African Invertebrates: Festschrift dedicated to Ansie Dippenaar-Schoeman

Dr Ansie Dippenaar-Schoeman, who is currently employed on contract at the Arachnida Unit in the Biosystematics Division, has recently been honoured in a Festschrift issue published in African Invertebrates, volume 56, issue 2. This edition of the journal was dedicated to her in recognition of her contributions to the field of arachnology throughout her career. Highlights of her career include her book ‘African Spiders: An Identification Manual’, which was co-authored with Dr Rudy Jocqué; the many papers that she has published; and the key role she played in the South African National Survey of Arachnida (SANSA) project. This work was done while contributing to the establishment and growth of the National Collection of Arachnida (non-acari) throughout her 46 years at the ARC.

The Festschrift edition is dedicated to arachnid papers from the African continent. A total of 19 papers are included that represent four orders, namely Araneae (spiders), Scorpiones (scorpions), Solifugae (red romans) and Pseudoscorpiones (false scorpions). To acknowledge Ansie’s contribution to African Arachnology, contributors worldwide have named one new genus and 15 new species of arachnids after her in this Festschrift. To find out more about the papers that are in the Festschrift, please see the African Invertebrates website: http://africaninvertebrates.org/

The issue was edited by Dr Charles Haddad, with notes on Ansie’s career by Rudy Jocqué and Stefan Foord.

Contact: Ms Robin Lyle at LyleR@arc.agric.za
New bird dropping araneid for South Africa

A new species of bird-dropping spider, *Pasilobus dippenaarae*, was described from the KwaZulu-Natal midlands, South Africa. This species was first observed in a wooded suburban garden and is the first record of the genus from the country. A mature female spider was observed on the upper surface of a leaf of *Cestrum laevigatum*, where it had made a thin covering of silk threads on which it was sitting.

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LATEST ON THE CROWNED NURSERY-WEB SPIDERS IN SA

The African genus *Rothus* Simon, 1898 was reviewed. The male of *Rothus vitatus* Simon, 1898, is described and illustrated for the first time. Based on the examination of available type material and type illustrations, *R. purpurissatus* Simon, 1898 and *R. magnus* Caporiacco, 1940, are here considered junior subjective synonyms of *R. aethiopicus* Pavesi, 1883. The three currently accepted species (*R. auratus* Pocock, 1900, *R. aethiopicus* and *R. vitatus*) are illustrated and redescribed. The body colouration is variable and animals may be light coloured or much darker with bands and lines. Genitalia are important to distinguish between species.

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Spiders of the African genus *Rothus* Simon, 1898 have tufts of setae between the anterior eyes. Their body colouration is cryptic and the carapace frequently decorated with symmetrical patterns of black on a brown or grey background or with pale longitudinal stripes. The carapace is longer than wide, clothed with plumose setae, and there are longitudinal bands or spots on the abdomen. Their eight eyes are arranged in two rows (4:4) and the posterior eye row is recurved. There are teeth on the cheliceral furrow. Their legs are relatively long, sometimes slightly laterigrade and spines are present on the patellae, femora, tibiae and metatarsi. The tarsi have three claws. An elongate abdomen tapers towards the back and usually has plumose setae.

The plant-living nursery-web spiders are commonly found on vegetation at night. Their movements are erratic, but they move swiftly on the substrate, sometimes in leaps or jumps.
Tusitala includes ten species known from Afrotropical Region and Yemen. Two species of Tusitala, T. barbata Peckham & Peckham, 1902 and T. hirsuta Peckham & Peckham, 1902, were redescribed and one subspecies, T. barbata longipalpis was synonymised with T. barbata. One new species, T. ansieae, was described from Botswana based on both sexes.

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NEW CRAB SPIDER GENUS RECORD FOR SOUTH AFRICA

The genus Geraesta Simon, 1889 is restricted to the Afrotropical Region and currently comprises three poorly studied species. An ongoing study of the genus, Stephanopis, revealed that at least two African species placed in it are misplaced and should be transferred to Geraesta. This includes one species, Geraesta congoensis, known from South Africa as well as Botswana, Democratic Republic of the Congo and the Ivory Coast.

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Diploglena arida—known only from the arid northern parts of the Northern Cape Province.

D. capensis—known only from two localities in the Western Cape Province.

D. dippenaarae—known only from two localities in the vicinity of Saldanha Bay in the Western Cape Province.

D. karooica—broadly distributed from southern Namibia to southwestern South Africa.

D. major—known from western Namibia, eastern Botswana and the northern parts of South Africa.

D. proxila—known only from the type locality in the vicinity of Saldanha Bay in the Western Cape Province.

FOUR NEW TWO-EYED SPIDERS FOR SOUTH AFRICA

The Afrotropical two-eyed orange lungless spider genus Diploglena Purcell, 1904 was revised. Four new species were described: D. arida, D. dippenaarae and D. proxila from South Africa, and D. karooica from South Africa and Namibia. All of the species are distributed in arid and semi-arid vegetation types, including desert, Nama and Succulent Karoo, fynbos and dry savannas.

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A NEW GENUS OF HUNTSMAN SPIDER FOR SA

Southern African Sparassidae have been only rarely included in taxonomic revisions. From material collected by Dirk Kunz in South Africa, a species was recognised as new to science. Several character states make this genus unique among the Sparassidae.

Diagnostic characters proposed include not only those for the genus but also for the so-called African clade. Unique within the entire family are the reduction of the gnathocoxal serrula and the prolateral embolus. Special claw tuft setae and metatarsi I to III with three prolateral and retrolateral spines, respectively, occur in the entire African clade.

The new genus *May* is described from southern Africa, together with four new species. Only one species, *May bruno*, is new to South Africa.

These spiders live in arid environments, specifically in sand dunes. One spider was observed in a burrow in a sand dune, while others were active during the night, running on the ground on gravel.

Only known from the Witsand Nature Reserve (type locality) and the Twee Rivieren Rest Camp, Northern Cape, South Africa.

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TWO GRASS HUNTSMAN SPECIES IN SA

*Pseudomicrommata* species are medium-sized Sparassidae strongly associated with vegetation, mostly grasslands and savannas, hence the common name “grass huntsman spider”. The genus is easily distinguished from other African Sparassidae because of its unique coloration, with the body decorated by a single darker median stripe dorsally in contrast to the rest of the paler body. This kind of coloration can be observed in other foliage-dwelling Sparassidae, such as the species of the European genus *Micrommata* Latreille, 1804. Prior to this revision all individuals of *Pseudomicrommata* were thought to be *P. longipes*.

The grass huntsman spider genus *Pseudomicrommata* Järvi, 1914 is revised in the Afrotropical Region, resulting in the recognition of four valid species.

- The type species, *P. longipes* (Bösenberg & Lenz, 1895), is redescribed and recorded from Kenya, Tanzania, Botswana, South Africa and Namibia.
- *Pseudomicrommata vittigera* (Simon, 1897) (from South Africa and Namibia) is revalidated and its male is described for the first time. The species is recorded from Nelspruit, Pafuri, and Loskop Dam Nature Reserve.
- Two new species are described: *P. mary* (male and female) from Guinea and Ivory Coast, and *P. schoemanae* (female) from Cameroon.

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Two new dark sac spider species for South Africa

In the last decade there has been a dramatic increase in the number of described species of Afrotropical trachelid spiders. Two new species of the genus *Afroceto* Lyle & Haddad, 2010 were described, raising the total number of species to 16 and the number of South African endemic *Afroceto* to 13. This increases the total endemic South African trachelids to 32, with a total of 60 species found in the Afrotropical Region.

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A NEW LONG NECK SPIDER FROM ST LUCIA

The Arachaeidae is a small family of very rare spiders, represented by four genera and 70 extant species, known only from southern Africa, Madagascar and Australia. The archaeids are very small, free-living cryptozoic hunters, easily recognised by the long raised cephalic region and elongated chelicerae.

The Arachaeidae is represented by one genus and twelve species in southern Africa. From South Africa 12 *Afrarchaea* species are presently recognised.

A new species of *Afrarchaea* from KwaZulu-Natal, South Africa (*A. ansieae* sp. n.) was described from the Greater St. Lucia Wetland Park, Eastern Shores Nature Reserve, in KwaZulu-Natal.

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NEW UROPLECTES SCORPION

The scorpion fauna of southern Africa is very diverse, especially in the arid western half of the subcontinent. New species continue to be discovered as the region is surveyed with ultraviolet light detection methods.

The present contribution describes *Uroplectes ansiedippenaarae* a new species which is endemic to the Succulent Karoo Biome in the Northern Cape and Western Cape provinces of South Africa. The new species is the smallest known species of *Uroplectes* and among the smallest scorpion species in southern Africa, with adults ranging from 16–20 mm in total length. The addition of this new species raises the number of *Uroplectes* species and subspecies in South Africa to 19, and the number of endemics to 10.

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**MIMETIDAE**

*Ero aphana* (Walckenaer, 1802), photographed by Linda Wiese, from Jeffreys Bay. Known from Palearctic (St. Helena, Queensland, Western Australia, introduced).

**GNAPHOSIDAE**

*Ibala okorosave* Fitzpatrick, 2009, first records from Rooipoort Game Reserve and Tswalu Kalahari Reserve.

*Zeolotes ovambensis* Lawrence, 1927, first records from Tswalu Kalahari Reserve.

*Zeolotes chinguli* Fitzpatrick, 2009, recorded for the first time recorded from Mashovela Lodge, Soutpansberg.

**SALTICIDAE**

*Belippo calcarata* (Roewer, 1942), first record from Lekgalameetse Nature Reserve sampled by Peter Webb.

**ZODARIIDAE**

*Palfuria caputlari* Szűts & Jocqué, 2001 from Tanzania, first recorded from Nwanedi Game Reserve, Limpopo.

**CTENIDAE**

*Stenos caligineus* des Arts, 1912 from Central and East Africa, first record from Lekgalameetse Nature Reserve.

*Ctenus spectabilis* Lessert, 1921 from Central and East Africa, recorded from Benfontein Nature Reserve.

**SPARASSIDAE**

*Eusparassus jocquei* Moradmand, 2013 from Zimbabwe, now also recorded from Maramani Game Reserve.

**THERIDIIDAE**

*Cladomelea normale* Bryant, 1944 first record from Royal Natal National Park.

*Platnickina mneon* (Bösenberg & Strand, 1906), recorded from Ndumo Game Reserve.

**ARANEIDAE**

*Cladomelea longipes* (O.P. Cambridge, 1877 from Congo, now recorded in Zimbabwe and South Africa.

*Eriovixia excelsa* (Simon, 1889) from the East, recorded from South Africa.
Survey results: Ophathe Game Reserve, KZN

This study reports on the arachnid diversity of the Ophathe Game Reserve (OGR) in northern KwaZulu-Natal, as found during a preliminary survey in June 2007 (mid winter) and a SANSA field survey in October 2008 (mid spring) in four representative habitats. The SANSA survey included seven sampling methods: pitfalls, beating, sweep-netting, litter sifting, hand collecting, night collecting and Winkler traps.

A total of 282 arachnid species were collected during two visits to OGR. Spiders (Araneae) were the overwhelmingly dominant order, represented by 268 species from 47 families. Five other arachnid orders were also sampled: Scorpiones (five species in two families), Pseudoscorpiones (four species in four families), Opiliones (three species in two families), and Amblypygi and Solifugae (one species each).

These survey results are comparable with several longer-term surveys in the Savanna biome, and indicate that the SANSA sampling protocol can yield an impressive diversity of arachnids during a relatively short period of sampling, with a high level of coverage.

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Student projects: EDGE EFFECTS IN THE KNYSNA FOREST

Rudi Swart is studying edge and road effects in the Knysna Forest by using arthropods as indicator species. Arthropods make good bio-indicators due to their short reproductive phase, their abundance and the fact that they are relatively sensitive to small changes in the environment. During last year, he spent five weeks in late autumn and five weeks in late spring sampling arthropods from the Knysna Forest at different locations. In this area, which is a proclaimed national park, there are large tracts of land covered by commercial pine plantations bordering the indigenous afromontane forests. The effect of these unnatural land uses on the natural forest’s biodiversity is still unknown.

With the conversion of natural forest / fynbos to commercial timber production areas, we not only lose large areas of natural vegetation, but we also have the associated effects of a changing micro-climate and altered soil properties, possibly reaching into the remaining natural forest. These effects, termed edge effects (where two differing land uses border), may alter the assemblages, abundances and diversity of species naturally occurring within the forest, usually with significant effects on the integrity / health of the indigenous landscape.

Clear felled areas do seem to affect natural forest arthropod diversity, and preliminary findings suggest that arthropods in forests bordering clear felled areas are affected up to 50 m from the clear-felled-forest edge. Restoration efforts are planned for many of these areas. I am currently busy with the final results and write-up of my thesis and hope to finish at the end of this year.

A typical example of a clear felled-forest edge. Micro-climatic changes readily occur in these areas and often penetrate the natural forest, affecting arthropod diversity up to 50 m in the forest.

A total of 64 species of spiders were sampled during my field work. Voucher specimens are kept in the National Collection of Arachnida in Pretoria.

Contact: Mr Rudy Swart at 16016823@sun.ac.za
A very important 31 page paper has recently been published, summarising the results of the 18 years that SANSA has existed. The paper was a joint effort of the SANSA team members.

It shows the role SANSA has played in unifying and strengthening arachnid research, with the major thrust to discover the spider diversity in South Africa. We discuss the present status of knowledge, constraints to improving this, and the future directions for research. SANSA has provided the foundations for a more integrative approach to spider diversity research.

Future research should build on this legacy by linking taxonomic diversity with functional diversity, predicting the response of this diversity to global change drivers.

Functional approaches link these studies to ecosystem processes. Global collaborative studies at several sites following standardised sampling protocols and focused research questions would add value to the SANSA collection and the importance of spiders for the health of ecosystems.

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SCIENTIFIC MEETINGS
ENTOMOLOGICAL CONGRESS IN GRAHAMSTOWN

The 19th Biannual Congress of the Entomological Society of Southern Africa (ESSA) was hosted jointly with the 37th Biannual congress of the Zoological Society of Southern Africa (ZSSA) by the Department of Zoology and Entomology at Rhodes University, Grahamstown between the 12th and 17th of July 2015.

During a special session focusing on databases two papers were presented on SANSA. The aim of this session was to draw together different experiences from a wide range of successful databasing projects undertaken in South Africa. The session covered technical database concepts, integration into larger systems, experiences from implementation and managements of these projects, along with the current technology being used.

The following presentations were given at ESSA:


Colin Schoeman reported on his PhD study dealing with surveys in the Vhembi Biosphere


This study forms part of the South African National Survey of Arachnida (SANSA), initiated in 1997 with the main aim to create an inventory of the arachnid fauna of South Africa. One of the objectives of SANSA is to assess the number of spider species presently conserved in protected areas in the country. The relatively poor knowledge of the arachnids of the Eastern Cape and Thicket Biome provided the impetus to set up surveys for the greater Addo Elephant National Park (AENP). Although specimens of all of the arachnid orders (excluding Acari) were collected, the primary focus of this study was to sample spiders (Araneae) using sweep-netting (grasses), beating (bushes and trees) and pit traps (ground). Surveys of the spiders in AENP started in June 2009 and continued until 2013. So far a total of 246 spider species from 50 families have been recorded.

Thomisidae is the most species rich family with 36 spp., followed by the orb-web spiders (Araneidae) with 30 spp. and the jumping spiders (Salticidae) with 28 spp. This includes new distribution records for most species, and six possible new species have been identified. The surveys are continuing.

Linda Wiese represented SANSA at the Thicket Forum held in Port Elizabeth from 29 September to 1 October. Linda presented a talk titled ‘Spider diversity of the Addo Elephant National Park’. Twenty papers and one poster were presented at the forum. Albany Thicket is unique to the Eastern Cape and threatened by agriculture and goat farming. Interesting results from research done by students at Nelson Mandela Metropolitan University, such as the limited effect of frost on the growth and distribution of Spekboom, will be valuable for future restoration projects.
**NEW BOOK**

*Freshwater life* – the first illustrated field guide of its kind for the wider southern African region – describes a vast range of aquatic plant and animal groups in a single volume. This groundbreaking publication encompasses diverse groups from the large and conspicuous vertebrates to the diverse microscopic taxa, facilitating identification and describing the ecology of more than 1 000 freshwater organisms. Species have been selected on the basis of how likely they are to be encountered, and each account is accompanied by photographs and a distribution map. A comprehensive introduction details the ecology and significance of freshwater systems. This indispensable, easy-to-use guide will prove invaluable to outdoor enthusiasts, students and conservationists. The book includes some spider species associated with fresh water.

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**SCIENTIFIC MEETINGS cont.**

6th Annual Diamond Route Research Conference

Since 2010, six successful Annual Diamond Route Research Conferences (DRRC) have been held at the De Beers Corporate Headquarters in Ormonde, Johannesburg. This year’s congress took place on Tuesday, 20th and Wednesday, 21st October 2015. During all six years SANSA presented papers or posters on their research at the different Diamond Route Reserves. This year we presented the following talk and poster:

**Diamond Route reserves important for spider conservation in the Northern Cape**

R. LYLE, A.S. DIPPENAAR-SCHOEMAN & P. WEBB

As part of the South African National Survey of Arachnida (SANSA) spiders were sampled from three Diamond Route reserves in the Northern Cape Province: Benfontein, Rooipoort and Tswalu. Different collecting methods were used, namely sweep nets, beating trays, litter sieves and pittraps to sample different habitats. Two hundred species from 40 families are presently protected in these reserves. This represents 40% of the known Northern Cape spider species and 9% of all South African spiders. This is important information for the red listing of spiders, presently underway.

**Spider collecting at Wakefield**

R. JOQUÉ, A.S. DIPPENAAR-SCHOEMAN & R. LYLE

As part of the South African National Survey of Arachnida (SANSA), spiders were sampled from Wakefield in the Midlands of KwaZulu-Natal during January 2015. A sweep net, beating tray, litter sieve and pittraps were used to sample the different habitats. Several members of the class Arachnida were sampled, including a scorpion, several species of Opiliones and Pseudoscorpiones. The spiders were the most abundant and diverse order, and 25 families represented by 56 species have been sampled.


PROJECT NEWS

Surveys in the NATIONAL PARKS received a green light and SANSA is continuing gathering data in several parks:
- Addo National Park
- Namaqua National Park
- Richtersveld National Park
- Kruger National Park
- Table Mountain National Park

Renewed efforts are being made to sample arachnids in the NATIONAL BOTANICAL GARDENS. Surveys are underway in:
- Pretoria Botanical Garden
- Kirstenbosch Botanical Garden
- Lowveld Botanical Garden
- Free State National Botanical Garden

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LAST WORD...

ET PHONED HOME!

Vida van der Walt