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Additions to the jumping spider fauna of South Africa (Araneae: Salticidae)

CHARLES R. HADDAD¹ & WANDA WESOŁOWSKA²

¹Department of Zoology & Entomology, University of the Free State, P.O. Box 339, Bloemfontein 9300, South Africa; e-mail: haddadcr@ufs.ac.za

²Department of Biodiversity and Evolutionary Taxonomy, University of Wrocław, Przybyszewskiego 63/77, 51-148 Wrocław, Poland; e-mail: tomwes@biol.uni.wroc.pl

ABSTRACT. The following eleven species of jumping spiders from South Africa are described: *Fromarengo plana* sp. n. (♀), *Belippo pulchra* sp. n. (♂♀), *Dendryphantes matumi* sp. n. (♂♀), *D. neethlingi* sp. n. (♂), *Habrocestum auricomum* sp. n. (♂), *Hasarinella distincta* sp. n. (♂♀), *Langelurillus cedarbergensis* sp. n. (♀), *Microbianor furcatus* sp. n. (♂), *Phintella lajuma* sp. n. (♀), *Pseudicius squamatus* sp. n. (♂♀) and *P. zuluensis* sp. n. (♂♀). *Heliophanus villosus* WESOŁOWSKA, 1986 is synonymised with *H. bisulcus* WESOŁOWSKA, 1986 and the species is recorded from Namibia for the first time. The females of *Evarcha denticulata* WESOŁOWSKA et HADDAD, 2013, *E. ignea* WESOŁOWSKA et CUMMING, 2008 and *Heliophanus ndumoensis* WESOŁOWSKA et HADDAD, 2013 are described for the first time. A member of the genus *Neaetha* Simon, 1884 is recorded from the Southern Hemisphere for the first time. Two species, *Langelurillus namibicus* WESOŁOWSKA, 2011 and *Plexippus tsholotsho* WESOŁOWSKA, 2011, and the genus *Hasarinella* WESOŁOWSKA, 2012 (for *H. distincta* sp. n.) are recorded from South Africa for the first time. New distribution records of some other poorly known salticids are given.

Key words: arachnology, taxonomy, salticids, South Africa, taxonomy, synonym, new species, new records, canopy fogging.

INTRODUCTION

Taxonomic studies in recent years have substantially increased our knowledge of South African jumping spiders and have brought much new information on their distribution (WESOŁOWSKA & HADDAD 2009, 2013; AZARKINA & LOGUNOV 2010; HADDAD & WESOŁOWSKA 2011; AZARKINA & FOORD 2013; WESOŁOWSKA, AZARKINA & RUSSELL-SMITH in press). This information, combined with that given by PECKHAM & PECKHAM (1903),

SIMON (1887, 1902, 1910), LESSERT (1925) and LAWRENCE (1937, 1938, 1942, 1947), results in a relatively better knowledge of salticid fauna in this country compared to the majority of African territories. Nonetheless, surveys of poorly explored areas and habitats (e.g. forest canopies) still provide numerous discoveries. In the present paper we describe eleven new species of jumping spiders, among them six from tree canopies. New data on some little known species and their distribution are also given.

MATERIALS AND METHODS

The work is based on specimens of jumping spiders collected at various sites in South Africa (most of them in 2012) and deposited in three large natural history museums in this country (see below).

Collected spiders were preserved in 70% ethanol and then examined in a dish with ethanol. Descriptions of colours pertain to wet specimens. In some cases the male pedipalps and the epigynes were dissected off of specimens for study. Epigynes were macerated in 5% hot KOH for a few minutes, dehydrated with 100% ethanol, cleared in xylene and drawn in temporary mounts in eugenol. After examination, the genitalia were placed in micro-vials with ethanol and put into the vials containing the specimens from which they had been removed. Terminology is standard for spiders. All measurements are given in millimetres and were made with a binocular microscope (Nikon) equipped with an ocular micrometer scale. Digital photos were taken using a Nikon Coolpix 8400 mounted on a Nikon SMZ800 stereomicroscope. The extended focal range images were stacked using Helicon Focus image stacking software.

The specimens studied in this paper are deposited in the following collections (curators given in parenthesis):

MRAC – Royal Museum for Central Africa, Tervuren, Belgium (Rudy JOCQUÉ)

NCA – National Collection of Arachnida, ARC – Plant Protection Research Institute, Pretoria, South Africa (Ansie DIPPENAAR-SCHOEMAN)

NMSA – KwaZulu-Natal Museum, Pietermaritzburg, South Africa (Chrizelda STOFFELS)

SAMC – Iziko South African Museum, Cape Town, South Africa (Dawn LARSEN)

TAXONOMY

Afromarengo plana sp. nov.

Figs 1–4, 28

DIAGNOSIS

This species can be distinguished by the form of the epigyne, with two large oval depressions (*A. coriacea* – the only known female in the genus – has a single epigynal depression). The seminal ducts are longer and the spermathecae smaller than in *A. coriacea* SIMON, 1900 (compare Fig. 4 with fig. 1g, h, j in WANLESS 1978). The retro-marginal cheliceral tooth has four cusps, whereas there are only three in congeners.

ETYMOLOGY

The specific name is Latin for flat, referring to the body shape of this spider.

MATERIAL EXAMINED

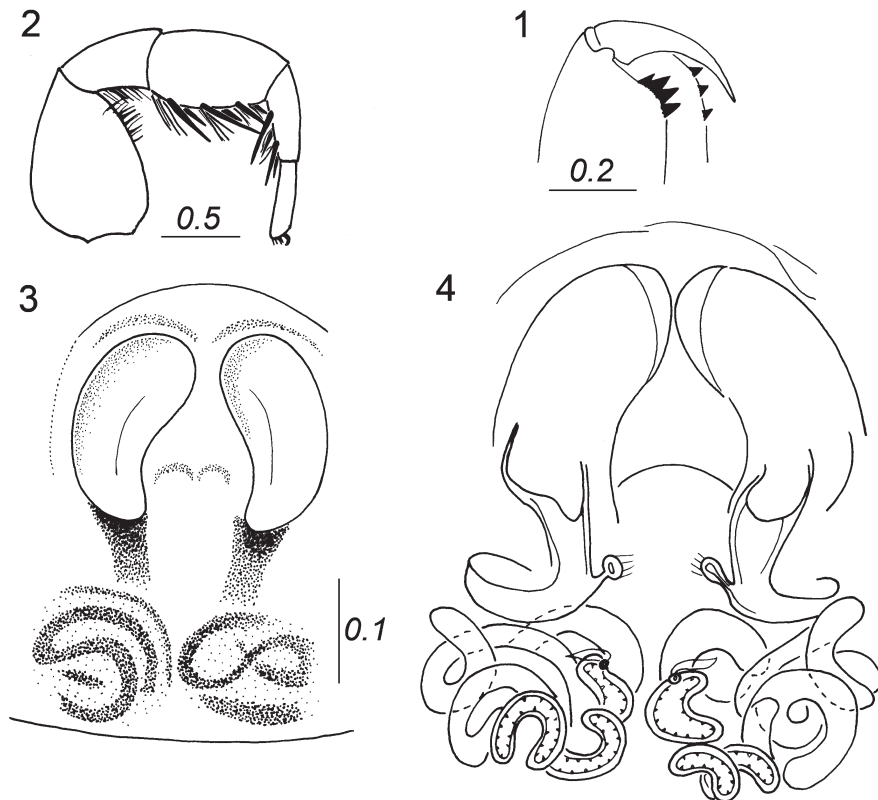
Holotype: female, Free State Province, Tussen-die-Riviere Nature Reserve, 30°29'S:26°11'E, 1270 m a.s.l., beating, riparian bush, 14.IV.2012, leg. University of the Free State students (NCA 2013/589).

Paratype: together with holotype, 1 female.

DESCRIPTION

Measurements. Cephalothorax: length 1.7–1.8, width 1.3–1.4, height 0.6. Abdomen: length 2.4–2.8, width 1.2–1.7. Eye field: length 0.8–0.9, anterior width 1.1–1.2, posterior width 1.3–1.4.

Male unknown.



1-4. *Afromarengo plana*, paratype: 1 – cheliceral dentition; 2 – first leg; 3 – epigyne; 4 – internal structure of epigyne

Female. General appearance as in Fig. 28. Small, elongate spider with strongly flattened body. Carapace brown, eyes surrounded by black rings, with two large round black patches on centre of eye field. Ocular area covered in dense colourless hairs, with some long brown bristles near the eyes and light hairs on carapace slopes. Clypeus very low. Chelicerae with three promarginal and four retromarginal teeth (Fig. 1). Sternum and mouthparts light brown, endites with whitish chewing margins. Abdomen oval, greyish-beige, clothed in delicate brown hairs, venter similarly coloured. Spinnerets brown. First pair of legs stouter than others, brown, with swollen femora and tibiae (Fig. 2). Spination of leg I: femur 0-1-1-0 dorsally, 0-0-0-1 prolaterally, tibia 2-2-2 ventrally, metatarsus 2-2 ventrally. Tibia II with 1-1 ventrally, metatarsus II 2-2 ventrally. Other legs yellow. Leg hairs brown, sparse. Epigyne weakly sclerotized, with two large bean-shaped depressions anteriorly, separated by narrow ridge (Fig. 3). Seminal ducts very long, forming several loops, their inlet parts weakly sclerotized, with small accessory glands entering into initial part of seminal ducts (Fig. 4).

DISTRIBUTION

Known only from the type locality (Fig. 23).

HABITAT AND BIOLOGY

This species was collected by foliage beating in riparian bush along the Caledon River. The type locality is situated at the transition between the Grassland and Nama Karoo Biomes.

***Belippo pulchra* sp. n.**

Figs 5–9, 73–74

DIAGNOSIS

The male is similar to *Belippo meridionalis* WESOŁOWSKA et HADDAD, 2013 from the KwaZulu-Natal Province in South Africa. This species can be easily distinguished from it and other congeners by the shape of chelicerae and their dentition: this species has narrower chelicerae than in other species, with a toothless promargin and five teeth on the retromargin. The female differs from other *Belippo* species [except *B. anguina* SIMON, 1910 and *B. nexilis* (SIMON, 1910)] by the form of the epigyne, which has a broad ridge clearly separating the oval depressions, while the depressions are nearly touching in others. *B. pulchra* may be separated from the two species mentioned above (endemics of Sao Thome Island) by the presence of black line on sides of legs (uniformly coloured in the latter species) and characteristic abdominal pattern (Fig. 74).

ETYMOLOGY

The specific name is Latin for pretty.

MATERIAL EXAMINED

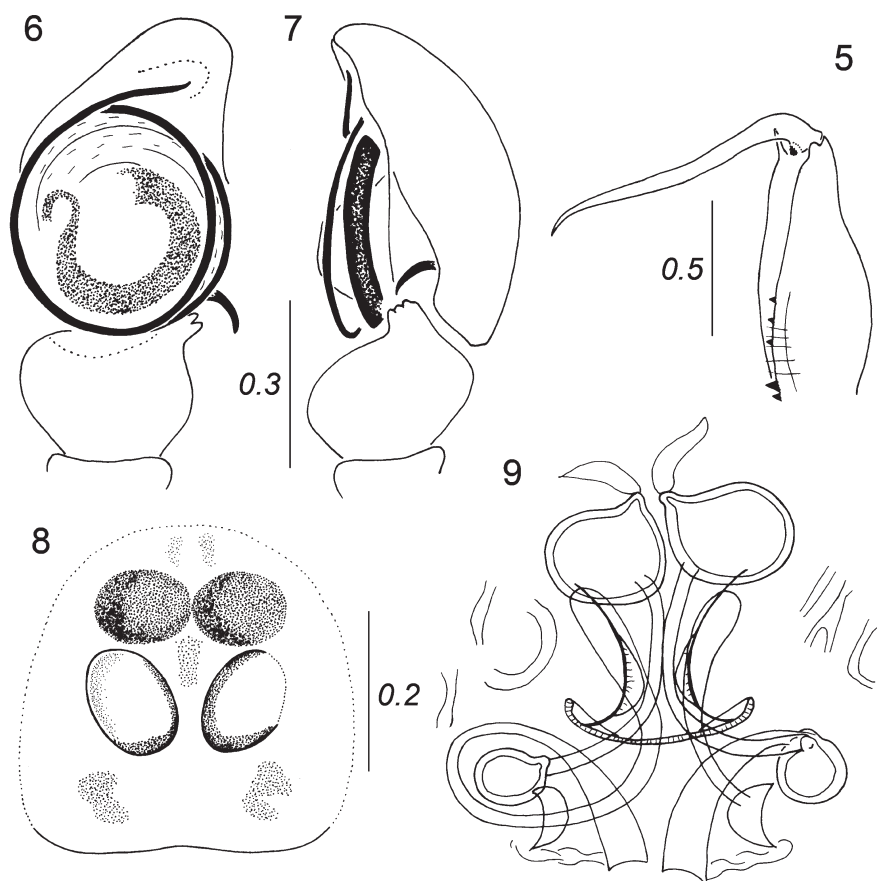
Holotype: male, Limpopo Province, Magoebaskloof pass, 23°52'S:30°00'E, 1188 m a.s.l., sifting leaf litter, Afromontane forest, 6.XI.2012, leg. J.A. Neethling (NCA 2012/5704).

Paratypes: together with holotype, 2 females; Limpopo Province, Tzaneen, 23°51'S:30°09'E, sifting leaf litter, riparian forest, 6.X.2012, leg. J.A. Neethling, 1 female (NCA 2012/5705). KwaZulu-Natal Province, Amanzimtoti, Amanzimtoti Bird Sanctuary, 30°02'S:30°53'E, leaf litter, coastal forest, 24.XI.2012, leg. J.A. Neethling, 1 female (NCA 2013/660).

DESCRIPTION

Measurements (male/female). Cephalothorax: length 1.7/1.7–1.8, height 0.6/0.6. Abdomen: length 1.8/1.8–2.4, width 1.0/1.0–1.5. Eye field: length 0.8/0.8–0.9, anterior and posterior width 1.0/1.0–1.1.

Male. General appearance as in Fig. 73. Very small, ant-like spider. Carapace dark brown, anterior part of eye field black, with shallow constriction behind eye field, posterior eyes surrounded with black rings, ocular area delicately pitted, with a



5-9. *Belippo pulchra*, holotype (male) and paratype (female): 5 – cheliceral dentition of male; 6 – palpal organ, ventral view; 7 – palpal organ, lateral view; 8 – epigyne; 9 – internal structure of epigyne

few colourless bristles at anterior eyes and some white hairs on thoracic part. Clypeus very low, dark. Chelicerae large and elongated, reddish brown, promargin toothless, retromargin with five small teeth (Fig. 5). Mouthparts and sternum light brown. Abdomen oval, without constriction, dorsum covered with broad black, strongly shining scutum (Fig. 73). Dorsum covered in sparse long, thin colourless hairs, with white scales forming small submarginal patches at one third abdomen length. Venter brown with two light streaks, narrowing towards end of abdomen. Spinnerets short, yellowish grey. Legs short, slender, yellow. Femora of leg I with black dorsal surface, patellae and tibiae with black prolateral line, metatarsi black. Other legs yellowish with dark line along their retrolateral surface. Tibia I with four pairs of ventral spines, metatarsus I with two pairs. Pedipalps brown. Palpal tibia with apical retrolateral denticles, tibial apophysis hidden in cymbial groove, sickle-shaped (Fig. 7). Embolus long, encircling bulb twice, with broad pars pendula (Fig. 6).

Female. General appearance as in Fig. 74. Similar to male, colouration slightly lighter, abdomen with light transverse band and pair of pale round submarginal patches medially and subtriangular posterior patch (Fig. 74). Legs whitish-yellow with black line along sides. Epigyne weakly sclerotized, with two oval depressions in centre, divided by broad ridge (Fig. 8). Internal structure as in Fig. 9, seminal ducts long, spermathecae composed of two spherical chambers joined by long narrow canal.

DISTRIBUTION

Known from isolated localities in northern and eastern South Africa (Fig. 23).

HABITAT AND BIOLOGY

A leaf litter dweller collected from various closed canopy forests. This species may be a mimic of *Crematogaster* ants, some species of which occur in leaf litter.

***Dendryphantes matumi* sp. n.**

Figs 10–15, 19–20

DIAGNOSIS

A distinctive species that can be easily recognized by the structure of the genitalia. The male has a pedipalp with a very large hooked embolus and a large process at base of the femur. The female has a distinctive epigyne form, with a large oval anterior hollow leading to a deep pouch, with the copulatory openings situated at the bottom.

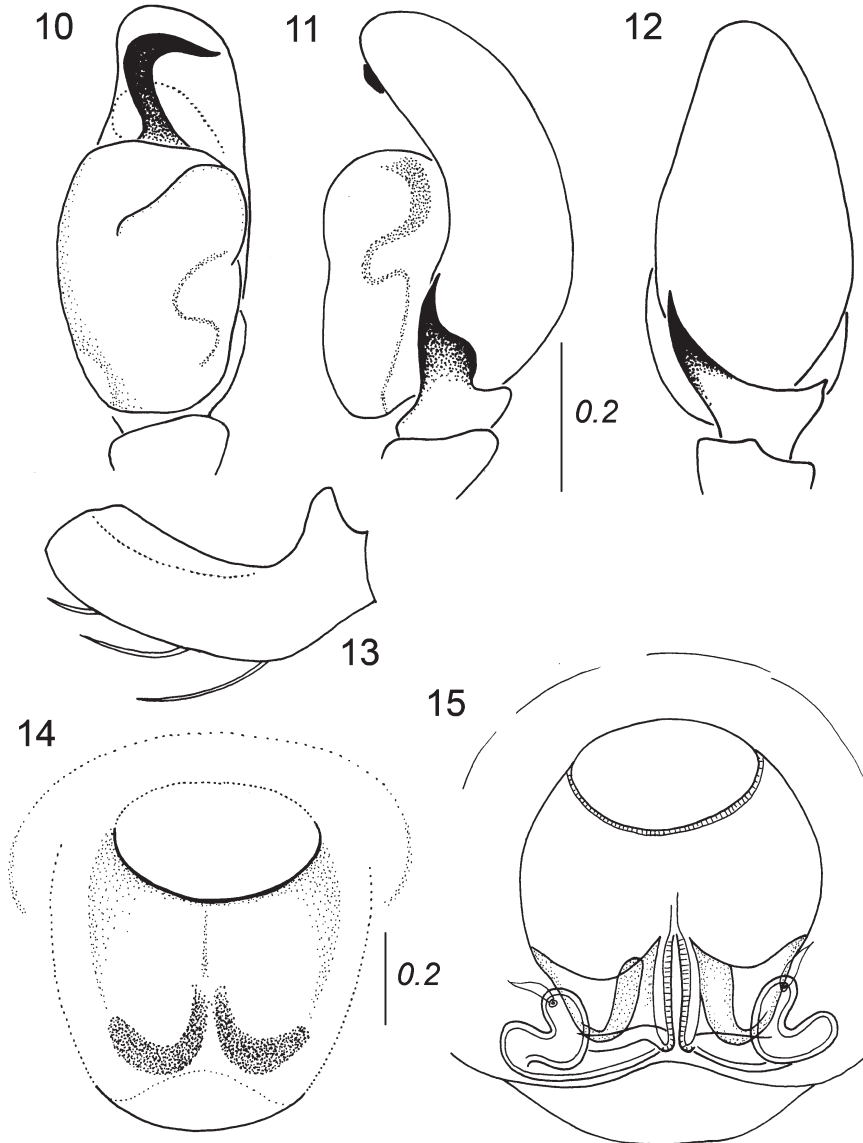
ETYMOLOGY

The specific name is a noun in apposition, referring to the isiZulu name of the tree from which the holotype was collected (matumi = *Breonadia salicina*).

MATERIAL EXAMINED

Holotype: male, KwaZulu-Natal Province, iSimangaliso Wetland Park, crocodile centre, 28°21'S:32°25'E, canopy fogging, *Breonadia salicina*, 14.V.2012, leg. J.A. Neethling & C. Luwes (NMSA 26522).

Paratypes: together with holotype, 1 male, 2 females; iSimangaliso Wetland Park, Meersig, 28°14'S:32°29'E, canopy fogging, *Syzygium cordatum*, 14.V.2012, leg. J.A. Neethling & C. Luwes, 1 male, 5 females (NMSA 26523).



10-15. *Dendryphantes matumi*, paratypes: 10 – palpal organ, ventral view; 11 – palpal organ, lateral view; 12 – palpal organ, dorsal view; 13 – palpal femur; 14 – epigyne; 15 – internal structure of epigyne

DESCRIPTION

Measurements (male/female). Cephalothorax: length 1.3/1.2–1.4, width 0.9/0.8–1.0, height 0.4/0.5. Abdomen: length 1.2/1.2–1.6, width 0.9/0.8–1.0. Eye field: length 0.5/0.6, anterior and posterior width 0.8/0.8–0.9.

Male. General appearance as in Figs 19–20. Very small, flattened spider (Fig. 20). Carapace oval, low, almost black with lustre, integument pitted. Some short greyish hairs on thoracic part, longer brown bristles on eye field, delicate light hairs surrounding anterior eyes. Fovea placed more posteriorly than in other salticids (at two-thirds carapace length), in shallow pit. Clypeus low, dark, with a few white scales. Chelicerae dark brown with some white scales on dorsal surface, unidentate with short fang. Sternum, endites and labium dark brown. Abdomen ovoid, dark brown to black with pair of submarginal yellowish-white spots at midpoint, venter dark. Abdomen covered in fine dense hairs. Spinnerets dark brown. First legs brown, stouter than others, with slightly swollen tibiae. Tibia I with one pair of ventral spines, metatarsus with two pairs. Other legs whitish, only femora and proximal halves of patellae, tibiae and metatarsi brown. Pedipalps dark, relatively large. Tibia short, tibial apophysis large, broad with pointed tip (Fig. 11). Bulb oval, convex, embolus large and hooked (Fig. 10). Palpal femur with large process at base (Fig. 13).

Female. Similar to male, more hairy, colouration more contrasting. Endites with narrow white lines along chewing margins. Some specimens possess, in addition to light median spots on abdominal dorsum, also small whitish marks anteriorly. Epigyne strongly sclerotized, with large oval anterior depression (Fig. 14). Internal structure as in Fig. 15, atria strongly sclerotized, placed posteriorly in deep cavity.

REMARKS

The generic position of the species is uncertain. The habitus of the species resembles members of the genus *Dendryphantes* KOCH C.L., 1837, but the carapace is more rectangular and only a single pair of spines is present on the first tibia (three pairs in the majority of *Dendryphantes* species). The genitalic structure is more similar to species of the genus *Rhene* THORELL, 1869. This species is probably related to *Dendryphantes arboretus* WESOŁOWSKA et CUMMING, 2008 from Zimbabwe. It is possible that this species, together with three other atypical *Dendryphantes* (*D. arboretus*, *D. limpopo* WESOŁOWSKA et HADDAD, 2013 and *D. neethlingi* sp. n.) may form a monophyletic group for which a new genus may need to be created.

DISTRIBUTION

Known only from the type locality (Fig. 23).

HABITAT AND BIOLOGY

The species lives in forest canopy, and was collected by fogging in subtropical coastal forests.

***Dendryphantes neethlingi* sp. n.**

Figs 16–18, 21–22

DIAGNOSIS

A distinctive species, easily recognized by the very characteristic, large triangular embolus. Although the habitus is different, the structure of the male palp resembles that in *Rhene amanzi* WESOŁOWSKA et HADDAD, 2013, but the embolus is curved to retrolateral side (vs prolateral in *R. amanzi*) and the tibial apophysis is shorter (compare Fig. 16 with fig.140 in WESOŁOWSKA & HADDAD 2013).

ETYMOLOGY

This species is dedicated to Jan-Andries NEETHLING, who collected the holotype.

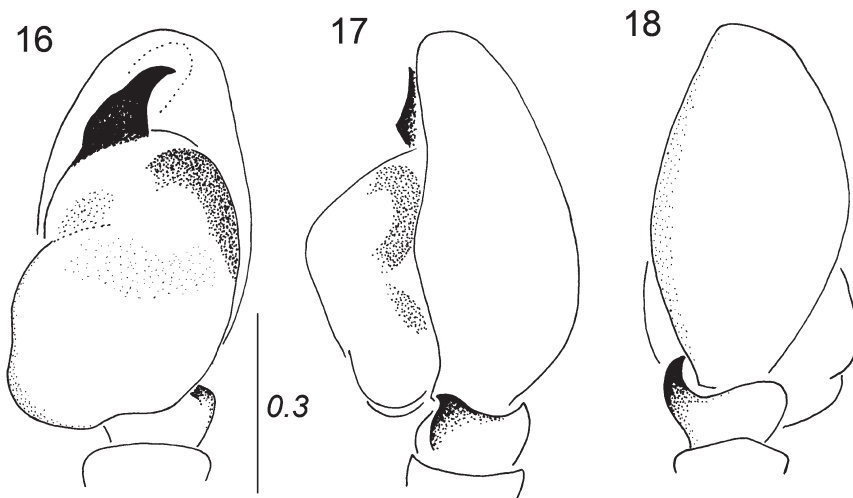
MATERIAL EXAMINED

Holotype: male, KwaZulu-Natal Province, Drakensberg, Champagne Valley, 28°57'S:29°29'E, 1120 m a.s.l., canopy fogging, *Acacia* sp., 3.XI.2012, leg. J.A. Neethling (NCA 2013/661).

DESCRIPTION

Measurements. Cephalothorax: length 1.4, width 1.1, height 0.5. Abdomen: length 1.7, width 1.0. Eye field: length 0.6, anterior width 0.8, posterior width 0.9.

Male. General appearance as in Figs 21–22. Small spider with strongly flattened body. Carapace oval, dark brown, clothed in dark hairs. Eye field almost black, pitted, with some long bristles near anterior eyes. Mouthparts and sternum brown. Abdomen



16–18. *Dendryphantes neethlingi*, holotype; 16 – palpal organ, ventral view; 17 – palpal organ, lateral view; 18 – palpal organ, dorsal view

ovoid, brownish with irregular lighter patches in anterior part (bleached?). Sides with narrow light lines (Fig. 22). Venter dark, spinnerets blackish. First pair of legs clearly stouter than others. Legs brown, tinged with grey, distal parts of segments light. Pedipalps brown. Palpal tibia very short, tibial apophysis small (Fig. 17). Bulb oval, convex, embolus triangular, very broad at the base, curving towards retrolateral side of bulb (Fig. 16).

Female unknown.

DISTRIBUTION

Only known from the type locality (Fig. 23).

HABITAT AND BIOLOGY

The species was collected from the canopy of an *Acacia* sp. in alpine grasslands by canopy fogging.



19-22. *Dendryphantes matumi*, male: 19 – dorsal view; 20 – lateral view; and *Dendryphantes neethlingi*, male: 21 – dorsal view; 22 – lateral view

***Evarcha denticulata* WESOŁOWSKA ET HADDAD, 2013**

Figs 24–25, 50–51

Evarcha denticulata WESOŁOWSKA & HADDAD 2013: 195, figs 9, 62–64.

MATERIAL EXAMINED

Western Cape Province, Fisherhaven, 34°22'S:19°07'E, leaf litter, 19.III.2004, leg. C. Haddad, 1 male (NCA 2013/1824). Eastern Cape Province, Jeffrey's Bay, Kabeljous, 34°00'S:24°56'E, dense grass in garden, 12.IX.2012, leg. C. Haddad, 2 males, 2 females (NCA 2012/4324); Amatola Mountains, Hogsback, 32°36'S:26°58'E, 27.III.2007, leg. C. Haddad, 1 male (NCA 2007/1205).

DESCRIPTION

Measurements (female). Cephalothorax: length 2.4–2.5, width 1.8–1.9, height 1.1–1.2. Abdomen: length 3.1–3.4, width 2.5–2.7. Eye field: length 1.0–1.1, anterior width 1.5–1.6, posterior width 1.6–1.7.

Description of male in WESOŁOWSKA & HADDAD (2013). "Face" of the male, with characteristic white lines, shown in Fig. 50.

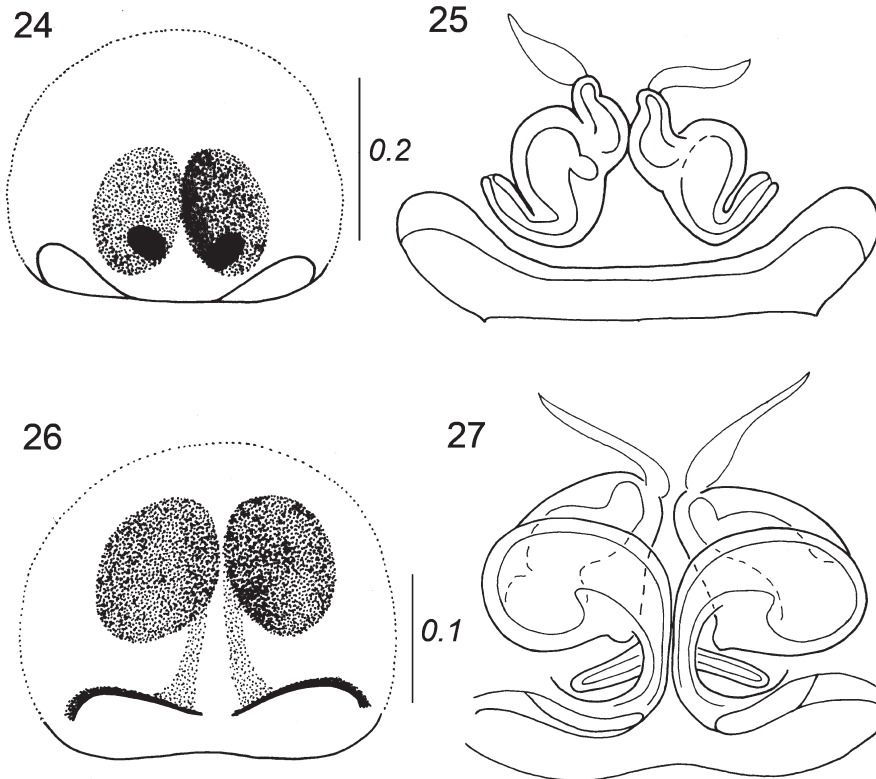


23. Distribution of *Afromarengo plana* (open circle), *Belippo pulchra* (closed circles), *Dendryphantes matumi* (open squares), *D. neethlingi* (closed squares), *Evarcha denticulata* (open stars) and *E. ignea* (closed stars) in South Africa

Female. General appearance as in Fig. 51. Carapace high, brown, only blackish near eyes. White hairs form small patches between anterior eyes and radiating lines on carapace slopes. "Face" similar to that in male; few long white bristles on clypeus, with white hairs forming three parallel thin lines below anterior lateral eyes on "cheeks", anterior eyes encircled by white scales. Chelicerae dark brown, labium and endites with pale tips, sternum light brown. Abdomen clearly lighter than in male, dark grey patches forming oblique streaks on yellowish background (Fig. 51). Long white bristles on anterior edge of abdomen. Venter light yellow with greyish patches, spinnerets dark. Legs light brown, distal parts of segments darker. Leg hairs brown, spines numerous, dark brown. Epigyne small, with very broad pocket at epigastric furrow (Fig. 24). Internal structure as in Fig. 25, wall of spermathecae thick and strongly sclerotized, fertilization ducts large.

REMARKS

The female of the species is described here for the first time.



24-27. *Evarcha denticulata*: 24 – epigyne; 25 – internal structure of epigyne; and *Evarcha ignea*: 26 – epigyne; 27 – internal structure of epigyne

DISTRIBUTION

A species known from the Eastern and Western Cape Provinces of South Africa, in the Western Cape previously recorded only in Cape Town (Fig. 23).

HABITAT AND BIOLOGY

A ground-dwelling spider collected in the leaf litter of fynbos and grassland habitats.

***Evarcha ignea* WESOŁOWSKA et CUMMING, 2008**

Figs 26–27, 98–99

Evarcha ignea WESOŁOWSKA & CUMMING 2008: 175, figs 22–23; WESOŁOWSKA & HADDAD 2009: 30, figs 34–37, 212; WESOŁOWSKA & EDWARDS 2012: 745.

MATERIAL EXAMINED

KwaZulu-Natal Province, Maputaland, Tembe Elephant Park, 27°02'S:32°24'E, sand forest, leaf litter, 1.VII.2010, leg. C. Haddad, 1 male, 1 female (MRAC).

DESCRIPTION

Measurements (female). Cephalothorax: length 2.5, width 1.9, height 1.5. Abdomen: length 2.2, width 1.6. Eye field: length 1.1, anterior width 1.7, posterior width 1.8.

Description of male in WESOŁOWSKA & CUMMING (2008) and WESOŁOWSKA & HADDAD (2009). “Face” of the male, with characteristic orange clypeus, shown in Fig. 98.

Female. General appearance as in Fig. 99. Colouration clearly lighter than male. Carapace whitish yellow with grey eye field, large light chevron on eye field posteriorly, eyes surrounded by black rings, a few light hairs between anterior eyes. Brown hairs form a thin belt on border of dorsal plane and slopes of carapace. Clypeus low, yellow. Chelicerae, sternum and mouthparts light, only hairs on tips of endites blackish. Abdomen ovoid, creamy, with delicate darker pattern composed of some chevrons medially and oblique streaks laterally, venter light. Spinnerets whitish. Legs creamy with brown hairs. Epigyne as in Fig. 24, copulatory openings placed posteriorly. Internal structure similar to that in *E. certa* ROLLARD et WESOŁOWSKA, 2002 and *E. arabica* WESOŁOWSKA et VAN HARTEN, 2007, but seminal ducts shorter and narrower and first chamber of the spermathecae larger (Fig. 25).

REMARKS

The female of the species is described here for the first time.

DISTRIBUTION

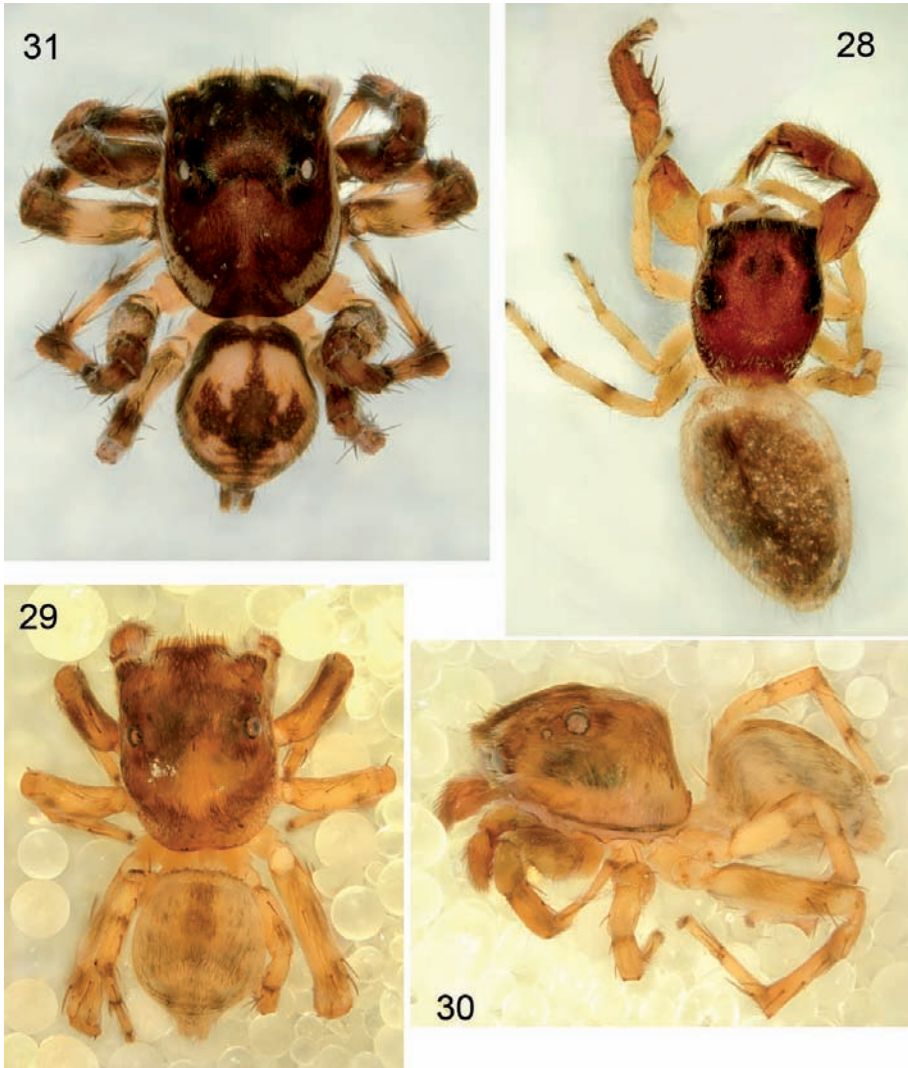
Known from Zimbabwe, Nigeria and South Africa; in South Africa previously recorded only from the Ndumo Game Reserve, approximately 15 km west of the newly recorded locality (Fig. 23).

HABITAT AND BIOLOGY

A ground-dwelling spider collected from the leaf litter and soil surface of forest and savanna habitats.

Evarcha vittula HADDAD et WESOŁOWSKA, 2011

Evarcha vittula HADDAD & WESOŁOWSKA 2011: 66, figs 39, 48–50.



28-31. *Afromarengo plana*, female: 28 – dorsal view; *Habrocestum africanum*, male: 29 – dorsal view; 30 – lateral view; *Habrocestum auricomum*, male: 31 – dorsal view

MATERIAL EXAMINED

KwaZulu-Natal Province, Maputaland, Tembe Elephant Park, 27°02'S:32°24'E, sparse woodland, base of grass tussocks, 1.VII.2010, leg. C. Haddad, 3 males, 2 imm. (MRAC).

DISTRIBUTION

Described from the Free State Province of South Africa, recorded for the first time from the north-eastern part of the country (Fig. 39).

HABITAT AND BIOLOGY

In contrast to most *Evarcha*, this species is usually found in grass-dominated habitats, where it has been collected under rocks, in pitfalls and in grass tussocks. The sparse woodland habitat, in which this species is recorded here, comprises open grasslands with only isolated patches of woody plants.

***Habrocestum africanum* WESOŁOWSKA et HADDAD, 2009**

Figs 29–30

Habrocestum africanum WESOŁOWSKA & HADDAD 2009: 38, figs 62–67; WESOŁOWSKA & HADDAD 2013: 199.

MATERIAL EXAMINED

KwaZulu-Natal Province, Maputaland, Tembe Elephant Park, 27°02'S:32°24'E, sand forest, leaf litter, 9.I.2006, leg. C. Haddad, 2 males (MRAC).

Description in WESOŁOWSKA & HADDAD (2009). The photos of this male show white hairs on the prolateral side of the palp (Fig. 29) and coloured hairs at the anterior eyes (fawn above and white below - Fig. 30).

DISTRIBUTION

The species was known only from isolated localities in northern KwaZulu-Natal and the Western Cape Province (Fig. 39).

HABITAT AND BIOLOGY

A ground-dwelling spider previously recorded from woodland and fynbos habitats, here for the first time from forests.

***Habrocestum auricomum* sp. n.**

Figs 31–33

DIAGNOSIS

The species is related to *Habrocestum africanum* WESOŁOWSKA et HADDAD, 2009, but differs by the shape of the bulb, which is oval and without a posterior lobe (*H. africanum* has a large lobe), as well as by the thinner embolus and tibial apophysis.

ETYMOLOGY

The specific name is Latin, meaning golden-haired, referring to the presence of golden shining hairs on the carapace.

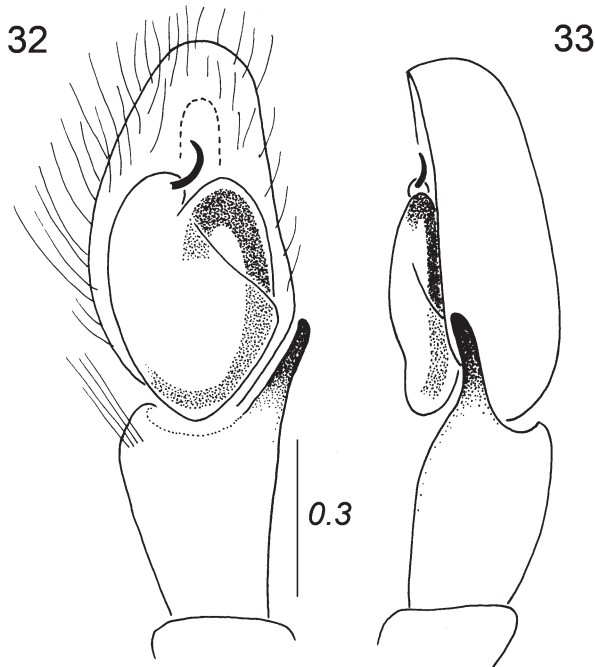
MATERIAL EXAMINED

Holotype: male, Limpopo Province, Medike Mountain Reserve, 23°00'S:29°37'E, sifting leaf litter, montane bushveld, 8.XI.2012, leg. J. A. Neethling (NCA 2012/5701).

DESCRIPTION

Measurements. Cephalothorax: length 2.7, width 2.1, height 1.5. Abdomen: length 2.0, width 1.6. Eye field: length 1.1, anterior width 1.9, posterior width 1.7.

Male. General appearance as in Fig. 31. Carapace high with very steep posterior slope, brown with black ocular area. Eye field short, distance between anterior lateral eyes slightly larger than between posterior laterals. Anterior eyes surrounded by small scales, fawn above eyes, white below, with some brown bristles near eyes. Carapace covered in fine long golden hairs, denser on eye field. Fovea visible. Broad white streak on lateral slopes composed of fine hairs. Clypeus moderately high, brownish. Chelicerae fissidentate, with two teeth on promargin and bicuspid tooth on retromargin. Labium



32-33. *Habrocestum auricomum*, holotype: 32 – palpal organ, ventral view; 33 – palpal organ, lateral view

brown, endites brownish with pale chewing margins, sternum yellow, tinged with grey. Abdomen small, narrower and shorter than carapace, anterior and lateral edges blackish, dorsum yellow with large butterfly-shaped dark brown marking. Venter dark brown with light streaks laterally and two lines formed by light dots medially. Dorsum of abdomen covered with fine translucent hairs interspersed with brown hairs. Anterior spinnerets blackish, posteriors yellow. Coxae and trochanters of all legs whitish yellow, other segments brown with whitish ring medially. Leg hairs light, spines numerous, long. Pedipalps light yellow, clothed in very dense white hairs (especially patella and tibia), only palpal femur blackish. Palpal organ shown in Figs 32-33; tibial apophysis straight, bulb oval, embolus short, fine and curved prolaterally.

Female unknown.

DISTRIBUTION

Known only from the type locality (Fig. 39).

HABITAT AND BIOLOGY

Collected from leaf litter in savanna.

Hasarinella distincta sp. n.

Figs 34–38, 55–56

DIAGNOSIS

The male is distinctive in having a unique form of the chelicerae with an enlarged retrolateral tooth. The palpal organ is similar to that in *Hasarinella berlandi* (LESSERT, 1925) but the bulb is oval and lacks tegular processes (see WESOŁOWSKA 2012: figs 16 & 17). The epigyne is also similar to that of *H. berlandi*, but the distal parts of the copulatory canals are clearly wider, with an accompanying membranous sac (see WESOŁOWSKA 2012: fig. 18).

ETYMOLOGY

The specific name is Latin, referring to the characteristic form of the male's chelicerae.

MATERIAL EXAMINED

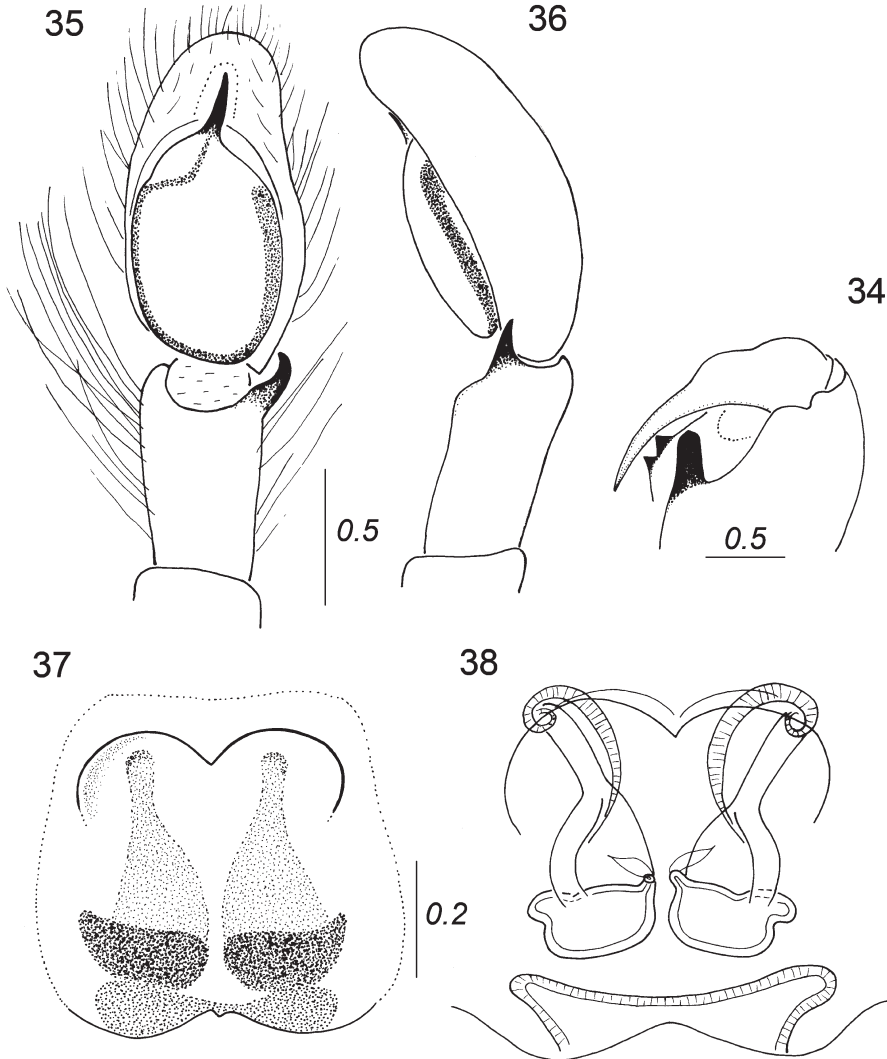
Holotype: male, Limpopo Province, Legalameetse Nature Reserve, 24°07'S:30°09'E, below knee, grassland and *Acacia* woodland, 16.I.2009, leg. V. Gelebe (NCA 2013/2359).

Paratype: same locality as holotype, woodland, 15.I.2009, leg. S. Foord, N. Hahn, M. Muthapuli & V. Gelebe, 1 female (NCA 2013/2358).

DESCRIPTION

Measurements (male/female). Cephalothorax: length 3.8/3.4, width 2.9/2.7, height 1.5/1.4. Abdomen: length 3.7/4.5, width 2.2/3.0. Eye field: length 1.8/1.4, anterior width 2.6/2.2, posterior width 2.5/2.1.

Male. General appearance as in Fig. 55. Carapace oval, moderately high, dark brown with three fine streaks, one of them medially and two on lateral slopes (Fig. 55). Carapace covered in brown hairs, with long bristles near eyes and anterior eyes surrounded by fawn scales. Clypeus low, dark brown with some white hairs. Chelicerae big and robust, dark brown, with short fang, two teeth on promargin and large rectangular tooth on retromargin (Fig. 34). Labium and endites light brown with thin whitish anterior edges, sternum brown. Abdomen ovoid, brownish, with two fine white



34-38. *Hasarinella distincta*, holotype (male) and paratype (female): 34 – cheliceral dentition of male; 35 – palpal organ, ventral view; 36 – palpal organ, lateral view; 37 – epigyne; 38 – internal structure of epigyne

streaks (Fig. 55), clothed in brown hairs, long at anterior edge. Venter greyish-brown. Spinnerets brownish. Legs brown (first pair broken), with fine white line composed of light hairs on dorsal surface of patellae and tibiae II and III. Leg hairs and spines brown. Pedipalps brown, hairy, covered with dense long white hairs. Palpal tibia with single short apophysis (Fig. 36), bulb oval, embolus nearly straight, short and broad (Fig. 35).

Female. Shape of body like male, general appearance as in Fig. 56. Colouration as in male, but lacking white lines on dorsum and scales around eyes. Retrolateral cheliceral tooth parallel sided, not as in male. Venter of abdomen dark, with four lines composed of white dots. Spinnerets yellowish grey. Legs brown, two anterior pairs darker. Epigyne as in Fig. 37, with anterior depression and broad pocket at epigastric furrow. Internal structure as in Fig. 38, delicate sclerotized lips surrounding copulatory openings, copulatory canals weakly sclerotized in initial part.

DISTRIBUTION

Known only from the type locality (Fig. 39). This is the first representative of the genus recorded from South Africa.

HABITAT AND BIOLOGY

Collected from low-growing vegetation in savanna habitats.



39. Distribution of *Evarcha vittula* (open circles), *Habrocestum africanum* (closed circles), *H. auricomum* (open squares) and *Hasarinella distincta* (closed squares) in South Africa

***Heliophanus (Helafricanus) bisulcus* WESOŁOWSKA, 1986**

Figs 40–43, 52

Heliophanus bisulcus WESOŁOWSKA 1986: 16, figs 70–74.*Heliophanus villosus* WESOŁOWSKA 1986: 22, figs 176–179, **syn. n.**

MATERIAL EXAMINED

Western Cape Province, Jacobs Bay, 32°58'S:17°54'E, nested in crevice in rock face, 26.III.2012, leg. C.A. Owen, 1 female (SAMC 6549); Agulhas, 34°49'S:20°01'E, 20.III.2012, leg. C.A. Owen, 1 female (SAMC 6548).

ADDITIONAL MATERIAL

Namibia: Luderitzbucht, Punta Diaz, 26°35'S:15°10'E, *Salicornia* flats & rocks, 10.X.1984, leg. T. Griswold, 2 males, 4 females (NMSA 26490).

REDESCRIPTION

Measurements (male/female). Cephalothorax: length 2.2/2.6, width 1.7/2.0, height 0.9/0.9. Abdomen: length 2.5/3.0–3.7, width 1.7/1.9–2.7. Eye field: length 1.0/0.9, anterior width 1.3/1.4, posterior width 1.4/1.5.

Male. Carapace oval, dark brown, eye field black, with short dense greyish hairs covering carapace and ill-defined longitudinal light stripe on thoracic part. Abdomen oval, blackish, clothed in short, dense greyish hairs, forming faint broad lighter median streak. Pedipalps with long patellar apophysis and three apophyses on tibia, proximal one very thin and long. Bulb irregular, embolus double with parts joined by membrane (Figs 40–41).

Female. General appearance as in Fig. 52, slightly larger than male. Carapace dark brown with black ocular area and reddish-brown sides. Dorsum of carapace covered with dense light greyish hairs and scattered brown bristles, denser and longer at anterior row of eyes. Some white scales on frontal part of eye field and on “cheeks”, also surrounding anterior eyes below. Clypeus low, sternum and mouthparts dark brown, only chewing margins of endites whitish. Abdomen oval, black, clothed in dense, short greyish hairs, forming herring bone pattern (Fig. 52). Venter yellowish, tinged with grey. Spinnerets black. Legs yellow, bearing brown hairs and spines, tarsal claw tufts black. Pedipalps light, clothed in white hairs. Epigyne with two large depressions posteriorly (Figs 42–43). Internal structure as in Figs 178, 179 in WESOŁOWSKA (1986).

REMARKS

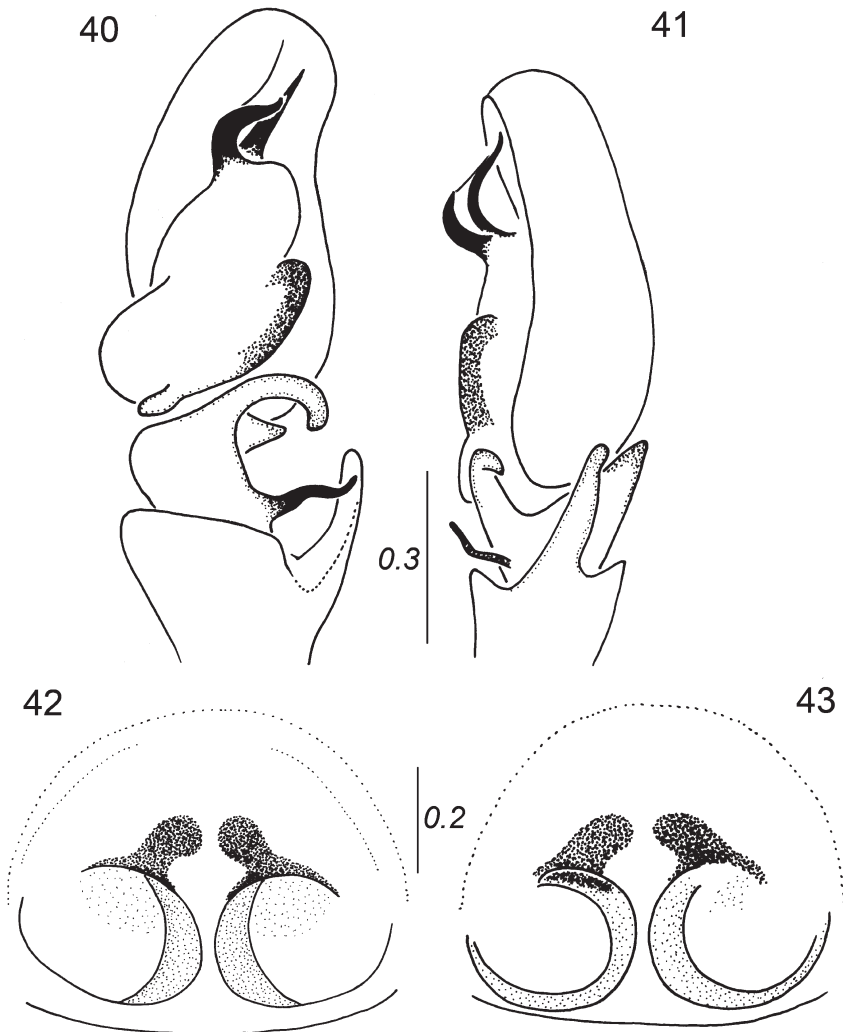
Both species were originally described from a single sex only (*H. villosus* – female, *H. bisulcus* – male); the studied sample from Namibia contains both males and females of these two species together. Thus, both the species names are synonymized.

DISTRIBUTION

Hitherto known only from the Western Cape Province of South Africa, with two further localities reported here (Fig. 63). Recorded for the first time in Namibia.

HABITAT AND BIOLOGY

The two specimens examined here from SAMC were collected from the intertidal zone along rocky seashores, while those from NMSA were likely collected close to the seashore, where succulent *Salicornia* are a dominant vegetation component.



40-43. *Heliophanus bisulcus*: 40 – palpal organ, ventral view; 41 – palpal organ, lateral view; 42, 43 – epigyne

***Heliophanus (Heliocapensis) claviger* SIMON, 1901**

Heliophanus claviger SIMON 1901: 56, fig. 9; WESOŁOWSKA 1986: 15, figs 54–63; WESOŁOWSKA & HADDAD 2009: 41, figs 68–72.

MATERIAL EXAMINED

Western Cape Province, Fisherhaven, 34°22'S:19°07'E, leaf litter, 19.III.2004, leg. C. Haddad, 1 male (NCA 2013/1825).

DISTRIBUTION

Species known from the KwaZulu-Natal and Western Cape Provinces of South Africa; in the Western Cape Province previously only recorded in Cape Town and surrounding areas (Fig. 63).

HABITAT AND BIOLOGY

Poorly known, collected from leaf litter and low-growing foliage in savanna and fynbos habitats.

***Heliophanus (Heliocapensis) mirabilis* WESOŁOWSKA, 1986**

Figs 44–47, 53

Heliophanus mirabilis WESOŁOWSKA 1986: 14, figs 50–53.

MATERIAL EXAMINED

Western Cape Province, Algeria Forest Station, 41 km SSE of Clanwilliam, 32°11'S:18°53'E, 1.XI.1985, leg. C. Griswold, J. Doyen & T. Griswold, 1 male (NMSA 26472).

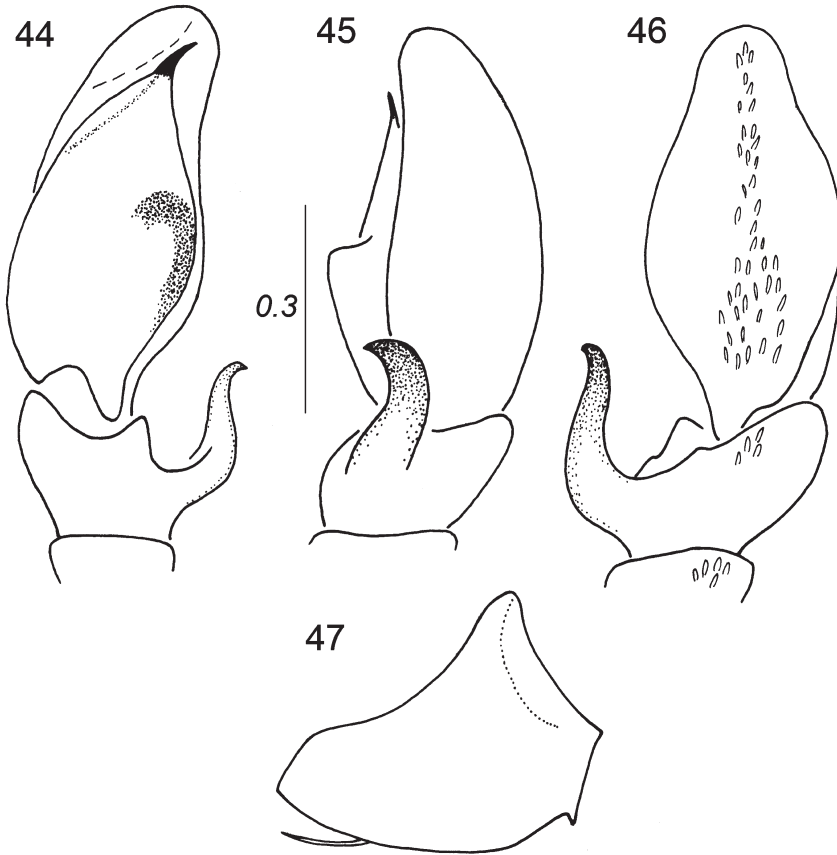
REDESCRIPTION

Measurements. Cephalothorax: length 1.7, width 1.2, height 0.6. Abdomen: length 1.6, width 1.2. Eye field: length 0.7, anterior width 1.0, posterior width 1.1.

Male. General appearance as in Fig. 53. Carapace oval, brown, with black eye field and metallic shine, with fine white lines along lateral margins of carapace in its posterior part. Sternum and mouthparts light brown. Abdomen oval, dark brown, with pair of white spots near anterior edge and second pair near midpoint, venter light brown. Legs light brown. Short dark hairs cover whole body. Pedipalps brown, with band formed by small white scales on cymbium (Fig. 46). Tibial apophysis large, embolus very short (Fig. 44). Femur with triangular apophysis on ventral surface (Fig. 47).

DISTRIBUTION

Hitherto the species was known only from the type locality, placed in the same district (Fig. 63).



44-47. *Heliophanus mirabilis*: 44 – palpal organ, ventral view; 45 – palpal organ, lateral view; 46 – palpal organ, dorsal view; 47 – palpal femur

HABITAT AND BIOLOGY

Poorly known, presently only recorded from fynbos habitats.

***Heliophanus (Heliophanus) ndumoensis* WESOŁOWSKA et HADDAD, 2013**

Figs 48–49, 54

Heliophanus (Heliophanus) ndumoensis WESOŁOWSKA & HADDAD 2013: 205, figs 12, 82–85.

MATERIAL EXAMINED

Limpopo Province, Legalameetse Nature Reserve, 24°12'S:30°20'E, beating, riverine to mixed woodland, 17.I.2009, leg. S. Foord, 4 males, 5 females (NCA 2013/2357).

DESCRIPTION

Measurements (female). Cephalothorax: length 2.4–2.5, width 1.8–1.9, height 0.8–0.9. Abdomen: length 2.5–2.7, width 1.8–2.0. Eye field: length 1.0–1.1, anterior width 1.5–1.6, posterior width 1.6–1.7.

Description of male in WESOŁOWSKA & HADDAD (2013).

Female. General appearance as in Fig. 54. Medium sized spider. Carapace moderately high, oval, slightly wider in posterior half, brown with black eye field. Carapace covered in dense grey hairs, with scattered long bristles among them on ocular area. Chelicerae and sternum light brown, endites and labium brownish with pale tips. Abdomen yellowish grey with pattern composed of brown chevrons and spots (Fig. 54), dorsum clothed in short dense grey and brown hairs, with long hairs at anterior abdominal edge. Venter light, spinnerets grey. Legs yellow with greyish brown rings, first pair with dark femur and black streak on prolateral surface of patella and tibia. Palps yellowish. Epigyne short and broad, weakly sclerotized, with two round depressions, long scapus and lateral copulatory openings (Fig. 48). Internal structure of epigyne as in Fig. 49, with copulatory ducts directed anteriorly then medially before entering median spermathecae.

REMARKS

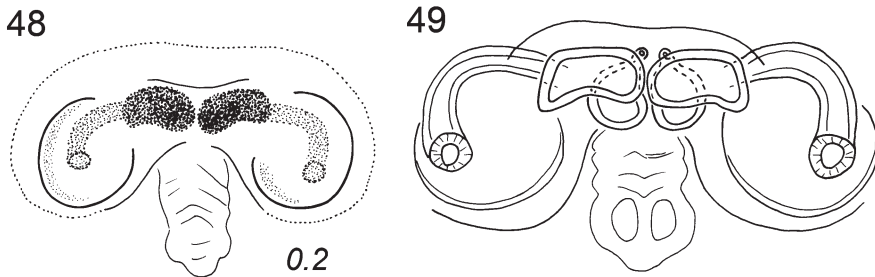
The female is described for the first time. The species belongs to the *orchesta* group (WESOŁOWSKA 1986). The structure of epigyne is similar to that in *H. transvaalicus* Simon, 1901 but the copulatory ducts are thinner, the spermathecae are smaller, and the scapus is long (very short in *H. transvaalicus*).

DISTRIBUTION

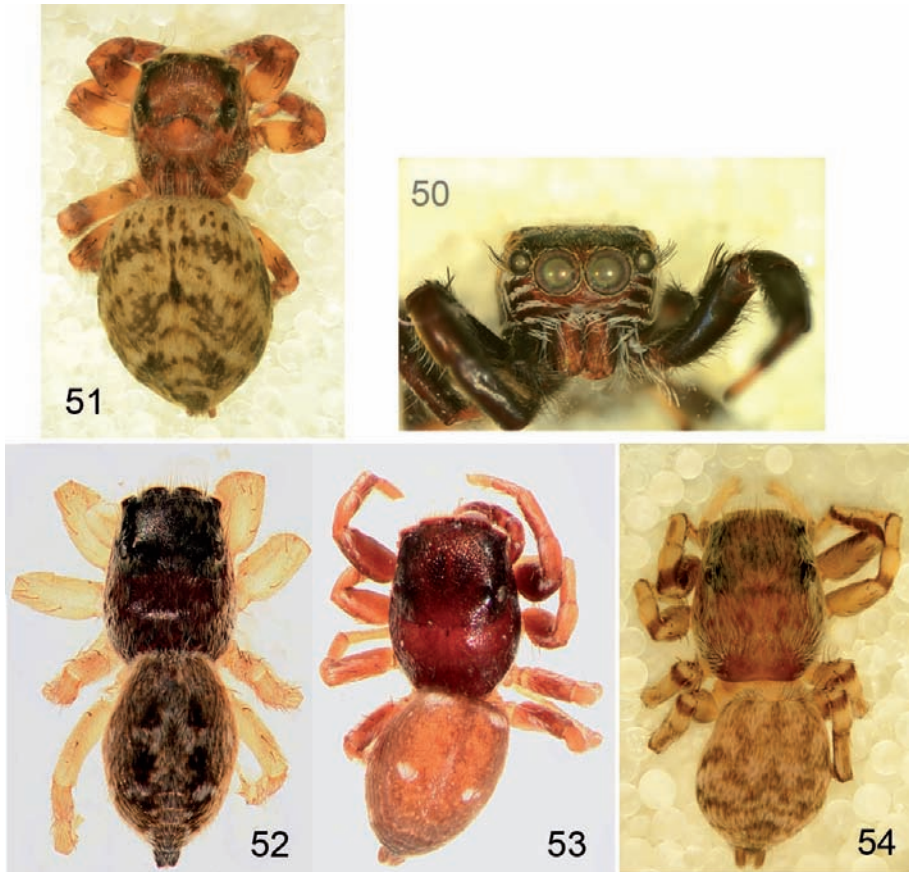
Previously known only from the type locality (Ndumo Game Reserve, KwaZulu-Natal), recorded from Limpopo Province for the first time (Fig. 63).

HABITAT AND BIOLOGY

A foliage and litter-dwelling species from forest and savanna habitats.



48-49. *Heliophanus ndumoensis*: 48 – epigyne; 49 – internal structure of epigyne



50-54. *Evarcha denticulata*: 50 – male, frontal view; 51 – female, dorsal view; *Heliophanus bisulcus*, female: 52 – dorsal view; *Heliophanus mirabilis*, male: 53 – dorsal view; *Heliophanus ndumoensis*, female: 54 – dorsal view

Hispo georgius (PECKHAM et PECKHAM, 1892)

Leptorchestes georgii PECKHAM & PECKHAM 1892: 52, plate 2, fig. 6.

Quekettia georgii PECKHAM & PECKHAM 1903: 255.

Pseudomarengo inermis CAPORACCO, 1947: 228, plate 2, fig. 63; ROEWER 1965: 33, figs 27a–e.

Pseudomarengo rufescens CAPORACCO 1947: 229, plate 2, fig. 64.

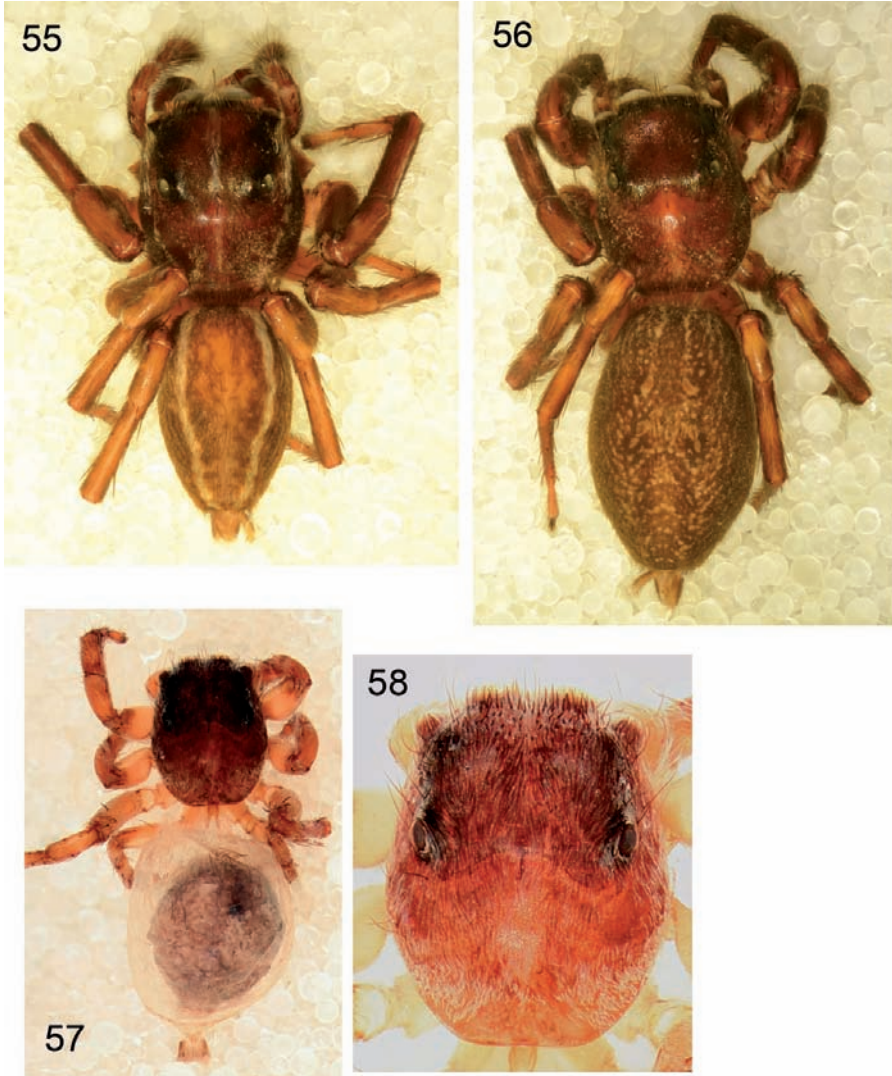
Hispo inermis WANLESS 1981: 186, figs 5a–j; WESOŁOWSKA & CUMMING 2008: 186, figs 55–66.

Hispo georgius WESOŁOWSKA & HADDAD 2009: 47.

MATERIAL EXAMINED

Eastern Cape Province, Amatola Mountains, Hogsback, 39 Steps waterfall, 32°35'S:26°56'E, hand collecting, Afromontane forest, 28.IX.2011, leg. J.A. Nee-thling & C. Luwes, 1 male (NCA 2013/590). KwaZulu-Natal Province, Ophathe

Game Reserve, Overgrazed savanna, 28°22'S:31°23'E, 560m a.s.l., pitfall traps, 29.IX–3.X.2008, leg. C. Haddad, 1 male (NCA 2008/4107); Tembe Elephant Park, 27°02'S:32°25'E, 15.IV.2003, leg. A. Honiball, sweep-netting, grassland, 1 male, 1 imm. (NCA 2007/1778); same data, 1 male, 2 females (NCA 2007/1779); same data, 2 females (NCA 2007/1780). Limpopo Province, Settlers, Tuinplaas, Springbokvlakte, 24°57'S:28°31'E, sweep-netting, grass, 6.XII.2001, leg. M. van Jaarsveld, 1 female (2007/1807).



55-58. *Hasarinella distincta*: 55 – male, dorsal view; 56 – female, dorsal view; *Langelurillus cedarbergensis*, female: 57 – dorsal view; 58 – carapace

DISTRIBUTION

Species widely distributed in Africa; in South Africa previously only recorded in the Ndumo Game Reserve. The first records for the Eastern Cape and Limpopo Provinces are given here (Fig. 63).

HABITAT AND BIOLOGY

Poorly known. A scarce species collected close to the soil surface or under bark in savanna and forest habitats.

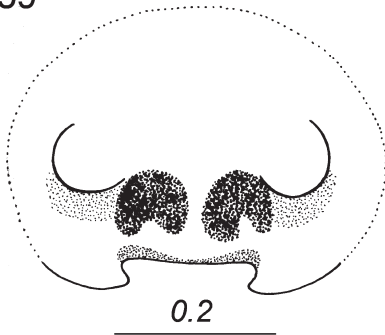
Langelurillus cedarbergensis sp. n.

Figs 57–62

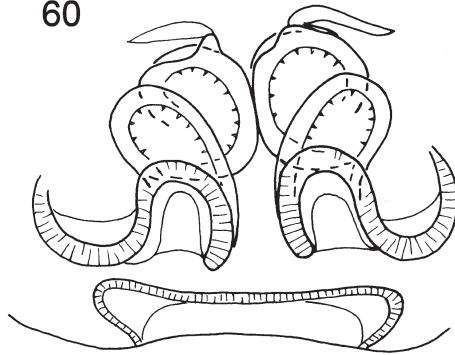
DIAGNOSIS

This species is similar to *Langelurillus namibicus* WESOŁOWSKA, 2011, but can be distinguished by the structure of the epigyne: the copulatory openings are wide apart, the atria have strongly sclerotized lips, the seminal ducts are shorter, and the spermathecae have a single chamber (composed of three chambers in *L. namibicus*).

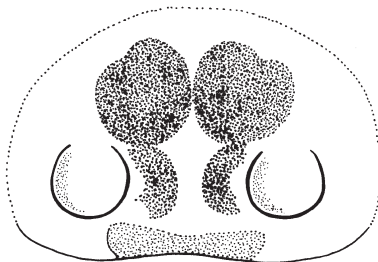
59



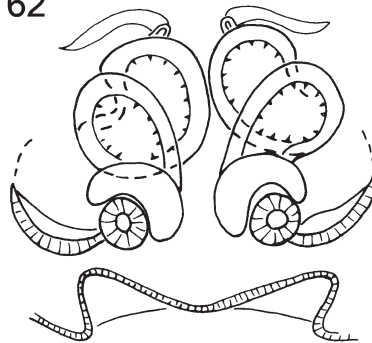
60



61



62



59-62. *Langelurillus cedarbergensis*, holotype (59, 60) and paratype (61, 62): 59, 61 – epigyne; 60, 62 – internal structure of epigyne

ETYMOLOGY

The specific name is derived from the type locality.

MATERIAL EXAMINED

Holotype: female, Western Cape Province, Cedarberg Mountains, 17 km SE of Algeria, 32°25'S:19°10'E, fynbos, 1.XI.1985, leg. C. Griswold, J. Doyen & T. Griswold (NMSA 26433).

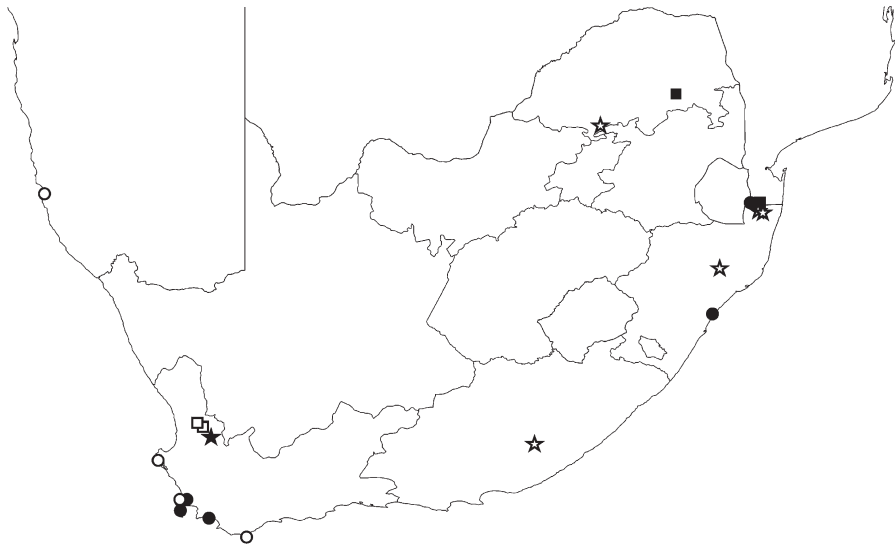
Paratype: 1 female, together with holotype.

DESCRIPTION

Measurements. Cephalothorax: length 2.6–2.7, width 2.0–2.2, height 1.1–1.3. Abdomen: length 3.4–3.8, width 3.2. Eye field: length 1.1–1.2, anterior width 1.7, posterior width 1.8.

Male unknown.

Female. General appearance as in Fig. 57. Carapace high, dark brown with black area near eyes, clothed in dense greyish-white hairs, with some long brown bristles among them on eye field and short thick rod-like bristles on anterior part of ocular area (Fig. 58). Clypeus low, orange, with some white hairs on it. Anterior eyes fringed below with white hairs. Chelicerae light brown, with small tooth on retrolateral margin. Labium and endites brownish with pale tips. Sternum dark yellow. Abdomen almost spherical, greyish beige (bleached), covered with delicate short grey hairs and sparse brown bristles, denser at anterior edge. Venter light. Spinnerets long, anteriors



63. Distribution of *Heliophanus bisulcus* (open circles), *H. claviger* (closed circles), *H. mirabilis* (open squares), *H. ndumoensis* (closed squares), *Hispo georgius* (open stars) and *Langelurillus cederbergensis* (closed stars) in South Africa and southern Namibia

yellow, posteriors grey. Legs short, light brown, first pair with very short segments. Leg hairs brown and grey, spines numerous, light. Epigyne small, weakly sclerotized, with posterior notch (Figs 59, 61). Copulatory openings situated posteriorly, seminal ducts short, spermathecae strongly sclerotized, with wide pocket at epigastric furrow (Fig. 60, 62).

DISTRIBUTION

Known only from the type locality (Fig. 63).

HABITAT AND BIOLOGY

A ground-dwelling spider from drier fynbos habitats.

***Langelurillus namibicus* WESOŁOWSKA, 2011**

Langelurillus namibicus WESOŁOWSKA 2011: 320, figs 32–33.

MATERIAL EXAMINED

Northern Cape Province, Kamiesberg mountains, 23 km E of Kamieskroon, 30°12'S:17°56'E, 4–5.XI.1985, leg. C. Griswold, J. Doyen & T. Griswold, 1 female (NMSA 26465).

DISTRIBUTION

This species was previously only known from the type locality in southern Namibia, and is recorded for the first time from South Africa (Fig. 80).

***Langona hirsuta* HADDAD et WESOŁOWSKA, 2011**

Figs 64–67

Langona hirsuta HADDAD & WESOŁOWSKA 2011: 79, figs 64–65, 76–84.

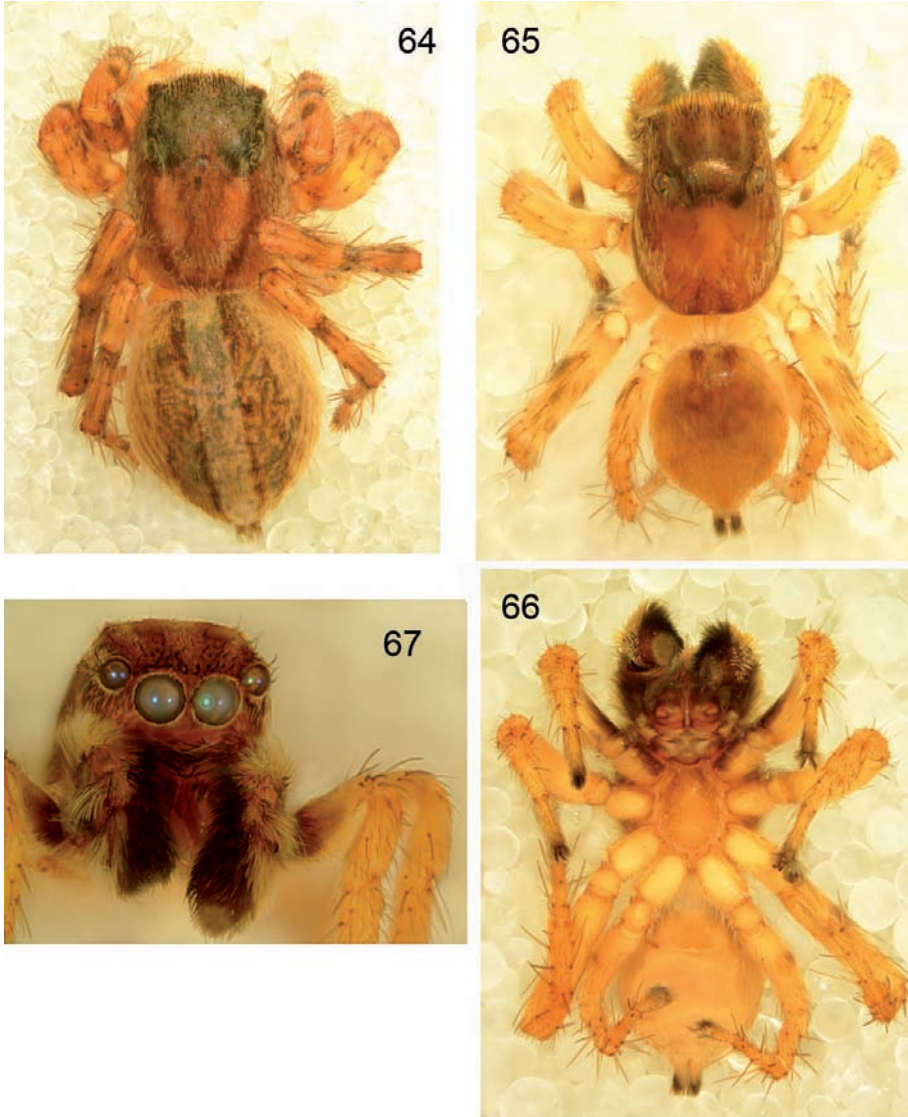
MATERIAL EXAMINED

Limpopo Province, farm Tweekansen, 24°49'S:28°57'E, 26.II.2003, leg. M. van Jaarsveld, 1 female (NCA 2002/1284); same locality, 7.V.2002, leg. M. van Jaarsveld, 1 male, 1 female, 1 imm. (NCA 2002/1282); Legalameetse Nature Reserve, 24°07'S:30°09'E, sweep-netting grassland, 16.I.2009, leg. M. Muthapuli, 1 male, 1 female (NCA 2013/2360).

Description in HADDAD & WESOŁOWSKA (2011). In the fresh male from Legalameetse N.R. the colouration is more distinctive than in the holotype. There are delicate light streaks on the eye field and reddish fawn scales around the eyes of the first row (Fig. 65), as well as a characteristic dark streak on the basal segments of the first leg ventrally (Fig. 66) and very hairy dark pedipalps (Fig. 67).

DISTRIBUTION

In the original description this species was recorded from the Free State and Northern Cape Provinces, and the first records from the Limpopo Province are presented here (Fig. 80).



64-67. *Langona hirsuta*: 64 – female, dorsal view; 65 – male, dorsal view; 66 – male, ventral view; 67 – male, frontal view

HABITAT AND BIOLOGY

This is a ground- and grass-dwelling spider from grassland, Nama Karoo and savanna habitats, where it is most abundant in overgrazed habitats and areas with minimal grass cover.

***Massagris mirifica* PECKHAM et PECKHAM, 1903**

Massagris mirificus PECKHAM & PECKHAM 1903: 186, pl.19, fig. 1.

Massagris mirifica WESOŁOWSKA 1993: 137, figs 1–8.

MATERIAL EXAMINED

Eastern Cape Province, Amatola Mountains, Hogsback, 32°35'S:26°56'E, canopy fogging, *Podocarpus falcatus*, 1.IV.2012, leg. C. Haddad & J.A. Neethling, 1 male (NMSA 26520). KwaZulu-Natal Province, Zululand, Eshowe, Dlinza Forest on western outskirts of town, 28°53'S:31°28'E, 1800 ft a.s.l., 17.I.1984, leg. T. & C. Griswold, P. Croeser & P. Reavell, 1 male (NMSA 26505); iSimangaliso Wetland Park, Mission Rock Beach Area, 28°15'S:32°28'E, 14.V.2012, leg. J.A. Neethling & C. Luwes, 1 male (NCA 2013/12).

DISTRIBUTION

A South African species, previously recorded from only two localities in the Kwa-Zulu-Natal (Durban) and Eastern Cape Provinces (East London) (Fig. 80).

HABITAT AND BIOLOGY

One of the specimens was collected by canopy fogging, the only biological data known to date for this species. It occurs in coastal and Afromontane forests in south-eastern and eastern South Africa.

***Microbianor furcatus* sp. n.**

Figs 68–72, 75–76

DIAGNOSIS

This species is distinctive in having a unique form of the tibial apophysis, with three tips.

ETYMOLOGY

The specific name is Latin for forked, referring to the shape of the tibial apophysis of the male palp.

MATERIAL EXAMINED

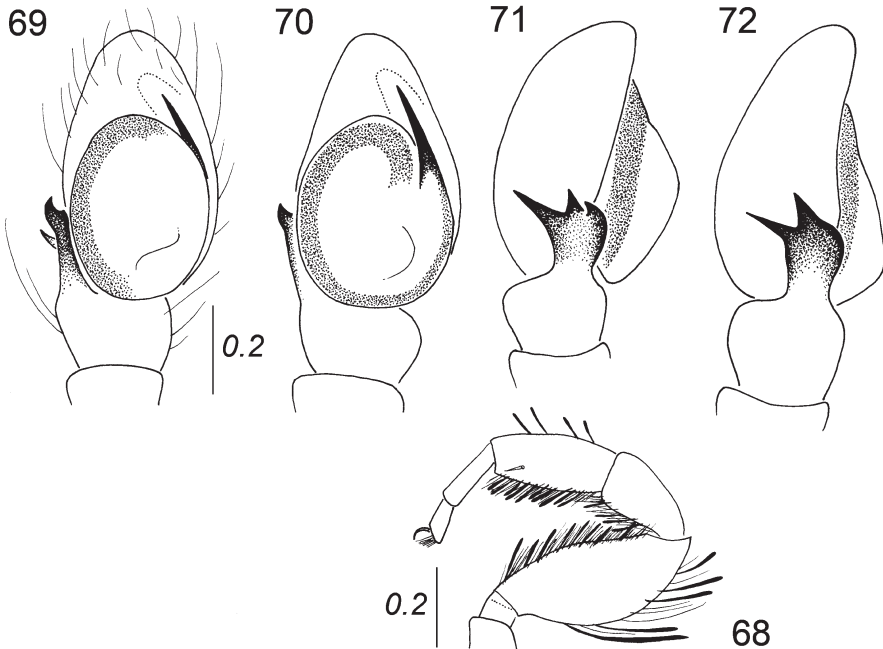
Holotype: male, Free State Province, Bloemfontein, National Botanical Gardens, 29°02'S:26°12'E, 1250 m a.s.l., grassland, open pitfall, 16.XII.2012, leg. C. Haddad (NCA 2013/659).

Paratypes: same locality as holotype, sweeps, vegetation along stream, 28.X.2012, leg. C. Haddad, 1 male (NCA 2013/343); same locality, sweeps, vegetation along stream, leg. C. Haddad, 12.X.2012, 2 males (NCA 2013/344).

DESCRIPTION

Measurements. Cephalothorax: length 0.8, width 0.8, height 0.3. Abdomen: length 0.9, width 0.8. Eye field: length 0.6, anterior width 0.6, posterior width 0.7.

Male. General appearance as in Figs 75–76. Tiny spider with stout body. Carapace flattened, broad and short, with large trapezoid eye field. Colouration of carapace dark brown, almost black in vicinity of eyes, with pitted microsculpture, covered with translucent opalescent blue-green scales and some delicate dark hairs. Clypeus low, brown with few white hairs. Chelicerae unidentate, endites and sternum dark brown. Abdomen short, almost round, flattened, dorsum covered with large scutum, blackish brown, clothed in small opalescent blue-green scales. Venter and spinnerets dark. First legs stouter than others, femora black, other segments dark brown, tibiae swollen, with long feather-like hairs on femora, patellae and tibiae, denser on ventral surface (Figs 68, 76). Legs II–IV lighter. Palp brown, proximal segments with similar feathery hairs



68–72. *Microbianor furcatus*, paratype: 68 – first leg; 69 – palpal organ, ventroprolateral view; 70 – palpal organ, ventral view; 71 – palpal organ, retrolateral view; 72 – palpal organ, dorsolateral view

as on first leg. Palpal tibia short, with very large, forked apophysis (Figs 71–72). Bulb rounded, embolus straight (Figs 69–70).

Female unknown.



73-77. *Belippo pulchra*: 73 – male, lateral view; 74 – female, dorsal view; *Microbianor furcatus*, male: 75 – dorsal view; 76 – lateral view; *Neaetha* sp., female: 77 – dorsal view

DISTRIBUTION

Known only from the type locality (Fig. 80).

HABITAT AND BIOLOGY

This species was collected from grassland by pitfalls and sweep-netting. Its tiny size, dark colouration and round body are apparent adaptations to mimicry of small black ladybird beetles that were common in sweep-netting samples at the type locality.

***Neaetha* sp.**

Fig. 77

MATERIAL EXAMINED

Limpopo Province, Modimolle, Jubaweni Game Reserve, 24°47'S:28°49'E, base of grass tussocks, 6.X.2012, leg. C. Haddad, 1 female (NCA 2012/5706).

REMARKS

Discovery of the male of this species is necessary for the certain determination of the species because females of all *Neaetha* spp. are very similar and difficult to recognize. However, this record of *Neaetha* is of considerable significance, as this is the first incidence of the genus in South Africa and the first certain record south of the equator.

DISTRIBUTION

Known only from the type locality (Fig. 80).

***Phintella lajuma* sp. n.**

Figs 78–79, 94

DIAGNOSIS

The species can be recognized by the shape of the epigyne, with a large, strongly sclerotized plate in the posterior half.

ETYMOLOGY

The specific name is a noun in apposition, referring to the type locality.

MATERIAL EXAMINED

Holotype: female, Limpopo Province, Soutpansberg Mountains, Lajuma Mountain Retreat, 23°02'S:29°27'E, 1300 m a.s.l., canopy fogging, Afromontane forest, 10.XI.2012, leg. J.A. Neethling (NCA 2013/667).

DESCRIPTION

Measurements. Cephalothorax: length 2.1, width 1.7, height 1.0. Abdomen: length 3.1, width 2.4. Eye field: length 1.1, anterior width 1.4, posterior width 1.4.

Male unknown.

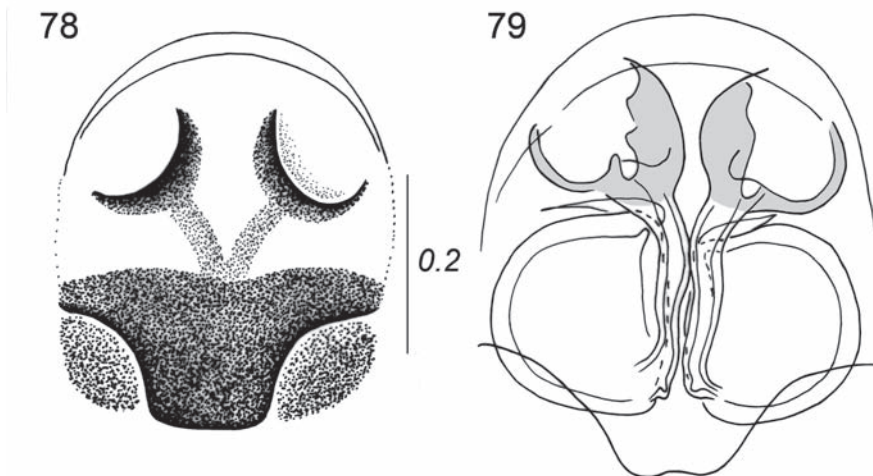
Female. General appearance as in Fig. 94. Medium sized spider. Carapace moderately high, thoracic part light brown with striae and markings. Eye field darker, black near eyes, anterior median eyes encircled by white scales, anterior lateral eyes with white scales only at the bottom, some similar scales on eye field anteriorly. Sparse long brown bristles on eye field, denser at anterior row of eyes. Clypeus low, clothed in white scales. Chelicerae with two teeth on promargin and single tooth on retromargin. Endites light brown, sternum greyish-orange. Abdomen ovoid, yellowish-beige, with indistinct darker pattern composed of two wide lateral belts and two pairs of submarginal distal patches. Sides and venter light. Abdomen and thoracic part of carapace with only sparse fine hairs. Spinnerets yellow. Legs fine, light yellow, their hairs light. First tibia with three pairs of ventral spines, metatarsus with two ventral pairs, spines long, brown. Epigyne large, posterior half consisting of strongly sclerotized plate, with tongue-shaped posterior rim (Fig. 78). Internal structure simple, atria large, heavily sclerotized; seminal ducts narrow; spermathecae spherical, large (Fig. 79).

REMARKS

The taxonomic status of this species can be verified after the discovery of the male. The structure of the epigyne is similar to that in some members of the genus *Phintella* BÖSENBERG et STRAND, 1906 (e.g. *P. aequipes* (PECKHAM et PECKHAM, 1903) or *P. lucida* WESOŁOWSKA et TOMASIEWICZ 2008).

DISTRIBUTION

Only known from the type locality (Fig. 80).



78-79. *Phintella lajuma*, holotype: 78 – epigyne; 79 – internal structure of epigyne

HABITAT AND BIOLOGY

The specimen was collected by canopy fogging in Afromontane forests.

***Plexippus tsholotsho* WESOŁOWSKA, 2011**

Plexippus tsholotsho WESOŁOWSKA 2011: 337, figs 71–72.

MATERIAL EXAMINED

Limpopo Province [Transvaal], Nwambiya Pan, 22°40'S:31°21'E, 29.X.1963, leg. R.F. Lawrence, 1 female (NMSA 26424).

DISTRIBUTION

Previously known only from the type locality in western Zimbabwe; recorded for the first time in the north-eastern corner of South Africa (Fig. 100).

HABITAT AND BIOLOGY

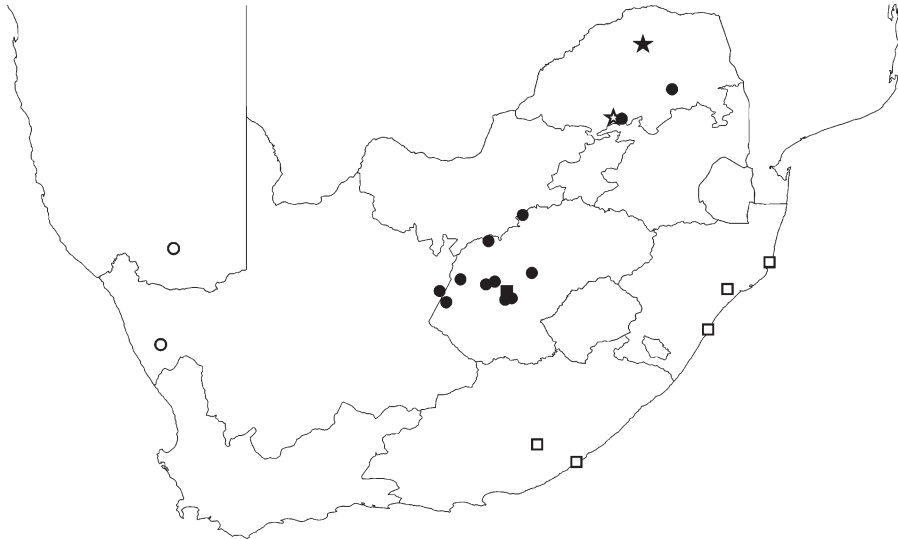
Only known from savanna habitats.

***Pseudicius squamatus* sp. n.**

Figs 81–87, 96–97

DIAGNOSIS

A distinctive species, with the male easily distinguishable by the presence of some black scales on the cymbium tip retrolaterally, near the tip of the embolus. The female



80. Distribution of *Langelurillus namibicus* (open circles), *Langona hirsuta* (closed circles), *Massagris mirifica* (open squares), *Microbianor furcatus* (closed square), *Neaetha* sp. (open star) and *Phintella lajuma* (closed star) in South Africa and southern Namibia

can be recognized by the large triangular depression in the centre of the epigyne and by the course of the seminal ducts.

ETYMOLOGY

The specific name is Latin, referring to the presence scale-like hairs on the tip of the male palp.

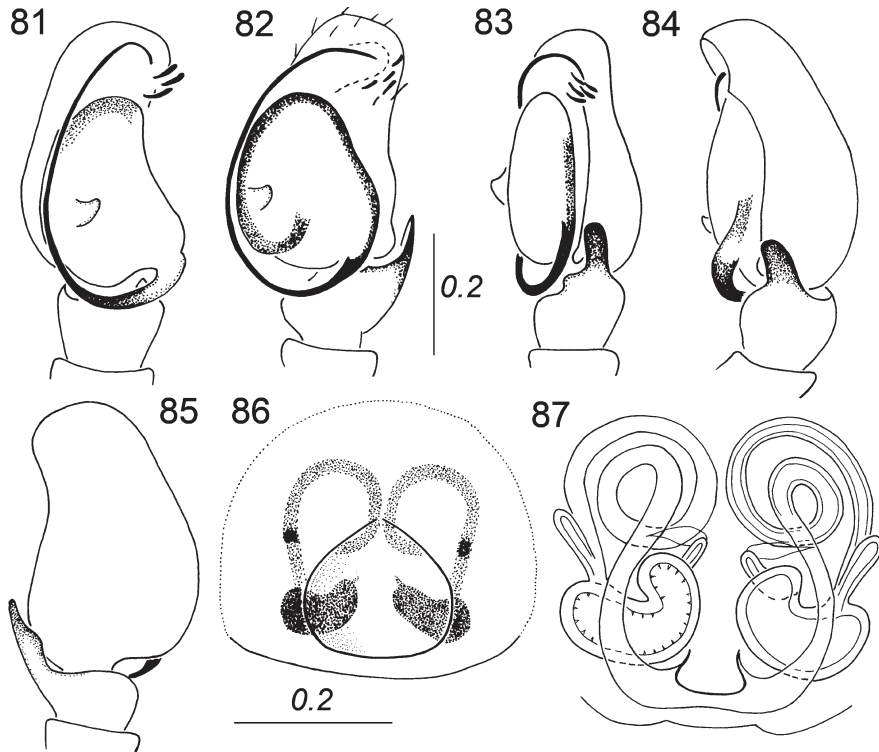
MATERIAL EXAMINED

Holotype: male, KwaZulu-Natal Province, iSimangaliso Wetland Park, Meersig, 28°14'S:32°29'E, canopy fogging, *Syzygium cordatum*, 14.V.2012, leg. J.A. Neethling & C. Luwes (NCA 2013/576).

Paratypes: same data as holotype, 2 males, 1 female (NCA 2013/597).

DESCRIPTION

Measurements (male/female). Cephalothorax: length 1.4–1.7/1.5, width 1.0–1.2/1.1, height 0.5–0.6/0.6. Abdomen: length 1.2–1.8/2.2, width 1.3–1.4/1.4. Eye field: length 0.7–0.8/0.7, anterior width 0.8–0.9/0.9, posterior width 0.9–1.0/1.0.



81-87. *Pseudicius squamatus*, paratypes: 81 – palpal organ, ventroprolateral view; 82 – palpal organ, ventral view; 83 – palpal organ, ventroretrolateral view; 84 – palpal organ, retrolateral view; 85 – palpal organ, dorsal view; 86 – epigyne; 87 – internal structure of epigyne

Male. General appearance as in Fig. 96. Small spider with slender and flattened body. Carapace flat, oval, dark brown with almost black eye field, with long brown bristles near eyes. Carapace with three delicate narrow stripes composed of white hairs, starting from anterior eyes and running to posterior edge. Lateral margins of carapace also with white streaks. Clypeus low, clothed in white hairs. Mouthparts and sternum dark brown. Abdomen dark, brownish grey, with white lateral streaks and less contrasting median streak posteriorly divided into chevrons (Fig. 96). Sides black, venter grey with four lines composed of white dots. Spinnerets dark grey. First pair of legs slightly stouter than others, brown, with lateral surfaces of femora and patellae black, tibiae also blackish. Single spine on prolateral surface of first tibia. Other legs yellow, only lateral surfaces of their femora tinged with black. Pedipalp brown, with white scales dorsally on its tibia. Palpal tibia short, with single flat apophysis (Figs 83–84). Embolus long, whip-shaped (Figs 81–82). Characteristic black scales distally on retrolateral side of cymbium ventrally, near embolus tip (Figs 81–83).

Female. Similar to male, lighter in colour (Fig. 97). Carapace densely covered with whitish grey hairs, with brown bristles in vicinity of eyes. Legs yellow with brown stains, lateral surfaces of first femora tinged with brown. Epigyne with large subtriangular central depression (Fig. 86). Internal structure as in Fig. 87, copulatory openings placed posteriorly; seminal ducts long, forming two loops, weakly sclerotized in inlet part; accessory glands very large.

DISTRIBUTION

Known only from the type locality (Fig. 100).

HABITAT AND BIOLOGY

This species was collected from tree canopies in coastal forest.

***Pseudicius zuluensis* sp. n.**

Figs 88–93, 95

DIAGNOSIS

The species is closely related to *Pseudicius gracilis* HADDAD et WESOŁOWSKA, 2011 and *P. karinae* HADDAD et WESOŁOWSKA, 2011 (both described from the Free State Province). The size, habitus and colouration of these species is very similar. The male may be recognized by the shape of the dorsal tibial apophysis, which has a clearly broader base, with an additional small lobe (compare Figs 89–90 herein with figs 174 and 180 in HADDAD & WESOŁOWSKA 2011). The female is practically indiscernible from *P. gracilis*.

ETYMOLOGY

The specific name is derived from Zululand, the region of KwaZulu-Natal where the species occurs.

MATERIAL EXAMINED

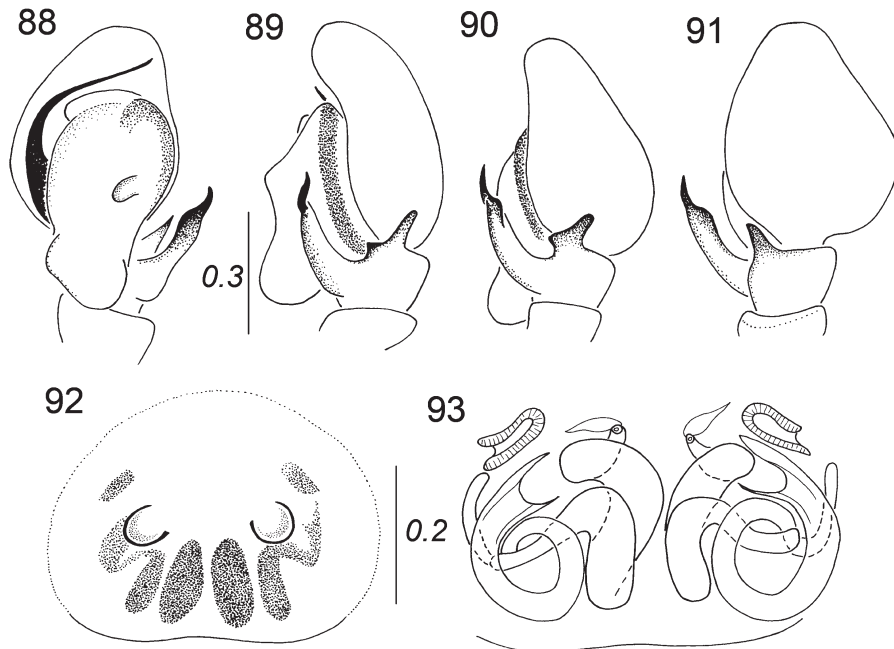
Holotype: male, KwaZulu-Natal Province, Vryheid, Vryheid Mountain Nature Reserve, 27°45'S:30°46'E, 1225 m a.s.l., canopy fogging, *Acacia tortilis*, 24.V.2012, leg. J.A. Neethling (NCA 2013/598).

Paratypes: same data as holotype, 8 males, 1 female (NCA 2013/588).

DESCRIPTION

Measurements (male/female). Cephalothorax: length 1.9/1.8, width 1.2/1.2, height 0.5/0.6. Abdomen: length 2.0/2.2, width 1.3/1.4. Eye field: length 0.7/0.7, anterior width 0.9/0.9, posterior width 1.0/1.0.

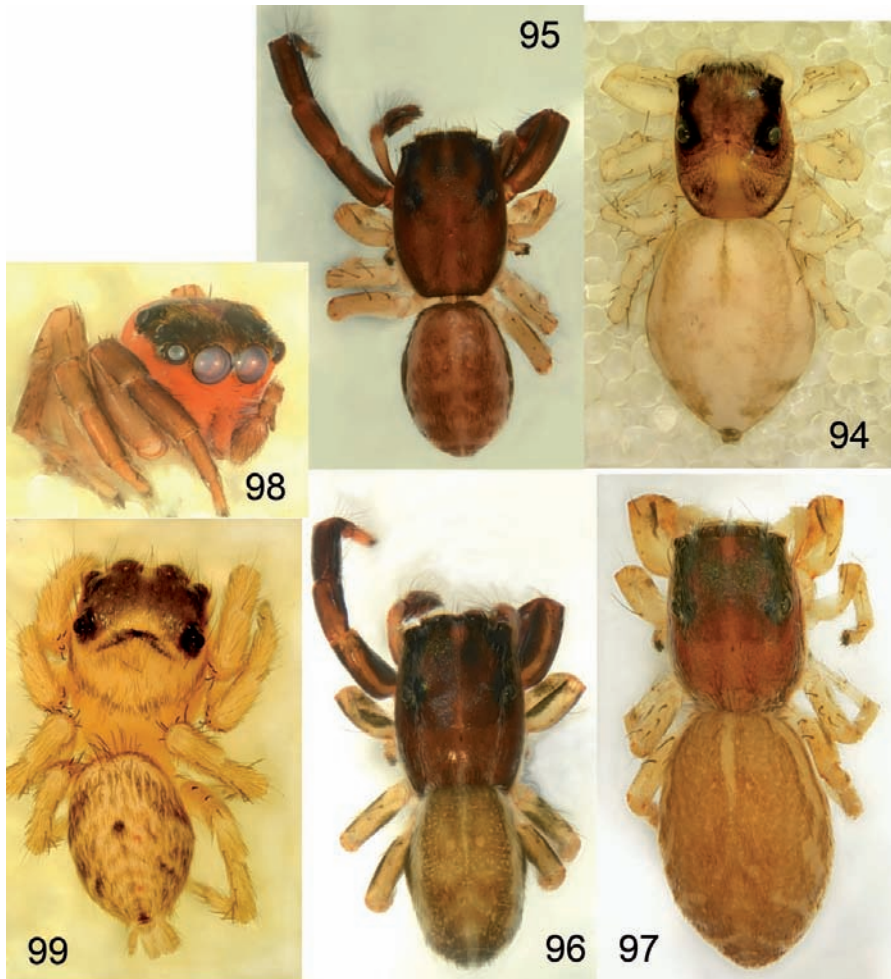
Male. General appearance as in Fig. 95. Small spider with elongated body. Carapace oval, strongly flattened, dark brown, eye field black, pitted. Carapace covered in thin colourless hairs, with a few long bristles near anterior row of eyes. Anterior eyes encircled by whitish scales, some similar scales on sides of ocular area. Stridulatory apparatus present, composed of row of stiff setae placed anteriorly on lateral surfaces of carapace and a few similar bristles on prolateral surface of first femora. Mouthparts and sternum dark brown. Abdomen ovoid, brown, with lighter pattern composed of white hairs; sides of abdomen dark with light streaks, midline with poorly contrasted irregular



88-93. *Pseudicius zuluensis*, paratypes: 88 – palpal organ, ventral view; 89 – palpal organ, lateral view; 90 – palpal organ, dorsolateral view; 91 – palpal organ, dorsal view; 92 – epigyne; 93 – internal structure of epigyne

belt, venter yellowish. Spinnerets dark. First leg brown, long and robust, stouter than others, with swollen tibia, single short spine on prolateral surface of tibia. Legs II–IV yellowish brown. Leg hairs sparse, very long, thin, brown. Pedipalp brown. Palpal tibia short, with two apophyses, dorsal one with additional enlargement at base (Figs 89–90), bulb ovoid with large posterior lobe and small process in centre (Fig. 88).

Female. Shape of body as in male, but first leg of normal size. Abdominal dorsum brownish, divided by narrow light median line and three transverse thin streaks. Epi-gyne oval, wider than long, with two round depressions and pockets placed in front



94–99. *Phintella lajuma*, female: 94 – dorsal view; *Pseudicius zuluensis*: 95 – male, dorsal view; *Pseudicius squamatus*: 96 – male, dorsal view; 97 – female, dorsal view; *Evarcha ignea*: 98 – male, frontal view; 99 – female, dorsal view

of them (Fig. 92). Seminal ducts long, twisted; large accessory glands fall into ducts, spermathecae narrow and long (Fig. 93).

DISTRIBUTION

Known from the type locality only (Fig. 100).

HABITAT AND BIOLOGY

As in a few related *Pseudicius* spp., this species lives in canopy of *Acacia* trees in grassland habitats.

Schenkelia modesta LESSERT, 1927

Schenkelia modesta LESSERT, 1927: 466, figs 36–37; PRÓSZYŃSKI 1968: 217, figs 1–9; WESOŁOWSKA & RUSSELL-SMITH 2000: 94, figs 256–260; WESOŁOWSKA & HADDAD 2009: 80, figs 170–175; WESOŁOWSKA & EDWARDS 2012: 759.

MATERIAL EXAMINED

MPUMALANGA Province [Transvaal], Kruger National Park, 6 km S of Skukuza, 25°00'S:31°36'E, under bark, 17.XII.1984, leg. C. Griswold, 1 female (NMSA 26494).



100. Distribution of *Plexippus tsholotsho* (open circle), *Pseudicius squamatus* (closed circle), *P. zuluensis* (open square) and *Schenkelia modesta* (closed squares) in South Africa

DISTRIBUTION

Species distributed in central Africa, known also from Nigeria, in South Africa hitherto recorded only from the Ndumo Game Reserve in KwaZulu-Natal. Recorded here from the Mpumalanga Province for the first time (Fig. 100).

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