

## Four new species of the genus *Udzungwomyia* Grichanov, 2018 from Lesotho and South Africa (Diptera: Dolichopodidae)

### Четыре новых вида рода *Udzungwomyia* Grichanov, 2018 из Лесото и Южной Африки (Diptera: Dolichopodidae)

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KEY WORDS: Afrotropical, South Africa, Medeterinae, Udzungwomyini, new species, key.

КЛЮЧЕВЫЕ СЛОВА: Афротропики, Южная Африка, Medeterinae, Udzungwomyini, новый вид, определитель.

**ABSTRACT:** A new material for the Afrotropical genus *Udzungwomyia* Grichanov, 2018 has been recently found and identified. *Udzungwomyia spinitarsa* Grichanov, **sp.n.**, *U. brevitarsa* Grichanov, **sp.n.**, *U. maseru* Grichanov, **sp.n.**, and *U. lundeans* Grichanov, **sp.n.** from Lesotho and South Africa are described and illustrated. New species differ from other representatives of the genus in morphology of male genitalia and male secondary sexual characters on wing and hind leg. An identification key to six Afrotropical species is compiled.

**РЕЗЮМЕ:** Обнаружен и определен новый материал по афротропическому роду *Udzungwomyia* Grichanov, 2018. Описаны и иллюстрированы *Udzungwomyia spinitarsa* Grichanov, **sp.n.**, *U. brevitarsa* Grichanov, **sp.n.**, *U. maseru* Grichanov, **sp.n.**, и *U. lundeans* Grichanov, **sp.n.** из Лесото и Южной Африканской республики. Новые виды надежно отличаются по строению гениталий и вторичным половым признакам на крыльях и задних ногах самцов.

### Introduction

The Afrotropical genus *Udzungwomyia* Grichanov, 2018 was described in the subfamily Medeterinae by Grichanov [2018] for a new species *U. morogoro* Grichanov, 2018. The species was collected from the Udzungwa Mountains National Park in the Morogoro Region of Tanzania. The new genus was associated with a peculiar group of mainly medeterine genera with symmetrical male postabdomen or nearly so, with epandrial foramen positioned basally. Grichanov [2019] discovered *Udzungwomyia* in South Africa

(Limpopo Province), described *U. simoni* Grichanov, 2019 and created a medeterine tribe Udzungwomyiini for *Udzungwomyia*, Neotropical *Maipomyia* Bickel, 2004 and Oriental *Neomedetera* Zhu, Yang et Groo-taert, 2007.

A careful examination of material from the collection of the Natal Museum, Pietermaritzburg, KwaZulu-Natal, South Africa (NMSA) has revealed a new material showing more diverse fauna of this genus in southern Africa. In this paper four new species of *Udzungwomyia*, *U. spinitarsa* Grichanov, **sp.n.**, *U. brevitarsa* Grichanov, **sp.n.**, *U. maseru* Grichanov, **sp.n.**, and *U. lundeans* Grichanov, **sp.n.** from Lesotho and South Africa are described. Now six species of the genus *Udzungwomyia* are known. An identification key to Afrotropical species is compiled.

### Materials and methods

The holotypes and paratypes of the new species will be housed in the NMSA. The types of the new species have been studied and photographed with a ZEISS Discovery V-12 stereo microscope and an AxioCam MRc5 camera. Genitalia preparations have been photographed with a ZEISS AxioStar stereo microscope and an AxioCam ICc3 camera. The measurement accuracy of these microscopes is 0.01 mm. Morphological terminology and abbreviations follow Cumming, Wood [2017] and Grichanov, Brooks [2017]. The lengths of the antennomeres, podomeres and wing vein sections are given in millimetres. Body length is measured from the base of the antenna to the tip of abdominal segment 6. Wing length is measured from the base to the wing apex. The figures showing the hypopygium in lateral view are oriented as it appears in the intact specimens, with the morphologically ventral surface of the genitalia facing upwards, dorsal surface downwards.

## Taxonomy

### Genus *Udzungwomyia* Grichanov, 2018

**DIAGNOSIS.** This generic diagnosis is based on males and females (if known) of six included species, and lists features considered to be of generic importance. Body generally brown-black, weakly pollinose; body length 2–3 mm; pleura and abdomen laterally often silvery white pollinose; face in middle distinctly or strongly narrowed; antenna about as long as head height, black; postpedicel about as large as pedicel, semiglobular, with indistinct apex; stylus usually preapical; mesonotum with 1 long and 1 short notopleural, 1 supra-alar setae; facial suture distinct at least at eye borders; posterior third of mesonotum distinctly flattened; 4 or 5 pairs of strong dorsocentrals; acrostichal setae absent; lateral scutellars present, short, hair-like; mid and hind legs with short, but distinct black major setae; apex of male hind tibia and base of hind basitarsus thickened, often with modified setae; distal section of vein  $M_{1+2}$  weakly curved,  $R_{4+5}$  and  $M_{1+2}$  slightly converging on distal half, subparallel at wing apex; anal vein well developed; epandrial foramen positioned basally or laterally, shifted towards base; male sternum 4 and/or 5 enlarged, forming hood; male segment 6 bare, segment 7 reduced, devoid of setae; segment 8 well-developed, setose; male genitalia small, partly concealed; hypandrium midventral, bifurcated, with two long or short lateral arms; phallus simple; surstylus and cercus short. Female terga 9+10 divided medially into 2 hemitergites, each bearing one thick spine and several long simple setae.

#### KEY TO SPECIES OF *UDZUNGWOMYIA* (MALES)

1. Hind tibia with 2 long thick apicals, with longest seta half as long as basitarsus ..... 2  
– Hind tibia with short simple, rarely thickened, apicals ..... 3
2. Hind tibia with 2 thick golden apicals; hind tarsus 1.5 times longer than hind tibia; body length about 3 mm (Tanzania) .....  
..... *U. morogoro* Grichanov  
– Hind tibia with 2 thick black apicals; hind tarsus about as long as hind tibia; body length 2 mm (South Africa: Limpopo) .....  
..... *U. simoni* Grichanov
3. Hind tibia 2 times longer than hind tarsus; epandrial foramen basal; body length 2.5 mm (South Africa: KwaZulu-Natal) ..  
..... *U. brevitarsa* **sp.n.**  
– Hind tibia 1.25 times longer than hind tarsus; epandrial foramen left basolateral ..... 4
4. Hind basitarsus with basoventral process bearing 2 long thick setae running along basitarsus; body length 2.5 mm (South Africa: KwaZulu-Natal) ..... *U. spinitarsa* **sp.n.**  
– Hind basitarsus with only basoventral process, without modified setae ..... 5
5. Palpus black; eyes almost contiguous in middle of face; posterior wing margin straight; body length 2 mm (Lesotho) .....  
..... *U. maseru* **sp.n.**  
– Palpus silvery white; face in middle as wide as height of postpedicel; posterior wing margin forming distinct bulge immediately before  $M_4$ ; body length 2.7 mm (South Africa: Eastern Cape) ..... *U. lundeans* **sp.n.**

#### *Udzungwomyia spinitarsa* **sp.n.**

Figs 1–6.

**MATERIAL.** Holotype ♂, Republic of South Africa, [KwaZulu-]Natal Province, Drakensberg Mountains (2929Ad), Giant's Castle Reserve, 5800 ft, 18.X.1971, B.R. Stuckenberg &

M.E. Irwin (NMSA; male terminalia dissected and stored in glycerin in microvial pinned with the specimen). Paratypes. 4♀, same data as for holotype (NMSA).

**DESCRIPTION.** **Male** (Fig. 1). Length (mm): body 2.5, wing 2.6/0.9, antenna 0.7. **Head** (Fig. 2). Frons black, grey pollinose; face black, whitish grey pollinose, narrow, narrowest in middle, half as wide as height of postpedicel; clypeus convex, slightly wider than high (12/9); facial suture distinctly separating clypeus; antenna (Fig. 3) black; postpedicel small, rounded, about as long as high (7/6), with long hairs; arista-like stylus apical, simple, with short hairs apically; length ratio of scape to pedicel to postpedicel to arista-like stylus, 0.04/0.05/0.07/0.59; proboscis black; palpus black, with black setae; lower postocular setae white; about 5 upper postoculars short, black. **Thorax** black, with mostly black setae; mesonotum grey-brownish pollinose; pleura densely grey pollinose; propleuron with 1 strong white seta and 1 hair in lower part; 4 pairs of strong dorsocentral setae slightly decreasing in length anteriorly; acrostichals absent; scutellum with 2 long strong setae and 2 minute lateral hairs, dorsally bare. **Legs** black, with mainly black setae; coxae with white hairs and setae; hind coxa with one outer seta; fore leg simple, devoid of setae; mid femur with single anterior preapical seta; mid tibia with pair of anterodorsal and posterodorsal setae at base, 1 dorsal at middle and 3 short apical setae; mid tarsus simple; hind femur with single short anterior preapical seta; hind tibia slightly thickened at apex, with pair of anterodorsal and posterodorsal setae at base, few short dorsal setae, 1 white posterior preapical seta; hind basitarsus excavated ventrally in basal half, thickened in distal half, with few short white setae at apex, with small triangular basoventral process bearing small spine and 2 long thick setae reaching distal 3/4 of basitarsus (Fig. 4); tibia and tarsomere (from first to fifth) length (mm): fore leg: 0.74/0.28/0.11/0.08/0.06/0.08, mid leg: 0.92/0.46/0.19/0.09/0.08/0.09, hind leg: 0.93/0.34/0.28/0.15/0.08/0.09. **Wing** (Fig. 5) greyish, hyaline; basal portion of costa almost straight, bearing simple setae;  $R_{2+3}$  and  $R_{4+5}$  gradually diverging to wing apex;  $R_{4+5}$  and  $M_{1+2}$  almost parallel in apical part; ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$  to dm-m to distal part of  $M_1$  (in mm), 0.27/0.23/0.21/0.28; basal section of  $M_{1+2}$  shorter than distal section (14/17); lower calyp-ter orange, with white cilia; halter blackish. **Abdomen** (shrunken) black, grey pollinose, with black hairs and short black marginal setae; terga 2–5 laterally whitish pollinose; tergum 1 with white setae; sterna 2–4 well developed; sternum 5 forming large rounded lateral lobes, emarginated distally; tergum 6 large, bare; sternum 6 membranous; tergum 7 semicircular, very narrow, symmetrically lying along posterior margin of tergum 6, bare; segment 8 large, rounded, covered with microtrichia and sparse setae; hypopygium (Fig. 6) concealed, black; cercus black, with short light hairs and long setae; epandrium small, globular, basally asymmetrical, as long as high (lateral aspect), with symmetrical appendages; foramen positioned left laterally; hypandrium midventral, trilobate, forming 2 large lateral lobes expanding distally (lateral aspect), each lobe with dorsal tooth; phallus simple, short and thin distally; epandrial lobe broad, beaklike, with few short setae in distal half; surstylus long and thin, with short setae at apex; unpaired postgonite (or fused lobes of surstylus) long and thin, with brush of setae at apex; cercus small, obovate, covered with short white hairs, bearing several long simple setae; cerci separated, not fused.

**Female.** Length (mm): body 2.6, wing 2.7. Similar to male except lacking male secondary sexual characters. Legs simple; hind tibia with 3 short apical setae; abdomen with 5 visible segments; oviscapt divided into 2 acanthophorites, each bearing 1 thick seta and 4 long simple setae; cercus fingerlike, projected, with long apical setae and several setulae.

**ETYMOLOGY.** The specific epithet (Lat. *spina*; Gr. *tarsós*) refers to the 'spined tarsus' of the male hind leg.

DISTRIBUTION. South Africa (KwaZulu-Natal).

DIAGNOSIS. The new species differs from all other species of the genus in morphology of the male hind basitarsus, which is excavated ventrally in basal half, thickened in distal half, with few short white setae at apex, with small triangular basoventral process bearing small spine and 2 long thick setae reaching distal 3/4 of basitarsus. The other species have more or less simple hind basitarsus, without long thick basoventral setae.

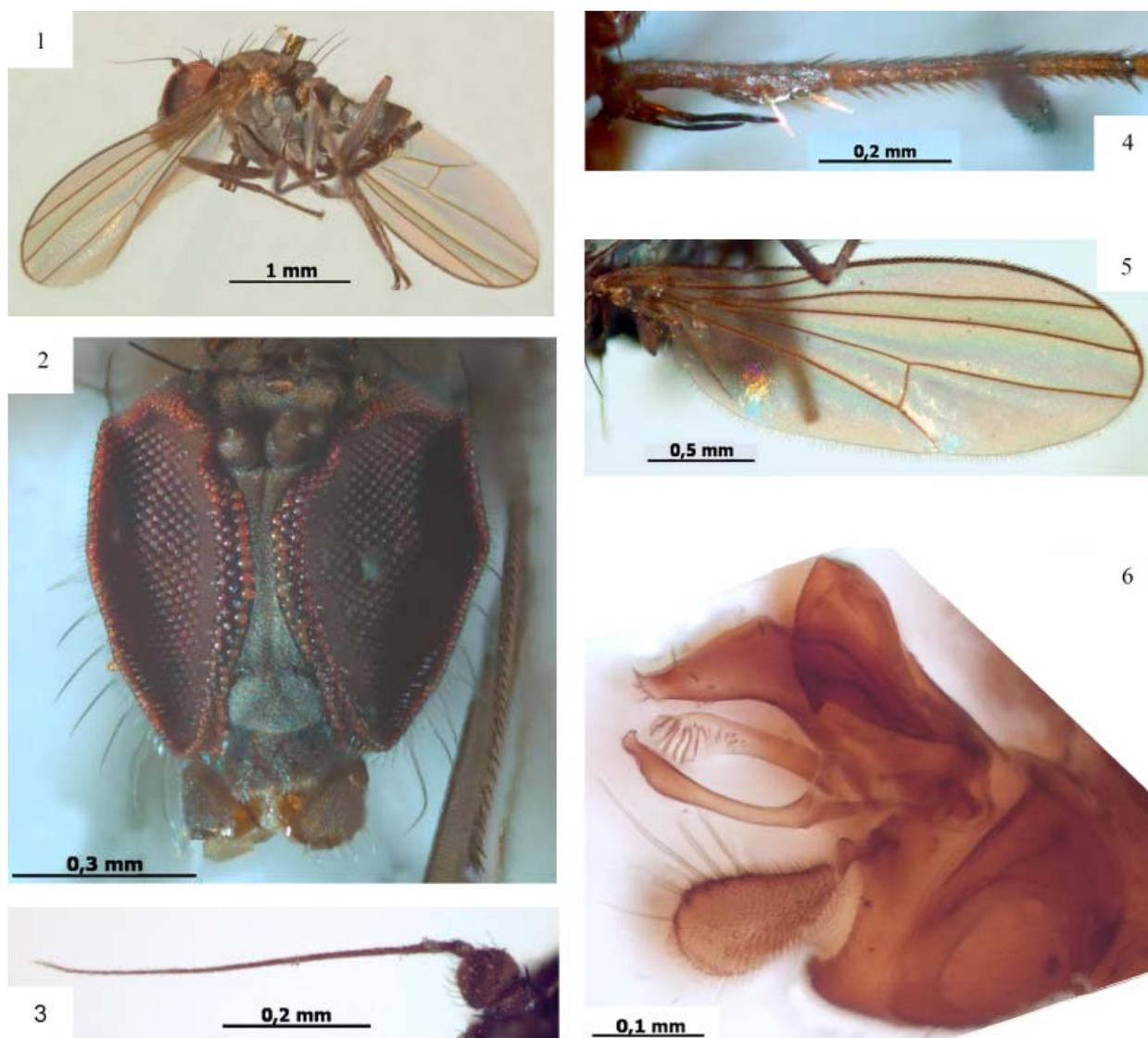
*Udzungwomyia brevitarsa* sp.n.

Figs 7–14.

MATERIAL. Holotype ♂, Republic of South Africa, [KwaZulu-]Natal Province, Drakensberg Mountains (2929Ad), Giant's Castle Reserve, 5800 ft, 1.XI.1972, M.E. Irwin (NMSA). Paratypes. 1♂, 1♀, same data as for holotype (NMSA); male terminalia dissected and stored in glycerin in microvial pinned

with the specimen); 1♂, [KwaZulu-]Natal Province, Drakensberg Mountains (2929Ad), Giant's Castle Reserve, 5800 ft, 18.X.1971, B.R. Stuckenberg & M.E. Irwin (NMSA).

DESCRIPTION. **Male** (Fig. 7). Length (mm): body 2.5, wing 2.6/0.9, antenna 0.9. **Head** (Fig. 8). Frons black, grey pollinose; face black, whitish pollinose, narrow; eyes contiguous in middle of face; clypeus silvery white pollinose, convex, slightly wider than high (11/8); facial suture distinctly separating clypeus; antenna (Fig. 9) black; postpedicel small, rounded, slightly higher than long (9/6), with long hairs; arista-like stylus apical, simple, with short hairs apically; length ratio of scape to pedicel to postpedicel to arista-like stylus (stylomeres 1 and 2), 0.06/0.06/0.06/0.04/0.51; proboscis black; palpus enlarged, silvery white pollinose, with white setae; lower postocular setae white; about 5 upper postoculars short, black. **Thorax** black, with mostly black setae; mesonotum grey-brownish pollinose; pleura whitish pollinose; propleuron with 3 white setae in lower part; 4 pairs of strong dorsocentral setae slightly decreasing in length



Figs 1–6. *Udzungwomyia spinitarsa*, sp.n., male: 1 — habitus; 2 — head; 3 — antenna; 4 — hind tarsus, anterior view; 5 — wing; 6 — hypopygium, left lateral view.

Рис. 1–6. *Udzungwomyia spinitarsa*, sp.n., самец: 1 — внешний вид; 2 — голова; 3 — усик; 4 — задняя лапка, вид спереди; 5 — крыло; 6 — гипопигий, вид слева сбоку.

anteriorly; acrostichals absent; scutellum with 2 long strong setae and 2 minute lateral hairs, dorsally bare. *Legs* black, with mainly black setae; coxae with white hairs and setae; hind coxa with one outer seta; fore leg simple, devoid of strong setae; mid femur with single anterior preapical seta; mid tibia with pair of anterodorsal and posterodorsal setae at base and 3 short apical setae; mid tarsus simple; hind femur with single short anterior preapical seta; hind tibia (Fig. 10) distinctly thickened and flattened at apex, with 1 anterodorsal seta at base, anterior row of semi-erect setulae in basal half, dorsal row of 5 setae below middle, 2 anterior preapical black setae; 5 short brownish ventral apical setae; hind basitarsus (Fig. 11) thickened in basal half, with small triangular basoventral tooth; tibia and tarsomere (from first to fifth) length (mm): fore leg: 0.71/0.29/0.11/0.07/0.08/0.09, mid leg: 0.88/0.45/0.15/0.09/0.07/0.07, hind leg: 1.13/0.20/0.12/0.08/0.09/0.09. *Wing* (Fig. 12) greyish, hyaline; basal portion of costa almost straight, bearing simple setae;  $R_{2+3}$  and  $R_{4+5}$  gradually diverging to wing apex;  $R_{4+5}$  and  $M_{1+2}$  almost parallel in apical part; ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$  to dm-m to distal part of  $M_4$  (in mm), 0.21/0.15/0.20/0.25; basal section of  $M_{1+2}$  shorter than distal section (13/20); lower calypter brown, with white cilia; halter brownish. *Abdomen* black, grey pollinose, with black hairs and short black marginal setae; terga 2–4 laterally whitish pollinose; sterna 2–4 well developed; sternum 4 largest, subquadrate, with 2 lateral groups of 4 strong setae (Fig. 13); sterna 5–6 reduced, membranous; tergum 5 narrow; tergum 6 small, located between tergum 5 and sternum 4, hemispherical, with distal emargination and ventral lobes covered with hairs; tergum 7 semicircular, very narrow, symmetrically lying along posterior margin of tergum 5, bare; segment 8 large, rounded, covered with short white setae; hypopygium (Fig. 14) partly concealed, black; cercus black; epandrium shining, globular, basally asymmetrical, as long as high (lateral aspect), with symmetrical appendages; foramen positioned left laterally; hypandrium mid-ventral, trilobate, with short medial lobe and 2 long thin lateral lobes, each lobe with dorsal tooth; phallus simple, short and thin distally; epandrial lobe broad at base, thin and pointed at apex, with few short setae at base and at apex; surstylus short, with unequal in length and shape arms, both with short setae and hook-like appendix; cercus small, rounded-triangular, with finger-like apex, covered with short white hairs, bearing several long curved setae; cerci separated, not fused.

**Female.** Length (mm): body 2.6, wing 2.7. Similar to male except lacking male secondary sexual characters. *Legs* simple; hind tibia 1.7 times longer than hind tarsus, with pair of strong anterodorsal and weak posterodorsal setae at base and 3 short apical setae; dorsal setae weak; hind basitarsus distinctly longer than next segment (18/12); abdomen with 5 visible segments; oviscapit concealed.

**ETYMOLOGY.** The specific epithet (Lat. *brevis*; Gr. *tarsós*) refers to the 'short tarsus' of the male hind leg.

**DISTRIBUTION.** South Africa (KwaZulu-Natal).

**DIAGNOSIS.** The new species differs from all other species of the genus in the shortened hind tarsus, with the hind tibia two times longer than hind tarsus. The other species have normal hind tarsus, only slightly shorter than or as long as hind tibia.

*Udzungwomyia maseru* sp.n.

Figs 15–22.

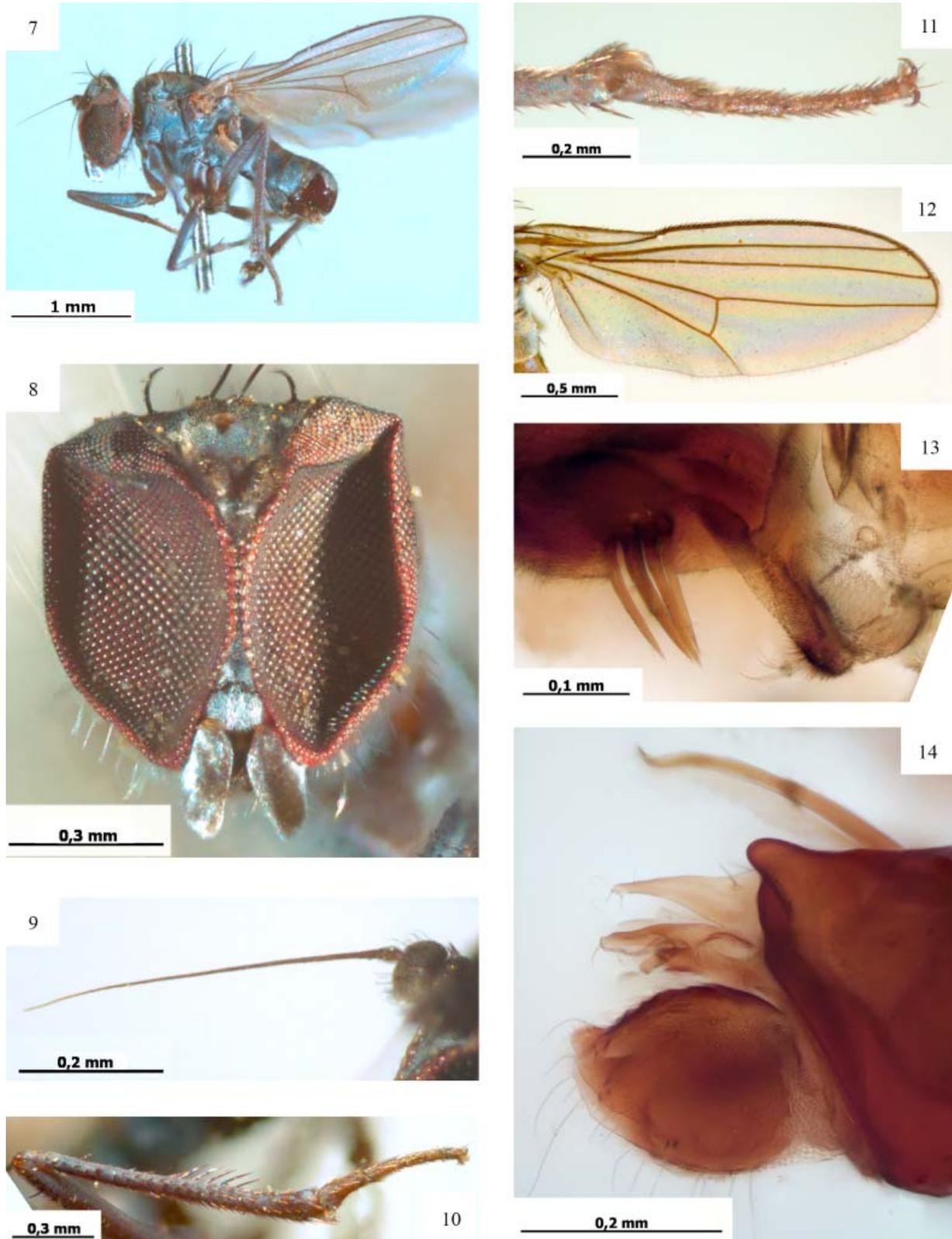
**MATERIAL.** Holotype ♂, Lesotho, Roma Mission, Maseru District, Basutoland, 4–13.I.1963, B. & P. Stuckenberg / Upper Cave, sandstone level, 6000 ft. (NMSA). Paratype. 1♂, same data as for holotype (NMSA; male terminalia dissected and stored in glycerin in microvial pinned with the specimen).

**DESCRIPTION. Male** (Fig. 15). Length (mm): body 2.0, wing 2.2/0.7, antenna 0.7. *Head* (Fig. 16). Frons black, grey pollinose; face black, whitish pollinose, narrow, narrowest in middle; eyes nearly contiguous in middle of face; clypeus silvery white pollinose, convex, slightly wider than high (4/3); facial suture distinctly separating clypeus; antenna (Fig. 17) black; postpedicel small, rounded, slightly higher than long (8/6), with long hairs; arista-like stylus apical, simple, with short hairs apically; length ratio of scape to pedicel to postpedicel to arista-like stylus (stylomeres 1 and 2), 0.04/0.05/0.06/0.03/0.51; proboscis black; palpus small, black, with 1 black seta and white hairs; lower postocular setae white; about 5 upper postoculars short, black. *Thorax* black, with mostly black setae; mesonotum grey-brownish pollinose; pleura whitish pollinose; propleuron with 3 white setae in lower part; 5 pairs of strong dorsocentral setae slightly decreasing in length anteriorly; acrostichals absent; scutellum with 2 long strong setae and 2 minute lateral hairs, dorsally bare. *Legs* black, with mainly black setae; coxae with white hairs and setae; hind coxa with one outer seta; fore leg simple, devoid of strong setae; mid femur with single anterior preapical seta; mid tibia with pair of anterodorsal and posterodorsal setae at base and 3 short apical setae; mid tarsus simple; hind femur with single short anterior preapical seta; hind tibia slightly thickened at apex, with 1 anterodorsal seta at base, dorsal row of 6–7 setae in middle third, 2 short anterior apical black setae; comb of short brownish ventral apical setae; hind basitarsus (Fig. 18) thickened in basal half, with small triangular basoventral tooth; tibia and tarsomere (from first to fifth) length (mm): fore leg: 0.58/0.27/0.14/0.08/0.06/0.06, mid leg: 0.76/0.43/0.19/0.09/0.07/0.08, hind leg: 0.91/0.21/0.26/0.14/0.07/0.08. *Wing* (Fig. 19) greyish, hyaline; basal portion of costa almost straight, bearing simple setae;  $R_{2+3}$  and  $R_{4+5}$  gradually diverging to wing apex;  $R_{4+5}$  and  $M_{1+2}$  almost parallel in apical part; ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$  to dm-m to distal part of  $M_4$  (in mm), 0.19/0.15/0.14/0.25; basal section of  $M_{1+2}$  shorter than distal section (13/20); basal section of  $M_4$  slightly thickened in middle; lower calypter brown, with brown cilia; halter brownish. *Abdomen* black, grey pollinose, with black hairs and short black marginal setae; terga 2–4 laterally whitish pollinose; sterna 2–4 well developed; sternum 4 largest, subquadrate, glabrous; sterna 5–6 reduced, membranous; tergum 5 narrow; tergum 6 small, located between tergum 5 and sternum 4, hemispherical, without distal emargination, with ventral lobes covered with short hairs; tergum 7 semicircular, very narrow, symmetrically lying along posterior margin of tergum 5, bare; segment 8 large, rounded, covered with short white setae; hypopygium (Fig. 20) partly concealed, black; cercus black; epandrium shining, globular, basally asymmetrical, as long as high (lateral aspect), with symmetrical appendages; foramen positioned left laterally; hypandrium (Fig. 21) midventral, trilobate, with short medial lobe bearing 4 asymmetrical spines and 1 tooth, with 2 long thin lateral lobes; phallus simple, short and thin distally; epandrial lobe broad at base, thin at apex, thickened at extreme apex, bearing few short apical setae; surstylus (Fig. 21) short and broad, with fused arms, with short setae and hook-like appendix; cercus (Fig. 22) small, rounded-triangular, with finger-like apex, covered with short white hairs, bearing several moderately long straight setae; cerci separated, not fused.

**Female.** Unknown.

**ETYMOLOGY.** The species is named after the Maseru District of Lesotho, where the type material was collected.

**DISTRIBUTION.** Lesotho.

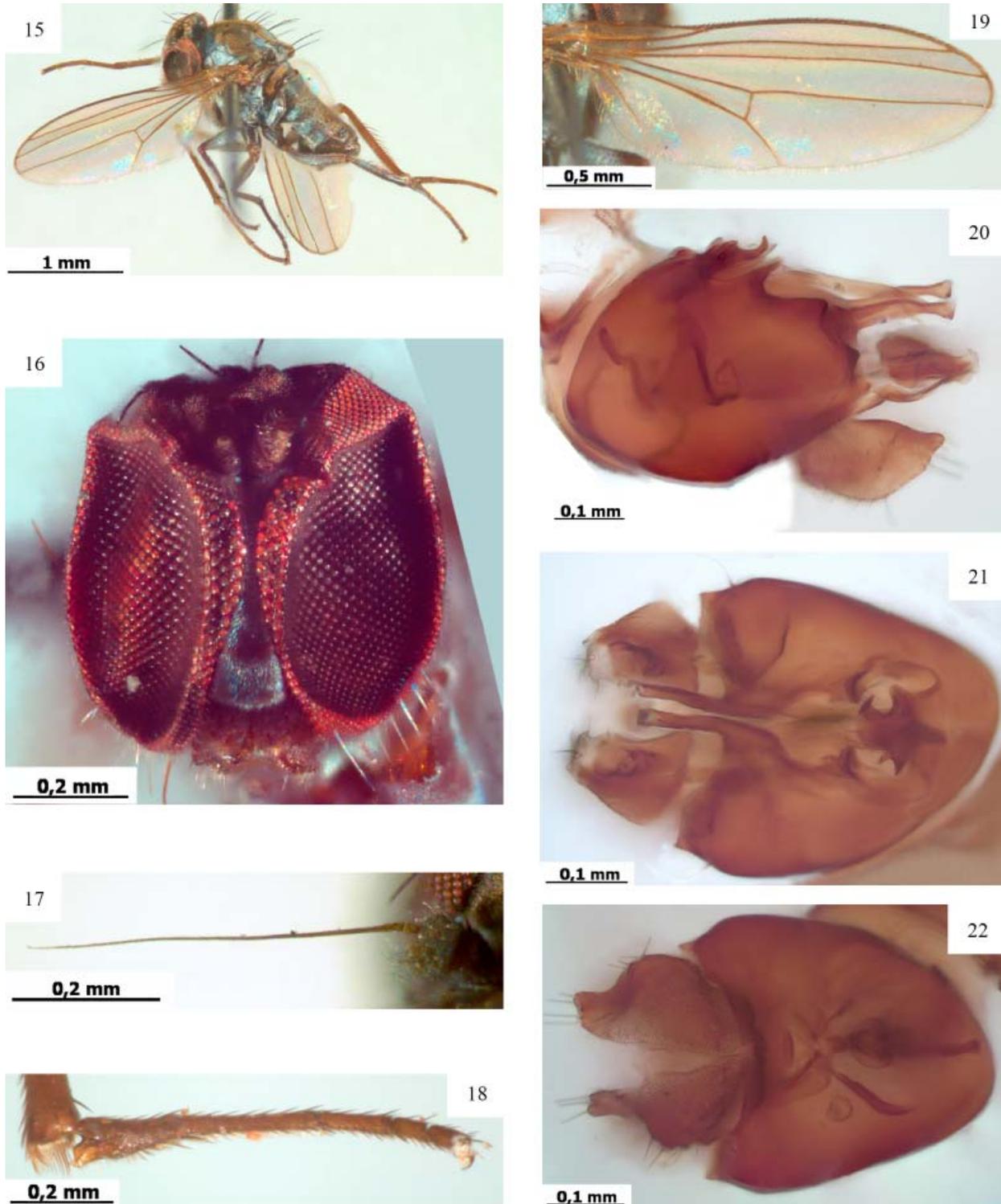


**Figs 7–14.** *Udzungwomyia brevitarsa*, sp.n., male: 7 — habitus; 8 — head; 9 — antenna; 10 — hind tibia and tarsus, anterior view; 11 — hind tarsus, ventral view; 12 — wing; 13 — setae on sternum 4 and ventral lobe of tergum 6, lateral view; 14 — details of hypopygial appendages, lateral view.

**Рис. 7–14.** *Udzungwomyia brevitarsa*, sp.n., самец: 7 — внешний вид; 8 — голова; 9 — усик; 10 — задняя голень и лапка, вид спереди; 11 — задняя лапка, вид снизу; 12 — крыло; 13 — щетинки 4-го стернита и вентральная лопасть 6-го тергита, вид сбоку; 14 — детали придатков гипопигия, вид сбоку.

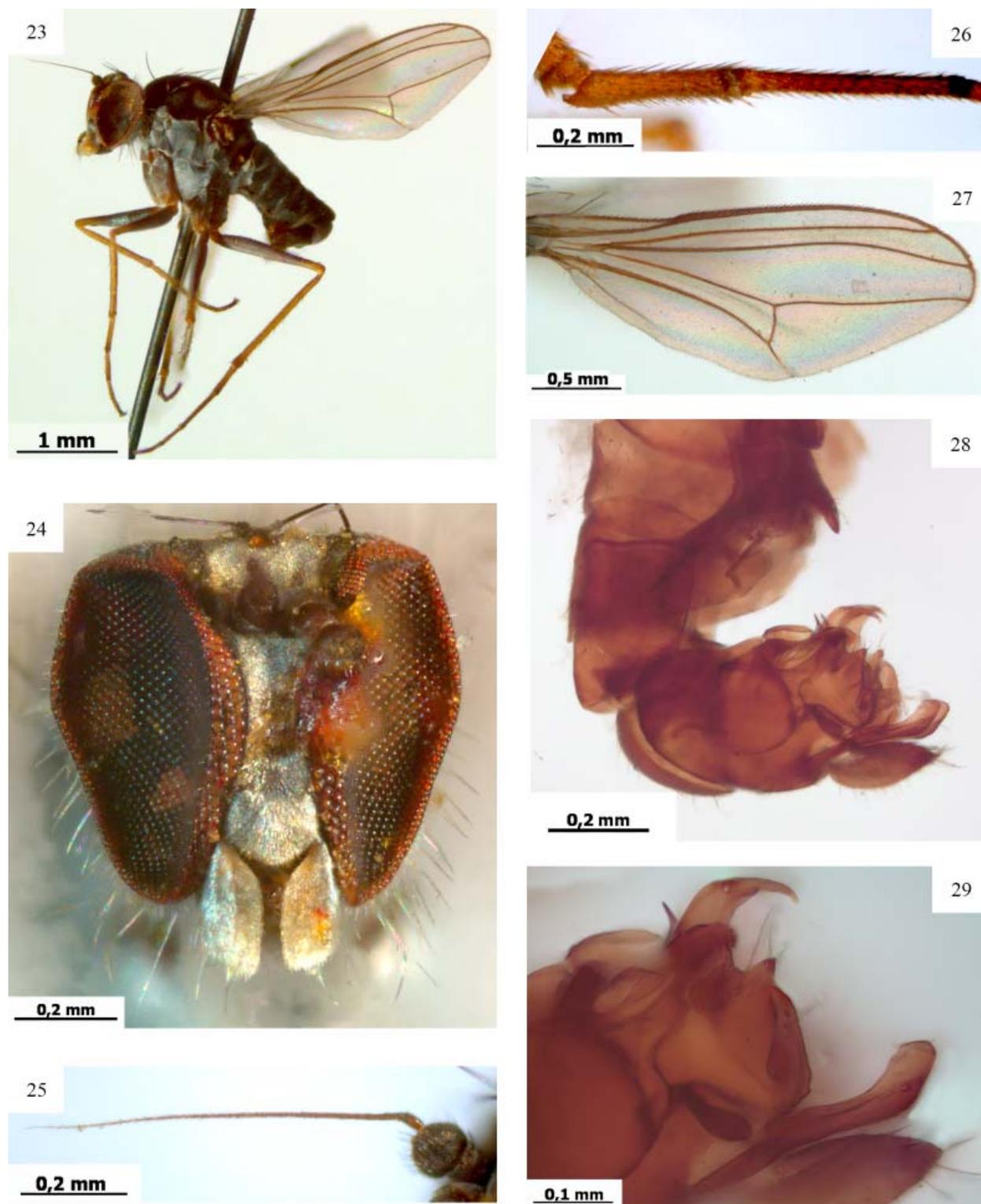
DIAGNOSIS. The new species is similar in habitus to *U. lundeans* sp.n., strongly differing in black palpus, almost contiguous eyes in middle of face, straight posterior wing margin and shape

of male hind basitarsus. *U. lundeans* sp.n. male have silvery white palpus, distinctly separated eyes, distinct bulge immediately before wing vein  $M_4$  and shape of male hind basitarsus.



Figs 15–22. *Udzungwomyia maseru*, sp.n., male: 15 — habitus; 16 — head; 17 — antenna; 18 — hind tarsus, anterior view; 19 — wing; 20 — hypopygium, right lateral view; 21 — hypopygium, ventral view; 22 — hypopygium, dorsal view.

Рис. 15–22. *Udzungwomyia maseru*, sp.n., самец: 15 — внешний вид; 16 — голова; 17 — усик; 18 — задняя лапка, вид спереди; 19 — крыло; 20 — гипопигий, вид справа сбоку; 21 — гипопигий, вид снизу; 22 — гипопигий, вид сверху.



Figs 23–29. *Udzungwomyia lundeans*, sp.n., male: 23 — habitus; 23 — head; 24 — antenna; 26 — hind tarsus, anterior view; 27 — wing; 28 — abdominal segments 4–6 and hypopygium, right lateral view; 29 — details of hypopygial appendages, lateral view.

Рис. 23–29. *Udzungwomyia lundeans*, sp.n., самец: 23 — внешний вид; 24 — голова; 25 — усик; 26 — задняя лапка, вид спереди; 27 — крыло; 28 — брюшные сегменты 4–6 и гипопигий, вид справа сбоку; 29 — детали придатков гипопигия, вид сбоку.

*Udzungwomyia lundeans* sp.n.

Figs 23–29.

**MATERIAL.** Holotype ♂, Republic of South Africa, Lundeans [=Lundin's] Nek, Barkly East District, Eastern Cape Province, 1925–2100 m, 18.I.1963, B. & P. Stuckenberg (NMSA; male terminalia dissected and stored in glycerin in microvial pinned with the specimen).

**DESCRIPTION.** **Male** (Fig. 23). Length (mm): body 2.7, wing 2.7/1.0, antenna 0.9. **Head** (Fig. 24). Vertex and frons black, whitish grey pollinose, with black major setae; face black, white pollinose; face in middle narrowing, as wide as postpedicel height; facial suture distinct; antenna (Fig. 25) about as long as head height, black; postpedicel slightly larger than pedicel, globular, with indistinct apex, as long as high, white pubescent; arista-like stylus preapical, filiform, shortly haired; length ratio of scape to pedicel to postpedicel to stylus, 0.04/0.05/0.09/0.77; proboscis small, light haired; palpus enlarged, silvery white pollinose, with white setae; lower postocular setae white; about 5 upper postoculars short, black. **Thorax** mat, black, with black setae; mesonotum grey pollinose; pleura whitish grey pollinose; posterior third of mesonotum distinctly flattened; anterior third of mesonotum haired; propleuron with 1 white propleural seta and few short hairs; 4 pairs of strong dorsocentral setae; acrostichals absent; 1 pair of scutellars. **Legs** long and slender, bicolorate; setae and setulae black except as noted; coxae black except orange apex, whitish pollinose; fore and mid coxae with short simple white anterior cilia; hind coxa with 1 strong white lateral seta at middle; trochanters brown; femora black except yellow distal apices; tibiae dirty yellow; tarsi with 2–3 basal segments dirty yellow and 2–3 distal segments black; claws on all legs small and black, pulvilli white; fore leg devoid of strong setae, but fore tibia with 2 very short anterodorsals and 2–3 short apical setae; mid femur simple, with anterior preapical seta; mid tibia with 1 anterodorsal and 4 apical setae; tarsomeres 1–3 with short apicals; hind femur simple, with anterior preapical seta, as long as diameter of femur; hind tibia slightly swollen at apex, with 1 anterodorsal seta, 3–4 short dorsals behind middle; hind basitarsus (Fig. 26) with basoventral tooth; tibia and tarsomere (from first to fifth) length (mm): fore leg: 0.85/0.34/0.27/0.19/0.11/0.12, mid leg: 1.25/0.57/0.35/0.19/0.1/0.11, hind leg: 1.39/0.33/0.46/0.3/0.13/0.13. **Wing** (Fig. 27) almost hyaline, with brown veins; costa slightly thickened behind  $R_1$ ,  $R_{2+3}$  and  $R_{4+5}$  subparallel, diverging at wing apex;  $R_{4+5}$  and  $M_{1+2}$  slightly converging on distal half;  $M_{1+2}$  almost straight beyond dm-m, joining costa beyond wing apex; ratio of part of costa between  $R_{2+3}$  and  $R_{4+5}$  to this between  $R_{4+5}$  and  $M_{1+2}$  to dm-m to distal part of  $M_4$  (in mm), 0.29/0.19/0.22/0.24; crossvein dm-m weakly convex, 3/5 as long as maximum distance between  $R_{4+5}$  and  $M_{1+2}$  veins; anal vein distinct; narrow anal lobe present; alula absent; posterior wing margin between base and  $M_4$  almost straight, forming distinct bulge immediately before  $M_4$ ; lower calypter light brownish, with white setae; halter yellow. **Abdomen** mat, black, laterally whitish pollinose, with black hairs and setae along tergal margins; hypopygium including cerci entirely black, with light cilia; terga 2–4 laterally whitish pollinose; sterna 2–4 well developed; sternum 4 large, with broad distomedial hairy projection (Fig. 28); sterna 5–6 reduced, membranous; tergum 6 large, glabrous; tergum 7 semicircular, very narrow; segment 8 large, rounded, covered with short white setae; hypopygium (Fig. 28) partly concealed, black; cercus black; epandrium globular, basally asymmetrical, as long as high (lateral aspect), with symmetrical appendages; foramen positioned left basolaterally; hypandrium midventral, trilobate, with short medial lobe and 2 spine-like lateral lobes directed ventrally; phallus simple, short and thick; epandrial lobe broad at

base, beak-like at apex, bearing 1 preapical seta; ventral lobe of surstylus short and broad (Fig. 29), with medial finger-like projection, with short setae; dorsal lobe of surstylus long and narrow (Fig. 29), thickened and rounded apically, with short setae; cercus small, subtriangular (dorsal aspect), with indistinct apex, covered with short white hairs, bearing several moderately long straight setae; cerci separated, not fused.

**Female.** Unknown.

**ETYMOLOGY.** The species is named after the Lundeans Nek, a pass across the Witteberge range, an outlier of the Drakensberg escarpment, where the type material was collected.

**DISTRIBUTION.** South Africa (Eastern Cape).

**DIAGNOSIS.** The new species is similar in habitus to *U. maseru* sp.n., strongly differing in silvery white palpus, distinctly separated eyes, distinct bulge immediately before wing vein  $M_4$  and shape of male hind basitarsus. *U. maseru* sp.n. male have black palpus, almost contiguous eyes in middle of face, straight posterior wing margin and shape of male hind basitarsus.

## Conclusion

In the present study, four new species of *Udzungwomyia* from Lesotho and South Africa are described in addition to two previously known species. All species were found in mountains of Tanzania (Udzungwa Mountains) and southern Africa (Drakensberg escarpment) at a height about 2000 m above sea level. There are some poorly studied mountain ranges between Tanzania and South Africa; therefore, I can anticipate discovery of more *Udzungwomyia* species in tropical Africa.

Four new species described here have changed a little the generic concept of *Udzungwomyia*. Nevertheless, more or less modified male hind tibia and hind basitarsus, often with modified setae, is a remarkable synapomorphy shared by all species. Diverse structures of hypopygia and variously modified pregenital segments are also peculiar.

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