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Authors: Haddad, Charles R., and Lyle, Robin

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Three new genera of tracheline sac spiders from southern Africa (Araneae: Corinnidae)

Charles R. Haddad and **Robin Lyle**

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

ABSTRACT

Three new genera of sac spiders of the subfamily Trachelinae (Corinnidae) are described from southern Africa. *Fuchiba* gen. n. is represented by *F. aquilonia* sp. n. (type species), *F. capensis* sp. n., *F. montana* sp. n., *F. similis* sp. n., *F. tortilis* sp. n. and *F. venteri* sp. n. All species are endemic to South Africa except for *F. aquilonia* sp. n., which is also recorded from Mozambique and Botswana, and *F. montana* sp. n., which is known from Lesotho. *Fuchibotulus* gen. n. is represented by *F. bicornis* sp. n. from South Africa (type species) and *F. kigelia* sp. n. from South Africa and southern Mozambique. *Poachelas* gen. n. is represented by three new species, and two species groups are recognised based on leg morphology. The *striatus* species group is represented by *P. striatus* sp. n. (type species, South Africa) and *P. solitarius* sp. n. (Zimbabwe). The *montanus* species group, represented by *P. montanus* sp. n., is endemic to South Africa. The three genera show different microhabitat preferences. Representatives of *Fuchiba* gen. n. and *Fuchibotulus* gen. n. were collected primarily by pitfall trapping or by hand from leaf litter in various biomes, while representatives of *Poachelas* gen. n. were collected primarily from the base of grass tussocks, or occasionally by sweep-netting in grassland and savannah. Identification keys to new species are provided for each genus.

KEY WORDS: Afrotropical, Araneae, Corinnidae, *Fuchiba*, *Fuchibotulus*, *Poachelas*, sac spiders, new taxa, endemic, identification keys.

INTRODUCTION

Until recently, Afrotropical tracheline sac spiders (Araneae: Corinnidae) have been largely neglected and their diversity in the region is poorly known. Dippenaar-Schoeman and Jocqué (1997) listed *Austrachelas* Lawrence, 1938, *Brachyphaea* Simon, 1895, *Cetonana* Simon, 1874, *Pronophaea* Simon, 1897 and *Trachelas* L. Koch, 1866 as Afrotropical tracheline genera. A sixth genus, *Paccius* Simon, 1898, was erroneously listed as being a castianeirine; this genus also belongs to the Trachelinae (Platnick 2000). Subsequently, Bosselaers and Jocqué (2000) transferred the monotypic genus *Thysanina* Simon, 1910 from the Liocranidae to the Trachelinae, on the basis of the presence of ventral leg cusps on legs I and II, as well as other characters. This genus was recently revised by Lyle and Haddad (2006*a*), who described five new species. Bosselaers and Jocqué (2000, 2002) commented that the monotypic corinnine genus *Lessertina* Lawrence, 1942 may be a tracheline, as it possesses a single ventral cusp on metatarsi I and II, but the presence of a palpal median apophysis excludes it from the subfamily. Currently this genus is considered Corinnidae *incertae sedis* (Bosselaers & Jocqué 2000). Most recently, Haddad (2006) described the monotypic genus *Spinotrachelas* from South Africa.

A revision of Afrotropical Trachelinae is currently in progress. In reviewing the genera presently listed in the group, it is clear that *Austrachelas* is misplaced in the Trachelinae and may be transferred to one of the gnaphosoid families (Lyle & Haddad 2006*b*). *Brachyphaea* and *Pronophaea* are also misplaced and may belong to the Corinninae (Haddad 2007).

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In this paper three new genera of tracheline sac spiders are described from southern Africa, representing a total of 11 new species. Members of *Fuchiba* gen. n. appear to be ground-living spiders (Figs 1–3) associated with fynbos, grassland and savannah habitats in South Africa, Lesotho, Botswana and Mozambique. Spiders of *Fuchibotulus* gen. n. are leaf litter dwellers associated with fynbos, karoo and savannah habitats in South Africa and Mozambique. *Poachelas* gen. n. are closely associated with grasses (Fig. 4), and have been collected from grassland and savannah in South Africa and Zimbabwe.

In terms of morphology, each genus has relatively conservative genitalic morphology that shows little variation, especially when compared to the diverse genitalic structures of Afrotropical *Thysanina*, *Trachelas* and *Cetonana* (Lyle & Haddad 2006*a*; Lyle 2008). *Fuchiba* gen. n. and *Fuchibotulus* gen. n. are small spiders that resemble *Trachelas*, but are more robust, have smaller and more widely spaced eyes, distinctive dorsal chevron markings, and lack ventral leg cusps in both sexes. These two genera can be easily separated on their external morphology and distinctive genitalic structures. Members of *Poachelas* gen. n. can be readily recognised by their very elongate body and pale colouration with a grey median abdominal stripe, apparent adaptations for camouflage on grass (also seen in the thomisid genus *Runcinia* Simon, 1875, philodromid genus *Tibellus* Simon, 1875, and zodariid genus *Chariobas* Simon, 1893, for example), as well as by the presence of paired ventral leg spines and cusps in males, and paired ventral leg spines in females of *P. striatus* sp. n. (absent in *P. montanus* sp. n.).

The new descriptions raise the number of valid tracheline genera from the region to eight, and although the revisions of *Trachelas* and *Cetonana* are still to be published



Figs 1–4. General habitus of *Fuchiba* gen. n. and *Poachelas* gen. n. from southern Africa: (1) *F. aquilonia* sp. n., female, Marracuene, Mozambique; (2) *F. capensis* sp. n., male, De Hoop Nat. Res., South Africa; (3) *F. venteri* sp. n., male, Jakobsbaai, South Africa; (4) *P. striatus* sp. n., male, Bloemfontein, South Africa.

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TABLE 1.
Species composition of Afrotropical tracheline sac spider genera. An asterisk indicates new species described in the current paper.

Genus	Number of species
Cetonana Strand, 1929	6
Fuchiba gen. n.	6*
Fuchibotolus gen. n.	2*
Paccius Simon, 1897	8
Poachelas gen. n.	3*
Spinotrachelas Haddad, 2006	1
Thysanina Simon, 1910	6
Trachelas L. Koch, 1866	8
TOTAL	40

(Lyle 2008), the known species diversity in the region increases from to 29 to 40 species (Table 1).

MATERIAL AND METHODS

All spiders were studied under a stereomicroscope. Female genitalia were dissected from the abdomen using fine entomological pins, placed in a small vial in 70% ethanol, cleared for 8 minutes in a Branson 3200 ultrasonic bath, and observed for sketch drawings in 70% ethanol. Dissected genitalia were placed in microvials in the vial with the specimen from which they had been removed. Body measurements were taken of the largest and smallest specimens of each sex, and eye and leg measurements were taken from the largest specimen. The length of leg segments is given from the femur to tarsus, and total. All measurements are given in millimetres (mm). Leg spination follows the format of Bosselaers and Jocqué (2000).

The following abbreviations are used in the descriptions:

AER – anterior eye row
AL – abdomen length
ALE – anterior lateral eye
AME – anterior median eye
AW – abdomen width
CL – carapace length
CW – carapace width
FL – fovea length
PER – posterior eye row
pl – prolateral
PLE – posterior lateral eye
plv – prolateral ventral
PME – posterior median eye
rlv – retrolateral ventral
RTA – retrolateral tibial apophysis
SL – sternum length
ST – spermatheca
SW – sternum width
TL – total length

Material of *Fuchiba capensis* sp. n. and *Poachelas striatus* sp. n., and palps of the two *Fuchibotulus* gen. n. species, was prepared through a graded ethanol series and then critical point dried in an argon chamber. Material was then mounted on stubs and sputter-coated three times with gold before observation in a JEOL WinSEM 6400 at 10kV. Digitised micrographs were taken. Digital photographs of the general habitus of males and/or females of each species were taken using a Nikon Coolpix 8400 mounted on a Nikon SMZ800 stereomicroscope.

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Labels of holotype and allotype specimens are quoted *verbatim*. A slash (/) indicates the end of a line of print, and two slashes (//) indicate data on a further label. The material used in this revision has been deposited in the following collections (curators are given in parenthesis):

AMNH – American Museum of Natural History, New York, USA (Norman Platnick);
BMNH – British Museum of Natural History, London, UK (Janet Beccaloni);
CASC – California Academy of Sciences, San Francisco, USA (Charles Griswold);
DNSM – Durban Natural Science Museum, South Africa (Mariaan Tomalin);
MACN – Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina (Martín Ramírez);
MNHG – Museum of Natural History, Geneva, Switzerland (Peter Schwendinger);
MRAC – Royal Museum for Central Africa, Tervuren, Belgium (Rudy Jocqué);
NCA – National Collection of Arachnida, Pretoria, South Africa (Ansie Dippenaar-Schoeman);
NMBA – National Museum, Bloemfontein, South Africa (Leon Lotz);
NMZA – National Museum of Zimbabwe, Bulawayo, Zimbabwe (Moira FitzPatrick);
SAMC – Iziko South African Museum, Cape Town, South Africa (Margie Cochrane).

TAXONOMY

Genus **Fuchiba** gen. n.

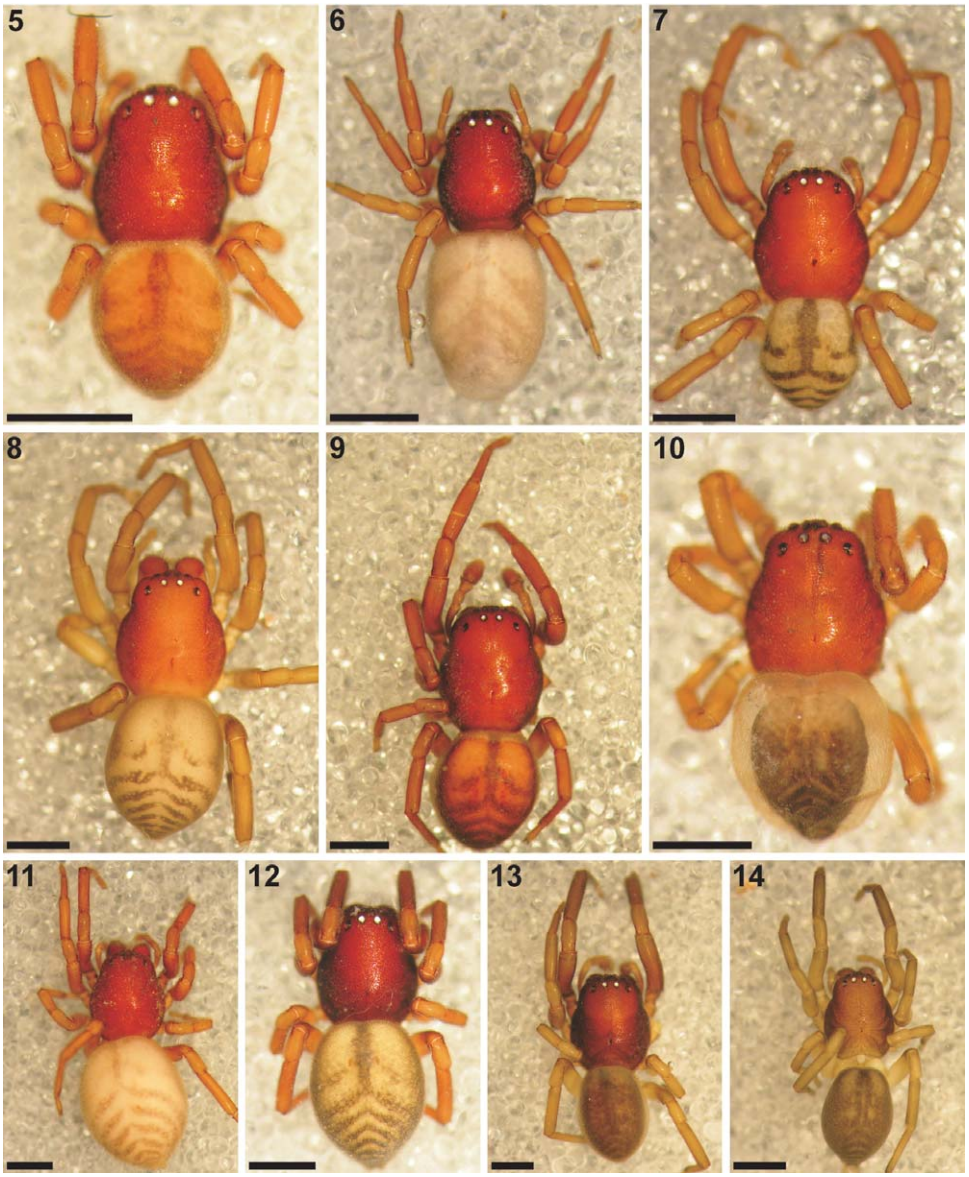
Etymology: The genus name is an arbitrary combination of letters. Gender masculine.

Type species: *Fuchiba aquilonia* sp. n.

Diagnosis: Separated from other trachelines by the robust body, lack of any cusps or spines on legs, widely spaced eyes, high and finely granulate carapace with a shallow depression immediately anterior to the fovea, and by the genitalic structures: males have a short coiled embolus distally on the tegulum and a simple single RTA; females have copulatory openings situated laterally in sclerotised posterior circular depressions.

Description: Small spiders, 2.43–4.70 mm long; carapace yellow-brown, orange, red-brown or dark brown, abdomen pale grey with dark grey dorsal chevron marking (Figs 1–3, 5–14); carapace surface finely granulate (Figs 15, 16); AER procurved, clypeus height larger than AME diameter; AME slightly smaller than ALE, or eyes subequal; AME closer to ALE than to each other; PER strongly recurved (Fig. 16); PME slightly larger than PLE, or eyes subequal; PME closer to each other than to PLE; chilum single, triangular, tapering distally, sometimes with distal notch; cheliceral promargin and retromargin with three teeth each, retromarginal teeth often on single base, otherwise close together (Fig. 17); labium trapezoidal; endites straight laterally with distinct serrula (Fig. 18), anterolateral spur present in male *F. montana* sp. n. and *F. venteri* sp. n.; carapace broadly oval, widest at midpoint, eye region wide; carapace with slight depression anterior to fovea, posterior margin slightly concave; pleural bars isolated; sternum shield-shaped; precoxal triangles present; intercoxal sclerites present between coxae I and II, II and III, and III and IV; legs I and II more strongly built than legs III and IV; legs without spines or ventral cusps, metatarsi and tarsi scopulate (Figs 19, 20), with paired tarsal claws and weakly developed claw tufts (Fig. 21); metatarsi III and IV with terminal preening brush; leg formula 1423 in ♂, 4123 in ♀; abdomen oval, tapering

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Figs 5–14. General habitus of *Fuchiba* gen. n. species: (5, 6) *F. aquilonia* sp. n., male, Ndumo Game Reserve, and female, Marracuene; (7, 8) *F. capensis* sp. n., De Hoop Nat. Res., male and female; (9, 10) *F. montana* sp. n., male, Mohale Lodge, and female, Mohale Dam; (11) *F. similis* sp. n., female, Ngome State Forest; (12) *F. tortilis* sp. n., female, Fisherhaven; (13, 14) *F. venteri* sp. n., Jakobsbaai, male and female. Scale bars = 1.0 mm.

posteriorly; dorsal scutum complete in ♂, absent in ♀; dorsal sigilla present; venter with paired tiny sclerites running from epigastric fold to spinnerets; inframamillary sclerite absent; male palp with single subtriangular RTA; tegulum oval, with short distal embolus forming single coil (Figs 22, 23); female epigyne with copulatory openings

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situated laterally in paired circular ridges; vulva with short entrance ducts, directed anteriorly; ST II large, oval, anteromedially situated, ST I small, laterally situated.

Species included: *F. aquilonia*, *F. capensis*, *F. montana*, *F. similis*, *F. tortilis* and *F. venteri* (all new).

Key to species of the genus *Fuchiba* gen. n.

1 Males (♂ of *F. similis* sp. n. and *F. tortilis* sp. n. unknown) 2
– Females 5

2 Embolus forming narrow coil with tip directed towards and ending close to cymbial tip (Fig. 45) ..... **F. venteri** sp. n.
– Embolus forming broad coil in transverse plane, tip closer to distal end of tegulum than to cymbial tip (Fig. 26) 3

3 Embolus forming complete coil through 360°, tip situated close to prolateral base and directed towards cymbial tip (Fig. 36) ..... **F. montana** sp. n.
– Embolus only curving 180° to 270° from prolateral base (Figs 26, 32) 4

4 Embolus coiled through 180°, tip directed slightly towards cymbial tip (Fig. 26) ..... **F. aquilonia** sp. n.
– Embolus coiled through approx. 270°, tip slanting slightly towards base of tegulum (Fig. 32) ..... **F. capensis** sp. n.

5 Epigyne with distinctive paired posterior circular ridges (Fig. 30), entrance ducts not coiled (Fig. 31) 6
– Epigyne with subrectangular ridges with curved margins, entrance ducts distinctly coiled (Figs 43, 44) ..... **F. tortilis** sp. n.

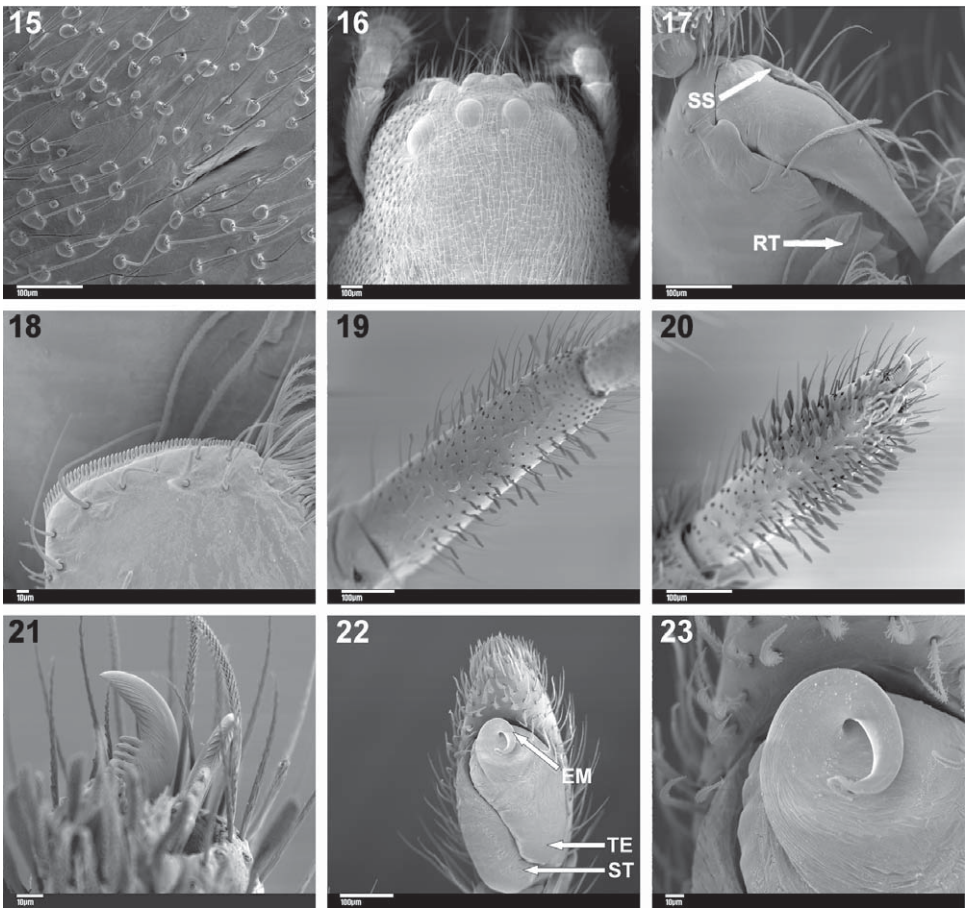
6 Epigyne with corrugated ridges anteriorly, ST II small and round (Fig. 41) ..... **F. similis** sp. n.
– Epigyne without corrugated ridges anteriorly, ST II usually larger and oval 7

7 Copulatory openings situated anterolaterally in circular ridges; ST II large, length from anterior margin to posterior bend much greater than length of circular ridges (Fig. 38) ..... **F. montana** sp. n.
– Copulatory openings situated mediolaterally or posteriorly in circular ridges; ST II smaller, length from anterior margin to posterior bend nearly equal to or smaller than length of circular ridges (e.g. Fig. 30) 8

8 Base of ST II initially bending posteromedially following entrance ducts before bending anteriorly into oval receptacle; ST II orientated parallel to body axis (Fig. 30) ..... **F. aquilonia** sp. n.
– Base of ST II initially bending anteromedially following entrance ducts before bending anterolaterally into oval receptacle; ST II orientated obliquely relative to body axis (Figs 34, 47) 9

9 Copulatory openings broad (Fig. 47), lateral receptacles of ST I distinctly separated (Fig. 48); carapace yellow-brown ..... **F. venteri** sp. n.
– Copulatory openings narrow (Fig. 34), lateral receptacles of ST I close together (Fig. 35); carapace yellow-brown to red-brown ..... **F. capensis** sp. n.

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Figs 15–23. Scanning electron micrographs of *Fuchiba capenis* sp. n., male: (15) carapace surface and fovea; (16) dorsal view of eye region; (17) chelicera, indicating retromarginal cheliceral teeth (RT) and shaggy seta on anterior margin (SS); (18) serrula; (19) metatarsus I, ventral view; (20) tarsus I, ventral view; (21) tarsal claws; (22) palp, indicating tegulum (TE), subtegulum (ST) and embolus (EM); (23) embolus, enlarged.

Fuchiba aquilonia sp. n.

Figs 1, 5, 6, 24–31, 40

Etymology: From Latin *aquilonia* (northern), reflecting the northern-most occurrence of this species.

Diagnosis: Males can be recognised by the fine embolus, which forms an incomplete coil with tip directed towards the cymbial tip. Females can be recognised by the large oval ST II and other details of the vulva.

Description:

Male.

Measurements: CL 1.22–1.76, CW 1.04–1.45, AL 1.20–1.60, AW 1.17–1.43, TL 2.43–3.50, FL 0.04–0.07, SL 0.61–0.83, SW 0.57–0.78, AME–AME 0.09, AME–ALE 0.05,

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ALE–ALE 0.40, PME–PME 0.11, PME–PLE 0.17, PLE–PLE 0.68. Length of leg segments: I 0.99+0.52+0.84+0.61+0.45=3.41; II 0.91+0.50+0.69+0.59+0.45=3.14; III 0.72+0.40+0.47+0.57+0.27=2.43; IV 0.89+0.43+0.73+0.87+0.31=3.23.

Carapace, including eye region, bright orange to dark red-brown, slightly darker laterally (Fig. 5); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline (Fig. 24); surface granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height equal to 1.25× AME diameter; AME separated by distance equal to their diameter; AME separated from ALE by approx. 0.5× AME diameter (Fig. 25); PER strongly recurved, median eyes larger than laterals; PME separated by distance equal to their diameter; PME separated from PLE by approx. 1.75× PME diameter. Chelicerae orange-brown to red-brown; anterior surface with scattered short, fine setae; promargin with three widely spaced teeth, median tooth largest, proximal tooth smallest; retromargin with three subequal teeth sharing single base. Sternum orange-brown, darker along border; surface smooth, covered in fine setae. Abdomen: with bright orange scutum covering entire dorsum, dorsum with distinct grey chevron markings (Fig. 5); cream laterally and ventrally, with grey mottling; shield-shaped, broadest at half its length, slightly longer than wide; surface covered in short fine setae; two pairs of dorsal sigilla present; venter with small oval sclerites, running in paired lines from epigastric fold to spinnerets. Legs I to IV uniform orange; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Palp with small, subtriangular RTA with sharp tip; embolus distal on tegulum, forming single incomplete coil, with tip slanting slightly towards cymbial tip (Figs 26, 27).

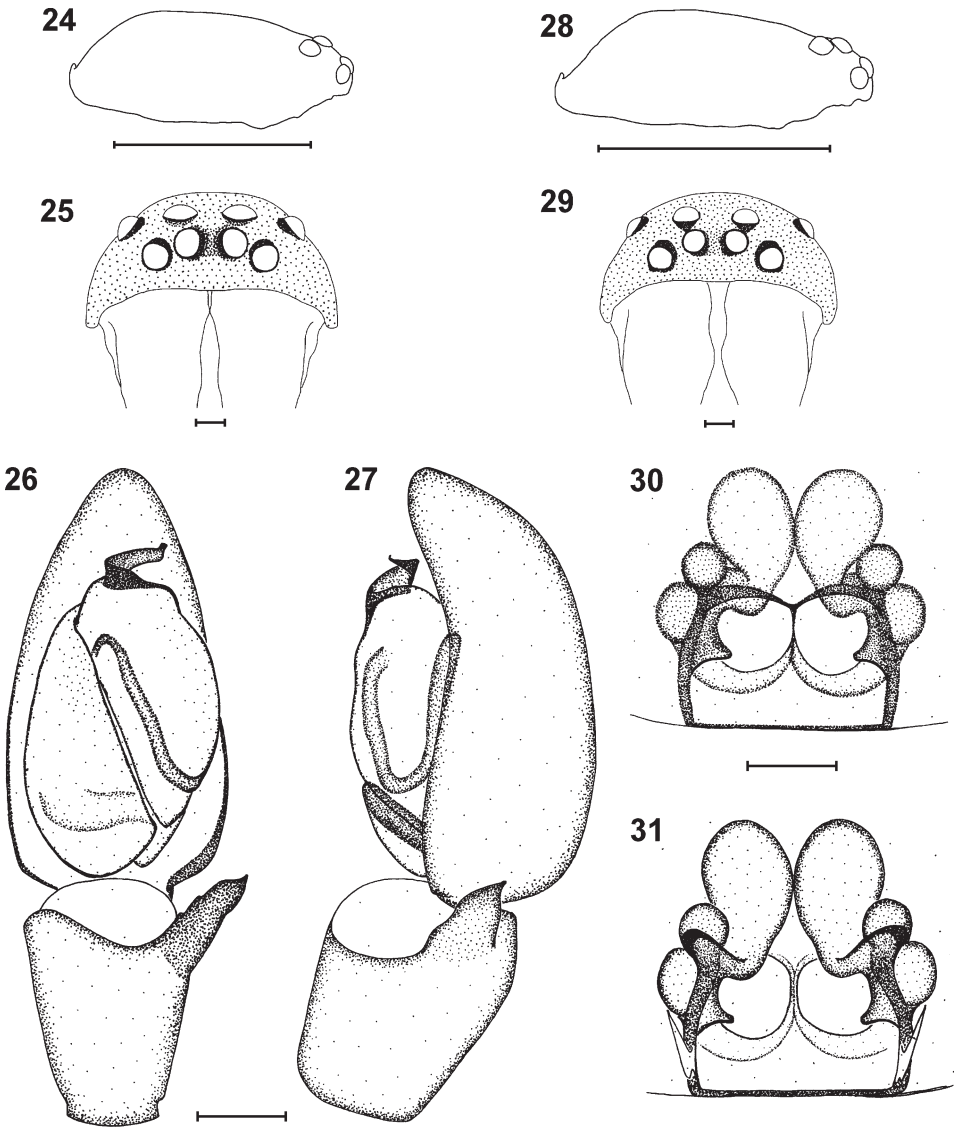
Female.

Measurements: CL 1.30–1.83, CW 1.07–1.52, AL 1.43–2.13, AW 1.32–1.85, TL 2.70–4.08, FL 0.07–0.08, SL 0.67–0.89, SW 0.61–0.80, AME–AME 0.09, AME–ALE 0.04, ALE–ALE 0.37, PME–PME 0.11, PME–PLE 0.20, PLE–PLE 0.68. Length of leg segments: I 1.01+0.53+0.78+0.60+0.44=3.36; II 0.93+0.52+0.72+0.57+0.42=3.16; III 0.81+0.43+0.52+0.59+0.28=2.63; IV 1.07+0.50+0.85+0.92+0.35=3.69.

Carapace, including eye region, bright orange to dark red-brown, slightly darker laterally (Figs 1, 6); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline (Fig. 28); surface granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height equal to 1.33× AME diameter; AME separated by distance equal to their diameter; AME separated from ALE by distance approx. 0.5× AME diameter (Fig. 29); PER strongly recurved, eyes subequal; PME separated by distance equal to 1.25× their diameter; PME separated from PLE by distance nearly 2× PME diameter. Chelicerae orange-brown to red-brown; anterior surface with scattered short, fine setae; promargin with three widely spaced teeth, median tooth largest, proximal tooth smallest; retromargin with three subequal teeth sharing single base. Sternum orange-brown, darker along border; surface smooth, covered in fine setae. Abdomen: pale grey dorsally with dark grey chevron markings (Fig. 6); cream laterally and ventrally, with dark grey mottling; oval, tapering posteriorly, broadest at half its length, longer than wide; dorsal scutum absent; surface covered in short fine setae; two pairs of sigilla present; venter with small oval sclerites, running in two paired lines

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from epigastric fold to spinnerets. Legs I to IV uniform orange; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Epigyne with copulatory openings mediolaterally in circular ridges (Fig. 30); ST II initially narrow following copulatory openings, with large, oval, anteromedial receptacles and small, globose lateral receptacles; ST I small, oval, laterally situated, slightly anterior to copulatory openings (Fig. 31).



Figs 24–31. *Fuchiba aquilonia* sp. n., male (24–27) and female (28–31): (24, 28) carapace, lateral view; (25, 29) eye region, anterior view; (26) palp, ventral view; (27) same, retrolateral view; (30, 31) epigyne, ventral and dorsal views. Scale bars: 1.0 mm in Figs 24, 28; 0.1 mm in Figs 25–27, 29–31.

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Holotype: ♂ SOUTH AFRICA: "R.S.A., Limpopo Province / Soutpansberg Mts / Lajuma Mountain Retreat, Woodland 4 / 23°02.530'S, 29°26.866'E / 6.xii.2004 / M. Mafadza / Sifting leaf litter // Araneae / Corinnidae / Trachelinae / Fuchiba / aquilonia HOLOTYPE 1♂ / NCA 2005/1891 det. C.H. //" (NCA, 2005/1891).

Allotype: ♀ SOUTH AFRICA: "Springbokvlakte / Tuinplaas / Settlers-Roedtan / 23.vii.2002 / M. van Jaarsveld / pitfall traps, grass // Araneae / Corinnidae / Trachelinae / Fuchiba / aquilonia ALLOTYPE 1♀ / NCA 2003/291 det. C.H. //" (NCA, 2003/291).

Paratypes: BOTSWANA: 1♂ 1♀ Kwando R., 23.iii.1976, F. Wanless & A. Russell-Smith, amongst grass and *Phragmites* (BMHN). MOZAMBIQUE: 2 imm. 3♂ 2♀ nr Marracuene, Blue Anchor Inn, alt. 50 m, 25°35.124'S:32°39.568'E, 28.xi.2007, C. Haddad & R. Fourie, sifting leaf litter, savannah (NCA, 2008/164); 3♂ 1♀ Nova Choupanga [Chupanga, 18°05'S:35°35'E], viii, P. Lesne (MNHG). SOUTH AFRICA: *KwaZulu-Natal*: 1♂ Ndumo Game Reserve, W shore of Nyamiti Pan, 26°53.767'S:32°16.557'E, 26.vi.2006, C. Haddad & F. Jordaan, leaf litter, subtropical bush (NCA, 2008/564). *Limpopo*: 1♀ Soutpansberg Mts, Lajuma Mountain Retreat, 23°02.414'S:29°26.687'E, 6.ii.2008, C. Haddad, base of grass tussocks (NCA, 2008/511); 1♂ 15 km NW of Klaserie, Guernsey Farm, 19–31.xii.1985, S. & J. Peck, Malaise traps, woodland (AMNH, 85/295).

Other material examined: BOTSWANA: 1♀ Maun, Maphaneng Pan, 18.ii.1976, A. Russell-Smith, in riverine woodland leaf litter (BMNH); 2♀ Maun, Maphaneng Lagoon, 30.i.1977, A. Russell-Smith, riverine woodland leaf litter (BMNH). MOZAMBIQUE: 1 imm. 1♀ Xai-Xai, Montego's Camp, alt. 28 m, 25°03.659'S:33°40.633'E, 2.xii.2007, C. Haddad & R. Lyle, leaf litter, dune forest (NCA, 2008/180). SOUTH AFRICA: *KwaZulu-Natal*: 1♀ Mkuzi Game Reserve, *Combretum apiculatum/molle* woodland, alt. 81 m, 27.66801°S:32.29947°E, 2.ii.2003, Earthwatch volunteers (NCA, 2008/565); 3 imm. 2♂ 1♀ Ndumo Game Reserve, Main Camp, 26°54.581'S:32°18.798'E, 13.vi.2005, C. Haddad, grass litter (NCA, 2008/569); 2♀ Phinda Resource Reserve, alt. 38 m, 27°50'43"S:32°18'49.1"E, 13–15.iv.2001, M. Ramirez (MACN). *Limpopo*: 2♀ Makalali Game Reserve, 24°09'S:30°42'E, 11.xii.1999, C. Whitmore (DMSA ARA 387); 1♀ Nylstroom, Leeudorings, 24.iii.1980, D. Uys, pitfall traps (NCA, 88/343); 1♂ Soutpansberg Mts, Lajuma Mountain Retreat, Island 2, 23°01.921'S:29°26.193'E, 23.xi.2004, M. Mafadza, sifting leaf litter (NCA, 2005/1890); 1♂ Springbokvlakte, Tuinplaas, Settlers-Roedtan, Wildskamp, 7.xi.2001, M. van Jaarsveld, pitfall traps, grass (NCA, 2003/292); 1♀ Springbokvlakte, Settlers, Bekendevlei, 7.v.2002, M. van Jaarsveld, pitfall traps, grass (NCA, 2003/503). *Mpumulanga*: 1♂ Kruger National Park, Satara, 24.41°S:31.77°E, 15–18.xii.1985, S. & J. Peck, Malaise trap, streamside thornscrub (AMNH, 85/283); 1♂ same locality, Skukuza, 12–15.xii.1985, S. & J. Peck, Malaise trap, thornscrub forest (AMNH, 85/277); 1♀ Marble Hall, 25.v.1999, P. Stephen, pitfall traps, citrus orchard (NCA, 99/209); 1♀ same locality, Schoeman Boerdery, 16.xi.1999, P. Stephen, pitfall traps, citrus orchard (NCA, 2000/203).

Distribution: Widely distributed in subtropical southern Africa, particularly in the Savannah and Forest Biomes (Fig. 40).

Biology: This species was primarily collected from leaf litter and by pitfall trapping in savannah and forest habitats.

Fuchiba capensis sp. n.

Figs 2, 7, 8, 15–23, 32–35, 40

Etymology: This species is named after the Eastern and Western Cape provinces in South Africa, to which it is endemic.

Diagnosis: Males can be recognised by the fine embolus, which forms an incomplete coil with the tip angling slightly towards the base of the tegulum. Females can be recognised by the small obliquely orientated oval ST II and the copulatory openings located posteriorly in the circular ridges of the epigyne.

Description:

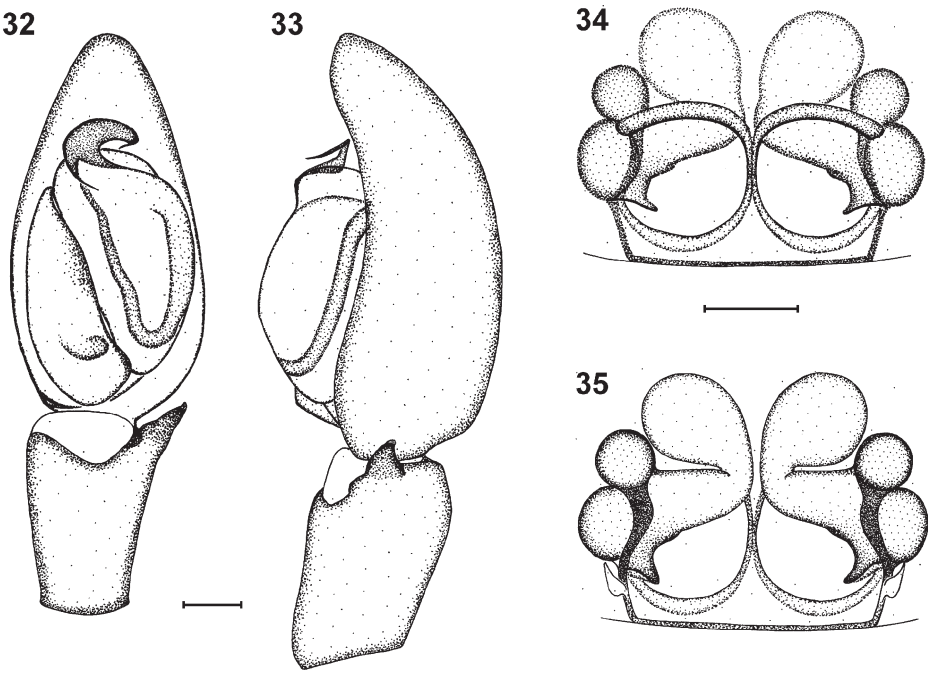
Male.

Measurements: CL 1.60–1.97, CW 1.28–1.60, AL 1.57–1.87, AW 1.30–1.33, TL 3.08–3.70, FL 0.09–0.10, SL 0.82–0.93, SW 0.73–0.86, AME–AME 0.06, AME–ALE 0.05, ALE–ALE 0.36, PME–PME 0.10, PME–PLE 0.20, PLE–PLE 0.69. Length of leg

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segments: I 1.27+0.64+1.06+0.73+0.55=4.25; II 1.13+0.62+0.93+0.70+0.49=3.87; III 0.88+0.50+0.62+0.69+0.30=2.99; IV 1.17+0.56+1.00+1.07+0.37=4.17.

Carapace, including eye region, pale orange to dark orange-red, slightly darker laterally (Figs 2, 7); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height approx. equal to 1.5× AME diameter; AME separated by 0.75× their diameter; AME separated from ALE by approx. 0.5× AME diameter; PER strongly recurved, median eyes slightly larger than laterals; PME separated by distance equal to their diameter; PME separated from PLE by approx. 1.75× PME diameter. Chelicerae orange to orange-brown; anterior surface with scattered short, fine setae; promargin with three widely spaced teeth, median tooth largest, proximal tooth smallest; retromargin with three closely spaced teeth, median tooth largest, proximal and distal teeth subequal. Sternum pale to dark yellow, yellow-brown along border; surface smooth, covered in fine setae. Abdomen: pale grey dorsally with distinct dark grey dorsal chevron markings, branches extending laterally, converging at spinnerets (Fig. 7); venter pale grey; oval, tapering posteriorly, broadest at half its length, longer than wide; dorsal scutum weakly sclerotised, covering posterior 3/4 of dorsum, pale orange; surface covered in short fine setae; two pairs of dorsal sigilla present; venter with small oval sclerites running in single paired lines from epigastric fold to spinnerets. Legs I to IV uniform orange; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps



Figs 32–35. *Fuchiba capensis* sp. n.: (32, 33) male palp, ventral and retrolateral views; (34, 35) female epigyne, ventral and dorsal views. Scale bars = 0.1 mm.

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absent. Palp with small, subtriangular RTA with pointed tip (Fig. 32); embolus distal on tegulum, forming single incomplete coil with tip angling slightly towards base of tegulum (Figs 32, 33).

Female.

Measurements: CL 1.56–2.17, CW 1.33–1.93, AL 2.23–2.53, AW 1.83–2.10, TL 3.72–4.68, FL 0.10–0.13, SL 0.83–1.19, SW 0.77–1.03, AME–AME 0.09, AME–ALE 0.06, ALE–ALE 0.42, PME–PME 0.15, PME–PLE 0.26, PLE–PLE 0.87. Length of leg segments: I 1.37+0.73+1.03+0.83+0.57=4.53; II 1.28+0.69+0.97+0.80+0.53=4.27; III 1.05+0.57+0.72+0.83+0.33=3.50; IV 1.52+0.68+1.18+1.35+0.43=5.16.

Carapace, including eye region, bright yellow-brown to dark orange-brown, slightly darker laterally (Fig. 8); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes slightly larger than medians; clypeus height slightly larger than AME diameter; AME separated by 0.66× their diameter; AME separated from ALE by approx. 0.5× AME diameter; PER strongly recurved, eyes subequal; PME separated by distance lightly less than their diameter; PME separated from PLE by approx. 1.33× PME diameter. Chelicerae orange-brown to red-brown; anterior surface with scattered short, fine setae; promargin with three widely spaced teeth, median and distal teeth subequal, proximal tooth smaller; retromargin with three subequal teeth sharing single base. Sternum pale orange, yellow-brown along border; surface smooth, covered in fine setae. Abdomen: pale grey dorsally with distinct dark grey dorsal chevron markings, branches extending laterally, converging at spinnerets (Fig. 8); cream laterally, with broad triangular dark grey marking in anterior half, sometimes fused to anterior dorsal chevron markings; venter pale grey with small pair of triangular dark grey markings anterior to spinnerets; oval, tapering posteriorly, broadest at half its length, slightly longer than wide; dorsal scutum absent; surface covered in short fine setae; dorsum with two pairs of sigilla present; venter with small oval sclerites, running in single paired lines from epigastric fold to spinnerets. Legs I to IV uniform orange; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Epigyne with copulatory openings situated posterolaterally in circular ridges (Fig. 34); ST II initially broad following copulatory openings, narrowing medially before entering small obliquely orientated oval anterior receptacle; ST II connected to small globose ST I via narrow lateral tube (Fig. 35).

Holotype: ♂ SOUTH AFRICA: "R.S.A., Western Cape Prov. / De Hoop Nat. Res. / Lekkerwater Road / 34°24.002'S, 20°33.151'E / 26.ix.2007 / C. Haddad / Under Thamnochortis / grasses // Corinnidae / Fuchiba capensis / HOLOTYPE / NCA 2008/584 //" (NCA, 2008/584).

Paratypes: SOUTH AFRICA: *Western Cape*: 3♀ Cape Town, Table Mountain, Orange Kloof Nat. Res., 34°00'S:18°23.7'E, alt. 125 m, 18.xii.1997, B. Fisher, sifted leaf litter, mold, rotten wood, Afromontane forest (CASC); 2♂ Cape Town, Newlands Forest Reserve, SE of Table Mountain, 33°58'S:18°28'E, 4.iv.2001, N. Larsen, K. Muller, S. Prinsloo, D. Ubick & S. Ubick, indigenous forest (CASC); 2♂ De Hoop Nat. Res., Bitou number 2, 34°27.194'S:20°24.250'E, 16.vii.2005, C. Haddad & R. Lyle, milkwood leaf litter, with ants (AMNH); 2♀ same locality, Cupido's Kraal, 34°25.222'S:20°37.904'E, 26.ix.2007, C. Haddad & R. Lyle, leaf litter, *Eucalyptus* forest (NCA, 2007/3877); 1♀ Fisherhaven, nr Hermanus, 34°21.430'S:19°07.557'E, 12.i.2008, C. Haddad, sifting leaf litter (NCA, 2008/455); 3♀ Swellendam, Marloth Nat. Res., 33°59.951'S:20°27.419'E, 25.ix.2007, C. Haddad & R. Lyle, leaf litter, fynbos (NCA, 2008/264).

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Other material examined: SOUTH AFRICA: *Eastern Cape*: 1♀ Baviaanskloof, 13.i.1979, J. Breytenbach, pitfall traps (NCA, 97/745). *Western Cape*: 1♀ Cape Peninsula, Bergvliet, xii.1899, F. Purcell (SAMC, 6168); 1♀ Cape Peninsula, Table Mountain, Platteklip Gorge, vi.1901, W. Purcell (SAMC, 12106); 1♀ Cape Peninsula, sides of Kalk Bay Mountain, ii.1902, W. Purcell (SAMC, 12315); 4♂ De Hoop Nat. Res., Potberg, 34°22.487'S:20°31.980'E, 6.iv.2004, C. Haddad, sifting leaf litter, *Eucalyptus* forest (NCA, 2008/571); 5♂ 1♀ same locality, 8.iv.2004, C. Haddad, leaf litter and creepers, *Eucalyptus* forest (NCA, 2008/570); 1♀ Heidelberg, Witsand, 34°24'S:20°50'E, 29.x.1987, Entomology Staff, under plants (NMBA, 2380).

Distribution: Largely restricted to Western Cape, with a single record from the western part of Eastern Cape (Fig. 40).

Biology: This species was collected from leaf litter in natural fynbos and Afromontane forest habitats, but at De Hoop Nat. Res. was more common in the leaf litter of exotic *Eucalyptus* plantations. In the latter habitat it showed further microhabitat selection, being considerably more common in areas with grass and creeper cover than in areas without it.

Fuchiba montana sp. n.

Figs 9, 10, 36–40

Etymology: This species is named after the montane habitats where all specimens were collected.

Diagnosis: Males can be recognised by the embolus, which nearly forms a complete coil, with the tip directed at the cymbial tip. Females are recognised by the anterolaterally placed copulatory openings and the large oval ST II.

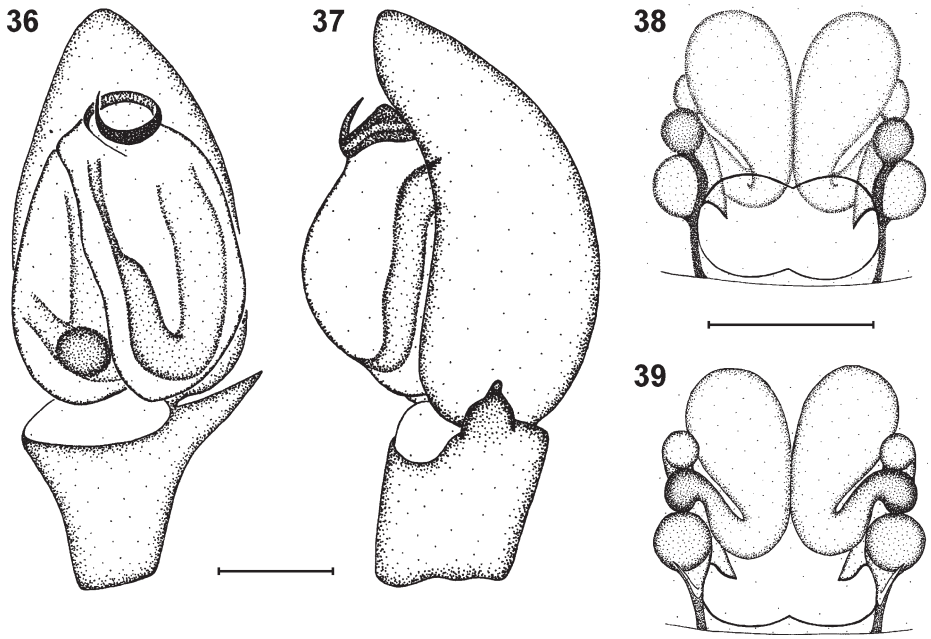
Description:

Male.

Measurements: CL 2.13, CW 1.85, AL 2.13, AW 1.93, TL 4.28, FL 0.07, SL 0.97, SW 0.93, AME–AME 0.10, AME–ALE 0.06, ALE–ALE 0.42, PME–PME 0.17, PME–PLE 0.29, PLE–PLE 0.88. Length of leg segments: I 1.33+0.70+1.10+0.72+0.55=4.40; II 1.23+0.65+0.93+0.68+0.49=3.98; III 0.87+0.53+0.62+0.70+0.35=3.07; IV 1.17+0.60+0.93+1.03+0.43=4.16.

Carapace, including eye region, red-brown, dark grey laterally (Fig. 9); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface finely granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height approx. equal to 1.5× AME diameter; AME separated by distance equal to their diameter; AME separated from ALE by distance slightly larger than 0.5× AME diameter; PER strongly recurved, median eyes larger than laterals; PME separated by 1.25× their diameter; PME separated from PLE by 2× PME diameter. Chelicerae red-brown, dark grey along inner and outer margins; anterior surface with scattered short, fine setae; promargin with three widely spaced teeth, median tooth largest, proximal tooth smallest; retromargin with three closely spaced teeth, proximal and median teeth subequal, distal tooth smallest; endites with anterolateral spur. Sternum orange with grey markings radiating from centre, orange-brown along border; surface smooth, with scattered erect short fine setae. Abdomen: pale grey dorsally with distinct dark grey dorsal chevron markings, branches extending laterally (Fig. 9); venter pale grey with cream mottling; abdomen shield-shaped, tapering posteriorly, broadest at half its length, slightly longer than wide; dorsal scutum covering entire dorsum, yellow-

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Figs 36–39. *Fuchiba montana* sp. n.: (36, 37) male palp, ventral and retrolateral views; (38, 39) female epigyne, ventral and dorsal views. Scale bars = 0.1 mm.

brown; surface covered in short fine setae; four pairs of dorsal sigilla present, first pair elongate, at 1/3 abdomen length, remaining pairs smaller, near midpoint; venter with small oval sclerites running in single paired lines from epigastric fold to spinnerets. Legs I to IV uniform orange-brown; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Palp with small, triangular RTA with sharply pointed tip; embolus distal on tegulum, forming single complete coil with tip directed towards cymbial tip (Figs 36, 37).

Female.

Measurements: CL 1.57–1.75, CW 1.42–1.58, AL 1.63–2.07, AW 1.60–1.70, TL 3.13–3.70, FL 0.06–0.07, SL 0.85–1.00, SW 0.77–0.90, AME–AME 0.07, AME–ALE 0.05, ALE–ALE 0.37, PME–PME 0.16, PME–PLE 0.17, PLE–PLE 0.67. Length of leg segments: I 1.27+0.65+0.97+0.73+0.53=4.15; II 1.13+0.60+0.87+0.70+0.45=3.75; III 0.87+0.53+0.63+0.65+0.33=3.01; IV 1.30+0.62+1.13+1.12+0.43=4.60.

Carapace, including eye region, orange-brown, grey laterally (Fig. 10); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes slightly larger than medians; clypeus height equal to 1.25× AME diameter; AME separated by distance slightly less than their diameter; AME separated from ALE by approx. 0.5× AME diameter; PER strongly recurved, median eyes slightly larger than laterals; PME separated by 1.25× their diameter; PME separated from PLE by approx. 2× PME diameter. Chelicerae red-brown, grey along inner and outer margins; anterior surface with scattered short, fine setae; promargin with three widely

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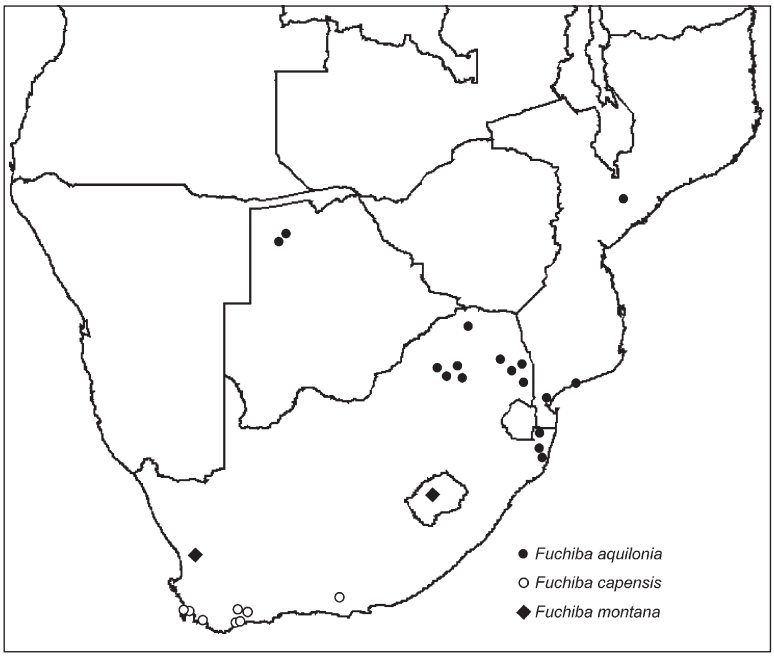


Fig. 40. Distribution of *Fuchiba aquilonia* sp. n., *F. capensis* sp. n. and *F. montana* sp. n.

spaced teeth, median and distal teeth subequal, proximal tooth smaller; retromargin with three subequal teeth sharing single base. Sternum orange, orange-brown along border; surface smooth, covered in erect short fine setae. Abdomen: pale grey with indistinct grey chevron markings (Fig. 10); abdomen pale grey laterally, venter pale grey with cream mottling; abdomen oval, tapering posteriorly, broadest at half its length, slightly longer than wide; dorsal scutum absent; surface covered in short fine setae; two pairs of sigilla present; venter with small oval sclerites, running in two paired lines from epigastric fold to spinnerets. Legs I to IV uniform orange-brown; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Epigyne with copulatory openings situated anterolaterally in circular ridges (Fig. 38); entrance ducts directed anteriorly before entering ST I and ST II; ST II initially with small oval anterior receptacle, then looping posteriorly then anteriorly before entering large oval anteromedian receptacles; ST I posteriorly located, small, comma-shaped, linked to fertilisation ducts by short duct (Fig. 39).

Holotype: ♂ "Lesotho, Mohale Lodge / 29°28'S, 28°03'E / 4 March 2003, C. Haddad / On wall in house //" (NMBA, 9593).

Allotype: ♀ "Lesotho, Mohale Dam / Island, 29°25'S, 28°03'E / 6 March 2003, C. Haddad / between fern roots (2108 m) //" (NMBA, 9594).

Paratype: SOUTH AFRICA: *Western Cape*: 1♀ Cederberg Mts, between Clanwilliam and Packhuis, R. Lightfoot, xi.1899 (SAMC, 5873).

Distribution: Known from the central Maluti Mountains in Lesotho. The outlying record from the Cederberg Mountains in Western Cape suggests that this species may occur along mountain ranges between these two sites, but has not been collected there yet.

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Biology: This species was collected from high altitude montane grassland in the Maluti Mts (2100–2300 m). The holotype was collected at night inside a bathroom, and the allotype and an immature were collected from the tangled roots at the base of ferns along a rocky outcrop.

Fuchiba similis sp. n.

Figs 11, 41, 42, 49

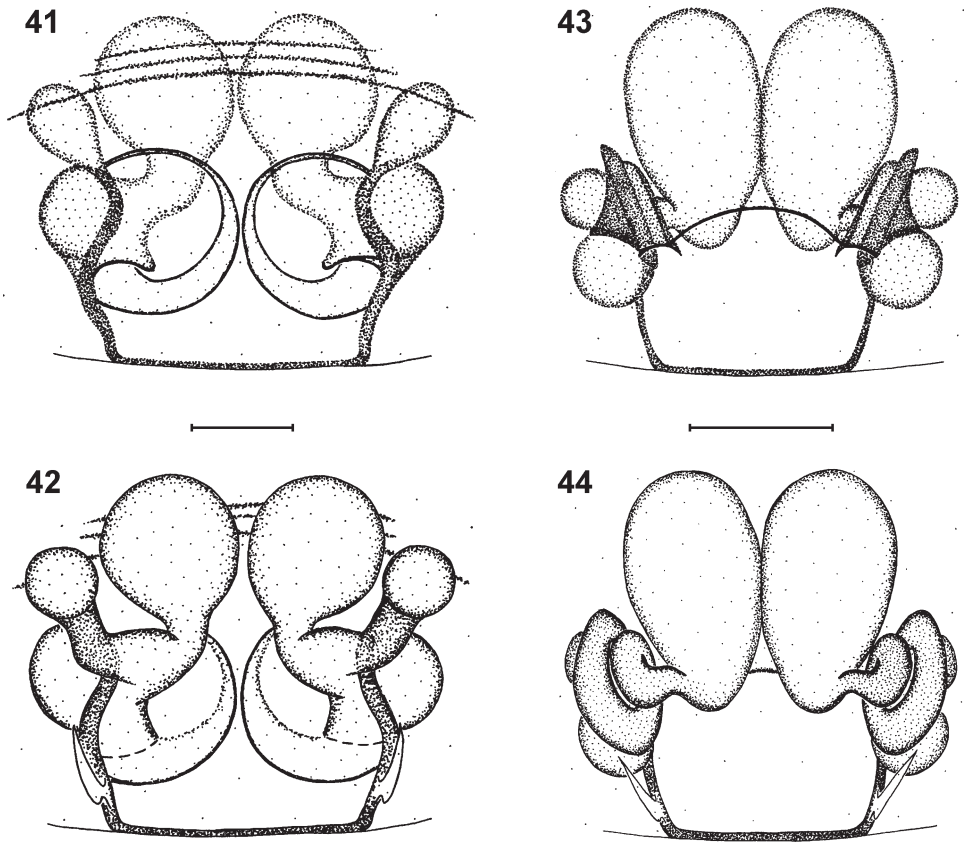
Etymology: From Latin *similis* (alike), the name refers to the similarities in epigyne structure to *F. capensis* sp. n.

Diagnosis: This species can be recognised by the fine transverse corrugations anteriorly on the epigyne, and by the larger ST II than *F. capensis* sp. n. Male unknown.

Description:

Female.

Measurements: CL 1.93, CW 1.63, AL 2.87, AW 2.30, TL 4.70, FL 0.08, SL 0.97, SW 0.90, AME–AME 0.10, AME–ALE 0.05, ALE–ALE 0.41, PME–PME 0.13, PME–



Figs 41–44. Female epigyne: (41, 42) *Fuchiba similis* sp. n., ventral and dorsal views; (43, 44) *F. tortilis* sp. n., ventral and dorsal views. Scale bars = 0.1 mm.

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PLE 0.19, PLE–PLE 0.71. Length of leg segments: I 1.23+0.65+1.00+0.75+0.60=4.23; II 1.17+0.63+0.83+0.72+0.53=3.88; III 0.97+0.53+0.67+0.73+0.40=3.30; IV 1.27+0.58+1.10+1.20+0.47=4.62.

Carapace, including eye region, deep orange-brown, slightly darker laterally (Fig. 11); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface finely granular, covered in dense, short fine setae, interspersed with long erect setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height equal to 1.25× AME diameter; AME separated by distance slightly less than their diameter; AME separated from ALE by approx. 0.5× AME diameter; PER strongly recurved, median eyes slightly larger than laterals; PME separated by 1.25× their diameter; PME separated from PLE by 1.75× PME diameter. Chelicerae deep orange-brown; anterior surface with scattered short, fine setae, interspersed with long, fine erect setae; promargin with three widely spaced teeth, median tooth slightly larger than distal tooth, proximal tooth smallest; retromargin with three subequal teeth sharing single base. Sternum bright orange, dark orange-brown along border; surface smooth, covered in short fine setae. Abdomen: cream with distinct grey chevron markings dorsally, posterior branches continuing laterally, converging at spinnerets (Fig. 11); cream laterally and ventrally with faint grey mottling; oval, tapering posteriorly, broadest at half its length, slightly longer than wide; dorsal scutum absent; surface covered in short fine setae, interspersed with long erect setae; dorsum with three pairs of sigilla present, first at 1/3 abdomen length, posterior pairs close together at midpoint; venter with indistinct small oval sclerites, running in two paired lines from epigastric fold to spinnerets. Legs I to IV uniform yellow-brown; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae interspersed with long erect setae; leg spines and cusps absent. Epigyne with fine transverse corrugated ridges anteriorly and circular ridges posteriorly; copulatory openings situated laterally in these depressions; entrance ducts short and broad; ST II bent medially, narrowing before entering round anteromedian receptacles; ST I anterolaterally situated, with fine duct leading to fertilisation ducts posteriorly.

Holotype: ♀ SOUTH AFRICA: "Ngome State Forest / 27°49'S, 31°26'E / X.1992 / M. van der Merwe / 2C/ 10 – Pit trap / open forest //" (NCA, 94/436).

Biology: The holotype was collected by pitfall trapping in open forest.

Fuchiba tortilis sp. n.

Figs 12, 43, 44, 49

Etymology: From Latin *tortilis* (twisted), the name refers to the structure of the entrance ducts of the epigyne.

Diagnosis: This species can be recognised by the distinctively coiled entrance ducts and the poorly developed circular ridges in the epigyne. Male unknown.

Description:

Female.

Measurements: CL 1.70, CW 1.50, AL 2.17, AW 1.77, TL 3.68, FL 0.07, SL 0.92, SW 0.82, AME–AME 0.07, AME–ALE 0.04, ALE–ALE 0.42, PME–PME 0.11, PME–

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PLE 0.16, PLE–PLE 0.63. Length of leg segments: I 1.00+0.56+0.77+0.57+0.45=3.35; II 0.93+0.52+0.65+0.55+0.42=3.07; III 0.73+0.47+0.50+0.56+0.28=2.54; IV 1.13+0.50+?+?+?=?.

Carapace, including eye region, deep red-brown, slightly darker laterally (Fig. 12); carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface finely granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height equal to AME diameter; AME separated by approx. 0.66× their diameter; AME separated from ALE by approx. 0.5× AME diameter; PER strongly recurved, median eyes slightly larger than laterals; PME separated by distance slightly larger than their diameter; PME separated from PLE by 1.5× PME diameter. Chelicerae bright orange; anterior surface with scattered short and long fine setae; promargin with three widely spaced teeth, median and distal teeth subequal, proximal tooth smallest; retromargin with three subequal teeth sharing single base. Sternum yellow-brown, darker along border, with pale grey mottling; surface smooth, with scattered short fine setae. Abdomen: cream dorsally with distinct grey chevron markings, branches merging laterally (Fig. 12); grey with cream mottling laterally, cream ventrally; oval, tapering posteriorly, broadest at half its length, slightly longer than wide; dorsal scutum absent; surface covered in short fine setae, interspersed with long erect setae; dorsum with three pairs of sigilla present, first at 1/3 abdomen length, posterior pairs smaller, close together at midpoint; venter with indistinct small oval sclerites, running in two paired lines from epigastric fold to spinnerets. Legs I to IV pale orange, anterior pairs slightly darker than posterior pairs; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae interspersed with long erect setae; leg spines and cusps absent. Epigyne with subrectangular ridges posteriorly, slightly curved along margins; copulatory openings situated anterolaterally in these depressions (Fig. 43); entrance ducts coiled twice before entering ST II medially; ST II large, oval, anteriorly situated; ST I small and laterally situated, with fine duct leading to fertilisation ducts posteriorly (Fig. 44).

Holotype: ♀ SOUTH AFRICA: "Farm Ulster, / Near Fort Brown / 1.xii.1993 / M. Burger / on soil, pittrap //" (NCA, 96/68).

Fuchiba venteri sp. n.

Figs 3, 13, 14, 45–49

Etymology: This species is named for our friend Jonathan Venter, in or near whose residence the entire type series was collected.

Diagnosis: Males can be recognised by the narrowly coiled embolus with its tip near the cymbial tip, and females by the broad copulatory openings in the epigyne.

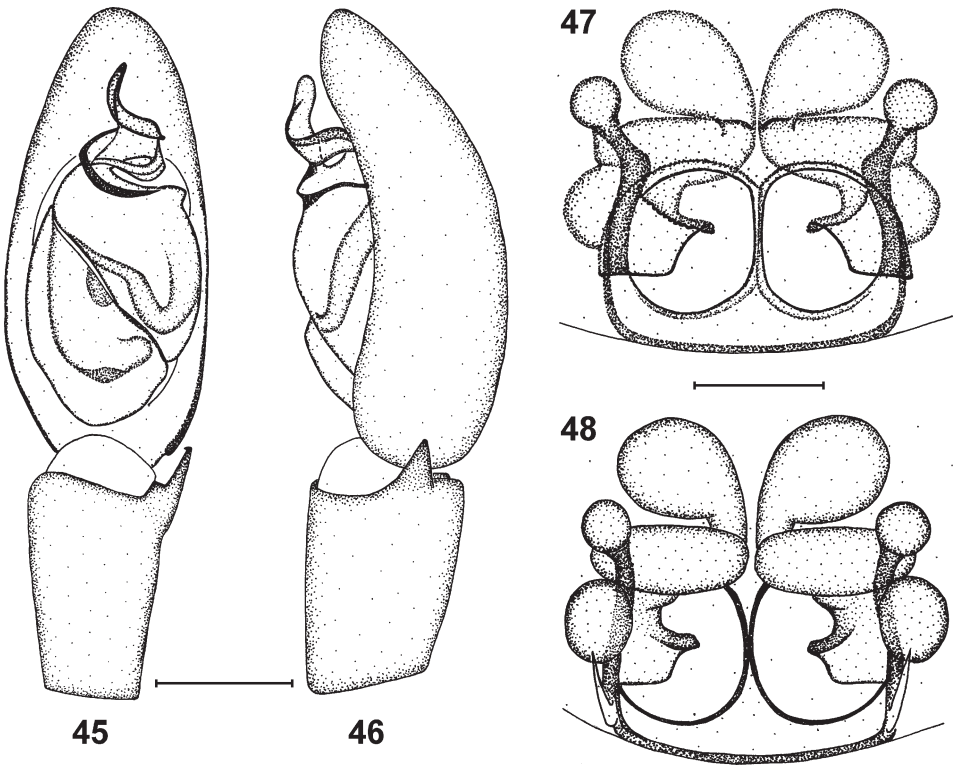
Description:

Male.

Measurements: CL 1.57–2.10, CW 1.33–1.90, AL 1.53–2.17, AW 1.30–1.63, TL 2.80–4.18, FL 0.09–0.15, SL 0.80–1.10, SW 0.75–0.98, AME–AME 0.08, AME–ALE 0.06, ALE–ALE 0.44, PME–PME 0.13, PME–PLE 0.19, PLE–PLE 0.78. Length of leg segments: I 1.52+0.77+1.28+0.78+0.52=4.87; II 1.32+0.67+1.01+0.78+0.51=4.29; III 0.92+0.50+0.63+0.73+0.33=3.11; IV 1.30+0.61+1.07+1.23+0.42=4.63.

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Carapace, including eye region, appearing black in live specimens (Fig. 3), in ethanol dark orange-brown, dark grey-brown laterally (Fig. 13); carapace gradually rounded with highest point at 1/3 its length, sloping gradually to 2/3 its length, last quarter with steep decline; surface finely granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes slightly larger than medians; clypeus height slightly larger than AME diameter; AME separated by approx. 0.75× their diameter; AME separated from ALE by 0.5× AME diameter; PER strongly recurved, median eyes larger than laterals; PME separated by distance equal to their diameter; PME separated from PLE by 1.33× PME diameter. Chelicerae dark brown; anterior surface with scattered short and long fine setae; promargin with three closely spaced teeth, median tooth largest, proximal and distal teeth subequal; retromargin with three closely spaced teeth, proximal and median teeth subequal, distal tooth smallest; endites with anterolateral spur. Sternum dark brown with dark grey markings radiating from centre; surface smooth, with scattered short fine setae. Abdomen: pale grey with distinct dark grey dorsal chevron marking, branches extending laterally (Fig. 13); dark grey laterally and ventrally, venter with pale grey mottling; shield-shaped, tapering posteriorly, broadest at half its length, longer than wide; dorsal scutum covering entire dorsum, yellow-brown; surface covered in short fine setae; three pairs of dorsal sigilla present, first pair elongate, at 1/3 abdomen



Figs 45–48. *Fuchiba venteri* sp. n.: (45, 46) male palp, ventral and retrolateral views; (47, 48) female epigyne, ventral and dorsal views. Scale bars = 0.1 mm.

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length, remaining pairs smaller, near midpoint; venter with small oval sclerites running in two paired lines from epigastric fold to spinnerets. Legs appearing black in live specimens (Fig. 3); legs I and II darker yellow-brown than legs III and IV in ethanol; all tibiae and metatarsi darker than other segments; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Palp with small, triangular RTA with bent tip; embolus distal on tegulum, forming broad coil with tip directed towards cymbial tip (Figs 45, 46).

Female.

Measurements: CL 1.44–1.57, CW 1.25–1.36, AL 1.63–1.87, AW 1.18–1.37, TL 3.20–3.60, FL 0.08–0.10, SL 0.87–0.90, SW 0.77–0.80, AME–AME 0.06, AME–ALE 0.05, ALE–ALE 0.31, PME–PME 0.10, PME–PLE 0.13, PLE–PLE 0.54. Length of leg segments: I 1.10+0.58+0.87+0.66+0.50=3.71; II 1.05+0.53+0.93+0.62+0.45=3.58; III 0.80+0.45+0.53+0.63+0.30=2.71; IV 1.20+0.53+0.95+1.07+0.37=4.12.

Carapace, including eye region, yellow-brown (Fig. 14), with grey striae radiating from fovea, fusing laterally; carapace gradually rounded with highest point at 2/3 its length, last quarter with steep decline; surface granular, covered in dense, short fine setae; fovea short, distinct, slightly thickened, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height equal to AME diameter; AME separated by approx. 0.66× their diameter; AME separated from ALE by approx. 0.5× AME diameter; PER strongly recurved, median eyes larger than laterals; PME separated by distance slightly less than their diameter; PME separated from PLE by approx. 1.33× PME diameter. Chelicerae yellow-brown with faint grey mottling; anterior surface with scattered short and long fine setae; promargin with three widely spaced teeth, median and distal teeth subequal, proximal tooth smaller; retromargin with three



Fig. 49. Distribution of *Fuchiba similis* sp. n., *F. tortilis* sp. n. and *F. venteri* sp. n.

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teeth sharing single base, distal tooth slightly smaller than proximal and median teeth. Sternum pale yellow-brown with grey mottling and darker grey striae radiating from centre; grey along border; surface smooth, covered in short fine setae. Abdomen: yellow-grey dorsally with dark grey chevron markings (Fig. 14); dark grey laterally and ventrally with yellow-grey mottling; oval, tapering posteriorly, broadest at half its length, longer than wide; dorsal scutum absent; surface covered in short fine setae; dorsum with three pairs of sigilla present, first at 1/3 abdomen length, posterior pairs smaller and less distinct, close together at midpoint; venter with small oval sclerites, running in two paired lines from epigastric fold to spinnerets. Legs I to IV with similar colouration; femora and patellae pale yellow-grey, darker distally; tibiae and metatarsi darker grey; moderately dense scopulae on metatarsi and tarsi, remaining leg segments covered in fine, less dense setae; leg spines and cusps absent. Epigyne with copulatory openings situated laterally in circular ridges (Fig. 47); entrance ducts directed anteriorly before entering ST I and ST II; ST II initially with small oval lateral receptacle, then looping medially then anteriorly before entering oval anteromedian receptacles; ST I laterally located, small and globose, linked to fertilisation ducts by short duct (Fig. 48).

Holotype: ♂ SOUTH AFRICA: "R.S.A., Western Cape Prov. / Jakobsbaai / 32°57.734'S, 17°53.520'E / 2.x.2007, C. Haddad & R. Lyle / Night collecting //" (NCA, 2008/221).

Paratypes: 7♂ 3♀ same locality as holotype, 2.x.2007, C. Haddad & R. Lyle, leaf litter, coastal fynbos (NCA, 2008/223).

Biology: This species was found at the base of dense fynbos shrubs, where it was common together with a new *Thysanina* species. The holotype male was collected at night inside a house.

Genus **Fuchibotulus** gen. n.

Etymology: The name is a combination of *Fuchiba*, a genus to which these spiders are related, and the Latin *botulus* (sausage), that refers to the sausage-shaped ST II of the female. Gender masculine.

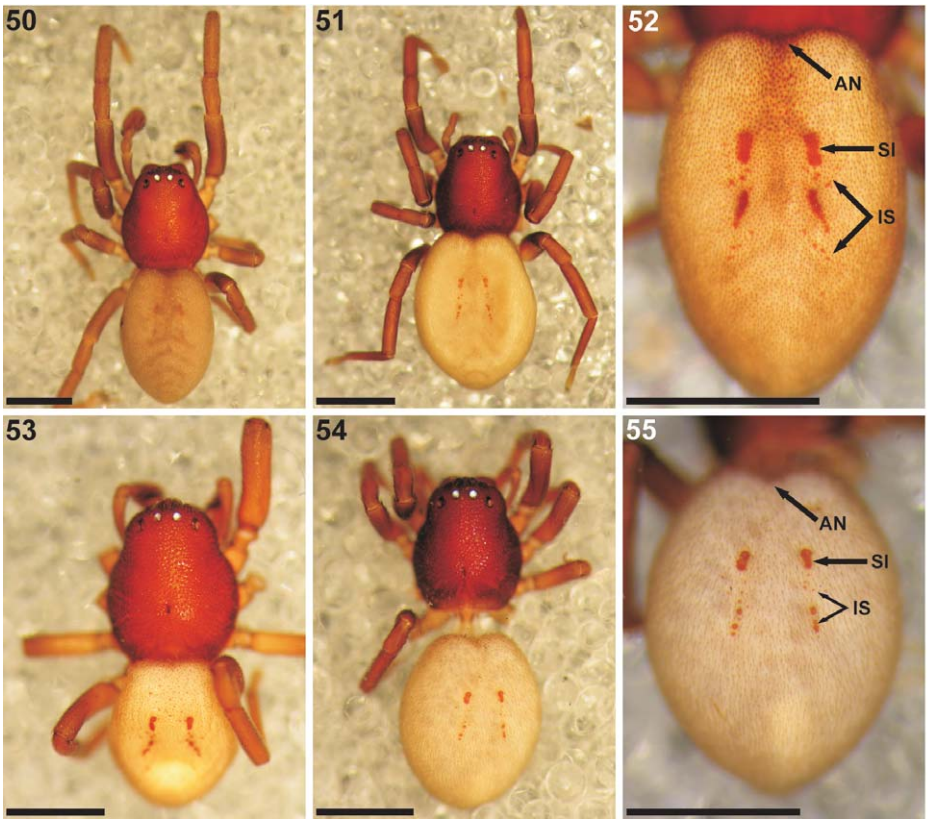
Type species: *Fuchibotulus bicornis* sp. n.

Diagnosis: The carapace shape is evenly high and flat dorsally, with a sharp decline in the last fifth, and has a strongly tuberculate surface texture (Figs 50, 51, 53, 54). The abdomen is notched anteriorly and has distinct dorsal sigillae with several pairs of tiny intermediate sclerites among them (Figs 52, 55). The legs lack spines and ventral cusps, and are weakly scopulate. Males have a needle-like embolus originating prolaterally and curving retrolaterally around the tegulum, accompanied by a narrow membranous conductor (Fig. 56); the palpal tibia has a larger single or bifid distal retrolateral apophysis and a small tooth-like proximal retrolateral dorsal apophysis (Figs 57, 58); females have a narrow median epigynal hood and strongly twisted entrance ducts leading to long, sausage-shaped ST II, with corresponding twisted ducts leading from ST II to the small posterior ST I.

Description: Small spiders, 2.80–3.55 mm long; carapace red, surface strongly granulate; abdomen pale grey with darker dorsal chevron marking; AER procurved, clypeus height equal to or slightly larger than AME diameter; AME slightly smaller than ALE, or eyes subequal; AME closer to ALE than to each other; PER strongly recurved; PME slightly larger than PLE, or eyes subequal; PME closer to each other than to PLE; chilum single,

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triangular, tapring distally; cheliceral promargin and retromargin with three teeth each, retromarginal teeth often on single base; labium trapezoidal, posterior width equal to length; endites straight laterally with distinct serrula; carapace broadly oval, widest at midpoint, eye region smoothly connected to thoracic region; carapace with slight depression anterior to fovea, posterior margin slightly concave; pleural bars isolated; sternum shield-shaped; precoxal triangles present; intercoxal sclerites present between coxae I and II, II and III, and III and IV; legs I slightly more strongly built than others in males; legs without spines or ventral cusps, metatarsi and tarsi weakly scopulate, metatarsi III and IV with terminal preening brush; leg formula 1423 ♂, 4123 ♀; abdomen oval, distinctly notched anteriorly, tapering posteriorly; dorsal scutum absent in both sexes; dorsal sigilla present, with several intermediate sclerites between them; venter with paired tiny sclerites running from epigastric fold to spinnerets; small inframamillary sclerite present; male palp with subtriangular RTA, sometimes split distally, and small tooth-like dorsal apophysis; tegulum oval, embolus needle-like, originating prolaterally, directed retrolaterally along distal margin of tegulum, accompanied by narrow membranous conductor; female epigyne with narrow median epigynal hood, copulatory openings



Figs 50–55. General habitus of *Fuchibotulus* gen. n. species: (50–52) *F. bicornis* sp. n., Fisherhaven: (50) male, (51) female, (52) male abdomen, indicating anterior notch (AN), intermediate sclerites (IS) and sigilla (SI); (53–55) *F. kigelia* sp. n.: (53) male, Magaliesberg, (54) female, Ndumo Game Reserve, (55) female abdomen. Scale bars = 1.0 mm.

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medially, entrance ducts strongly twisted, ST II long and sausage-like, directed posteriorly; duct leading from ST II to ST I twisted around entrance ducts; ST I small and oval, posterolaterally situated.

Species included: *F. bicornis* and *F. kigelia* (both new).

Key to species of the genus *Fuchibotulus* gen. n.

1 Males 2
– Females 3

2 Embolus tip at 2/3 of cymbium width (Fig. 61); distal retrolateral tibial apophysis distinctly bifid (Fig. 62) ..... **F. bicornis** sp. n.
– Embolus tip at retrolateral margin of cymbium (Fig. 67); distal retrolateral tibial apophysis triangular (Fig. 68) ..... **F. kigelia** sp. n.

3 ST II very elongate, extending posteriorly beyond anterior margin of copulatory openings (Fig. 69) ..... **F. kigelia** sp. n.
– ST II oval-elongate, not extending to anterior margin of copulatory openings..... (Fig. 65) ..... **F. bicornis** sp. n.

Fuchibotulus bicornis sp. n.

Figs 50–52, 56, 57, 59–66, 71

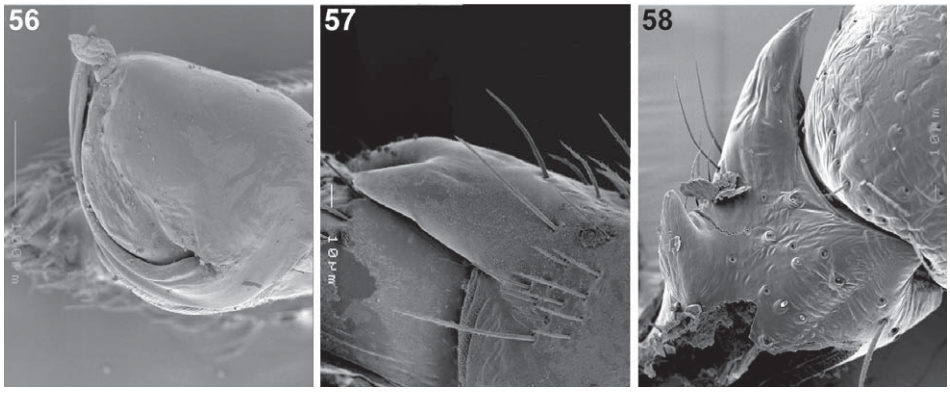
Etymology: From Latin *bicornis* (forked), the name refers to the bifid RTA of the male palp.

Diagnosis: This species can be recognised by the bifid RTA of the male palp and embolus shape, and the shorter ST II, which do not project posteriorly as far as the anterior margin of the copulatory openings.

Description:

Male.

Measurements: CL 1.40–1.52, CW 1.20–1.33, AL 1.75–1.87, AW 1.25–1.31, TL 3.12–3.28, FL 0.09–0.10, SL 0.77–0.83, SW 0.67–0.71, AME–AME 0.06, AME–ALE 0.02,

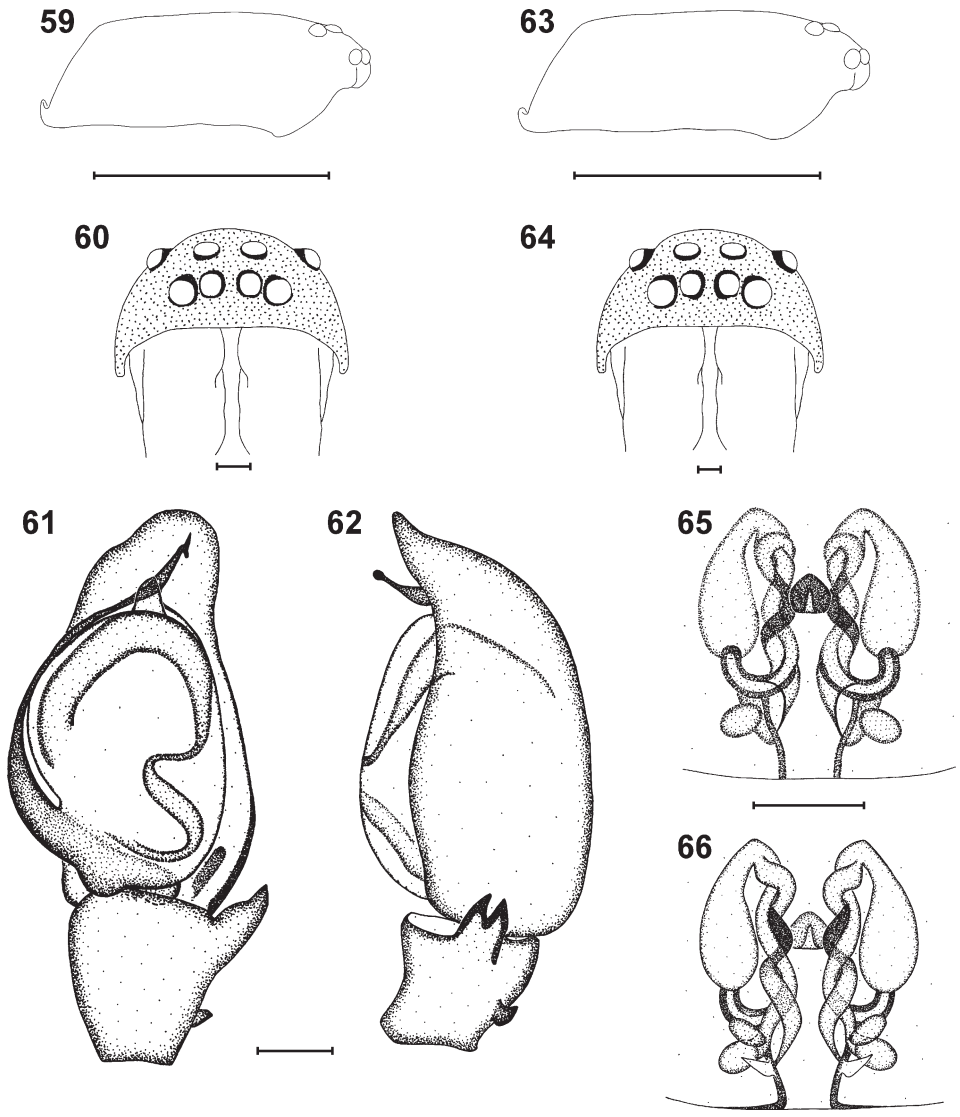


Figs 56–58. Scanning electron micrographs of *Fuchibotulus* gen. n. males: (56, 57) *F. bicornis* sp. n., palpal tegulum and retrolateral tibial apophysis in ventral view; (58) *F. kigelia* sp. n., retrolateral tibial apophysis, dorsal view.

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ALE–ALE 0.26, PME–PME 0.07, PME–PLE 0.13, PLE–PLE 0.51. Length of leg segments: I 1.13+0.57+0.96+0.73+0.47=3.86; II 0.99+0.53+0.79+0.63+0.39=3.33; III 0.77+0.43+0.55+0.62+0.27=2.64; IV 1.07+0.50+0.84+0.93+0.30=3.64.

Carapace, including eye region, deep orange, slightly darker laterally (Fig. 50); carapace slightly rounded anteriorly with highest point at 1/3 its length, flat dorsally, sloping very slightly to 4/5 its length, last fifth with steep decline (Fig. 59); surface coarsely granulate, covered in very short fine setae; fovea short, distinct, slightly thickened,



Figs 59–66. *Fuchibotulus bicornis* sp. n., male (59–62) and female (63–66): (59, 63) carapace, lateral view; (60, 64) eye region, anterior view; (61, 62) palp, ventral and retrolateral views; (65, 66) female epigyne, ventral and dorsal views. Scale bars: 1.0 mm in Figs 59, 63; 0.1 mm in Figs 60–62, 64–66.

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at 3/4 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes larger than medians; clypeus height slightly larger than AME diameter (Fig. 60); AME separated by distance slightly larger than 0.5× their diameter; AME separated from ALE by slightly less than 0.25× AME diameter; PER strongly recurved, median eyes slightly larger than laterals; PME separated by 0.66× their diameter; PME separated from PLE by 1.33× PME diameter. Chelicerae red-brown; anterior surface granular, with scattered short fine setae; promargin with three teeth, median and distal teeth subequal, proximal tooth smallest; retromargin with three teeth on single base, proximal and median teeth subequal, distal tooth smallest and blunt. Sternum bright orange, darker along border; surface smooth, with scattered short fine setae. Abdomen: pale grey throughout, with indistinct grey dorsal chevron markings; oval, distinctly notched anteriorly, tapering posteriorly, broadest at half its length, longer than wide (Fig. 50); dorsal scutum absent; surface finely granulate, covered in short stout setae anteriorly, becoming finer towards posterior; two pairs of large elongate dorsal sigilla present, first pair at 1/3 abdomen length, second pair near midpoint, with several pairs of tiny oval intermediary sclerites posterior to each pair (Fig. 52); venter with small oval sclerites running in two paired lines from epigastric fold to spinnerets; small broad inframamillary sclerite present. Legs I to IV orange-brown, tarsi slightly paler; weakly developed scopulae on metatarsi and tarsi, remaining leg segments covered in short fine setae; leg spines and cusps absent. Palp with small retrolateral tibial apophysis with split tip, and small secondary tooth-like dorsal apophysis (Figs 57, 61, 62); embolus fine, originating prolaterally on tegulum, curling around tegulum, ending in sharp tip retrolaterally (Fig. 56); conductor narrow and membranous, reaching embolus tip (Fig. 61).

Female.

Measurements: CL 1.33–1.58, CW 1.14–1.30, AL 1.90–2.13, AW 1.54–1.60, TL 3.28–3.55, FL 0.09–0.10, SL 0.76–0.85, SW 0.65–0.73, AME–AME 0.09, AME–ALE 0.02, ALE–ALE 0.26, PME–PME 0.08, PME–PLE 0.11, PLE–PLE 0.48. Length of leg segments: I 0.97+0.57+0.73+0.63+0.42=3.32; II 0.93+0.50+0.67+0.59+0.38=3.07; III 0.80+0.44+0.53+0.63+0.27=2.67; IV 1.09+0.53+0.83+0.96+0.33=3.74.

Carapace, including eye region, deep orange (Fig. 51); carapace slightly rounded anteriorly with highest point at 1/3 its length, flat dorsally, sloping very slightly to 4/5 its length, last fifth with steep decline (Fig. 63); surface coarsely granulate, covered in very short fine setae; fovea short, distinct, slightly thickened, at 3/4 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes much larger than medians; clypeus height equal to 1.33× AME diameter; AME separated by approx. 1.25× their diameter; AME separated from ALE by approx. 0.25× AME diameter (Fig. 64); PER strongly recurved, median eyes larger than laterals; PME separated by 0.75× their diameter; PME separated from PLE by approx. 1.25× PME diameter. Chelicerae orange-brown; anterior surface granular, with scattered short and long fine setae; promargin with three teeth, median tooth largest, proximal tooth smallest; median and distal teeth closest together; retromargin with three subequal teeth sharing single base. Sternum pale orange-brown with faint grey mottling, darker along border; surface smooth, covered in short fine setae. Abdomen: pale grey throughout, with indistinct dorsal chevron markings; oval, distinctly notched anteriorly, tapering posteriorly, broadest at half its length, longer than wide (Fig. 51); dorsal scutum absent; surface finely granulate, covered

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in short stout setae anteriorly, becoming finer towards posterior; dorsum with two pairs of elongate sigilla present, first pair at 1/3 abdomen length, second pair at midpoint, latter pair sometimes fragmented into several smaller sclerites; several pairs of small intermediate sclerites posterior to each pair; venter with small oval sclerites, running in two paired lines from epigastric fold to spinnerets; small subrectangular inframamillary sclerite present. Legs I to IV brown, slightly paler distally; weakly developed scopulae on metatarsi and tarsi, remaining leg segments covered in short fine setae; leg spines and cusps absent. Epigyne with small median hood, copulatory openings situated medially in short curved ridges (Fig. 65); entrance ducts twisted anteriorly before entering ST II, with corresponding twisted ducts leading from long sausage-like ST II to posterior ST I; ST I comprising two small oval lateral receptacles, linked to fertilisation ducts by short narrow duct (Fig. 66).

Holotype: ♂ SOUTH AFRICA: "R.S.A., Western Cape / De Hoop Nat. Reserve / Koppie Alleen / 34°28.534'S, 20°30.349'E / C. Haddad, 5.iv.2004 / Under rocks in fynbos / HOLOTYPE ♂ / Fuchibotulus bicornis / NCA 2008/567 //" (NCA, 2008/567).

Allotype: ♀ "R.S.A., Western Cape Prov. / Fisherhaven, near Hermanus / 34°21.430'S, 19°07.557'E / 30.ix.2007, R. Lyle & C. Haddad / Sifting leaf litter // ALLOTYPE ♀ / Fuchibotulus / bicornis / NCA 2008/ 218 //" (NCA, 2008/218).

Paratypes: SOUTH AFRICA: *Western Cape*: 1♂ Bergvliet, ix.1904, W.F. Purcell (SAMC, 14190); 1♂ Cape of Good Hope Nat. Res., Olifantsbos, nr Skaife Centre, alt. 20 m, 34°15.76'S:18°23.13'E, x.1998, H. Robertson, Winkler traps (SAMC, C005504); 1 imm. 1♀ De Hoop Nat. Res., Bitou number 2, 34°27.194'S: 20°24.250'E, 25.ix.2007, C. Haddad & R. Lyle, sifting leaf litter (NCA, 2007/3898); 3 imm. 1♂ 1♀ Fisherhaven, nr Hermanus, 34°21.430'S:19°07.557'E, 19.iii.2004, C. Haddad, sifting leaf litter (NCA, 2008/ 566); 1♀ Hermanus, Vermont, 16.vii.2007, V. Hamilton-Atwell, in litter (NCA, 2008/449).

Distribution: Endemic to Western Cape (Fig. 71).

Biology: This species was primarily collected from leaf litter in fynbos habitats.

Fuchibotulus kigelia sp. n.

Figs 53–55, 58, 67–71

Etymology: This species is named after the African sausage tree, *Kigelia africana* (Lam.) Benth. (Bignoniaceae); the name refers to the elongate shape of the spermathecae. The epithet is a noun in apposition.

Diagnosis: Males can be recognised by the embolus, which projects beyond the retrolateral margin of the cymbium, and the simple subtriangular RTA; females can be recognised by the long ST I, which extend posteriorly beyond the anterior margins of the copulatory openings.

Description:

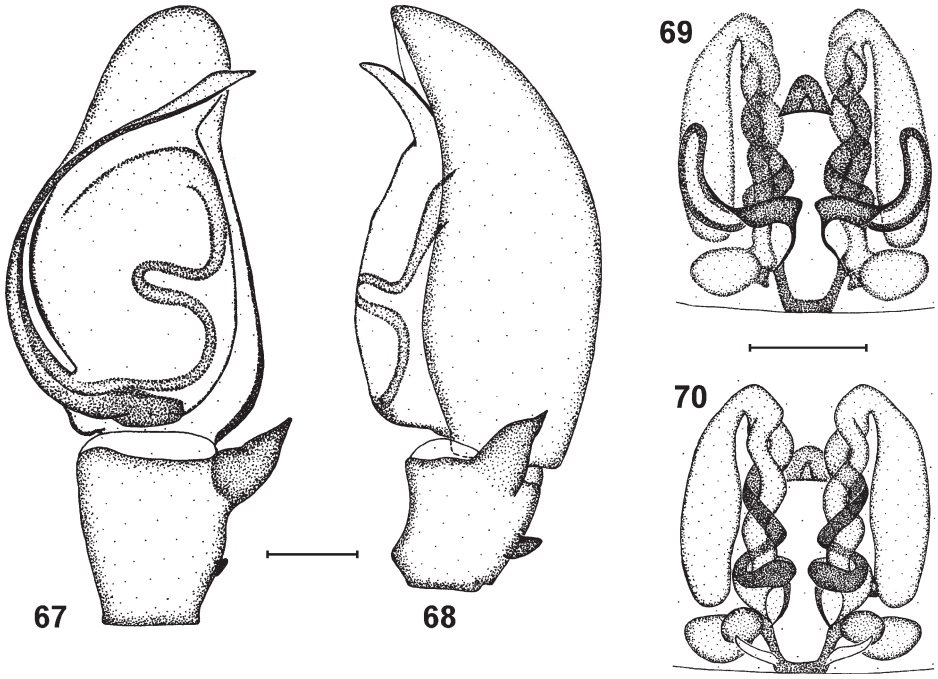
Male.

Measurements: CL 1.40–1.67, CW 1.12–1.40, AL 1.45–1.80, AW 1.17–1.35, TL 2.80–3.20, FL 0.10–0.12, SL 0.71–0.87, SW 0.63–0.73, AME–AME 0.06, AME–ALE 0.02, ALE–ALE 0.29, PME–PME 0.10, PME–PLE 0.13, PLE–PLE 0.54. Length of leg segments: I 1.21+0.63+1.03+0.81+0.47=4.15; II 1.02+0.53+0.77+0.68+0.43=3.43; III 0.80+0.46+0.53+0.64+0.29=2.72; IV 1.07+0.53+0.89+0.99+0.33=3.81.

Carapace, including eye region, deep orange, slightly darker near margins (Fig. 53); carapace slightly rounded anteriorly with highest point at 1/3 its length, flat dorsally, sloping very slightly to 4/5 its length, last fifth with steep decline; surface coarsely

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granular, covered in very short fine setae; fovea short, distinct, slightly thickened, at 3/4 carapace length. Eyes surrounded by black rings; AER procurved, eyes subequal; clypeus height equal to 1.25× AME diameter; AME separated by slightly less than 0.66× their diameter; AME separated from ALE by slightly less than 0.25× AME diameter; PER strongly recurved, median eyes slightly larger than laterals; PME separated by distance equal to their diameter; PME separated from PLE by 1.5× PME diameter. Chelicerae orange; anterior surface granular, with scattered long and short fine setae; promargin with three closely spaced teeth, median tooth largest, proximal tooth smallest; retromargin with three teeth on single base, proximal tooth large, median and distal teeth flat, only projecting slightly. Sternum bright orange, darker along border; surface smooth, with scattered short fine setae. Abdomen: pale grey throughout, without dorsal chevron markings; oval, distinctly notched anteriorly, tapering posteriorly, broadest at half its length, longer than wide (Fig. 53); dorsal scutum absent; surface finely granulate, covered in short stout setae anteriorly, becoming finer towards posterior; two pairs of large elongate dorsal sigilla present, first pair at 1/3 abdomen length, second pair near midpoint; each sigillum split transversely in two in some specimens; several pairs of tiny oval or elongate intermediary sclerites posterior to each pair; venter with small oval sclerites running in two paired lines from epigastric fold to spinnerets; small broad inframamillary sclerite present. Legs I to IV deep yellow-brown, femora slightly darker distally, tarsi slightly paler; weakly developed scopulae on metatarsi and tarsi, remaining leg segments covered in short fine setae; leg spines and cusps absent. Male palp with small triangular retrolateral tibial apophysis with sharp tip, and small secondary



Figs 67–70. *Fuchibotulus kigelia* sp. n.: (67, 68) male palp, ventral and retrolateral views; (69, 70) female epigyne, ventral and dorsal views. Scale bars = 0.1 mm.

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tooth-like dorsal apophysis (Figs 58, 67, 68); embolus fine, originating prolaterally on tegulum, curling around tegulum, ending in sharp tip projecting beyond retrolateral margin of cymbium; conductor narrow and membranous, reaching embolus tip (Fig. 67).

Female.

Measurements: CL 1.14–1.36, CW 0.92–1.17, AL 1.55–1.84, AW 1.14–1.50, TL 2.75–3.40, FL 0.07–0.08, SL 0.60–0.73, SW 0.53–0.63, AME–AME 0.05, AME–ALE 0.01, ALE–ALE 0.25, PME–PME 0.09, PME–PLE 0.11, PLE–PLE 0.44. Length of leg segments: I 0.90+0.47+0.67+0.53+0.41=2.98; II 0.82+0.43+0.57+0.50+0.35=2.67; III 0.66+0.37+0.47+0.52+0.27=2.29; IV 0.95+0.47+0.73+0.83+0.32=3.30.

Carapace, including eye region, deep orange, orange-brown laterally (Fig. 54); carapace slightly rounded anteriorly with highest point at 1/3 its length, flat dorsally, sloping very slightly to 4/5 its length, last fifth with steep decline; surface coarsely granular, covered in very short fine setae; fovea short, distinct, slightly thickened, at 3/4 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes slightly larger than medians; clypeus height equal to AME diameter; AME separated by 0.5× their diameter; AME separated from ALE by approx. 1/8× AME diameter; PER strongly recurved, eyes subequal; PME separated by distance approx. equal to their diameter; PME separated from PLE by approx. 1.33× PME diameter. Chelicerae orange; anterior surface granular, with scattered short and long fine setae; promargin with three teeth, median tooth largest, proximal tooth smallest; median and distal teeth closest together; retromargin with three subequal teeth sharing single base. Sternum orange, dark orange-brown along border; surface smooth, covered in short fine setae. Abdomen: pale grey throughout, with very faint grey indistinct dorsal chevron markings; oval, distinctly notched anteriorly, tapering posteriorly, broadest at half its length, longer than wide (Fig. 54); dorsal scutum absent; surface finely granulate, covered in short stout setae anteriorly, becoming finer towards posterior; one pair of elongate sigilla present at 1/3 abdomen length, with several pairs of small intermediate sclerites near midpoint of

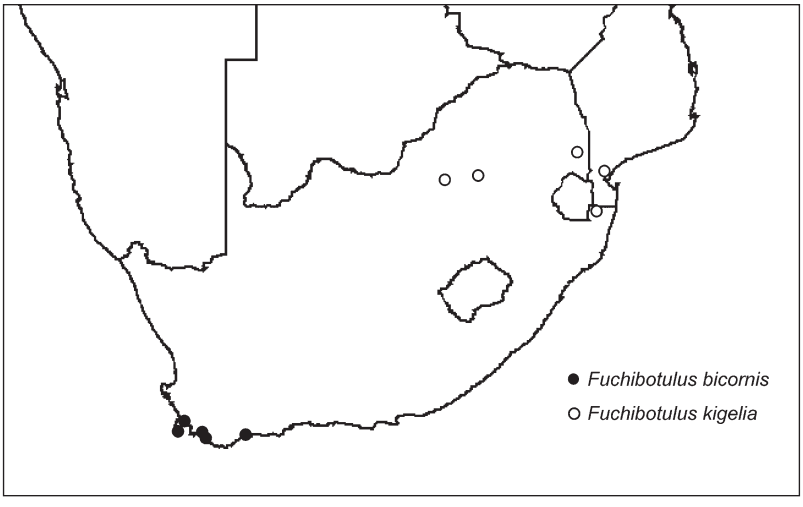


Fig. 71. Distribution of *Fuchibotulus* gen. n. species.

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abdomen (Fig. 55); venter with small oval sclerites, running in two paired lines from epigastric fold to spinnerets; small inframammilary sclerite present. Legs I to IV orange-brown, femora slightly darker distally; weakly developed scopulae on metatarsi and tarsi, remaining leg segments covered in short fine setae; leg spines and cusps absent. Epigyne with small median hood, copulatory openings situated medially in short curved ridges (Fig. 69); entrance ducts twisting anteriorly before entering elongate sausage-like ST II, with corresponding twisted ducts leading from ST II to posterior ST I; ST II posterior margin extending beyond anterior margin of copulatory openings (Fig. 69); ST II comprising two small oval posterolateral receptacles, linked to fertilisation ducts by short narrow duct (Fig. 70).

Holotype: ♂ "AMNH / REPUBLIC SOUTH AFRICA: E. / Transvaal, 15 km NW Klaserie, / Guernsey Farm, 19-31.xii. / 1985, S&J Peck, woodland / malaise-FITs, #85-295 / HOLOTYPE ♂ / Fuchibotulus kigelia //" (AMNH).

Allotype: ♀ "R.S.A., KwaZulu-Natal / Ndumo Game Res., Main Camp / 26°54.6'S, 32°18.8'E / 13.vi.2005 / C. Haddad / grass litter // ALLOTYPE ♀ / Fuchibotulus kigelia / NCA 2006/1339 //" (NCA, 2006/1339).

Paratypes: MOZAMBIQUE: 1♀ nr Marracuene, Blue Anchor Inn, 25°35.124'S:32°39.568'E, 28.xi.2007, C. Haddad & R. Fourie, sifting leaf litter, savannah (NCA, 2008/163). SOUTH AFRICA: *Gauteng*: 1♂ Pretoria, Wapadrand, ii.1988, R. Oberprieler (NCA, 98/959). *North West*: 1♂ Magaliesberg, Meyer's Farm, 25°44'S:27°17'E, 17.v.1998, A. Leroy (NCA, 2008/568).

Distribution: Widely distributed in savannah and grassland habitats in the northern parts of South Africa and southern Mozambique (Fig. 71).

Biology: Collected from leaf litter.

Genus **Poachelas** gen. n.

Etymology: From the grass family Poaceae, with which these spiders are closely associated, and from the genus *Trachelas*, to which they are related. Gender masculine.

Type species: *Poachelas striatus* sp. n.

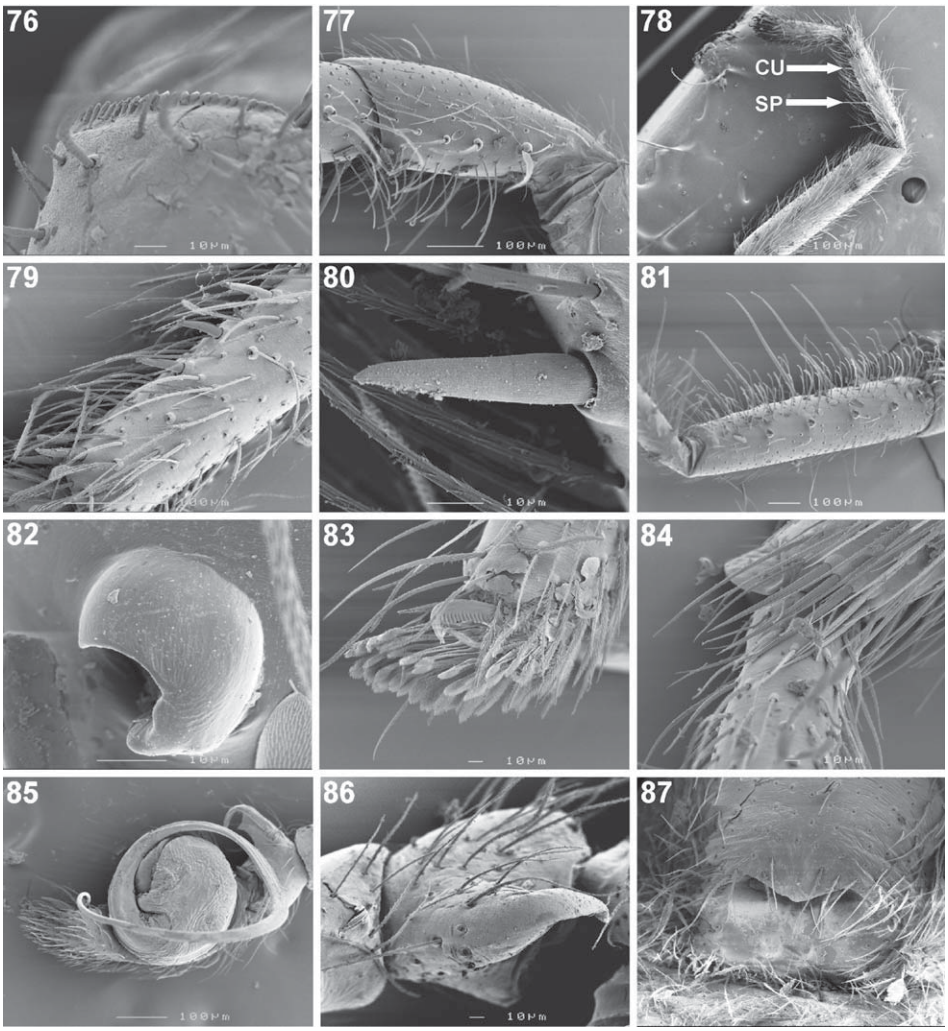
Diagnosis: This genus can be easily recognised from other trachelines by the pale elongate body, usually with a median abdominal stripe (Figs 72–75), lack of a dorsal scutum in both sexes, darkened anterior tibiae and metatarsi, and ventral leg cusps in known males that also have paired ventral leg spines on the anterior legs. Females lack cusps and may or may not have strong paired ventral leg spines on the anterior tibiae and metatarsi.



Figs 72–75. General habitus of *Poachelas* gen. n. species: (72, 73) *P. striatus* sp. n., male, Erfenis Dam Nat. Res., and female, Bloemfontein; (74) *P. solitarius* sp. n., male, Maleme Rest Camp; (75) *P. montanus* sp. n., female, Platberg Nat. Res. Scale bars = 1.0 mm.

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Description: Small spiders, 2.63–4.23 mm long; carapace cream or yellow, abdomen with grey median stripe; AER procurved, clypeus height 0.5–0.66× AME diameter; AME slightly smaller than ALE; AME separated by 0.33–0.5× their diameter, AME nearly touching ALE; PER strongly recurved; eyes variable in size, usually subequal; posterior eye interdistances subequal, at least 0.75× PME diameter; chilum single, triangular, weakly sclerotised; cheliceral promargin with three teeth, retromargin with two or three teeth, often on single base; labium trapezoidal; endites straight laterally with distinct serrula (Fig. 76); carapace oval, elongate, widest at midpoint; carapace



Figs 76–87. Scanning electron micrographs of *Poachelas striatus* sp. n.: (76) female, serrula; (77) female, patella, prolateral view; (78) male, leg I, indicating ventral spines (SP) and cusps (CU); (79) male, cusps on metatarsus I; (80) male, metatarsal cusp enlarged; (81) female, tibia I with *plv* spines missing and *rlv* spines present; (82) female, tibial spine base; (83) male, tarsal claw and claw tufts; (84) male, metatarsus IV preening comb; (85) male palp, ventral view; (86) male palpal RTA; (87) female, epigyne, ventral view.

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with slight depression at 0.66× its length, fovea indistinct, posterior margin straight; pleural bars isolated, weakly sclerotised; sternum oval-elongate; precoxal triangles present; intercoxal sclerites present between coxae I and II, reduced between coxae II and III and III and IV; legs I slightly more strongly built than other pairs; patellae I with *plv* spines (Fig. 77); anterior legs of males strongly spined, with paired ventral spines on tibiae and metatarsi (Fig. 78), and elongate cusps on tibiae, metatarsi and tarsi I, and metatarsi II (Figs 78–80); anterior legs of females strongly spined in *P. striatus* (Figs 81, 82), arrangement as for males, replaced by erect setae in *P. montanus*; cusps absent; tarsi with paired claws and dense claw tufts (Fig. 83); metatarsi III and IV with terminal preening comb (Fig. 84); leg formula 1423 ♂, 4123 ♀; abdomen elongate oval, twice as long as wide; dorsal scutum absent in both sexes; venter without sclerites; male palp with long, narrow, curved RTA (Figs 85, 86); tegulum round, embolus originating distally on tegulum, curling around margins, curving along retrolateral margin of cymbium towards cymbial tip (Fig. 85); female epigyne variable, with copulatory openings situated medially in posterior half of epigyne (Fig. 87); ST II large and situated anteriorly; ST I small, posterolaterally situated.

Species included: *P. montanus*, *P. solitarius* and *P. striatus* (all new).

Key to species of the genus *Poachelas* gen. n.

1 Males (♂ of *P. montanus* sp. n. unknown) 2
– Females (♀ of *P. solitarius* sp. n. unknown) 3

2 Median abdominal stripe broad and pale grey (Fig. 72); embolus tip reaching tip of cymbium (Fig. 91); retrolateral tibial apophysis curved in retrolateral view (Fig. 97) ..... **P. striatus** sp. n.
– Median abdominal stripe narrow and black (Fig. 74); embolus tip extending 2/3 the distance from distal end of tegulum to cymbial tip (Fig. 97); retrolateral tibial apophysis straight in retrolateral view (Fig. 97) ..... **P. solitarius** sp. n.

3 Anterior legs with strong paired ventral spines on tibiae and metatarsi; epigyne with copulatory openings in broad lip-like ridge (Fig. 94); ST II round, ST I small, oval (Fig. 95); >3.0 mm long ..... **P. striatus** sp. n.
– Anterior legs with erect setae on tibiae and metatarsi; epigyne with small anteromedian hood, copulatory openings in posteriorly directed curved ridges (Fig. 98); ST II large and oval, ST I elongate with rounded posterior lobe (Fig. 99); <3.0 mm long ..... **P. montanus** sp. n.

Poachelas striatus species group

Diagnosis: Members of this species group can be recognised by the leg morphology. Males have paired ventral leg spines on the anterior tibiae and metatarsi, as well as elongate ventral leg cusps on the anterior tibiae, metatarsi and tarsi; females lack cusps and have strong paired leg spines on the anterior tibiae and metatarsi.

Poachelas striatus sp. n.

Figs 72, 73, 76–95, 100

Etymology: From Latin *striatus* (striate), the name refers to the distinctive median stripe running along the abdomen.

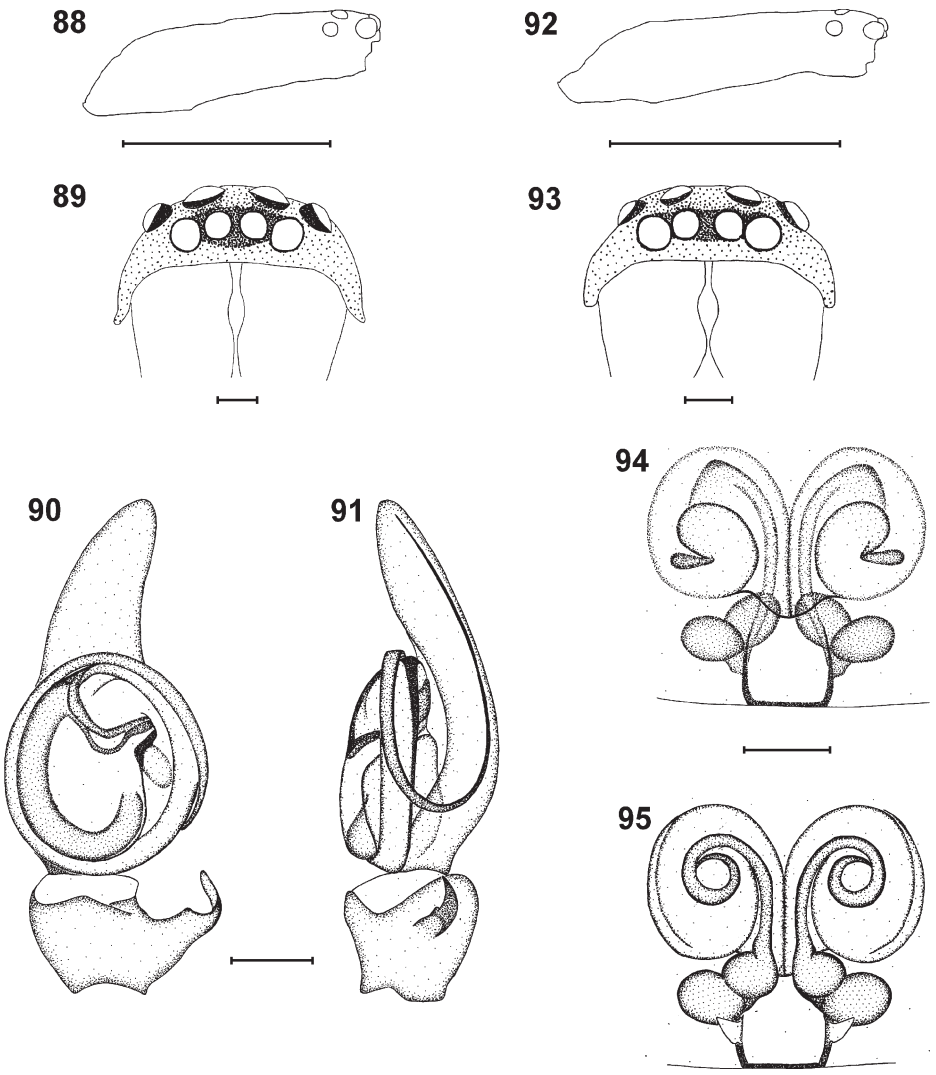
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Diagnosis: *P. striatus* sp. n. can be recognised from the only other species in this group by the genitalic morphology, with an embolus coiled around the tegulum and ending near the cymbial tip.

Description:

Male.

Measurements: CL 1.30–1.47, CW 0.83–0.98, AL 1.46–1.80, AW 0.75–0.87, TL 2.63–3.25, FL 0.08–0.09, SL 0.87–0.95, SW 0.53–0.61, AME–AME 0.03, AME–ALE 0.015,



Figs 88–95. *Poachelas striatus* sp. n., male (88–91) and female (92–95): (88, 92) carapace, lateral view; (89, 93) eye region, anterior view; (90, 91) palp, ventral and retrolateral views; (94, 95) female epigyne, ventral and dorsal view. Scale bars: 1.0 mm in Figs 88, 92; 0.1 mm in Figs 89–91, 93–95.

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ALE–ALE 0.19, PME–PME 0.09, PME–PLE 0.07, PLE–PLE 0.37. Length of leg segments: I 1.18+0.57+1.07+0.83+0.48=4.13; II 0.87+0.47+0.68+0.59+0.40=3.01; III 0.60+0.33+0.43+0.47+0.27=2.10; IV 1.13+0.50+1.10+0.92+0.40=4.05.

Carapace bright yellow, paler posteriorly, with pale grey stripe from between PME to midpoint, forming small rectangular grey marking medially (Fig. 72); carapace flattened with highest point at 1/3 carapace length, sloping gently to posterior, last fifth declining more steeply (Fig. 88); surface smooth with scattered short fine setae; fovea indistinct, lying in shallow median depression, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes larger than medians; clypeus height equal to approx. 0.66× AME diameter; AME separated by approx. 1/3 their diameter; AME separated from ALE by approx. 1/8× AME diameter (Fig. 89); PER recurved, median eyes slightly larger than laterals; PME separated by distance slightly larger than their diameter; PME separated from PLE by distance slightly smaller than PME diameter. Chelicerae pale yellow; anterior surface slightly granulate, with scattered short and long fine setae; promargin with three small teeth, distal tooth largest, proximal and median teeth subequal; retromargin with two closely spaced teeth, distal tooth slightly larger. Sternum cream with faint grey mottling, slightly darker along border; surface smooth, with scattered short fine setae. Abdomen: cream with pale grey mottling, with broad grey median stripe dorsally running along abdomen, expanding laterally above spinnerets (Fig. 72); elongate, twice as long as wide, broadest at half its length; dorsal scutum absent; surface covered in short fine setae; two pairs of indistinct oval sigilla present, first at 1/4 abdomen length, second pair anterior to midpoint; venter without sclerites. Legs I to IV with pale yellow femora; patellae, tibiae and tarsi I dark yellow-brown, metatarsi I dark brown; legs II to IV pale yellow-brown; legs covered in short fine setae with scattered long erect setae, particularly on femora, patellae and tibiae; metatarsi III and IV with terminal preening comb; tarsi I and IV with rows of short erect *plv* and *rlv* setae; leg spination: femora: I *pl* 2; patellae: I *plv* 2; tibiae: I *plv* 5–7 *rlv* 6 spines, *plv* 1–2 cusps, II *rlv* 0–2 spines; metatarsi: I *plv* 3–5 *rlv* 3–4 spines, *plv* 4–10 *rlv* 0–2 cusps, II *rlv* 4 spines, *plv* 1–4 cusps; tarsi: I *plv* 1–2 cusps. Male palp with fine curved retrolateral tibial apophysis (Figs 85, 86, 90, 91); tegulum round, embolus fine, originating distally, curving around tegular margins before looping retrolaterally, curving along distal retrolateral margin to tip of cymbium (Figs 90, 91).

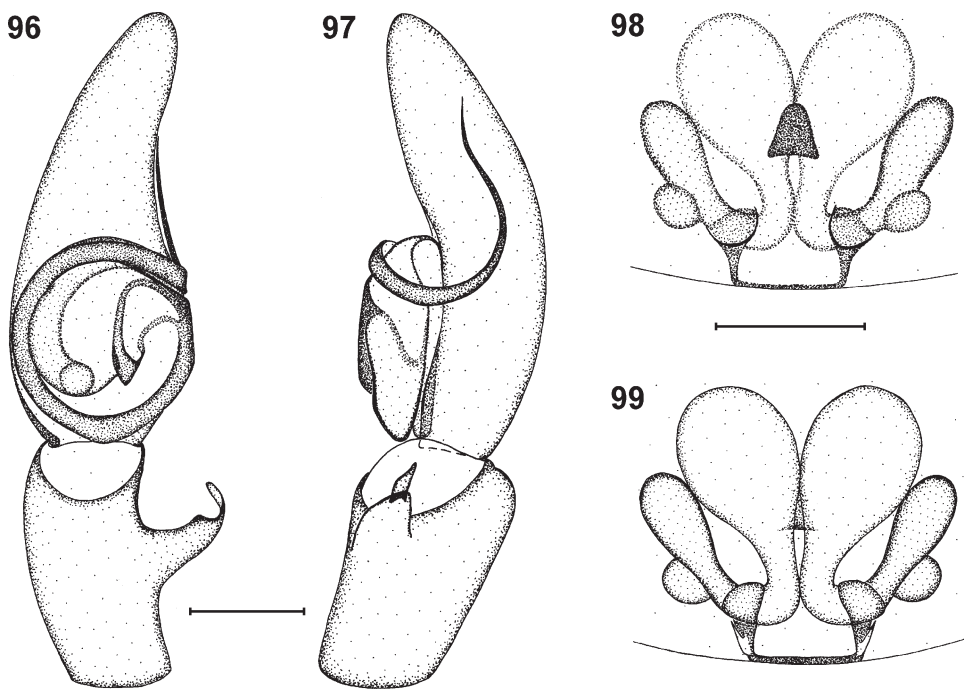
Female.

Measurements: CL 1.26–1.43, CW 0.91–1.00, AL 2.00–2.28, AW 1.07–1.20, TL 3.10–3.58, FL 0.13–0.17, SL 0.87–0.94, SW 0.57–0.61, AME–AME 0.03, AME–ALE 0.01, ALE–ALE 0.17, PME–PME 0.07, PME–PLE 0.08, PLE–PLE 0.36. Length of leg segments: I 1.07+0.61+0.98+0.82+0.45=3.93; II 0.87+0.45+0.76+0.57+0.43=3.08; III 0.67+0.37+0.43+0.45+0.28=2.20; IV 1.20+0.57+1.20+1.00+0.43=4.40.

Carapace pale yellow, sometimes with pale grey mottling, with pale grey stripe from PER to midpoint, forming rectangular grey marking medially (Fig. 73); eye region at AER black; carapace flattened with highest point at 1/3 carapace length, sloping gently to posterior, last fifth declining more steeply (Fig. 92); surface smooth with dense short fine setae; fovea indistinct, lying in shallow median depression, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes larger than medians; clypeus height slightly larger than 0.5× AME diameter; AME separated by 0.33× their diameter;

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AME separated from ALE by approx. 1/8× AME diameter (Fig. 93); PER slightly recurved, eyes subequal; PME separated by distance slightly less than their diameter; PME separated from PLE by distance equal to PME diameter. Chelicerae pale yellow; anterior surface smooth, with scattered short and long fine setae; promargin with three small teeth, median and distal teeth largest, subequal in size; retromargin with two closely situated teeth, distal tooth largest. Sternum cream, dark yellow along border; surface smooth, covered in long fine setae. Abdomen: cream, with broad grey median stripe dorsally running along abdomen, expanding laterally in posterior third (Fig. 73); elongate, twice as long as wide, broadest at half its length; dorsal scutum absent; surface covered in short and long fine setae; two pairs of indistinct oval sigilla present, first pair at 1/4 abdomen length, second pair at anterior to midpoint of abdomen; venter without sclerites. Legs I to IV with pale yellow femora; patellae, tibiae, metatarsi and tarsi I and I dark yellow-brown, legs II to IV pale yellow-brown; legs covered in short fine setae with scattered long erect setae, particularly on femora and patellae; metatarsi III and IV with terminal preening comb; tarsi I and IV with rows of short erect *plv* and *rlv* setae; leg spination: femora: I *pl* 3–5 *rlv* 7; patellae: I *plv* 2–4 *rlv* 1; tibiae: I *plv* 6–7 *rlv* 6–8, II *rlv* 4–5; metatarsi: I *plv* 4–7 *rlv* 4–5, II *rlv* 5–7; palp spineless, with several long fine erect setae on femora and patellae. Epigyne with copulatory openings situated anterolaterally in posterior lip-shaped ridge (Figs 87, 94); entrance ducts coiling before entering large round anteromedian ST I, with broad median ducts leading from ST I to posterolateral oval ST II (Fig. 95).



Figs 96–99. (96, 97) *Poachelas solitarius* sp. n., male palp, ventral and retrolateral views; (98, 99) *P. montanus* sp. n., female epigyne, ventral and dorsal views. Scale bars = 0.1 mm.

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Holotype: ♂ SOUTH AFRICA: "R.S.A., Free State Province / Bloemfontein District / Glen Agricultural College / 28°54'S, 26°21'E / 16.iv.2008, J. van Niekerk / Base of grass tussocks // Holotype ♂ / Poachelas striatus / NMBA 11582 //" (NMBA, 11582).

Allotype: ♀ "NMBA 10907 / South Africa, FS / Bloemfontein, Botanical Gardens / 2908S/2610E, / L. Lotz, Oct 2006 / pit-trap 2, in grassland near office // Allotype ♀ / Poachelas striatus / NMBA 10907 //" (NMBA, 10907).

Paratypes: SOUTH AFRICA: *Free State*: 3♀ Bloemfontein, National Botanical Gardens, 29°02'44"S: 26°12'34"E, 13.xi.2007, C. Haddad, base of grass tussocks (NCA, 2007/3804); 1 imm. 1♂ same locality, 24.iv.2008, C. Haddad, base of grass tussocks (NCA, 2008/582); 2 imm. 5♂ 14♀ same locality, 28.v.2008, C. Haddad, base of grass tussocks (NCA, 2008/589); 1♂ 8♀ Erfenis Dam Nat. Res., Weedy grassland, 28°29.722'S:26°48.439'E, 28.viii.2007, C. Haddad, searching, base of grass tussocks (NCA, 2007/3142); 1 imm. 1♂ Glen Agricultural College, 28°54'S:26°21'E, 24.iv.2008, J. van Niekerk, base of grass tussocks (NMBA, 11583).

Biology: This species was commonly found at the base of grass tussocks, and occasionally caught by sweep-netting. The adults from the National Botanical Gardens were collected during spring. By late summer (March 2008) no adults were collected, although more than 25 immature specimens were observed. In the following month males started to appear. By the end of May nearly no immatures were collected, only adults. This suggests a life cycle where adults breed in spring and early summer, immatures develop through summer, maturing in early autumn, with the adults overwintering and breeding the following spring. One adult female maintained in the laboratory produced an egg sac of 6.0 mm diameter, consistent in structure with other corinnids (foundation disc of silk on which eggs are laid, covered by a disc of papery silk). Eight cream-coloured oval eggs were produced, each being approx. 0.60×0.68 mm.

Distribution: Known only from the Grassland Biome in Free State (Fig. 100).

Poachelas solitarius sp. n.

Figs 74, 96, 97, 100

Etymology: From Latin *solitarius* (solitary), as this species is known from a single male only.

Diagnosis: This species can be recognised from *P. striatus* sp. n. by the male embolus, which does not reach the cymbial tip, and by more ventrally-placed RTA. Female unknown.

Remark: Most of the paired ventral leg spines on the anterior legs are missing from the holotype, but the spine bases give an accurate idea of the spine arrangement.

Description:

Male.

Measurements: CL 1.78, CW 1.22, AL 2.55, AW 1.13, TL 4.23, FL 0.08, SL 1.16, SW 0.77, AME–AME 0.03, AME–ALE 0.015, ALE–ALE 0.22, PME–PME 0.10, PME–PLE 0.10, PLE–PLE 0.44. Length of leg segments: I 1.73+0.83+1.57+1.03+0.53=5.69; II 1.28+0.64+1.05+0.79+0.51=4.27; III 0.84+0.47+0.54+0.57+0.37=2.79; IV 1.57+0.66+1.50+1.18+0.47=5.38.

Carapace bright yellow, paler posteriorly, with dark grey stripe from between PME to midpoint, forming small rectangular grey marking medially (Fig. 74); carapace flattened with highest point at posterior eye row, sloping gently to posterior, last fifth declining more steeply; surface smooth with scattered short and long fine setae; fovea

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indistinct, lying in shallow median depression, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes larger than medians; clypeus height equal to approx. 0.5× AME diameter; AME separated by 0.33× their diameter; AME separated from ALE by approx. 1/8× AME diameter; PER recurved, median eyes slightly larger than laterals; PME separated by distance equal to their diameter; PME separated from PLE by distance equal to PME diameter. Chelicerae bright yellow; anterior surface smooth, with scattered short and long fine setae; promargin with three small teeth, distal tooth largest, proximal tooth smallest; retromargin with two subequal teeth sharing single broad base. Sternum pale yellow, slightly darker along border; surface smooth, with scattered short fine setae. Abdomen: cream, with very fine black median stripe dorsally running along abdomen, expanding laterally above spinnerets (Fig. 74); elongate, more than twice as long as wide, broadest at half its length; dorsal scutum absent; surface covered in short fine setae; two pairs of indistinct oval sigilla present, either side of midpoint of abdomen; venter without sclerites. Legs I to IV yellow; tibiae and metatarsi I, II and IV with dark grey distal bands; legs covered in short fine setae; metatarsi III and IV with terminal preening comb; leg spination: femora: I *pl* 4; patellae: I *plv* 3 *rlv* 1; tibiae: I *plv* 9 *rlv* 9 spines, *plv* 3–4 *rlv* 1 cusps, II *rlv* 6 spines; metatarsi: I *plv* 6 *rlv* 4 spines, *plv* 3 cusps, II *rlv* 4 spines, *plv* 1 cusp; tarsi: I *plv* 2 *rlv* 1–2 cusps. Male palp with fine curved retrolateral tibial apophysis (Figs 96, 97); tegulum round, embolus fine, originating distally, curving around tegular margins before looping retrolaterally, curving along distal retrolateral margin of cymbium (Fig. 97).

Holotype: ♂ "Zimbabwe 2028D1 / Maleme Rest Camp / J. Minshull 4.ii.1987 / NMZ/A5522 // HOLOTYPE ♂ / Poachelas solitarius //" (NMZA, A5522).

Biology: Unknown, but presumably associated with grass.

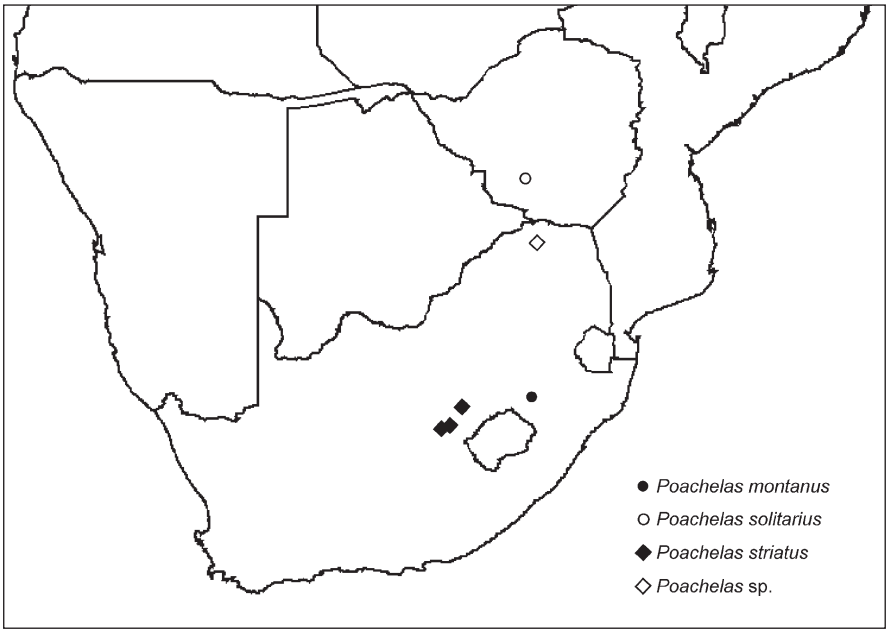


Fig. 100. Distribution of *Poachelas* gen. n. species.

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Poachelas montanus species group

Diagnosis: Members of this species group have the same general morphology as the *striatus* group, but the abdominal markings are less distinct, and they lack the strong anterior leg spines of the latter species group.

Poachelas montanus sp. n.

Figs 98–100

Etymology: The species name reflects the montane grassland habitats, where it was collected.

Diagnosis: This species can be recognised by its small size, absence of leg spines, and the morphology of the female genitalia. Male unknown.

Description:

Female.

Measurements: CL 0.97–0.99, CW 0.71–0.73, AL 1.60–1.80, AW 0.90–0.97, TL 2.63–2.90, FL 0.06–0.07, SL 0.63–0.65, SW 0.46–0.48, AME–AME 0.03, AME–ALE 0.015, ALE–ALE 0.14, PME–PME 0.04, PME–PLE 0.04, PLE–PLE 0.23. Length of leg segments: I 0.67+0.36+0.49+0.40+0.29=2.21; II 0.53+0.32+0.38+0.33+0.27=1.83; III 0.38+0.23+0.25+0.32+0.17=1.35; IV 0.65+0.30+0.57+0.53+0.23=2.28.

Carapace, including eye region, bright yellow with pale grey stripe from PER to midpoint, forming rectangular grey marking medially (Fig. 75); carapace flattened with highest point at posterior eye row, sloping gently to posterior; surface smooth with scattered short and long fine setae; fovea indistinct, lying in shallow median depression, at 2/3 carapace length. Eyes surrounded by black rings; AER procurved, lateral eyes larger than medians; clypeus height equal to 0.5× AME diameter; AME separated by 0.25× their diameter; AME separated from ALE by approx. 1/8× AME diameter; PER slightly recurved, lateral eyes slightly larger than medians; PME separated by approx. 0.75× their diameter; PME separated from PLE by approx. 0.75× PME diameter. Chelicerae orange; anterior surface smooth, with scattered short and long fine setae; promargin with three small teeth, median tooth largest, proximal and distal teeth subequal; retromargin with three teeth sharing single base, proximal tooth largest, distal tooth smallest. Sternum yellow with grey mottling, dark yellow-brown along border; surface smooth, covered in fine setae. Abdomen cream, with very faint grey median stripe dorsally running along abdomen, expanding laterally in posterior third (Fig. 75); abdomen elongate, nearly twice as long as wide, broadest at half its length; dorsal scutum absent; surface covered in short fine setae; two pairs of oval sigilla present, first pair indistinct, at 1/4 abdomen length, second pair distinct, close to midpoint of abdomen; venter without sclerites. Legs I to IV yellow; tibiae, metatarsi and tarsi I and II yellow-brown, with long dense erect setae ventrally; metatarsi and tarsi with weak scopulae, remaining leg segments covered in short fine setae; metatarsi III and IV with terminal preening comb; leg spines and cusps absent. Epigyne with copulatory openings situated posteriorly in short semi-circular ridges; entrance ducts entering oval anteromedian ST I, with broad ducts leading from ST I to lateral oval ST II.

Holotype: ♀ SOUTH AFRICA: "R.S.A., Free State Prov. / Harrismith district / Platberg Nat. Res. / 28°16.839'S, 29°12.062'E / 14.xii.2005 / C. Haddad / Under rocks, montane grassland // HOLOTYPE ♀ / Poachelas montanus / NCA 2008/579 //" (NCA, 2008/579).

Paratype: ♀ same data as holotype (NCA, 2008/580).

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Poachelas sp.

A series of subadult specimens was collected at the base of grass tussocks at the Lajuma Mountain Retreat in the Soutpansberg Mts, Limpopo Province, South Africa (Fig. 100). Attempts to rear these specimens to adulthood failed. This species seems to belong to the *montanus* species group, as both subadult males and females lack the ventral leg spines typical of the *striatus* group. The formal description of this species is postponed until adults are collected.

DISCUSSION

The present paper brings the number of new genera described from the Afrotropical Region to four. 'True' trachelines from the region, i.e. excluding misplaced taxa discussed above, include eight genera represented by 40 species (Table 1). However, many new species of *Cetonana* and *Trachelas* have yet to be described. Several new species of *Spinotrachelas* and *Thysanina* have been discovered since last revisions (Haddad 2006; Lyle & Haddad 2006*a*). The genus *Paccius* still needs attention, and Platnick (2000) suggests that there may be as many as 25 species occurring on the Indian Ocean islands, to which these spiders are endemic (Madagascar, La Réunion, Comoros and Mauritius). With the publication of these studies, the diversity of Afrotropical Trachelinae will probably treble (Table 1).

Synapomorphies of the subfamily Trachelinae still need to be thoroughly assessed and are the subject of much debate. Platnick and Shadab (1974*a*) suggested that trachelines can be characterised by the complete absence of leg spines and the presence, at least in males, of ventral cusps on the last three segments of the anterior legs. However, leg spines have been recorded from several species of Afrotropical *Cetonana* (Tucker 1920; Lawrence 1942; Lyle 2008), many species of the South American *Meriola* Banks, 1895 (Platnick & Ewing 1995), two species of *Thysanina* (Lyle & Haddad 2006*a*), and from the monotypic *Spinotrachelas* (Haddad 2006). *Poachelas* gen. n. also has strong spines on the anterior legs. A review of these genera, and other trachelines, prompts that the absence of leg spines should not be considered a valid synapomorphy for the group. Based on the discussion of trachelines by Platnick (1975), Haddad (2006) proposed that the loss of leg spines and ventral cusps may represent an apomorphic state within the trachelines, with *Spinotrachelas* being the most plesiomorphic genus in the group. Two newly described genera, *Fuchiba* and *Fuchibotulus*, may represent the most derived genera in the group as all their known species lack leg spines and cusps in both sexes. Ventral leg cusps, in turn, persist in at least males of all the remaining genera (Platnick & Shadab 1974*a*, *b*; Platnick 1975, 2000; Grimm & Vilbel 1986; Platnick & Ewing 1995; Platnick & Rocha 1995; Deeleman-Reinhold 2001; Lyle & Haddad 2005, 2006*a*; Chami-Kranon *et al.* 2007), with the exception of many Palaearctic and Afrotropical *Trachelas* (Lyle 2008; Bosselaers *et al.*, in press), in which the cusps are often absent from both sexes.

Based on the current descriptions, relationships of the three new genera to other trachelines can be proposed. *Fuchiba* and *Fuchibotulus* may be most closely related to the Afrotropical species of *Trachelas*, which usually lack leg cusps in both sexes (Lyle 2008). *Poachelas* appears to be most closely related to the South African genus *Spinotrachelas*, based on the presence of strong paired ventral leg spines on the anterior

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legs (Haddad 2006), in addition to strongly developed cusps in males. However, clear adaptations for living in grass habitats in *Poachelas* (elongate body and pale colouration with median abdominal stripe) suggest that this body form is derived. Consequently, it may be premature to consider these two genera closely related purely on the basis of their leg structure. Their true relations may become quite different when these taxa are included in a cladistic analysis with a large number of somatic and genitalic characters.

The present paper advances our knowledge of tracheline diversity and the variation of important somatic morphological traits in the group. With revisions of other Afrotropical genera, it is hoped that an accurate phylogeny of the Trachelinae can be prepared, with diagnostic characters of each genus, and relationships between genera (particularly apparently polyphyletic genera such as *Cetonana* and *Trachelas*) can be more thoroughly resolved.

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