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A NEW GENUS AND SPECIES OF SUBFAMILY MEDETERINAE (DIPTERA: DOLICHOPODIDAE) FROM CAMEROON

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Summary. *Cameroonomyia matilei* Grichanov, **gen. et sp. n.** is described from Cameroon. The presence of distinct anterior preapical seta on mid and hind femora places the new genus in the tribe Udzungwomyiini. It is considered close to the genus *Udzungwomyia* Grichanov, 2018, but differs from the latter in the wing distinctly longer than the body; the face almost parallel-sided, about 2 times as wide as height of the postpedicel; the postpedicel subtriangular, with dorsal arista-like stylus; six pairs of dorsocentral bristles; the male hind tibia and basitarsus simple, without modified setae or bristles; the sternum 2 with long and thin ventral process in both sexes; the hypopygium with epandrial foramen positioned left laterally; the hypandrium long and broad (ventral aspect), flat, with distal emargination; the surstylus with modified arms. Species of *Udzungwomyia* differ from *Cameroonomyia* **gen. n.** in the wing distinctly shorter than the body; the face in middle about as wide as height of postpedicel, half as wide as face at clypeus and under antenna; the postpedicel semiglobular, with preapical arista-like stylus; four pairs of strong dorsocentral bristles; the male hind tibia swollen at apex, with two long thick curved apicals; the hind basitarsus with basiventral process; the sternum 2 without ventral process; the hypopygium with epandrial foramen positioned basally; the hypandrium short, bifurcated from base; the surstylus with simple arms. A key to four genera of the tribe Udzungwomyiini is provided.

Key words: Medeterinae, Udzungwomyiini, taxonomy, new genus, new species, key, Cameroon, Afrotropical Region.

И. Я. Гричанов. Новый род и вид подсемейства Medeterinae (Diptera: Dolichopodidae) из Камеруна // Дальневосточный энтомолог. 2024. N 495. С. 1-9.

Резюме. *Cameroonomyia matilei* Grichanov, **gen. et sp. n.** описан из Камеруна. Такой признак, как передняя предвершинная щетинка на средних и задних бедрах, помещает новый род в трибу Udzungwomyiini. Он рассматривается наиболее близким к роду *Udzungwomyia* Grichanov, 2018, но отличается от последнего тем, что крыло заметно длиннее тела; лицо с почти параллельными сторонами, примерно в два раза шире высоты третьего членика усика; последний почти треугольный, со спинной аристой; шесть пар дорсоцентральных щетинок; задние голени и первый членик задней лапки самца простые, без видоизмененных щетинок; второй стернит брюшка с длинным и тонким вентральным отростком у обоих полов; гипопигий с эпандриальным отверстием, расположенным слева сбоку; гипандрий длинный и широкий (вид снизу), плоский, с дистальной выемкой; сурстиль с модифицированными лопастями. Виды *Udzungwomyia* отличаются от *Cameroonomyia* **gen. n.** тем, что крыло заметно короче тела; ширина лица посередине примерно равна высоте третьего членика усика, в два раза уже лица у наличника и под усиками; третий членик усика полукруглый, с предвершинной аристой; четыре пары дорсоцентральных щетинок; задние голени самца утолщены на вершине, с двумя длинными утолщенными изогнутыми щетинками на вершине; первый членик задней лапки самца с базовентральным отростком; второй стернит брюшка без вентрального отростка; гипопигий с эпандриальным отверстием, расположенным базально; гипандрий короткий, раздвоенный от основания; сурстиль с простыми лопастями. Составлен определитель четырех родов трибы Udzungwomyiini.

INTRODUCTION

The Cameroonian Dolichopodidae numbers 47 species (Grichanov, 2018, 2020), but there is no doubt that many more species are waiting discovery and description.

The tribe Udzungwomyiini was recently proposed for three medeterine genera, the Afrotropical *Udzungwomyia* Grichanov, 2018 with two species, monotypic Oriental *Neomedetera* Zhu, Yang et Grootaert, 2007, and Neotropical *Maipomyia* Bickel, 2004 with two species (Grichanov, 2019). The tribe members have the following synapomorphic features. Small species with body length 2–3.6 mm; face usually narrow, usually narrowing in middle; facial suture distinct at least at eye borders; posterior third of mesonotum distinctly flattened; mesonotum with 1–2 notopleural, 1 humeral, 1 sutural, and 1 postalar bristles; 4–6 pairs of strong dorso-central bristles in regular rows; acrostichal setae absent (*Cameroonomyia* **gen. n.**, *Udzungwomyia*, *Maipomyia* in part) or present, biseriate (*Neomedetera*, *Maipomyia*);

mid and hind femora each with one anterior preapical bristle. The last character distinguishes *Udzungwomyiini* from other tribes of the subfamily Medeterinae.

A re-examination of unidentified male and female collected nearly half-century ago in mountain forests of Cameroon revealed that they are related to the tribe *Udzungwomyiini*, but cannot be associated with any genus included there.

This paper aims to describe and illustrate a new genus and species *Cameroonomyia matilei* Grichanov, **gen. et sp. n.** from Cameroon.

MATERIALS AND METHODS

The types of the new species were collected in 1975 in the Bafut Nguemba Forest Reserve (BNFR) located within the Guinean forest of West African hotspot. In 1978, the BNFR had about 70% of its surface area covered with native forest (Takem-Mbi, 2013). Since then nearly 40% loss of the reserve trees was counted, while eucalyptus laden-farmland achieved dominance by 2018 (Fogwe et al., 2019). The forests are located on altitudes ranging between 1800 and 2500 m along the Bamenda Highland Ridge.

The holotype and paratype of the new species will be housed in the National Museum of Natural History, Paris, France (MNHN). The types have been studied and photographed with a ZEISS Discovery V-12 stereo microscope and an AxioCam MRc5 camera. Genitalia preparation has 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

Subfamily Medeterinae Lioy, 1864

Tribe *Udzungwomyiini* Grichanov, 2019

Key to genera of *Udzungwomyiini*

1. Wing vein R_{4+5} ending costa closer to vein R_{2+3} than to vein M_1 ; M_1 distinctly weaker than other veins; hypandrium reduced; epandrial foramen positioned left laterally *Maipomyia*
- Wing vein R_{4+5} ending costa closer to vein M_1 than to vein R_{2+3} ; M_1 not weaker than other veins; hypandrium short, bifurcated; epandrial foramen variously positioned 2

2. Acrostichal setae present, biseriate; lateral scutellars absent; distal section of wing vein M arched anteriorly, distinctly converging with R_{4+5} ; hind basitarsus about 2 times longer than next tarsomere; male segments 6 and 7 subequal in length, setose; segment 8 reduced, bare; epandrial foramen positioned basoventrally *Neomedetera*
- Acrostichal setae absent; lateral scutellars present, hairlike; distal section of wing vein M weakly curved or straight, subparallel to R_{4+5} ; hind basitarsus distinctly shorter than next tarsomere; male segments 6 and 7 bare, segment 7 reduced; segment 8 well-developed, setose; epandrial foramen variously positioned 3
3. Wing distinctly shorter than body; face in middle about as wide as height of postpedicel, half as wide as face at clypeus and under antenna; 4 pairs of strong dorsocentral bristles; sternum 2 without ventral process; epandrial foramen positioned basally *Udzungwomyia*
- Wing distinctly longer than body; face almost parallel-sided, about 2 times as wide as height of postpedicel; 6 pairs of strong dorsocentral bristles; sternum 2 with long and thin ventral process in both sexes; epandrial foramen positioned left laterally *Cameroonomyia* gen. n.

Genus *Cameroonomyia* Grichanov, gen. n.

<https://zoobank.org/NomenclaturalActs/7652CEC0-A676-4CB9-84EF-25E772BF7EBB>

Type species: *Cameroonomyia matilei* Grichanov, **sp. n.**; here designated.

DIAGNOSIS. This generic diagnosis is based on male and female of one included species, and lists features considered to be of generic importance. Body length about 3.6 mm, generally brown-black, weakly pollinose; face under antenna as wide as clypeus, nearly 2 times as wide as postpedicel height, slightly narrowed at middle in male, nearly parallel-sided in female; facial suture distinctly separating clypeus; antenna about as long as head height, black; postpedicel slightly larger than pedicel, subtriangular, with rounded apex, as long as high; arista-like stylus dorsal; mesonotum with 2 long notopleural, 1 supra-alar bristles; 6 pairs of strong dorsocentrals with anterior pair shorter and posterior pair longer than other bristles; acrostichals absent; lateral scutellars present, fine, 1/3 as long as marginal bristles; legs long and slender, simple in both sexes, without modified setae or bristles; mid and hind legs with distinct black major bristles; mid and hind femora with anterior preapical bristle; hind basitarsus shorter than next segment; wing distinctly longer than body; part of costa between R_{2+3} and R_{4+5} two times longer than part of costa between R_{4+5} and M_{1+2} ; distal section of wing vein M_{1+2} almost straight; R_{4+5} and M_{1+2} slightly converging in distal half, subparallel at wing apex; crossvein dm-m positioned at wing midlength, about as long as maximum distance between R_{4+5} and M_{1+2} veins; abdomen not longer than thorax; sternum 2 with relatively long and thin ventral process in both sexes; male sternum 4 forming large triangular ventral hood with hook-like process in middle of posterior margin; postabdomen nearly symmetrical, with epandrial foramen positioned basally; male tergum 6 small, bare; male tergum 7 semicircular, very narrow, symmetrically lying along posterior margin of tergum 6, bare; segment 8 well-developed, setose; genitalia mostly hidden; hypandrium midventral, broad (ventral aspect), flat, with distal emargination; phallus simple; surstylus small and distinctly divided, with free arms; male cerci small, rounded, not fused. Female abdomen with 5 visible segments.

***Cameroonomyia matilei* Grichanov, sp. n.**

<https://zoobank.org/NomenclaturalActs/3554ACC5-1F67-4490-83C2-A8E2930170F1>

Figs 1, 2

TYPE MATERIAL. Holotype – ♂, **Cameroon**: “Mission Cameroun, C.N.R.S. [Centre national de la recherche scientifique], RCP [Recherche coopérative sur programme] 318, Octobre – Novembre 1975 / Bafut Nguemba [Forest Reserve] (vallée de la Haute Nguemba), Province du Nord-Ouest / 27.X.1975” [MNHN]. Paratype: 1 ♀, same data as for holotype, but the date is 3.XI.1975 [MNHN].

DESCRIPTION. Male (Fig. 1A). Head (Fig. 1B): vertex, frons and face black, weakly grey pollinose, with black major bristles; vertical bristle black, strong and long, positioned on upper corner of head; short postvertical seta as a linear continuation of postocular setal row; one pair of strong ocellar bristles with adjacent pair of hairs; single row of fine black simple postoculars decreasing in size upward; eyes with short hairs between facets below, with microscopic hairs above; face under antenna as wide as clypeus, nearly 2 times as wide as postpedicel height, slightly narrowed at middle; face 2 times as high as face width in middle; facial suture distinct; antenna (Fig. 1C) about as long as head height, black; scape and pedicel small, simple; pedicel globular, with ring of apical setulae of approximately equal length; postpedicel slightly larger than pedicel, subtriangular, with rounded apex, as long as high, white pubescent; arista-like stylus dorsal, filiform, shortly haired, with its segment 1 very short; length of scape, pedicel, postpedicel, stylus (segments 1 and 2), 0.08/0.07/0.12/0.06/0.98; palpus black, as long as clypeus, oval, black haired, with black apical seta; proboscis thick, projected, black haired.

Thorax (Fig. 1D) mat, brownish black, weakly grey pollinose, with black bristles; anterior slope of mesonotum shortly haired; 6 pairs of strong dorsocentrals with anterior pair shorter and posterior pair longer than other bristles; acrostichals absent; 2 pairs of scutellars with lateral setae fine, 1/3 as long as marginal bristles; 2 long notopleurals, 1 long and few short black propleural setae above fore coxa.

Legs long and slender, mainly dirty yellow; bristles, setae and setulae black; mid and hind coxae mostly brown; distal tarsomeres brownish; fore coxa with short simple anterior cilia, 2 setae at base and 3 setae at apex; mid coxa with short anterior cilia and 1 fine seta at middle; hind coxa with 1 fine lateral bristle at middle; claws on all legs small and black, pulvilli small and white; fore leg devoid of bristles, but fore tibia with 2 short anterodorsals, 2 short apicals and anterior apical scale of setulae; mid femur simple, with anterior preapical seta; mid tibia with 2 anterodorsal, 2 posterodorsal and 5 apical bristles; tarsomeres 1–4 with short apicals; hind femur simple, with anterior preapical bristle, slightly longer than height of femur; hind tibia simple, with 2 anterodorsal, 2 posterodorsal, few fine ventral, 1 dorsal preapical and 2 short apical setae (Fig. 3); hind basitarsus simple; tarsomeres 1–4 with short apicals (Fig. 3); femur, tibia and tarsomere (from first to fifth) length (mm): fore leg: 1.13/1.17/0.91/0.55/0.28/0.19/0.24, mid leg: 1.41/1.92/1.23/0.59/0.38/0.21/0.21, hind leg: 1.66/2.11/0.66/0.78/0.43/0.31/0.21.

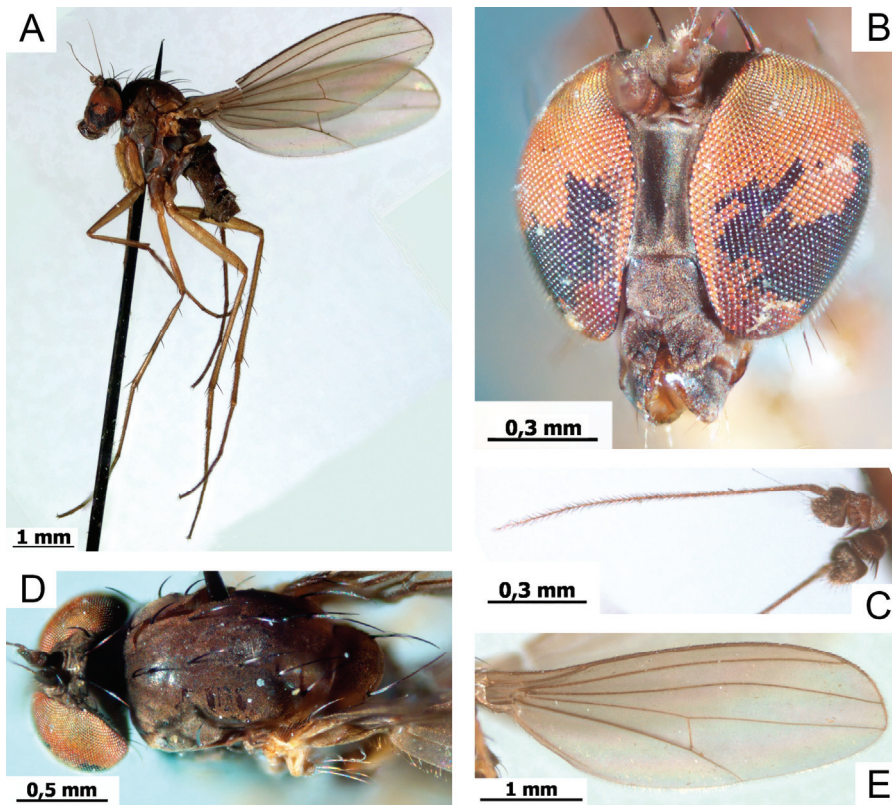


Fig. 1. *Cameroonomyia matilei* sp. n. (male holotype): A – habitus; B – head; C – antenna; D – head and mesonotum, dorsal view; E – wing.

Wing (Fig. 1E) almost hyaline, with brown veins; R_{2+3} and R_{4+5} gradually diverging to wing apex; R_{4+5} and M_{1+2} slightly converging in distal half; M_{1+2} almost straight, 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), 0.55/0.26/0.35/0.62; crossvein $dm-m$ straight, perpendicular to longitudinal wing axis, slightly shorter than maximum distance between R_{4+5} and M_1 veins; anal vein well-developed; narrow anal lobe present; anal angle obtuse; alula absent; posterior wing margin evenly convex; lower calypter brownish, with long black setae; halter yellow.

Abdomen mat, black, weakly grey pollinose, with black hairs and long bristles along tergal margins; terga 1–5 and sterna 2–4 well-developed; sternum 2 with relatively long and thin ventral process; sternum 4 forming large triangular ventral hood sparsely covered with short white hairs, with 3 pairs of long setae posteriorly and hook-like process in middle of posterior margin (Fig. 2A); tergum 6 small, bare; sterna 5–6 membranous; tergum 7 semicircular, very narrow, symmetrically

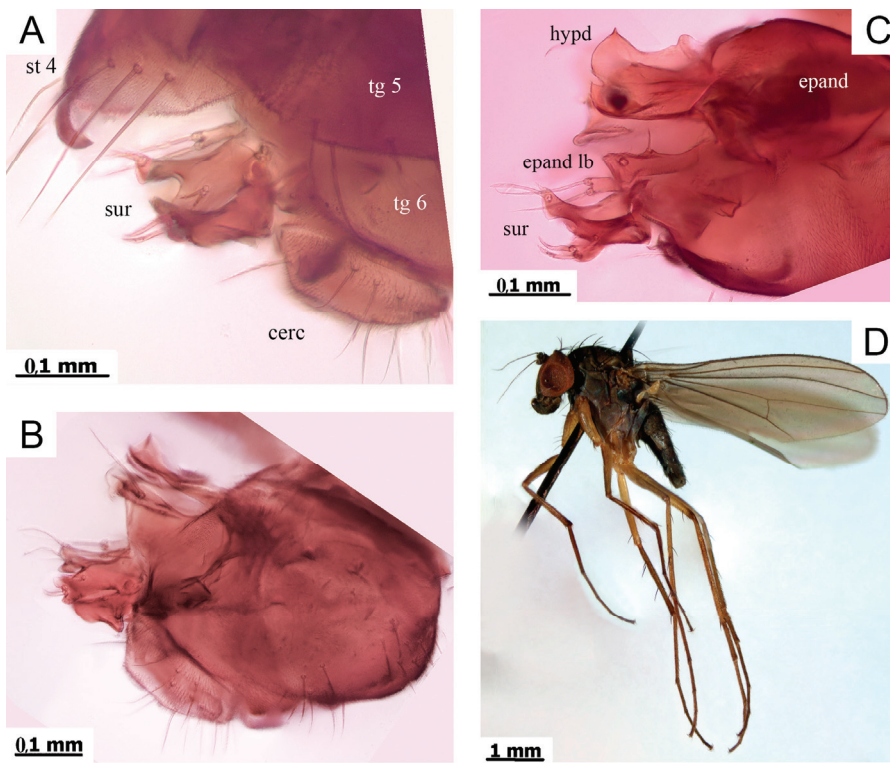


Fig. 2. *Cameroonomyia matilei* sp. n. (A–C – male holotype, D – female paratype): A – apex of abdomen, lateral view, after maceration; B – everted hypopygium, lateral view; C – everted hypopygium, ventral-lateral view; D – habitus. Abbreviations: cer = cercus; epand = epandrium; epand lb = epandrial lobe; hypd = hypandrium; ph = phallus; st 4 = sternite 4; sur = surstylus; tg 5 = tergite 5; tg 6 = tergite 6.

lying along posterior margin of tergum 6, bare, ending laterally with minute plates (sternum 7); segment 8 large, rounded, covered with microtrichia and sparse setae, with short ventral process. Hypopygium (Fig. 2B) including cerci entirely black; epandrium small (ca. 0.4 mm), globular, basally asymmetrical, as long as high (lateral aspect), with symmetrical appendages; foramen large, positioned left laterally; hypandrium (Fig. 2C) midventral, broad (ventral aspect), flat, with distal emargination, pointed at left and right apices; phallus simple, short and thin distally; epandrial lobe subtriangular (lateral aspect), broad, projected distoventrally, fused with ventral side of epandrium, with 1 short apical and 1 long subapical setae; finger-like epandrial process between epandrial lobe and surstylus with 2 long apical setae; surstylus projected, with dorsal and ventral arms, with relatively long apical setae; dorsal arms of left and right surstylus strongly curved to each other; ventral arm bifurcated from middle, with straight lobes bearing strong setae; cercus

small, rounded, covered with short white hairs, bearing several simple setae dorsally and apically; cerci separated, not fused.

MEASUREMENTS (in mm). Body length 3.6; antenna length 1.2; wing length 4.3; wing width 1.3.

Female. Similar to male except lacking male secondary sexual characters. Face nearly parallel-sided; abdomen with 5 visible segments; oviscapt hidden.

MEASUREMENTS (in mm). Body length 3.6; antenna length 1.2; wing length 4.5; wing width 1.5.

ETYMOLOGY. The species is named after the late French dipterologist Dr. Loïs Matile (1938–2000).

DISCUSSION

In the present study, a new genus and a new species *Cameroonomyia matilei* **gen. et sp. n.** is described by a male holotype and a female paratype collected in the mountain Bafut Nguemba Forest Reserve of Cameroon. This nature reserve like many other protected areas of the country are largely undercollected, and the types were apparently accidentally caught together with many other insects by researchers of the French National Museum of Natural History. Nevertheless, there are many poorly studied mountain ranges in West Africa; so, we can anticipate discovery of more *Cameroonomyia* **gen. n.** species in future.

The genus *Cameroonomyia* **gen. n.** is considered the closest to *Udzungwomyia* in the tribe Udzungwomyiini (Grichanov, 2019), differing from the latter in the wing distinctly longer than the body; the face almost parallel-sided, about 2 times as wide as height of the postpedicel; the postpedicel subtriangular, with dorsal arista-like stylus; six pairs of strong dorsocentral bristles; the male hind tibia and basitarsus simple, without modified setae or bristles; the anal vein well-developed; the sternum 2 with long and thin ventral process in both sexes; the hypopygium with epandrial foramen positioned left laterally; the hypandrium long and broad (ventral aspect), flat, with distal emargination; the surstylus with modified arms. Species of *Udzungwomyia* differ from *Cameroonomyia* **gen. n.** in the wing distinctly shorter than the body; the face in middle about as wide as height of postpedicel, half as wide as face at clypeus and under antennae; the postpedicel semiglobular, with preapical arista-like stylus; four pairs of strong dorsocentral bristles; the male hind tibia swollen at apex, with two long thick curved apicals; the hind basitarsus with basiventral process; the anal vein fold-like; the sternum 2 without ventral process; the hypopygium with epandrial foramen positioned basally; the hypandrium short, bifurcated from base; the surstylus with simple arms (Grichanov, 2018, 2019).

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