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## NEW TAXA AND SYNONYMY IN THE FAMILY PYRGOTIDAE (DIPTERA, TEPHRITOIDEA). II. SUBTRIBE ADAPSILIINA AND AFROTROPICAL CAMPYLOCERA

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**New Taxa and Synonymy in the Family Pyrgotidae (Diptera, Tephritoidea). II. Subtribe Adapsiliina and Afrotropical Campylocera.** Korneyev, V. A. — In the tribe Pyrgotini, a monophyletic lineage is considered as the subtribe Adapsiliina Rondani, 1869, **revised rank**; it includes the genera *Adapsilia* Waga, 1842, *Campylocera* Macquart, 1843, *Euphya* Wulp, 1885, *Eupyrgota* Coquillett, 1899, *Geloemyia* Hendel, 1908, *Hendelpyrgota* Vanschuytbroeck 1963, *Plectrobrachys* Enderlein, 1942, *Porpomastix* Enderlein, 1942, *Pyrgotomyia* Hendel, 1934, *Siridapha* Enderlein, 1942, *Trichopeltia* Wulp, 1885, and an unnamed and unplaced genus-group taxon (represented by the group of species related to *Adapsilia hirtoscutellata* Hendel, 1933). Based on having at least two synapomorphies: the incomplete costa not reaching apex of medial vein, and male cerci flattened dorsoventrally, large, slightly longer and wider than epandrium, the broadest concept of the genus *Campylocera* Macquart, 1843 is proposed. In the Afrotropical Region, it therefore includes also all the species assigned by Steyskal (1980) to the genera *Clemaxia* Enderlein, 1942, *Congopyrgota* Aczél, 1958, **syn. n.**, *Diasteneura* Hendel, 1908, **syn. n.**, *Dicrostira* Enderlein, 1942, *Hexamerinx* Enderlein, 1942, *Hypotyphla* Loew, 1873, **syn. n.**, *Hypotyphlina* Enderlein, 1942, **syn. n.**, *Lygiohypotyphla* Enderlein, 1942, and *Prohypotyphla* Hendel, 1934, **syn. n.** The other important characters of *Campylocera* are the low epistome, subocular sclerite well expressed, and femoral organ on female mid femur always lacking. The following synonymy is established: *Campylocera ferruginea* Macquart, 1843 = *Prohypotyphla omissa* Hendel, 1934, **syn. n.**; *Campylocera hyalipennis* (Aczél, 1958, **comb. n.**) = *Congopyrgota hyalipennis* Aczél, 1958 = *Congopyrgota kivuensis* Vanschuytbroeck, 1963, **syn. n.** = *Congopyrgota ethiopica* Steyskal, 1972, **syn. n.**; *Campylocera latigenis* Hendel, 1914 = *Prohypotyphla obtusicornis* Hendel, 1934, **syn. n.** = *Dicrostira partitigena* Enderlein, 1942, **syn. n.**; *Campylocera loewi* (Hendel, 1908), **comb. n.** = *Hypotyphla loewi* Hendel, 1908 = *Prohypotyphla (Hypotyphlina) saegeri* Aczél, 1958, **syn. n.**; *Campylocera caudata* (Hendel, 1914), **comb. n.** = *Hypotyphla caudata* Hendel, 1914 = *Lygiohypotyphla hyalipennis* Vanschuytbroeck, 1963, **syn. n.** = *Lygiohypotyphla ruwenzoriensis* Vanschuytbroeck, 1963, **syn. n.**; *Campylocera basilewskyi* (Vanschuytbroeck, 1963), **comb. n.** (= *Diasteneura basilewskyi* Vanschuytbroeck, 1963), *Campylocera laticeps* (Hendel, 1908), **comb. n.** (= *Diasteneura laticeps* Hendel, 1908), *Campylocera obscura* (Vanschuytbroeck, 1963), **comb. n.** (= *Diasteneura obscura* Vanschuytbroeck, 1963), *Campylocera similis* (Steyskal, 1963), **comb. n.** (= *Diasteneura similis* Steyskal, 1963), *Campylocera variceps* (Curran, 1928), **comb. n.** (= *Diasteneura variceps* Curran, 1928), *Campylocera nigripennis* (Hendel, 1934) **comb. n.** (= *Prohypotyphla nigripennis* Hendel, 1934), *Campylocera scalaris* (Hendel, 1934) **comb. n.** (= *Prohypotyphla scalaris* Hendel, 1934).

**Key words:** Diptera, Cyclorrhapha, Tephritoidea, Pyrgotidae, taxonomy, new species, synonymy.

### Introduction

While preparing a chapter for the Manual of Afrotropical Diptera (Korneyev, in press), I faced numerous problems of generic classification and nomenclature in the family Pyrgotidae. After a detailed study of the type specimens and vast additional material I came at a conclusion that some taxonomic improvements and nomenclatural changes should be done out of scope and prior to detailed taxonomic revisions of large genera, which are time-consuming and pending projects, involving dozens, and often up to hundred of species, including the new and poorly known ones, which require detailed descriptions and thus are to be postponed for decades.

In this paper, I only focused on the most important nomenclatural changes, which are relevant to the Afrotropical fauna or to the classification of the family as a whole. This paper continues previous taxonomic revisionary studies of the Afrotropical pyrgotids by the author (Korneyev, 2006 a, b; 2012; 2014 a, b, 2015 a, b, 2016).

### Material and methods

The specimens examined in this study are deposited in the following collections (curators in parentheses): BMNH — the Natural History Museum, London, United Kingdom (D. Notton, K. Goodger, D. Whitmore); DEI — Senckenberg Deutsches Entomologisches Institut, Müncheberg, Deutschland (F. Menzel); KBIN — Royal Institute of the Natural Sciences, Brussels, Belgium (P. Grotaert, P. Limbourg); MNKB—Museum für Naturkunde, Berlin, Germany (J. Ziegler, S. Marotzke, J. Pohl); NHMW—Naturhistorisches Museum, Wien, Austria (R.-E. Contreras-Lichtenberg; P. Sehnal); MRAC—Royal Museum of Central Africa, Tervuren, Belgium (M. De Meyer; E. De Koninck); NICW—Namibian National Insect Collection, Windhoek, Namibia (V. Bliss, through A. Kirk-Spriggs); NMKE — Nairobi National Museum, Kenya (R. Copeland); NMSA — KwaZulu-Natal Museum, Pietermaritzburg, South Africa (M. Mostovsky); SMNS—Staatliches Museum für Naturkunde, Stuttgart, Germany (H.-P. Tschorsnig); USNM—National Museum of Natural History, Smithsonian Institution, Washington, D. C., U. S. A. (c/o A. L. Norrbom, SEL USDA).

In the labels of type specimens, the slash character (/) is used to indicate separated lines, the double reverse slash (\) for the text on label rear side; the triple slash (///) is used for the scripts perpendicular to main text of label, and square brackets [] are for deciphered abbreviations in the literally quoted labels. The non-type material is arranged alphabetically by country names, then from the West to the East and from the North to the South within each country; and finally, by the year, month and day of collecting. (P) indicates plesiomorphic, (A) apomorphic modality of character, and (SA) — synapomorphy.

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### Tribe Pyrgotini

#### Subtribe Adapsiliina Rondani, 1869, revised rank

Adapsilioidi Rondani, 1869: 6; Sabrosky, 1999: 39.

Type genus: *Adapsilia* Waga, 1842.

**D i a g n o s i s.** Ocelli always absent; frontal setae lacking; antennae usually moderately or very long, commonly with pedicel and flagellomere more than  $1.5 \times$  as long as wide, pedicel without incision (A); face with long, separate or fused antennal grooves; epistome low, sclerotized (A); wing with subcostal vein entire and reaching costal vein at acute angle (?A); costal vein without humeral break (A) but often with inconspicuous subcostal break (A); abdomen with sternites 1 and 2 fused (SA with other Pyrgotinae) without a seam (A); male genitalia: phallic guide well developed (A); epandrium bare dorsally (A); inner surstylus without prenisetae (A); female: oviscape on ventral side without tongue-like combs of thickened setae or unpaired lobe (A? as reversal); eversible membrane without taeniae (A); aculeus moderately small, at most  $1.5 \times$  as long as oviscape width at aperture (A), with sternite 8 lacking setae (A) and no anal slit (A); ventral receptacle scepter-like (SA with other Pyrgotinae). In addition, many of the members of this subtribe possess the so-called femoral organ (an area with thin cuticle devoid of setae) on anterior surface of the mid femur, the character not occurring anywhere outside Adapsiliina (only a few Australian *Toxura* (Toxurini) and South American *Tropidothrinax* (Pyrgotina) have somewhat similar structures on fore femur and fore tibia).

Monophyly of this subtribe is supported by at least one synapomorphy: the presence of subocular sclerite (secondary sclerotised crescent area on the gena ventral of the compound eye) and epandrium without setae on its dorsal side. Its representatives have several characters, which are believed to be synapomorphies of the subfamily Pyrgotinae (abdominal sternites 1 and 2 fused, ventral receptacle scepter-like), Pyrgotini +Toxurini (prenisetae lacking), and Pyrgotini (subcosta straight, without subapical bent). Distribution of the character modalities among other Pyrgotini and Toxurini remains very poorly examined, and even the possible sister-group of the Adapsiliina is unknown.

The following Old World genera belong here:

*Adapsilia* Waga, 1842; *Campylocera* Macquart, 1843; *Euphya* Wulp, 1885; *Eupyrgota* Coquillett, 1899; *Geloemyia* Hendel, 1908; *Hendelpyrgota* Vanschuytbroek 1963; *Plectrobrachys* Enderlein, 1942; *Porpomastix* Enderlein, 1942; *Pyrgotomyia* Hendel, 1934; *Siridapha* Enderlein, 1942; *Trichopeltia* Wulp, 1885. In addition, a group of species related

to *Adapsilia hirtoscutellata* Hendel, 1933 forming an unnamed and unplaced genus-group taxon, belongs in this subtribe.

### Genus *Campylocera* Macquart, 1843

Type species: *Campylocera ferruginea* Macquart, 1843 (by original designation).

#### Synonyms

*Clemaxia* Enderlein, 1942

Type species: *Clemaxia angustipalpis* Enderlein, 1942 (by original designation). Synonymised by Aczél (1958).

*Congopyrgota* Aczél, 1958, **syn. n.**

Type species: *Congopyrgota hyalipennis* Aczél, 1958 (by original designation).

*Diasteneura* Hendel, 1908, **syn. n.**

Type species: *Diasteneura laticeps* Hendel, 1908 (by monotypy).

*Dicrostira* Enderlein, 1942.

Type species: *Dicrostira partitigena* Enderlein, 1942 (by original designation).

*Hexamerinx* Enderlein, 1942.

Type species: *Campylocera latigenis* Hendel, 1914 (by original designation).

*Hypotyphla* Loew, 1873, **syn. n.**

Type species: *Hypotyphla loewi* Hendel, 1908 (by subsequent designation of Hendel, 1908).

*Hypotyphlina* Enderlein, 1942.

Type species: *Hypotyphla caudata* Hendel, 1914 (by original designation).

*Lygiohypotyphla* Enderlein, 1942.

Type species: *Prohypotyphla nigripennis* Hendel, 1934 (by original designation).

*Prohypotyphla* Hendel, 1934, **syn. n.**

Type species: *Prohypotyphla scalaris* Hendel, 1934 (by original designation).

**Diagnosis.** A genus of about 50 nominal species described mainly from the continental Afrotropical Region, with about 5 species known from the Oriental Region, Papuan Subregion and Northern Australia. They possess an incomplete costa not reaching apex of medial vein (fig. 1, 2, arrow) (**synapomorphy**), a low epistome, the subocular sclerite well expressed (but narrow in species with very low gena), the femoral organ on mid femur always lacking, and male cerci flattened dorsoventrally, large, slightly longer and wider than epandrium (**synapomorphy**).

The species we place in this genus all possess at least two mentioned synapomorphies and are believed to belong in a monophyletic clade within Adapsilini. They form several groups of species, differing mainly by the shape of antenna, surstylus, oviscape, and aculeus, number of the ocellar setae, presence or absence of the lateral vertical setae, ocellar triangle, stump vein, wing pattern, and modified setae on mid and hind coxae. These characters conspicuously overlap and give no possibility to split *Campylocera* into distinct genera. I consider them all to be of species-group rank instead and all the names of nominal genera to be synonyms. Here, I preliminarily place the considered species to two artificial groupings: a) with 1–4 pairs of additional ocellar setae (“*Campylocera* complex”) and b) with 1 pair of ocellar setae and no extra ocellars (“*Hypotyphla* complex”). Forthcoming taxonomic revision and phylogenetic analysis (Korneyev, in preparation) may clarify their relationships and give a key to *Campylocera*.

Descriptions of pyrgotid species were traditionally largely based on external characters, which give very few sound characters, so detailed studies of the terminalia need to be conducted. Many nominal species can only be distinguished either from females or (rarely) from males alone. Due to sexual dimorphism in head shape and wing pattern, in many cases different sexes cannot be reliably shown to be conspecific. No comprehensive key to species has been published and the genus requires thorough taxonomical revision. The biology and immature stages of Afrotropical species remain unknown.

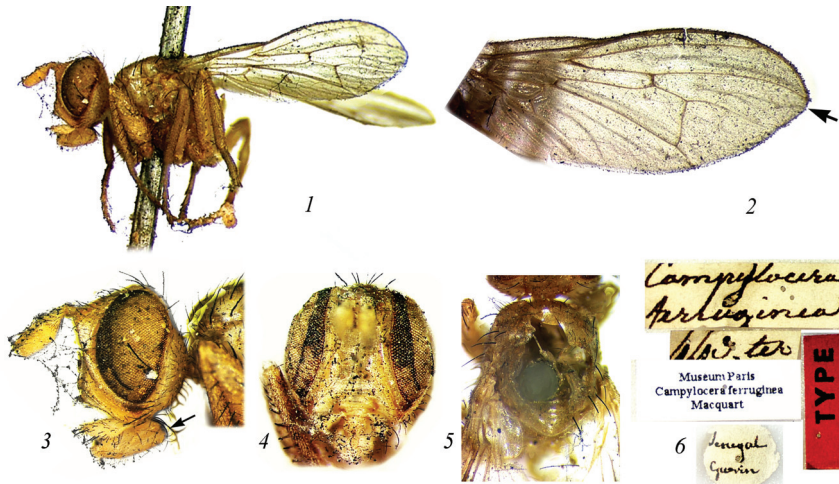


Fig. 1. *Campylocera ferruginea*, holotype (MHNP): 1 — habitus, lateral view; 2 — wing; 3 — head, left (arrow indicates enlarged setae); 4 — head, anterior view; 5 — mesonotum, dorsal view; 6 — labels.

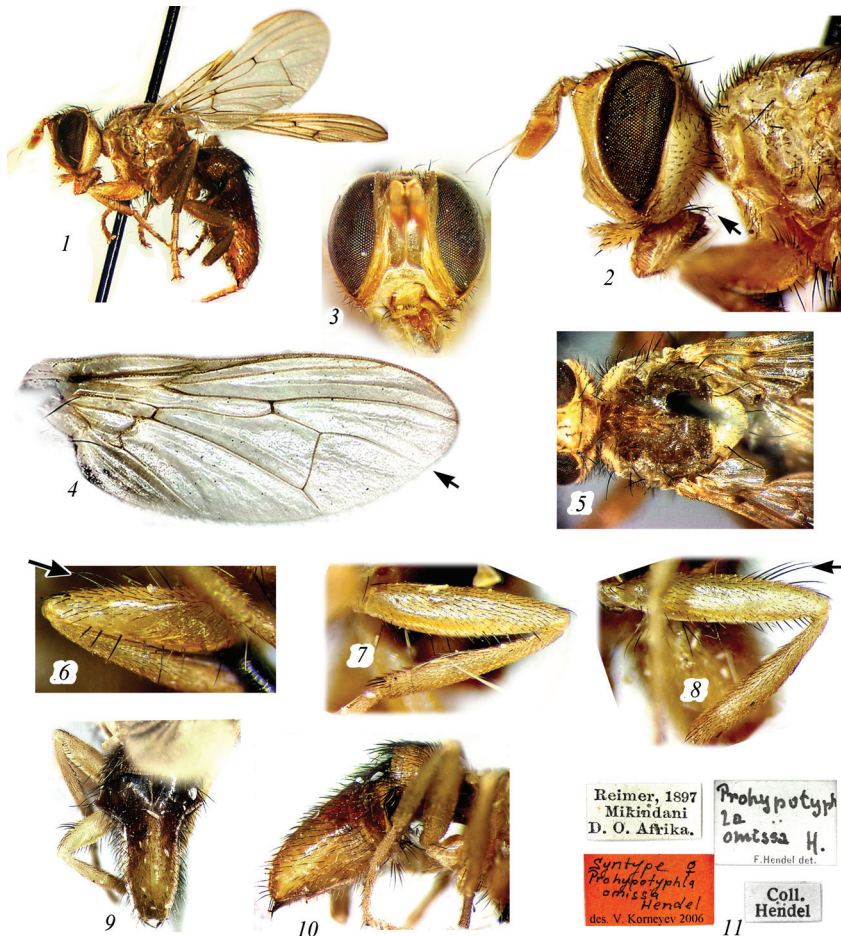


Fig. 2. *Campylocera ferruginea*: holotype ♀ of *Campylocera omissa* (NHMW): 1 — habitus, lateral view; 2 — head, left (arrow indicates enlarged setae); 3 — head, anterior view; 4 — wing; 5 — mesonotum, dorsal view; 6 — fore leg, posterior view (arrow indicates long setae); 7 — mid leg, anterior; 8 — hind leg, anterior view; 9–10 — oviscape, dorsal and left view; 11 — labels.



In this paper, I only consider the type species of the nominal genera, with their synonymy, based on the study of type specimens and additional material, as listed below. A complete taxonomic revision and a key to species are still pending (Korneyev, in preparation).

### *Campylocera* complex

#### *Campylocera ferruginea* Macquart, 1843 (figs 1–3)

*Campylocera ferruginea* Macquart, 1843 a: 220; Macquart, 1843 b: 377; Steyskal, 1980: 557.  
*Prohypotyphla omissa* Hendel, 1934: 150; Steyskal, 1980: 560, **syn. n.**

**Material. Type.** Syntype [sex unknown] *Campylocera ferruginea*: **Senegal**: “Sénégal / Guerin” [round label], [unclear h/w] ter., “*Campylocera / ferruginea*” [Macquart’s h/w] (Guerin-Meneville leg.) (MHNP). Syntype ♀ *Prohypotyphla omissa*: **Tanzania**: “Reimer, 1897 / Mikindani / D. O. Afrika,” “Coll. Hendel”, “*Prohypotyph / la omissa / H.*” (NHMW).

**Non-type. Angola:** Bruco, 26.02–2.03.1972, 1 ♂, R. Giraul, 10 mls NE, Mocamedes, 27–29.02.1972, 1 ♀ (Southern African Expedition, BM72–1) (BMNH); **Kenya:** Ngong Nairobi, 07.1954, 1 ♀ (Fowler & Coulson) (NMKE). **Namibia:** Katima Mulilo Dist., Kubuniana Camp: Kwando River, 17.87° S 23.33° E, 28–30.10.2003, Malaise trap



Fig. 3. *Campylocera ferruginea*, non-type ♂ (1–6) and ♀ (7–11) (Nigeria, USNM): 1–2 — genitalia, right and ventral view; 3 — outer and inner surstyli, ventral view; 4–6 — phallus glans at different angles; 7 — oviscape apex; 8 — aculeus; 9 — vagina and ventral receptacle; 10 — medioventral lobe; 11 — spermathecae (2 of 3).



Fig. 4. *Campylocera unicolor* syntype ♂ (MHNP): 1 — habitus, lateral view; 2 — wing; 3 — head, left (arrow indicates enlarged setae); 4 — head, anterior view; 5 — mesonotum, dorsal view; 6 — fore leg, posterior view; 7 — mid leg, anterior; 8 — hind leg, anterior view; 9 — labels.

sample, 1 ♂, 2 ♀ (A. H. & M. K. Kirk-Spriggs); Munwe Dist., Okavango River, 18°04'04" S 21°28'51" E, Malaise trap & sweeping, 1.01.1999, 1 ♀ (Kirk-Spriggs, Marais & Mann); Rundu Dist.: Simanya, Okavango River, 17°33'17" S 18°32'30" E, light trap riverine forest, 23–24.01.1998, 1 ♀ (Kirk-Spriggs & Marais) (NICW). **Nigeria:** Zaria, Samaru, m. w. trap, 30.09.1966, 1 ♂ (dissected), 25.09.1966, 1 ♀ (dissected) (J. Deeming) (USNM). **Saudi Arabia:** Taif, 8.09.1934, 1 ♂ (J. B. Philby) (BMNH, B. M. 1934–536). **Sierra Leone:** Njala, 06.1936, 1 ♀ (E. Hergreaves) (BMNH).

**Diagnosis.** This species can be easily recognized among other *Campylocera* species from the 4–5 pairs of very long and strong setae on prementum (fig. 1, 3; 2, 2, arrow), fore and hind femora with long preapical setae dorsally (fig. 2, 6, 8), double lateral surstylus (fig. 3, 1), oviscape wide, dorsally straight, without spinulose humps or other modifications (fig. 2, 10), and aculeus with wide basal shoulders (fig. 3, 8). Mesonotum with conspicuous presutural supra-alar setae; scutellum moderately long setulose, often with 1 or 2 additional setae on each side.

**Remarks.** The abdomen of the only extant syntype of *Campylocera ferruginea* is missing (fig. 1, 1), but as the extremely long premental setae are known in the only one African species, its identity is clear.

#### *Campylocera unicolor* Becker, 1909 (fig. 4)

*Campylocera unicolor* Becker, 1909: 118; 1910: 27; Steyskal, 1980: 557.

**Material. Type.** Syntype ♂ *Campylocera unicolor*: **Kenya:** "MUSEUM PARIS / Afrique Orient. Angl / Nairobi / Maurice de Rothschild" [pale blue label], "Campylocera / unicolor Beck. [Becker's handwriting] det Becker" (MHNP).

**Remark.** This species based on a single known male considered a syntype, was described originally without mentioning number or labels of the type(s). I do not designate lectotypes in the present paper: this is to be done in the forthcoming revision of the genus *Campylocera*.

This specimen is very probably conspecific to *C. hyalipennis* (Aczél, 1958) or *C. scalaris* (Hendel, 1934), described based on females and having minor differences between each other to tell which “female morphospecies” corresponds to this male. It will be considered in details in the revision of the genus (Korneyev, in prep.).

***Campylocera hyalipennis* (Aczél, 1958) comb. n. (figs 5–7)**

*Congopyrgota hyalipennis* Aczél, 1958: 41; Steyskal, 1980: 558. — *Congopyrgota kivuensis* Vanschuytbroeck, 1963: 19; Steyskal, 1980: 558, **syn. n.** — *Congopyrgota ethiopica* Steyskal, 1972: 2; 1980: 558, **syn. n.**

**Material. Type.** Holotype ♀ *Congopyrgota hyalipennis*: D. R. Congo [Zaire]: “Congo Belge: PNU / Karibwe af. Lusinga / (1700 m) 8–10-iii-1947 / Mis. G. F. de Witte. 8a”, “*Congopyrgota* n. gen. / *hyalipennis* n. sp. ♀ / Dr. M. Aczél det. 19”, “HOLOTIPO” [red printed label], “Inst. M. Lillo / Preparación / Nº 241–W”, “Holotypus” [orange label] [left wing detached, antennae missing] (MRAC).

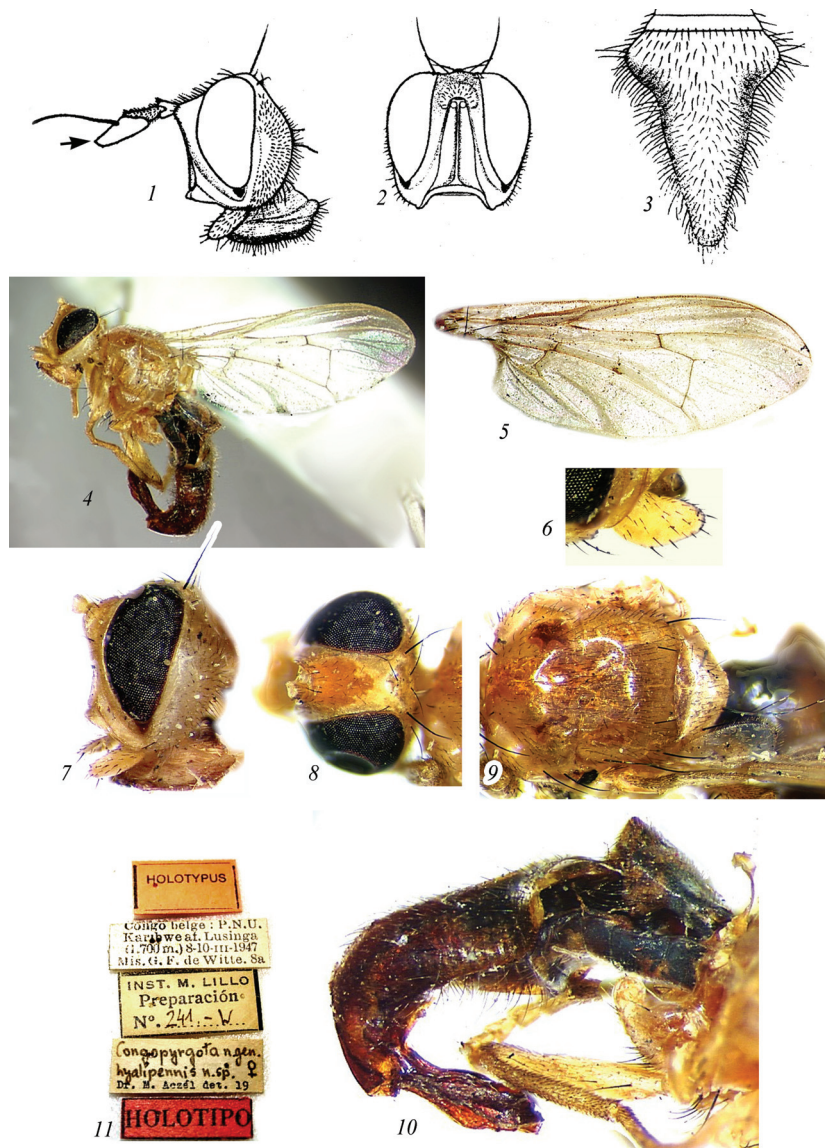


Fig. 5. *Congopyrgota hyalipennis* holotype ♀ (MRAC): 1, 7 — head, left (arrow indicates pointed angle of the flagellomere 1); 2 — head, anterior view; 3 — oviscape, dorsal view; 4 — habitus, left; 5 — wing; 6 — palp; 8 — head, dorsal view; 9 — mesonotum, dorsal view; 10 — abdomen and oviscape, right view; 11 — labels (1–3 — redrawn from Aczél (1958), with changes, 4–11 — original photos).



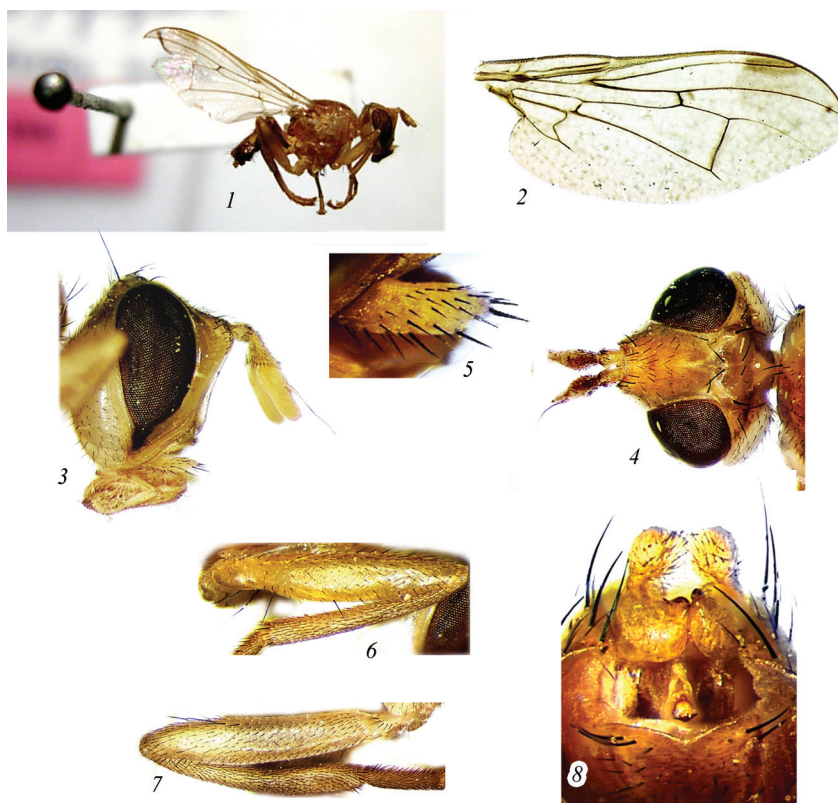


Fig. 6. *Campylocera kiwuensis* holotype ♂ (MRAC): 1 — habitus, lateral view; 2 — wing; 3 — head, right; 4 — head, dorsal view; 5 — palp; 6 — fore leg, posterior view; 7 — hind leg, anterior view; 8 — epandrium, ventral view.

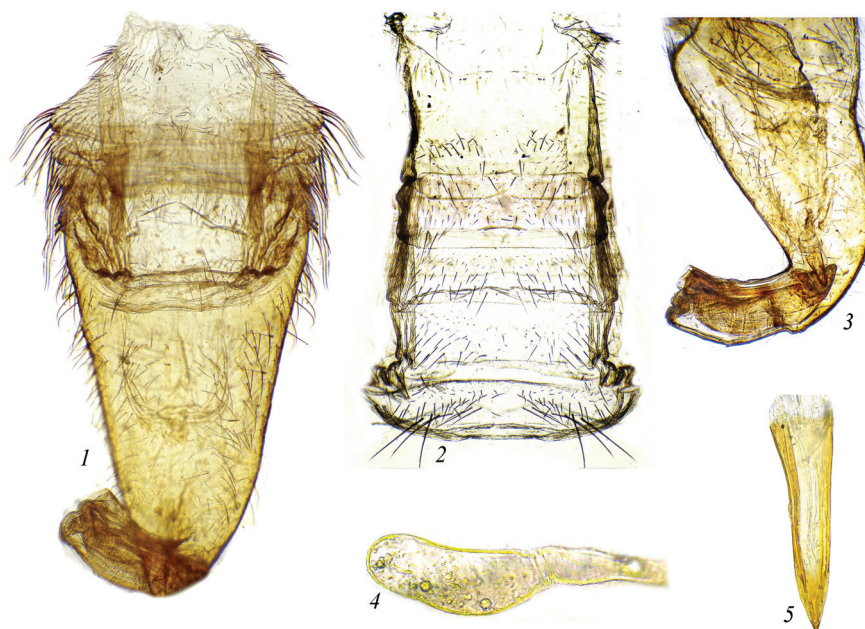


Fig. 7. *Campylocera hyalipennis*, non-type ♀ (Uganda, USNM): 1 — abdomen, ventral view; 2 — abdominal sternites 1–6; 3 — oviscape, left view; 4 — spermatheca (1 of 3); 5 — aculeus.



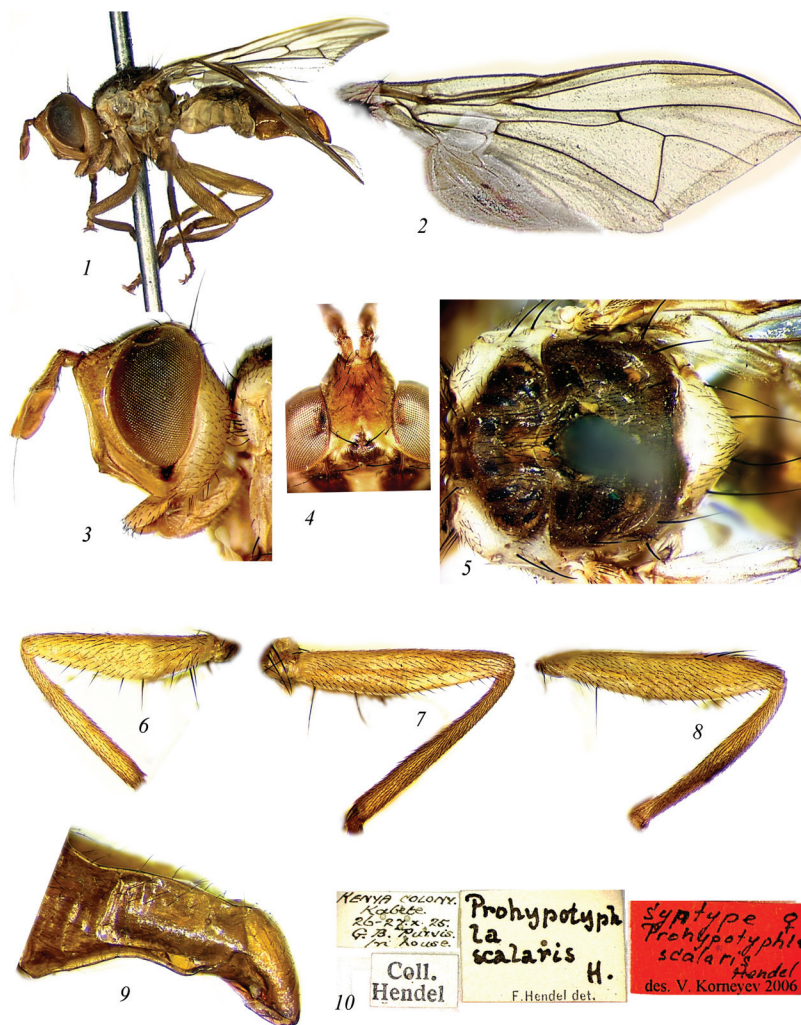


Fig. 8. *Campylocera scalaris* holotype ♀ (NHMW): 1 — habitus, lateral view; 2 — wing; 3 — head, left (arrow indicates enlarged setae); 4 — head, dorsal view; 5 — mesonotum, dorsal view; 6 — fore leg, posterior view; 7 — mid leg, anterior; 8 — hind leg, anterior view; 9 — oviscape, dorsal and left view; 10 — labels.

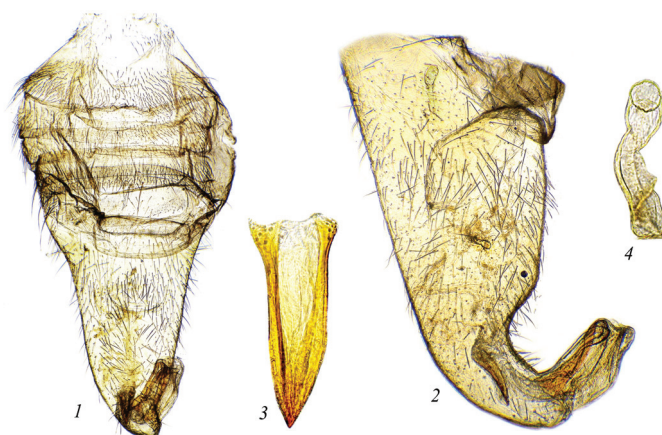


Fig. 9. *Campylocera scalaris* non-type ♀ (Nigera, USNM): 1 — abdomen, ventral view; 2 — oviscape, right view; 3 — aculeus; 4 — ventral receptacle.

Holotype ♂ *Congopyrgota kivuensis*: **D. R. Congo** [Zaire]: “Congo Belge: P. N. A. [Parc National Albert = Virunga National Park] / Rutshuru / 1285 m. 68.06.1934 / G. F. de Witte: 431”, “P. Vanschuytbroeck det. / *Congopyrgota kivuensis* n. sp. / Holotypus [red paper label]”. (MRAC).

Holotype ♀ *Congopyrgota ethiopica*: **Ethiopia**: “Ethiopia / Bahar Dar Juni/Juli / Schaufele leg.” [blue paper printed label], “Holotype / *Congopyrgota* / *ethiopica* / Steyskal” [pink paper label with red print] (dissected) (SMNS). Paratype ♀ *Congopyrgota ethiopica*: [labels as in the holotype, except “Paratype...”].

Non-type. **Uganda**: Ankole, Kichwamba, 23–29.04.1968, 6 ♂, 16 ♀ (P. J. Spangler) (USNM).

**Diagnosis.** This species can be recognized from its moderately slender habitus, flagellomere 1 twice as long as wide, truncated apically, often with slightly acute dorsoapical corner (fig. 5, 1, arrow), vertex with one ocellar, one postocellar, long inner vertical seta and short (but present) outer vertical seta, parafacial moderately narrow, at its middle half as wide as flagellomere 1, normally with dark subocular spots; scutellum short and evenly setulose, with 2 pairs of setae but without irregular extra setae between them; femora not thickened; fore and hind femora dorsally with 2–3 suberect setae not longer than femur width at apical half; male surstylus simple and short (fig. 6, 8); wing with pale grey subapical spot in male (fig. 6, 2), much paler and almost inconspicuous in female (fig. 5, 5); vein  $R_{2+3}$  without stump vein; vein  $R_{4+5}$  with 3–5 setulae basally on dorsal side; female oviscape narrowly conical, ventrally without humps, setulose fields or other conspicuous modifications, with aperture on ventral side (figs 7, 1, 3); aculeus without basal shoulders (fig. 7, 5).

**Remarks.** I was unable to find any essential differences between the three species described in the genus *Congopyrgota*, and consider them conspecific. They are also similar to *Prohypotyphla scalaris* Hendel, 1934, which is either a sister species differing by its darker mesonotum and slightly different oviscape shape. *Congopyrgota* is therefore a synonym of *Prohypotyphla* Hendel, 1934 (see below), and they both are considered to be synonyms of *Campylocera*.

### *Campylocera scalaris* (Hendel, 1934) **comb. n.** (fig. 5–7)

*Prohypotyphla scalaris* Hendel, 1934: 149; Vanschuytbroeck, 1963: 41; Steyskal, 1980: 560.

**Material. Type.** Syntypes 2 ♀: **Kenya**: “Kenya colony / Kabete / 26–27. x. 25 / G. B. Purvis / in house”, “*Prohypotyphla* / la / *scalaris* H. / F. Hendel. det.”, “Coll. Hendel.” (NHMW; DEI).

Non-type. **Nigeria**: Zaria, Samaru, m. w. trap, 1.06.1966, 1 ♀, 21.05, 22, 24, 26.06.1967, 8 ♀, 11, 15, 16, 18, 19, 20, 21, 26.06.1968, 13 ♀, 10, 31.05, 26.06.1972, 3 ♀ (J. Deeming) (USNM); Samaru, mercury vapor lamp, 15–22.06, 13–20.07.1970, 2 ♀ (P. H. Ward) (BMNH). **Kenya**: Nairobi, 10.1934, 1 ♀ (F. W. Edwards), 4.02.1959, 1 ♀ (no collector); Karura, 06.1936, 1 ♀ (van Someren) (BMNH).

**Diagnosis.** *C. scalaris* is a species superficially similar to *C. ferruginea* in its almost uniformly yellowish body often with reddish-yellow lyrate pattern on scutum and whitish scutellum, hyaline wings, medium-size (wing length 6.5–8.1 mm), and only one pair of ocellar and one pair of postocellar setae present, with pedicel moderately elongate, shorter than flagellomere 1 (the latter parallel-sided, twice as long as wide and apically blunt), lacking outer vertical setae, mid coxae with 2 setae laterally and short setulae medioventrally, short setulose hind coxae, femora not thickened, with long basal and subbasal ventral setae, fore femur without long dorsal setae, mid and hind femora with short and thin apicoventral setae, scutellum short setulose with 4 scutellar setae, wide abdomen, differing from other *Campylocera* by the wide conical oviscape without setose swellings but with a ventral incision (lateral view). It is closely related to *C. unicolor* Becker and *C. hyalipennis* (see discussion above), differing from the second by the blunt flagellomere 1, slightly darker mesonotum and somewhat wider aculeus (fig. 8, 3), but the ranges of variability of these characters need additional studies to see if they are separate species.

**Remark.** See discussion on synonymization of *Campylocera*, *Congopyrgota* Aczél, 1958, **syn. n.**, and *Prohypotyphla* Hendel, 1934 **syn. n.**

***Campylocera latigenis* Hendel, 1914 (fig. 10–13)**

*Campylocera latigenis* Hendel, 1914: 98; Steyskal, 1980: 557. — *Prohypotyphla obtusicornis* Hendel, 1934: 152; Steyskal, 1980: 560, **syn. n.** — *Dicrostira partitigena* Enderlein, 1942: 126; Steyskal 1980: 558, **syn. n.**

Material. **Type.** Holotype ♂ *Campylocera latigenis*: **Cameroon**: “N.-Kamerun / Joh[ann]-Albrechtshöhe / L. Conradt S. G. \ 21.5. [18]96.”, “*Campylocera / latigenis*, H. / det. Hendel”, “Hendel / coll.” (NHMW).

Holotype ♀ *Campylocera obtusicornis*: **Cameroon**: “N.-Kamerun / Joh. Albrechtshöhe / L. Conradt S.” [blue label], “*Campyloc. / obtusicor- / nis H. / F. Hendel det.*”, “Coll. Hendel.” (NHMW).

Syntype ♀ *Dicrostira partitigena*: **Cameroon**: “N.-Kamerun / Johann-Albrechtshöhe / 21. [sic!] 5.1896 [handwritten] / L. Conradt S. G.” [blue label], “Typus” [red, printed, Enderlein’s style], “*Dicrostira / partitigena / Type Enderl. ♀ / Dr. Enderlein det. 1934*” (MNKB).

**Diagnosis.** *C. latigenis* belongs in a group of species represented by rusty-yellow, moderately large and robust flies having grayish wing with yellowish cells bc, c, r<sub>1</sub>, and distal margin of cell cup, 3–6 pairs of ocellars, 1–2 pairs of postocellars, and outer verticals half as long as of inner vertical setae, parafacial moderately wide, as wide as flagellomere 1, shiny, gena 1/3 times as high as eye, with wide non-sclerotized genal groove as wide as parafacial in ventral half, subocular sclerite usually with shiny brownish spot, densely setulose thorax, presutural supra-alar and acrostichal prescutellar setae lacking, densely (but moderately long) setulose scutellum, with 4–6 scut twice as long as setulae, of them, basal scutellars are the thinnest.

It differs from related species (*C. oculata* Hendel, *C. latipennis* Ségué, and a few undescribed ones) by the oviscape evenly narrowed posteriorly and moderately setose over whole ventral side, on ventral surface non-convex and bearing neither thickened nor long setae, without spinulose or setose swelling; fore femur (moderately swollen, with 5–6 thin and long setae of ventral row, but no long and dense ventral setulae — fig. 12, 9) and proepisternum (3–4 setae vs. 6–15 setae in other species). Closely related *C. oculata* Hendel differs by slightly smaller size, and the oviscape swollen and black spinulose basiventrally, with narrow apical half. *C. latipennis* can be recognized from the oviscape medioventrally swollen and bearing moderately long but non-spinulose setae on the swelling and short apical narrow part.

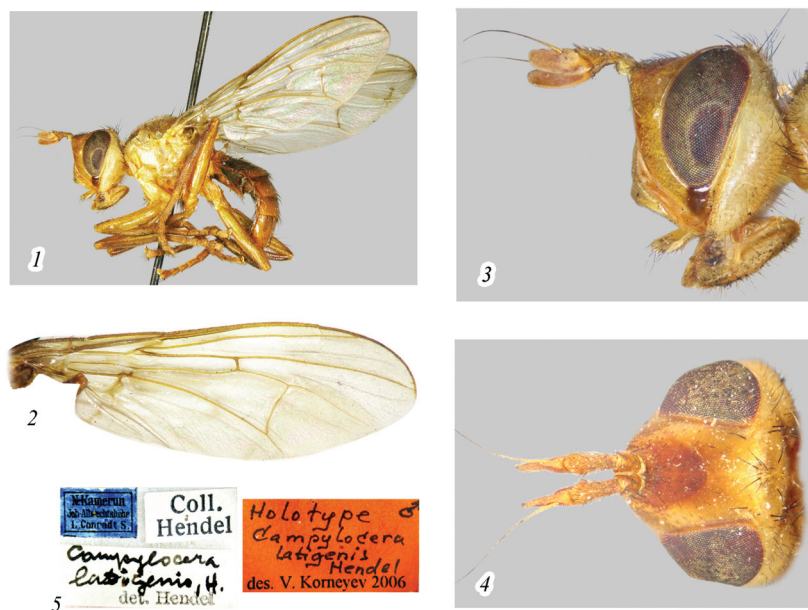


Fig. 10. *Campylocera latigenis*: holotype ♂ (NHMW): 1 — habitus, lateral view; 2 — wing; 3 — head, right; 4 — head, dorsal view; 5 — labels.



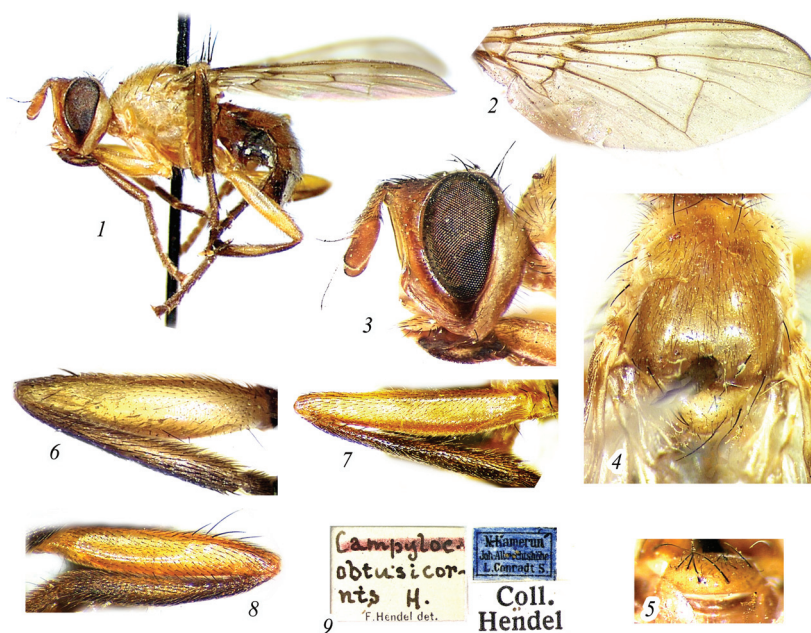


Fig. 11. *Campylocera latigenis*: holotype ♂ *Campylocera obtusicornis* (NHMW): 1 — habitus, lateral view; 2 — wing; 3 — head, right; 4 — mesonotum, dorsal; 5 — scutellum, posterior view; 6 — fore leg, posterior view; 7 — mid leg, anterior view; 8 — hind leg, anterior view; 9 — labels.

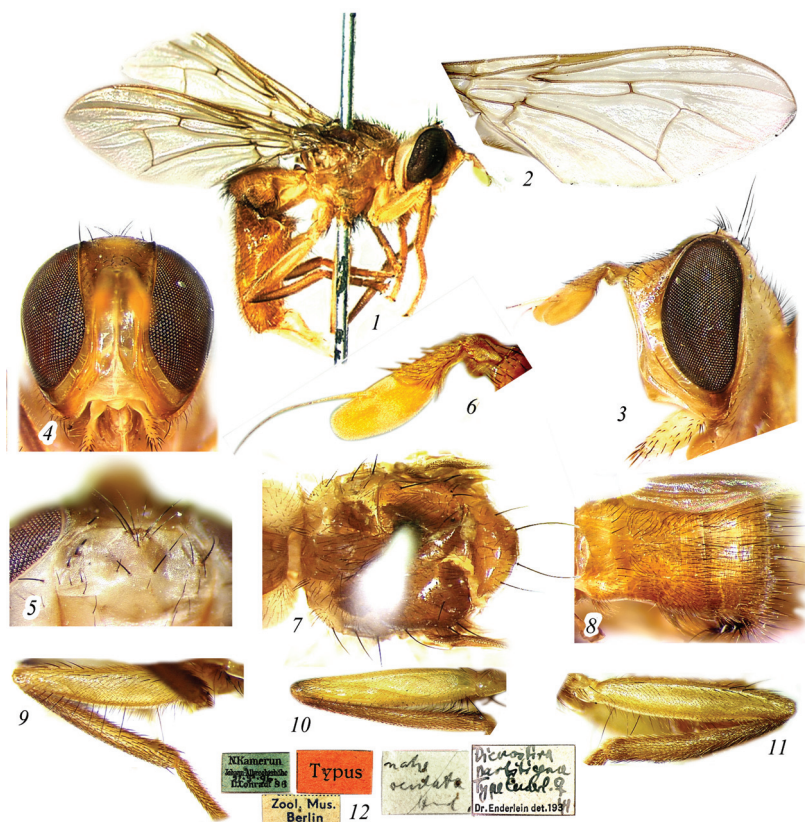


Fig. 12. *Campylocera latigenis*: holotype ♀ *Dicrostyra partitigena* (NHMW): 1 — habitus, lateral view; 2 — wing; 3 — head, left; 4 — head, anterior view; 5 — occiput, posterior view; 6 — antenna; 7 — mesonotum, dorsal view; 8 — abdomen, dorsal view; 9 — fore leg, posterior view; 10 — mid leg, anterior; 11 — hind leg, anterior view; 12 — labels.



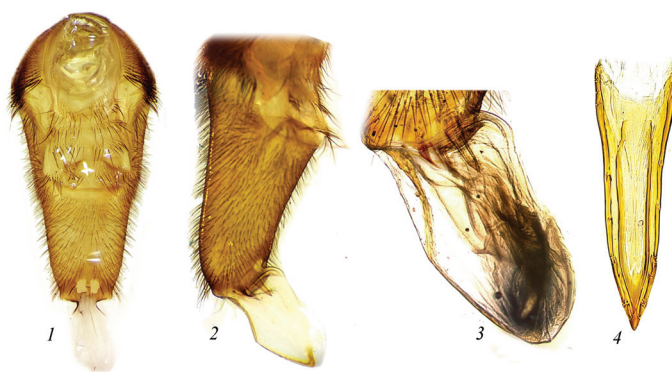


Fig. 13. *Campylocera latigenis*: holotype ♀ *Dicrostira partitigena* (NHMW): 1 — abdomen, ventral; 2 — oviscape, right; 3 — apex of oviscape, right, enlarged; 4 — aculeus.

**Remark.** All the three nominal species were described based of the specimens from the same series collected in Cameroon and showing no essential differences in the body size, coloration and vestiture. I consider these specimens to be conspecific and synonymize the species names based on them as name-bearing types. The number of scutellar setae vary from four through five to six in this species and also in *C. oculata*, *C. latipennis* and related species and cannot serve ever for distinguishing species.

The nominal genera *Dicrostira* Enderlein, 1942 **syn. n.** and *Hexamerinx* Enderlein, 1942 **syn. n.** were based on the height of gena and number of scutellar setae, which are common for the whole group of species, related to *C. latigenis* and *C. ferruginea*, the type species of *Campylocera*, and have no value even for recognition of species. I therefore consider them congeneric and synonymize the generic names with *Campylocera*.

### *Hypotyphla* complex

#### *Campylocera angustipalpis* (Enderlein, 1942) (fig. 14)

*Clemaxia angustipalpis* Enderlein, 1942: 129; Vanschuytbroeck, 1963: 65; Steyskal, 1980: 558.

*Campylocera* (*Clemaxia*) *angustipennis*: Aczél, 1958: 40 (incorrect subsequent spelling).

**Material. Type.** Holotype ♀ *Clemaxia angustipalpis*: **Togo**: “[W-Afrika] Togo / Bismarckburg / 5.7. [18]93 L. Conradt S.”, “*Clemaxia / angusti- / palpis* Enderlein Dr. Enderlein det. 1934 | Type [pale red label]” (MNKB).

**Diagnosis.** This species can be recognized among other *Campylocera* species from the long pedicel and flagellomere 1 parallel-sided, apically bluntly rounded, fore femur with moderately long and thin setae, but without thickened apicoventral setae on dorsal surface, mid coxa with row of strong setae (fig. 14, 10) hind coxa antero-ventrally with somewhat thickened spinulose setulae (fig. 14, 10) not forming comb or thick brush; veins brown bordered, cell  $R_{2+3}$  apically with narrow brown apical margin (fig. 14, 2), oviscape long and narrow, without peculiar modified structures (fig. 14, 1, 13). Mesonotum without presutural supra-alar setae; scutellum short setulose, 2 setae on each side. This species is closely related to *C. gracilis* Hendel 1914 from Southern Nigeria differing mainly by longer setulose fore femur (short setulose with short, slightly thickened setulae apicoventrally in *C. gracilis*). Study of additional material is necessary to clarify, if this is a reliable difference of species or individual variability. No reliable associations with males found in collections are available.

**Remark.** Enderlein (1942) originally recognized *Clemaxia* as a genus to place the flies with incomplete costa, vein M reaching wing margin,  $R_{2+3}$  with or without stump vein, and scutellum bearing 4 setae. In this paper, all the Old World Adapsiliina species with incomplete costa are lumped in a monophyletic genus *Campylocera*. I therefore synonymize both generic names. Within *Campylocera*, *C. angustipalpis* forms a small group of species together with *C. loewi* (Hendel, 1908), *C. gracilis*, and *C. caudata* (Hendel, 1914); these

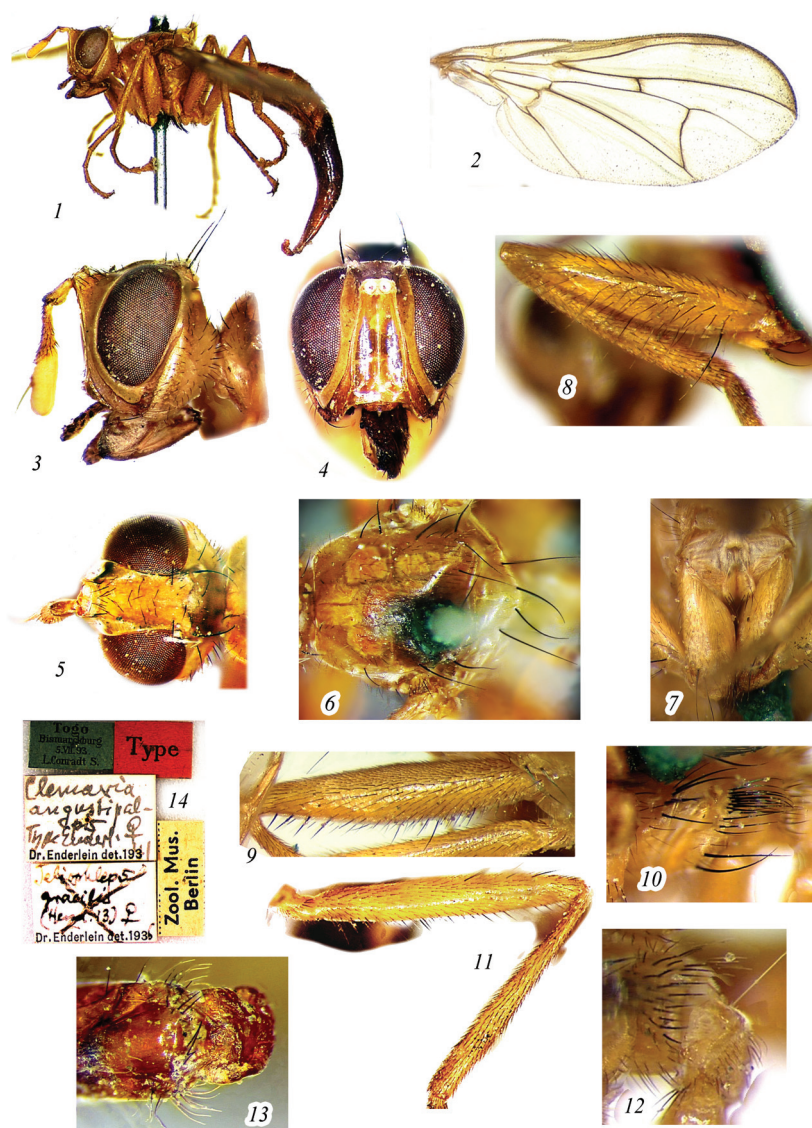


Fig. 14. *Campylocera angustipalpis*: holotype ♀ (MNKB): 1 — habitus, lateral view; 2 — wing; 3 — head, left; 4 — same, anterior; 5 — same, dorsal view; 6 — mesonotum, dorsal view; 7 — prosternum and fore coxae; 8 — fore leg, posterior view; 9 — mid femur, anterior; 10 — mid coxa; 11 — hind femur, anterior view; 12 — hind coxae; 13 — oviscape apex, ventrally; 14 — labels.

species share elongate and narrow pedicel, elongate and blunt flagellomere 1, small or moderately developed ocellar triangle with 1–2 pairs of ocellar setae, mid and hind coxae of females with more or less thickened setae, and oviscape narrow and long, 1.3–2 times as long as abdominal tergites combined and no sclerotized lobes or long sensillar brushes or combs at its apical aperture. *C. angustipalpis* can be distinguished from superficially *C. gracilis*, which shares similarly setulose mid and hind coxae of females, by the long and fine setae of the ventral rows on fore femur (the basalmost seta twice as long as femur width), whereas in *C. gracilis* they are short and spurious (the basalmost seta at most as long as femur width).

***Campylocera loewi* (Hendel, 1908), comb. n. (figs 15–17)**

*Hypotyphla loewi* Hendel, 1908: 146; 1909: 11, fig. 4–6; Steyskal, 1980: 558. — *Prohypotyphla* (*Hypotyphlina*) *saegeri* Aczél, 1958: 49; *Hypotyphlina saegeri*: Steyskal, 1980: 559, **syn. n.**

**Material. Type.** Holotype ♀ *Campylocera loewi*: **South Africa**: “Algoa-Bay. / Capland / Dr. H. Brauns /// 13 I 97”, “Hypotyphla / Loewi Hend / Type”, “Type” [dark brown shiny label] (NHMW).

Holotype ♀ *Prohypotyphla* (*Hypotyphlina*) *saegeri*: **DR Congo**: “Congo belge: P. N. U. / Mukana, 1.810 m. / 15-iii 1948 / Mis. G. F. de Witte”, “Prohypotyphla / (Hypotyphlina) ♀ / saegeri n. sp. / Dr. M. Aczél det.”, “HOLOTYPUS” [orange label with frame], “HOLOTIPO” [red label with frame], “Inst. M. Lillo / Preparación / № 240 — W” [right wing detached, slide possibly in Aczél collection in IML, left wing broken, apex glued to the polypore bar] (MRAC).

Non-type. **Nigeria**: N, Zaria, Samaru, 31.07.1968, 1 ♀, 7.07.1972, 1 ♀ (J. C. Deeming) (USNM). **Ethiopia**: Bahar Dar Joni, 7.08.1968, 1 ♀ (Schäufelle); S. W. Ethiopia, Konso, Province Gamu Gofa, 5°16' N 37°23' E, 23.01.1960, 1 ♀ (W. Richter) (SMNS). **Uganda**: N, Madi Opei, 05.1951, 1 ♀ (van Someren) (BMNH). **Kenya**: Muguga, 04.1969, 2 ♀, 8.05.1969, 1 ♀ (C. F. Dewhurst) (BMNH). **South Africa**: Limpopo (as “Transvaal”): Wylies Poort, Zoutpansberg, 29.01.1955, 2 ♀ (“B. R. S. P. G.”); KwaZulu-Natal: Ingwavuma District, 21.09.1961, 1 ♀ (T. Oatley) (NMSA).

**Diagnosis.** *C. loewi* can be differentiated from other species of the genus from the combination of entirely yellow body, elongate pedicel, long, apically bluntly rounded and parallel-sided flagellomere 1, short and blunt, subshining ocellar triangle with 2 ocellar setae, parafacial narrower than flagellomere 1; prosternum bare, proepisternum with 2–3 setae; scapular seta twice as long as setulae; presutural supra-alar seta lacking; scutellum with 4 setae, short setulose; wing slightly darkened along anterior margin and crossvein dm-cu or entirely hyaline; vein  $R_{2+3}$  with very short or without stump vein; femora ventrally short setose, with subbasal ventral (longest) seta as long as femur width; apicoventral setae short,

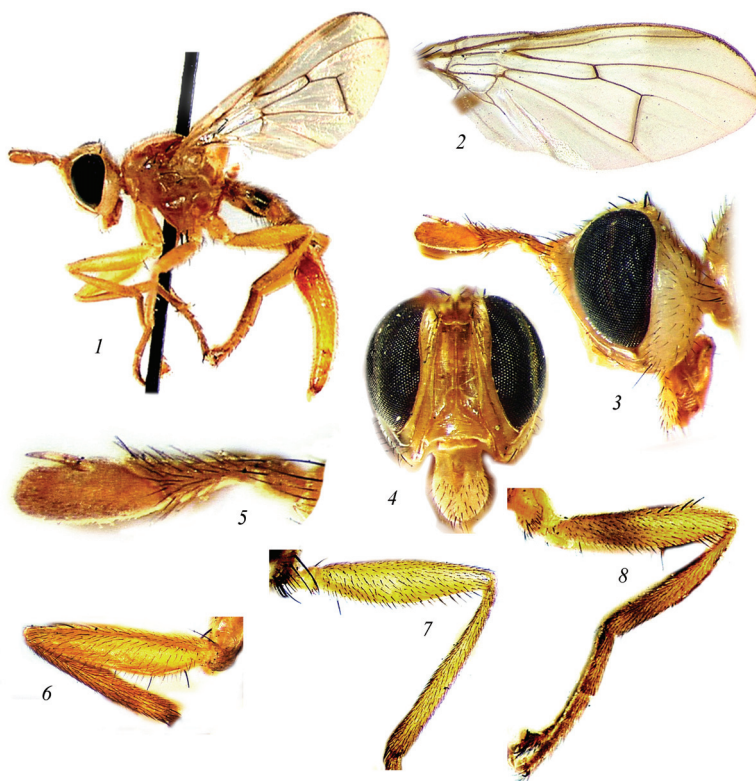


Fig. 15. *Campylocera loewi*: holotype ♀ (NHMW): 1 — habitus, lateral view; 2 — wing; 3 — head, left; 4 — same, anterior; 5 — antenna; 6 — fore femur and tarsus, posterior view; 7 — mid femur and tarsus, anterior; 8 — hind leg, anterior view.



spine-like; female mid coxa with 2 thickened setae laterally and row of 8–10 moderately short and thin black cilia medioventrally; hind coxa with slightly protruding antero-ventral surface covered with very thin and usually poorly visible setulae; oviscape long and narrow, 1.1–1.3 times as long as abdominal tergites combined, at its apical aperture with short convex, short medioventral and mediodorsal lobes and numerous setae not arranged into clear sensillar brushes or combs; aculeus (fig. 16, 4) short, as long as oviscape width apically (fig. 16, 1–3, arrow).

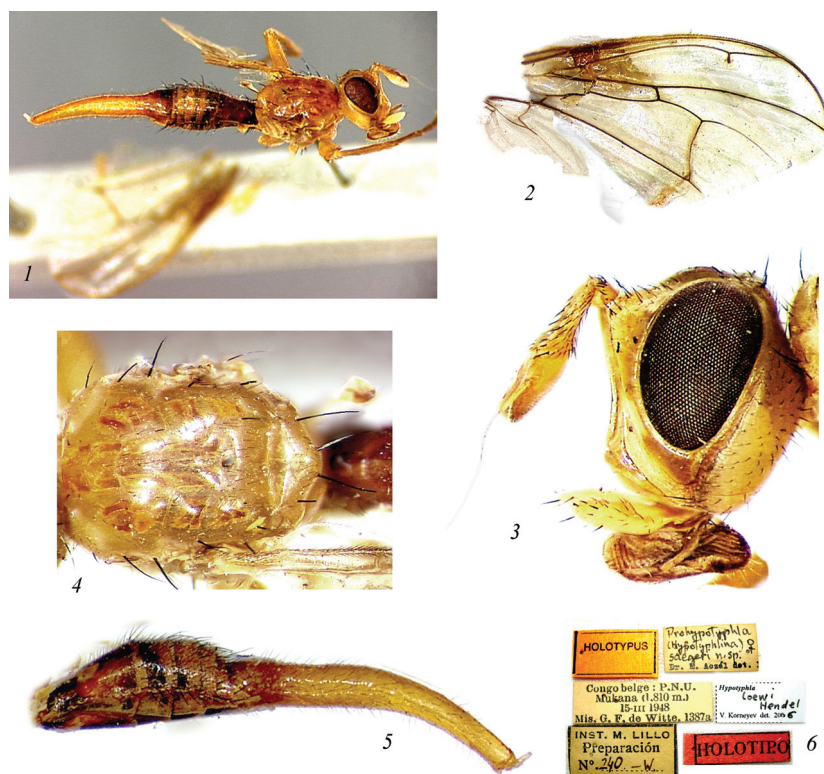


Fig. 16. *Campylocera loewi*: holotype ♀ *Hypotyphlina saegeri* (MRAC): 1 — habitus, dorsal view; 2 — wing; 3 — head, left; 4 — mesonotum; 5 — abdomen, left; 6 — labels.

It shares narrow parafacial, shape of antenna, long scapular seta, lacking presutural supra-alar seta, 4 scutellar setae and very long and narrow oviscape with *C. gracilis* and *C. caudata*, differing from them by less setulose mid coxa (in *C. gracilis* setae of the medioventral row strong, subequal to lateral setae, in *C. caudata* with thick brush of setulae) and hind coxa (in *C. gracilis* with sparse tuft of thickened setae, in *C. caudata* with thick brush of setulae wider than on mid coxa); in addition, *C. caudata* differs by strongly curved antero-ventrally and very long aculeus 1.4–1.7× as long as abdominal tergites combined.

**Remark.** Hendel (1908) described *Hypotyphla loewi* as the species that has a very short, stick-like arista (which was originally proposed by Loew as the key character for *Hypotyphla*); detailed microscopic study of the holotype *H. loewi* shows that its short arista (fig. 15, 5) is the result of clipping it in a live specimen, and the holotype otherwise shows no differences from other specimens from South Africa listed above in the material. Specimens from Central Africa show some variability (costal margin and crossvein dm-cu slightly brownish, vein  $R_{2+3}$  with very short stump vein in 20 % of specimens), but I consider them all, including the holotype of *Prohypotyphla* (*Hypotyphlina*) *saegeri* to be conspecific. I therefore synonymize the latter species with *H. loewi*.



The nominal genus *Hypotyphla* Loew, 1873 **syn. n.** is considered a part of *Campylocera* and is synonymized with the latter.

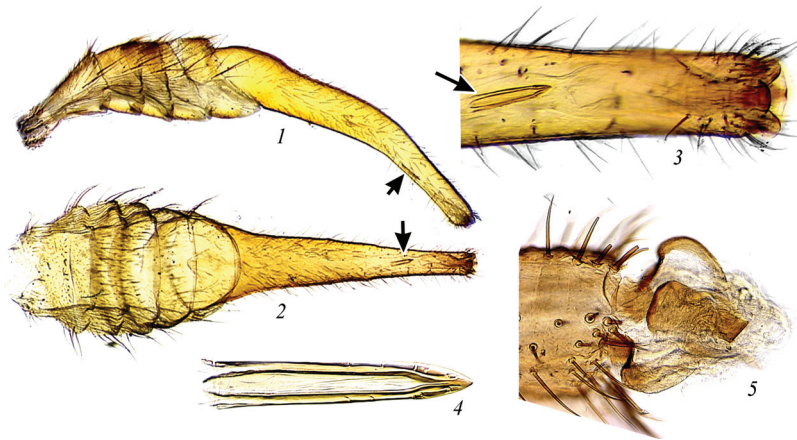


Fig. 17. *Campylocera loewi* non-type ♀, Kenya (BMNH): 1–2 — abdomen, left and ventral; 3 — apex of oviscapae, ventral, enlarged; 4 — aculeus; 5 — apical medioventral and lateral lobes of oviscapae. Arrows indicate the aculeus.

***Campylocera caudata* (Hendel, 1914), comb. n. (fig. 18–21)**

*Hypotyphla caudata* Hendel, 1914: 99; Steyskal, 1980: 559. — *Lygiohypotyphla hyalipennis* Vanschuytbroeck, 1963: 43; Steyskal, 1980: 559, **syn. n.** — *Lygiohypotyphla ruwenzoriensis* Vanschuytbroeck, 1963: 45; Steyskal, 1980: 559, **syn. n.**

**Material. Type.** Holotype ♀ *Hypotyphla caudata*: [Ghana]: “Obuasi / Ashanti / W. Africa / 14. VIII. 1907 / Dr. W. M. Graham / 1908–245”, “Caught on leave of hedge 6 p. m.”, “*Hypotyphla / caudata* H. / det. Hendel”, “Type ♀” [red-boarded circle], “Holo- / type” [red-boarded circle], “Holotype *Hypotyphla caudata* Hendel verified by J. E. Chainey, 2002”, “BMNH (E) # 252204” (BMNH).

Holotype ♂ *Lygiohypotyphla hyalipennis*: **DR Congo**: [Virunga National Park] “S[outh of] L[ake] Edouard: R[iver] Rwindi / (1000 m) 4-II-1936 / L. Lippens / Parc National Albert”, “Vanschuytbroeck det., 195... / *Lygiohypotyphla / hyalipennis* n. sp.”, “HOLOTYPUS” [orange label with frame], “Type” [pink label with frame], “*Campylocera caudata* Hendel V. Korneyev det. 2006” (MRAC). Paratypes *Lygiohypotyphla hyalipennis*: **DR Congo**: 1 ♀, “Musée du Congo / Semliki: Mutwanga / Beni, 1932 / Dr Van Hoof”, “*Lygiohypotyphla* ♀ / *hyalipennis* n. sp. / Dr. M. Aczél det. 19...”, “INST. M. LILLO / Préparation № 246 — W”, “Vanschuytbroeck det., 195... / *Lygiohypotyphla / hyalipennis* n. sp.”, “PARATYPUS” [orange label with frame] (MRAC); 1 ♀, “Congo belge, P. [arc] N. [ational de la] G. [aramba] / Miss. H. De Saeger / II/fd/17, 27-VIII-[19]52 / H. De Saeger. 3983”, “Para- / type” [orange label], “*Campylocera caudata* Hendel V. Korneyev det. 2006” (KBIN).

Holotype ♂ *Lygiohypotyphla ruwenzoriensis*: **DR Congo**: [Virunga National Park] “Congo Belge: P. [arc] N. [ational] A. [lbert] / 16-XI-1957 / P. Vanschuytbroeck / VS-230a”, “Massif Ruwenzori / Vallée Mont Mulungu / 2.400 m”, “Vanschuytbroeck det., 195... / *Lygiohypotyphla / ruwenzoriensis* n. sp.”, “prep. No 67”, “HOLOTYPUS” [orange label with frame], “Type” [pink label with frame], “*Campylocera caudata* Hendel V. Korneyev det. 2006” (MRAC). Paratype ♀: **DR Congo**: [Virunga National Park], “Congo Belge: P. [arc] N. [ational] A. [lbert] / 29-VIII-1956 / P. Vanschuytbroeck / VS 488”, “Massif Ruwenzori / riv. Lume (moyenne) / affl. Semliki / 1.830 m”, “Vanschuytbroeck det., 195... / *Lygiohypotyphla / ruwenzoriensis* n. sp. ♀”, “Para- / type” [orange label], “*Campylocera caudata* Hendel V. Korneyev det. 2006” (KBIN).

Non-type. [Ghana]: “///Obuasi / 7.1907 / c[aptured] on bath near lamp 8 p. m. Dr. W. M. Graham”, “Pres. Com. Inst. B. M. 1957 — 303”, 1 ♀ (BMNH). **Cameroon**: Balgom, rég. Ramoun (MHNP). **Uganda**: Ankole, Kichwamba, 1–5.05.1968, 2 ♀ (P. J. Spangler) (USNM); Kikondo Forest, 0.34755° S, 31.87017° E, h = 1153 m, forest near Lake Victoria, Malaise trap, 25.04–9.05.2007, 1 ♂, 1 ♀, 23.05–6.06.2007, 1 ♂ (R. Copeland) (NMKE).

**Diagnosis.** *C. caudata* is a peculiar, moderately large (wing length 7.5–12 mm) species with long abdomen in both sexes; it can be differentiated from other species of the genus from the combination of entirely reddish yellow body, elongate pedicel, long, apically bluntly rounded and parallel-sided flagellomere 1, short and blunt, subshining ocellar triangle with 2 ocellar setae, parafacial narrower than flagellomere 1; prosternum with 4–5 short setulae, propiosternum

with 5–6 setae; scapular seta twice as long as setulae; presutural supra-alar seta present or lacking; scutellum with 4 setae, short setulose; wing slightly darkened along anterior margin and crossvein dm-cu or entirely hyaline with grey microtrichia; vein  $R_{2+3}$  without or rarely with very short stump vein, vein  $R_{4+5}$  dorsally often with 3–7 setulae at base (fig. 18, 3); femora ventrally moderately short setose, with subbasal ventral (longest) seta longer than femur width (fig. 18, 8–10); apicoventral setae moderately thickened; female mid coxa with 2 thickened setae laterally and comb of 10–15 thick black setae medioventrally (brown ciliae in male); hind coxa with dense, thickened and short black setae forming flat brush (fig. 18, 7) (in male with numerous thin brown setulae — fig. 21, 6); female abdomen long, with wide sternites (fig. 19, 6); oviscapae long and narrow, curved anteroventrally (fig. 18, 19, 5), more than 1.4× as long as abdominal tergites combined and without sclerotized lobes or long sensillar brushes or combs at its apical aperture; aculeus (fig. 19, 7) elongate, slightly longer than oviscapae width at aperture (fig. 19, 5). Male abdomen long, with narrow sternites (fig. 19, 1); genitalia (fig. 19, 2–4): epandrium globose, bare, cerci moderately short, long setose (fig. 19, 2), inner and outer surstyli long, bar-like, attached anteroventrally and directed posteriorly, outer surstyli short spinulose as in most *Adapsiliina*, and inner surstyli with numerous apico-ventral setulae, but without prenisetae (fig. 19, 3); vanes of phallopodeme delta-like, basally widened (fig. 19, 2); phallus glans as on fig. 19, 4.

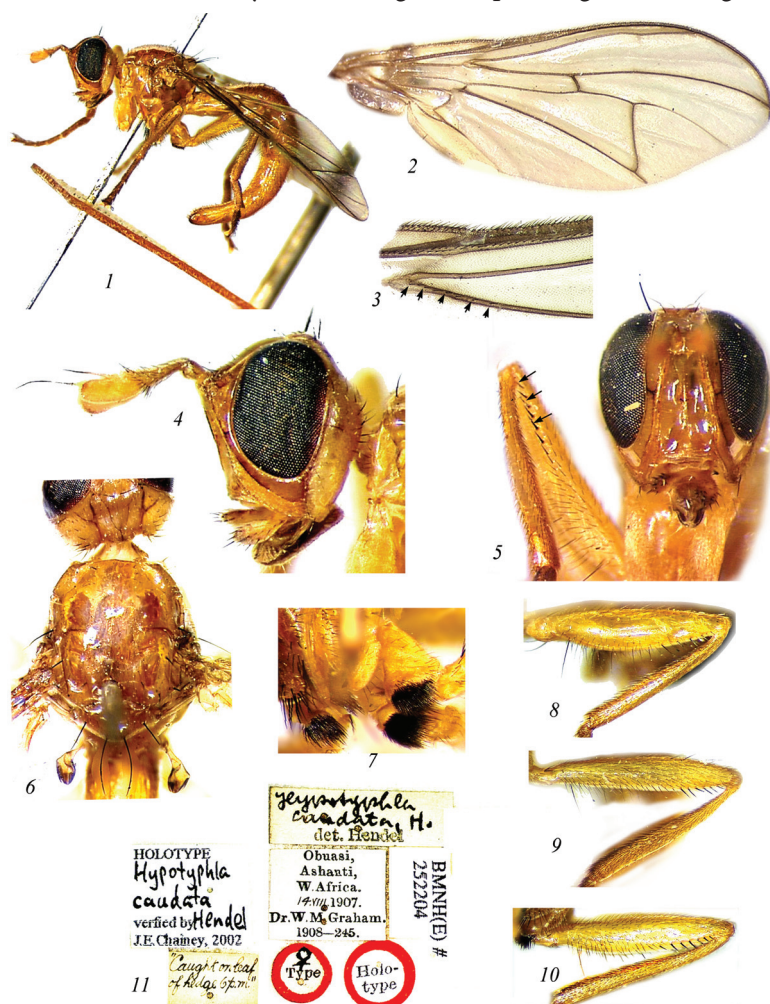


Fig. 18. *Campylocera caudata*: holotype ♀ (BMNH): 1 — habitus, lateral view; 2 — wing; 3 — veins  $R_1$ ,  $R_{2+3}$  and  $R_{4+5}$  (arrows indicate setulae); 4 — head, left; 5 — head, anterior view and fore femur (arrows indicate setulae on anterior surface); 6 — mesonotum, dorsal view; 7 — mid and hind coxae; 8 — abdomen, dorsal view; 9 — fore femur and tibia, posterior; 10 — mid leg, anterior; 11 — hind leg, anterior view; 12 — labels.

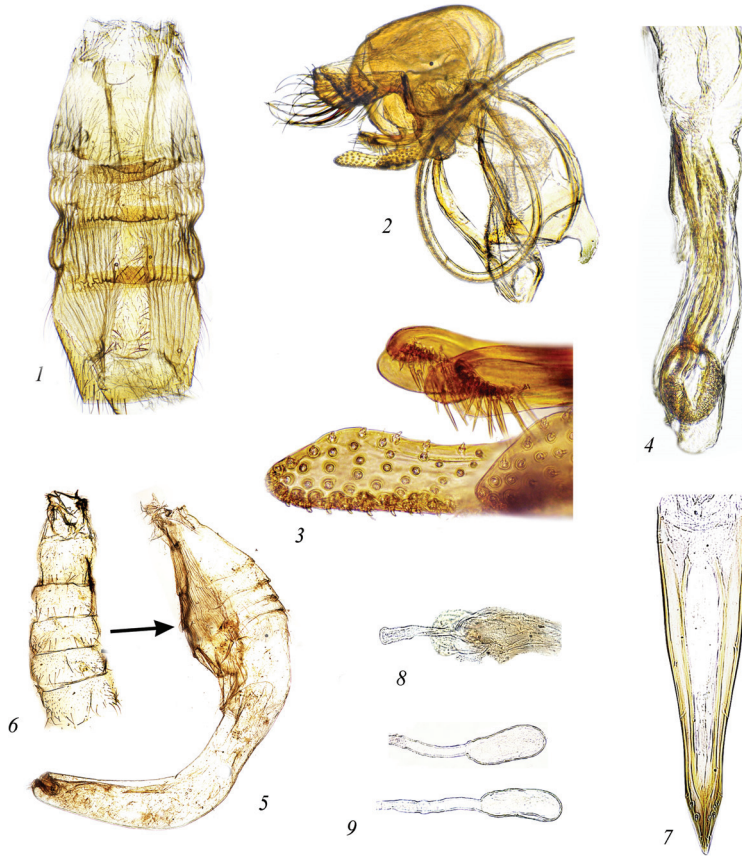


Fig. 19. *Campylocera caudata*: non-type ♂ (1-4) and ♀ (5-9) (BMNH): 1 — abdomen, ventral view; 2 — male postabdomen, right; 3 — surstyli, enlarged; 4 — phallus glans, ventral; 5 — abdomen, left; 6 — abdominal sternites 1-6; 7 — aculeus; 8 — vagina and ventral receptacle; 9 — spermathecae (2 of 3).

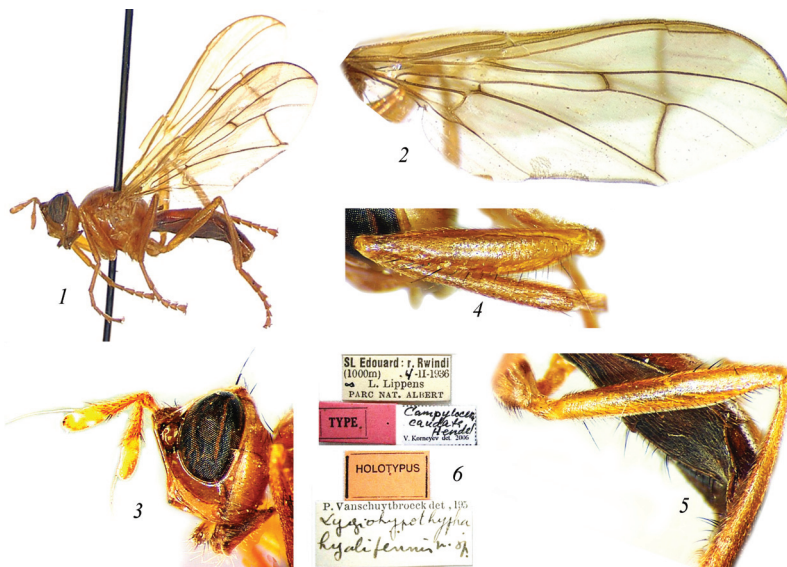


Fig. 20. *Campylocera caudata*: holotype ♂ *Lygohypotyphla hyalipennis* (MRAC): 1 — habitus, lateral view; 2 — wing; 3 — head, left; 4 — fore femur and tibia, posterior; 5 — hind leg, anterior view; 6 — labels.



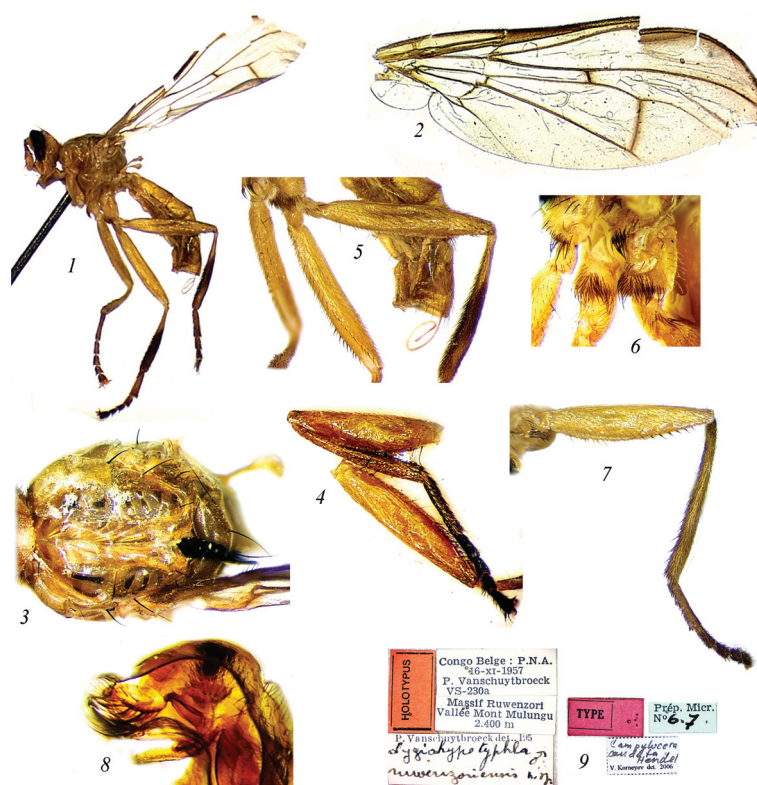


Fig. 21. *Campylocera caudata*: holotype ♂ *Lygiohypotyphla ruwenzoriensis* (MRAC): 1 — habitus, lateral view; 2 — wing; 3 — mesonotum, dorsal view; 4 — fore femora and tibiae, posterior (glued on carton); 5 — mid and hind femora and tibiae; 6 — mid and hind coxae; 7 — mid leg, anterior; 8 — epandrium (slide); 9 — labels.

It shares narrow parafacial, shape of antenna, long scapular seta, lacking presutural supra-alar seta, 4 scutellar setae and very long and narrow oviscape with *C. gracilis* and *C. loewi*, differing from them by larger size, and much more setulose mid and hind coxa (in females *C. gracilis* and *C. loewi* at most with sparse setulae).

**Remark.** Vanschuytbroeck (1963) described *Lygiohypotyphla hyalipennis* (fig. 20) and *L. ruwenzoriensis* (fig. 21) based on series of males and females from Ruwenzori (North-Eastern Congo) without a comparison with *C. caudata* or to each other. They show no essential differences except some variation in size and coloration (some specimens are either teneral or pinned after keeping in alcohol). Vestiture of femora shows certain variability even among specimens from Eastern Africa (thin, long and dense setulae in larger females and moderately long and less conspicuous in smaller specimens). Otherwise, all the Eastern African specimens do not show any essential differences from the specimens from Ghana and Cameroon and I consider them conspecific, and establish synonymy as given above.

The nominal genus *Hypotyphlina* Enderlein, 1942 **syn. n.** is considered a part of *Campylocera* and is synonymized with the latter, as well as closely related *Hypotyphla*.

### *Campylocera nigripennis* (Hendel, 1934) **comb. n.** (fig. 22)

*Prohypotyphla nigripennis* Hendel, 1934: 150; Vanschuytbroeck, 1963: 47; Steyskal, 1980: 559.

**Material. Type.** Holotype ♂: **Sierra Leone**: "Sierra Leone / Njala / 7-X-30 / E. Hargreaves", "Prohypotyph- / la / nigripennis / H. / ♂ F. Hendel det.", "Hendel / coll." (NHMW).

**Diagnosis.** *C. nigripennis* is similar to *C. caudata* and *C. gracilis* from the group of species represented by reddish-yellow, large flies with elongated pedicel and flagellomere 1 (latter parallel-sided, twice as long as wide and apically blunt), lacking outer vertical setae, moderately



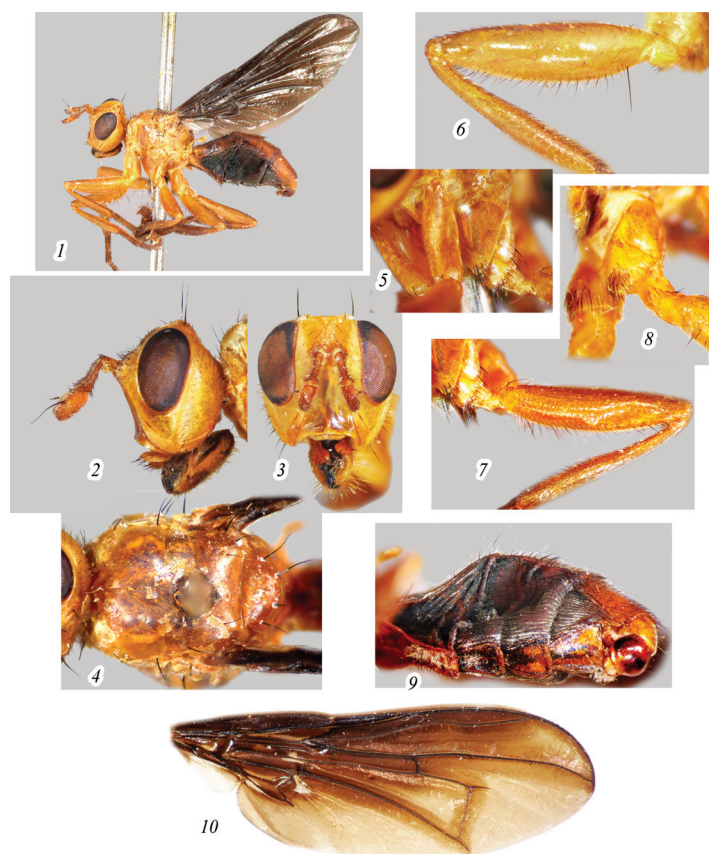


Fig. 22. *Campylocera nigripennis*: holotype ♀ (NHMW): 1 — habitus, lateral view; 2 — head, left; 3 — head, anterior view; 4 — mesonotum, dorsal view; 5 — fore and mid coxae; 6 — fore femur and tibia, posterior; 7 — mid coxa, femur and tibia, anterior; 8 — hind coxae; 9 — abdomen, ventrolateral view; 10 — wing.

long body, setose mid and hind coxae, short preapical ventral setae on mid and hind femur, short setulose scutellum with 4 scutellar setae, easily differing from all known *Campylocera* by almost entirely dark brown wing (fig. 22, 10), winding vein  $R_{2+3}$ , facial carina wide and low, ocellar, post-ocellar, anterior notopleural and katapisternal setae lacking. Wing length 9.2 mm.

**Remark.** Known from a unique male only, this species is believed to belong in the group of species, which includes *C. loewi*, *C. caudata* and related species, differing by the numerous autapomorphic characters (low facial carina, ocellar and anterior notopleural setae lacking, wing dark brown). Otherwise it fits the diagnosis of *Campylocera* in its essential characters, and I synonymize *Lygiohypotyphla* Enderlein, 1942 **syn. n.** with it.

### *Campylocera laticeps* (Hendel, 1908), **comb. n.** (fig. 23)

*Diasteneura laticeps* Hendel, 1908: 150; Hendel, 1909: 24, fig. 20, 21; Enderlein, 1942: 100; Steyskal, 1980: 558.

**Material. Type.** Holotype ♂ *Diasteneura laticeps*: **South Africa**: “Bothaville, Oranje Dr. Brauns /// 22. II. 90”, “*Diasteneura / laticeps* Hend. / Type”, “Type” [dark red, shiny label] (NHMW).

**Diagnosis.** *C. laticeps* belongs in a group of species characterized by the partly black head, thorax, and usually also abdomen or legs, dark patterned wing (fig. 23, 1; 24, 2) and more or less conspicuously developed ocellar triangle with 2–4 ocellar setae and antenna with long pedicel and flagellomere 1.

Within this group, about six described and undescribed species differing by the very high gena (0.5–0.7× as high as eye), large shining brown ocellar triangle 0.3–0.5 as long as frons width (fig. 23, 6), non-spinulose mid and hind coxae (in both sexes), very large, non-separated cerci and extremely narrow medial surstylus (in male — as on fig. 24, 3) and short

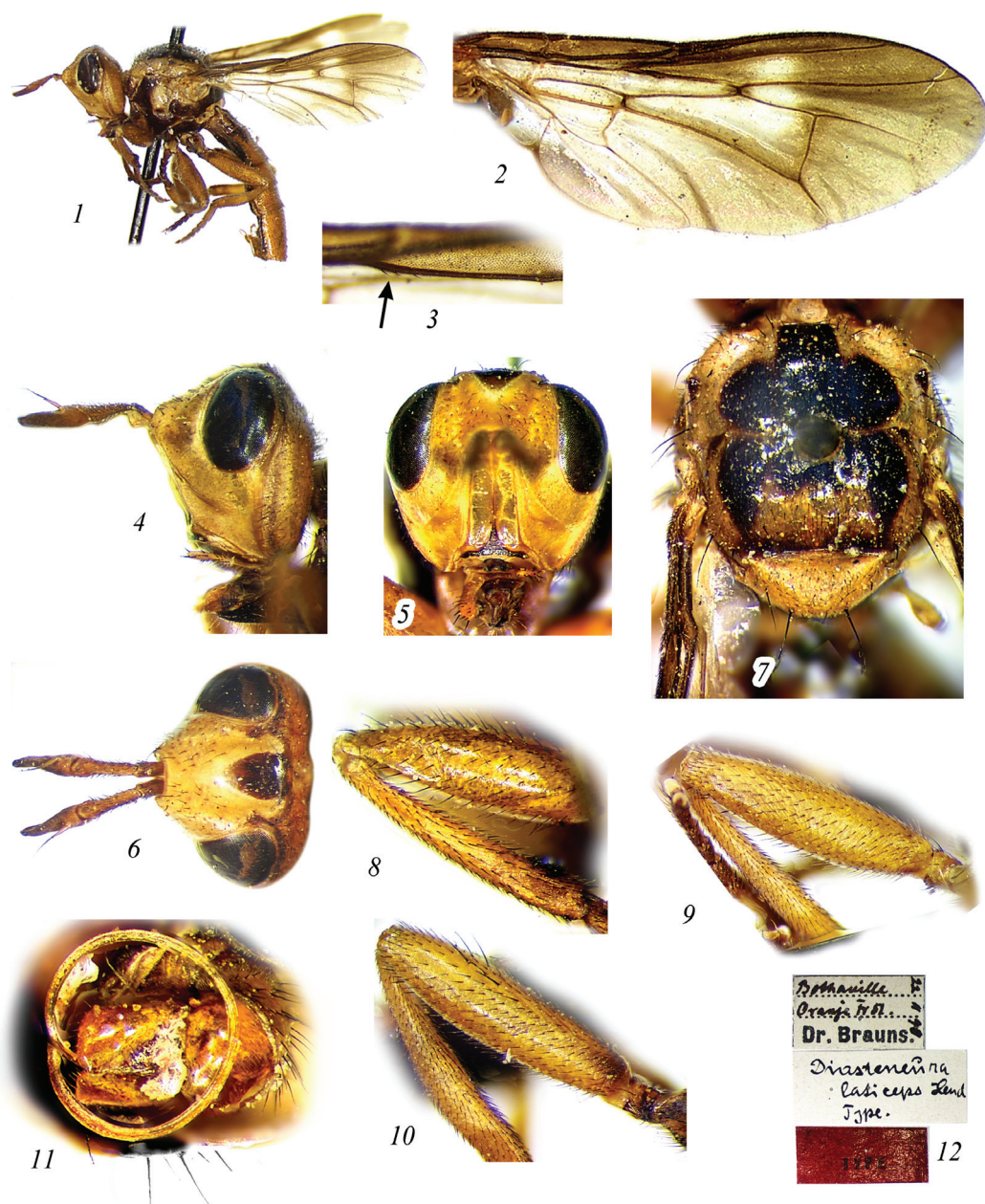


Fig. 23. *Campylocera laticeps*: holotype ♀ (NHMW): 1 — habitus, lateral view; 2 — wing; 3 — vein  $R_{4+5}$  (arrow indicates setula); 4 — head, left; 5 — same, anterior; 6 — same, dorsal; 7 — mesonotum, dorsal view; 8 — fore femur and tibia, posterior; 9 — mid leg, anterior; 10 — hind leg, anterior view; 11 — male genitalia, ventral view; 12 — labels.

(as long as abdominal tergites combined), wide conical oviscape (as on fig. 24, 1) bearing around apical aperture one moderately long dorsomedial lobe, paired sensillar brushes (rows of 3–4 closely located thick setulae) and short latero-ventral lobes form a subgroup that corresponds to the genus *Diasteneura*; the species differ mostly by the coloration of body and wings, and vestiture of scutellum and legs. *C. laticeps* differs from them all by the occiput entirely yellow (partly or entirely black in other species).

**Remark.** Species assigned to *Diasteneura* form a well-defined, certainly monophyletic group supported at least by such synapomorphies as high gena and large ocellar triangle,

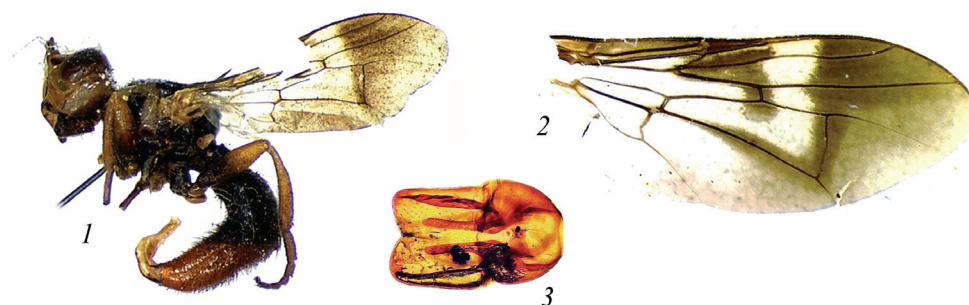


Fig. 24. *Campylocera similis*: paratypes ♀ (1–2) and ♂ (3) (MRAC): 1 — habitus, lateral view; 2 — wing; 3 — male genitalia, ventral view (slide).

and possibly some sexually dimorphic characters, which are known only for some species of this subgroup (only one species is known from both species by far). None of the characters contradict their placement into *Campylocera*, and I therefore synonymize the latter name and *Diasteneura* Hendel, 1908 **syn. n.** The species formerly assigned to *Diasteneura* are transferred: *Campylocera basilewskyi* (Vanschuytbroeck, 1963), **comb. n.**, *Campylocera laticeps* (Hendel, 1908), **comb. n.**, *Campylocera obscura* (Vanschuytbroeck, 1963), **comb. n.**, *Campylocera similis* (Steyskal, 1963), **comb. n.**, *Campylocera variceps* (Curran, 1928), **comb. n.** In addition, new species recognized in collections must be described and new synonyms of nominal species established elsewhere (Korneyev, in prep.).

## Conclusion

A wide concept of the genus *Campylocera* is accepted to include the species formerly assigned to the genera *Clemaxia*, *Congopyrgota*, *Diasteneura*, *Dicrostira*, *Hexamerinx*, *Hypotyphla*, *Hypotyphlina*, *Lygiohypotyphla*, and *Prohypotyphla*. A synonymy of the type species of these nominal genera and new combinations for their type species is provided.

This paper aims only justification of the *Campylocera* concept accepted in the Manual of Afrotropical Diptera (Korneyev, in press). The other species previously assigned to those nominal genera (see: Steyskal, 1980) as well as certain Oriental and Australasian genera and species will be formally transferred and synonymized in the forthcoming revision of the genus *Campylocera* (Korneyev, in prep.).

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