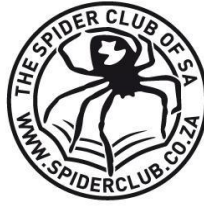


The Spider Club News



OCTOBER 2017 – VOLUME 33 No. 3



www.greenhumour.com

PUTTING US IN OUR PLACE

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Don't forget to consult the SCSA diary on our website and Facebook page for super events coming up soon. If you are a registered SCSA member you will receive emails and/or texts advising you of what's coming up. As usual, Norman Larsen will be in attendance at the Cape Union Mart Adventure Centre in Cape Town's Canal Walk every Saturday 11-12 to demonstrate and talk about spiders.

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.

Our Mission Statement

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

Contact Us

Your Committee

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... At the Spider Club of Southern
Africa page

Note from the Editor



I'm keeping this short, because Astri has written a fabulous Hub, longer than usual, and needing some space. It follows this note.

Lately members are sending us some lovely contributions to the newsletter. This time we have an article by Joh Henschel and Yael Lubin on stone-nest spiders in exclusion areas in the Karoo that are set up to understand what happens when you exclude sheep and other domestic food animals, or conversely, to measure the damage done by them. Also, we review three new books, all of them good. Dr Richard Pearce of the BAS has contributed an article on Every Spider Matters, which contains universal good sense about spiders.

I do hope you enjoy the newsletter.

Yours in spidering

Joan



Me holding forth at the 30th ECA in Nottingham, England.

FROM THE HUB – IN TWO PARTS

EUROPEAN CONGRESS OF ARACHNOLOGY and other stories

Please forgive me but this time I won't be talking about the Spider Club or about you, the lovely Spider Club members, instead here's something about my latest spider adventure. I'm really not sure where to begin, I have SOOO much to tell you! Spiders have taken me out of my comfort zone again, this time to England. There was to be a Spider Day at Waltham Place, the Oppenheimers' beautiful estate in Berkshire on 24th of August and we were to entertain and educate invited guests. To our immense surprise and delight Prof Ansie Dippenaar, John and I were offered a return flight to England, so that we could showcase the work being carried out on spiders in South Africa. Ansie felt she was unable to face the long flight and delegated Stefan to take her place.

But I am getting ahead of myself, back to the 30th European Congress of Arachnology. I had been toying with the idea of a trip to Britain to visit family and to attend the ECA in Nottingham, so it all fell in place, I could attend the first two days of the congress and get back to Berkshire in time for the spider day. Quick e-mail to Stefan, "If you go, I'll go." We both decided to attend.

The conference was beautifully organized by a committee made up of Sara Goodacre, Dmitri Logunov, Geoff Oxford, Tony Russell-Smith and Yuri Marusik. I swear there were dozens of Saras. She was everywhere ready to lend a hand, give instructions and shepherd delegates in the right directions and she was ably assisted by the 10 friendly and efficient green people (her helpers). To say I enjoyed the conference would be a huge understatement. It was lovely to meet up with old friends, make new friends and meet people face to face who had previously just been names and as always to enjoy the company of like-minded people. As usual parallel sessions were a problem. For example, Richard Gallon presented

his “Revision of the southern African spider genus *Brachionopus*” at the same time as Stefan’s presentation. I HAD to attend both, so why couldn’t there be two of me? In the end Stefan’s presentation won.

It was interesting that we were not the only non-European (!) delegates; The UK and Czech Republic fielded the most delegates but attendees came from Israel, Brazil, Sri Lanka, The USA, New Zealand and Algeria and although Marlis Dumke is from Germany she spoke about the Australian sub-social crab spider *Australomisidia ergandro*, André Walter from Denmark talked about group feeding in “our” sub-social *Stegodyphus africanus*. There were presentations on all aspects of arachnology from around the world, not just Europe and on our way back to Berkshire (once we had discovered where the temporary bus ticket office was located!) Stefan suggested that it would be good to open up our local African Arachnological Society Colloquium to presentations on arachnids and arachnology from around the world. Previous Colloquia invitations have stipulated that presentations should be on African arachnids only. I think that would be an excellent idea to widen our horizons.

It is always difficult to say which presentations were most interesting, inspiring or just plain entertaining but let me stick my neck out and say the two Plenary Session speakers were wonderful (as they should be). Yael Lubin’s talk “The other spider societies” about *Cyrtophora citricola* known as colonial spiders with behavioural flexibility and Fritz Vollrath’s “Spider webs and their silks” both blew me away. Yael is of course an old and dear friend, Fritz Vollrath an inspiring new one. It was good to talk with to him late on Tuesday evening in a church-become-pub. If you recall our collection of live *Euprosthenops australis* from Terra Nostra, so long ago went directly to his laboratory at Oxford and apparently enabled the initiation of valuable research into the properties of silk. One of the newly discovered properties is that it doesn’t change or become brittle at very low temperatures; Samu Ferenc’s presentation showing that the simple presence of spiders inhibits the depredations of crop destroying invertebrates - biocontrol without consumption by scaring the baddies away. Another delightful presentation was about the diversity and ecology of spiders found in the hollows of the Spanish oak *Quercus pyrenaica*. Yuri Marusik as usual turned several known “facts” of biogeography, spider classification on their heads.

On Wednesday morning Stefan and I had to change gear so to speak, and travel to Waltham Place via London. We were quite proud of ourselves having arrived at Maidenhead station at precisely 3.30 p.m. as arranged from South Africa and there were my husband John and Duncan MacFadyen of E Oppenheimer and Son waiting to whisk us to another world, Waltham Place Farm.



These pictures of Waltham Place are available online at www.walthamplace.com and show (left) part of the garden where you can see mown areas are minimal and plants are allowed to grow between mown bits at their own pace. The earliest parts of this elegant house date back to a manor built in 1634 but most of it dates from 18th century. The barn, where we gave our talks and had tea and lunch is very old and in fact is mentioned in The Domesday Book, a survey of England commissioned by William the Conqueror in 1086!

The Spider Day commenced at 9:30 (a time deemed early in the UK) with a welcome by Strilli Oppenheimer to the 32 guests. The first presentation was Prof Stefan Foord’s “South African spiders, their importance in a balanced ecology”, then Matt Shardlow gave the UK perspective on the conservation of spiders, teatime (delicious!) and Dr Sarah Henshall of Buglife UK told us about the spiders of Waltham Place and where we were likely to find them. I was last, talking about spiders of Brenthurst Garden in Johannesburg. Here are the speakers:



From left to right, Dr Sarah Henshall of Buglife UK, Matt Shardlow, Prof Stefan Foord, Astri & John Leroy

To use Strilli Oppenheimer’s own words the farm and garden at Waltham place are informal biodynamic and organic which means there were spiders EVERYWHERE! After our presentations we mixed with the guests at lunch and then each of us, paired with someone who knew the estate took groups to look for and at spiders. Of course, August in Britain is premier spider time when adults mature, ready to mate lay eggs and die before the northern winter. There were many spiders in the family Linyphiidae that were strange to me - almost 1/3 of all species in Britain belong to this family. They’re collectively called money spiders, so whenever I didn’t know what linyphiid spider I was looking at I called it a money spider. The big orb-weaver, *Araneus diadematus* (garden spider in the UK) were quite common (see photo on page 20) and the thick funnel-webs of the house spider *Tegenaria saeva* could be seen through windows of outhouses and greenhouses. (Photo of *T. saeva* on page 21.)

The spectacular wasp spider *Argiope bruennichi* was the highlight, Niki McCann, the Education Officer at Waltham Place, showed us where to find their webs amongst the irises in the grassland maze where their webs were really well camouflaged and quite difficult to spot. Thanks Niki!



Argiope bruennichi the wasp spider photograph taken from freenatureimages.eu on line.

On behalf of Stefan, John and myself I would like to thank Mrs Strilli Oppenheimer for inviting us to spend time at Waltham place and for giving us the opportunity to present South African spiders. It was a lovely visit to a gorgeous place- it was fun and we had a wonderful time, thank you.

Astri

Photo of Astri at the ECA by Christian Komposch

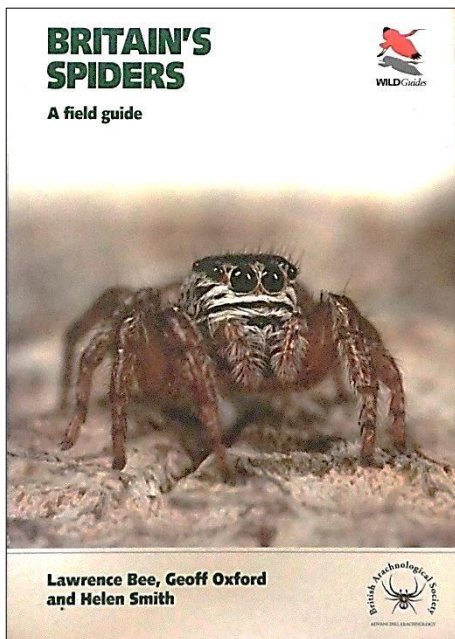
BOOK REVIEWS

As promised in the last issue, we are reviewing the two new spider guides from Britain and Australia, and Astri also reviews an excellent new book on Invertebrate Tracks and Signs.

NEW BRITISH FIELD GUIDE SETS A HIGH STANDARD

Review by Astri Leroy

BRITAIN'S SPIDERS – A field guide - a publication in the WildGuides series. Authors: Lawrence Bee, Geoff Oxford and Helen Smith 480 pages, semi-hard cover; published by Princeton University Press, New Jersey (in association with the British Arachnological Society). ISBN 978-0-691-16529-5. You can buy this book for R417 at www.loot.co.za.



This is a book that looks good and feels good. It's not too big to put in your rucksack but big enough to give an enormous amount of information about British spiders. The illustrations of spiders are all photographic, even those in the section on spider anatomy. You have to look hard to be sure.

The book has an excellent introductory section with spider anatomy, biology, ecology thoroughly covered. There's a small glossary for those arachnological terms for which there is no easy English translation but technical terms have been kept to a minimum or explained throughout the text. There's a short section on 'spiders and people' and information on where to find spiders, what equipment is needed and something on collecting techniques. There is also a very nifty short index to the families in the back flap of the cover, and a key to the maps and codes, including IUCN terms, in the front flap.

Two things that stand out for me are the section "A guide to spider families based on appearance" the other is a double page spread near the front of the book with a pictorial list of the 37 families, most of the illustrations are approximately life size except for the very tiny ones where the actual size is shown inside a ring. The

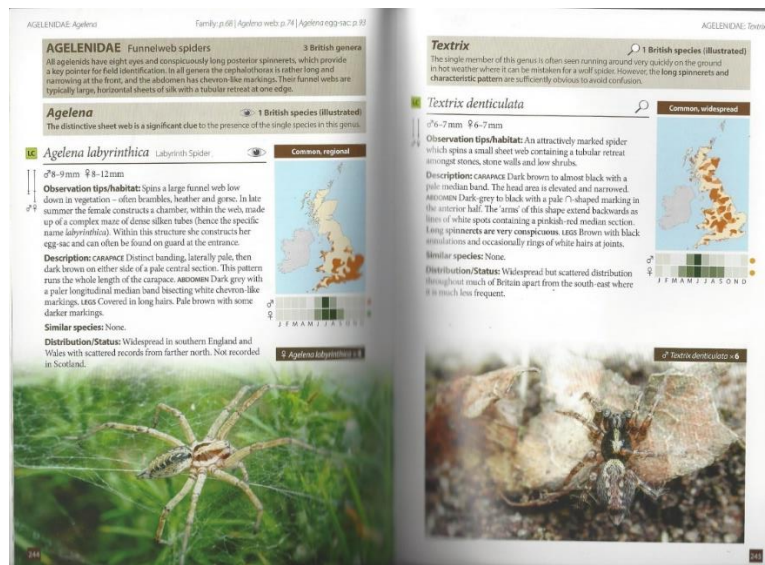
page number for each family illustrated is given which helps find one's way around the book.

The section "A guide to spider families based on appearance" is in effect is an illustrated family key showing diagnostic features such as number of eyes, size and any obvious features like the extremely long legs of the Pholcidae (what they call cellar spiders and we call daddy long-legs spiders) or the massive fang bases of their only mygalomorph, *Atypus affinis*. There's a general description of a typical member of each family, key characteristics are highlighted in bold text and similar families with which they could be confused are noted. Not only is there this guide to families there are also guides to webs and egg-cases.

Page numbers are given in both these sections and can be used to steer your way around the Species Accounts which is, of course, the main field-guide section of the book in which there are 395 entries. That's more than half of the approximately 680 species (according to the BAS website) of spiders in Britain. The family Linyphiidae with 280 species makes up more than a third of them s but because most are very small, very similar in appearance and only identifiable using a high magnification microscope, only a few of the larger and more easily recognisable ones are shown.

The species accounts are wonderful, giving the scientific and common names, observation tips, habitat, size distribution and status. In the introduction to the Species Accounts it is pointed out that very few spiders can be accurately identified to species level from photographs or even by looking at them in the field. (We know that.) To indicate which might be identifiable three icons are used, an eye showing that they can be identified in the field, usually without capture. An icon of a hand lens indicates that the specimen might be identifiable with careful close examination and a hand lens and an

icon for a microscope shows that they can only be identified using a microscope. Each account is clearly and beautifully illustrated and if you read the introduction to the species account properly even a foreigner to Britain like me can use these accounts to great effect in the field. I did! Here's the page I used to identify *Textrix* sp.



Strangely this publication, which is dated 2017, does not take into account some quite radical taxonomic changes which took place three years ago (Ramirez, 2014). The genera *Phrurolithius* and *Cheiracanthium* have been left in the family Corinnidae and Clubionidae respectively and the well-known *Achaearanea tepidariorum* and other *Achaearanea* species in that genus are now accepted as being in the genus *Parasteatoda* and in one instance the genus *Cryptachea*. Apparently, the authors decided to stick to the checklist of British spiders which had not yet been updated at the time of going to press.

Notwithstanding the above it is a superb field guide, and an exemplar for how field guides should be laid out, and if you ever visit Britain and/or want to get to know their spiders, this is the book to use.

What I loved is that the authors note that: "It is intended that the book will be updated and revised to reflect future changes in status and new records and it would be extremely useful to obtain feedback from readers who may have suggestions for improving the book's accuracy or ease of use, or who can supply better images – please contact the authors at wildguide@britishspiders.org.uk"

So, there should be a revision and maybe the "new" genera will be taken into account.



Left: Co-author Lawrence Bee, seen with Astri Leroy at the barbeque at the 30th European Congress of Arachnology held in England recently.

**Who knows who took the picture?
It was a party, after all**



Invertebrates of Southern Africa and their Tracks and Signs

By Lee Gutteridge

Softcover: 409 pages

Publisher: Jacana Publishing

Language: English

ISBN-13: 978-1431421572

Lavishly illustrated with excellent photographs

Review by Astri Leroy

If you are really interested in natural history, and even more so if you have a passion for invertebrates, you absolutely must get a copy of "INVERTEBRATES of Southern Africa and their TRACKS AND SIGNS". (Recommended price R320, and R245 at www.awn.co.za.)

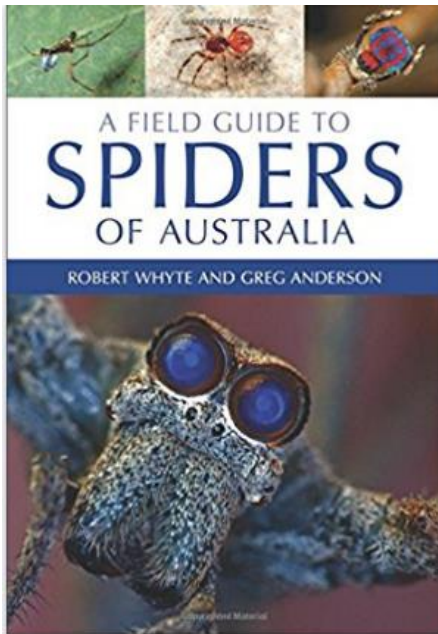
My first glance through this book brought me up short - I honestly thought I had eyes that sought out and found signs and tracks of tiny creatures and knew how to interpret them. I thought I knew which natural artefact pointed to which small creature, why certain leaves were eaten in a particular way, who laid those eggs, what those strange indentations in the mud meant, even if the author of those signs had moved on. I'm good at arachnid signs but there is a huge amount I don't know about other invertebrates and will be able to learn from this book. There are so many indicators that I have looked at but not known what they meant, now I can look them up, well most of them. Even Lee with his vast knowledge of the natural world admits that a huge amount remains unknown and as he says so many invertebrates are undescribed and live far beyond their currently described ranges. That certainly goes for spiders, and it's interesting that we have found the same via our Facebook page and through the various Virtual Museums.

Within a few minutes of opening this book I discovered that there is no index. I wanted to check the page on which the tracks and images of the white sparassid from Witsand and the name of the kind of caterpillars that can cover trees and bushes in silk. I was dismayed to find there was none! (By the way that sparassid from Witsand was scientifically described by Jäger & Krehenwinkel, in 2015 and goes by the unlikely scientific name of *May bruno*. I know to my cost that there is no way to keep up with taxonomic revisions and so does Lee, so I'm just saying.) Then I read the "how to use this book" page. I know, I know: read the instruction first . . . anyway, instead of using an Index Lee has given very useful headings in the table of contents. This works for complete tyros, but I'm not so sure it does for those of us who know a little more. So, if you want to know what might hatch from that neat pattern of tiny, pearl-like eggs you go to Chapter 6, Eggs and Egg cases, then to eggs without egg cases, check the pictures and find that they are the eggs of one of the shield-bugs. THEN you will discover Lee's speciality of giving much more background information than you would expect. He says that in the normal course of events shield bug nymphs will emerge by opening a "lid" at the top of each egg but if there is just a tiny hole they have been parasitized and a tiny micro-parasitoid wasp will emerge.

Of course, we know the world belongs to invertebrates. We know that they have been around far longer than we who have backbones. We know our planet Earth and the creatures that live in it wouldn't last a month without them, but when they have left signs and tracks of themselves, would we know who had passed that way? I thought I was good at interpreting tracks; after all I was taught by Joh Henschel to track spiders, scorpions, golden moles other creatures in the Namib and later practiced with Vaughan Jessnitz and others at Witsand.

A little about Lee - he wears many hats; that of a professional guide, a teacher of tracking skills, author, trainer for FGASA nature training, and paleoanthropological interpreter. Just Google him and you will find lots more. But his greatest skill is communicating his enormous enthusiasm and knowledge of the African bush. This book bears that out. Lee, this book is just stunning, but I **still** think there should have been an index.





ATTRACTIVE NEW FIELD GUIDE FOR AUSTRALIA

Review by Joan Faiola

A Field Guide to Spiders of Australia: Robert Whyte and Greg Anderson. **ISBN-13:** 978-0643107076. CSIRO Publishing 2017. 464 pages.

Currently GBP 29.38 at www.amazon.co.uk

You can get it on special order from www.loot.co.za at ZAR 669, a lot more reasonable than the ZAR 1070 offering at Takealot.com when I first enquired a couple of months ago. No surprise that it is no longer advertised on that site. I opted for the Kindle version at www.amazon.com at USD 34.61 (ZAR 488).

Kindle did not work so well for the Britain's Spiders book (I tried a sample but it is really a PDF and I was not successful at getting it lined up nicely, so ended up buying the hard copy at Loot - quite reasonably too). The sample I tried first of Australian Spiders seemed to work better, though I do think that field guides probably should be bought in hard copy. That said, the list of contents at the beginning helped navigate the Kindle version, though the index at the end was not so good, as is always the case with Kindle versions. You can also navigate from the last contents page, using links such as "orb-weavers", "White Tails", etc. The paper version has helpful stuff in the cover flaps, of course not available in this format! A family tree diagram is included at the end of the book, but this was illegible in the Kindle version.

Perhaps because of the restrictions imposed by the Kindle format, some of the photos in Australian Spiders seemed a bit small, but otherwise the first thing that strikes you about this book is the WOW! quality of the photography, aided by the fact that many Australian spiders are colourful in the extreme. Most of the photographs are by the authors, but many photos were contributed by others, including Otto Jurgens, famous for his Peacock Spider photos and videos.

The authors estimate that the total number of species in Australia is around 15,000 to 20,000, and only 4,000 of them are described so far. (Compare circa 2,300 described species for Southern Africa). A number of the undescribed species have been included. The book covers 78 families, 381 genera and 836 species, and includes around 1,300 photographs.

Sections are included on parts of a spider and shortcuts to identification – behaviour, eyes, spinnerets, location, webs, burrows, egg sacs, and an intriguing section on leaf-curlers.

The book is organised by infra order: Araneomorphae first ("modern" spiders) then Mygalomorphae. The families under each of those two headings were in strict alphabetical order, as were the genera below that, which the authors admitted was not ideal. However, the first section excluded 39 little-known families, which were treated after the Mygalomorphae section. So, you would find Archaeidae, Ctenidae, Dictynidae, and surprisingly, Philodromidae, in this section and not in the main section.

What surprised me was the conversational style of the species accounts – in a way it read like a novel, and for the first time in my life I read a field guide as one. I read it from start to finish in two lengthy sittings. I think I could not put it down, because of the fascination of many species. You cannot help being struck by the sheer numbers of species in some of the families, and their obvious beauty. Not fair! They have **dozens** of *Argiope*! Not to mention the huge swathes of salticids, which seemed to go on for ever. However, I think that the format used in Britain's Spiders is better for the field, setting aside that the Brits have an advantage with fewer species: you cannot cover 4,000 species properly in a field guide, and the authors wisely did not attempt to.

In the species accounts there are side panels which discuss aspects of what is going on in the main text. For instance, in Araneidae there is a side-discussion on *Araneus* “a huge task of discovery and classification”.

An omission was a section on venom and venomous spiders, which seems to be a prerequisite for South African guides, even though only one group of our spiders is considered very dangerous. In the Australian guide no emphasis was placed on medical importance – you had to pick this up in the species accounts. I was surprised at how many of the trapdoor mygalomorphs are medically important (no Southern African species are), and of course the Redback, *Latrodectus hasseltii*, was mentioned, otherwise it was not considered a big deal by the authors.

Astri was able to test the efficacy of Britain’s Spiders in the field, in her recent visit to the UK. But I can’t comment on how well this book would work in the field, though I assume that it would work quite well so long as the user knows the book and where to find information.

This field guide has an excellent feature, in that it is supported by a super website, www.arachne.org.au. The site can be kept up to date in a way that no book can. I found a very useful list of errata and updates, which I can use when reading the book. For example, unnamed or undescribed species subsequently described are included in the updates. Much of the content of the book is to be found on the website, too.

I would recommend this book, despite it being unconventional as a field guide, but urge you to buy the hard copy!



I could not find any photos used in the book on www.arachne.org.au, so I selected a couple of photos from the site that were similar.

This photo (left) is of a juvenile *Arkys bulburinensis*, in the intriguing family Arkyidae – ambush hunters, exemplifying the uniqueness of Australian spiders, 90% of which are not known outside Australia. Arkyid spp once included in Araneidae. Note the setae on the front legs which aid prey capture.

Photo: Dr Greg Anderson

They don’t have lots of theraphosid species, but the ones they have are BIG!
This beauty is *Phlogius crassipes* Queensland Whistling Tarantula, that has 9 cm body length. And yes, they are able to make sounds by stridulating a patch of setae associated with the chelicerae.

Photo: Robert Whyte



SCIENCE NEWS

Compiled by Joan Faiola

NO MORE SICARIUS in Africa

**Phylogeny of Sicariidae spiders (Araneae: Haplogynae),
with a monograph on Neotropical *Sicarius* –
Ivan L.F. Magalhaes, Antonio D. Brescovit and Adalberto J. Santos**

This recent paper redefined the family Sicariidae, which previously contained two genera – *Sicarius* (Six eyed Sand Spiders – sub-family Sicariinae) which are represented in Africa and South America, and *Loxosceles* (Violin Spiders – sub-family Loxoscelinae), which are distributed worldwide in warmer areas.

The authors placed the African Sicariinae in a separate clade based on DNA sequencing and morphology. The African species have therefore been placed in the resurrected genus *Hexophthalma* (meaning six-eyed), and the South American species will remain in *Sicarius*.

It should be noted that the descriptions in the paper of all the African Sicariinae were rather sparse, incomplete or absent, which is odd considering they have been subjected to such a radical taxonomic move.

Below: *Hexophthalma* sp from Northern Limpopo Province, South Africa. Posed on a rock to show it off. Note the very strong setae on the femorae - “macrosetae”, and the sand being retained by hairs all over the carapace and abdomen. Photo © J. Faiola



FIRST BITE BY A PHILODROMID DESCRIBED FOR SOUTH AFRICA

Since spiders bite so rarely, we don't know a lot about the effects of bites for a lot of species. Spiders are considered harmless in the main until we have proven documented bites.

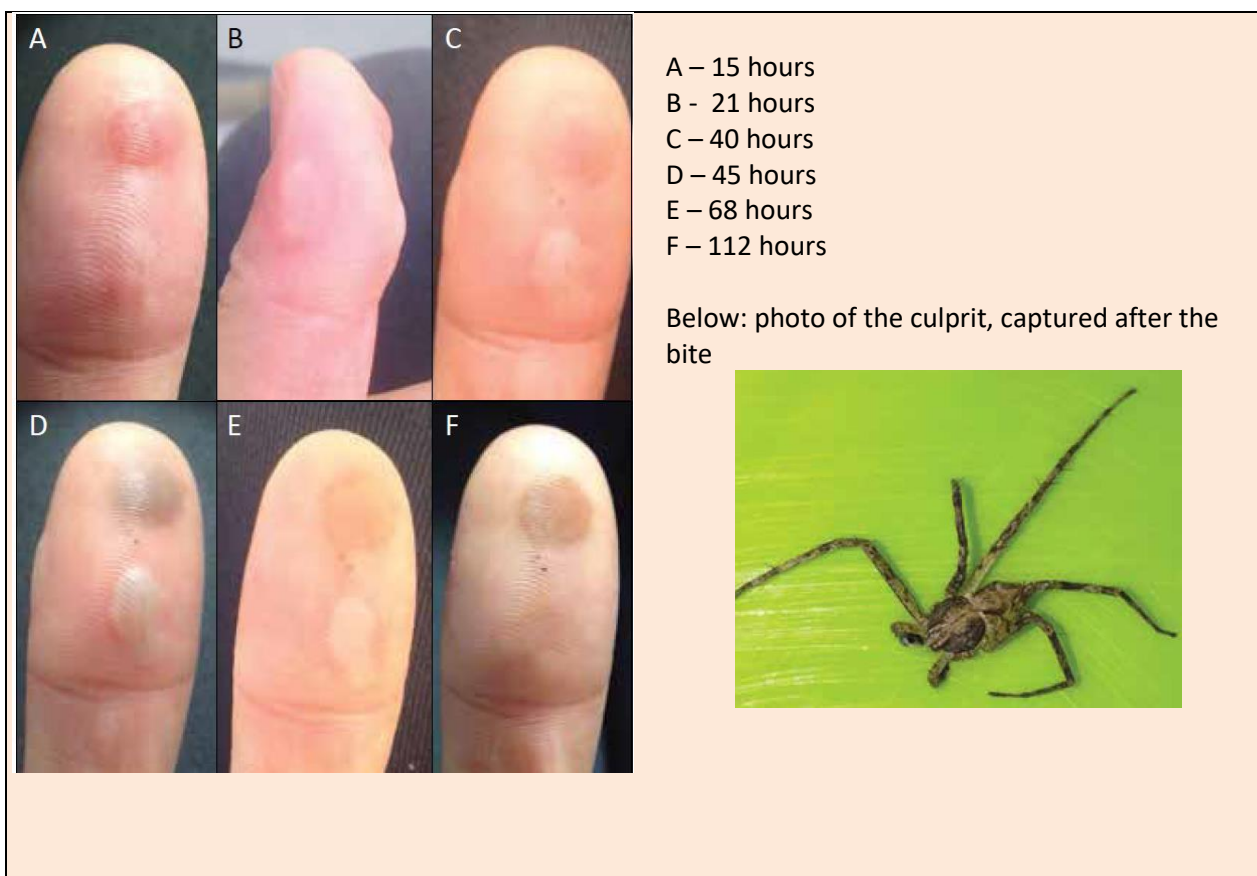
Such a case was reported recently in a case study paper published in the South African Medical Journal under open access:

CASE REPORT

First report of clinical presentation of a bite by a running spider, *Philodromus* sp. (Araneae: Philodromidae), with recommendations for spider bite management

M Coetzee,^{1,2} PhD; A Dippenaar,³ PhD; J Frean,^{1,2} MB BCH, MMed (Path); R H Hunt,^{1,2} PhD

A 25-year old woman was bitten in May 2016 when taking down washing from a washing line. The bite – on the thumb - was extremely painful, and the woman had to take painkillers. The following day blisters started to appear around the bite site, and by the end of the day three blisters were present. The thumb was still extremely painful. By the third day some necrosis was evident in the top blister but the toxic effect was still local(D). The following shows the progression of the lesions, which by 112 hours (F) are seen to be healing. Note the position of the bite marks (2) between the top and middle blisters. Treatment was the usual for necrotic lesions, i.e. supportive, with emphasis on keeping the lesions clean to prevent secondary infection. The following information and illustrations were lifted from the report.



FINDING NEMOSCOLUS

By Joh Henschel¹ and Yael Lubin²

Nemoscolus showed that it was unafraid to place itself in the way of Ovis, and so Ovis whisked it off.

Thereupon we undertook to find *Nemoscolus*, the spider, who was taken by Ovis, the sheep, near Tierberg, the long-term ecological research (LTER) site, far across the vast sea of dwarf shrubs of the Karoo.

At tortoise speed we braved the heights of *heuweltjies*, negotiated the abyss of aardvark, got pointers from a bunch of scorpions, and noted tell-tale signs until we finally found *Nemoscolus*. Not just one, but 558 of them, of which two out of every three occurred in the sanctuary of Tierberg, there where Ovis dare not tread.

Stone-nest spiders and their webs

Nemoscolus tubicola, or stone-nest spiders, build their webs like an inverse trapeze some 15-20 cm above the ground, straddling 20-60 cm gaps between shrubs. The spider's retreat towers upwards above the web, placing the spider in the gap between shrubs, exactly where sheep are bound to step and tear the web.



The web and retreat of *Nemoscolus*

Of ten *Nemoscolus* where we observed their nest being torn, seven rebuilt webs within three days. The sheep's step cost them time and energy; silk is a high-quality protein – wonder thread one should add – that is expensive and could cost productivity.

The other three *Nemoscolus* did not fare well. One disappeared, the second was perhaps snatched by a bird seen on the ground nearby, and all that remained of the third was a pile of frantic ants. Which goes to show that sheep are, indeed, dangerous.

Really?

Besides kicking spiders, sheep eat shrubs, changing vegetation structure and density across the veld, which in turn affects whether, where and how web spiders can place their webs and forage optimally. By affecting plant phenology (growth, flowering and seed production), sheep can also reduce insect populations, particularly pollinators and herbivorous insects such as grasshoppers, which *Nemoscolus* loves to eat. These and several other ecological impacts of sheep change with stocking density and type of sheep, as was demonstrated in other studies.

Nemoscolus is not the only spider impacted by sheep. In our search for *Nemoscolus* along five-metre-wide transects of 15-metre length each – 92 transects in total – we recorded that the next most common spiders, *Agelena* (grass funnel-web spiders), was also over twice as abundant inside the Tierberg sheep-exclosure than outside it. *Latrodectus* (Karoo button spiders) had a far stronger aversion to sheep, with 92% occurring inside the sanctuary.

Sheep are not the only culprits kicking spiders about the Karoo. Cattle and game animals would do that too.



Nemoscolus tubicola and its retreat (removed from web) at Tierberg, where we also found another species, *N. vigintipunctatus*, 100 km beyond its previously recorded range



Karoo button spiders (*Latrodectus karoensis*) appear to be highly vulnerable to sheep

It can be argued that web spiders occasionally losing their webs from such kicks is the natural state. What we recorded adjacent to Tierberg were the consequences of frequent high stocking densities of resident grazers, effects that go beyond the impact on plants alone, suggesting that grazers have far-reaching ecological impacts across trophic levels.

Sanctuary

We could not have recognised this if it had not been for the Tierberg LTER sanctuary, SAEON's research terrain from which sheep, cattle and larger game are excluded by a fence surrounding the property. This makes the fence an important component of the research being conducted at Tierberg, as it controls disturbance to plants, small animals, experiments and equipment.

The sanctuary of Tierberg may be deemed to be unnatural – the exclusion of most large game species and domestic grazers is not the normal condition in these Karoo rangelands – but it serves as a window through which to recognise the many effects of fencing and impacts of grazers on Karoo shrublands.



Ground-living spiders were less affected by sheep, but face other dangers. When *Microhodotermes viator* termites from a *heuweltjie* attacked a female baboon spider and her creche of spiderlings from below inside the spider burrow (inset), a fountain of frenzied spiders gushed out, and the female finally limped off, carrying termites clamped to her foot and belly, ouch!



Visiting scientist Yael Lubin from Israel introduces Wolwekraal intern Yondela Nqadala to spiders

¹ SAEON Arid Lands Node, Kimberley, South Africa

² Ben Gurion University, Sde Boqer Campus, Negev, Israel

Since we conducted our fieldwork in January 2017, ownership and land use has changed on Tierberg's neighbouring farms. Sheep were removed and a large game ranch without internal fences is being established. Fenced-in Tierberg is well-positioned in the middle of the changing landscape and geared to continue observing and conducting critical tests with experiments that help reveal drivers of change.

Exclusion plots are recognised as a powerful tool in rangelands worldwide. The Kenya Long-Term Exclosure Experiments (KLEE) is rated as the most productive field experiments ever carried out on the continent of Africa. By comparison, Tierberg LTER is much smaller in scale and not as complex, but it, too, can boast an impressive output of publications, over a hundred, and many collaborators over the last three decades. Many scientists from South Africa and abroad – in this case from Israel – have made use of Tierberg to learn about the Karoo, about rangelands in arid lands, and about ecology in a changing world.

Acknowledgement:

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BOLAS SPIDERS IN SOUTHERN AFRICA AND AN APPEAL FOR INFORMATION AND PHOTOS

Bolas spiders in Southern Africa are in the genus *Cladomelea* (Araneidae). Their bolas evolved from an orb web until nothing was left but a line with a blob of sticky silk at the end. Bolas spiders prey exclusively on certain moths, and attract them by emitting pheromones that mimic those of female moths of the same species, and capture them by swinging the bolas and snaring them on the sticky blob. There are currently four described species in Africa, two of them from Southern Africa, *C. akermani* and *C. debeeri*, though other species have been discovered and are awaiting description.

Bolas spiders appear to have a limited distribution in the KZN midlands, but they are probably under-recorded in the region. They are strictly nocturnal, and cryptically blend into the background when at rest, making it difficult to find them. This newsletter has previously featured a specimen found in the Eastern Cape, and they are probably to be found in all the northern provinces of the country. One specimen was found near Mookgophong (Naboomspruit), at an AFRAS Colloquium, but not all the arachnologists present agreed with the diagnosis!

Only a few people out there have seen and photographed any species of *Cladomelea*: John Roff, the Leroys, Janet Calder in East London, Meg Cumming in Harare which is probably *Cladomelea longipes*, Barend Jordaan from Barberton district. And Charles Haddad with his new species (from the Colloquium mentioned above?).

John Roff, of Hilton College in the KZN Midlands has asked that Spider Club members send in their records of *Cladomelea*, and photos of any species seen. This will assist in improving our knowledge of this genus and its distribution.

A collaboration with Len De Beer (after whom *C. debeeri* was named) is planned, to produce a paper on the genus, with taxonomic, ecological and aesthetic angles.

John recently found a beautiful *Cladomelea debeeri* at Hilton College, near the Umgeni river, in a *Dombeya* tree, and shared his photos. Here are two of them:



WINTER SORTING SESSIONS

We held two sorting sessions at Astri's house – in her very comfortable garage. The first, on 12th August, had only three of us in attendance. Despite that, it was a lot of fun, and we had a very convivial braai lunch in perfect winter weather.

Astri then proposed another session, on 1st October, and this was very well attended indeed, and we managed to make inroads into Astri's backlog of specimens. **Alison Morgan** takes up the story:

On Sunday the 1st of October I had the great privilege to spend the day identifying spiders with members of the Spider Club.

As a beginner it was an amazing opportunity to learn and discover so many fascinating new things from people like Astri, Joan and Jacky. Their passion for the natural world as well as spiders was so evident throughout the day.

There was a quick introduction upon our arrival after which we were given a lesson on how to use the microscopes, we were then given step by step instructions on what to look for in order to get to the closest possible ID of each specimen. If I had to make one suggestion, I would suggest a check list that us beginners could go through and tick off as we went along. The more knowledgeable in the group could then come and confirm our findings as I felt we did tend to monopolize their time a lot.

I would like to thank all those there on Sunday for sharing their knowledge with us and taking the time to go through so many fascinating facts. Your patience and kindness was greatly appreciated!

I look forward to the next outing/meeting and encourage others to take part in them too!

Note: The check list is a very good idea and we will compile one for next time. We might hold sessions at very short notice either at Astri's or Joan's, if we see a window in our busy schedules. You will be notified – hope to see you then!

Hard at work:

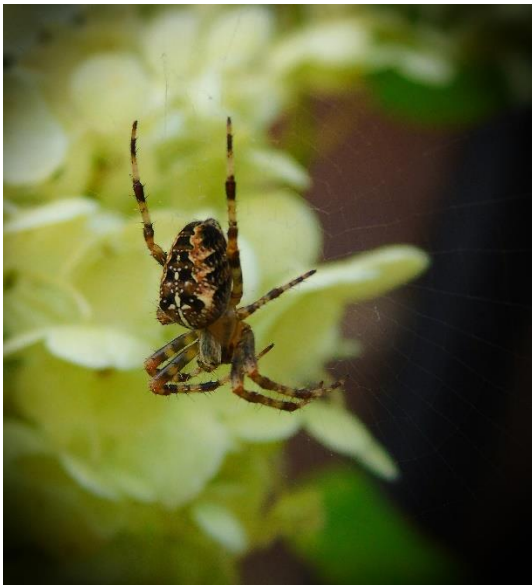


There is no need to be scared of spiders – they’re good for our planet, home and hygiene

By Dr Richard J. Pearce, who is an arachnologist and animal ecologist writing on behalf of the British Arachnological Society

Few creatures can claim to be as universally despised and misunderstood as the humble spider, maligned the world over for her long hairy legs and rapid, darting movements. The house-proud shake their collective heads in annoyance at the sight of cobwebs, those hanging tapestries that silently mark the tireless labour of an industrious arachnid. Yet few appreciate the work these animals do in keeping our homes clean.

Spiders are an essential part of global ecosystems. They serve to improve hygiene in and around our homes by controlling genuine pest species and vectors of disease. Indeed, spiders do not spread disease themselves and are extremely adept at controlling populations of insects that pose a genuine threat to human health. Moreover, spiders are key parts of the food chain for larger animals. Their existence significantly increases the quantity and diversity of prey available to birds and mammals, thus maintaining the wondrous diversity of life on Earth and enriching all our lives. Our planetary biodiversity and global ecology is, in significant part, dependant on these remarkable animals.



The attractive and ubiquitous European garden orb-weaver, *Araneus diadematus*. Unlike South African orb-weavers in *Araneus*, she appears to be active during daylight hours.

Photo: Richard J. Pearce

Alarmist news stories are far from the truth

To date, more than 45,000 species of spider have been described worldwide, with new species still being discovered every year. In Britain alone, we have documented approximately 670 different species, including; orb-weavers, jumping spiders, spiders that live under bark and some, even, that build homes under water. For the purposes of this article I shall focus on just two groups; the humble house spider (*Tegenaria* spp.) and the garden orb-weaver (*Araneus* spp.), as these account for many sightings in the early autumn months.

Every year at about this time, the newspapers abound with alarmist stories of spiders invading our homes. Such stories bear little relation to the truth and only serve to increase needless fear of spiders in many. Whilst it is true that spiders are more visible at this time, stories of home invasion are precisely that - just stories. There is simply no evidence to support the idea that house spiders live outside during the summer months and then ‘invade’ our homes in the autumn to breed and overwinter. Rather, these timid animals share our homes with us unnoticed throughout the year, quietly going about their business of keeping pests at bay without causing us any harm. Why, then, the apparent influx at the beginning of autumn?

Male house spider, *Tegenaria saeva*.

Photo: Geoff Oxford



Every spider matters

The simple truth is that many species reach sexual maturity at this time of year. Males are more active as they roam in search of females (this makes them no more 'sex-crazed' than any other animal). Whilst it is the leggy male house spider that is often most noticeable in the home, you are more likely to notice female orb-weavers in your garden during the autumn months. Hanging upside down in their intricately constructed webs, their plump and frequently colourful bodies draw the eye, yet these animals offer no threat to us.

Only a tiny fraction of British spider species are capable of biting humans and, even then, only as a last resort when they feel their lives are threatened. Despite media scare stories, none of these species can do us any real harm. The horror stories perpetuated by the UK press are unwarranted. Many of the effects of alleged bites reported in the press bear no relation to genuine documented cases of spider bite. Of course, as with any bites by spiders or insects, there is always a minor risk of secondary infection if the wound is not clean, but this has nothing to do with the spider *per se* and everything to do with puncture wounds and wound hygiene. Indeed, bites from spiders are cleaner and far less likely to transmit disease than those from many biting flies. In short, the threat posed by spiders is negligible and the benefits they bring are many. Add to that the sad fact that many species of spider, both globally and in the UK, are struggling to cope with habitat loss and many other threats. Whilst some species thrive, many others are dwindling and may be lost altogether if preventative action is not taken in time. Every spider matters. Learning to live alongside these marvellous creatures can only be good for us and our planet. We are better off, by far, with spiders in our lives.

Dr Pearce (@DrRichJP) is a member of the British Arachnological Society (BAS). The BAS is devoted exclusively to the study and understanding of arachnids. For more information about spiders, please visit the BAS website at <http://britishspiders.org.uk> (@BritishSpiders)

This article was first published in iNews at the link <https://inews.co.uk/opinion/better-off-far-spiders-lives/> on 14th September 2017.

SOUTH AFRICAN FOOTNOTE:

So why would this be relevant to us South Africans? Well, even though we have bigger spiders and more species than they do in the UK, attitudes and beliefs about spiders prevalent in this country are strikingly similar to theirs. Myths about spiders abound here too. Even though we have a few medically important spiders in South Africa, bites from those are vanishingly few and their effects grossly exaggerated. All the arguments above are universal truths, and can be adapted to the South African experience, and we should share the article with anyone who needs to read sensible facts about spiders, and their essential place in the natural world around us.

SPIDERS FROM MLILWANE, SWAZILAND

Amazing photography by Ernst Klimsa

Mlilwane Wildlife Sanctuary is situated in the Ezulwini Valley, south of Swaziland's capital, Mbabane. Ernst Klimsa from Germany took lots of photos of spiders he found in the sanctuary. We can't show them all, but here is a selection. It's possible that we will publish more of Ernst's photos in future issues.



Above left and right: *Neoscona moreli* (Araneidae), dorsal view and view of the "face"



Leucauge auronotum (Tetragnathidae)
Left: female
Above: possibly the male of the species



Above: *Synema imitator* (Thomisidae) male, with beautiful view of the face on the right. Thomisid males are usually very small.



Above: Entrancing view of face of *Thomisus congoensis* (Thomisidae) male.



Above: two views of *Pellenes bulawayoensis* (Salticidae)



Above: *Eriovixia* sp. (Araneidae) Two views of a male



Ernst could not get a view of the eye pattern of this spectacular spider, but decided it was probably *Ctenus gulosus* (Ctenidae). If not then it could be a *Hogna* (Lycosidae). Eye pattern was essential for an accurate ID.