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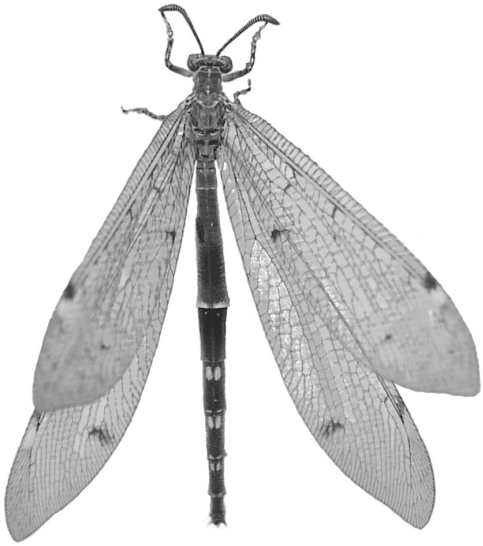

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New species and new records of *Telmaturgus* Mik, 1874 (Diptera: Dolichopodidae) from Tropical Africa

Новые виды и новые находки *Telmaturgus* Mik, 1874 (Diptera: Dolichopodidae) в тропической Африке

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Ключевые слова: Diptera, Dolichopodidae, Sympycninae, Тропическая Африка, новые виды, новые указания.

Abstract. A new material for the genus *Telmaturgus* Mik, 1874 has been recently collected and/or identified. The present research gives new records, including *T. munroi* (Curran, 1925) found for the first time in the Republic of Cameroon and the Federal Democratic Republic of Ethiopia. *Telmaturgus silvestris* **sp. n.** from the Democratic Republic of the Congo and *T. mulleri* **sp. n.** from the Republic of South Africa are described. The new species differ from other members of the genus in modification and setation of male fore and mid tarsi mainly.

Резюме. Новый материал по роду *Telmaturgus* Mik, 1874 был недавно собран и/или определен. Исследование включает новые находки известных видов, в том числе *T. munroi* (Curran, 1925), обнаруженного впервые в Камеруне и Эфиопии. Описаны новые виды *Telmaturgus silvestris* **sp. n.** из Демократической Республики Конго и *T. mulleri* **sp. n.** из Южной Африки. Новые виды отличаются от других представителей рода главным образом украшениями передних и средних лапок самцов.

Introduction

Recently, seven Oriental Sympycninae species and *Sympycnus simplicipes* Becker, 1908 with extremely wide distribution (except for Americas) have been transferred to the cosmopolitan genus *Telmaturgus* Mik, 1874 [Grichanov, 2017a]. As a result, the total number of *Telmaturgus* species has reached to 27 including 11 Afrotropical species [Grichanov, 2017b, 2018]. Those re-placements have been based on male and female secondary sexual characters of generic importance, which correspond to the *Telmaturgus* generic concept. The genus can be defined by a combination of such synapomorphies as modified male fore tarsomeres and strongly bulging female clypeus in addition to bare antennal scape and regularly decreasing in length last four segments of hind tarsus [Grichanov, 2011a; Runyon, 2012].

The Afrotropical species of the genus were separated from the *Sympycnus* Loew, 1857 by Grichanov [2011a], who provided a key for the then known in the Region species of *Telmaturgus*. Later new records and new illustrations for some species of the regional fauna have been published [Grichanov, 2011b; Grichanov et al., 2011a, b; Negrobov et al., 2017; Grichanov, Brooks, 2017]. See Grichanov [2018] for a catalogue of species known from Afrotropical countries on the continent and from Madagascar and Mauritius. *Telmaturgus munroi* (Curran, 1925) has the widest distribution in the Region.

In this paper two new species of *Telmaturgus* from Democratic Republic of the Congo and South Africa are described. The present research gives also new records including *T. munroi* found for the first time in Cameroon and Ethiopia.

Material and methods

Material cited in this work is housed at the National Museum (BMSA, Bloemfontein, South Africa), the Royal Belgian Institute of Natural Sciences (IRSNB, Brussels, Belgium), the Natal Museum (NMSA, Pietermaritzburg, Kwa-Zulu Natal, South Africa) and the Zoological Museum of Moscow State University (ZMUM, Moscow, Russia). Specimens 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. Morphological terminology and abbreviations follow Cumming and Wood [2017] and Grichanov and Brooks [2017]. The relative lengths of the antennomeres and podomeres should be regarded as representative ratios and not measurements. Body length is measured from the base of 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, anterior end facing left and posterior end facing right.

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Telmaturgus silvestris Grichanov, **sp. n.** (Figs 1–4)

Material. Holotype, ♂ (IRSNB), in ethanol, 30038: D.R. Congo, Kona, primary swamp forest, sweeping, 2°02′32.97″N / 22°47′26.09″E, 13.05.2010 (P. Grootaert). Paratypes: 1♂ (IRSNB), in ethanol, same label; 1♂ (IRSNB), in glycerol, mounted in a vial on pin, 30026, D.R. Congo, Yaekela, primary forest, Malaise trap, 0°48′37.57″N / 24°17′07.21″E, 2–7.05.2010 (P. Grootaert).

Description. Male (somewhat lightened due to long-term storage in ethanol). Head. Frons shining violet-black; face black, strongly narrowing downward; face under antennae about as wide as height of postpedicel, clypeus half as wide as height of postpedicel; palpi and proboscis black; antenna black; scape bare, with pointed inner process; pedicel simple, globular, with ring of short setae; postpedicel with broad base, very narrow along its length, with drawn-out apex, 2.5 times as long as high at base, densely long pubescent; stylus simple, regularly pubescent, basodorsal; postoculars in single row, upper setae black, lower postoculars white; length ratio of scape to pedicel to postpedicel to stylus (1st and 2nd segments), 8 : 7 : 20 : 4 : 36.

Thorax mostly black, grey pollinose; pleura brown in lower half; setae black; proepisternum without strong setae, with 2 short cilia; 3 (2 + 1) pairs of strong dorsocentrals of approximately equal length with short seta in front of the 1st pair; no acrostichals; 1 pair of strong scutellar setae (broken) and one pair of microscopic lateral hairs.

Legs including coxae mostly brown; fore and mid tibiae and tarsi dark yellow; fore coxa covered with short anterior hairs, with some strong dark apical setae. Fore femur with 1–2 posteroventral subapical stiff cilia; fore tibia slightly thickened, with weak anterodorsal serration along distal 2/3, with 1–2 apical setae; fore basitarsus with rather distinct anteroventral swelling at basal 1/3, thickened and slightly projected posteroventrally on distal 1/3; fore tarsus with 2nd–4th segments shortened. Mid femur with 1 anterior and 1 posterior subapical setae, with 2–3 short semi-erect ventral cilia at base and with 1 posteroventral subapical cilia; mid tibia with 2 anterodorsal, 1 posterodorsal, 1 ventral and 3–4 apical setae; mid tarsus simple. Hind femur without strong anterior subapical seta, with 1 anteroventral and 1 posteroventral preapical setae, with ventral row of short sparse setae; hind tibia with 2 anterodorsal, 3 dorsal setae, 5–7 posterodorsals decreasing in length distally from middle of tibia, 2 ventral and 2–3 apical setae; hind tarsomeres simple. Tibia and tarsomere (from 1st to 5th) length ratio: fore leg: 42 : 19 : 9 : 7 : 5 : 7, mid leg: 55 : 25 : 10 : 8 : 7 : 7, hind leg: 59 : 15 : 13 : 8 : 6 : 6.

Wing greyish; ratio of cross-vein *dm-m* to apical part of M_4, 14 : 24; distal part of M_{1+2} weakly convex, almost parallel to R_{4+5}; lower calypter brown with black setae; halter with yellow stem and brown knob.

Abdomen mostly brown, lighter ventrally, with black vestiture; hypopygium brown. Epandrium rounded. Epandrial seta undeveloped. Aedeagus simple, thin. Ventral surstylus with 3 ventral and 1 very short apical setae, as wide as dorsal surstylus. Cercus rounded, with long setae.

Length (mm; in ethanol): body 1.7, antenna 0.5, wing 1.4/0.5.

Female unknown.

Diagnosis. The new species is close to *T. garambaensis* Grichanov, 2008 (see key in Grichanov [2011a]), differing in the modified fore basitarsus, the absence of the midventral seta on the hind basitarsus, much longer antennal postpedicel, 2.5 times longer than high. *Telmaturgus garambaensis* has simple fore basitarsus, ornamented hind basitarsus, short triangular postpedicel, 1.2 times longer than high [Grichanov, 2008]. It is worth noting that the hypopygium morphology is quite uniform in the most of Afrotropical species, differing mainly in the length and number of setae on surstylus and cercus (see figures in Grichanov [2008, 2011a, b]).

Etymology. From Latin *silvéstris* – inhabiting woods.

Telmaturgus mulleri Grichanov, **sp. n.** (Figs 5–7)

Material. Holotype, ♂ (NMSA), in glycerol, mounted in a vial on pin: South Africa, KZN, PMB Karkloof, 1325 m, 29°19.1′S / 30°15.5′E, 25.09–22.12.2005, MT (M. Mostovski).

Description. Male (strongly discolorated due to long-term storage in ethanol). Body mainly yellow with major bristles brown; frons brown; mesonotum brown except anterior and posterior angles; pleura with small blackish spot under wing base; abdomen brownish dorsally; antennae and legs yellow.

Head. Face strongly narrowing downward; face under antennae nearly as wide as height of postpedicel, linear below; eyes distinctly separated in lower half of face; antenna with scape bare, with pointed inner process; pedicel simple, globular, with ring of short setae; postpedicel with broad base, with drawn-out apex, 1.3 times as long as high at base, densely long pubescent; stylus simple, regularly pubescent, middorsal; postoculars in single row; length ratio of scape to pedicel to postpedicel to stylus (1st and 2nd segments), 9 : 8 : 16 : 9 : 48.

Thorax with major setae mostly broken; proepisternum without strong setae, with 2 short cilia; 5 (3 + 2) pairs of strong dorsocentrals of approximately equal length with short seta in front of the 1st pair; no acrostichals; 1 pair of strong scutellar setae (broken) and one pair of microscopic lateral hairs.

Legs. Fore coxa covered with short anterior hairs, with some strong apical setae. Fore femur with 1–2 posteroventral subapical stiff cilia; fore tibia with anterodorsal serration along distal 2/3; fore tarsus with 3rd–4th segments shortened; 4th segment with small distoventral projection bearing 2 strong setae reaching claws. Mid femur with 1 anterior and 1 posterior subapical setae, with 1 posteroventral subapical cilia; mid tibia with 1 anterodorsal, 3 posterodorsal and 3–4 apical setae; mid basitarsus bearing 2 strong distoventral setae and 2 very long posterior preapical cilia; 2nd segment with about 5 posterior hairs, about 5 ventral and 1 stronger distoventral setae; 3rd and 4th segments each with 1 distoventral seta. Hind femur with strong anterior subapical seta, with short ventral setulae; hind tibia with 2 anterodorsal, 4 posterodorsal, 3 ventral and 3–4 apical setae; hind tarsomeres simple. Tibia and tarsomere (from 1st to 5th) length ratio: fore leg: 82 : 54 : 28 : 15 : 8 : 9, mid leg: 125 : 66 : 27 : 15 : 11 : 10, hind leg: 157 : 34 : 36 : 22 : 12 : 10.

Wing. Ratio of cross-vein *dm-m* to apical part of M_4, 22/38; distal part of M_{1+2} weakly convex, parallel to R_{4+5}.

Abdomen with dark vestiture; epandrium rounded; phallus simple, mostly thin, thick at apex; ventral surstylus with 4 ventral setae decreasing in length distally, about as wide as dorsal surstylus; dorsal surstylus with 2 dorsal setae, basal seta stronger and longer than distal seta; cercus rounded, with moderately long setae.

Length (mm; in ethanol): body 2.8, antenna 0.8, wing 2.7/0.8.

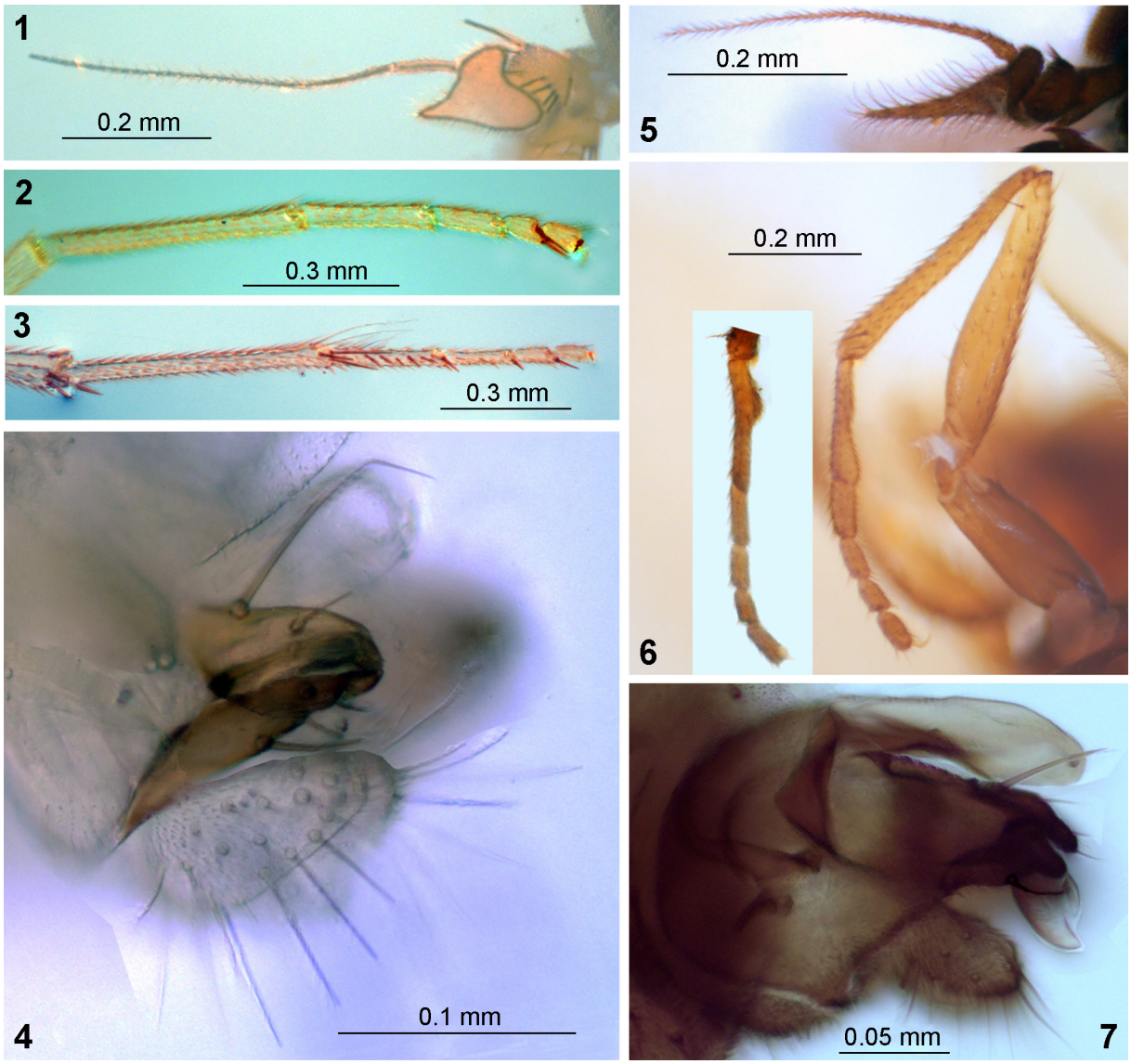
Female unknown.

Diagnosis. The new species keys to either *T. kenyensis* Grichanov, 2008 or *T. kovali* Grichanov, 2008 (see key in Grichanov [2011a]), both known from Equatorial Africa, differing in the absence of acrostichal setae on mesonotum, in species-specific modification and setation of fore and mid tarsi and other characters.

Etymology. The species is named for the South African entomologist, Dr. Burgert Muller (NMSA).

Telmaturgus kwandensis (Grichanov, 2008)

Material. 5♂, 34♀ (BMSA), Namibia, Katima Mulilo Distr., Mavunje campsite at 17°55.141′S / 23°19.073′E, 22–26.11.2012, 945 m, Malaise trap, Kwando River floodplain (A.H. Kirk-Spriggs); 1♂, 6♀ (BMSA), Namibia, Katima Mulilo Distr., Kalizo Lodge area at 17°32.806′S / 24°33.829′E, 14–17.11.2012, 941 m, Malaise trap, open savanna floodplain (A.H. Kirk-Spriggs).



Figs 1–7. *Telmaturgus* spp., males.

1–4 – *T. silvestris* Grichanov, **sp. n.**: 1 – antenna, 2 – fore tarsus, 3 – mid tarsus, 4 – surstylus and cercus; 5–7 – *T. mulleri* Grichanov, **sp. n.**: 5 – antenna, 6 – fore leg, posterior view, with inset showing fore tarsus, anterior view, 7 – hypopygium, right lateral view.

Рис. 1–7. *Telmaturgus* spp., самцы.

1–4 – *T. silvestris* Grichanov, **sp. n.**: 1 – усик, 2 – передняя лапка, 3 – средняя лапка, 4 – сурстиль и церка; 5–7 – *T. mulleri* Grichanov, **sp. n.**: 5 – усик, 6 – передняя нога, вид сзади, на врезке показана передняя лапка, вид спереди, 7 – гипопигий, вид справа сбоку.

Distribution. Type locality: Madagascar, Tamatave Province, Ambatondrazaka. Namibia, Madagascar.

Telmaturgus munroi (Curran, 1925)

Material. 1♂ (ZMUM), in ethanol, Ethiopia, Ambo PPRC, neighbour cowshed, MT, 18.10–5.11.2011 (L. Rybalov); 1♂ (ZMUM), Ethiopia, Oromya, Awasa L., 7.079°S / 38.478°E, 1690 m, 15–16.03.2012 (N. Vikhrev); 1♀ (BMSA), Kenya, Eastern Prov., Njuki-Ini forest station, 0.51660°S / 37.41843°E, remnant indigenous upland forest, 1455 m, 19–20.04.2011 (A.H. Kirk-Spriggs); 2♂ (ZMUM), Kenya, Laikipia Co., Thomson's Falls, 2350 m, 0.05°S / 36.38°E, 29–30.12.2013 (N. Vikhrev); 1♂, 1♀ (BMSA), South Africa, RSA, Free State, Harrismith, Scotland Farm at 27°58′59.5″S / 29°37′09.8″E, Malaise trap, dense Leucosidea dominated scrub, 26–29.02.2012 (A.H. Kirk-Spriggs); 3♂, 1♀ (BMSA), Cameroon, Mezam, Sincoa village at 5°45.119′N / 10°09.589′E, 1614 m, sweeping grasses and other vegetation, 20.08.2013 (A.H. Kirk-Spriggs).

Distribution. Type locality: South Africa: Mpumalanga, Barberton. Gambia, Sierra Leone, Ivory Coast, Gabon, DR Congo, Burundi, Rwanda, Kenya, Tanzania, Namibia, Zimbabwe, South Africa [Grichanov, 2018]. A new species for Cameroon and Ethiopia.

Telmaturgus simplicipes (Becker, 1908)

Material. 6♂ (BMSA), Kenya, Eastern Prov., Njuki-Ini forest station, 0.51660°S / 37.41843°E, 1455 m, remnant indigenous upland forest, 19–20.04.2011 (A.H. Kirk-Spriggs).

Distribution. Type locality: Spain: Canary Islands, Teneriffe. DR Congo, Kenya, South Africa. Australasian: Australia, Papua New Guinea, Solomon Islands, Hawaii. Oriental: India (Kashmir, West Bengal),

Sri Lanka, Nepal, China (Henan, Shanghai, Zhejiang, Guizhou, Fujian, Taiwan, Yunnan, Guangxi, Guangdong, Hong Kong, Macau), Myanmar, Philippines, Indonesia (Flores). Palaearictic: Spain including Canary Islands, France, Germany, Czech, Austria, Italy, Greece including Crete, south of Russia (Adygea, Krasnodar), Abkhazia, Azerbaijan, Turkey (Afyonkarahisar, Kutahya, Uşak), Egypt, Israel, Iraq, Iran, Uzbekistan. Tajikistan, Kyrgyzstan, north of Kazakhstan, Korea [Grichanov, 2018].

Telmaturgus triseta (Grichanov, 2008)

Material. 2♂, 6♀ (BMSA), Namibia, Katima Mulilo Distr., Salambala Forest at 17°50.066′S / 24°36.225′E, Miombo and Moppane woodlands, 926 m, Malaise trap, 18–20.11.2012 (A.H. Kirk-Spriggs); 1♂, 1♀ (BMSA), Namibia, Katima Mulilo Distr., Mavunje campsite at 17°55.141′S / 23°19.073′E, Kwando River floodplain, 945 m, Malaise trap, 22–26.11.2012 (A.H. Kirk-Spriggs).

Distribution. Type locality: "Côte d'Ivoir, bord M. G., Loc.: Fopo Bonake". Ivory Coast, Namibia, Mauritius [Grichanov, 2018].

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