

Two new species of *Campsicnemus* Haliday (Diptera: Dolichopodidae) from Tropical Africa

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Campsicnemus lantsovi sp. n. from Cameroon and *C. yangi* sp. n. from Congo (Kinshasa) are described. A catalogue and key to 6 Afrotropical species of the genus are given.

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Introduction

The world fauna of the genus *Campsicnemus* Haliday includes more than 200 mostly Hawaiian species. About 60 species are known in the Holarctic Region. The Afrotropical zoogeographical Region numbers 6 species, of which 3 species are recorded on St. Helena: *C. armatus* Zetterstedt and *C. magius* Loew have apparently Palearctic origin, and *C. atlanticus* Dyte was described from Azores (Dyte and Smith, 1980). If it is not a misidentification, these species should be considered accidental introducents in the fauna of the southern Atlantic island. *C. brevitatus* Parent (holotype examined, the Royal Institute for Natural Sciences, Brussels) has nothing to do with *Campsicnemus* and will be transferred to another genus, probably *Acropsilus* Mik. So, the only species of the *Campsicnemus* is known from the continental Afrotropics, *C. caffer* Curran, closely related to *C. armatus* (Curran, 1926). Treating unidentified material from the collection of the Natural History Museum in London, the Royal Museum for Central Africa in Tervuren, Belgium and the Royal Institute for Natural Sciences in Brussels, I found two new species of the genus from Cameroon and Congo (Kinshasa). In this paper descriptions for these species, catalogue and key to

6 Afrotropical species of *Campsicnemus* are given.

Holotypes and paratypes of the new species are deposited in the Natural History Museum in London [NHML] (*C. lantsovi*), Royal Museum for Central Africa in Tervuren, Belgium [RMCA] and the Royal Institute for Natural Sciences in Brussels [RINS] (*C. yangi*).

List of known Afrotropical species of *Campsicnemus* Haliday

(for references see Dyte and Smith, 1980)

Campsicnemus Haliday in Walker, 1851: 187. Type-species: *Dolichopus scambus* Fallen, 1823, by validation of I.C.Z.N. (1958: 351) (Opinion 531). [Name No. 1316 in Official List of Generic Names in Zoology]

=*Camptosceles* Haliday, 1832: 357

=*Ectomus* Mik, 1878: 8

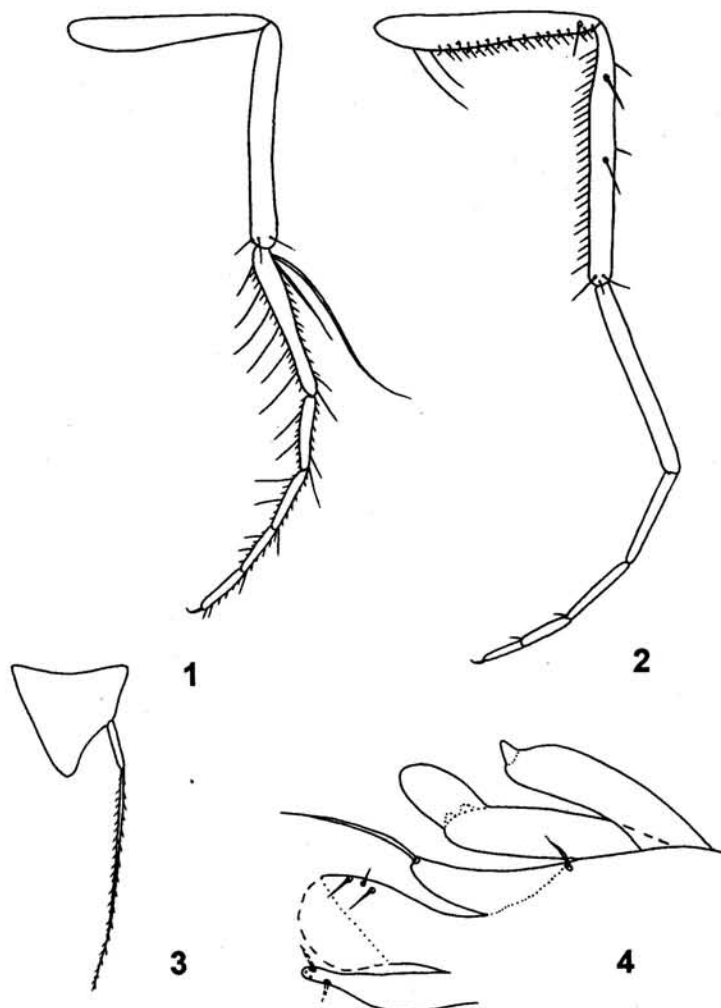
=*Emperoptera* Grimshaw in Grimshaw & Speiser, 1902: 81

armatus armatus Zetterstedt, 1849: 3093 (*Dolichopus*). Denmark; St. Helena, Europe, Siberia, Russian Far East.

atlanticus Dyte, 1980: 224. Azores; St Helena.

=*mirabilis* Frey, 1945: 42.

brevitatus Parent, 1937: 10 (?*Campsicnemus*, ?*Acropsilus*). Congo (Kinshasa).



Figs 1—4. *Campsicnemus lantsovi* sp. n. (after alkalisation)

1, fore leg; 2, middle leg; 3, first flagellomere of antennae; 4, apicoventral part of hypopygium, lateral view.

caffer Curran, 1926: 15. South Africa.

lantsovi sp. n. Cameroon.

magius Loew, 1845: 392 (*Medeterus*). Italy (Sicily);

St. Helena, North Africa, Europe, Central Asia.

yangi sp. n. Congo (Kinshasa).

***Campsicnemus lantsovi* sp. n.**

(Figs 1—4)

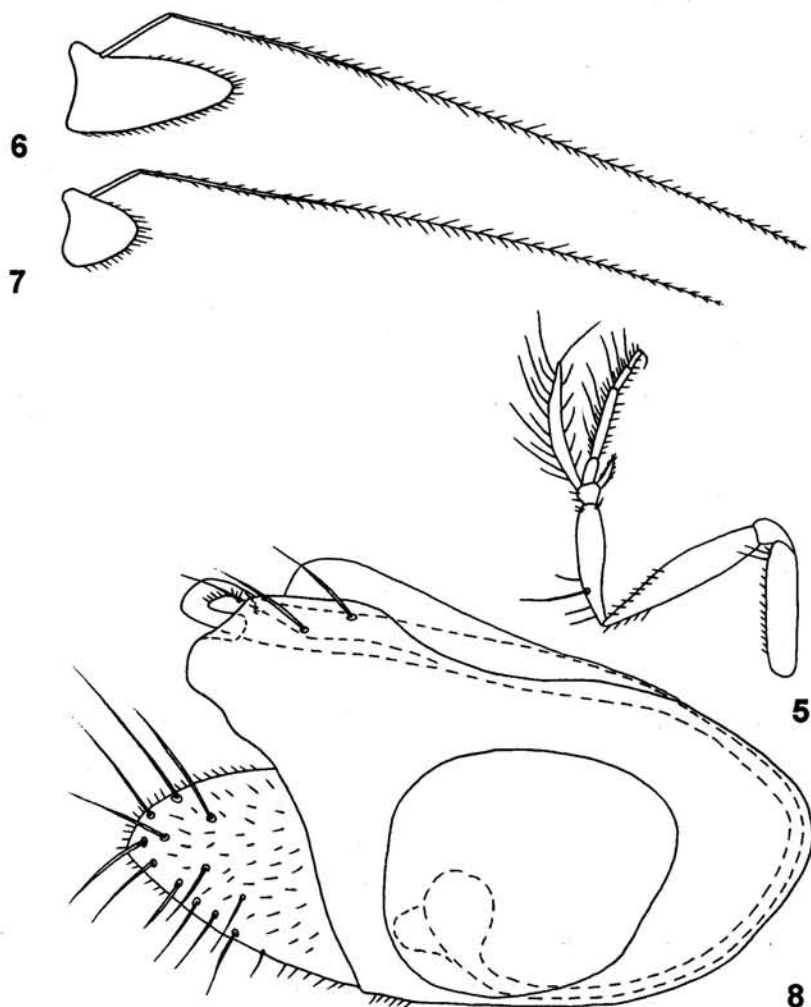
Holotype. Male (in glycerol), B. Cameroons: Ngusi, 4.XI.1949, H. Oldroyd, B.M. 1950-2.

Description (all measurements from dry specimen). Frons dull black. A strong vertical, 2 strong ocellar setae present. Eyes with short hairs. Face black, pollinose, narrowed in the middle, 4 times as

high as wide under antennae. Width ratio of epistome under antennae to epistome in the middle to clypeus at palpi, 9 : 5 : 10. Palpi and proboscis short, black; palpus with a small bristle and black hairs. Antenna black; pedicel with a ring of short setulae; first flagellomere triangular, nearly as long as high at base, with acute, not pointed apex, pubescent. Arista middorsal, 7 times as long as first flagellomere, pubescent.

Mesonotum brownish-black, weakly shining; pleura black, pollinose. One black propleural seta above fore coxa. Four dorsocentral setae; acrostichals absent. Scutellum with two strong setae and two hairs from the outside.

Legs mostly dirty-yellow; fore coxa brownish-yellow; middle and hind coxae and apical segments

Figs 5—8. *Campsicnemus yangi* sp. n.

5, fore leg; 6, first flagellomere of male antennae; 7, first flagellomere of female antennae; 8, hypopygium, lateral view.

longer than diameter of tibia; one penultimate seta 3 times longer than diameter of tibia. Fore basitarsus short and thick, with 2 dorsal setae slightly longer than diameter of basitarsus, thick pointed apicoventral apophysis nearly 1/3 the length of fore tibia and covered with short setulae, and another posterior apical straplike, flattened laterally, apophysis as long as fore tibia, covered with dorsal and ventral rows of setae: most of dorsal setae and one apical seta half as long as tibia; ventral setae 1/3 the length of dorsal setae. 3rd segment with 3, 4th with 2, 5th with one long dorsal setae half as long as fore tibia in addition to elongate posterodorsal setulae. 5th tarsomere with one strong claw. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 35 : 45 : 32 : 5 : 5 : 19 : 7 : 7. Middle

femur simple, with one strong anterior subapical seta and several antero- and posteroventral hairs at apex. Middle tibia simple, with 3 anterodorsal, 2 anteroventral, 2 apical setae. Middle tarsus simple. Length ratio of middle coxa to femur to tibia to tarsus (segments from first to fifth), 28 : 68 : 71 : 26 : 13 : 11 : 8 : 8. Hind femur with one anterior subapical seta. Hind tibia with 3 anterodorsal, 2 posterodorsal, 2 anteroventral, 3 apical setae. Hind tarsus simple. Length ratio of hind coxa to femur to tibia to tarsus (segments from first to fifth), 15 : 76 : 80 : 18 : 19 : 14 : 9 : 9.

Wing hyaline, elongate. R_1 1/3 the length of wing. R_{2+3} and R_{4+5} slightly divergent apicad. M_{1+2} weakly but distinctly convex anteriorly, parallel to R_{4+5} in apical half of wing; both veins distinctly diver-

of tarsi brown. Fore coxa with black hairs and several fine subapical setae, hind coxa with one black external seta. Fore femur simple, with very short hairs, practically bare. Fore tibia simple, with one short anterodorsal, 1–2 apical setae. Fore basitarsus with antero- and posteroventral rows of hairs, 2–5 times as long as diameter of segment, and two very long anterior basal cilia, the first 2/3 the length of basitarsus and the second as long as first two segments of tarsus. Second to fourth articles of fore tarsi each with two long ventral and one long anteroapical cilia. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 55 : 60 : 39 : 18 : 15 : 10 : 8. Middle femur simple, with two ventral cilia at base, slightly longer than diameter of femur, continuing in a row of simple hairs, half as long as diameter, and anteroventral row of erect, curved at apex cilia, 1/3 to 1/2 as long as diameter of femur; one strong anterior subapical seta. Middle tibia simple, with 2 strong anterodorsal, 2 short posterodorsal, 4–5 apical setae and ventral row of simple hairs, as long as diameter of tibia. Middle tarsus simple. Length ratio of middle femur to tibia to tarsus (segments from first to fifth), 64 : 75 : 57 : 25 : 20 : 12 : 10. Hind femur with a row of 3–4 anterior setae in apical third, ending with stronger subapical seta. Hind tibia with 2 anterodorsal, 2 posterodorsal, 2 apical setae. Hind basitarsus with a short basoventral seta. Length ratio of hind femur to tibia to tarsus (segments from first to fifth), 78 : 85 : 29 : 37 : 22 : 14 : 11.

Wing hyaline. R_{4+5} and M_{1+2} parallel. Ratio of part of costa between R_{2+3} and R_{4+5} to this between R_{4+5} and M_{1+2} , 20 : 12. Ratio of apical to basal part of M_{1+2} , 65 : 80. Ratio of $m-cu$ to apical part of CuA_1 , 13 : 20. Anal vein foldlike. Anal lobe narrow, alula undeveloped. Lower calypter brownish-yellow, with black cilia.

Abdomen brown-black, weakly shining, with black hairs, pressed from lateral sides. Hypopygium concealed (partly destroyed). Hypandrium with pointed apex. Aedeagus with oval apical lobe. Epandrial lobe digitiform, with strong apical seta and one epandrial seta at base. Cercus broken. Ventral lobe of surstylus seems to be broad (partly destroyed); dorsal lobe narrow, with 2 strong subapical setae.

Female unknown.

Length: body 2.4 mm (dry) — 2.6 mm (after alkalisation). antenna 0.8 mm; wing 2.6 mm.

Distribution. Cameroon.

Etymology. The species is named after the Russian dipterologist Dr. Vladimir Lantsov.

Diagnosis. *C. lantsovi* is keyed to Palearctic *C. crinitarsis* Strobl or *C. marginatus* Loew (Parent, 1938), differing from the first species in simple midtarsus, and from the second in ornamented fore

tarsus. The new species is also keyed to Oriental *C. glaucus* Becker (1924), differing in ornamented fore tarsus and simple hind tarsus. *C. lantsovi* is clearly distinguished from the Afrotropical *C. caffer* Curran by simple ventral hairs on middle tibia.

Campsicnemus yangi sp. n.

(Figs 5–8)

Holotype. Male, Congo Belge: P.N.G. Miss H. De Saeger, II/gd/8, 13.XII.1951, Rec. H. De Saeger, 2901 [RMCA].

Paratypes. Female with the same label; 1 male (in glycerol), Congo Belge: P.N.G. Miss H. De Saeger, II/hb/10, 3.VII.1951, Rec. J. Verschuren, 2041; 1 female, Congo Belge: P.N.G. Miss H. De Saeger, II/ic/10, 7.IX.1951, Rec. H. De Saeger, 2391; 1 female, Congo Belge: P.N.G. Miss H. De Saeger, II/f/17, 20.I.1951, Rec. H. De Saeger, 1144; 1 male, Congo Belge: P.N.G. Miss H. De Saeger, II/jc/9, 4.III.1952, Rec. H. De Saeger, 3161; 1 female, Congo Belge: P.N.G. Miss H. De Saeger, II/dd/9, 7.VII.1952, Rec. H. De Saeger, 3758; 1 female, Congo Belge: P.N.G. Miss H. De Saeger, II/gc/8, 10.VII.1952, Rec. H. De Saeger, 3765; 1 female, Congo Belge: P.N.G. Miss H. De Saeger, II/gd/10, 8.VIII.1952, Rec. H. De Saeger, 3909 [RMCA]; 1 male, Congo Belge: Kivu, Rutshuru, riv. Rodahira, 1200 m, 1.VII.1935, G.F. de Witte: 1680 [RNS].

Description. Frons metallic black. One vertical, 2 strong ocellar setae present. Eyes with short hairs. Postocular setae uniseriate, black. Face black, grey pollinose, narrowed in the middle, 3 times as high as wide under antennae. Width ratio of epistome under antennae to epistome in the middle to clypeus at palpi, 9 : 1 : 5. Palpi and proboscis short, black. Antenna black; pedicel with a ring of short setulae; first flagellomere elongate, narrowed apically, nearly twice longer than high at base, with rounded apex, pubescent. Arista basodorsal, pubescent. Length ratio of scape to pedicel to first flagellomere to arista (1st and 2nd segments), 5 : 3 : 11 : 5 : 40.

Mesonotum violet-black, weakly shining; pleura black, pollinose. One black propleural seta above fore coxa. Four dorsocentral setae; acrostichals absent. Scutellum with two strong setae, two hairs from the outside and two median marginal hairs.

Legs mostly dirty-yellow; fore coxa brown at base; middle and hind coxae and apical segments of posterior four tarsi brown-black. Fore coxa with short light hairs and several fine subapical black setae, hind coxa with one black external seta. Fore femur simple, with elongate anterior, dorsal and posterior setulae in apical third. Fore tibia swollen, as wide as fore femur, with 4–5 long dorsal setae in basal half: basal 2–3 setae and one lower seta slightly

gent at extreme apex. Ratio of part of costa between R_{2+3} and R_{4+5} to this between R_{4+5} and M_{1+2} , 26 : 18. Ratio of apical to basal part of M_{1+2} , 69 : 65. Ratio of $m-cu$ to apical part of CuA_1 , 12 : 21. Anal vein present. Anal lobe narrow, alula undeveloped. Posterior wing margin nearly straight, slightly concave between CuA_1 and M_{1+2} , covered with elongate hairs. Lower calypter yellow, with black cilia. Halter yellow-brownish.

Abdomen green-black, weakly shining, with black hairs. Hypopygium concealed, black. Foramen mid-lateral. Hypandrium with acute apex. Aedeagus with rounded apex. Epandrial lobe short, digitiform, with strong dorsal seta and short hairs. Two epandrial setae. Cercus subtriangular, with strong setae. Surstylus indistinct.

Female. Similar to male except lacking male secondary sexual characters. 1st flagellomere subtriangular, with rounded apex, as long as high at base; arista basodorsal. Fore tibia black except basal third, gradually thickened apicad, at apex twice thicker than at base. Fore tarsus simple. Length ratio of fore coxa to femur to tibia to tarsus (segments from first to fifth), 33 : 45 : 35 : 20 : 8 : 6 : 5 : 6. M_{1+2} weakly arcuate, parallel to R_{4+5} in apical part. Posterior wing margin straight between M_{1+2} and CuA_1 .

Length: body 1.85 mm, antenna 0.8 mm, wing 2.5 mm; wing-width 0.5 (at the end of R_{2+3}) — 0.6 (at the end of R_1).

Distribution. Congo (Kinshasa).

Etymology. The species is named for the Chinese dipterologist Dr. Ding Yang.

Diagnosis. *C. yangi* is keyed to Palearctic *C. magius* Loew (Parent, 1938), differing in simple fore femur, mostly yellow femora, elongate 1st flagellomere, morphology of fore tarsus.

Key to Afrotropical species of *Campsicnemus* (males)

1. Fore tibia strongly enlarged, with long setae; fore basitarsus with long appendages 2
- Fore leg simple; at most fore tarsus with long hairs 3
2. Fore femur and tibia strongly enlarged, with rows of strong bristles, 1st to 3rd segments of fore tarsus with long appendages and long hairs *magius* Loew
- Fore femur simple, fore tibia swollen, with dorsal row of 4 long setae in basal half; fore basitarsus only with long appendages; other tarsomeres with long setae *yangi* sp. n.
3. Middle tibia with round ventral wart in apical third, middle femur excavated ventrally in apical

- third, middle basitarsus with strong horn-like bristle *atlanticus* Dyte
- Middle tibia without ventral wart, middle femur without excavation 4
4. Midtibia with row of simple ventral hairs longer than tibia diameter, without acute apical spine; midfemur with 2 ventral hairs at base, longer than diameter and double row of ventral hairs half as long as diameter of femur; fore tarsomeres 1st to 3rd with 2 rows of long hairs, 3—4 times as long as diameter of tarsomeres; one of the longest anterior hair at base of basitarsus reaching tip of 2nd tarsomere *lantsovi* sp. n.
- Middle tibia with posteroventral row of blunt black cilia and acute apical spine, middle femur slightly enlarged, evenly ciliate below 5
5. Middle tibia with 3 dorsal bristles *caffer* Curran
- Middle tibia with only 2 dorsal bristles 6
6. Fore coxa with white hairs only; hind tibia with 2 *ad*, 1—2 *pd*, 1 *pv* (North Africa) *armatus deserti* Vaillant
- Fore coxa with white hairs and black apical setae; hind tibia with 2 *ad*, 4 *pd*, without *pv* *armatus armatus* Zetterstedt

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