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## Research article

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# *Manzuma* gen. nov., a new aelurilline genus of jumping spiders (Araneae, Salticidae)

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**Abstract.** A new jumping spider genus, *Manzuma* gen. nov. (Salticidae Blackwall, 1841), is described, type species is *Manzuma nigritiba* (Caporiacco, 1941). *Aelurillus reconditus* Wesolowska & van Harten, 1994 is synonymized with *Rafalus nigritiba* (Caporiacco, 1941). Four new combinations are proposed: *M. jocquei* gen. et comb. nov. (ex *Aelurillus*), *M. kenyaensis* gen. et comb. nov. (ex *Langelurillus*), *M. lymph*a gen. et comb. nov. (ex *Rafalus*) and *M. nigritiba* gen. et comb. nov. (ex *Rafalus*). Three species, *M. botswana* gen. et sp. nov. (♂♀, Botswana and Republic of South Africa), *M. petroae* gen. et sp. nov. (♂♀, Republic of South Africa) and *M. tanzanica* gen. et sp. nov. (♂, Tanzania), are described. The male of *M. kenyaensis* gen. et comb. nov. and female of *M. lymph*a gen. et comb. nov. are described for the first time. A new aelurilline synapomorphy is proposed. Identification key for males is provided.

**Keywords.** *Aelurillus*, new combination, new species, synapomorphy, *Rafalus*.

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## Introduction

The subtribe Aelurillina Simon, 1901 (*sensu* Maddison 2015) contains 288 species belonging to 9 genera; this subtribe is the most speciose among tribe Aelurillini Simon, 1901 which otherwise includes 189 species and 26 genera in Freyina Edwards, 2015 and 62 species and 14 genera in Thiratoscirtina Bodner & Maddison, 2012 (WSC 2019). Five of the subtribe's genera were recently revised, described or reviewed: *Aelurillus* Simon, 1884 (Azarkina 2006), *Asianellus* Logunov & Heçiak, 1996 (Logunov & Heçiak 1996), *Langelurillus* Próchniewicz, 1994 (Próchniewicz, 1994), *Proszynskiana* Logunov, 1996 (Logunov 1996a) and *Stenaelurillus* (Wesolowska 2014a, 2014b; Logunov & Azarkina 2018). Four genera, *Langona* Simon, 1901, *Phamuelus* Caleb & Mathai, 2015, *Phlegra* Simon, 1876 and *Rafalus* Prószyński, 1999, remain in need of revision.

The genus *Rafalus* Prószyński, 1999 contains twelve species, distributed mainly in West Asia and Africa although two species are known from Middle Asia and Bhutan (WSC 2019). According to Prószyński (1999), *Rafalus* can be distinguished from other members of Aelurillina, such as *Aelurillus* Simon, 1884,

*Langona* Simon, 1901 and *Phlegra* Simon, 1876, by the following characters: (1) palpal tibia with one retrolateral apophysis and without a bunch of stiff setae; (2) female epigyne with two indistinct posterior openings, ducts long and broad, S-like bent, very small spermathecae located transversely; (3) legs III are the longest (rarely about equal to legs IV); and (4) higher, convex cephalothorax.

In his paper, Prószyński (1999) described four new species: *R. christophori* Prószyński, 1999 (♂♀), *R. feliksi* Prószyński, 1999 (♂♀), *R. karskii* Prószyński, 1999 (♀) and *R. stanislawi* Prószyński, 1999 (♂); he also provided five new combinations: *R. insignipalpis* (Simon, 1882) (♂♀), *R. lymphus* (Próchniewicz & Hęciak, 1994) (♂), *R. nigrיתיבייס* (Caporiacco, 1941) (♂), *R. variegatus* (Kroneberg, 1875) (♂♀) and *R. wittmeri* (Prószyński, 1978) (♂). Wesołowska & van Harten (2010) described three new species of *Rafalus* from the United Arab Emirates: *R. arabicus* Wesołowska & van Harten, 2010 (♂♀), *R. desertus* Wesołowska & van Harten, 2010 (♂) and *R. minimus* Wesołowska & van Harten, 2010 (♂). One year later Wesołowska & Russell-Smith (2011) described *Aelurillus jocquei* Azarkina, Wesołowska & Russell-Smith, 2011 (♂♀) from Nigeria with remarks that “The species only tentatively is included to the genus *Aelurillus*. It may well represent a new genus...”. Five years later Dawidowicz & Wesołowska (2016) described *Langelurillus kenyaensis* Dawidowicz & Wesołowska, 2016 after a single female from Kenya.

Close study of the types of *Rafalus* revealed that it is polyphyletic, and that *R. lymphus* and *R. nigrיתיבייס*, as well as two species from the genus *Aelurillus*, *A. jocquei* and *A. reconditus*, and one species from *Langelurillus* Próchniewicz, 1994, *L. kenyaensis*, are quite different and belong to a new genus, which is described hereinafter. Moreover, a male from Yemen, collected not far from the type locality of *A. reconditus* is conspecific with the type specimen of *A. nigrיתיבייס*, leading to the conclusion that *A. reconditus* is a junior synonym of *A. nigrיתיבייס*.

The aim of the present paper are (1) to describe a new genus, *Manzuma* gen. nov., (2) to illustrate and redescribe four species, *A. jocquei*, *L. kenyaensis*, *R. lymphus* and *R. nigrיתיבייס*, (3) to synonymize *A. reconditus* with *R. nigrיתיבייס*, (4) to propose four new taxonomic combinations: *M. jocquei* gen. et comb. nov., *M. kenyaensis* gen. et comb. nov., *M. lymphus* gen. et comb. nov. and *M. nigrיתיבייס* gen. et comb. nov., (5) to describe male of *M. kenyaensis* and female of *M. lymphus* for the first time, (6) to describe three new species, *M. botswana* sp. nov. (♂♀, from Botswana and Republic of South Africa), *M. petroae* gen. et sp. nov. (♂♀, from Republic of South Africa) and *M. tanzanica* gen. et sp. nov. (♂, from Tanzania), (7) to provide an identification key for males, (8) to propose a new aelurilline synapomorphy – retrolateral cavity in the males endites, and (9) to map the distribution of all *Manzuma* gen. nov. species.

## Materials and methods

The specimens used in this study have been borrowed from or deposited in the following museums (curator names are in parentheses):

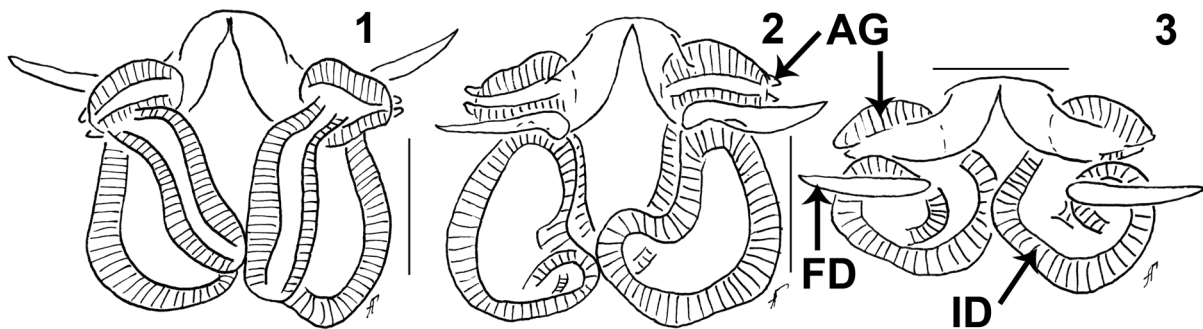
- BMNH = Natural History Museum, London, UK (J. Beccaloni)
- ISEA = Institute of Systematic and Ecology of Animals SB RAS (ISEA), Novosibirsk, Russia (G.N. Azarkina)
- HUJI = Hebrew University of Jerusalem, the National Natural History Collections Jerusalem, Israel (E. Gavish-Regev)
- MEUU = Museum of Evolution, Uppsala University, Uppsala, Sweden (E. Mejlom)
- MHNG = Muséum d'histoire naturelle, Genève, Switzerland (P. Schwendinger)
- MMUE = Manchester Museum, University of Manchester, UK (D.V. Logunov)
- MNHN = Muséum national d'histoire naturelle, Paris, France (C. Rollard)
- MRAC = Royal Museum for Central Africa, Tervuren, Belgium (A. Henrard)
- MSNF = Museo di Storia Naturale, Florence, Italy (L. Bartolozzi)

- NCA = National Collection of Arachnida, Plant Protection Research Institute, Pretoria/Tshwane, Republic of South Africa (P. Marais)  
 NHRS = Natural History Museum, Stockholm, Sweden (G. Lindberg)  
 SMF = Senckenberg Museum, Frankfurt am Main, Germany (P. Jäger)  
 SMNH = Steinhardt Museum of Natural History, Tel Aviv, Israel (S. Zonstein)  
 ZMB = Museum für Naturkunde, Berlin, Germany (J. Dunlop)

### Comparative material

- *Aelurillus v-insignitus* (Clerck, 1757) (Figs 1–3, 8–9): RUSSIA • 5 ♂♂; Crimea, Skvortsovskaya steppe, ca 2.7 km NW of Skvortsovo; 45.0902° N, 33.7777° E; 12 Mar. 2002; Y.M. Marusik leg.; ISEA 001.8347) • 1 ♀; Stavropol' Province, Manych-Gudilo Lake; ca 46.2167° N, 42.9167° E; 4–5 Jul. 2003; T. Khanov leg.; semidesert; ISEA, 001.8348.
- *Rafalus christophori* Prószyński, 1999 (Figs 4–7, 23–26): ISRAEL • Holotype ♂; Makhtesh Ramon [=Ramon Crater], nr Shen Ramon; ca 30.5667° N, 34.8500° E; 31 Jan. 1987; Y. Lubin leg.; HUJI 14237 • 4 ♂♂, 1 ♀; Arava Valley; ca 29.9667° N, 35.0500° E; 20 Apr. 2003, 8 May 2003, 30 May 2003; E. Topel leg.; SMNH.
- *Stenaelurillus guttiger* Simon, 1901 (Fig. 16): SOUTH AFRICA • 4 ♂♂, 1 ♀; Limpopo Prov., Polokwane Game Reserve; 23.9667° S, 29.4667° E; 14 Nov. 2005; T.T. Khoza and M.A. Modiba leg.; woodland; active search; NCA 2008/206).

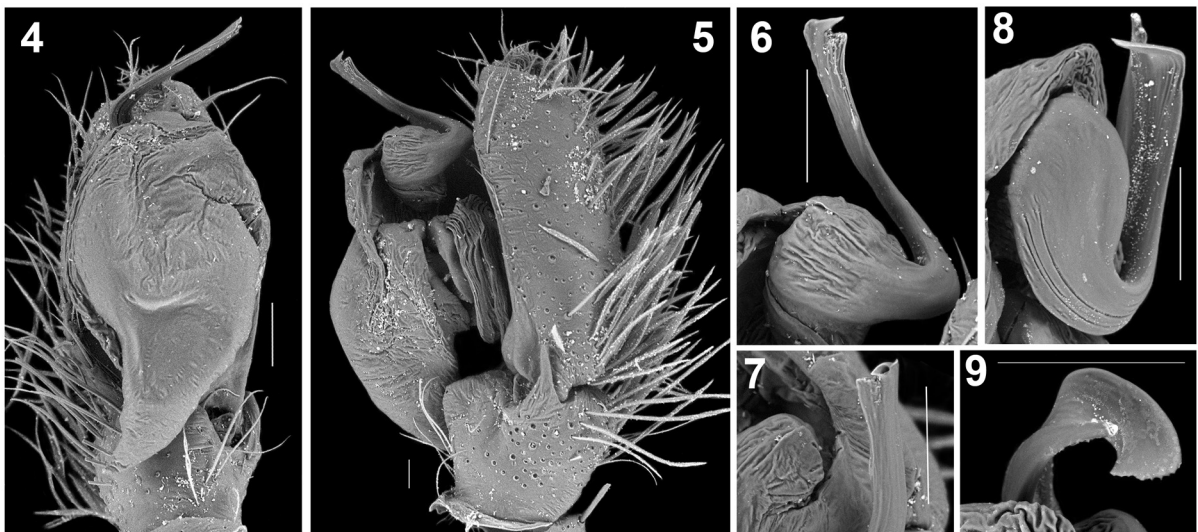
A total of 165 specimens belonging to ten species and four genera have been examined. Specimens were studied in 70% ethanol and their coloration refers to that of the preserved specimens. All drawings were made with the aid of a reticular eyepiece attached to an MBS–10 stereo microscope at ISEA and Leica M165C at SMF. Photographs were taken with a Canon EOS 550D camera attached to a Zeiss Stemi 2000–C stereo microscope at ISEA and Canon EOS 6D camera attached to Leica M165C at SMF. Stack images were combined using Helicon Focus 6.3 software. The epigynes were detached and macerated in 20% KOH solution overnight. Palp expansion was accomplished by placing in 10% KOH for 10 minutes then placed into distilled water. SEM microphotographs were taken with SEM Hitachi TM–1000 at ISEA. Parts of spiders were dried, and then mounted on an adhesive specimen stub. After photos and drawings were taken, parts were placed in microvials and stored with specimens. All drawings were edited and assembled in Adobe Photoshop CS5. For the leg spination the system adopted is that used by Ono (1988). All measurements are in millimeters. The distributional map was compiled using the online mapping software SimpleMapp (Shorthouse 2010). The terminology follows Maddison (1996), Azarkina *et al.* (2018), Logunov & Azarkina (2018) and Azarkina & Zamani (2019).



**Figs 1–3.** *Aelurillus v-insignitus* (Clerck, 1757). 1–3. Spermathecae. 1. Ventral view. 2. Dorsal view. 3. Apical view. Scale bars: 0.1 mm.

### Abbreviations

AG	=	accessory glands
ALE	=	anterior lateral eye
AME	=	anterior median eye
ap	=	apical
ApP	=	apical projection
BH	=	basal haematodocha
C	=	cymbium
CO	=	copulatory openings
d	=	dorsal
DH	=	distal haematodocha
E	=	embolus
EB	=	embolic base
ED	=	embolic division
EnC	=	endital cavity
EP	=	epigynal pocket
EW	=	epigynal wings
FD	=	fertilization ducts
Fm	=	femur
ID	=	insemination duct
Mt	=	metatarsus
PLE	=	posterior lateral eye
PP	=	proximal projection
pr	=	prolateral
Pt	=	patella
RTA	=	retrolateral tibial apophysis
SD	=	sperm duct
SR	=	salticid radix
St	=	subtegulum



**Figs 4–9.** Scanning electron micrographs of *Rafalus christophori* Prószyński, 1999 (4–7) and *Aelurillus v-insignitus* (Clerck, 1757) (8–9). 4–5. Male palp. 4. Ventral view. 5. Retrolateral view. 6–9. Embolic division. 6, 8. Retrolateral view. 7, 9. Apical view. Scale bars: 0.1 mm.

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T	=	tegulum
TA	=	terminal apophysis
Tb	=	tibia
TP	=	tegular process
rt	=	retrolateral
v	=	ventral

## Results

Class Arachnida Cuvier, 1812  
 Order Araneae Clerck, 1757  
 Family Salticidae Blackwall, 1841  
 Tribe Aelurillini Simon, 1901

Subtribe **Aelurillina** Simon, 1901

To date, the only synapomorphy for the subtribe Aelurillina has been suggested: viz., the presence of the deep cymbial pocket (*sensu* Logunov 1996a: figs 3, 4) in which the embolic division is hidden. A new good synapomorphy for the Aelurillina seems to be the presence of a small basal retrolateral cavity in the male endites (arrowed in Figs 15–17, EnC); all other salticid groups known to me lack such the cavity. Thus, the monophyly of the Aelurillina subtribe (*sensu* Maddison 2015) is well-supported by two good synapomorphies (both are seen in the males): the cymbial pocket and the endite cavity.

Genus *Manzuma* gen. nov.

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### Type species

*Saitis nigriritibiis* Caporiacco, 1941, designated here.

### Etymology

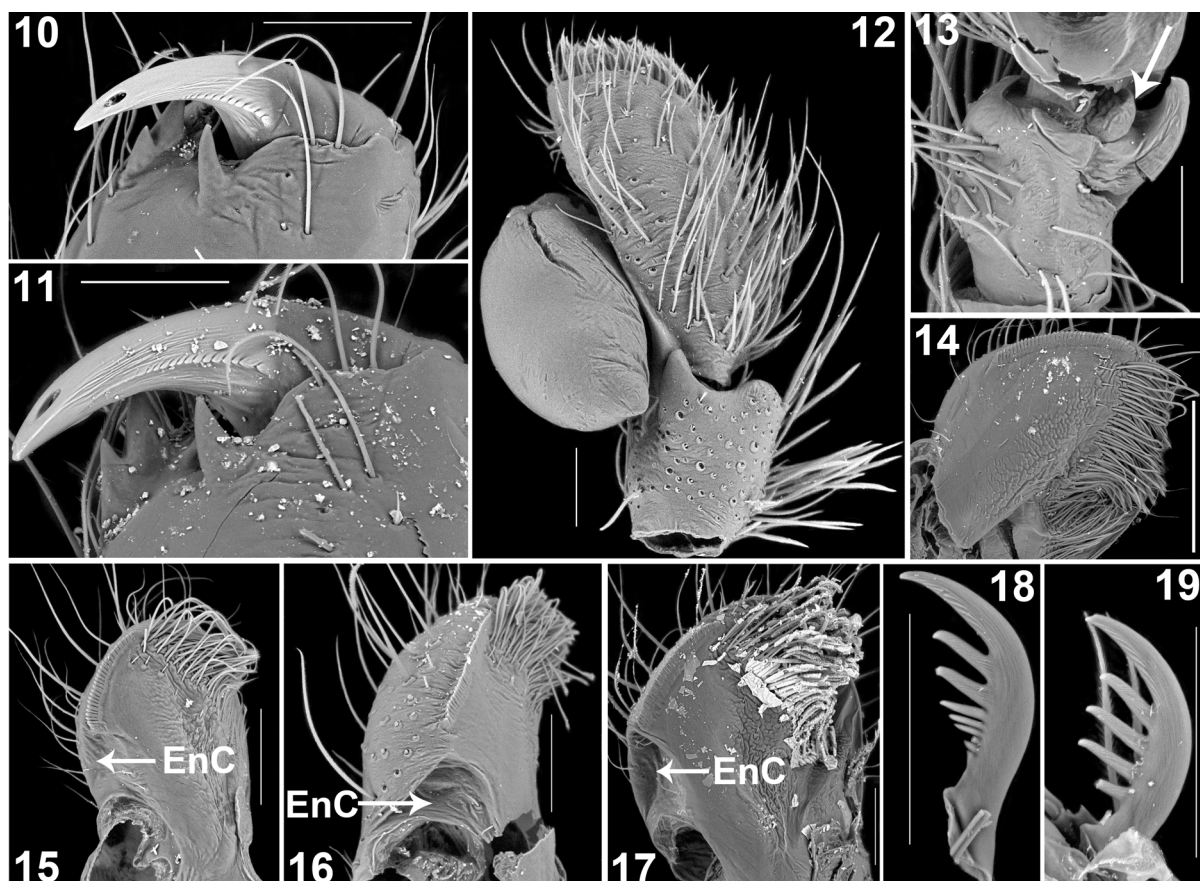
This genus is dedicated to my mother, Manzuma Mavlyut kyzy Azarkina. At the same time, ‘manzuma’ is an Islamic poetry genre from Ethiopia, the area of origin of the type species, *Manzuma nigriritibia* gen. et comb. nov. Gender feminine.

### Diagnosis

The body shape of the new genus is very similar to that of *Aelurillus* Simon, 1884. *Manzuma* differs from *Aelurillus* in the following characters: (1) base of the embolic division (ED) with an apical projection (Figs 52, 55, arrowed, ApP), which is absent in *Aelurillus* (Fig. 8); (2) the terminal apophysis (TA) is membranous and broad, situated on both pro- and retrolateral sides of the embolus, curved inwards prolaterally (Figs 56–59), while in *Aelurillus* the TA is more sclerotized, and connected to embolus by a membrane only on the retrolateral side (Fig. 9 and Azarkina & Zamani 2019: figs 5–11); (3) embolic tip wide, with a short apical membranous process (Figs 56, 58), while in *Aelurillus* the embolus is pointed apically, without a membranous process (Figs 8–9); (4) epigynal wings are always absent, while in *Aelurillus* they are always present (see e.g. Azarkina 2002, 2003, 2009, etc.); (5) introductory parts of the insemination ducts are fused around the copulatory openings to form a small tube and then bifurcated (Figs 36, 67, 94, 115, 142, 164, CD), while in *Aelurillus* copulatory openings are always separate, even if they lie in the same epigynal depression (Figs 1–3); (6) accessory glands are short, weakly sclerotized and in most cases seen only from an apical view (Figs 35, 67, 113–115, 140–141, 164, AG), while in *Aelurillus* accessory glands are strongly sclerotized and in most cases visible from a dorsal view of the spermathecae (Figs 2–3, AG).

*Manzuma* gen. nov. differs from *Rafalus* in the following characters: (1) palpal tibia without a ventral bulge, ventral RTA triangular and well developed, dorsal RTA small, rounded (Fig. 12), while in *Rafalus* the palpal tibia has a ventral bulge, ventral RTA triangular at the base and elongated apically, without dorsal RTA (Fig. 5); (2) base of embolic division with apical protuberance (Fig. 55, arrowed, ApP) which is absent in *Rafalus* (Fig. 6); (3) TA broad in *Manzuma* gen. nov. (Figs 56–59), narrow in *Rafalus* (Figs 6–7); (4) clypeus relatively high, ca. half of AME’s diameter, while in *Rafalus* the clypeus low, about  $\frac{1}{3}$  of AME’s diameter (Figs 23, 26); (5) the carapace is pear-shaped, almost half as wide at AME, while in *Rafalus* the carapace is rectangular (Fig. 24); (6) the copulatory openings are situated in the apical part of the epigyne, with short (except for *M. kenyaensis*, Figs 90–91, 93) introductory parts of the insemination ducts (Figs 34, 36, 69–71, 115, 140–142, 164, 167), while in *Rafalus* the openings are situated near the epigastric furrow, introductory parts of the insemination ducts are long and tube-shaped (see Prószyński 1999: figs 3–4, 11–12).

Except for *Aelurillus* and *Rafalus*, all other aelurilline genera are distinct from *Manzuma* gen. nov. in basic body form (*Langona*, *Langelurillus*, *Phlegra*, *Proszynskiana*, *Stenaelurillus*) or composition of copulatory organs (e.g. coiled embolic division in *Asianellus*, *Langona*, *Langelurillus*, some *Phlegra* and *Phanuelus* or embolic division without apical projection in *Proszynskiana*).

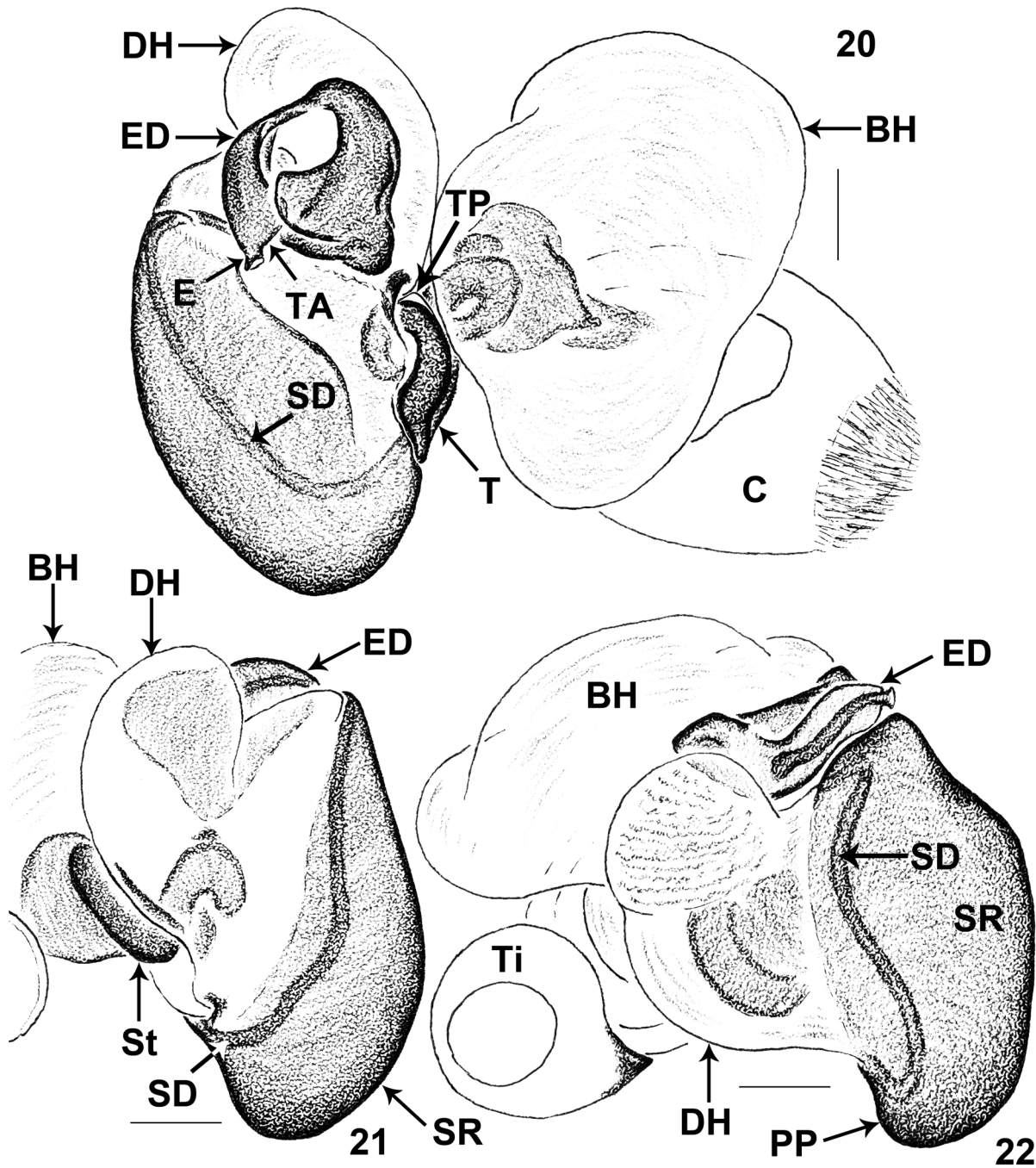


**Figs 10–19.** Scanning electron micrographs of *Manzuma jocquei* (Azarkina, Wesolowska & Russell-Smith, 2011) (10–15, 18–19), *Stenaelurillus guttiger* (Simon, 1901) (16) and *Aelurillus v-insignitus* (Clerck, 1757) (17). **10.** Male left chelicerae, retromarginal view. **11.** Female left chelicerae, retromarginal view. **12.** Male palp, ventral view. **13.** Male palpal tibia, ventral view. **14–17.** Right endites. **14.** Female. **15–17.** Males, *M. jocquei*, *S. guttiger* and *A. v-insignitus* correspondingly. **18–19.** Tarsal claw of legs I in males. **18.** Proteral. **19.** Retrolateral. Scale bars: 0.1 mm.

**Definition**

Small spiders, ranging in body length from 2.80 to 3.75 mm in males and 3.80 to 4.60 mm in females. Sexes similar in general body shape. Males usually smaller and brighter coloured.

CARAPACE. Rather high, highest point located in PLE or just behind PLE. Colour pattern of both sexes usually with two longitudinal stripes running along the ALE–PLE lines (poorly visible or invisible in



**Figs 20–22.** Expanded male palp of *Manzuma petroae* gen. et sp. nov., from South Africa (Roodeport). 20. Retrolatero-apical view. 21. Prolateral view. 22. Prolatero-apical view. Scale bars: 0.1 mm.

some females); fovea present and situated between PLEs; the anterior part of the eye field is covered with short erect bristles similar to the ‘rod-hairs’ described for *Asianellus* Logunov & Heçiak, 1996 (see Logunov & Heçiak 1996: figs 14–16).

CLYPEUS. Medium to high, ranging between 50–83% of the AME diameter in males and 44–63% in females.

CHELICERAE. Medium length, vertical and of usual shape; promargin with two small teeth, basally fused together, retromargin with one tooth (Figs 10–11).

ENDITES. Subparallel, of usual shape, with pale yellow to white apices; in males of all species with small retrolateral “cavity” (EnC) at the base of endites (Fig. 15), while in females this character is absent (Fig. 14).

STERNUM. Ovoid, longer than wide.

PEDICEL. Short, in live specimens not visible in dorsal view (Figs 46, 50, 182–183).

ABDOMEN. Elongate, without scutum; colour markings simple – with white median longitudinal stripe in males (Figs 37, 46, 72–73, 95–96, 117–119, 143–144, 168–169, 182–183, 185, 194) and usually with two median longitudinal lines of white spots in females (Figs 42, 50, 79, 103, 150, 178).

BOOK-LUNG COVERS. Not sclerotized.

SPINNERETS. Medium in size.

LEGS. Subequal in length, with femora of legs III longer than others; female metatarsi I without retrolateral spines; in four species (*M. jocquei*, *M. kenyaensis*, *M. nigritibia* and *M. petroae* gen. et sp. nov.) femora I of male with long white or yellow-white hairs prolaterally; tarsal claws narrow, on legs I–II of male with 7–8 teeth prolaterally and 4–5 retrolaterally (Figs 18–19), on legs I–II of female with 1 or 3–4 small teeth pro- and retrolaterally. Leg formula: III/IV/II/I or III/IV/I/II in both sexes.

FEMALE PALP. General form, without an apical claw.

MALE PALP. Femora of usual form, densely covered with long white hairs; tibia short, with ventral short membranous apophysis (Fig. 13, arrowed) and a well-developed sclerotized ventral apophysis and bulge-like dorsal apophysis (Figs 12, 28, 61, 84, 108, 132, 155, 189), in *M. kenyaensis* gen. et comb. nov. with dorsal bulge (Fig. 84). Cymbium oval, without apical claw; cymbial apex densely covered with short erect hairs and poorly-marked ventral groove. Basal haematodocha is well-developed (Figs 20–22, BH) and subtegulum is simple, visible in an expanded palp only (Figs 21, 54, ST). Tegulum is narrow and elongated, with small apical tegular projection (Fig. 20, TP), in *M. lymph*a and *M. nigritibia* poorly visible. The distal haematodocha is well-developed (Figs 20–22, DH) and the salticid radix has a small and rounded proximal projection (Figs 22, 52, 54, PP). Sperm duct runs from the subtegulum, down to the tegulum, and around the salticid radix in a clockwise direction to the ED (Figs 20–22, SD). The embolic division consists of the embolus with a large embolic base bearing an apical projection (Figs 20, 52, 54–55, ED, E and ApP) and a broad membranous paddle-shaped terminal apophysis curved inside, situated in both pro- and retrolateral sides of the embolus (Figs 56–59). Embolus slightly curved retrolaterally, apex broad, apically with a short membranous process (Figs 53–54). For an explanation of the male palpal composition see Logunov & Azarkina (2018). For an explanation of the embolic division and its complex origin see Logunov (1996b), Azarkina (2002) and Azarkina & Zamani (2019); in the latter paper EO refers to the ED in this paper.



**FEMALE COPULATORY ORGANS.** The epigyne has a small epigynal depression around the copulatory openings. The epigynal pocket is situated at the edge of epigastric furrow, deep, protruding ventrally, with cavity inside (Fig. 166) but epigynal wings are absent (Figs 34, 69–71, 90–91, 93, 113, 140–141, 161–163). The introductory part of insemination ducts is weakly sclerotized, fused around the copulatory openings to a small tube and then bifurcated (Figs 36, 67, 94, 115, 142, 164, ID). The remaining parts of insemination ducts are heavily sclerotized, complex and consist of two multichamber sections (Figs 35, 68, 89, 114, 141, 167). The accessory glands are short (*contra* Wesolowska & van Harten 1994), weakly sclerotized and in most cases seen only from an apical view or through the epigynal tegument (Fig. 164, AG). Fertilization ducts arise anteriorly at the top of spermathecae, near the copulatory openings (Fig. 164, FD).

### Composition

*Manzuma* gen. nov. consists of seven species known from both sexes, except for *M. tanzanica* gen. et sp. nov. known from the male only. It includes *M. botswana* gen. et sp. nov. (♂♀, from Botswana and Republic of South Africa), *M. jocquei* gen. et comb. nov. (♂♀, from Ivory Coast, Nigeria and Central African Republic), *M. kenyaensis* gen. et comb. nov. (♂♀, from Kenya), *M. lymphia* gen. et comb. nov. (♂♀, from Kenya), *M. nigriritibia* gen. et comb. nov. (♂♀, from Ethiopia and Yemen), *M. petroae* gen. et sp. nov. (♂♀, from Republic of South Africa), and *M. tanzanica* gen. et sp. nov. (♂, from Tanzania).

### Distribution

Afrotropical Region (*sensu* Dippenaar-Schoeman & Jocqué 1997) (Fig. 200).

### Natural history

Like other members of the Aelurillina (Prószyński 2017; Logunov & Azarkina 2018), members of *Manzuma* gen. nov. are ground-dwellers, occurring in different biotopes with high insulation.

### Remarks

Females of six *Manzuma* gen. nov. species show close similarity in coloration and great intraspecific variability in the structure of copulatory organs (Figs 69–71, 90–91, 113, 140, 161–163) and are almost



**Figs 23–26.** *Rafalus christophori* Prószyński, 1999, holotype, ♂, general appearance. Scale bars: 1 mm.

indistinguishable from each other. Females of *M. botswana* gen. et sp. nov., *M. kenyaensis* gen. et comb. nov. and *M. petroae* gen. et sp. nov. have a short white stripe on the eye field just behind the AMEs and cheeks with two narrow lines of whitish dense scales running from AMEs to the sides of the carapace (Figs 42, 45, 49–50, 103, 106). Females of *M. jocquei*, *M. lymph*a and *M. nigr*itibia are almost indistinguishable except that *M. jocquei* and *M. lymph*a have the cephalic part of the carapace slightly narrower, than that of *M. nigr*itibia. Females of *M. kenyaensis* are most distinguishable from other species in structure of spermathecae, they have very long introductory parts of the insemination ducts, almost two-three times longer compare to other species (Figs 90–91, 93). For these reasons I was unable to produce a useable key to females.

### Key to species (males)

1. Eye field with median short longitudinal stripe behind AMEs (Figs 37–39, 46, 48, 168–171, 176–177, 182–183) ..... 2
  - Central area of eye field covered with brown short scales, without such a stripe (Figs 72–73, 75–77, 95–96, 99–102, 117–119, 121–125, 143–145, 147–148, 194, 196–199) ..... 3
2. Clypeus covered with short brown scales, with central transverse stripe of white hairs (Figs 38–39, 48). Cheeks with two stripes of white scales running from ALEs to the lateral sides of carapace (Fig. 38). Fm I prolaterally without dense long yellow-white hairs ..... *M. botswana* gen. et sp. nov.
  - Clypeus and cheeks covered with long white hairs; clypeus with diamond-shaped patch of brown hairs between AME and on upper half of clypeus (Figs 170–171, 176–177, 186–187). Fm I prolaterally with dense long yellow-white hairs ..... *M. petroae* gen. et sp. nov.
3. Clypeus covered with sparse long brownish-white hairs (Figs 99–102). Palpal patella brown or brownish yellow dorsally, flattened, without hairs, iridescent (Figs 100–102). Palpal tibia with dorsal bulge (Fig. 84) ..... *M. kenyaensis* (Dawidowicz & et Wesolowska, 2016) gen. et comb. nov.
  - Without these characters ..... 4
4. Clypeus densely covered with long white hairs, without diamond-shaped patch of brown hairs between AMEs; upper half of cheeks under ALEs covered with short brown scales, basal half covered with long white hairs (Figs 75–77, 121–125, 196–197) ..... 5
  - Clypeus with diamond-shaped patch of brown hairs between AME and on upper half of clypeus; cheeks covered with long white hairs from ALEs to margin of carapace (Figs 145, 147–148) ..... *M. nigr*itibia (Caporiacco, 1941) gen. et comb. nov.
5. TA with well developed ApP (Figs 62, 64, 111); T with poorly visible TP (Figs 61, 64, 108, 111) ... ..... 6
  - TA with poorly developed ApP (Fig 192); T with clearly visible TP (Figs 189, 192). Ts, Mt and Ti I ventrally not dark brown (Figs 195, 197–199) ..... *M. tanzanica* gen. et sp. nov.
6. Ts, Mt and Ti I ventrally brown or dark brown (Figs 74–78); tip of ApP pointed dorsally (Fig. 64); tibial apophysis broad (Fig. 61) ..... *M. jocquei* (Azarkina, Wesolowska & Russell-Smith, 2011) gen. et comb. nov.
  - Ts, Mt and Ti I ventrally yellow or brownish (Figs 116, 120–122); tip of ApP pointed ventrally (Fig. 111); tibial apophysis narrow (Fig. 108) ..... *M. lymph*a (Próchniewicz & Heçiak, 1994) gen. et comb. nov.

*Manzuma botswana* gen. et sp. nov.

urn:lsid:zoobank.org:act:63B5C104-A877-448E-804A-36966BDAB2FC

Figs 27–48, 200

**Diagnosis**

*Manzuma botswana* gen. et sp. nov. is most similar to *M. petroae* gen. et sp. nov. in body coloration. The males of *M. botswana* gen. et sp. nov. differ in having the clypeus covered with short brown scales, medially with a thin vertical stripe of white hairs (Figs 39, 48), while in *M. petroae* gen. et sp. nov. the clypeus is covered with long white hairs with a diamond-shaped patch of brown hairs between AME and on upper half of clypeus in the center (Figs 170–173, 176–177, 186–187). The cheeks in *M. botswana* gen. et sp. nov. have a thin white line running from ALEs to the sides of the carapace (Fig. 38), while in *M. petroae* gen. et sp. nov. the cheeks are covered with yellowish-white hairs (Figs 171, 177). Apical projection (ApP) in *M. botswana* gen. et sp. nov. is large and robust (Fig. 31), while ApP in *M. petroae* gen. et sp. nov. is smaller in size, rounded in lines and slightly bent dorsally (Fig. 158). The females of *M. botswana* gen. et sp. nov. differ in having a short narrow white stripe on the eye field just behind the AMEs (Figs 42, 44), while females of *M. petroae* gen. et sp. nov. have short wide stripe (Figs 49–51), almost invisible in specimens preserved in alcohol (Figs 178, 180).

**Etymology**

The species epithet is a noun in apposition taken from the country of the type locality, Botswana.

**Material examined****Holotype**

BOTSWANA • ♂; North-West/Ngamiland District, Okavango Delta, Maxwee; 19.4667° S, 23.6500° E; May–Sep. 1976; A. Russell-Smith leg.; floodplain, grassland; MRAC.

**Paratypes**

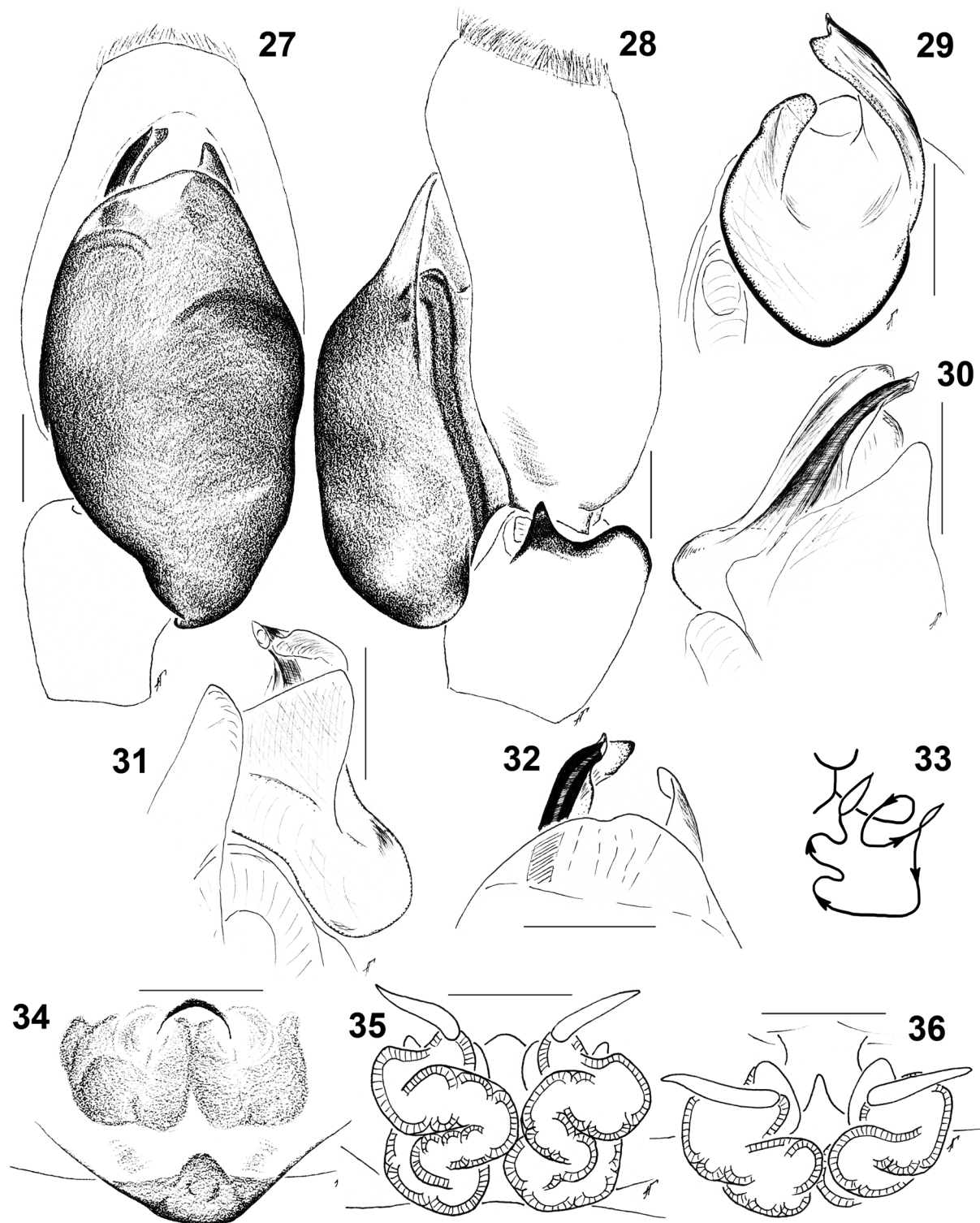
BOTSWANA – North-West/Ngamiland District • 4 ♂♂; same collection data as for holotype; BMNH • 4 ♂♂; same collection data as for holotype; ZMB/Arach 49129 • 1 ♂; same collection data as for holotype; MRAC • 1 ♂; same collection data as for preceding; 1 Sep. 1975; SMF • 1 ♂; same collection data as for preceding; 28 Nov. 1975; MHNG • 1 ♂; same collection data as for preceding; 2 Jan. 1976; BMNH • 9 ♂♂, 1 ♀; Okavango Delta, Shorobe Lagoon; ca 19.7500° S, 23.7500° E; 24 Jun. 1975; A. Russell-Smith leg.; grassland; pitfall traps; BMNH • 3 ♂♂; same collection data as for preceding; ISEA 001.8345 • 3 ♂♂; same collection data as for preceding; NCA 2019/710 • 3 ♂♂; same collection data as for preceding; MMUE G7631.1 • 1 ♀; Moremi Game Reserve, Mboma Lagoon; ca 19.1833° S, 23.2667° E; 13 Aug. 1977; A. Russell-Smith leg.; in *Hyparrhenia* grassland; MRAC • 1 ♀; Crocodile Camp; ca 19.9167° S, 23.5000° E; 25 Jun. 1979; B. Taylor and A. Morely leg.; NCA 83/494.

SOUTH AFRICA • 1 ♂; Limpopo Province, Lekgalameetse Reserve; ca 24.1833° S, 30.1833° E; 25 Sep. 2015; P. & L. Webb leg.; NCA 2019/711.

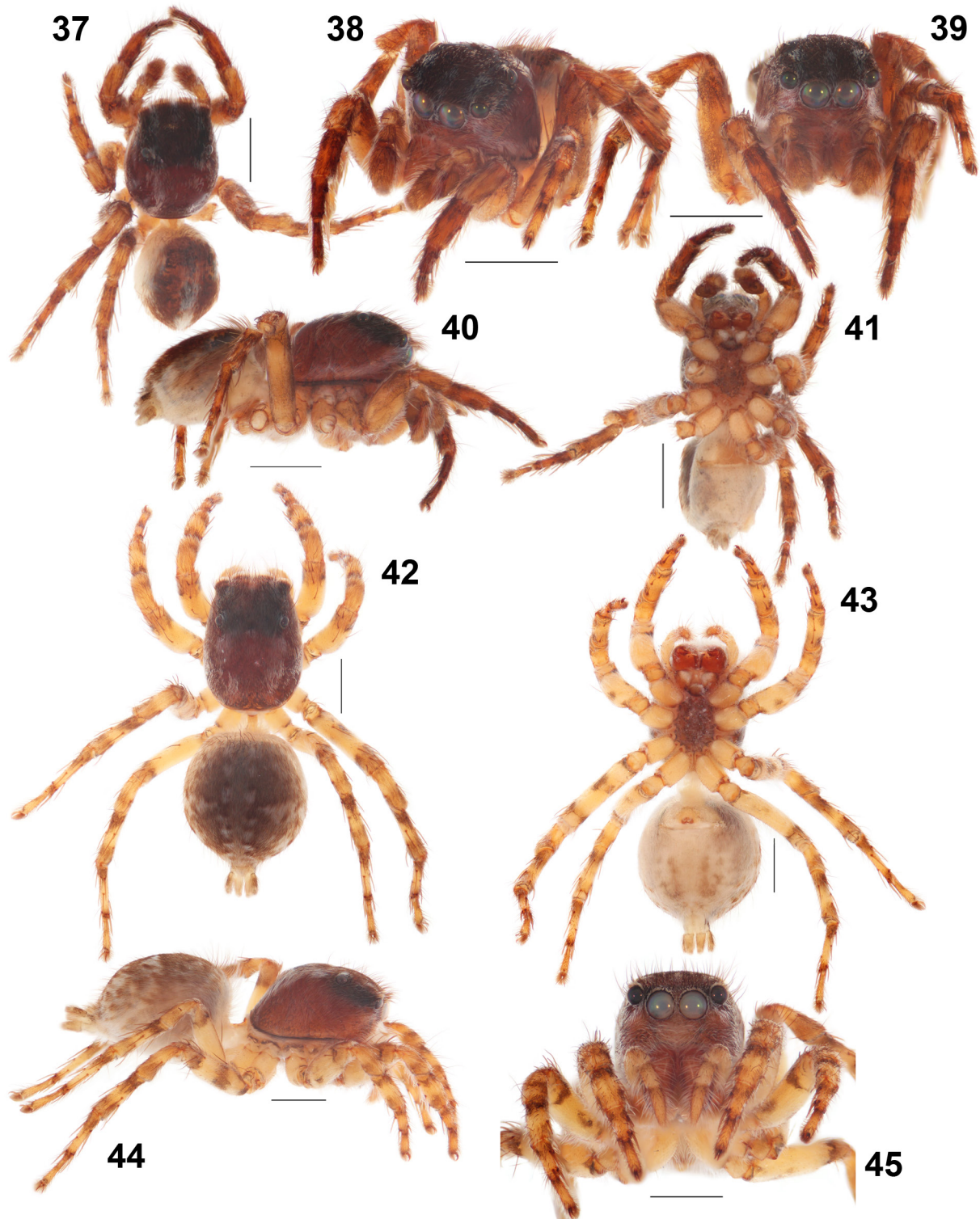
**Description**

**Male** (the smallest holotype MRAC, the biggest NCA 2019/711)

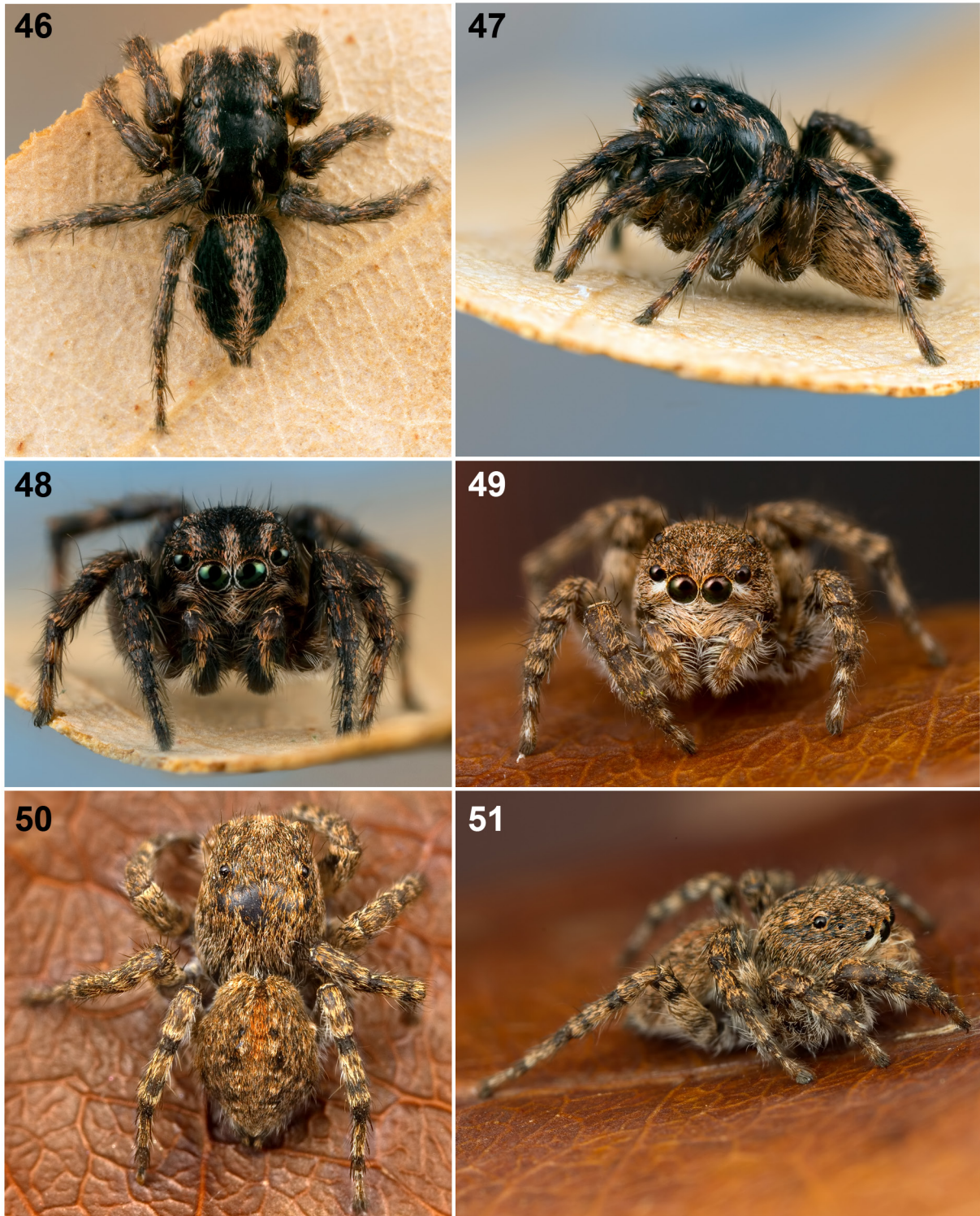
Measurements: carapace: 1.70–1.90 long, 1.45–1.50 wide, 1.10 high. Abdomen: 1.70–1.75 long, 1.35–1.50 wide. Ocular area: 0.80–0.85 long, 1.15–1.20 wide anteriorly, 1.10–1.15 wide posteriorly. Cheliceral length 0.55–0.60. Clypeal height 0.25. Diameter of AME 0.30–0.35. Length of leg segments (bigger NCA 2019/711): I 1.00 + 0.65 + 0.70 + 0.55 + 0.50 (3.40); II 1.05 + 0.65 + 0.65 + 0.55 + 0.45 (3.35); III 1.50 + 0.80 + 0.95 + 1.00 + 0.50 (4.75); IV 1.30 + 0.60 + 0.85 + 1.00 + 0.50 (4.25). Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1-0, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm



**Figs. 27–36.** *Manzuma botswana* gen. et sp. nov., holotype, ♂ (27–28), paratype, ♂ from Maxwee (29–32), paratype, ♀ from Shorobe Lagoon (33–36). 27–28. Male palp. 27. Ventral view. 28. Retrolateral view. 29–32. Embolic division. 29. Dorsal view. 30. Prolateral view. 31. Retrolateral view. 32. Ventral view. 33. Diagrammatic course of the insemination ducts. 34. Epigyne, ventral view. 35–36. Spermathecae. 35. Dorsal view. 36. Apical view. Scale bars: 0.1 mm.



**Figs 37–45.** *Manzuma botswana* gen. et sp. nov., holotype, ♂ (37–41) and paratype, ♀ from Moremi GR (42–45), general appearance. Scale bars: 1 mm.



**Figs 46–51.** 46–48. *Manzuma botswana* gen. et sp. nov., general appearance of live ♂ from South Africa. 49–51. *Manzuma petroae* gen. and sp. nov., general appearance of live ♀ from South Africa, photos © Vida van der Walt.

d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0; pr 1-1-1, rt 1-1-0; v 1-1-2 ap; Mt pr and rt 1-1ap, 2-2 ap. III: Fm d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1-1, rt 1-1-1-0, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 2-0-2 ap. IV: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 2-0-2 ap. Coloration (in alcohol: Figs 37–41; live specimens: 46–48). Carapace brown, eye field dark brown, covered with short brown scales, with two longitudinal stripes of white scales running from ALEs to the rear end, sides covered with white thin stripe of scales. Eye field with short white longitudinal stripe of white scales running from AMEs to  $\frac{1}{2}$  length of eye field. Sternum yellow-brown to brown. Endites and labium brown-yellow. Chelicerae yellow-brown. Clypeus yellow-brown to brown, with central transverse stripe of white hairs. Cheeks brown, with two stripes of white scales running from ALEs to the lateral sides of carapace. Abdomen: dorsum brown, medially with longitudinal white stripe; venter brownish yellow. Book-lungs covers yellow. Spinnerets: anterior brownish yellow, posterior brown. All legs yellowish-brown. Femora of all legs apically brown. Patellae I ventrally brown. Tibiae, metatarsi and tarsi I prolaterally and ventrally dark brown. Palps brown-yellow. Palpal femora retrolaterally covered with short dark-brown hairs, ventrally and prolatero-apically densely covered with white hairs. Tibia and cymbium covered with brown hairs, retrolaterally with white hairs. Palpal structure as in Figs 27–32: tegulum with clearly visible proximal projection; apical projection large; TA apically pointed.

#### Female (BMNH and MRAC)

Measurements: carapace: 2.15 long, 1.45 wide, 1.20 high. Abdomen: damaged and cannot be measured. Ocular area: 1.00 long, 1.35 wide anteriorly, 1.30 wide posteriorly. Cheliceral length 0.75. Clypeal height 0.25. Diameter of AME 0.40. Length of leg segments: I 1.10 + 0.70 + 0.80 + 0.50 + 0.50 (3.60); II 1.10 + 0.70 + 0.70 + 0.50 + 0.45 (3.45); III 1.80 + 0.90 + 1.00 + 0.90 + 0.70 (5.30); IV 1.50 + 0.70 + 1.00 + 1.20 + 0.60 (5.00). Leg spination: I: Fm d 0-1-1-4; Tb pr 1-1, v 2-2-2 ap; Mt pr 1-1 ap, v 2-2 ap. II: Fm d 0-1-1-4; Tb pr 1-1, v 1-1-2 ap; Mt pr 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol: Figs 42–45). Coloration similar to that of males. Clypeus without medial thin white stripe. Cheeks with white stripes of scales running from outer rim of AME's to lateral sides of carapace. All legs brownish yellow. Abdomen: dorsum brown, medially with two longitudinal rows of white dots. Spinnerets brownish yellow. Epigyne and spermathecae as in Figs 33–36: copulatory openings almost invisible; epigynal pocket low, central structure is  $\frac{1}{3}$  of epigynal height; inferior border of EP convex caudally.

#### Distribution

Botswana, South Africa (Fig. 200).

*Manzuma jocquei* (Azarkina, Wesolowska & Russell-Smith, 2011) gen. et comb. nov.  
Figs 10–15, 18–19, 52–82, 200

*Aelurillus jocquei* Azarkina, Wesolowska & Russell-Smith, 2011 in Wesolowska & Russell-Smith, 2011: 557, figs 7–13, 215–216; ♀ holotype from BMNH, not examined.

#### Diagnosis

*Manzuma jocquei* is most similar in body coloration to *M. lymph*a, *M. nigr*itibia and *M. tanzanica*. The males can be distinguished from *M. tanzanica* by the well developed apical projection (ApP) (poorly developed in *M. tanzanica*) (cf. Figs 57–58, 64 and 190, 192 correspondingly). From *M. lymph*a is can be distinguished by more robust ApP pointed dorsally in *M. jocquei* (Figs 55, 64) while in *M. lymph*a ApP smaller in size and pointed ventrally (Fig. 111). From *M. nigr*itibia it can be distinguished by the

coloration of the clypeus and cheeks. The upper half of the cheeks under ALEs are covered with short brown scales and the basal half of the cheeks are covered with long white hairs (Figs 75–77) while in *M. nigritibia* the clypeus has a diamond-shaped patch of brown hairs between AME and on the upper half of clypeus, the cheeks are covered with long white hairs from ALEs to margin of carapace (Figs 145, 147). The females cannot be distinguished from *M. lymphæ* and *M. nigritibia* but can be distinguished from *M. botswana* gen. et sp. nov. and *M. petroae* gen. et sp. nov. by the absence of white stripes of scales running from the outer rim of AME's to the lateral sides of carapace (cf. Figs 82, 129, 152, 44 and 180 correspondingly).

### Material examined

CENTRAL AFRICAN REPUBLIC • 1 ♀; Bambari; ca 5.7500° N, 20.6667° E, Aug.–Sep. 1967; G. Pierrard leg.; MRAC 133.906.

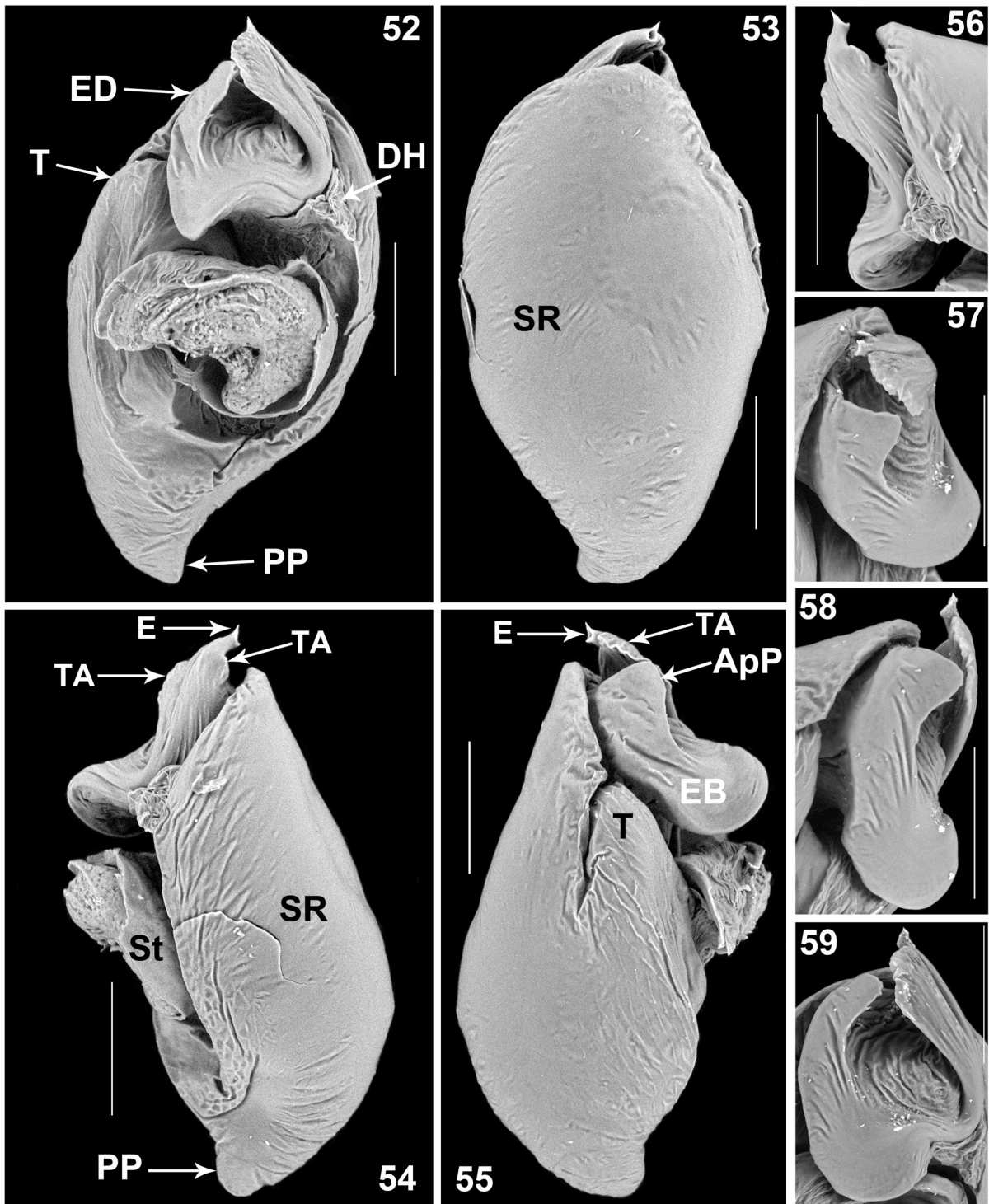
CÔTE D'IVOIRE – **Gôh-Djiboua District** • 6 ♂♂; Gagnoa, quadrats; ca 6.1333° N, 5.9333° E; 19 May 1994; A. Russell-Smith leg.; upland rice; MRAC • 5 ♂♂; same collection data as for preceding; BMNH • 5 ♂♂; same collection data as for preceding; MHNG • 5 ♂♂; same collection data as for preceding; SMF • 5 ♂♂; same collection data as for preceding; ZMB/Arach 49128. – **Vallée du Bandama District** • 5 ♂♂; Bouaké, quadrats, WARDA; ca 7.6833° N, 5.0333° W; 17 Aug. 1994; A. Russell-Smith leg.; weed control experiment; BMNH • 3 ♂♂; same collection data as for preceding; NCA 2019/729 • 6 ♂♂; same collection data as for preceding; ISEA 001.8351 • 1 ♂, 3 ♀♀; same collection data as for preceding; ISEA 001.8352 • 5 ♂♂; same collection data as for preceding; MMUE G7631.2 • 5 ♂♂, 2 ♀♀; same collection data as for preceding; MMUE G7631.3 • 1 ♂, 2 ♀♀; same collection data as for preceding; NCA 2019/730 • 2 ♀♀; same collection data as for preceding; ZMB/Arach 49130 • 1 ♀; same locality as for preceding; 30 Nov. 1994; A. Russell-Smith leg.; SMF. – **Yamoussoukro Autonomous District** • 1 ♂; Kossou; ca 7.0000° N, 5.4833° W; 2 Feb. 1975; R. Jocqué leg.; savanna; MRAC 152.953. – **Montagnes District** • 3 ♂♂; Man, road to Tonkoui; ca 7.4000° N, 7.5167° W; 13 Nov. 1975; J.-C. Ledoux leg.; degraded forest, on the ground; MNHN • 1 ♂; Cavally forest, ca 6.0833° N, 7.6000° W; 16 Nov. 1975; J.-C. Ledoux leg.; rotten wood; MNHN • 5 ♂♂; Cavally forest, Litière; 6.0833° N, 7.6000° W, 17 Nov. 1975; J.-C. Ledoux leg.; MNHN. – **Lagunes District** • 1 ♀; Réserve naturelle scientifique de Lamto; ca 6.2167° N, 5.0333° W; 23 Oct. 1975; J.-C. Ledoux leg.; *Loudetia* savanna, on the ground; MNHN.

### Description

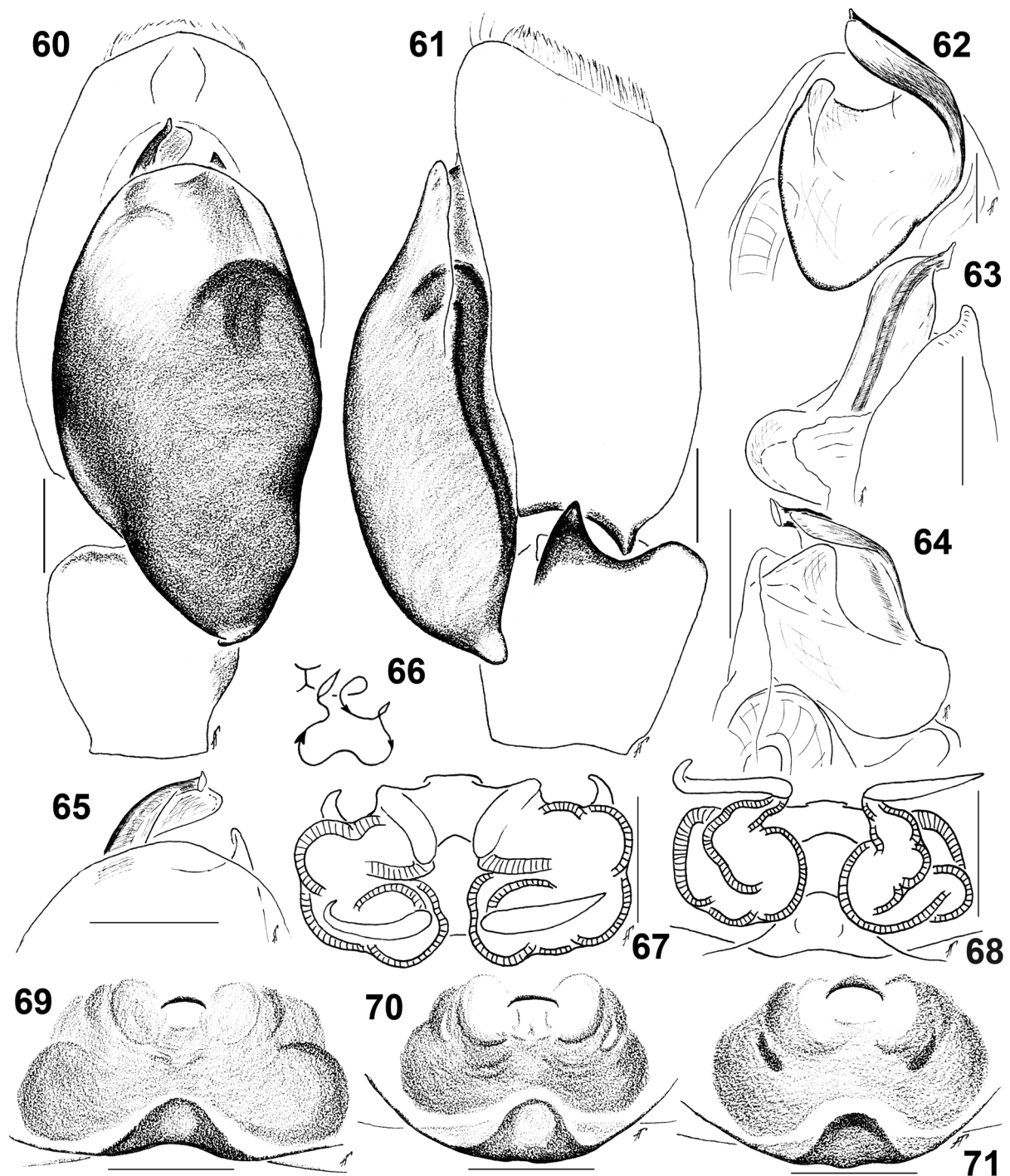
**Male** (the smallest ZMB/Arach 49128, the biggest ZMB/Arach 49128)

Measurements: carapace: 1.50–2.00 long, 1.20–1.55 wide, 0.85–1.10 high. Abdomen: 1.30–1.75 long, 1.00–1.30 wide. Ocular area: 0.70–0.90 long, 1.05–1.20 wide anteriorly, 1.00–1.15 wide posteriorly. Cheliceral length 0.50–0.60. Clypeal height 0.15–0.25. Diameter of AME 0.30–0.35. Length of leg segments: I 1.00 + 0.60 + 0.60 + 0.50 + 0.45 (3.15); II 1.00 + 0.60 + 0.65 + 0.50 + 0.45 (3.20); III 1.50 + 0.70 + 0.70 + 0.90 + 0.50 (4.30); IV 1.30 + 0.60 + 0.70 + 0.90 + 0.55 (4.05). Leg spination: I: Fm d 0-1-1-5; Pt pr 1 or pt and rt 1; Tb pr 1-1-1, rt 0-1-0, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Pt pr 1 or pr and rt 1; Tb d 1-0-0; pr 1-1-1, rt 0-1-0; v 1-1-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-5 or 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 2-0-2 ap. IV: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 2-0-2 ap. Coloration (in alcohol; Figs 72–78). Carapace brown, eye field dark brown, covered with brown scales, with two longitudinal white stripes of scales running from PLEs to the rear margin of the carapace; sides covered with white stripes of scales. Sternum brown. Endites and labium yellow-brown. Chelicerae brown, covered with white hairs. Clypeus and cheeks brown, densely covered with long white hairs, upper half of cheeks under ALEs covered with short brown scales, basal half of cheeks covered with long white hairs. Abdomen: dorsum dark brown, medially with longitudinal white stripe; ventral yellow-grey. Book-lung covers yellow-grey. Spinnerets: anterior

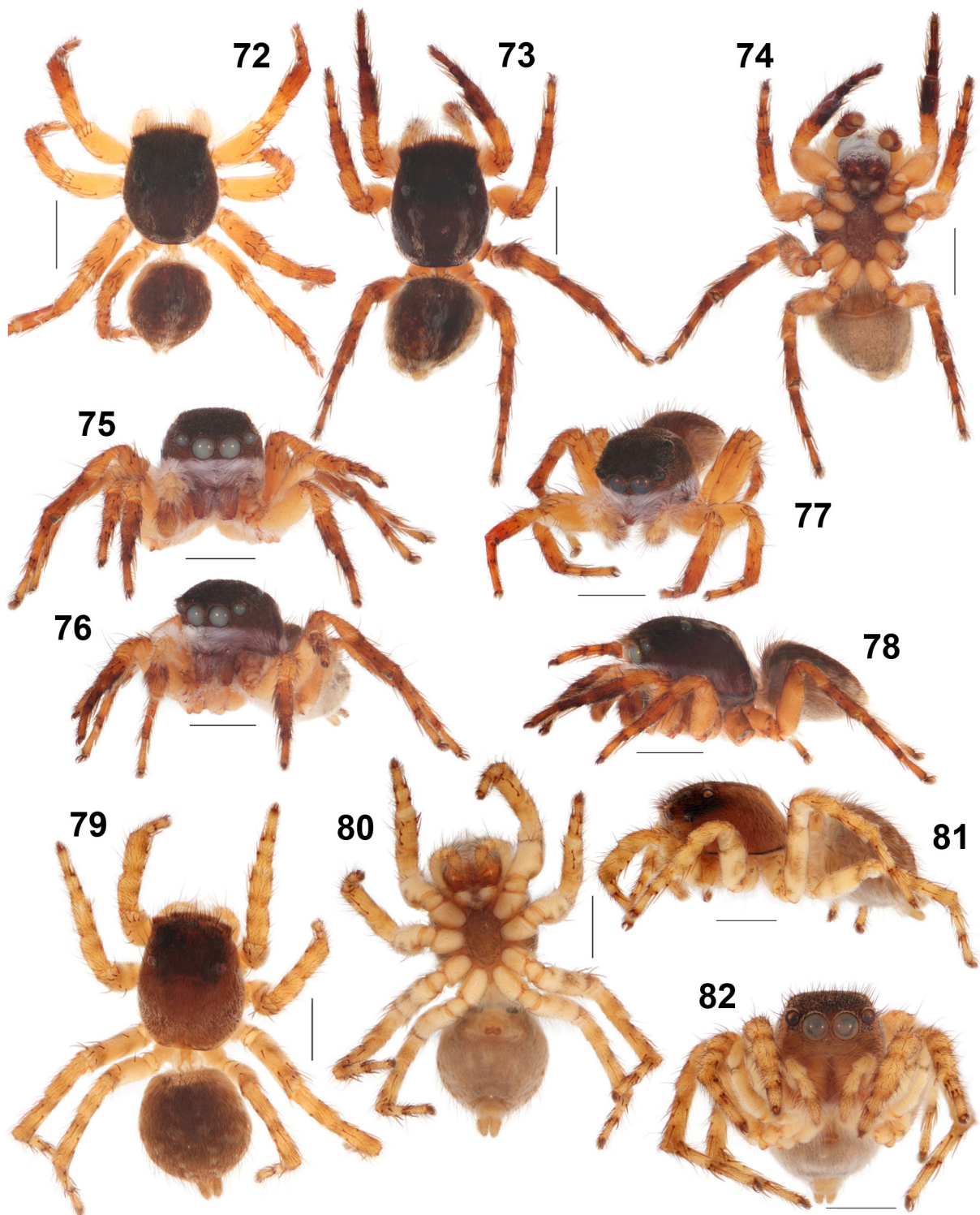




**Figs 52–59.** *Manzuma jocquei* (Azarkina, Wesolowska & Russell-Smith, 2011) gen. et comb. nov., from Côte d’Ivoire (Gagnoa), scanning electron micrographs. **52–55.** Male bulbus. **52.** Dorsal view. **53.** Ventral view. **54.** Prolateral view. **55.** Retrolateral view. **56–59.** Embolic division. **56.** Prolateral view. **57.** Retrolatero-apical view. **58.** Retrolateral view. **59.** Dorsal view. Scale bars: 0.1 mm.



**Figs 60–71.** *Manzuma jocquei* (Azarkina, Wesolowska & Russell-Smith, 2011) gen. et comb. nov., ♂♂ from Côte d’Ivoire (Gagnoa, ZMB/Arach 49128, SMF) (60–65), ♀♀ from Côte d’Ivoire (Bouaké, ISEA 001.8352, NCA 2019/730) (67–70) and Central African Republic (Bambari, MRAC 133.906) (71). 60–61. Male palp. 60. Ventral view. 61. Retrolateral view. 62–65. Embolic division. 62. Dorsal view. 63. Prolateral view. 64. Retrolateral view. 65. Ventral view. 66. Diagrammatic course of the insemination ducts. 67–68. Spermathecae. 67. Apical view. 68. Dorsal view. 69–71. Epigyne, ventral view. Scale bars: 0.1 mm.



**Figs 72–82.** *Manzuma jocquei* (Azarkina, Wesolowska & Russell-Smith, 2011) gen. et comb. nov., ♂♂ from Gagnoa (73–76, 78) and Bouaké (72, 77), ♀ from Bouaké (79–82, NCA 2019/730), general appearance. Scale bars: 1 mm.

yellow, posterior brown. All legs yellow to brownish yellow. Femora I prolaterally densely covered with long white hairs. Tibiae, metatarsi and tarsi I ventrally dark-brown. Palps yellow, covered with long white hairs; cymbium brown. Palpal structure as in Figs 52–59, 60–65: tegulum with small, almost invisible proximal projection; apical projection medium in size; TA broad apically.

#### Female (NCA 2019/730)

Measurements: carapace: 2.10 long, 1.80 wide, 1.10 high. Abdomen: 2.30 long, 1.80 wide. Ocular area: 0.95 long, 1.40 wide anteriorly, 1.35 wide posteriorly. Cheliceral length 0.75. Clypeal height 0.20. Diameter of AME 0.45. Length of leg segments: I 1.10 + 0.70 + 0.70 + 0.45 + 0.40 (3.35); II 1.00 + 0.60 + 0.60 + 0.50 + 0.45 (3.15); III 1.50 + 0.90 + 0.90 + 0.90 + 0.60 (4.80); IV 1.30 + 0.80 + 0.80 + 1.00 + 0.60 (4.50). Leg spination: I: Fm d 0-1-1-4; Tb pr 0-0 or 1-0, v 2-2-2 ap; Mt pr 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-4; Tb pr 0-1 or 1-1, v 1-1-2 ap; Mt pr 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 2-0-2 ap. IV: Fm d 0-1-1-1 or 0-1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr and rt 0-1-1 or 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 2-0-2 ap. Coloration (in alcohol; Figs 79–82). Carapace brown, eye field dark brown, covered with whitish scales, with two hardly visible longitudinal white stripes of scales. Sternum yellow-brown. Endites, labium and chelicerae brownish yellow. Clypeus and cheeks brownish yellow, covered white long hairs. Abdomen: dorsum brown, medially with two longitudinal rows of white spots; venter yellow-grey. Book-lung covers grey-yellow. Spinnerets yellow. All legs and palps yellow. All femora apically brownish. Palps yellow, palpal tibia brownish. Epigyne and spermathecae as in Figs 66–71: copulatory openings almost invisible; epigynal pocket low to medium, central structure about  $\frac{1}{3}$ – $\frac{1}{2}$  of epigynal height.

#### Distribution

Côte d'Ivoire, Nigeria and Central African Republic (Fig. 200).

#### Comments

The female from Central African Republic is provisionally assigned to *Manzuma jocquei* gen. et comb. nov. This female seems to belong to another, undescribed *Manzuma* species occurring in Central Africa. Males collected together with the females from Central Africa are required to resolve this problem.

*Manzuma kenyaensis* (Dawidowicz & Wesółowska, 2016) gen. et comb. nov.  
Figs 83–106, 200

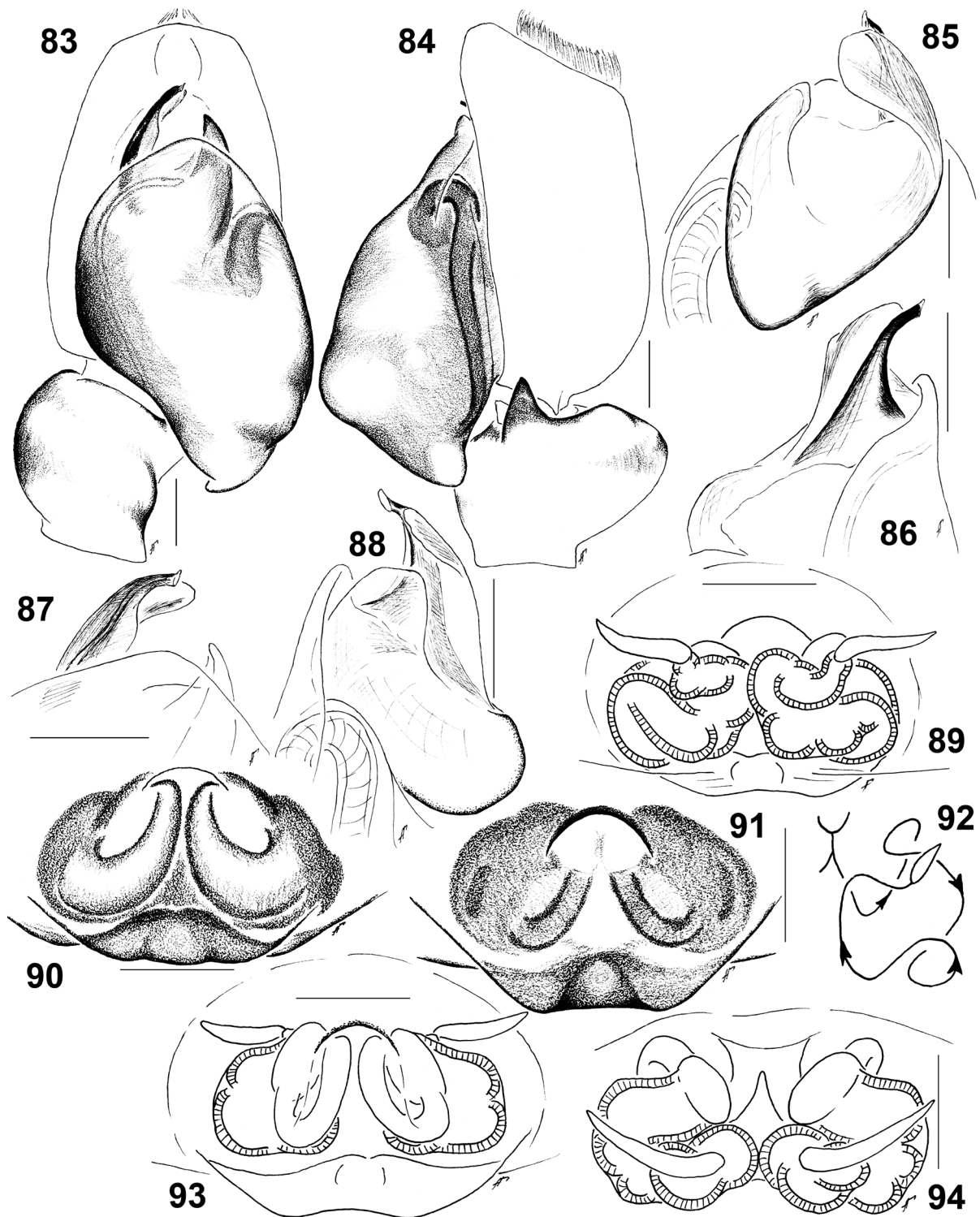
*Langelurillus kenyaensis* Dawidowicz & Wesółowska, 2016: 448, figs 43–44; ♀ holotype from MEUU, not examined.

#### Diagnosis

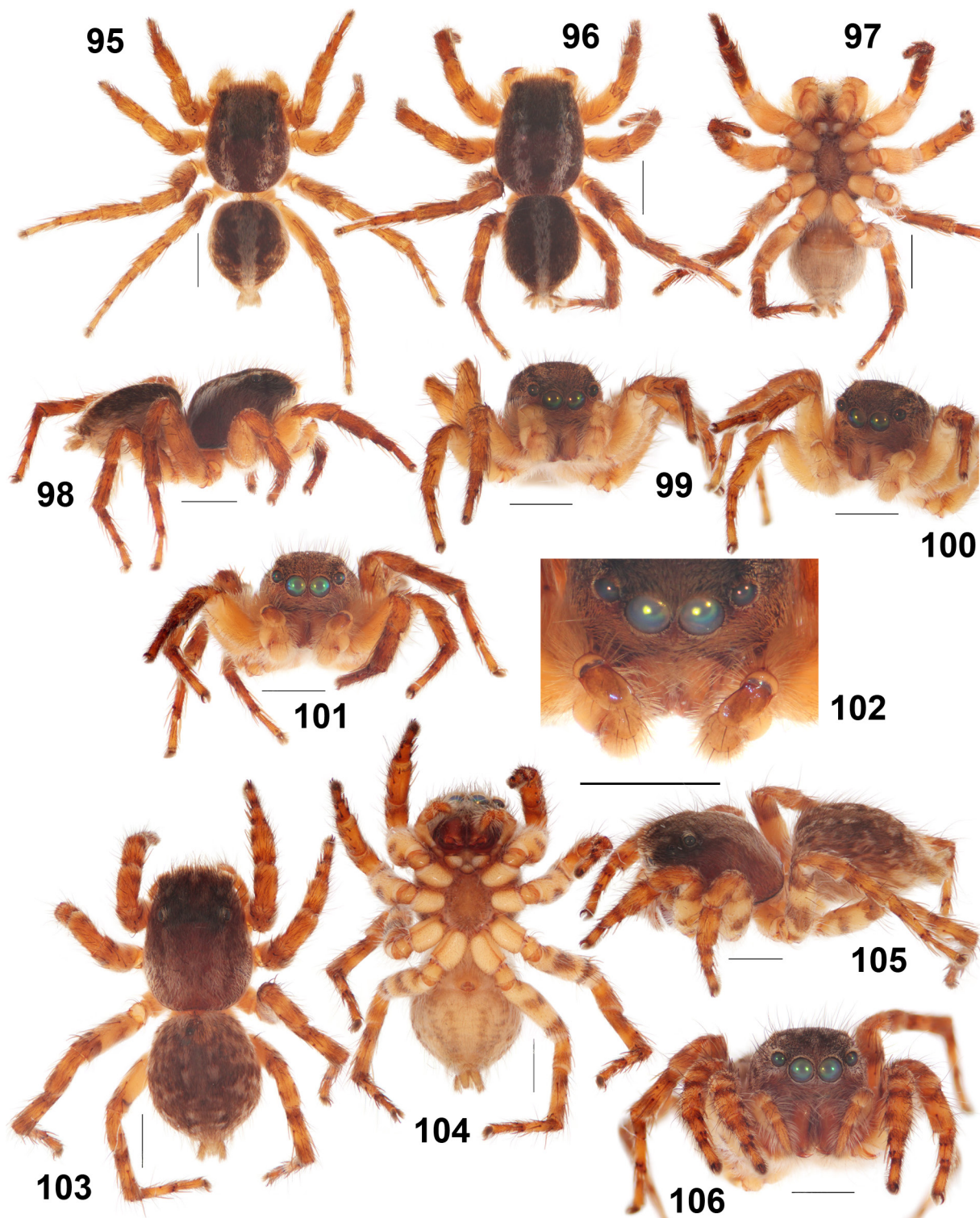
The males of *M. kenyaensis* gen. et comb. nov. can easily be distinguished from those of all other species of *Manzuma* gen. nov. by dorsal bulge on palpal tibia (Fig. 84) and palpal patella brown or brownish yellow dorsally, flattened, almost without hairs, iridescent (Fig. 102). The females of *M. kenyaensis* gen. et comb. nov. can easily be distinguished from other *Manzuma* gen. nov. species by long introductory parts of the insemination ducts (Figs 90–91, 93).

#### Material examined

KENYA – **West Pokot Country** • 1 ♀; Kamatira; ca 1.2500° N, 35.1333° E; 2000 m a.s.l., 24 Aug. 1974; J. Murphy leg.; roadside scrub; MMUE G7572.11 • 6 ♂♂, 1 ♀; Kwaisagat; ca 1.2500° N, 35.1667° E; 2400 m a.s.l.; 1 Jul. 1984; J. Murphy leg.; MMUE G7572.12, MMUE G7572.13. – **Nyeri Country** • 1 ♂, 1 ♀; Naro Moru; ca 0.1500° S, 37.0166° E; 2000 m a.s.l.; 17 Aug. 1974; J. Murphy leg.; riverside scrub; ISEA 001.8307. – **Trans-Nzoia Country** • 1 ♂; Kitale Forest; ca 1.0167° N, 35.0000° E; 2000 m



**Figs 83–94.** *Manzuma kenyaensis* (Dawidowicz & Wesolowska, 2016) gen. et comb. nov., ♂ from Kwaisagat (MMUE G 7572.12) (83–88), ♀ from Kamatira (MMUE G7572.11) (90) and Kwaisagat (MMUE G 7572.13) (89, 91–94). **83–84.** Male palp. **83.** Ventral view. **84.** Retrolateral view. **85–88.** Embolic division. **85.** Dorsal view. **86.** Prolateral view. **87.** Ventral view. **88.** Retrolateral view. **89.** Spermathecae, dorsal view. **90–91.** Epigyne, ventral view. **92.** Diagrammatic course of the insemination ducts. **93–94.** Spermathecae. **93.** Ventral view. **94.** Apical view. Scale bars: 0.1 mm.



**Figs 95–106.** *Manzuma kenyaensis* (Dawidowicz & Wesolowska, 2016) gen. et comb. nov., ♂ from Kwasigat (MMUE G 7572.12) (95–102), ♀ from Naro Moru (ISEA 001.8307) (103–106), general appearance. Scale bars: 1 mm.

a.s.l.; 8 Aug. 1972; J. Murphy leg.; scrub, litter; MMUE G7572.14. – **Elgeyo-Marakwet Country** • 1 ♂; Kaibos [=Kaipos] Hill; ca 1.1833° N, 35.1500° E; 2600 m a.s.l.; 2 Sep. 1984; J. Murphy leg.; jungle edge; MMUE G7572.47.

### Description

#### Male (MMUE G7572.12)

Measurements: carapace: 1.80–2.00 long, 1.60–1.70 wide, 1.25 high. Abdomen: 1.80–1.90 long, 1.50–1.60 wide. Ocular area: 0.80–0.95 long, 1.15–1.25 wide anteriorly, 1.05–1.15 wide posteriorly. Cheliceral length 0.60–0.75. Clypeal height 0.25. Diameter of AME 0.35–0.400. Length of leg segments: I 1.30 + 0.65 + 0.70 + 0.45 + 0.45 (3.55); II 1.25 + 0.60 + 0.65 + 0.50 + 0.45 (3.20); III 1.70 + 0.80 + 0.80 + 1.00 + 0.60 (4.90); IV 1.50 + 0.75 + 0.80 + 1.00 + 0.60 (4.65). Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 0-0 or 1-0, pr 1-1-1, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0; pr 1-1-1, rt 1-0-0 or 1-1-0; v 1-1-2 ap; Mt pr and rt 1-1ap, v 2-2 ap. III: Fm d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1-0 or 1-1-1-1, rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 2-0-2 ap. IV: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 95–102). Carapace brown, eye field dark brown, covered with brownish-white scales, with two longitudinal stripes of white scales running from AME to the rear margin of the carapace. Sternum yellow-brown. Endites and labium brownish yellow. Chelicerae brown-yellow. Clypeus and cheeks brown, sparsely covered with long whitish-yellow hairs. Abdomen: dorsum dark brown, medially with longitudinal white stripe; ventral greyish-yellow. Book-lung covers grayish-yellow. Spinnerets brownish yellow. All legs brownish yellow. Femora of all legs apically brown. Femora I densely covered with long whitish-yellow hairs. Patellae, tibiae, metatarsi and tarsi of all legs brown, in some specimens not. Palps yellow, covered with long whitish-yellow hairs. Palpal patella almost without hairs dorsally, with a few apical bristles, iridescent lustrous, yellow-brownish to brown. Cymbium yellow. Palpal structure as in Figs 83–88: palpal tibia with dorsal bulge, embolus thin in apical part with slightly widened tip, apical projection well developed.

#### Female (the smallest ISEA 001.3807, the biggest MMUE G7572.13)

Measurements: carapace: 2.50–2.80 long, 2.10–2.30 wide, 1.30–1.60 high. Abdomen: 2.50–3.00 long, 2.10–2.70 wide. Ocular area: 1.00–1.10 long, 1.40–1.50 wide anteriorly, 1.35–1.45 wide posteriorly. Cheliceral length 0.80–1.00. Clypeal height 0.20–0.30. Diameter of AME 0.40–0.45. Length of leg segments: I 1.50 + 0.80 + 0.90 + 0.60 + 0.55 (4.35); II 1.50 + 0.80 + 0.80 + 0.60 + 0.55 (4.25); III 2.00 + 1.10 + 1.10 + 1.20 + 0.65 (6.05); IV 1.80 + 0.90 + 1.20 + 1.30 + 0.80 (6.00). Leg spination: I: Fm d 0-1-1-4; Tb pr 0-0 or 0-1, v 2-2-2 ap; Mt pr 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Tb pr 0-1, v 1-1-2 ap; Mt pr 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 2-0-2 ap. IV: Fm d 0-1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 103–106). Carapace brown, eye field dark brown, covered with whitish transparent scales, with broad longitudinal white stripe medially, formed two lateral white stripes of white scales running from PLEs to the rear margin of the carapace. Eye field with short white longitudinal stripe of white scales running from AMEs to one third of length of eye field; around PME with two small patches of white scales. Sternum, endites and labium yellowish-brown. Chelicerae brown. Clypeus and cheeks brown, sparsely covered with long transparent white hairs. Cheeks with white stripes of scales running from outer rim of AME's to lateral sides of carapace. Abdomen: dorsum brown, medially with two longitudinal rows of white spots, with white patches laterally; venter brownish yellow, with numerous longitudinal rows of brown spots. Book-lungs covers yellow-brown. Spinnerets yellow. All legs brown-yellow, with brown patches and semi-rings. Palps yellow-brown. Epigyne and spermathecae as in Figs 89–94: introductory parts of the insemination ducts long, running down then up; epigynal pocket low, central structure is  $\frac{1}{3}$  of epigynal height, accessory glands small, almost invisible.

### Distribution

Kenya (Fig. 200).

***Manzuma lymph*** (Próchniewicz & Heçiak, 1994) gen. et comb. nov.  
Figs 107–130, 200

*Aelurillus lymphus* Próchniewicz & Heçiak, 1994: 34, figs 1a–f; ♂ holotype from NHRS, examined.

*Rafalus lymphus* – Prószyński 1999: 100.

**Diagnosis**

By the body coloration, *M. lymph* is most similar to *M. jocquei* and *M. tanzanica* gen. et sp. nov. The males can be distinguished from those of *M. jocquei* by the smaller apical projection (ApP), with its tip pointed ventrad (bigger and pointed dorsad in *M. jocquei*) (cf. Figs 109, 111 and 57–58, 64 correspondingly); the tibial apophysis narrow in *M. lymph* (Fig. 108) while it is broad in *M. jocquei* and *M. tanzanica* gen. et sp. nov. (Figs 61 and 188, correspondingly). From the latter species, *M. lymph* can be distinguished by the larger ApP (small, poorly visible in *M. tanzanica* gen. et sp. nov.) (cf. Figs 111 and 192). The females of *M. lymph* are indistinguishable from those of *M. jocquei* and *M. nigritiba*, but can be separated from those of *M. botswana* gen. et sp. nov. and *M. petroae* gen. et sp. nov. by the absence of white scaly stripes running from the AME's outer rim to the lateral sides of carapace (cf. Figs 129, 82, 152, 44 and 180).

**Material examined**

**Holotype**

KENYA • ♂, holotype of *Aelurillus lymphus*; Marsabit Country, Mountain forest at the craters rim of Gof Sokorte Guda (“Lake Paradise”); ca 2.2667° N, 37.9333° E; 15 Jan. 1975; T. Krønstedt leg.; NHRS 000070049.

**Paratype**

KENYA • 1 ♂; same collection data as for holotype; NHRS 000070049.

**Other material**

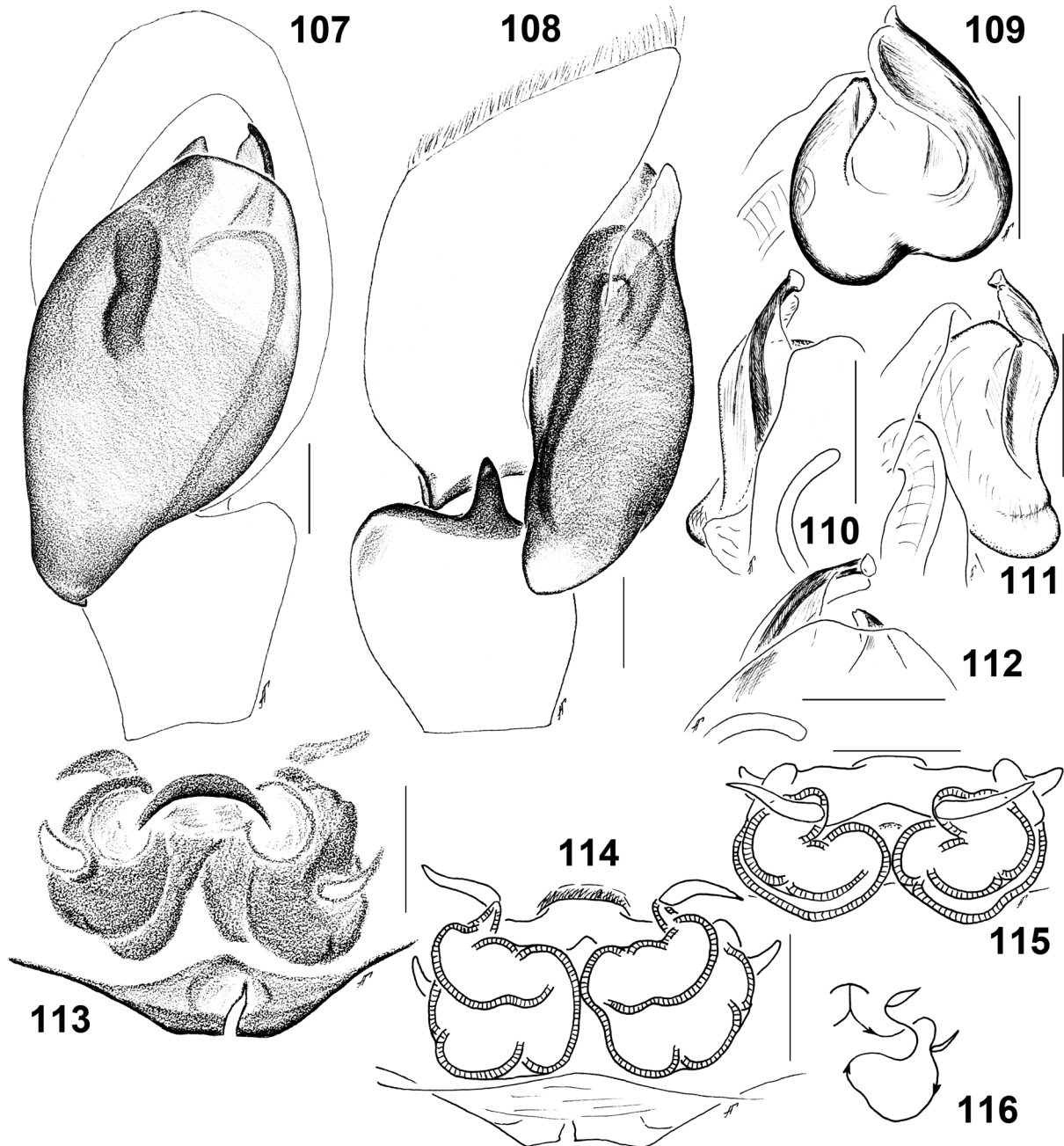
KENYA • **Marsabit Country** • 1 ♀; same collection data as for holotype; NHRS. – **Baringo Country** • 1 ♂; Baringo Lake; ca 0.6167° N, 39.0667° E; 1100 m a.s.l.; 37 Jul. 1974; J. Murphy leg.; grass near hot springs; MMUE G7572.45. – **Nakuru Country** • 1 ♂; Masai Mara; 1.1405° S, 35.2052° E; 1753 m a.s.l.; 3 Jan. 1996; W. Braunstein leg.; camp, high grass; sweepnetting; SMF 69776.

**Description**

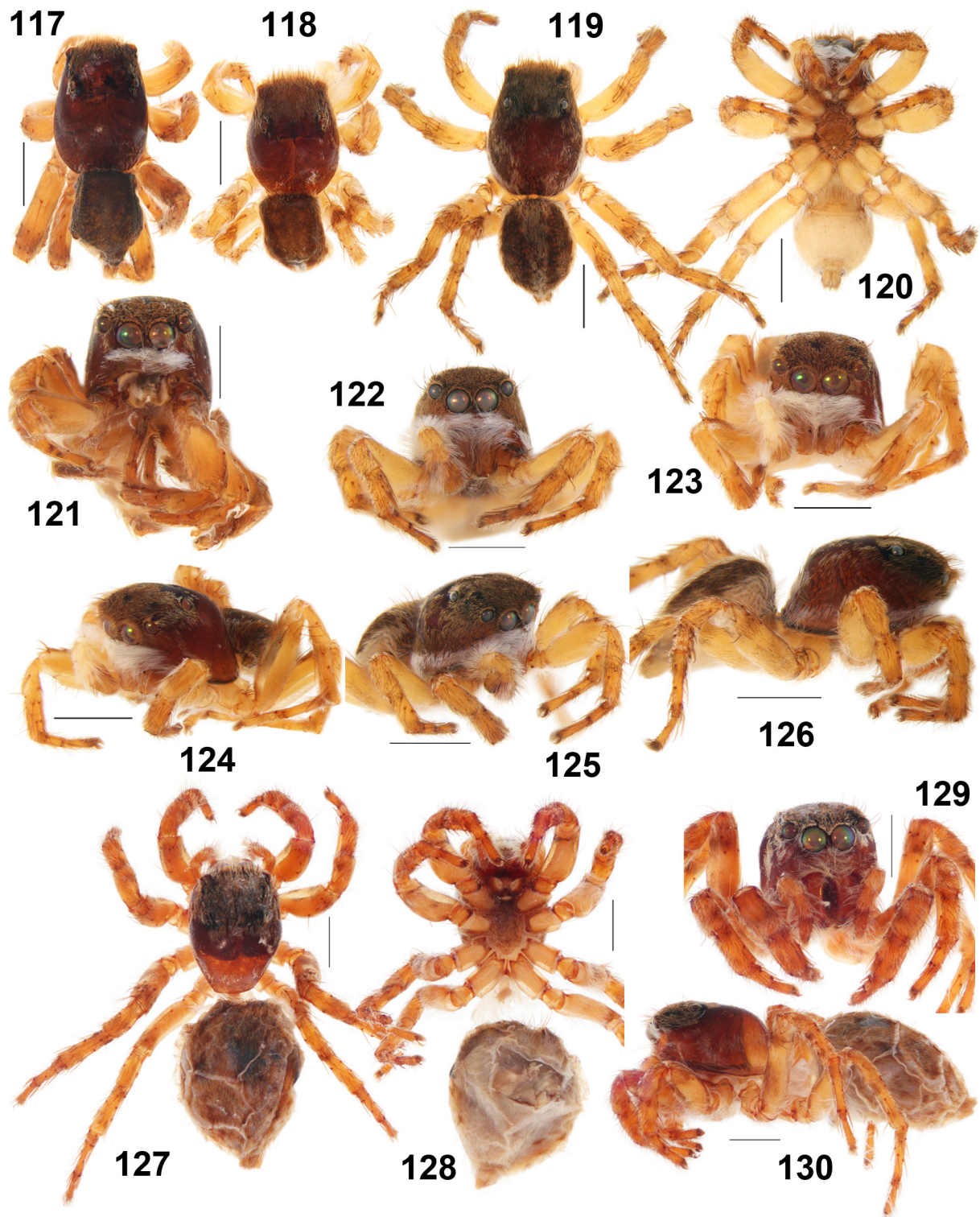
**Male** (the smallest paratype, the biggest holotype, coloration and leg spination SMF 69776)  
Measurements: carapace: 1.80–2.00 long, 1.45–1.55 wide, 1.10 high. Abdomen: 1.40–1.60 long, 1.10–1.20 wide. Ocular area: 0.85–0.90 long, 1.10–1.25 wide anteriorly, 1.05–1.20 wide posteriorly. Cheliceral length 0.60. Clypeal height 0.20. Diameter of AME 0.35. Length of leg segments (Holotype): I 1.10 + 0.60 + 0.65 + 0.50 + 0.50 (3.35); II 1.00 + 0.60 + 0.60 + 0.50 + 0.50 (3.20); III 1.60 + 0.75 + 0.80 + 0.90 + 0.65 (4.70); IV 1.45 + 0.65 + 0.80 + 1.10 + 0.65 (4.65). Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb pr 1-1-1, rt 0-1-0, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0; pr 1-1-1, rt 0-1-0; v 1-2-2 ap; Mt pr and rt 1-1ap, v 2-2 ap. III: Fm d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 117–126). Carapace brown, eye field dark brown, covered with white scales, with two longitudinal stripes of dense white scales, sides covered with white scaly stripes. Sternum yellow-brown. Endites and labium yellow-brown. Chelicerae yellow-brown to brown. Clypeus and cheeks brown, densely covered with long white hairs; apical half of cheeks under ALEs covered with short brown scales. Abdomen: dorsum brown, medially with longitudinal white



stripe; ventral yellow. Book-lung covers grey-yellow. Spinnerets brownish yellow. All legs yellow. Patellae, tibiae, metatarsi and tarsi of all legs brownish yellow. Palps yellow, covered with long white hairs; cymbium brownish yellow. Palpal structure as in Figs 107–112: apical projection well developed, pointed ventrally; embolic base round, divided to two well visible parts.



**Figs 107–116.** *Manzuma lymphia* (Próchniewicz & Heçiak, 1994) gen. et comb. nov., holotype (107–108), paratype (109–112) and ♀ from Gof Sokorte Guda (113–116). **107–108.** Male palp. **107.** Ventral view. **108.** Retrolateral view. **109–112.** Embolic division. **109.** Dorsal view. **110.** Prolateral view. **111.** Retrolateral view. **112.** Ventral view. **113.** Epigyne, ventral view. **114–115.** Spermathecae. **114.** Dorsal view. **115.** Apical view. **116.** Diagrammatic course of the insemination ducts. Scale bars: 0.1 mm.



**Figs 117–130.** *Manzuma lymph* (Próchniewicz & Hećiak, 1994) gen. et comb. nov., holotype (117, 121), paratype (118, 123–124), ♂ from Masai Mara (SMF 69776) (119–120, 122, 125–126) and ♀ from type locality (127–130), general appearance. Scale bars: 1 mm.

**Female**

Measurements: carapace: 2.70 long, 1.90 wide, 1.40 high. Abdomen: 3.20 long, 2.70 wide. Ocular area: 1.10 long, 1.40 wide anteriorly, 1.35 wide posteriorly. Cheliceral length 0.90. Clypeal height 0.25. Diameter of AME 0.45. Length of leg segments: I 1.30 + 0.80 + 0.80 + 0.50 + 0.50 (3.90); II 1.25 + 0.80 + 0.80 + 0.60 + 0.50 (3.95); III 1.90 + 0.90 + 1.10 + 1.20 + 0.65 (5.75); IV 1.70 + 0.80 + 1.10 + 1.35 + 0.65 (5.60). Leg spination: I: Fm d 0-1-1-4; Tb v 2-2-2 ap; Mt pr 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Tb pr 0-1, v 1-1-2 ap; Mt pr 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-1-2 or 0-1-1-3; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 127–130, body in a bad condition). Carapace brown, eye field dark brown, covered with whitish scales. Sternum brown-yellow. Endites and labium brown. Chelicerae brown. Clypeus and cheeks yellow-brown, covered with long white hairs. Abdomen: dorsum brown, covered with short brown hairs; venter yellow-grey, covered with white hairs. Book-lungs covers yellow-grey. Spinnerets brown-yellow. All legs and palps brownish-yellow, palps covered with white hairs. Epigyne and spermathecae as in Figs 113–116: epigynal pocket low, central structure is  $\frac{1}{3}$  of epigynal height; accessory glands well developed and well visible from dorsal and ventral view of epigyne.

**Distribution**

Kenya (Fig. 200).

*Manzuma nigritiba* (Caporiacco, 1941) gen. et comb. nov.  
Figs 123–145, 200

*Saitis nigritiba* Caporiacco, 1941: 145, fig. 63; ♂ holotype from MSNF, examined.

*Aelurillus reconditus* Wesolowska & van Harten, 1994: 2, figs 3–5; ♀ holotype from MRAC, examined.

**Syn. nov.**

*Aelurillus nigritiba* – Prószyński 1987: 1; ♂ only, transferred from *Saitis*.

*Rafalus nigritiba* – Prószyński 1999: 101, figs 41–42.

*Aelurillus reconditus* – Prószyński 2003: 36.

*Aelurillus lymphus* – Wesolowska & Tomasiewicz 2008: 4; misidentification.

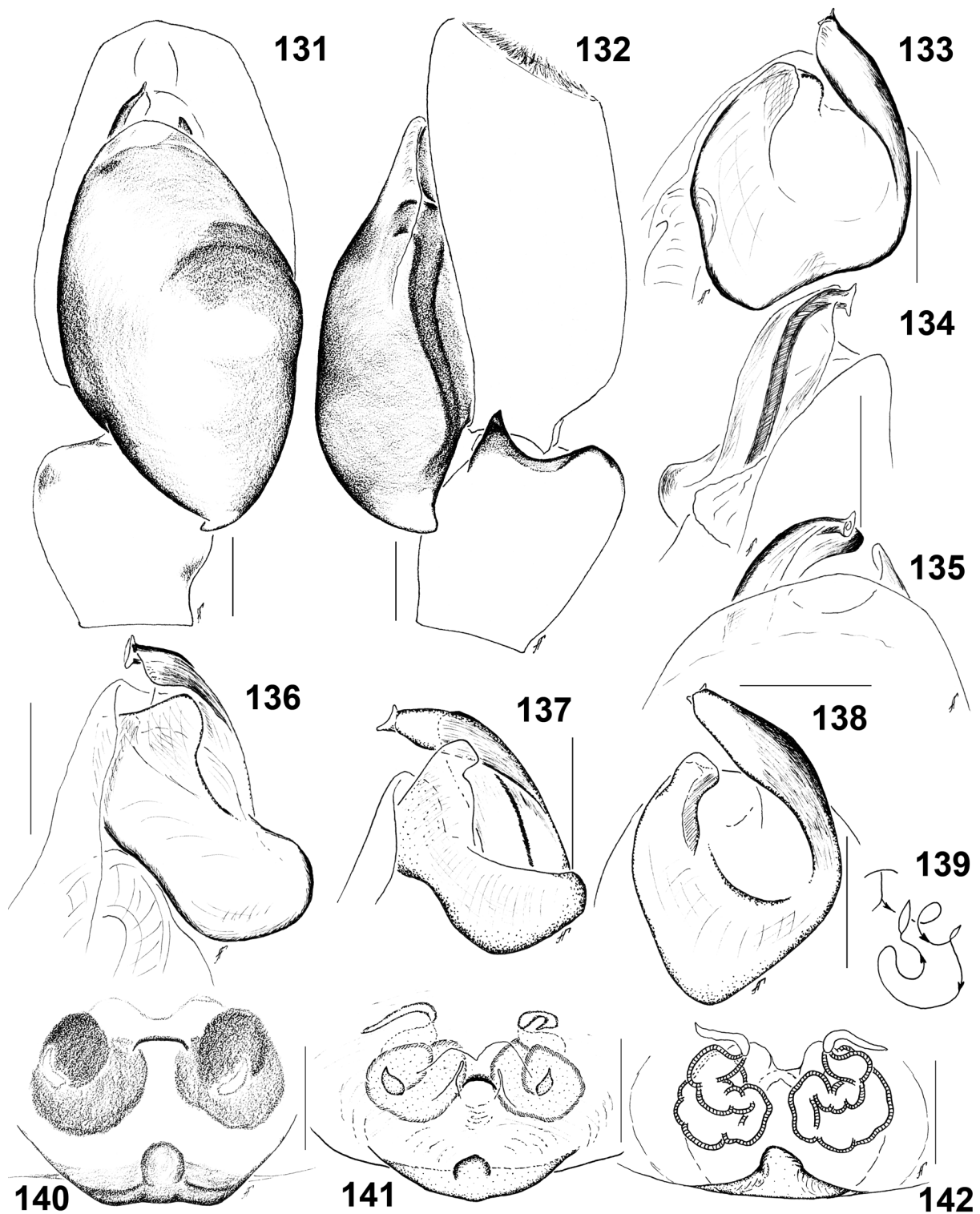
*Rafalus lymphus* – Wesolowska & van Harten 2010: 56, pl. 23, figs 83–86; misidentification.

**Diagnosis**

*Manzuma nigritiba* is most similar to *M. jocquei* and *M. lymphus* in body coloration. The males can be distinguished by the coloration of the clypeus and cheeks. The clypeus has a diamond-shaped patch of brown hairs between AME and on the upper half of the clypeus. The cheeks are covered with a long white hairs from the ALEs to the margin of carapace (Figs 145, 147), while in *M. jocquei* and *M. lymphus* the upper half of the cheeks under ALEs are covered with a short brown scales and the basal half covered with a long white hairs (Figs 75–77 and 121–125 correspondingly). The females cannot be distinguished from *M. jocquei* and *M. lymphus* but can be distinguished from *M. botswana* gen. et sp. nov. and *M. petroae* gen. et sp. nov. by the absence of white stripes of scales running from the outer rim of the AME's to the lateral sides of carapace (cf. Figs 152, 82, 129, 44 and 180 correspondingly).

**Material examined****Holotypes**

ETHIOPIA • ♂, holotype of *Saitis nigritiba*; “Foci del Sagan, Missione Biologico Sagan-Omo” [mouth of Sagan, biological mission Sagan-Omo]; ca 5.2167° N, 37.0167° E; 19 Jun. 1939; E. Zavattari leg.; MSNF, 439.



**Figs 131–142.** *Manzuma nigritiba* (Caporiacco, 1941) gen. et comb. nov., holotype of *Saitis nigritiba*, ♂ (137–138), ♂♂ from Ethiopia (Awash NP, MRAC) (131–136), holotype of *Aelurillus reconditus*, ♀ (139–142). **131–132.** Male palp. **131.** Ventral view. **132.** Retrolateral view. **133–138.** Embolic division. **133, 138.** Dorsal view. **134.** Prolateral view. **135.** Ventral view. **136–137.** Retrolateral view. **139.** Diagrammatic course of the insemination ducts. **140–142.** Epigyne. **140.** Ventral view. **141.** Ventro-apical view. **142.** Spermathecae, dorsal view. Scale bars: 0.1 mm.

YEMEN • ♀, holotype of *Aelurillus reconditus*; Al Mahwit Governorate, Wadi Surdud [=Wādī Surdūd]; ca 15.2667° N, 43.2000° E; 28–29 Dec. 1991; A. van Harten leg.; MRAC 201.301.

#### Other material

ETHIOPIA • 1 ♂; Awash N.P., Awash River below falls; ca 8.8333° N, 40.0000° E; 13 May 1987; A. Russell-Smith leg.; , on sandy beach; MRAC.

YEMEN • 1 ♂; Al-Lahima; ca 15.4000° N, 43.5333° E; 5 Jun.–24 Jul. 2001; A. van Harten leg.; Malaise trap; MRAC 212.800.

#### Description

##### Male (specimen from Ethiopia, MRAC)

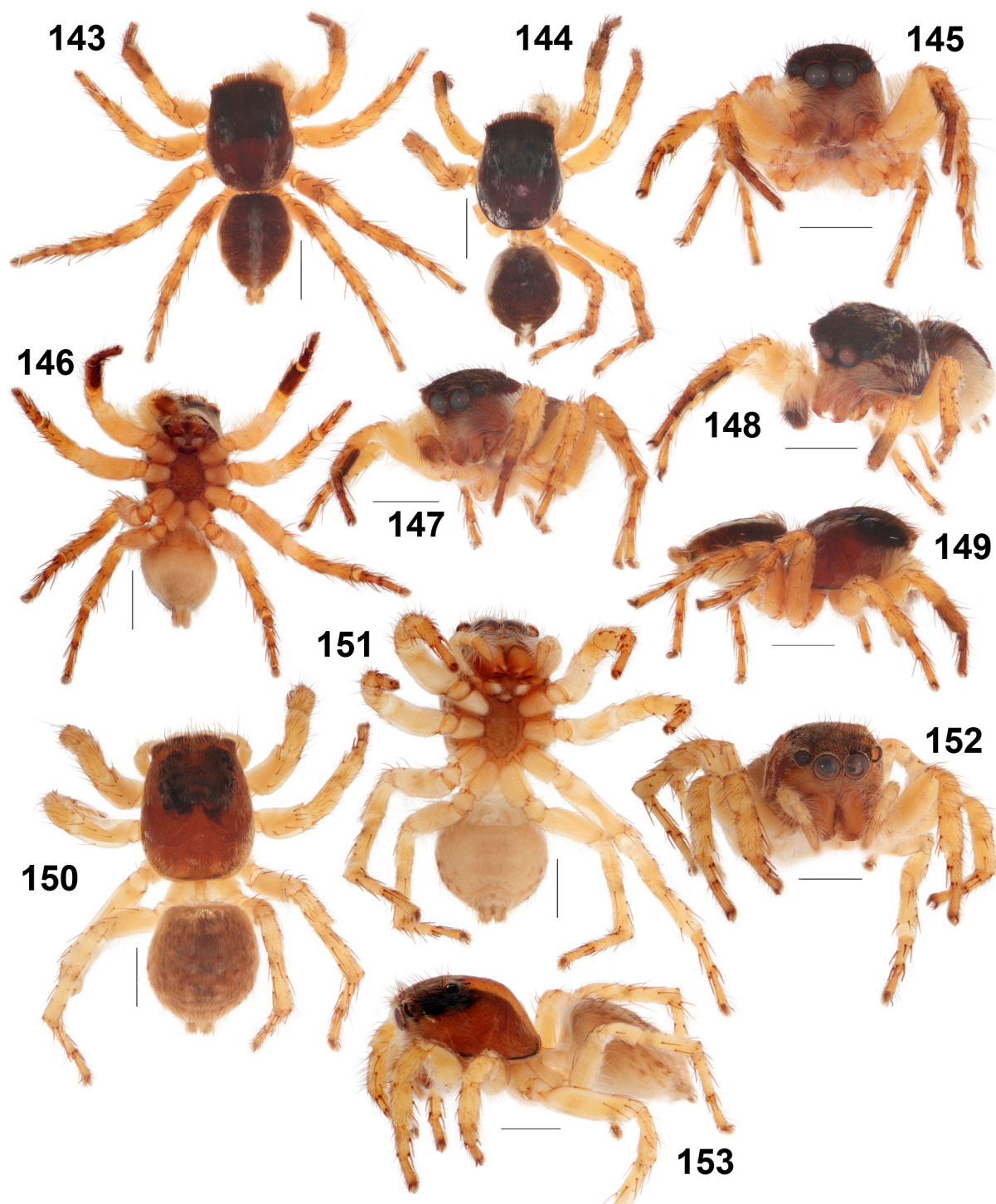
Measurements: carapace: 1.70 long, 1.50 wide, 1.20 high. Abdomen: 1.60 long, 1.30 wide. Ocular area: 0.90 long, 1.30 wide anteriorly, 1.20 wide posteriorly. Cheliceral length 0.55. Clypeal height 0.25. Diameter of AME 0.35. Length of leg segments: I 1.10 + 0.55 + 0.60 + 0.50 + 0.40 (3.15); II 1.10 + 0.60 + 0.60 + 0.45 + 0.40 (3.15); III 1.50 + 0.70 + 0.80 + 0.70 + 0.60 (4.30); IV 1.30 + 0.55 + 0.80 + 0.85 + 0.60 (4.10). Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 0-1-0, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0; pr 1-1-1, rt 0-1-0; v 1-1-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-5 or 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 2-0-2 ap. IV: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1-0, rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 143–149). Carapace brown, eye field dark brown, covered with brown scales, with two longitudinal white stripes of scales running from PLEs to the rear margin of the carapace; sides covered with white stripes of scales. Sternum, endites, labium and chelicerae yellow-brown. Clypeus and cheeks brown-yellow, covered with long yellow-white hairs, except small area beneath AMEs; clypeus with diamond-shaped patch of brown hairs between AME and on upper half of clypeus. Abdomen: dorsum brown, medially with longitudinal white stripe; ventral brownish yellow. Book-lung covers brownish yellow. Spinnerets brown-yellow. All legs yellow. Femora I prolaterally densely covered with long yellow-white hairs. Tibiae, metatarsi and tarsi I brown, ventrally dark-brown. Palps yellow; palpal femur covered with long white hairs; cymbium brown. Palpal structure as in Figs 131–138: tegulum with small, almost invisible proximal projection; apical projection medium in size; TA broad in middle part, apically getting narrow.

##### Female (holotype of *Aelurillus reconditus*)

Measurements: carapace: 2.50 long, 1.90 wide, 1.40 high. Abdomen: 2.20 long, 1.90 wide. Ocular area: 1.20 long, 1.40 wide anteriorly, 1.40 wide posteriorly. Cheliceral length 0.80. Clypeal height 0.20. Diameter of AME 0.45. Length of leg segments: I 1.10 + 0.80 + 0.80 + 0.60 + 0.50 (3.80); II 1.10 + 0.80 + 0.70 + 0.50 + 0.50 (3.60); III 1.70 + 1.00 + 1.00 + 1.00 + 0.60 (5.30); IV 1.50 + 0.80 + 1.00 + 1.20 + 0.70 (5.20). Leg spination: I: Fm d 0-1-1-4; Tb v 2-2-2 ap; Mt pr 1-1 ap, v 2-2 ap. II: Fm d 0-1-1-5; Tb pr 1-1, v 1-1-2 ap; Mt pr 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 150–153). Carapace brown, eye field dark brown, covered with whitish scales. Sternum brownish yellow. Endites and labium yellow. Chelicerae brownish yellow. Clypeus and cheeks yellow, covered with long yellow-white hairs. Abdomen: dorsum brown, covered with yellowish-white hairs; venter yellow-grey. Book-lungs covers and spinnerets yellow. All legs and palps yellow. Epigyne and spermathecae as in Figs 139–142: copulatory openings almost invisible; epigynal pocket low, central structure is 1/3 of epigynal height.

#### Distribution

Ethiopia, Yemen (Fig. 200).



**Figs 143–153.** *Manzuma nigritibia* (Caporiacco, 1941) gen. et comb. nov., ♂♂ from Ethiopia (143, 145–147, 149, MRAC) and Yemen (144, 148, MRAC 212.800), holotype of *Aelurillus reconditus*, ♀ (150–153), general appearance. Scale bars: 1 mm.

*Manzuma petroae* gen. et sp. nov.

urn:lsid:zoobank.org:act:A77CFC8E-24B1-412D-85F9-D7C5CB2D85A0

Figs 20–22, 49–51, 154–187, 200

**Diagnosis**

*Manzuma petroae* gen. et sp. nov. is most similar to *M. botswana* gen. et sp. nov. in body coloration. The males of *M. petroae* gen. et sp. nov. differ in having the clypeus covered with long white hairs with a diamond-shaped patch of brown hairs between the AME and on the upper half of the clypeus in the center (Figs 170–171, 176–177, 186–187), while in *M. botswana* gen. et sp. nov. the clypeus is covered with short brown scales, medially with a thin vertical stripe of white hairs (Figs 39, 48). The cheeks in *M. petroae* gen. et sp. nov. are covered with yellowish white hairs (Figs 170–171, 176–177) while in *M. botswana* gen. et sp. nov. the cheeks have a thin white line running from the ALEs to sides of carapace (Fig. 38). The apical projection (ApP) in *M. petroae* gen. et sp. nov. is small, rounded in outline and slightly bent dorsally (Fig. 158), while in *M. botswana* gen. et sp. nov. the ApP is large and robust (Fig. 31). The females of *M. petroae* gen. et sp. nov. differ in the uniform colour of the eye of specimens preserved in alcohol (Figs 178, 180) and short wide stripe just behind AMEs of live specimens (Figs 49–51), while in *M. botswana* gen. et sp. nov. the eye field has a short narrow white stripe just behind AMEs (Figs 42, 44).

**Etymology**

This species is dedicated to the South African curator of the National Collection of Arachnida at ARC PPRI (Pretoria/Tshwane), Petro Marais.

**Material examined****Holotype**

SOUTH AFRICA • ♂; KwaZulu-Natal Province, Ithala Game Reserve, Doornkraal Camp; 27.5122° S, 31.2039° E, 28 Jan. 2014; C. Haddad leg.; hand collecting on ground; NCA 2013/4929.

**Paratypes**

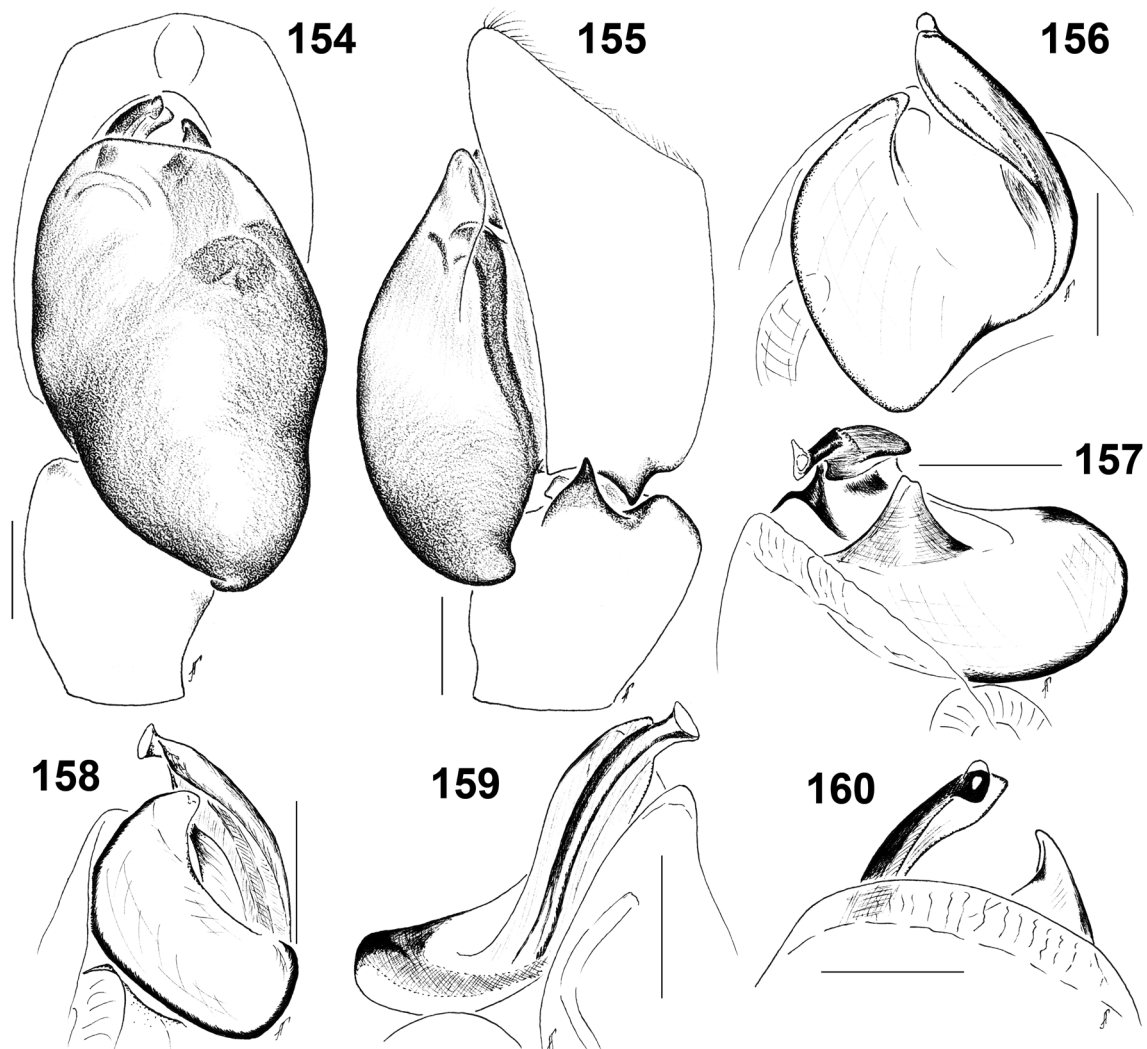
SOUTH AFRICA – **North-West Province** • 1 ♂; ca 40 km NW of Brits; ca 25.3833° S, 27.4500° E; 1984–1985; R. Watmough leg.; cotton; pitfall traps; MRAC. – **Gauteng Province** • 1 ♂; Pretoria/Tshwane, Rietondale research campus; ca 25.7167° S, 28.2167° E; 16 Jul. 1998; J. Nkwana leg.; pitfall traps; NCA 2019/713 • 1 ♂; Roodeport, Walter Sisulu National Botanical Garden; 26.0833° S, 27.8333° E; 5 Dec. 2015; G.N. Azarkina leg.; by hands; ISEA 001.7212 • 1 ♀; Midrand; 26.0197° S, 28.0970° E; 6 Mar. 2006; L. Niemand leg.; waterfall 5 IR; NCA 2009/3732. – **Limpopo Province** • 1 ♂; Tuinplaas, Springbokflakte Settlers (Tweekansen); 25.4833° S, 28.5667° E; 26 Nov. 2003; M. van Jaarsveld leg.; grass; pitfall traps; NCA 2016/382. – **KwaZulu-Natal Province** • 1 ♀; same collection data as for holotype; NCA 2019/712 • 1 ♂, 1 ♀; Hluhluwe/Umfolozzi NR; ca 28.0667° S, 32.1333° E; 2 Dec. 2005; M. Mgobozi leg.; NCA 2007/1998, NCA 2007/2045. – **Eastern Cape Province** • 1 ♀; Fort Beaufort, Mpofu Nature Reserve; 32.6100° S, 26.5900° E; 29 Jan. 2009; S.L. Peinke leg.; thornveld (transect 1); pitfall traps; NCA 2011/826.

**Description**

**Male** (the smallest holotype NCA 2013/4929, the biggest ISEA 001.7212,)

Measurements: carapace: 1.70–1.90 long, 1.30–1.40 wide, 0.85–0.95 high. Abdomen: 1.40–1.50 long, 1.20 wide. Ocular area: 0.75–0.85 long, 1.00–1.10 wide anteriorly, 0.95–1.05 wide posteriorly. Cheliceral length 0.45–0.60. Clypeal height 0.15–0.20. Diameter of AME 0.30–0.35. Length of leg segments: I 0.90 + 0.40 + 0.50 + 0.40 + 0.35 (2.55); II 0.90 + 0.50 + 0.50 + 0.30 + 0.30 (2.50); III 1.30 + 0.60 + 0.60 + 0.70 + 0.45 (3.65); IV 1.10 + 0.60 + 0.60 + 0.75 + 0.45 (3.50). Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1;

Tb pr 1-1-1, rt 0-0 (in HT) or 0-1, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0; pr 1-1-1, rt 1-1-0; v 1-1-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-1-3 (in HT) or 0-1-1(2)-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-1-2 ap, v 1-1-2 ap. Coloration (in alcohol: Figs 168–177; live specimens: Figs 182–187). Carapace brown to dark brown, covered with short brownish scales, with two longitudinal white stripes. Eye field dark brown, almost black, anterior third with short wide white longitudinal stripe. Sternum brownish yellow. Endites and labium yellow-brown. Chelicerae brownish yellow. Clypeus and cheeks brown, covered with yellowish-white hairs, with diamond-shaped patch of brown hairs between AME and on upper half of clypeus. Abdomen: dorsum brown, with median white longitudinal stripe; venter brownish yellow. Book-lung brownish yellow. Spinnerets yellowish-brown. All legs brownish yellow. Femora I with long dense yellow-white hairs. Patellae, tibiae, metatarsi and tarsi of all legs brownish. Palps yellow, covered with long yellow-white hairs. Palps as in Figs 146–152; ventral RTA triangle, well developed; dorsal RTA



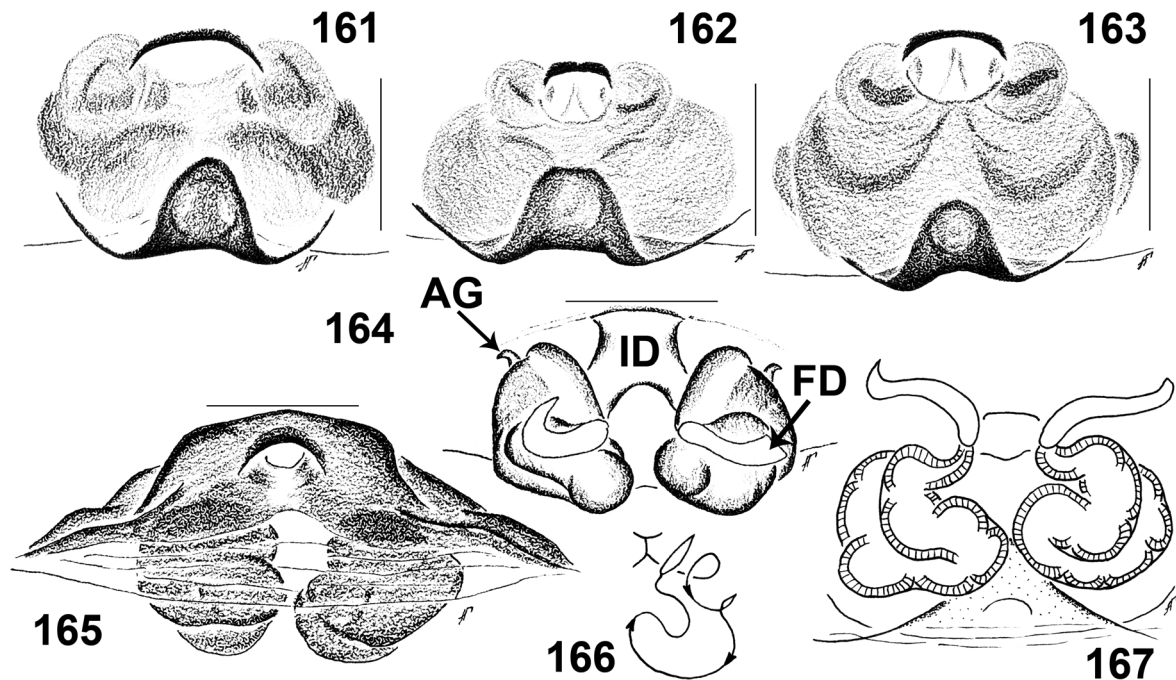
**Figs 154–160.** *Manzuma petroae* gen. et sp. nov., holotype, ♂ (154–155) and paratype, ♂ from Tuinplaas (NCA 2016/382) (156–160). **154–155.** Male palp. **154.** Ventral view. **155.** Retrolateral view. **156–160.** Embolic division. **156.** Dorsal view. **157.** Retrolatero-apical view. **158.** Retrolateral view. **159.** Prolateral view. **160.** Ventral view. Scale bars: 0.1 mm.



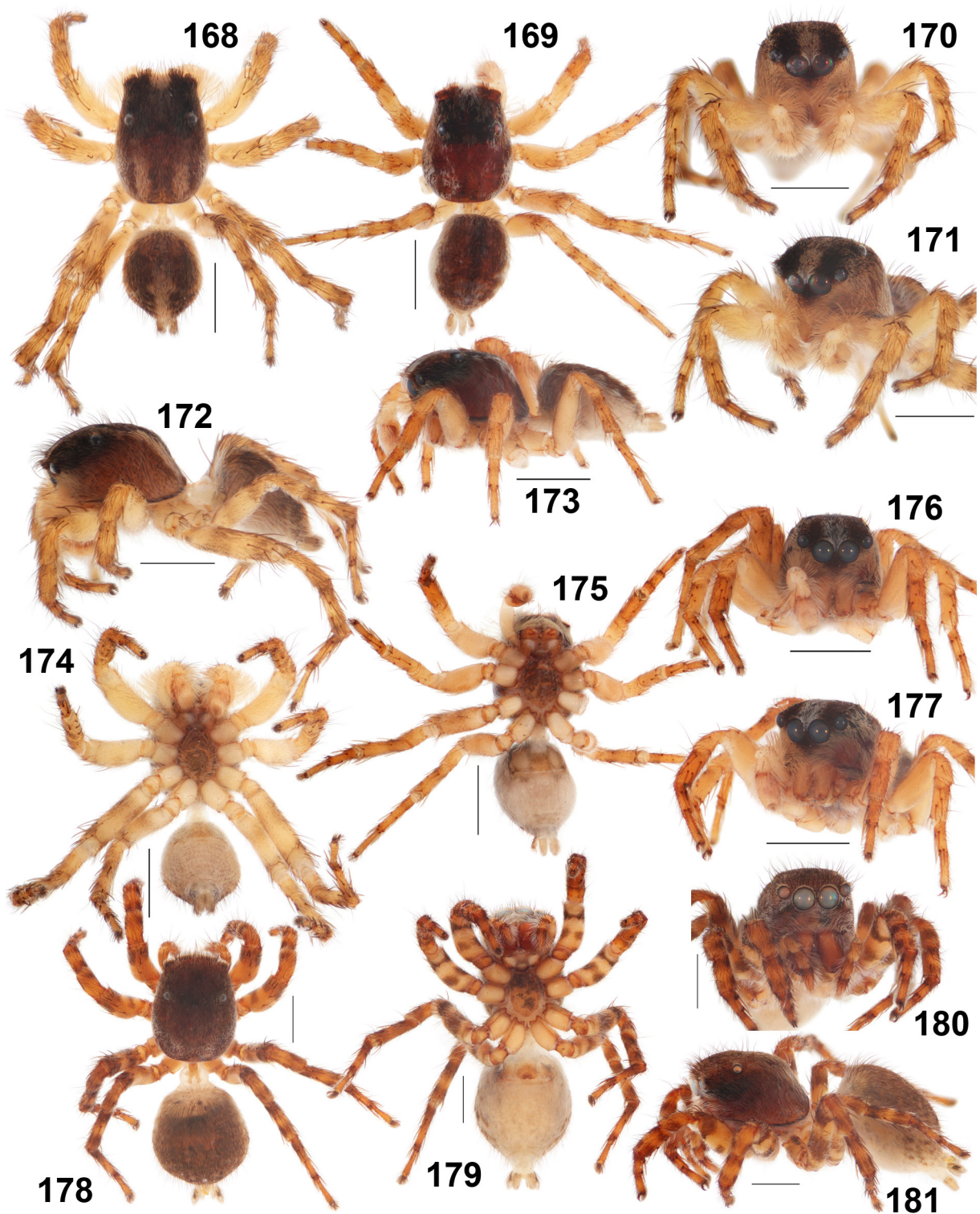
small, bulge-shaped; proximal projection rounded, small; embolic base with bifurcated apical projection, basal part with wide prominent lobe; tegulum with visible small tegular process.

**Female** (the smallest NCA 2007/2045, the biggest NCA 2009/3732)

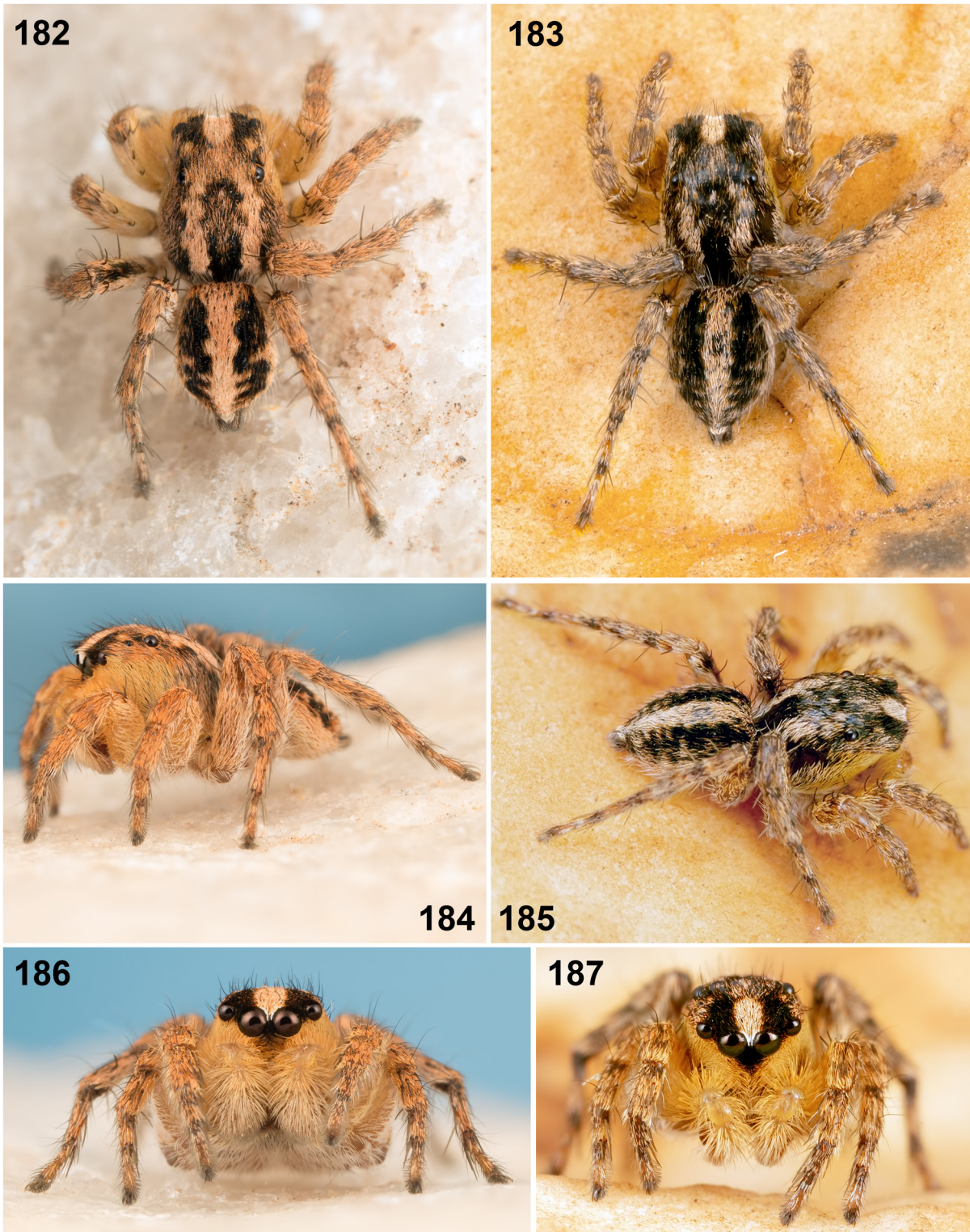
Measurements: carapace: 1.80–2.10 long, 1.75–1.85 wide, 1.10–1.45 high. Abdomen: 2.30–2.50 long, 1.80–2.10 wide. Ocular area: 0.90–1.00 long, 1.25–1.40 wide anteriorly, 1.20–1.35 wide posteriorly. Cheliceral length 0.70–0.85. Clypeal height 0.20–0.25. Diameter of AME 0.40–0.45. Length of leg segments: I 1.10 + 0.70 + 0.75 + 0.55 + 0.45 (3.55); II 1.10 + 0.70 + 0.70 + 0.60 + 0.50 (3.60); III 1.70 + 0.90 + 0.90 + 1.00 + 0.65 (5.15); IV 1.50 + 0.75 + 0.90 + 1.15 + 0.65 (4.95). Leg spination: I: Fm d 0-1-1-4; Tb pr 0-1 or 1-1, v 2-2-2 ap; Mt pr 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-4; Tb pr 1-1, v 1-1-2 ap; Mt pr 1-1 ap, v 2-2 ap. III: Fm d 0-1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (live specimens: Figs 49–51; in alcohol: Figs 178–181). Carapace brown, covered with transparent white scales, with two hardly visible white stripes, without such a stripes in a specimen from Eastern Cape (NCA 2011/826). Sternum brownish yellow. Endites and labium brownish. Chelicerae brown. Clypeus and cheeks yellow-brown, covered with white hairs; cheeks with two narrow lines of whitish dense scales running from AMEs to sides. Abdomen: dorsum brown, with two median lines of white dots; venter grey-yellow. Book-lung brownish yellow. Spinnerets: anterior pairs yellow, posterior pair yellow-brown. All legs and palps brownish yellow, with brown patches. Epigyne and spermathecae as in Figs 161–167: copulatory openings hardly visible; epigynal pocket high and convex ventrally; accessory glands located in the middle part of insemination ducts.



**Figs 161–167.** *Manzuma petroae* gen. et sp. nov., paratypes, ♀♀ from Ithala GR (161, 164–165, 167, NCA 2019/712), Midrand (162, NCA 2009/3732) and Mpofu NR (163, NCA 2011/826). **161–163.** Epigyne, ventral view. **164.** Spermathecae, apical view. **165.** Epigyne, basal view. **166.** Diagrammatic course of the insemination ducts. **167.** Spermathecae, dorsal view. Scale bars: 0.1 mm.



**Figs 168–181.** *Manzuma petroae* gen. et sp. nov., paratypes, ♂♂ from Roodeport (168, 170–172, 174, ISEA 001.7212) and Tuinplaas (169, 173, 175–177, NCA 2016/382), paratype, ♀ from Ithala GR (178–181, NCA 2019/712), general appearance. Scale bars: 1 mm.



**Figs 182–187.** *Manzuma petroae* gen. et sp. nov., general appearance of live ♂ from South Africa, photos © Vida van der Walt.

## Distribution

South Africa (Fig. 200).

*Manzuma tanzanica* gen. et sp. nov.

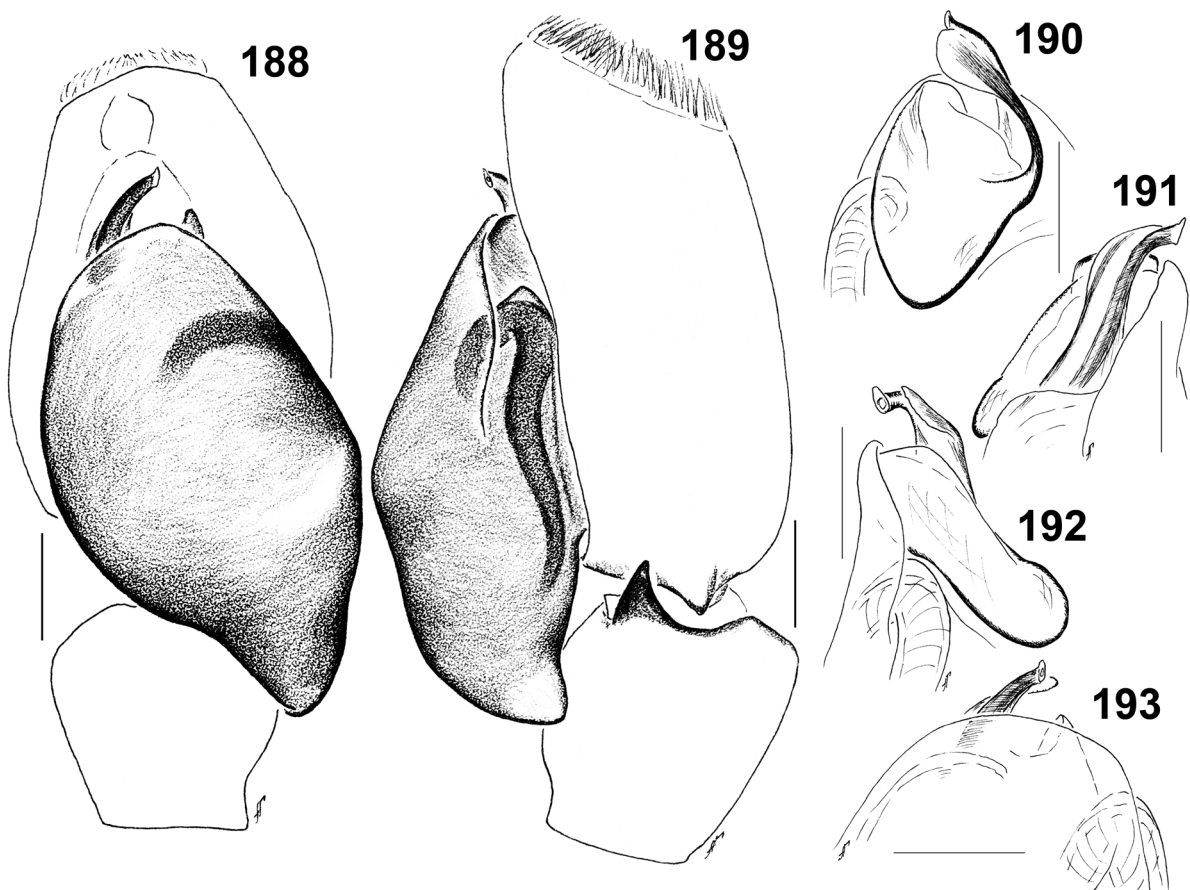
[urn:lsid:zoobank.org:act:78D84EB3-60B3-47B4-8DE8-7514C58E6BBC](https://zoobank.org/urn:lsid:zoobank.org:act:78D84EB3-60B3-47B4-8DE8-7514C58E6BBC)

Figs 188–200

*Aelurillus lymphus* – Wesolowska & Russell-Smith 2000: 14, figs 2–5.

## Diagnosis

*Manzuma tanzanica* is most similar to *M. jocquei*, *M. lymph*a and *M. nigr*itibia in body coloration. The males can be distinguished from *M. jocquei* and *M. lymph*a by the poorly developed apical projection (well developed in *M. jocquei*) (cf. Figs 190, 192, 57–58, 64 and 109, 111 correspondingly); from *M. nigr*itibia it can be distinguished by the coloration of the clypeus and cheeks. The upper half of cheeks under ALEs are covered with short brown scales and the basal half of cheeks covered with long white hairs (Figs 196–197) while in *M. nigr*itibia the clypeus has a diamond-shaped patch of brown



**Figs 188–193.** *Manzuma tanzanica* gen. et sp. nov., holotype, ♂ and paratype. **188–189.** Male palp. **188.** Ventral view. **189.** Retrolateral view. **190–193.** Embolic division. **190.** Dorsal view. **191.** Prolateral view. **192.** Retrolateral view. **193.** Ventral view. Scale bars: 0.1 mm.

hairs between AME and on upper half of clypeus and the cheeks covered with long white hairs from ALEs to margin of carapace (Figs 145, 147).

### Etymology

The specific epithet is named after the country of origin, Tanzania.

### Material examined

#### Holotype

TANZANIA • ♂; Mkomazi G.R., Ibaya Camp; ca 4.0000° S, 38.0000° E; 21–22 Nov. 1994; A. Russell-Smith leg.; burnt grassland; MRAC 208.024.

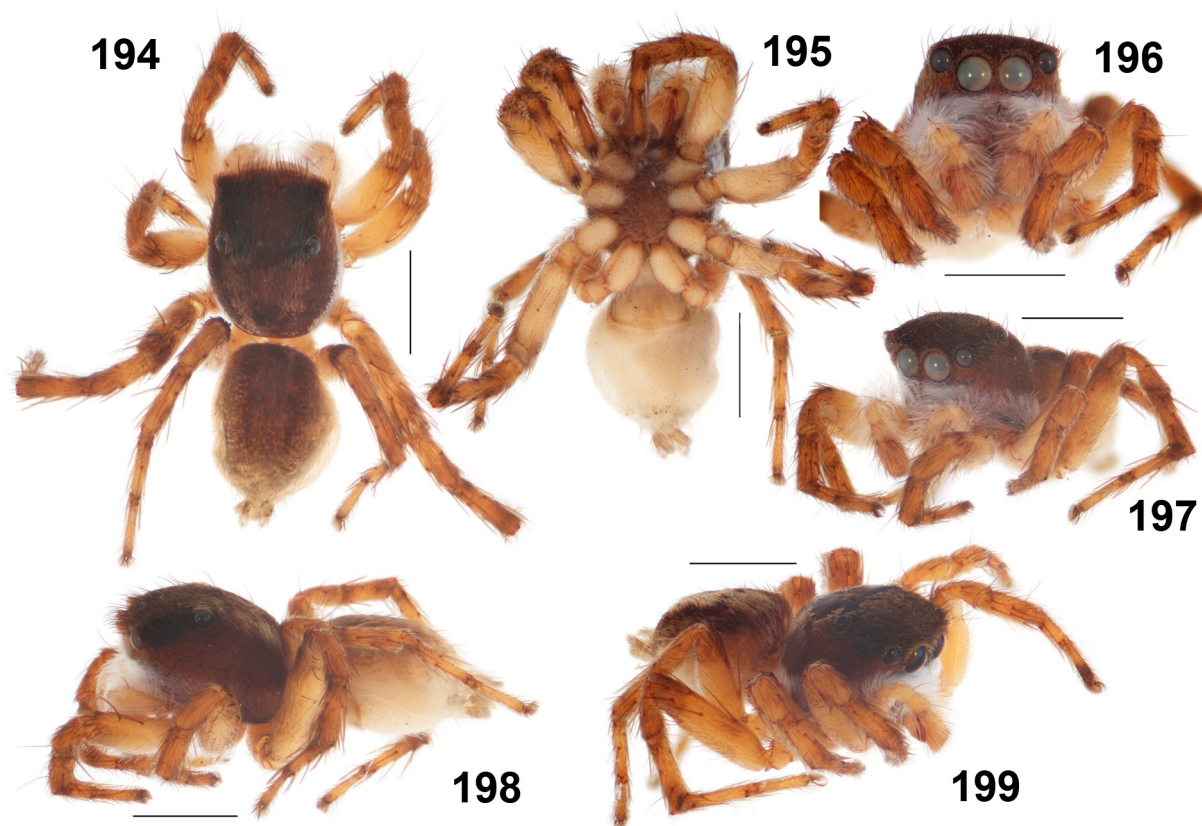
#### Paratypes

TANZANIA • 5 ♂♂; same collection data as for holotype; MRAC 208.024, MRAC 215.562 • 2 ♂♂; same locality as for holotype; Feb. 1994; A. Russell-Smith leg.; pitfall traps; grassland; MRAC 208.029.

### Description

#### Male (holotype, MRAC 208.024)

Measurements: carapace: 1.75 long, 1.50 wide, 1.10 high. Abdomen: 1.95 long, 1.50 wide. Ocular area: 0.95 long, 1.25 wide anteriorly, 1.20 wide posteriorly. Cheliceral length 0.55. Clypeal height 0.20. Diameter of AME 0.30. Length of leg segments: I 1.10 + 0.60 + 0.60 + 0.50 + 0.50 (3.30); II 1.00 + 0.60 + 0.65 + 0.50 + 0.45 (3.20); III 1.50 + 0.80 + 0.80 + 0.90 + 0.65 (4.65); IV 1.30 + 0.65 + 0.85 + 1.00



Figs 194–199. *Manzuma tanzanica* gen. et sp. nov., holotype, ♂, general appearance. Scale bars: 1 mm.

+ 0.60 (4.40). Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 0-1-0, v 2-2-2 ap; Mt pr and rt 1-1 ap, v 2-2 ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0; pr 1-1-1, rt 0-1-0; v 1-1-2 ap; Mt pr and rt 1-1ap, v 2-2 ap. III: Fm d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr and rt 1-0-2 ap, v 1-1-2 ap. IV: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2 ap; Mt d 1-1-0, pr 1-1-2 ap, rt 1-0-2 ap, v 1-1-2 ap. Coloration (in alcohol; Figs 194–199). Carapace brown, eye field dark brown, covered with brown scales, with two longitudinal stripes of white scales, sides covered with white stripes of scales. Sternum yellow-brown. Endites, labium and chelicerae brown-yellow. Clypeus and cheeks brown, densely covered with long white hairs; apical half of cheeks under ALEs covered with short brown scales. Abdomen: dorsum brown, medially with longitudinal white stripe; ventral grey-yellow. Book-lung covers brownish yellow. Spinnerets: anterior yellow, posterior brownish. All legs brownish yellow. Femora of all legs apically brown. Patellae, tibiae, metatarsi and tarsi of all legs yellow to brownish. Palps yellow, covered with long white hairs; cymbium yellow. Palpal structure as in Figs 188–193: tegulum with clearly visible proximal projection; apical projection small; TA paddle-shaped.

### Distribution

Tanzania (Fig. 200).

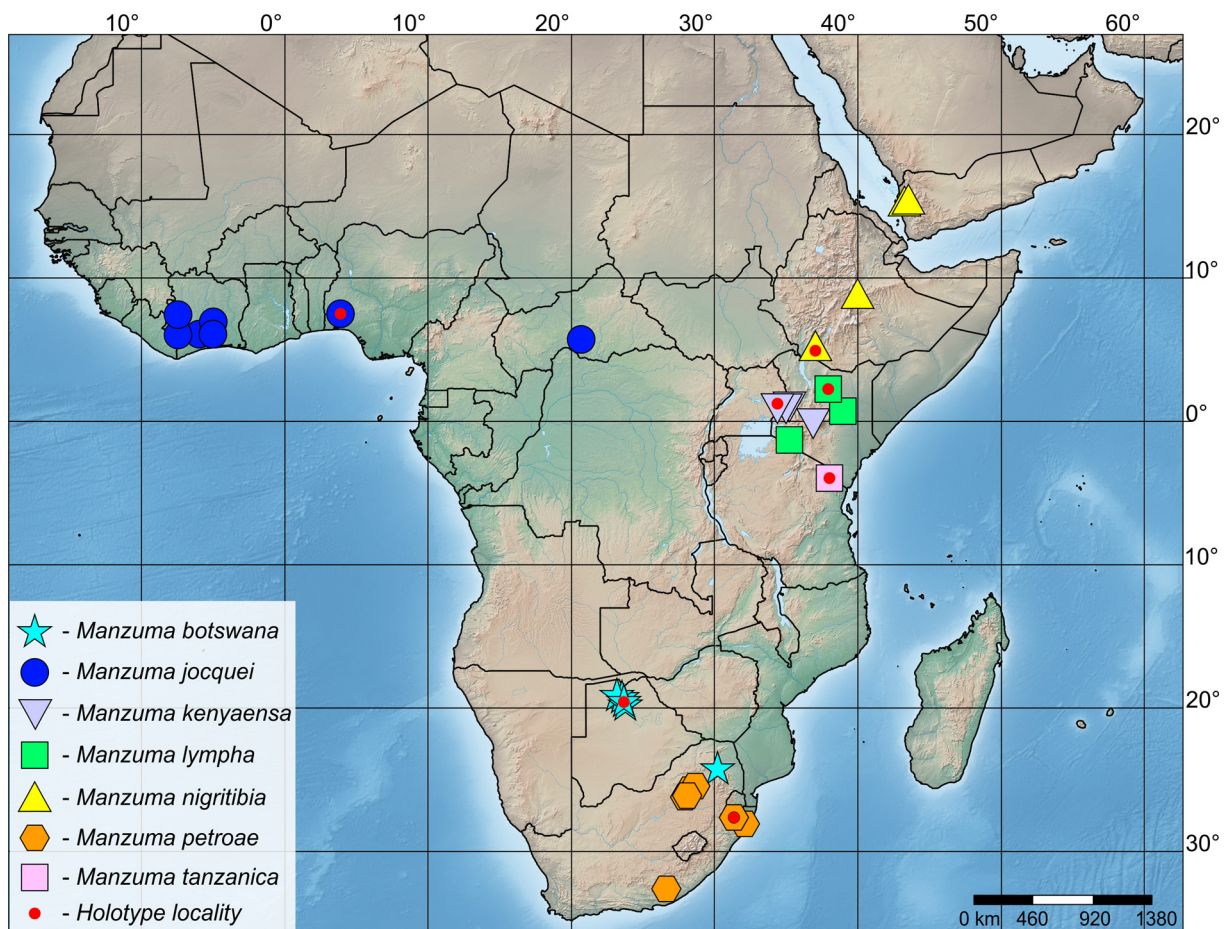
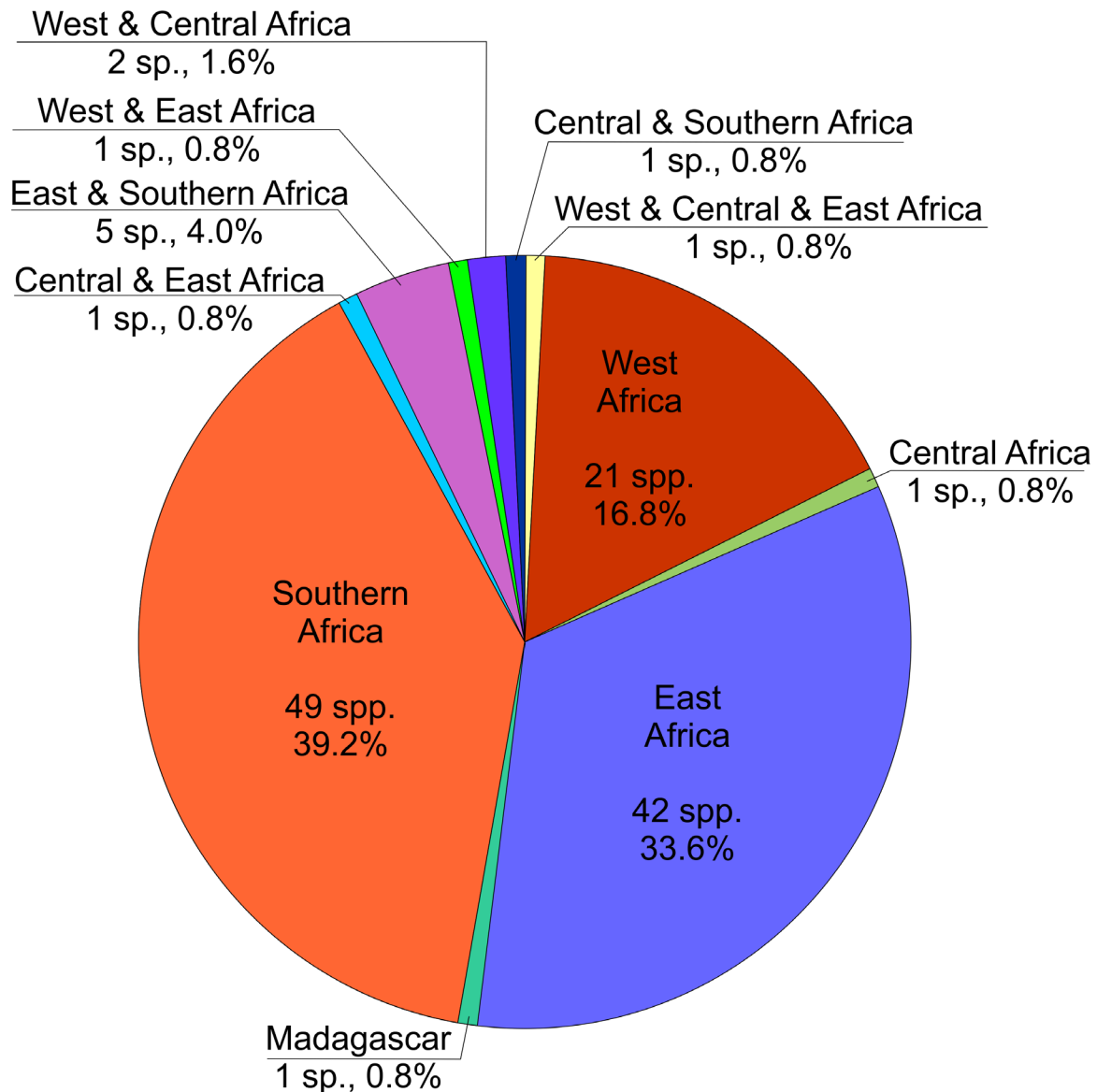


Fig. 200. Collecting localities of seven species of *Manzuma* gen. nov.

## Discussion

To date, the genus *Manzuma* gen. nov. is the first and the only endemic genus of aelurillines described from the Afrotropical Region. Although only seven species are known, the genus is likely to contain more undescribed species from different African regions, and its current species richness is underestimated. Underestimation of aelurilline diversity is not isolated to *Manzuma* gen. nov., but rather throughout aelurillines. There are undescribed endemic aelurilline genera from Africa awaiting description, with some of their species being mistakenly assigned to such genera as *Aelurillus*, *Langona*, *Langelurillus* and *Phlegra* (unpubl. data).

The currently-known world Aelurillina fauna contains 291 species in ten genera, including the *Manzuma* gen. nov. The Afrotropical Region (*sensu* Dippenaar-Schoeman & Jocqué 1997) includes 125 Aelurillina species in seven genera, which is almost 43 % of the world diversity of Aelurillina (Table 1). It is



**Fig. 201.** Proportions of aelurilline species in different subregions of Afrotropics.

**Table 1** (continued in next pages). Species composition and distribution of Aelurillina Simon, 1901 in Afrotropical Region.

Genera and species	Distribution	Subregion
<i>Aelurillus</i> Simon, 1884		
<i>A. catus</i> Simon, 1886	Senegal	West Africa
<i>A. cristatopalpus</i> Simon, 1902	South Africa	Southern Africa
<i>A. madagascariensis</i> Azarkina, 2009	Madagascar	Madagascar
<i>A. minutus</i> Azarkina, 2002	Eritrea	East Africa
<i>A. mirabilis</i> Wesołowska, 2006	Namibia	Southern Africa
<i>A. rugatus</i> (Bösenberg & Lenz, 1895)	Tanzania	East Africa
<i>A. russellsmithi</i> Azarkina, 2009	Côte d'Ivoire	West Africa
<i>A. subaffinis</i> Caporiacco, 1947	Ethiopia	East Africa
<i>A. tumidulus</i> Wesołowska & Tomasiewicz, 2009	Ethiopia	East Africa
<i>Langelurillus</i> Próchniewicz, 1994		
<i>L. alboguttatus</i> Wesołowska & Russell-Smith, 2000	Tanzania	East Africa
<i>L. cedarbergensis</i> Haddad & Wesołowska, 2013	South Africa	Southern Africa
<i>L. furcatus</i> Wesołowska & Russell-Smith, 2000	Kenya, Tanzania	East Africa
<i>L. holmi</i> Próchniewicz, 1994	Kenya	East Africa
<i>L. horrifera</i> Rollard & Wesołowska, 2002	Guinea	East Africa
<i>L. ignorabilis</i> Wesołowska & Cumming, 2008	Zimbabwe	Southern Africa
<i>L. krugeri</i> Wesołowska & Haddad, 2013	South Africa	Southern Africa
<i>L. manifestus</i> Wesołowska & Russell-Smith, 2000	Tanzania	East Africa
<i>L. minutus</i> Wesołowska & Cumming, 2008	Namibia, Zimbabwe	Southern Africa
<i>L. namibicus</i> Wesołowska, 2011	Namibia, South Africa	Southern Africa
<i>L. nigritus</i> (Berland & Millot, 1941)	Côte d'Ivoire, Guinea, Nigeria	West Africa
<i>L. orbicularis</i> Wesołowska & Cumming, 2008	Zimbabwe	Southern Africa
<i>L. primus</i> Próchniewicz, 1994	Kenya	East Africa
<i>L. quadrimaculatus</i> Wesołowska & Russell-Smith, 2011	Nigeria	West Africa
<i>L. rufus</i> (Lessert, 1925)	Ethiopia, Tanzania	East Africa
<i>L. sibandai</i> Wesołowska, 2011	Zimbabwe	Southern Africa
<i>L. spinosus</i> Próchniewicz, 1994	Kenya	East Africa
<i>L. squamiger</i> Wesołowska & Haddad 2018	South Africa	Southern Africa



Table 1 (continued).

Genera and species	Distribution	Subregion
<i>Langona</i> Simon, 1901		
<i>L. alfensis</i> Hęciak & Prószyński, 1983	Sudan, Ethiopia	East Africa
<i>L. avara</i> Peckham & Peckham, 1903	Southern Africa	Southern Africa
<i>L. bethae</i> Wesołowska & Cumming, 2011	Botswana, Zimbabwe	Southern Africa
<i>L. bisecta</i> Lawrence, 1927	Namibia	Southern Africa
<i>L. bitumorata</i> Próchniewicz & Hęciak, 1994	Tanzania	East Africa
<i>L. bristowei</i> Berland & Millot, 1941	West, Central Africa	West Africa
<i>L. fusca</i> Wesołowska, 2011	Zimbabwe	Southern Africa
<i>L. hirsuta</i> Haddad & Wesołowska, 2011	South Africa	Southern Africa
<i>L. improcera</i> Wesołowska & Russell-Smith, 2000	Tanzania	East Africa
<i>L. lotzi</i> Haddad & Wesołowska, 2011	Lesotho, South Africa	Southern Africa
<i>L. magna</i> Caporiacco, 1947	East Africa	East Africa
<i>L. maindroni</i> (Simon, 1886)	Senegal	West Africa
<i>L. manicata</i> Simon, 1901	South Africa	Southern Africa
<i>L. mediocris</i> Wesołowska, 2000	Zimbabwe	Southern Africa
<i>L. minima</i> Caporiacco, 1949	Kenya	Eastern Africa
<i>L. pecten</i> Próchniewicz & Hęciak, 1994	Kenya, Tanzania, Zimbabwe	East & Southern Africa
<i>L. pilosa</i> Wesołowska, 2006	Namibia	Southern Africa
<i>L. redii</i> (Audouin, 1826)	Yemen	East Africa
<i>L. sabulosa</i> Wesołowska, 2011	Namibia	East Africa
<i>L. senegalensis</i> Berland & Millot, 1941	Senegal	Southern Africa
<i>L. tartarica</i> (Charitonov, 1946)	Yemen	East Africa
<i>L. tortuosa</i> Wesołowska, 2011	Namibia, South Africa, Zimbabwe	Southern Africa
<i>L. trifoveolata</i> (Lessert, 1927)	Congo	Central Africa
<i>L. ukualuthensis</i> Lawrence, 1927	Namibia	Southern Africa
<i>L. vitiosa</i> Wesołowska, 2006	Namibia	Southern Africa
<i>L. warchalowskii</i> Wesołowska, 2007	South Africa	Southern Africa
<i>L. zimbabwensis</i> Wesołowska & Cumming, 2011	Zimbabwe	Southern Africa

**Table 1** (continued).

Genera and species	Distribution	Subregion
<i>Manzuma</i> gen. nov.		
<i>M. botswana</i> gen. et sp. nov.	Botswana, South Africa	Southern Africa
<i>M. jocquei</i> (Azarkina, Wesołowska & Russell-Smith, 2011) gen. et comb. nov.	Central African Republic, Côte d'Ivoire, Nigeria	West & Central Africa
<i>M. kenyaensis</i> Dawidowicz & Wesołowska, 2016 gen. et comb. nov.	Kenya	East Africa
<i>M. lymph</i> a (Próchniewicz & Hęciak, 1994) gen. et comb. nov.	Kenya	East Africa
<i>M. nigr</i> itibia (Caporiacco, 1941) gen. et comb. nov.	Ethiopia, Yemen	East Africa
<i>M. petroae</i> gen. et sp. nov.	South Africa	Southern Africa
<i>M. tanzanica</i> gen. et sp. nov.	Tanzania	East Africa
<i>Phlegra</i> Simon, 1876		
<i>P. abessinica</i> Strand, 1906	Ethiopia	East Africa
<i>P. albostr</i> iata Simon, 1901	Lesotho, Mozambique, South Africa	Southern Africa
<i>P. arborea</i> Wesołowska & Haddad, 2009	South Africa	Southern Africa
<i>P. atra</i> Wesołowska & Tomasiewicz, 2008	Ethiopia	East Africa
<i>P. bairstowi</i> Simon, 1886	South Africa	Southern Africa
<i>P. bifurcata</i> Schmidt & Piepho, 1994	Cabo Verde	West Africa
<i>P. certa</i> Wesołowska & Haddad, 2009	South Africa	Southern Africa
<i>P. chrysops</i> Simon, 1890	Yemen	East Africa
<i>P. crumena</i> Próchniewicz & Hęciak, 1994	Kenya	East Africa
<i>P. desquamata</i> Strand, 1906	Ethiopia	East Africa
<i>P. etosha</i> Logunov & Azarkina, 2006	Namibia, South Africa	Southern Africa
<i>P. gagna</i> o Logunov & Azarkina, 2006	Côte d'Ivoire	West Africa
<i>P. imperiosa</i> Peckham & Peckham, 1903	South Africa	Southern Africa
<i>P. insulana</i> Schmidt & Krause, 1998	Cabo Verde	West Africa
<i>P. karoo</i> Wesołowska, 2006	Namibia, South Africa, Zimbabwe	Southern Africa
<i>P. langanoensis</i> Wesołowska & Tomasiewicz, 2008	Ethiopia, Zimbabwe	East & Southern Africa
<i>P. levis</i> Próchniewicz & Hęciak, 1994	Kenya	East Africa
<i>P. lugubris</i> Berland & Millot, 1941	West Africa	West Africa

**Table 1** (continued).

Genera and species	Distribution	Subregion
<i>P. nuda</i> Próchniewicz & Hęciak, 1994	Ethiopia, Kenya, Tanzania, Uganda, Zimbabwe	East & Southern Africa
<i>P. parvula</i> Wesolowska & Russell-Smith, 2000	Tanzania	East Africa
<i>P. procera</i> Wesolowska & Cumming, 2008	Zimbabwe	Southern Africa
<i>P. pusilla</i> Wesolowska & van Harten, 1994	Yemen, Senegal to Zimbabwe	East & Southern Africa
<i>P. simplex</i> Wesolowska & Russell-Smith, 2000	Tanzania, Zimbabwe	East & Southern Africa
<i>P. solitaria</i> Wesolowska & Tomasiewicz, 2008	Ethiopia	East Africa
<i>P. soudanica</i> Berland & Millot, 1941	Mali	West Africa
<i>P. suaverubens</i> Simon, 1886	Senegal	West Africa
<i>P. tenella</i> Wesolowska, 2006	Namibia	Southern Africa
<i>P. tetralineata</i> (Caporiacco, 1939)	Ethiopia	East Africa
<i>P. touba</i> Logunov & Azarkina, 2006	Côte d'Ivoire, Nigeria	West Africa
<i>P. tristis</i> Lessert, 1927	Congo, Kenya	Central & East Africa
<i>P. varia</i> Wesolowska & Russell-Smith, 2000	Tanzania	East Africa
<b><i>Rafalus</i> Prószyński, 1999</b>		
<i>R. insignipalpis</i> (Simon, 1882)	Yemen	East Africa
<b><i>Stenaelurillus</i> Simon, 1886</b>		
<i>S. albopunctatus</i> Caporiacco, 1949	Kenya	East Africa
<i>S. bandama</i> Logunov & Azarkina, 2018	Côte d'Ivoire	West Africa
<i>S. brandbergensis</i> (Wesolowska, 2006)	Namibia	Southern Africa
<i>S. darwini</i> Wesolowska & Russell-Smith, 2000	Kenya, Tanzania	East Africa
<i>S. furcatus</i> Wesolowska, 2014	Namibia	Southern Africa
<i>S. fuscatus</i> Wesolowska & Russell-Smith, 2000	Kenya, Tanzania	East Africa
<i>S. glaber</i> Wesolowska & Russell-Smith, 2011	Ghana, Nigeria, Uganda	West & East Africa
<i>S. guttatus</i> (Wesolowska & Cumming, 2002)	Botswana, Namibia, Zambia, Zimbabwe	Southern Africa
<i>S. guttiger</i> (Simon, 1901)	Botswana, Mozambique, South Africa, Zimbabwe	Southern Africa
<i>S. hirsutus</i> Lessert, 1927	Congo, Central Africa, Ghana, Kenya, Senegal, Tanzania, Uganda	West & Central & East Africa
<i>S. ignobilis</i> Wesolowska & Cumming, 2011	Zimbabwe	Southern Africa

**Table 1** (continued).

Genera and species	Distribution	Subregion
<i>S. iubatus</i> Wesolowska & Russell-Smith, 2011	Nigeria	West Africa
<i>S. jocquei</i> Logunov & Azarkina, 2018	Cameroon	West Africa
<i>S. kavango</i> Wesolowska, 2014	Namibia	Southern Africa
<i>S. kronestedti</i> Próchniewicz & Hęciak, 1994	Tanzania	East Africa
<i>S. latibulbis</i> Wesolowska, 2014	Congo, Zambia	Central & Southern Africa
<i>S. leucogrammus</i> Simon, 1902	Mozambique, Zimbabwe	Southern Africa
<i>S. mirabilis</i> Wesolowska & Russell-Smith, 2000	Kenya, Tanzania	East Africa
<i>S. modestus</i> Wesolowska, 2014	South Africa	Southern Africa
<i>S. nigricaudus</i> Simon, 1886	Burkina Faso, Gambia, Mali, Niger, Senegal	West Africa
<i>S. pecten</i> Wesolowska, 2014	Botswana, Zambia	Southern Africa
<i>S. pilosus</i> Wesolowska & Russell-Smith, 2011	Nigeria	West Africa
<i>S. pseudoguttatus</i> Logunov & Azarkina, 2018	Namibia	Southern Africa
<i>S. senegalensis</i> Logunov & Azarkina, 2018	Senegal	West Africa
<i>S. siyamae</i> Logunov & Azarkina, 2018	Sudan	East Africa
<i>S. specularis</i> Wesolowska, 2014	Malawi	Southern Africa
<i>S. strandi</i> Caporiacco, 1939	Ethiopia	East Africa
<i>S. striolatus</i> Wesolowska & Russell-Smith, 2011	Nigeria	West Africa
<i>S. sudanicus</i> Wesolowska, 2014	Sudan	East Africa
<i>S. termitophagus</i> (Wesolowska & Cumming, 1999)	Botswana, Namibia, South Africa	Southern Africa
<i>S. uniguttatus</i> Lessert, 1925	Ethiopia, East Africa	East Africa
<i>S. zambiensis</i> Wesolowska, 2014	Malawi, Zambia, Zimbabwe	Southern Africa

worth mentioning that the modern chorological centers of the subtribe Aelurillina lie in the Afrotropical Region and the south part of the Palaearctics (see also Logunov & Azarkina 2018 for a detailed review of subtribe Aelurillina).

To date, only one aelurilline species – *Aelurillus madagascariensis* Azarkina, 2009 – is known from the Madagascar zoogeographical Region (*sensu* Kryzhanovski 2002) (Table 1). The spider fauna of Madagascar Region remains poorly known, with only 105 species in 33 genera being recorded from there since the first publication (Vinson 1863; WSC 2019). At least one more Aelurillina genus, in addition to *Aelurillus*, was recently found in Madagascar (W. Maddison, pers. com.).

The most abundant subregions of Afrotropics are South Africa, with 49 species (39.2 % of all Afrotropical aelurillines), and East Africa, with 42 species (33.6 %). Surprisingly, the most insect-rich subregion of Afrotropical Region, West Africa, contains only 21 aelurilline species (16.8 %). This could be explained by two reasons. First, the aelurillines are ground-dwellers that seem to prefer dry open biotopes with high insolation, whereas in West Africa the most common biotopes are humid tropical forest. The second and more probable reason could be insufficient knowledge of spider fauna of that subregion. The same holds true for Central Africa, with only one aelurilline species (0.8 %) being described from this region to date. Ten species are known from two or three subregions (Fig. 193). East and South Africa share five species (4.0 %), West and Central – two species (1.6 %). Central and East and Central and South Africa share one species each (0.8 %) (Fig. 201). One species (0.8 %) – *Stenaelurillus hirsutus* – is found in West, Central and East Africa. The most unusual distribution is known for *Stenaelurillus glaber*, which is found in West and East Africa (Table 1).

Five Aelurillina genera – *Aelurillus*, *Asianellus*, *Manzuma* gen. nov., *Proszynskiana* and *Stenaelurillus* – have recently been revised or described. The genera *Langelurillus*, *Langona*, *Phlegra* and *Rafalus* are in need of a taxonomic revision. The taxonomic problem of the genus *Phanuelus* and Asian members of *Langleurillus* is in need of special attention in the future (see also discussion in Logunov & Azarkina 2018).

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