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A new species of *Campsicnemus* Haliday (Diptera: Dolichopodidae) from South Africa and a key to continental Afrotropical species

Новый вид рода *Campsicnemus* Haliday (Diptera: Dolichopodidae) из Южной Африки и определитель видов материковой тропической Африки

I.Ya. Grichanov
И.Я. Гричанов

All-Russian Institute of Plant Protection, Podbelskogo Shosse 3, Saint-Petersburg, Pushkin 196608 Russia. E-mail: grichanov@mail.ru
Всероссийский НИИ защиты растений РАСХН, шоссе Подбельского 3, Санкт-Петербург, Пушкин 196608 Россия.

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Ключевые слова: Sympycninae, *Campsicnemus*, Тропическая Африка, новый вид, определитель.

Abstract. A new species, *Campsicnemus glupovi* Grichanov, **sp.n.** from South Africa is described and illustrated. *Campsicnemus glupovi* differs from all other species of the genus in practically simple male legs, without remarkable setation, but the fore basitarsus is distinctly thickened on basal half. An identification key to four species known from the continental Afrotropics is provided.

Резюме. Описан и иллюстрирован *Campsicnemus glupovi* Grichanov, **sp.n.** из Южной Африки. Новый вид отличается от всех других видов рода почти простыми ногами самца, без украшений; но первый членик передней лапки отчетливо утолщён в основной половине. Составлен определитель четырёх видов, известных из материковой части тропической Африки.

Introduction

The sympycnine genus *Campsicnemus* Haliday in Walker, 1851, is not specious in the Afrotropical Region in comparison with the Holarctic Region (90 species) and Pacific islands of the Hawaii and French Polynesia (203 species), numbering about 310 species worldwide [Grichanov, 2021]. Four probably introduced species are known on the St. Helena and three species on the continent [Grichanov, 2019]. *Campsicnemus caffer* Curran, 1926 is a member of the Trans-Palaearctic *C. armatus* species group, having a peculiar disjunctive area, occurring in southern (Republic of South Africa and Namibia) and northern Africa (south-eastern Algeria and Ethiopia). *Campsicnemus yangi* Grichanov, 1998 (Democratic Republic of the Congo) is included into the *C. magius* species group. *Campsicnemus lantsovi* Grichanov, 1998 (Cameroon) is close to Mediterranean *C. crinitarsis* Strobl, 1906.

In the present paper, one new species, *Campsicnemus glupovi* sp.n. from South Africa is described and illustrated. A key to the four species known from the continental Afrotropics is also presented.

Material and methods

The holotype of the new species is housed at the KwaZulu-Natal Museum, Pietermaritzburg, South Africa (NMSA). It has been studied with a ZEISS Discovery V–12 stereo microscope and photographed with an AxioCam MRc5 camera. Male genitalia have been macerated in 10 % KOH, photographed with a ZEISS Axiostar stereo microscope and an AxioCam ICc3 camera. Morphological terminology and abbreviations follow Cumming, Wood [2017]. Body length is measured from the base of the antenna to the tip of genital capsule. Wing length is measured from the base to the wing apex.

Results

Campsicnemus Haliday, 1851

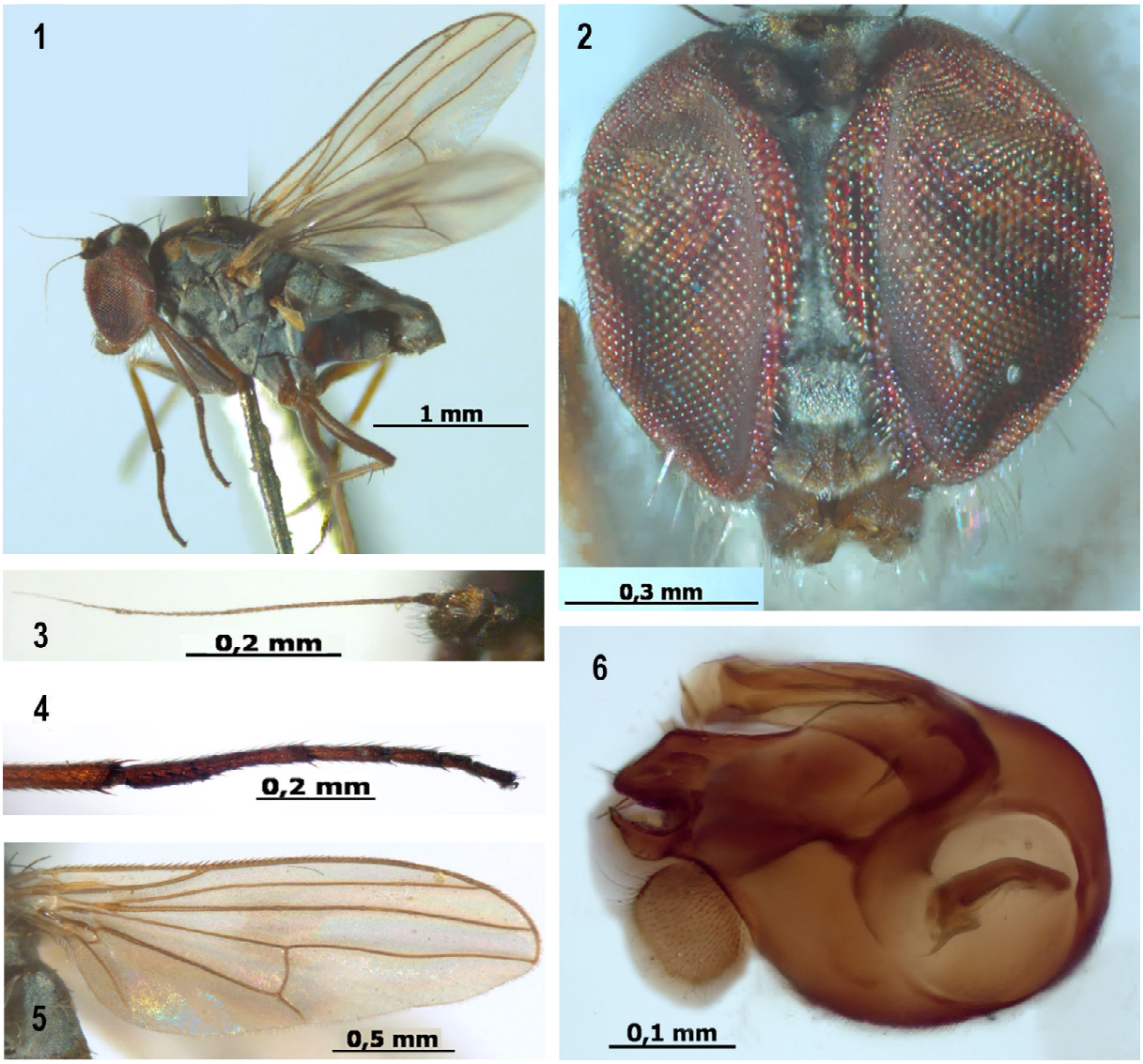
Campsicnemus Haliday, 1851: in Walker et al.: 187. Type species: *Dolichopus scambus* Fallén, 1823 (validation by I.C.Z.N., 1958, Opinion 531).

Remarks. See Grichanov, Brooks [2017] for a diagnosis of the genus. Male legs are usually modified and ornamented, rarely simple. Male genitalia are rarely pictured [e.g. Buchman, 1961; Negrobov, Zlobin, 1978; Grichanov, 1998; Yang et al., 2011], having generally sympycnine-like ground plan. Hypopygium is mostly concealed, rounded-quadrate, with semi-rounded cercus, usually small surstylus and epandrial lobes fused with epandrium. Grichanov [2019] provided an identification key to Afrotropical species. Specimens of *Campsicnemus* are rare in African collections.

Campsicnemus glupovi Grichanov, **sp.n.**

Figs 1–6.

Material. *Holotype* (male): Republic of South Africa, [Eastern] «Cape #7, 6 km E Alicedale, 33°19' S, 26°07' E, 600 m, 21.11.1990, A.E. Whittington, J.G.H. Londt leg.» [NMSA]. The holotype has its male terminalia dissected and stored in glycerin in a microvial pinned with the source specimen.



Figs 1–6. *Campsicnemus glupovi*, sp.n., holotype, male: 1 — habitus, lateral view; 2 — head, front view; 3 — antenna; 4 — fore tarsus, lateral view; 5 — wing; 6 — hypopygium, after maceration, left lateral view.

Рис. 1–6. *Campsicnemus glupovi*, sp.n., голотип, самец: 1 — внешний вид, вид сбоку; 2 — голова, вид спереди; 3 — усик; 4 — передняя лапка, вид сбоку; 5 — крыло; 6 — гипопигий, после размягчения, вид слева сбоку.

Description. Male (Fig. 1). Head (Fig. 2). Frons black, grey pollinose; face black, whitish pollinose, narrow, the narrowest in middle, where face 16 times as high as wide; clypeus convex, slightly wider than high (11/9); antenna (Fig. 3) black; postpedicel subtriangular, with rounded apex, about as long as high, with long hairs; arista-like stylus dorsoapical, simple, with distinct hairs apically; length ratio of scape to pedicel to postpedicel to stylus, 8/5/14/62; proboscis brown; palpus black, with black seta, white and black hairs; lower postocular setae white.

Thorax. Black, with mostly black bristles; mesonotum grey-brownish pollinose; pleura densely grey pollinose; propleuron with 1 strong and 1 weak white setae in lower part; 5 pairs of strong dorsocentral bristles without reduced setae, with several scattered hairs on anterior slope; acrostichals absent; scutellum with two long strong bristles, dorsally bare.

Legs. With coxae blackish brown, femora and tarsi mostly blackish brown, distal apices of femora, tibiae and bases of basitarsi brownish yellow; coxae with white hairs and setae; hind coxa with one outer seta; fore tibia with 2 short apical setae; fore basitarsus (Fig. 4) distinctly thickened on basal half, about as long as next 4 segments combined, with ventral row of 5–6 semi-erect setulae on thickened part; mid femur with single anterior preapical bristle; mid tibia, with 1 anterodorsal, 2 posterodorsal and 5 apical bristles; mid tarsus simple; hind femur with single anterior preapical bristle; hind tibia with 1 anterodorsal and 1 posterodorsal bristles at base and 2 dorsal bristles on distal half; hind tarsus with 1 basoventral and 1–2 distoventral small setae; podomeres (from tibia to fifth tarsomere) length ratio (in mm): fore leg: 0.66/0.32/0.14/0.09/0.06/0.07, mid leg: 0.87/0.42/0.17/0.09/0.08/0.07, hind leg: 0.94/0.26/0.22/0.14/0.07/0.09.

Wing (Fig. 5). Mostly hyaline, distinctly fumose in middle; basal portion of costa almost straight, bearing simple setae; R_{4+5} and M_{1+2} weakly convergent in apical part; ratio of costal section between R_{2+3} and R_{4+5} to that between R_{4+5} and M_{1+2}, 27/15; basal section of M_{1+2} shorter than distal section (13/18); ratio of cross-vein dm-m to distal part of M_4, 21/17; lower calypter yellow, with white cilia; halter yellow.

Abdomen**.** Black, grey pollinose, with black hairs and short black marginal setae; tergum 1 with white setae; 2–4 well developed; sternum 5 and segment 6 reduced; hypopygium (Fig. 6) concealed, black; cercus black, rounded, with short light hairs; surstylus with distinct dorsal lobe.

Measurements. Body length 2.4 mm, antenna length 0.7 mm, wing length 2.3mm, wing width 0.8 mm.

***Female*.** Unknown.

Differential diagnosis. The new species differs from all other Afrotropical species of the genus in practically simple legs, without remarkable setation, but the fore basitarsus is distinctly thickened on basal half.

***Distribution*.** The new species is only known from the type locality in South Africa (Western Cape).

Etymology. The name of the new species is dedicated to the famous Russian entomologist Prof. Viktor Vyacheslavovich Glupov (Novosibirsk).

Key to species of *Campsicnemus* (males) from continental Afrotropics

1. Legs practically simple, without remarkable setation; fore basitarsus distinctly thickened on basal half, about as long as next 4 segments combined (Fig. 4); wing distinctly fumose in middle (Fig. 5); body 2.4 mm (South Africa) ..... *C. glupovi* sp.n.
— Fore basitarsus simple or modified, shorter than next 4 segments combined; some other podomers modified or bearing remarkable setation; wing hyaline 2
2. Fore tibia swollen, with dorsal row of 4 long setae on basal half; fore basitarsus with long appendages; other tarsomeres with long setae; body about 2 mm (DR Congo) ..... *C. yangi*
— Fore tibia simple; fore basitarsus without appendages 3
3. Fore coxa with yellow hairs and bristles; fore leg simple; mid tibia with posteroventral row of blunt black erect setae; body about 1.5 mm (northern and southern Africa) ..... *C. caffer*
— Fore coxa with black hairs and bristles; mid tibia with ventral row of simple hairs; fore tarsomeres 1–3 with 2 rows of long setae, 3–4 times as long as diameter of segments; fore basitarsus with one long bristle at base reaching tip of 2nd segment; body about 2.5 mm (Cameroon) ..... *C. lantsovi*

Discussion

Goodman et al. [2014] conducted a molecular analysis of mainly Hawaiian *Campsicnemus* species, but also some species from French Polynesia, Europe, and North America. The resulting phylogeny showed support for a difference between the Holarctic and Pacific clades. Three species described from St. Helena with yellow antennae, modified and ornamented male mid femur and tibia [Grichanov, 2012] are remarkably similar to species of some Pacific groups [see reviews by Evenhuis, 2003, 2009] and were probably introduced to the Island by human. The other previously known Afrotropical species of the genus have close relations with some groups of much richer Palaearctic fauna [Grichanov, 2019]. *Campsicnemus glupovi* sp.n. from South Africa are somewhat similar to other species of the genus in habitus and hypopygium morphology, but having very unusual modification of fore basitarsus, not meeting in the Palaearctic [see review by Grichanov, 2009]. At present it is separated as the *Campsicnemus glupovi* species group. Only one male was found for the newly described species despite intensive collecting with Malaise trap and sweeping in South Africa. Because the male secondary sexual characters of the species is unique, its identification will not be problematic in the future.

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