zodariidae, namely *Palindroma*. Jocque and Henrard state that "[t]he four typical representatives of the genus are characterized by the profile of the carapace

with a slight dip, the absence of precoxal sclerites and the characters of the male palp with enlarged tibia, large subtegulum and tegular retrolateral knob". These spiders occur in miombo-woodland and coastal forest in East and Central Africa.

Ruan Booysen has recently found a few zodariids in the Vernon Crookes Nature Reserve that are suspected to be a new species of *Asceua* (not recorded in South Africa yet). The specimens were sent to Arnaud, so maybe we'll see him describe another new zodariid, and perhaps even a new genus.

Tropical tent-web spider traps bat in web



Ronel Pienaar, from Pretoria, took this photo of a small bat caught in the web of a tropical tent-web spider (*Cyrtophora citricola*). Considering that these spiders aren't really known for keeping a tidy web (they often use debris caught in the web as camouflage and a hiding spot), this bat will probably not be cut loose.

¹ Jocque, R. & Henrard, A. 2015. The new spider genus *Palindroma*, featuring a novel synapomorphy for the Zodariidae (Araneae).

European Journal of Taxonomy, 152. Available at <https://europeanjournaloftaxonomy.eu/index.php/ejt/article/view/274>.

Spider Walks

NORSCOT KOPPIES NATURE RESERVE – SUNDAY 18 OCTOBER 2020

by Caren Neal

Our walk at Norscot Koppies, in Fourways, Johannesburg North, turned out to be a rather small and intimate walk with only 16 people in attendance. I assume it had a lot to do with the heat as we did our walk during a heat wave in Johannesburg. By the time we all met at 8 am, it was already in the mid-20s and we knew it was going to be a scorcher. Even though I've lived in the north of Johannesburg for most of my adult life, this was my first trip to Norscot Koppies. I had no idea how lovely this little gem of a place was.

For those who live close by, they have an Open Day every first and last Sunday of every month from 9 am to 5 pm. Pop by on one of those days and go for a lovely walk through the reserve.

On the morning of the walk (we went on a non-Open Day), we were greeted warmly by Justin Holcroft, a friend of the reserve. He was kind enough to open for us, wait for the late-comers, lock us in safely while we were walking, and then open for us again when we were ready to leave. We were treated really well, so thank you to Justin for that.

Upon entering the reserve, before we had even started searching, Astri went off looking through termite/ant mounds and found a sand diver / termite feeder (Ammoxenidae). Going spidering with a professional like Astri is just such an eye-opening experience as she teaches us HOW to find these spiders that usually elude most of us. They are there, we just don't know how to find them!

We had quite a few children join us on the day, and again, like I always say, what a pleasure to see the enthusiasm. Children bring something so unique to our walks, and we have also noticed that children tend to find the most spiders. They really do dive right in and get down on the ground and look for our eight-legged friends. The children found a lot of spiders, but also found so many other insects.

The list of our finds is as follows:

- Hersiliidae - Long-spinnered bark spider (too many to count)
- Linyphiidae - Hammock-web spiders
- Lycosidae - *Pardosa* sp. male as well as females with egg sacs
Hogna sp.
Pirata sp. (water wolf spider)
- Oxyopidae - *Oxyopes affinis*
Oxyopes jacksoni
Oxyopes vogelsangeri
- Philodromidae - *Philodromus* sp.
- Pisauridae - *Rothus* sp.
- Phyxelididae - Hackled mesh-web spider
- Salticidae - *Thyene* sp.
- Theridiidae - *Achaearanea* sp.
- Thomisidae - *Diae* sp.
Juvenile *Synema* sp.
- Uloboridae - *Uloborus* sp.

by Caren Neal

This was the very first Night Walk in quite some time, with a much larger than anticipated turnout. There must have been around 50 people in attendance, mostly residents of the Eco Estate who were interested in seeing what we were doing.

We congregated at the clubhouse where we were treated to snacks, food, and drinks. Because the group was so large, we split up into three smaller groups before heading off into the estate. The first group was led by our matriarch, Astri Leroy. I led the second group, and the third group was led by my good friend Henning Boshoff.

Armed with our headlamps, torches, and scorpion lights, we started our walk. Within a very short period of time it was already dark and we had the opportunity to educate the residents of the Meyersdal Eco Estate about the various nocturnal spiders and scorpions, as well as the spiders that were active during the day, as we found many of them hiding away under rocks or in their nighttime retreats.

Of course, there were MANY *Neoscona* spp. out at night, so everyone got to learn about these entertaining nocturnal orb weavers that we found all over.

My group headed back earlier than everyone else as we wanted to survey the area closest to the clubhouse. We found so much more right there, and we were very surprised. We managed to find numerous *Rothus* spp. that were pairing up. On almost every plant there was a mature male and a mature female together.

The walk finished at 9 pm, with everyone rather exhausted from the hike through this beautiful reserve. Because of the time, and the lighting issues, we were unable to photograph the spiders that we had collected.

MODDERFONTEIN NATURE RESERVE – SUNDAY 6 DECEMBER 2020

by Jarrod Michael Todd

This day started off on a slightly overcast Sunday morning heading out to the Modderfontein Nature Reserve. Astri and I were the first to arrive, shortly followed by Henning and his kids. The others arrived about 10 minutes later. I'm really keen to tell you about this day of really interesting spider finds, and great people whom I got to hang out with! This was my first spider walk, and I am certainly at first not an extrovert, but everyone made me feel so welcome that I instantly felt comfortable, as if I've known them all for years.



We started out with everyone getting some glass vials and cotton wool to keep their finds safe until we came back to inspect all the spiders. As we headed out, everyone's heads were swinging left and right to either side of the road already so keen to find spiders, you could say we were all pretty damn excited!



As we got out the main driveway to the first clearing, JP lifted the first rock and shouted "SPIDER!" and everyone ran over. The first find was a spitting spider (*Scytodes* sp.). I have been looking for one of these for some time, so this was a very lucky find! In the luscious green grass we also found a few jumping spiders, family Salticidae. Garrie was doing his own thing by some trees when he too shouted out to everyone. He had found the tunnel of some spider that we suspect belonged to a baboon spider. We tried to coax it out and saw some legs, but I think when the spider saw us, she thought rather not!



A spitting spider (*Scytodes* sp.) on the left, and a sun jumping spider (*Heliophanus* sp.) on the right.

Looking for spiders, we obviously didn't stick to the main pathways that people generally follow; instead, we walked through the thick green grass, swinging our nets from side to side; this obviously attracted some attention. People started asking what we were doing; naturally, some thought we were crazy, as they usually run from spiders! But once we showed them some of the spiders in the vials and told them how each one hunts for their prey and why they are important to keep around, one response went from initially being "I run from spiders, but you guys run for them!" to "I'm actually going to go look for spiders at home and watch them because of you guys". Now that was cool to hear!



Some of the attendees doing some "sweeping" in the grass.

We carried along off the path for quite some time, even splitting up for a while. I headed up around a large mound of grass and shrubs on my own, swinging the net through the long grass, not finding much but tonnes of midges and grasshoppers. I eventually got to the back of the mound and swung the net around there for a bit. I walked back around with the net closed and walked towards some of the others. I opened my net and straight away saw an interesting spider. I asked Tayla to help me by getting a vial to get the spider into and we took it to her dad, Garrie, to ask what it was as I wasn't sure what I had found. Immediately his eyes went big and he had the biggest smile on his face, and he took it straight to Astri, who confirmed his suspicions. It was a beautiful male black button spider (probably *Latrodectus renivulvatus*, because of the location) in the Theridiidae family, commonly known as comb-footed spiders. This male had a super impressive set of pedipalps, but unfortunately was missing three legs. These spiders

are not often seen so this was a very lucky find. And I must add that Garrie and Henning were at this point green with envy about my find.

We stayed in that spot for a bit and I went to swing my net in some other bushes across the main path. When I looked inside, there once again didn't seem to be much, but then I noticed a little blob right at the bottom of the net. I scooped it out and saw it was a spider, a weird-looking spider with a large round abdomen that was black and pale green in colour.

I took it over to Henning, who immediately asked who found it, to which I said that I did. He then said it's a bird-dropping orb weaver, *Aethriscus olivaceus*, in the Araneidae family. Again a very rare find by me, but I rate it as beginner's luck!



A male black button spider (*Latrodectus renivulvatus*), and a bird-dropping orb weaver (*Aethriscus olivaceus*).

As we carried on, there were quite a few spider finds by almost everyone on the walk, with the pros Astri and Henning identifying all the unusual and more difficult ones, as well as answering any question you have with the most information they could possibly fit into the explanation. The kids who were with us were also super curious about all sorts of different finds, and it was really nice to see them have so much interest at such a young age; they definitely reminded me of myself!

The day might have started overcast but boy, did it get hot! Note to self, bring sunblock with next time! I burned pretty badly but it was well worth the time spent throughout the day with all these awesome people. At the end of the walk, we all went and sat at the farmers' market there. We grabbed some refreshments and some snacks and sat down at the benches to now take photos and look at all the different finds.

This really was the best experience for me that I wouldn't miss for the world. Every spider walk will definitely see my face and keenness to find some amazing spiders, as well as just seeing all the new spider-loving friends I have made who honestly made my first spider walk incredible!

Special thanks to all who joined in the walk: Tanya and Joshua Catlow, JP Hastie, Owen Devenish, Henning, Brandon and Caydee Boshoff, Astri Leroy, Garrie and Tayla Wright, Leigh and Cayleigh, Steven and Jade Henning, and Roulla Janse van Rensburg!

Images of the people and spiders follow.

People





Spiders



Left: A bird-dropping orb weaver (*Aethriscus olivaceus*). When this little spider tucks its legs in and sits down flat on a surface, you can just imagine why it is called the bird-dropping orb weaver. **Middle and right:** Two different grass orb weavers, *Kilima decens* and *Larinia* sp.



Black-and-white hammock-web spider (*Microlinyphia sterilis*; Linyphiidae).



A wolf spider (Lycosidae) with a green egg sac.



A slim-legged wolf spider (*Pardosa* sp.; Lycosidae).



Left: A water wolf spider (*Pirata* sp.; Lycosidae). **Right:** A grass running spider (*Tibellus* sp.; Philodromidae).



Left: A flat-headed running spider (*Thanatus* sp.; Philodromidae). **Right:** Crowned nursery-web spider (*Rothus* sp.; Pisauridae) with an egg sac.



A few of the jumping spiders we found: **From left to right:** *Heliophanus* sp.; *Myrmarachne* sp.; *Menemerus zimbabweensis*; and *Heliophanus* sp.



A male black button spider (*Latrodectus renivulvatus*; Theridiidae) missing three legs.



Left: A common false button spider (*Steatoda capensis*; Theridiidae). **Right:** Tucker's crab spider (*Ansieae tuckeri*; Thomisidae).



Left: Ladybird crab spider (*Camaricus nigrotesselatus*; Thomisidae). **Right:** Rosy-banded crab spider (*Misumenops rubrodecoratus*; Thomisidae).

KwaZulu-Natal fieldtrip diary

by Rudi Steenkamp

A while ago, Ruan Booysen, a student of Prof. Charles Haddad, asked if I would like to accompany him on his fieldwork to KwaZulu-Natal for 16 days. The main aim was to collect as many spitting spiders (Scytodidae) as possible for Ruan's PhD research, where he will revise the family, and possibly determine if there is more than one genus (*Scytodes*) in South Africa.

It's a long time away from home and work, but it was an offer I couldn't refuse. I'm just a spider enthusiast, so I've never been on such a trip before. I wasn't sure of what use I could possibly be, but finding spiders and photographing them is nothing new to me. So, on 2 October, we left Bloemfontein for our first stop in Harrismith, Free State.

Day 1: Harrismith – Platberg Nature Reserve



It was a very misty and cloudy day in Harrismith. The Platberg ("flat mountain") is somewhere behind all that mist and clouds in the left photo. The thick mist, low clouds, burnt trees and buildings, and stalking cows made this place quite creepy. I loved it! It reminded me of a horror movie.

We arrived in Harrismith on a very cloudy and misty day. It didn't look very promising, but we headed to the Platberg Nature Reserve nonetheless, only to find that a large part of the reserve recently burned down. Fortunately, spiders are resilient creatures, and we managed to find a few. Tonnes of Phyxelididae under rocks, and a few interesting wolf spiders, but unfortunately no spitting spiders... This was my first day, so I didn't know how many spiders we were supposed to find, but Ruan looked rather disappointed, which told me we didn't nearly find as many as he thought we were supposed to.



Left: A wolf spider with her egg sac. Top, fltr: wolf spider; and a subadult male black button; *Trabea* sp. wolf spider. Bottom, fltr: flower crab spider (*Thomisus* sp.); a highveld lesser thicktail scorpion; and a hackled mesh-web spider (Phyxelididae).

Day 2: Drakensberg Mountains – Royal Natal National Park

The next day we arrived at the ATKV resort in the Drakensberg Mountains. Apparently our reservation was made by the Archaeological Society, and the receptionists were rather disappointed to hear that they're having "arachnologists" in their resort and not archaeologists! However, they were very happy to hear that we're willing to rid their resort of some spiders. "Yes please! Take them all!" one exclaimed. After only finding hundreds of wolf spiders on their lawn, we set off for the Royal Natal National Park.



After drawing attention from some passers-by, Ruan had to pose for a photo with this "fan".

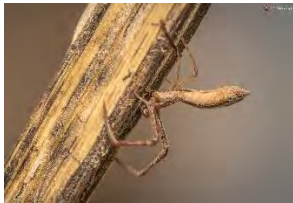
Here we had much better luck, with both the weather and in finding our first spitting spiders. The park was quite busy along the footpath, and the two guys sifting leaf litter, beating bushes, and with their heads deep in the grasses drew quite a lot of attention. One lady and her boyfriend took out their camera and indicated that they want a photo. "Oh, you want me to take a photo of you two?" "No, I want a photo with you two!" I also had to take a photo of her and Ruan with my camera, making sure to turn on the flash so that she knew I didn't fake taking a photo.

Further down the forest path I found many of the spiders on my "bucket list". While Ruan grew up in KZN, I grew up basically everywhere except KZN, so I saw many things for the first time: my first harvestman, jellybean theridiid, those undescribed little red and black theridiids, green crab spider, white running spider, single-line-web spider, the little sheepy jumping spider, a few ant-mimicking jumping spiders, and a lot of other rather common creatures I think people in KZN take for granted.

At the end of the path, at the cascades, I rested my aching feet in the ice-cold water before we headed back. With a few spitting spiders in the bag, the day was a reasonable success.



A triangular theridiid (*Romphaea* sp.) and my very first harvestman (*Rhampsinitus* sp.). The latter is not a spider, but rather an opilione, which some people refer to as a "daddy-longlegs".



Clockwise, fltr: The “sheepy salti” (tribe Ballini) that is being described by Galina Azarkina; one of the undescribed red-and-black theridiids; long-jawed water orb weaver (*Tetragnatha* sp.); one of the first spitting spiders (*Scytodes* sp.) that Ruan found on the trip; a jellybean theridiid (*Meotipa* sp.); and a single-line-web spider (*Miagrammopes* sp.).



Ruan and his sweepnet and stick in the breathtaking Royal Natal National Park. The beating method (holding a net under a bush or branch and beating it with a stick) proved extremely lucrative for finding bush- and tree-dwelling species, but not so much for finding *Scytodes* spp. That said, our beats weren’t completely void of *Scytodes* spp., and we found some in our beats in Karkloof.

Day 3: Drakensberg Mountains – Cathedral Peak

I'm just a sucker for mountains, so I looked forward to our trip to Cathedral Peak ever since Ruan mentioned more than a month ago that we'll be going there. At the gates, unfortunately, we were told that we cannot be in the vicinity of the hotel, so we'll have to collect outside the park. Oh well, at least we still had the majestic mountains as a backdrop.



A “selfie” of Ruan and I with the majestic Drakensberg Mountains and Cathedral Peak (the one that looks like a bell) in the background, as well as the Cathedral Peak Hotel. I was planning to shave my beard for the warm KZN weather, but kept it for our visit to the mountains because I figured it would be very cold there. It wasn't, and we (or I, at least) spent most of the day sweating and dehydrating.

We first searched the area near the gate. One of the gatekeepers came to investigate. After learning that we're there to find spiders, he excitedly informed us that there's a “huge” spider in the office, and asked if we wanted it. Yeah, of course! A minute or two later he returned with a common daddy longlegs in a container. “Do you want more?” Yeah, sure. He comes back with a few more, with a huge smile on his face. I don't know if he was happy to help us or that he managed to catch all those “nasty” spiders on his own. Maybe he was just glad to get rid of them.

After that we did a little bit of climbing, where I again realised how seriously unfit I am, and reached a small plateau. This place was beetle heaven, but we weren't there for them. Despite weather reports saying it would be cold in the mountains, it was extremely hot, and after our water ran out, we decided to head back down. We'll go to the other gate or a different park to collect. Halfway we realised the other gate was too far away, so we eventually turned back to the ATKV resort to see what we can find there instead.



Clockwise: A very small female ant-mimicking jumping spider (*Myrmarachne* sp.); a recently described *Micaria felix* (Gnaphosidae), and an impressive little male grass lynx spider (*Oxyopes* sp.).

Day 4: Pietermaritzburg

Our plan for the next three days was to work in the KwaZulu-Natal Museum, going through their collection of spiders to look for spitting spiders. On our arrival at the museum, we found out that they weren't expecting us until the following day, so we went to buy some supplies, thinking that the day was completely wasted.

However, the guesthouse where we stayed had a surprising diversity of spiders, and our night walks in the garden were especially lucrative. This is where I found my very first Amblypygi, my favourite arachnid, after spiders, of course. Here I also saw a scorpion spider for the first time, and was rather surprised how fast they are. So, what else is left on my bucket list? A long-spinnered bark spider; I wonder if we'll find any of them here. Oh, there's one! And another one! They are even more beautiful in real life than I imagined.

What's next? Four dandy jumping spiders (three subadult males and a female); another first for me. This place was bucket list heaven for me!



My very first tailless whip scorpion (*Damon* sp.) and scorpion spider (*Platyoides* sp.), and three different long-spinnered bark spiders (*Hersilia* spp.). All these arachnids were much faster than I thought they would be.



A female and subadult male dandy jumping spider (*Portia schultzi*). We found this one female, and three subadult males.

The last baboon spider I saw in the wild was when I was about six years old, so when Ruan spotted a female's burrow in the garden and tried to lure her out, I stood ready with my camera. Unfortunately, she was too snug in her burrow and didn't want to come out. We did, however, find two males, which was better than nothing.



One of two male baboon spiders, covered in water from the very light rain that fell that night.

I wasn't a big fan of the bustle of Pietermaritzburg and much rather preferred to be in nature, but this garden was just a treasure trove of first finds. My bucket list of spiders got a lot shorter here.

Day 5: KwaZulu-Natal Museum – Pietermaritzburg

Time for some “lab work” in the KwaZulu-Natal Museum. I would have loved to walk through the museum, but never really got the chance. We did get a little lost once, so we managed to see a few exhibits. This is the same museum where Charles Griswold was a curator from 1983 to 1986.

Anyway, back to work. We were handed a lot of vials of spitting spiders that had already been sorted, but also a few large jars of unsorted vials. Ruan and I each get a microscope, some ethanol, and everything we need to sort and label the spiders, at least according to family. It's slow and somewhat “boring” work, but I found it fascinating to look at all the spiders through the microscope and seeing things that even my macro lens can't capture.



My sorting station in the lab. Maybe not the most efficient station, but I did get the work done. The most abundant spiders in my jar of specimens were by far the Araneidae.

Day 6: KwaZulu-Natal Museum – Pietermaritzburg

On our last day in Pietermaritzburg, we wrapped up our work at the museum. It didn't take long, and we had the rest of the day to go somewhere else. We contemplated going to Howick Falls, but first a quick stop at the guesthouse. Despite the previous two sedentary days, both Ruan and I were very tired and decided to just "rest our eyes" for a few minutes. We both ended up sleeping for about three hours, leaving little left of the day. Oh well, at least we can still collect in the garden... The following photos are some of the other notable finds at the guesthouse.



Left: One of the dark sac spiders (Castianeirinae). Prof. Haddad thinks it might belong to a new genus. **Right:** A mushroom theridiid (*Phoroncidia* sp.) that rushed to the tree when we spotted her, still holding on to her thread of sticky silk.



A few unknown theridiids found on the trees in the garden. The top right one is possibly *Tidarren* sp.



Some of the jumpers we found. **Fltr:** *Myrmarachne marshalli*, *Asemonea* sp., and *Tusitala* sp.



One of the prowling sac spiders (Miturgidae). We currently only have two recorded species but, according to Prof. Haddad, there are so far 16 newly described species. This female is probably one of those new species.



A tailed orb weaver (*Eriovixia* sp.). Our African species have not yet been revised.

Day 7: Karkloof Canopy Tours forest

Our permits for the Karkloof Nature Reserve didn't go through, so we had to collect somewhere else. Ruan organised with Karkloof Canopy Tours to collect in their forest. This beautiful forest was bark spider heaven. Also, each bush and tree we beat delivered countless little red-and-black theridiids. If anyone was ever to describe these spiders, this forest is certainly the place to find hundreds of them.

After a few hours of very lucrative beating and sifting next to a stream close to the entrance, we decided to head up. And up... and more up... Not being a spring chicken anymore, I had to insist that we turn back after it became clear that there was no end in sight to all the climbing, and while there were ziplines everywhere, we had to go back the way we came, i.e. by foot. It was getting dark anyway.

Ruan managed to find a few spitting spiders, so we got what we came for. We also managed to find what appeared to be an undescribed *Ansiae* sp. crab spider. Unfortunately, she was a juvenile. Other notable finds included *Phrynarachne melloleitaai* (bird-dropping crab spider), *Pherecydes* sp. (what I call the Star Wars crab spider), *Meta meruensis* (Tanzanian water orb weaver), *Ideocaira triquetra*. (triangle orb weaver), and a few interesting araneids and theridiids.



Clockwise, fltr: Unknown crab spider, possibly *Ansiae* sp.; triangle orb weaver (*Ideocaira triquetra*); unknown theridiid; and a *Meta meruensis* water orb weaver. The latter will probably be moved to another genus as soon as it is revised; possibly to *Leucage* or *Metellina*.

Day 8: Pennington – Vernon Crookes Nature Reserve

Our next stop was Pennington, where we had a charming little cabin about a minute's walk from the beach. I haven't seen the sea in nine years, so it felt like seeing a long-lost friend again. But I'm not here to catch up with old friends, so we left for the Vernon Crookes Nature Reserve. Before the trip, I did an online search for all the reserves we would visit to see what they look like, and Vernon Crookes looked the least appealing. I was horribly wrong though, because it was a stunning place, and it seemed like we had the whole reserve to ourselves, which is not really surprising because it's not the easiest reserve to access.



A view over the Vernon Crookes Nature Reserve. This was by far the place with not only the most spiders, but also more of the rare ones. I just wish we could have comb every single square metre of this place...

When we arrived, there was no one at the offices. We did eventually manage to find a police officer who lived nearby and informed him of our purpose.

We didn't get far on our first day there and spent most of our time at the entrance, doing some sifting and beating. The place was crawling with all sorts of interesting spiders, and this is where Ruan found our first pelican spider (*Afrarchaea cornuta*), which was one of the spiders on his bucket list. Other notable finds included *Austrophaea zebra* (zebra dark sac spider), *Phoroncidia* sp. (mushroom theridiid), *Avelis hystriculus* (spiny crab spider), and *Palpimanus* sp. (palp-footed spider),



Clockwise, fltr: Horned pelican spider (*Afrarchaea cornuta*); palp-footed spider (*Palpimanus* sp.); spiny crab spider (*Avelis hystriculus*); and a mushroom theridiid (*Phoroncidia* sp.). The latter two spiders were extremely small (about 2 mm).

We also found a few beautiful huntsman spiders, an interesting wolf spider, a jellybean theridiid (*Meotipa* sp.) and a few Zodariidae that are believed to be a new species of *Asceua* (which were sent to Arnaud Henrard). All in all, it was a very lucrative day, and we looked forward to spending the whole day there the following day.



Top: An unknown wolf spider and huntsman. **Middle:** A jellybean theridiid (*Meotipa* sp.) and a male *Asceua* sp. zodariid. The **bottom** photo is the *Asceua* sp. female.

Day 9: Vernon Crookes Nature Reserve

When we arrived at Vernon Crookes on our second day, we discovered that we had a flat tyre. Before we could start searching for spiders, we had to fix it. Unfortunately, it wasn't an easy issue because we struggled to figure out how to remove the spare tyre (neither Ruan nor I were versed in bakkie tyre changing because we both drive sedans), and we eventually had to consult the manual.

With that done, we went down the footpath, a little deeper into the reserve. The forested area was a haven for funnel-web mygalomorphs (*Allothele* spp.; Euagridae), some of them with their webs between the branches (which I found to be rather strange). We also found a *Griswoldia* sp. false wolf spider (Zoropsidae), a biscuit box kite spider (*Isoxya tabulata*), another "Star Wars crab spider" (*Pherecydes* sp.), an unknown hackled orb weaver (Uloboridae), and a long-jawed ground spider (*Drassodella* sp.). Ruan also managed to find a second horned pelican spider, this time a female.



Top: A *Pherecydes* sp. crab spider and an unknown uloborid. **Middle:** A female horned pelican spider (*Afrarchaea cornuta*) and a long-jawed ground spider (*Drassodella* sp.). **Bottom:** A funnel-web mygalomorph (*Allothele* sp.) and a false wolf spider (*Griswoldia* sp.).



On our way out of the reserve, disaster struck. A branch that broke off a tree and hung in the middle of the road looked like a rather minor threat, but instead of gently brushing over the roof of the car, it smashed the windshield. We had to drive back to the cabin very slowly.

At night, the third misfortune strikes: no electricity. The owner said that it would take two hours to fix, but it turned out to last until the next day, so we ordered pizza and took photos and labelled vials under the emergency light.

Day 10: Cabin in Pennington

Due to our broken windshield, we couldn't drive anywhere, so Ruan spent the day labelling spiders while I took photos of some of our finds of the previous few days.

Day 11: Richards Bay – Enseleni Nature Reserve

At 5 am in the morning, I went to say goodbye to my long-lost friend, the ocean. I wasn't sure if I'd see it again in Richards Bay, which would be our next stop, as well as the closest place we could fix the windshield. Our only option was to drive there with the broken windshield.



A rather stormy goodbye from the Indian Ocean. This photo was taken at 5:30 in the morning on a Pennington beach, right after sunrise.

After checking into our accommodation, owned by a very friendly lady who gave us free reign of her garden to look for spiders, we went to the Enseleni Nature Reserve, where we spent only about an hour looking for spiders. The only notable find was two forest huntsman spiders (*Panaretella* spp.). I know that as a defence mechanism, they turn around and stick their abdomen in the air to display the eye spots, hoping that it would scare off predators. I'm sure it works against some predators, but not against humans, who might find it too cute to run away, especially since the "face" kind of looks like a sloth (or a martin), which is probably the least intimidating creature out there.



Two forest huntsman spiders (*Panaretella* spp.). Only the first one (on the left) felt intimidated enough to stick her abdomen in the air and show the eye spots. The second one didn't seem bothered by my presence at all.

Day 12: Richards Bay garden

Still without a vehicle, we decided to explore the very lush garden at our accommodation. We managed to find a few green jumping spiders (*Asemonea* spp.), whose eyes "changing colour" as the lenses move around never fail to amaze me.



A male green jumping spider (*Asemonea* sp.) all snug in his retreat. He looks rather incapacitated, but then he suddenly dashed out from under the silk threads. It took me a good 20 minutes to find him again.

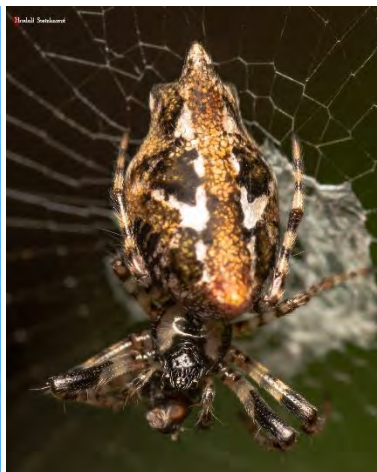


Top: A series of photos showing how the eyes of *Asemonea* spp. “change colour” when the spider looks in different directions. **Right:** A *Myrmarachne ichneumon* jumping spider, and the ant they mimic at the bottom (*Tetraponera* sp.).

We also found a *Myrmarachne ichneumon* ant-mimicking jumping spider busy feeding, as well as a whole bunch of other jumping spiders. Other finds include a very small tree sheet-web spider (Cyatholipidae), a *Cicynethus subtropicalis* zodariid, and my first southern green funnel-web pisaurid (*Hygropoda tangana*).



A southern green funnel-web nursery-web spider (*Hygropoda tangana*). The first time I saw a photo of these, I just couldn't believe we have a pisaurid like this in South Africa, so I always wanted to find one. While Ruan basically found 90% of the spiders on our trip, this find was mine :) I was quite chuffed...



Top: A *Cicynethus subtropicalis* zodariid. My girlfriend said that this was her favourite spider of our KZN trip. **Bottom, fltr:** One of the tree sheet-web spiders (Cyatholipidae); a garbage-line orb weaver (*Cyclosa* sp.); and a long-legged sac spider (*Cheiramiona kirkspriigsi*).

Day 13: St Lucia – uKuwela Nature Reserve



With our car's windshield fixed, we could continue our trip. The next stop was St Lucia, where the hippos roam the streets at night (we didn't see any). Unfortunately, the authorities never replied to Ruan's application for collection permits, and a visit to their offices also didn't help. We could therefore not collect in any of the areas around the town.

Fortunately, I remembered Clinton Dean Wright's invitation a month ago to go have a cup of coffee at their house near Hluhluwe when we're in St Lucia, so after a phone call, we were off to their house in the uKuwela Private Nature Reserve.



Barbara and their cat, Mithi. Missing our own ginger back in Bloemfontein at this time, this poor cat had to endure my relentless petting.

Getting there on our first visit was a nightmare. Our GPS sent us deep into the plantations and 4x4 trails and we got lost. Eventually, disregarding the directions, we managed to find our way to the highway and eventually to uKuwela, where we were greeted by our very friendly and hospitable hosts, Clinton and Barbara Wright, and their very bright son, Ricky, and very friendly cat, Mithi (who is scared to death of the leopards in the area).

It was already a little late, so we didn't go collecting. Of course I had to take a photo of the recently described Phinda button spider (*Latrodectus umbukwane*), and she was a stunner. I heard stories of how big these spiders are (most likely the biggest *Latrodectus* in the world), but it's very different if you see it with your own eyes. She was HUGE; her leg span almost the width of my hand. Barbara was nice enough to trust me to hold her in my palm (not recommended if you are lucky enough to find one of these spiders), and even her weight was impressive. If that spider would have fallen out of my hand, she would probably have died on impact.

At sunset, Clinton took us on a short tour through the reserve to show us where we could go the following morning. On the river dividing their reserve from the Phinda Game Reserve, I saw my very first wild crocodile; a rather big one that came swimming towards us. A hippo also graced us with her presence. It was dark when we eventually hit the road again.



The recently described Phinda button spider (*Latrodectus umbukwane*). While I wouldn't recommend handling these spiders, this one was just so relaxed (she is captive bred). Besides, this is the first photo I'm aware of that shows the relative scale of these spiders. Their egg sacs (which are purple when freshly spun) are also HUGE.

Day 14: St Lucia – uKuwela Nature Reserve

We went back to Clinton and Barbara’s place the following morning, and after some Vietnamese coffee, we went exploring. I finally made my first contribution to Ruan’s research when I found my first and the biggest spitting spider of our trip, a *Scytodes caffra*. Other interesting finds included what I call a pom-pom salti (*Afromarengo coricea*), a *Simorcus* sp. crab spider, and two large-eyed mini wolf spiders (*Minicosa neptuna*).



Top left: A *Simorcus* sp. crab spider. **Bottom left:** *Scytodes caffra*, our biggest spitting spider from the trip. **Right:** A “pom-pom salti” (*Afromarengo coricea*).



The very odd-looking large-eyed mini wolf spider (*Minicosa neptuna*). There’s only this one species in this genus, and they only occur in South Africa. This one was no bigger than 2 mm, making them very likely the smallest wolf spiders in the world.



Top left: A biscuit theridiid (*Phycosoma* sp.). **Top and middle right:** An unknown orb weaver. Prof. Dippenaar-Schoeman's best guess is *Artonis* sp., but unfortunately she can't be sure. Both these spiders were very small (<2 mm). **Bottom left:** Another unknown orb weaver, and a sea-side spitting spider (*Scytodes maritima*), by far my favourite spitting spider of our trip.

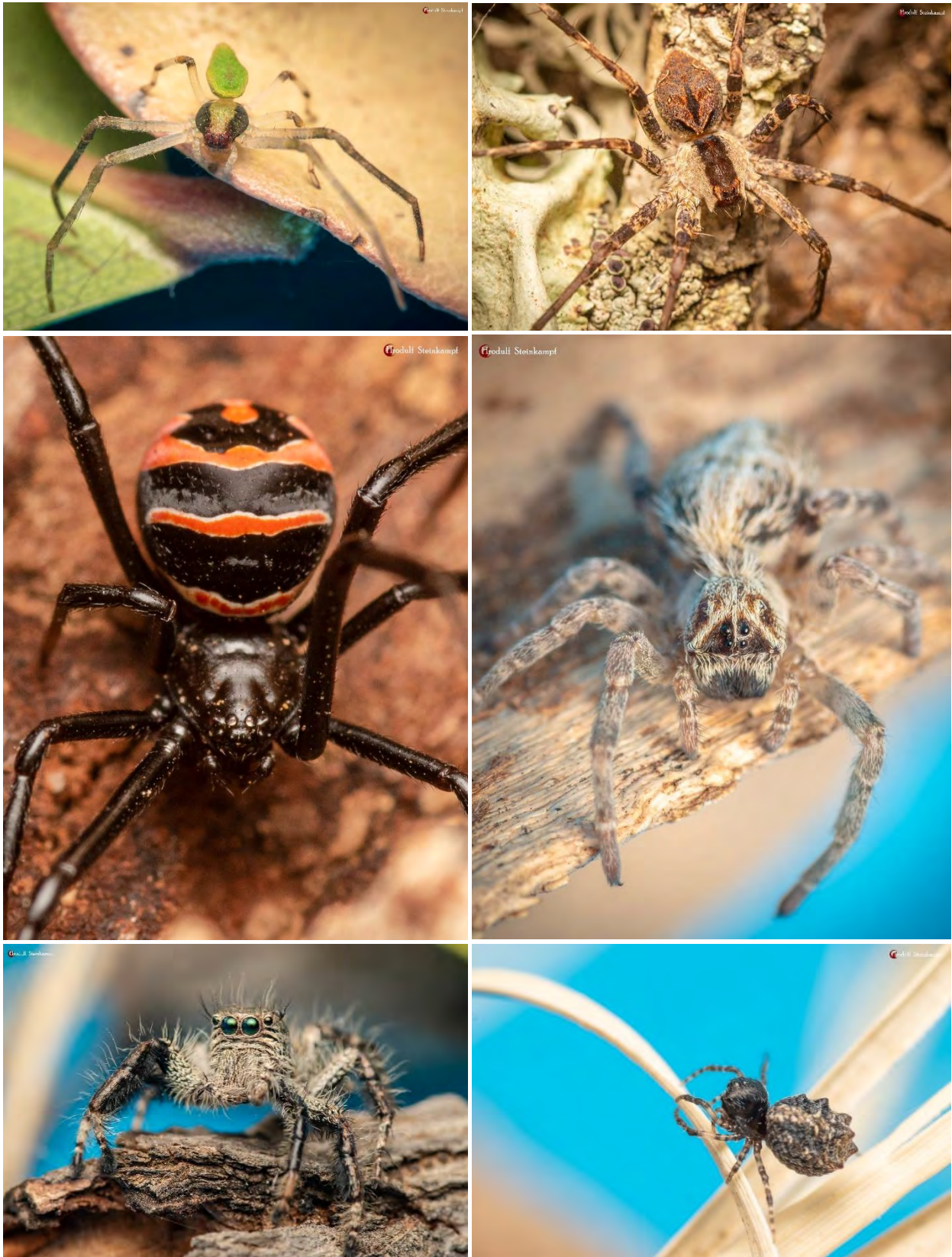
We went back to Clinton and Barbara's house and spent a good few hours there enjoying their hospitality. It was dark when we said our goodbyes, leaving me a little sad that I will probably never see these wonderful people again.

Day 15: Tembe Elephant Park

We didn't have much time to spend in Tembe and spent most of our time there driving around. For Tembe and Ndumo, we received magnets to put on our car doors that say that we're researchers. This allowed us to get out anywhere in the parks, with due caution of any wild animals, of course. We went looking for some watering holes or "pans", but they were all dry.

Despite the little time we spent here, we did manage to find two *Geraesta congoensis* crab spiders, a beautiful small funnel-web pisaurid (*Cispius* sp.), and the only Eresidae of our whole trip, a few community-nest spiders (*Stegodyphus* sp.). We also found the only female black button spider

(*Latrodectus* sp.) (unfortunately a juvenile) for the entire trip, as well a *Chorizopes* sp. (or *Chorizopesoides* sp.) orb weaver and the largest jumping spider in Africa, *Hyllus treleaveni*.



Top, fltr: One of two *Geraesta congoensis* crab spiders we found in Tembe, and a small funnel-web pisaurid (*Cispius* sp.). **Middle, fltr:** A juvenile female black button spider (most likely *Latrodectus renivulvatus*), and a female community nest spider (*Stegodyphus* sp.). Unfortunately we didn't find a male *Stegodyphus* sp. **Bottom, fltr:** *Hyllus treleaveni*; the biggest jumping spider in Africa. This was a male, however; they're slightly smaller than the females. Unknown spider; possibly *Chorizopes* sp. or *Chorizopesoides* sp., an orb weaver that supposedly preys on other spiders.



Other finds at Tembe include this dew-drop spider (*Argyrodus* sp.; possibly *A. convivans*, and this jumping spider (*Stenaelurillus guttiger*).

Day 16: Ndumo Game Reserve

Our last stop was Ndumo, a birder's paradise, with more than 430 bird species recorded here, by far the most in South Africa. (I love birds probably as much as I love spiders.) We hoped the spider species would also be numerous.



Sorry, I just had to include a photo of this female saddle-billed stork. They stand about 1.5 metres tall. They're HUGE!

We stopped next to Nyamiti Pan – filled with crocodiles, and where the fever trees are crawling with pseudoscorpions and *Afraflacilla venustula* jumping spiders – and selected a big vachellia (or what most South Africans still call an acacia) tree for our first and only fogging session.



Left: A fever tree next to Nyamiti Pan, where we spent the whole day. **Right:** One of the many crocodiles on the banks of the pan, which ensured that we didn't go collecting spiders too close to the water.

While fogging is an extremely efficient way to collect arboreal spiders, it's a very controversial method among spider and insect lovers because it basically means spraying insecticide into the tree with a machine resembling an old-style leaf-blower, and it kills indiscriminately. So, we had to get protection beforehand, because we initially thought that we're going to fog a lot of trees. Also, I found out the hard way that if it gets into your eyes, it burns like hell...

Unfortunately I didn't get a chance to go through the fogging material, so I don't know what spiders were found. I did, however, manage to take photos of the most impressive huntsman (some kind of *Olios* sp.) I've ever seen, as well as an orb weaver that looks a little like a cat-faced spider (*Araneus gemmoides*), but probably isn't.



My favourite huntsman of our trip, a tree huntsman spider (*Olios* sp.). Unfortunately she was busy dying from the insecticide. I would have loved to see her full of life, but if it wasn't for the fogging, I wouldn't have seen her at all.



Another unknown orb weaver. All these “unknown” spiders are still in the process of being identified, but at the time of publication, we haven’t received an identification yet.

Collecting the insects, spiders, etc. and packing up everything is quite hard work (I’m sure there is an easier way...), so I hope whatever was found in the material was worth the effort.

Day 17: Back home

Like all good things, this trip also had to end. We hit the road back home, a good 11-hour-long drive, me being much wiser than 16 days ago.

I learned how to properly beat and sift, and that the bases of grass tussocks are a great place to look for spiders. I got to leave my sedentary job behind the computer for a while and get out for some fresh air and exercise in one of South Africa’s most breath-taking provinces.

In these 16 days I also considerably improved my macro photography, and had the privilege to see and photograph spiders (and let’s not forget the birds and insects and other arthropods) I’ve never seen before, and in some cases I never knew existed.

It’s a wonderful world out there if you just spend enough time looking at it; and our country, despite all its problems, is still one of the most beautiful countries in the world, with a very rich diversity of fauna and flora. Instead of looking out over the ocean or up to the mountains, try to stick your head into some grass and witness our wonderful world below.

Once again, thank you to Ruan Booysen and Prof. Haddad for letting me go on this trip. It was truly an experience I will never forget.

Ladybird orb weavers

by Norman Larsen

Paraplectana Brito Capello, 1867

This article was put together with the kind help of Anneliese Pretorius, Dee Bennion, John and Astri Leroy, Kobie du Preez, and Sam Jacobsz.

At night a capture web is constructed, by *Paraplectana*, with a few radii and widely spaced spanning threads. The web is a spiral web; it is not a continuous spiral but separate spirals called a spanning thread and is four times thicker and at least seven times stronger than those made by other araneids and with larger glue droplets. The viscid droplets lose their glue properties within a few hours and if no prey is caught, the web must be reconstructed. When a moth flies into one of the spanning threads, it breaks off at the shear point and the spider hauls up the thread with moth attached. This web appears to be similar to the web of *Pasilobus* and looks very much like the bolas of a bolas spider when prey is caught and hangs on a single spanning thread.



Paraplectana thorntoni, Image: Anneliese Pretorius

Paraplectana is a genus of spiders with females having a body length of 9-16 mm; the males are smaller (6-9 mm). The carapace is a yellow-brown and the abdomen is round, resembling a ladybird beetle (family Coccinellidae) in colour and shape, with normally yellow, orange, or red patches on a black background or one of the colours with black spots. The legs are short. Not much is known about the lifestyle but they do make a web similar to *Cyrtarachne* with spanning threads. Due to the variety of colour patterns, there are probably more species than *P. thorntoni* (Thornton's ladybird spider), and *P. walleri* (Waller's ladybird spider).



Paraplectana walleri. Image: John Leroy

Paraplectana makes an orb web with widely spaced radials with widely spaced separate spirals. Each section between the radials has what are called spanning threads that are coated with numerous glue droplets smaller at the ends and progressively larger towards the centre. This is especially to capture moths. The space thread breaks off at one end and the spider hauls up her prey.

The egg sac is similar to some of the bolas spiders. Unfortunately the egg sac illustrated on the next page (photo by Kobie du Preez) was attacked by red mites.



Paraplectana thornstoni, in web. Image: Anneliese Pretorius



Paraplectana sp. Image: Dee Bennion



Paraplectana sp. from Central Africa. Image: Tinus Odendaal



Paraplectana thurtoni egg sac. Image: Kobie du Preez

It's a spider-eat-spider world

The following is a correspondence between Jeremy Poole and Dr Richard Pearce regarding noble false widow spiders (*Steatoda nobilis*) preying on other, often larger, spiders.

Reading Walter Schuit's post of 13th July reminded me that a couple of weeks ago, on one of my occasional nocturnal walks round my garden, I came across an adult female *Steatoda nobilis* with a captured *Araneus diadematus* female suspended from some silk, which she proceeded to draw up to her "lair" as I watched. A few minutes later I chanced upon what I think was an immature female *S. nobilis* with a fully grown (dead) female *Segestria florentina* trussed up in silk. Is this behaviour (taking on spider prey of the same or significantly larger size than themselves) common among *S. nobilis* or other spiders?

Cheers,
Jeremy Poole

Hi Jeremy,

Strategies and prey size vary rather widely between spider taxa. A number of taxa routinely tackle larger prey species (spiders and otherwise). Most people are familiar with the araneophagic exploits of *Pholcus phalangioides*. Leg span aside, these spiders punch well above their body mass in terms of the prey they are able to overwhelm and they are very capable of predating on physically imposing *Eratigena* sp.

As for the Theridiidae, a number of species have impressive form (*Steatoda* sp. can be included within this). Perhaps the most impressive examples are species like *Latrodectus hasselti* (the redback of Australian notoriety), which can ensnare, overpower and feed upon vertebrates. Small lizards are easy targets, but *L. hasselti* has also been routinely documented feeding on much larger prey, including juvenile brown snakes etc.

Our humble *S. nobilis* is clever, resourceful and eclectic in her tastes... but she isn't quite on that level!

Silk is a force magnifier. Venom likewise. These are good reasons why spiders have been so successful in evolutionary terms. Wow! I love these animals so much!

Kind regards,
Richard

Richard J. Pearce, Ph.D.
Associate Professor (Animal Ecology & Biodiversity Research)
Biodiversity Research Laboratory
Moreton Morrell College

Specialist hunters are rare in the spider world, and they will mostly specialise in only two taxa, i.e. the social insects (ants, wasps, and bees) and other spiders (Araneae). For example, the Ammoxenidae hunt only termites, the *Mystaria* spp. crab spiders hunt only bees and wasps, and many ant-mimics hunt only ants.

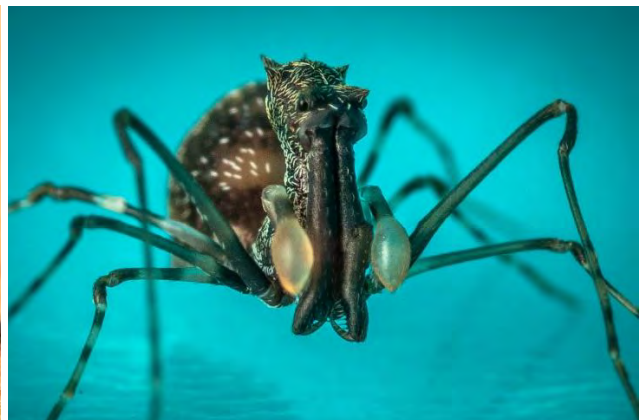
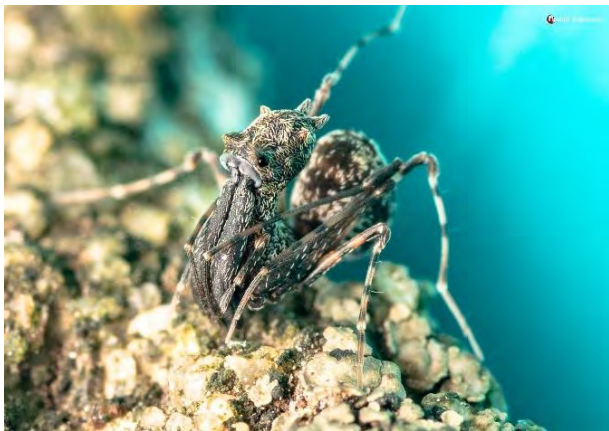
Most spiders are generalist hunters, and will often eat whatever they can catch and eat. The button spiders (*Latrodectus* spp.) and daddy longlegs (Pholcidae) are examples of generalist hunters, and they will prey on anything, including other spiders, and in the former's case, even small mammals and reptiles.

Then you get the spider-hunting spiders, which specialise in catching other spiders, mostly web-dwelling spiders. During our field trip to KwaZulu-Natal, I photographed four such spiders in four different families, namely the dandy jumping spider (*Portia schultzi*; Salticidae), the pirate spider (*Ero* sp.; Mimetidae), the spider-hunting orb weaver (*Chorizopes* sp., or maybe rather *Chorizopesoides* sp.; Araneidae), and the horned pelican spider (*Afrarchaea cornuta*; Archaeidae), also called the assassin spider.

Here is a short summary of each of these four spiders:

Archaeidae

The Archaeidae, also called pelican spiders or assassin spiders, mostly, if not exclusively, hunt other spiders. Spiders often leave a trail of silk behind them, which is what the Archaeidae follow to their prey. They tilt their heads back, push out their chelicerae, and then strike down on their prey. Due to the long chelicerae, they can keep their prey's defensive bites out of range.



Portia spp.

The *Portia* jumping spiders, also called dandy jumping spiders, are supposedly one of the “smartest” spiders in the world because they don’t rely on a single hunting strategy, but can rather formulate different strategies, depending on their environment. Some species, such as the Australian *Portia fimbriata*, have also been observed to spin webs, which is very unusual for the Salticidae family, which are free-living hunters. They will also sometimes hunt insects, which is probably where a web is more useful.



Mimetidae

Most of the Mimetidae, commonly called pirate spiders, are known to hunt only web-dwelling spiders. They will pluck the threads of the web, simulating the movement of trapped prey, or a mate, to lure their prey closer. Their legs have rake-like spines, which they use to immobilise the approaching spider's legs. They then deliver a very fast-acting venom, which almost immediately kills the prey.



Chorizopes or *Chorizopesoides* spp.

Very little is known about these spiders. Some sources, such as Kallal and Hormiga (2019)² say that they don't spin a web (an unusual trait for the orb weavers) and rather run around in leaf litter, hunting spiders. Other sources, such as Mi and Wang (2018)³ mention that *Chorizopesoides* spp. (previously *Chorizopes* spp.) spin vertical orb webs among shrubs.



These are just four types of spiders that hunt other spiders. There is still much we don't know about spiders and their behaviour, so there are probably many more spider-hunting spiders out there. Hopefully, with the participation of citizen scientists like you and me, we can learn a lot more about these spiders and their behaviour.

² Kallal, B. & Hormiga, G. 2019. Evolution of the male palp morphology of the orb-weaver hunting spider *Chorizopes* (Araneae: Araneidae) revisited on a new phylogeny of Araneidae, and description of a third species from Madagascar. *Invertebrate Systematics*, 33(2): 473-487.

³ Mi, X. & Wang, C. 2018. *Chorizopesoides*, a new genus of orb-weaver spider from China (Araneae: Araneidae). *Oriental Insects*, 52(1): 79-87.

A unique and interesting find...

by Tone Killick

On 1/5/20 I found something that completely blew my mind. I was at a local balancing pond on the Coopers Edge Estate (UK) when I came across an *Alopecosa pulverulenta* female with her egg sac. It looked like she was in the process of rotating the sac as it was positioned under her sternum and being held in her chelicerae (Photo 1). Her imitation of that other grass-dwelling species, *Pisaura mirabilis*, was very impressive indeed (Photo 2).



Photo 1: *Alopecosa pulverulenta* rotating egg sac. Image: Tone Killick



Photo 2: *Pisaura mirabilis* with egg sac. Image: Tone Killick

After taking a couple of photographs, the spider ran off, although in a rather ungainly fashion due to the way she was holding her egg sac. It was then that I noticed that rather than one sac, the spider was actually carrying two (Photo 3).



Photo 3: *A. pulverulenta* with two egg sacs. Image: Tone Killick

To say I was shocked is an understatement and I stopped her disappearing into the undergrowth by blocking her path with my hand. She then changed direction and started to head towards the shorter patch of grass that I had originally seen her on. This helped me twofold by making it easier for me to photograph, (it's no easy chore chasing lycosids through grass, especially with my knees) and there was also less chance of me losing the spider. I took several photos of her in her natural habitat (Photos 4 & 5) before collecting her and popping into a container.



Photo 4: *A. pulverulenta* with two egg sacs. Image: Tone Killick



Photo 5: *A. pulverulenta* with two egg sacs. Image: Tone Killick

I then packed up my camera equipment and made the five-minute walk back to my home, thoroughly excited with my find. Once home, I started to look carefully at the egg sacs under a 10x magnification hand lens. From experience, I could see that the white sac was produced by *A. pulverulenta* as it has the shape and structure of a golf ball, which is typical for a freshly produced egg sac of that species (Photo 6).



Photo 6: *A. pulverulenta* with fresh egg sac. Image: Tone Killick

Initially, I believed the second sac and obviously the older one was produced by a *Pardosa* sp. but must confess to having reservations about this now. Both sacs have been welded together with silk and the

fresh sac is indented by the older sac. I can only surmise as to how she ended up with two egg sacs. One theory is that the *A. pulverulenta* found the older discarded sac shortly before she was due to produce her own sac and the innate maternal instincts kicked in, thus causing her to attach the sac to her spinnerets. Whatever the reason for her having two egg sacs, this seemed a very unique find. For the next several hours I searched through the literature regarding this behaviour or even a similar image of a lycosid with two sacs but this proved fruitless. What my search did deliver was a remarkable image of an ichneumon wasp, *Gelis* sp., emerging from a *Pardosa* sp. sac that was photographed by Chris Ernst in the Yukon territory, Canada. Why would this seem remarkable to me? Well, after studying the egg sacs and looking at the photos I had taken, I noticed two tiny holes in the older egg sac (Photos 7 & 8), which looked remarkably similar to those in Ernst's photograph (Ernst, C. 2012)



Photo 7: Egg sac showing two tiny holes. Image: Tone Killick

From my experience, these holes were not caused by spiderlings emerging and besides, it would be far too early for emerging lycosid spiderlings if we consider the egg sac was produced this year. I also did not believe that these were caused by wear and tear as the lycosid egg sac is extremely tough and durable. Was the "*Pardosa*" sac discarded due to parasitoids? If so, the two small holes would suggest that the progeny of the parasitoid had emerged and the sac was now empty. An interesting study by Joe Bowden and Chris Buddle showed that in the Yukon territory, *Pardosa* spp. egg sacs are relentlessly parasitised by *Gelis* spp. (Bowden & Buddle, 2012).



Photo 8: Egg sac showing two tiny holes. Image: Tone Killick

Whether the older egg sac that the *A. pulverulenta* is carrying had been parasitised remains to be seen and although I have been very tempted to remove the sacs to investigate, I have decided to leave them be until the young spiderlings emerge from the fresh sac. Until that time, the *A. pulverulenta* has been set up in a cosy enclosure (Photo 9).



Photo 9: *A. pulverulenta* enclosure

References:

Bowden, J.J. & Buddle, C. 2012. Egg sac parasitism of Arctic wolf spiders (Araneae: Lycosidae) from northwestern North America. *The Journal of Arachnology*, 40(3): 348-350.

Ernst, C. 2012. The Wolf Spider Parasite - The Bug Geek. <https://thebuggeek.com/2012/10/19/photo-friday-wolf-spider-parasite/>

Mike's musings

A beginner's guide to spiders



Michael Green is a very active member on many of the nature-related groups, especially those dealing with the tiny world of insects, spiders, and other arthropods. He often posts informative posts on SCSA to educate the new members and those unfamiliar with how the world of spiders works. The following are just some of his posts (more will be posted in the coming newsletters).

About my posts on spiders

I am not an arachnologist but I am a very passionate nature lover and photographer. As a photographer I have learned that it is very important to study your subjects so that you know where and when to find them, as well as any habitual behaviour to look out for.

In this regard, I have studied several sources on spiders, e.g. online articles, books, field guides, and scientific publications. Personal observations also help a lot when learning about a specific subject. Over the years spiders have received such a bad and false reputation, mainly due to ignorance. I am learning something new about spiders almost every day and just have to share it with as many as possible.

A very BIG thank you must go to this group and its admin members for all the help and advice over the years. A special thanks also to Astri and John Leroy for their amazing book, 'Spiders of Southern Africa', as well as to the late Martin R Filmer for his awesome book, 'Filmer's Spiders'. Last but not least, to Norman Larsen, who revised Filmer's book (see the new revised edition). I am sure we will be hearing from Norman again and hopefully sooner than later.

Without these amazing books and people, I would be lost. My advice to you is to go out and buy these books because Education is the Key!

Do spiders have teeth to chew their food with?

All spiders have fangs but only some actually also have teeth on their fangs. Feeding techniques differ and are therefore determined by the kind of mouthparts each spider has. All spiders, however, feed by sucking on their prey.

Spiders with no teeth on their fangs, like the crab spiders in these pics, can only suck their food. Once their prey is immobilised, they vomit a digestive fluid onto it. They then suck up the resultant fluid through screens of hairs that filter out any solid bits. This process is repeated several times and initiates digestion outside the spider's body. Once all the soft parts of the prey have been sucked out, they discard the empty body in one piece.

Spiders like wolf spiders have teeth on their fangs. They basically follow the same sucking method as described above but also crush and crunch their prey while it is being digested. When these spiders have finished their meal, only a tiny ball of hard parts is left and discarded.



Mike Green



Mike Green



Spiders fangs and venom glands

Spiders' chelicerae, or fang bases, are situated at the front of the (cephalothorax) head section. Each fang base ends in a sharp, curved, moveable, hollow fang.

There is a duct in each fang that leads to the venom glands that are in the head section (cephalothorax). The venom glands are long, cylindrical organs attached to the fangs via the venom ducts. Spiders use their fangs for injecting venom and digestive fluids into prey and for self-defence. The fang bases are also used as "arms and hands" for digging and to carry egg sacs or prey.

Some spiders, such as the baboon and trapdoor spiders, fall into the more "primitive" group (Mygalomorphae) of spiders. They have very long fangs that lie parallel to the length of their bodies. They therefore need to raise

their heads and strike downwards when they bite.

Most spiders are, however, in the more "modern" group (Araneomorphae) of spiders. They have smaller fangs and bite with a pinching movement by opening and closing their fangs at right angles to the head. Some of the spiders in this group do, however, also have long fangs, as can be seen in this pic of a sac spider.

Spider evolution: The great survivors!

We still have so much to learn about the evolution of spiders and it is quite possible that more fossils will be discovered in the future. However, what we do know for a fact is that spiders have been very successful – having been around, more or less unchanged, for millions of years. They are found all over the world, except in Antarctica.

Spiders first appear in fossil records between 390 and 360 million years ago – before flowering plants or flying insects developed and even before amphibians. The oldest officially recognised spider fossil dates from 374 million years ago. The most ancient spider silk found so far dates from around 130 million years ago. Spider fossils from about 40 million years ago are quite common and look almost exactly like our present spider families do.



The majority of spiders found today are small, inoffensive creatures that keep mostly to themselves. They are among the best land predators on earth today. In saying that, we should keep in mind that humans are not and never will be their prey. For all of the above and their amazing survival against all odds, they surely deserve our respect. So the next time you see a spider, don't just squash or reach for the Doom, rather stop and think!

The two pics show the dorsal and ventral sides of a kite spider, which people refer to as prehistoric looking.

Why and how do spiders produce sound?

Spiders produce a variety of sounds, mainly to communicate with other spiders and to scare off predators. Many male spiders also produce sounds to attract females. These sounds are mostly so soft that they are barely audible to the human ear. Sounds produced to scare off predators are, however, much louder.

Different spiders produce sounds in different ways. By scraping body parts like limbs, abdomen, and booklungs against each other they can produce buzzing, clicking, hissing, or purring sounds. Certain body parts can also be vibrated to produce sound. They also use their legs, pedipalps, or abdomen to tap or drum on natural objects like dry leaves, which then act as amplifiers.



As an example, let's look at the baboon spider. These spiders hiss loudly when alarmed, sounding much like a hissing snake. Many people get quite a fright when they hear the sound for the first time. They achieve this sound by rubbing together parts of the fang bases and pedipalps, which are covered in rough hair. When alarmed, they will also take up a defensive stance, as can be seen in this pic.

Spiders have no outer ears, so how do they hear sounds?

Spiders do have hearing organs in the form of various vibration receptors, which are very sensitive to vibrations in the air, on surfaces, in their webs, and even on water. Their most important receptors are specialised hairs that cover the whole body but are concentrated on their limbs.

It may at first be difficult to think of hair as “ears”, but remember that the hair in our inner ears are what enable us to hear. The hairs in our ears move in response to airborne vibrations, which are passed on to tiny bones that cause our eardrums to vibrate. In turn, this information is transmitted to our auditory nerves.

Spiders' most specialised “hearing” hairs are arranged in straight lines or small clusters on certain limb segments. They are attached to a very thin membrane that is rich in nerve endings. These very fine, long, flexible hairs are immensely sensitive to air currents and low-frequency airborne vibrations. The movement of these hairs activate the “auditory nerves”, much like in humans.



This pic is a close-up of a daddy longlegs spider. You might say, but they are not hairy spiders so how do they hear? Take a closer look and you will see that the body and limbs are covered in hairs; we just can't see them with the naked eye.

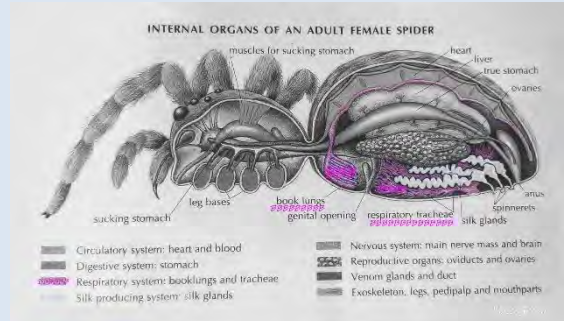
How do spiders breathe, also under water??

Spiders have two kinds of respiratory systems: booklungs and tracheae. See Pic 1, both systems marked in pink.

The booklungs basically consist of thin membrane plates. The gas exchange takes place between the air, on the one side of each plate, and the “haemolymph” or blood on the other side.

The tracheae are air tubes that run throughout the body and open to the outside through “stigmata” or openings in the exoskeleton. The tracheae lead air to the various parts of the body, where gas exchange takes place through the thin walls at the end of the tracheae.

Most spiders have one pair of booklungs and tracheae but some have no lungs, only tracheae, e.g. the orange lungless spider. Spiders like the baboon and trapdoor spiders have two pairs of booklungs and no tracheae.

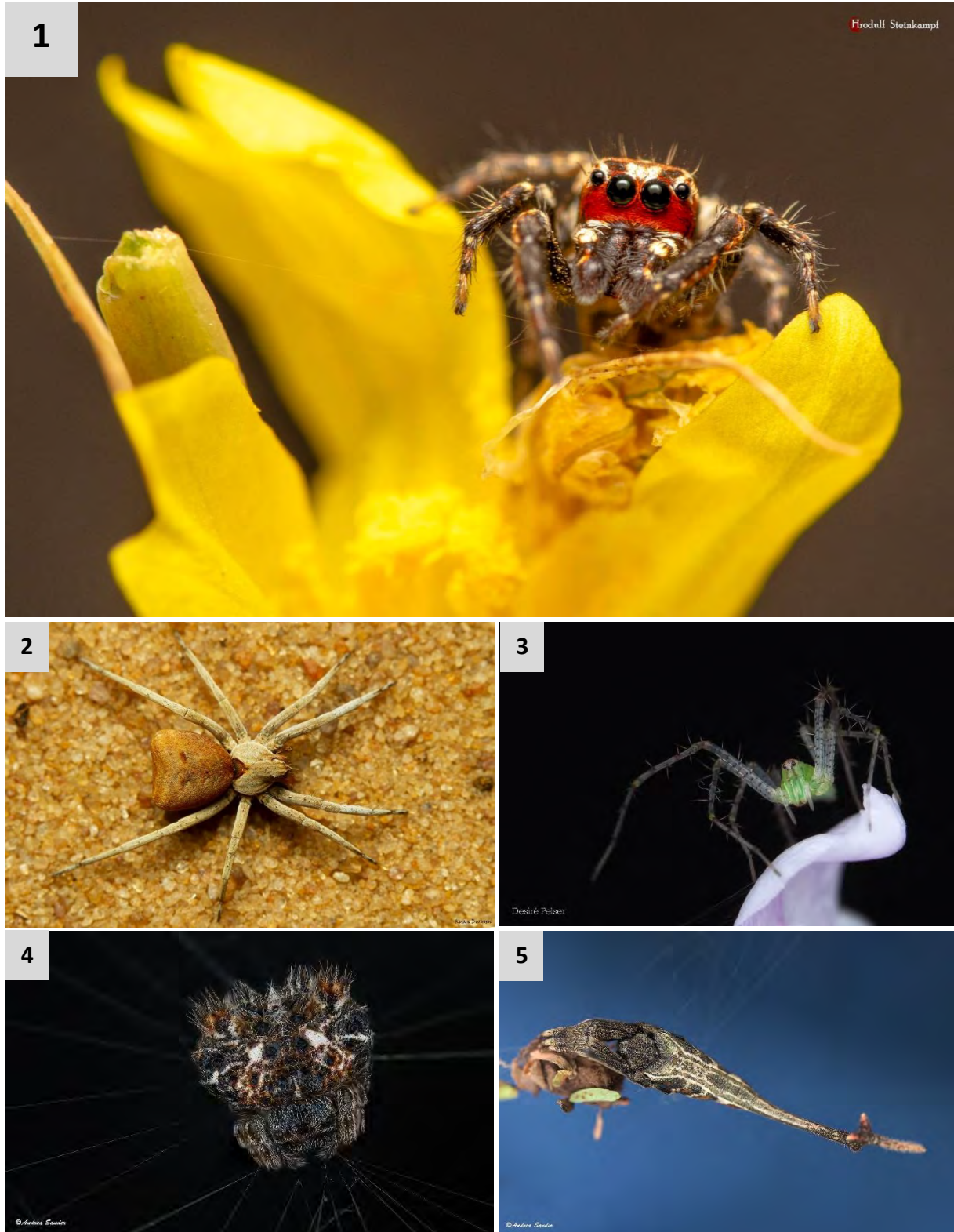


Very interesting is that some spiders can dive into water and remain submerged for a prolonged period. The diving bell spider found in Europe and Asia can spend 24 hours under water, just coming up for air now and again. Our long-jawed intertidal spider traps air in a silk-lined “storeroom” under water. When under water it does not need to surface to get air. In Pic 2 is one of our fishing spiders that traps bubbles of air on its hairs, which then act as an external “lung”, and enables it to breath under water. They mainly do this to hunt prey and hide from large predators. AMAZING!!!



Spider of the month

OCTOBER



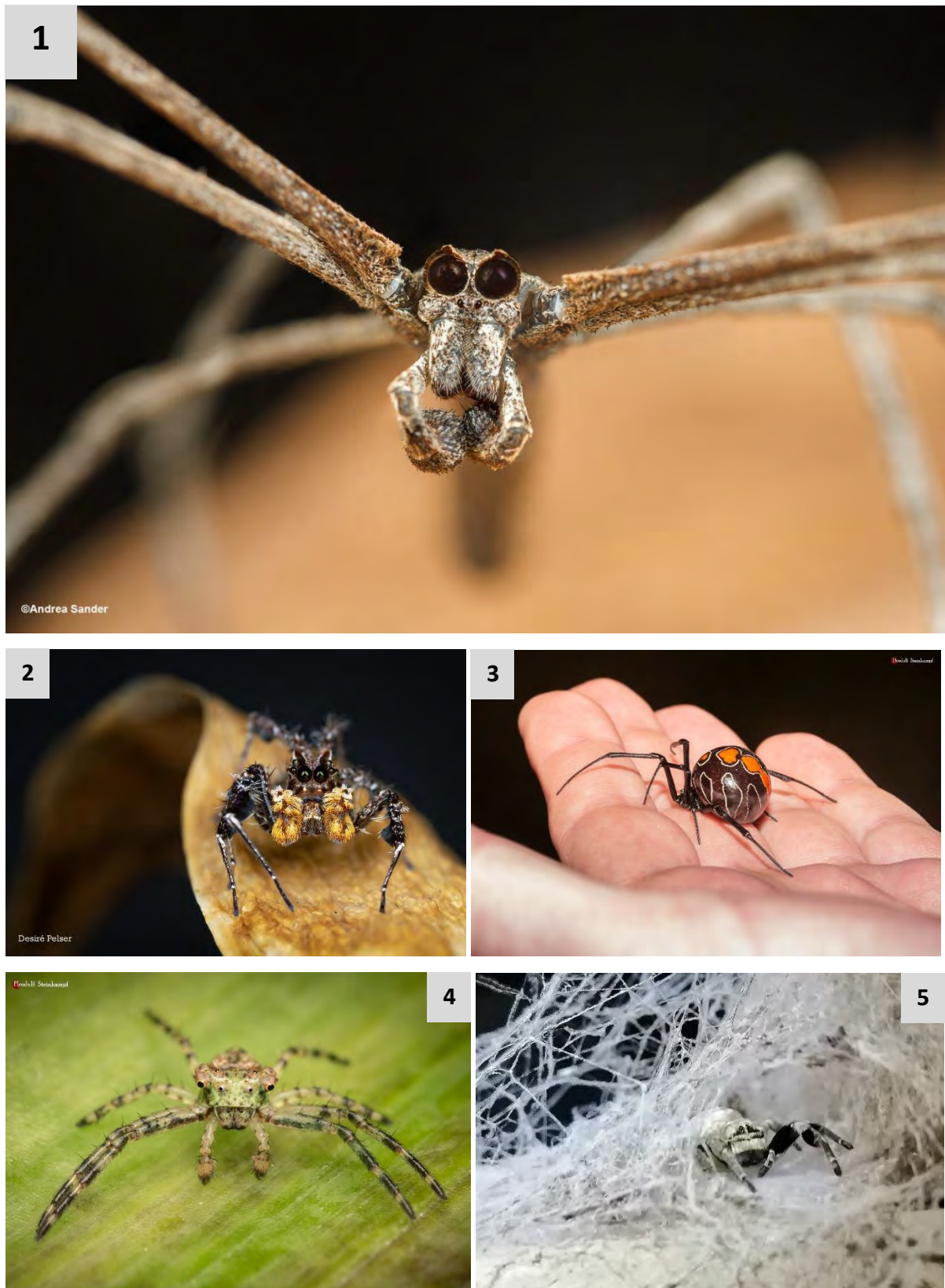
(1) Common evarcha (*Evarcha prosimilis*), by Rudi Steenkamp. (2) Stump-backed wolf spider (*Zenonina* sp.), by Ruan Booysen. (3) Green lynx spider (*Peucetia* sp.), by Desiré Pelser. (4) Spiny-backed orb weaver (*Afracantha camerunensis*) by Andrea Sander. (5) Scorpion-tailed spider (*Arachnura scorpionoides*) by Andrea Sander.

NOVEMBER



(1) Horned assassin spider (*Afrarchae cornuta*), by Rudi Steenkamp. (2) Icius jumping spider (*Icius* sp.) by Dawie Broekman. (3) Flower crab spider (*Thomisus* sp.), by Andrea Sander. (4) Doily orb weaver (*Gea* sp.) by Andrea Sander. (5) Large-eyed mini wolf spider (*Minicosa neptuna*) by Ruan Booysen.

DECEMBER



(1) Ogre-faced spider (*Deinopis* sp.) by Andrea Sander. (2) Dandy jumping spider (*Portia schultzi*) by Desiré Pelser. (3) Phinda button spider (*Latrodectus umbukwane*), by Rudi Steenkamp. (4) Pherecydes crab spider (*Pherecydes* sp.) by Rudi Steenkamp. (5) Community-nest spider (*Stegodyphus* sp.) by Emilio van Dyk.

HONORARY MENTION

These are a few spiders that didn't win the Spider of the Month, but that deserve to be showcased.



©Andrea Sander

Unknown orb weaver (Araneidae) by Andrea Sander



Desiré Pelsier

Unknown orb weaver (Araneidae) by Desiré Pelsier



Single-line-web spider (*Miagrammopes* sp.) by Ancia du Plessis

Feel-good posts

As Astri said in “From the Hub”, it’s not advisable to handle spiders if you don’t know what you’re doing, but it’s always nice to see someone overcome their fear through education, and many people are kinaesthetic learners who learn through touch. Either way, the spider in the left post was unharmed, and the lady was much richer in knowledge afterwards.

Gabriella Bissolati Arendse
 Rising star · 14 December at 13:31 · 🌐

Remember me? The girl who asked your advice on how to conquer her fears?

Well I read each and every comment and I took it all in..

Today, someone gave us a baboon spider to release which was found inside their house..

I took it as an opportunity to finally conquer my fear and after posting it to ID it..

I had the little guy crawl on my hand 🥰🥰🥰

And guyyyyyssss, as terrified as I was.. What a beautiful experience it was ❤️❤️

We will be safely relocating him this evening to a field opposite our house where there are lots of bush and bugs for him..

This is my proudest moment and I have to thank all of you for helping me through it 🙏



👍❤️🥰 1K 193 comments 17 shares

Lucia Tarasconi
 15 December at 08:35 · 🌐

So I used to be one of those people who were petrified of spiders and my stance was "kill it before it kills me" (this is no longer the case). I've come a long way with the absolute love of spiders from my dear friend [Roulla Janse van Rensburg](#) and this amazing group.

I have a red dot hairy field spider who I now watch with awe every night when she comes out ... we call her Madame ... yesterday I spotted her on the water fountain thinking she'd come down for a drink. On closer inspection I realised she was desperately trying to get off. I think the storm blew her down there.

I took a twig albeit a really long one ... and carefully placed it under her. She quickly climbed on and I relocated her to her web where she hurriedly climbed past all the bugs caught in the there and went straight into her hiding spot.

There was also a Mr hanging around a few days ago so I'll be on the look out for baby Madames.



❤️👍 Jeanne Van Aswegen, Caren Neal and 4 others 4 comments

Events

DIARY 2021: Go to www.spiderclub.co.za for more information.

We charge for attendance at field and certain other events: **R50 per adult and R10 per child 11 years and under with the option of paying R150 PER FAMILY for annual subscription.** Some venues also require an entrance fee, which must be paid by each individual. For field trips we will supply vials, magnifiers, plastic pill bottles, and some other basic collecting equipment but please bring your own if you have, as well as any reference books, a picnic lunch, adequate water, a hat, and good walking shoes. **Book on info@spiderclub.co.za or W Caren on 083 753 2946 or contact us on our Facebook page.**



Join our community on Facebook to meet like-minded people and stay updated on upcoming events <https://www.facebook.com/groups/101951926508391/>



Sunday 24 January 2021 **Spider Walk: Oori Private Game Reserve**

Shannon Rogotzki, a new member of the Spider Club, has kindly offered her home as a base. We will collect for a couple of hours, and then return to Shannon's home to identify what we have found. I will bring a microscope and will have the new draft Photo Guides on my laptop. Please bring a picnic lunch and your bathing cozzie. **Book on info@spiderclub.co.za** nearer the time on our Facebook page. When booking, please give your cell phone number and we will set up a WhatsApp group for the event.



26-28 February 2021 **Spider Weekend: Lakeview Resort, Klipdrift Dam, near Potchefstroom**

It is only about an hour and a half from Johannesburg but we decided to make a weekend of it and stay at the Lakeview Resort, hosted by Joanie Beytell. The self-catering cottages are small and fairly basic but comfortable and very reasonable at R250 per person per night plus a key deposit per cottage of R350. Camping is also available: R120 for a stand with electricity and R60 without electricity, plus R30 per person. Payment is to be made on arrival. More details to follow. **Book on info@spiderclub.co.za** nearer the time on our Facebook page. When booking, please give your cell phone number and we will set up a WhatsApp group for the event.



Sunday 14 March

Venue not yet decided; maybe on the West Rand or Pretoria areas. We will let you know.



24-27 April

April Cumberland Private Nature Reserve near Pietermaritzburg. A deposit has been paid for eight people in fairly rustic, self-catering accommodation. It is R270 per person per night to be repaid to Astri on booking. **No payment, no booking.** Details to follow. There is also a once-off conservation fee of R45 per person to pay on arrival.

Watch this space!

Keep your eyes on your e-mail and our Facebook page as other events may be organised, sometimes at quite short notice. We will attempt to give you fair warning. And remember that Norman Larsen is at the Cape Union Mart Adventure Centre, Canal walk in Cape Town for the first three Saturdays and the last Sunday of the month between 11 am and 12 pm to demonstrate and talk about SPIDERS!

TAIL END: *"The aim of science is not to open the door to infinite wisdom, but to set a limit to infinite error."*
Bertolt Brecht, German playwright and poet well known for his *bons mots*.