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## REVIEW OF CLINOCERINAE (DIPTERA: EMPIDIDAE) FROM THE CAUCASUS, WITH DESCRIPTION OF THREE NEW SPECIES

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### ABSTRACT

Eighteen species of Clinocerinae are recorded from the Caucasus, including three new species described herein [*Kowarzia caucasica* sp. nov. (Russia: Republic of Adygea), *Trichoclinocera grichanovi* sp. nov. (Russia: Kabardino-Balkaria), *Wiedemannia kustovi* sp. nov. (Russia: Republic of Adygea)]. The genus *Trichoclinocera* Collin is recorded from this region for the first time. A key to Clinocerinae of the Caucasus is presented.

**Key words:** Caucasus, Clinocerinae, Diptera, Empididae, new species, Palaearctic, Russia

## ОБЗОР CLINOCERINAE (DIPTERA: EMPIDIDAE) С КАВКАЗА, С ОПИСАНИЕМ ТРЕХ НОВЫХ ВИДОВ

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### РЕЗЮМЕ

С Кавказа указываются восемнадцать видов Clinocerinae, включая три новых вида, описанных в этой статье [*Kowarzia caucasica* sp. nov. (Россия: Республика Адыгея), *Trichoclinocera grichanovi* sp. nov. (Россия: Кабардино-Балкария), *Wiedemannia kustovi* sp. nov. (Россия: Республика Адыгея)]. Род *Trichoclinocera* Collin впервые найден на территории этого региона. Составлен определитель Clinocerinae Кавказа.

**Ключевые слова:** Кавказ, Clinocerinae, Diptera, Empididae, новые виды, Палеарктика, Россия

## INTRODUCTION

The Caucasus occupies a large area between the Black and Caspian seas showing great diversity of natural landscapes. For the most part the territory is covered with mountains and highlands. The Caucasus Mountains are the most famous; they include the Greater Caucasus Range (with Europe's highest

mountain, Mount Elbrus 5642 m) and the Lesser Caucasus, which runs parallel to the greater range.

The Clinocerinae of the Caucasus was first reviewed by Joost (1981a) who listed 15 species, describing six new species. Prior to this study, 16 species of the subfamily were known from this region (Shamshev and Kustov 2006).

Members of the subfamily Clinocerinae are bluish-grey, long-legged flies, ranging in size from 1 to 5 mm and are generally found associated with rocky streams,

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creeks, rivers, and seepage habitats showing the greatest diversity in mountainous regions (Sinclair 1995). The group is worldwide in distribution and currently includes more than 350 described species.

In this study one new species from each of *Kowarzia* Mik, *Trichoclinocera* Collin and *Wiedemannia* Zetterstedt are described and additional records of *Clinocera nigra* Meigen, 1804 are listed. Eighteen species of Clinocerinae are currently known from the Caucasus.

## MATERIAL AND METHODS

This study is based on material borrowed from or deposited in the following institutions: Canadian National Collection of Insects, Ottawa, Canada (CNC); Kuban State University, Krasnodar, Russia (KSU); Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZIN). Terms used for adult structures primarily follow those of Cumming and Wood (2009), except for the antenna where the terms of Stuckenberg (1999) are used. Label data for primary types are cited from the top downward, with the data from each label in quotation marks. Labels are cited in full, with original spelling, punctuation, and date, and label lines are delimited by a slash (/). Additional information is included in square [ ] brackets. The repository of each type is given in parentheses. Secondary type data are abridged and listed alphabetically.

## TAXONOMY

### Family Empididae Latreille, 1804

#### Subfamily Clinocerinae Collin, 1928

#### Genus *Clinocera* Meigen, 1803

*Clinocera* Meigen, 1803: 271. Type-species, *C. nigra* Meigen, 1804 (subsequent monotypy by Meigen, 1804: 292).

*Atalanta* Meigen, 1800: 31. Suppressed by I.C.Z.N., 1963: 339.

**Remarks.** There are at least three species of *Clinocera* [*C. appendiculata* (Zetterstedt, 1838), *C. nigra* Meigen, 1804 and *C. stagnalis* (Haliday, 1833)] known from the Caucasus. Joost (1981a) also described *C. schumanni* Joost, 1981 from Kabardino-Balkaria (Azau), but it is possibly a synonym of

*Kowarzia plectrum* (Mik, 1881). The type series of the former species needs to be re-examined (specimens currently unavailable). New records of *C. nigra* are listed below.

#### *Clinocera nigra* Meigen, 1804

*Clinocera nigra* Meigen, 1804: 292.

**Material examined.** RUSSIA: 2 males, 1 female, Republic of Adygeya, Caucasus State Nature Biosphere Reserve, source of Kurdzhips, 1570 m, near Plateau Lago-Naki, shore of stream, alpine crooked forest, 44°04'44''N 40°00'08''E, MT, 16–29 June 2011, leg. S.Yu. Kustov (KSU).

**Distribution.** PALAEARCTIC: Broadly distributed in Europe, also known from North Africa, Lebanon and Middle Asia; Caucasus: Georgia, Russia (Krasnodarskiy Territory, Republic of Adygea).

#### *Dolichocephala* Macquart, 1823

*Dolichocephala* Macquart, 1823: 147. Type-species, *D. maculata* Macquart, 1823 (by monotypy) (= *Tachydromia irrorata* Fallén, 1816).

**Remarks.** Two species of *Dolichocephala* were recorded from the Caucasus by Joost (1981a, 1981b): *D. irrorata* (Fallén, 1816) from Georgia and *D. monae* Joost, 1981 from Armenia. No additional records are available at this time.

#### *Kowarzia* Mik, 1881

*Kowarzia* Mik, 1881: 325. Type-species: *Clinocera barbatula* Mik, 1880 (des. Coquillett, 1903: 251).

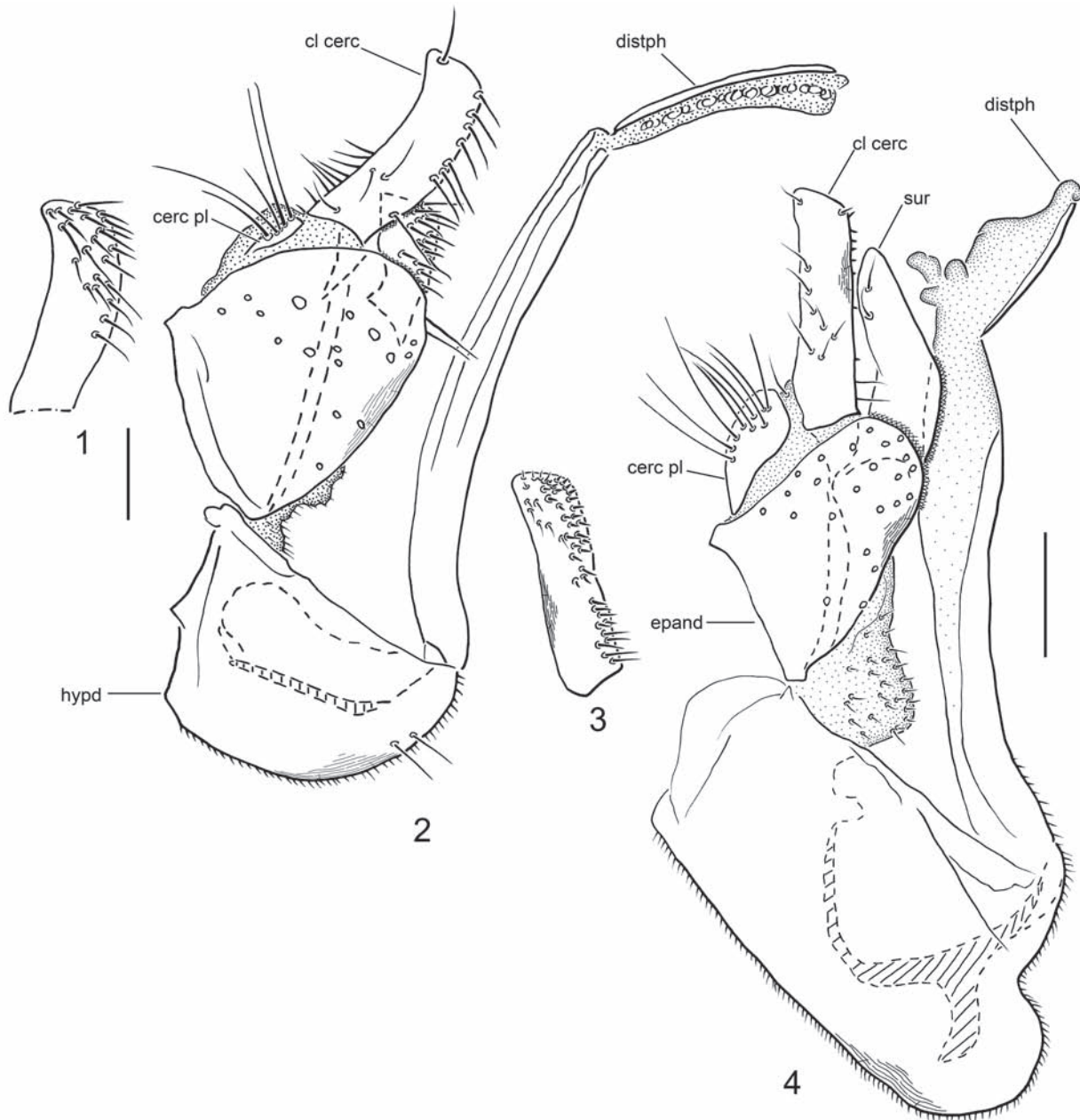
**Remarks.** One species of *Kowarzia* was previously recorded (*K. plectrum*) from the Caucasus (Georgia) (Joost 1981a) and an additional new species is described below.

#### *Kowarzia caucasica* sp. nov.

(Figs 1, 2)

**Etymology.** This species is named after the region where this species occurs.

**Type material.** Holotype – male, “RUSSIA: Republic of Adygeya/ Caucasus State Nature/ Biosphere Res., source of/ Kurdzhips, 1570 m, nr Plateau”; “Lago-Naki, shore of stream/ N44°04'44''



**Figs 1–4.** Male terminalia, lateral view. 1 – *Kowarzia caucasica* sp. nov., clasper, inner view; 2 – *K. caucasica* sp. nov., terminalia; 3 – *Trichoclinocera grichanovi* sp. nov., clasper, inner view; 4 – *T. grichanovi* sp. nov., terminalia. Scale bar is 0.1 mm. Abbreviations: cerc pl – cercal plate; cl cerc – clasper, distph – distiphallus, epand – epandrium, hypd – hypandrium, sur – surstylus.

E40°00'08''; alpine/ crooked for., 15–28.vii.2011/ leg. Kustov S.Yu.; MT" (ZIN). Paratypes: 1 male, same data as holotype (CNC); 1 male, same data as holotype, 18 September –4 October 2011 (KSU); 1 male, 1 female, same data as holotype, 30 June –14

July 2011 (ZIN); 1 male, same data as holotype, 31 August – 17 September 2011 (ZIN); 1 female, same data as holotype, 29 July –30 August 2011 (CNC); 3 females, same data as holotype, 16–29 June 2011 (ZIN).

**Recognition.** This species is distinguished from other species of *Kowarzia* by the yellowish-brown coxae and femora, apex of clasping cercus arched and tapered to beak-like tip, and surstylus straight, with apex tapered to beak-like tip, clothed in stout setae.

**Description.** *Male.* Head dark brown, face with pale blue pruinescence. Face with 3–4 setulae along inner margin of each eye. Arista-like stylus long and slender, subequal to height of eye.

Thorax dark brown, lacking distinct dorsal vittae; pleurae with margins of sclerites paler, lacking blue pruinescence. Chaetotaxy long and slender: several short acrostichal setulae anterior to first dorsocentral setae; 5 dorsocentral setae; 1 postpronotal seta; 1 presutural supra-alar seta; 2 notopleural setae, lower seta more slender; 1 postalar seta; 1 pair of apical scutellar setae.

Legs with coxae and femora yellowish-brown; tibiae and tarsi dark brown; coxae lacking blue pruinescence. Fore femur with preapical anterior comb. Fore tibia with anterodorsal semi-erect setae. Hind tibiae with erect dorsal and ventral stout setae on apical half; setae usually shorter than width of tibia. Hind tarsomere 1 with pair of erect basal setae and stout setae along ventral margin.

Wing narrow, darkly infusate; pterostigma narrow, elongate, faint; basal costal seta long, extending almost to humeral crossvein.

Abdominal sclerites dark brown. Terminalia (Figs 1, 2): Hypandrium cone-shaped, with short apical setae. Phallus slightly curved at base, remaining shaft nearly straight; distiphallus slender and flattened in lateral view, broad in dorsal view, slightly arched; ejaculatory apodeme slender, arched. Epandrium oval, subequal in length to hypandrium. Cercal plate with 4–5 setae confined to dorsolateral region. Clasping cercus straight, digitiform; apex hooked to rounded beak-like tip; inner face with long stout setae (Fig. 1), subequal in length to half width of cercus. Surstylus broad, straight, similar in shape to clasping cercus, apex narrowed to beak-like tip; apex clothed in stout setae.

*Female.* Similar to male.

*Length* (mm). Wing 3.8–4.5.

**Comparison.** This new species is similar to *K. tibiella* (Mik), with straight, slender clasping cercus (slightly curved apex) and narrow surstylus with long setae.

**Distribution.** PALAEARCTIC: Russia (Republic of Adygea).

### *Trichoclinocera* Collin, 1941

*Trichoclinocera* Collin, 1941: 237. Type-species: *Trichoclinocera stackelbergi* Collin, 1941 (by original designation).

**Remarks.** This genus is newly recorded from the Caucasus with the description of the following new species. The genus is widespread and speciose in eastern Asia and North America, with a single northern European species (Sinclair 1994; Sinclair and Saigusa 2005).

### *Trichoclinocera grichanovi* sp. nov.

(Figs 3, 4)

**Etymology.** This species is named after the Russian Dolichopodidae specialist and collector of the type specimen, Dr. Igor Grichanov (St. Petersburg).

**Type material.** Holotype – male, “RUSSIA: Kabardino-Balkaria / Ozen’, 43°13’N, 43°19’E/ 14.VI. 2001, I. Grichanov” (ZIN).

**Recognition.** This species of *Trichoclinocera* is distinguished by the narrow median scutal stripe of blue pruinescence (when viewed dorsally), blue pruinescent prescutellar depression and scutellum and form of the phallus.

**Description.** *Male.* Clothed in blue pruinescence except ocellar triangle and frons, scutum, and dorsum of abdomen brown. Head rounded; compound eyes large, rounded. Face rounded, slightly convex; entirely brightly blue pruinescent, lacking median brown stripe; lower margin of face with shallow cleft and low carina; gena one-fifth as wide as height of eye. Ocellar setae longest among cranial bristles; occiput with 2 pairs of stout setae posterior to ocellar triangle; postocular with row of short setae along margin of eye, upper half darker and stouter than lower bristles; lacking setae dorsal to occipital foramen. Arista short and stout, twice length of basal antennal segments. Palpus short, cylindrical, one-third height of eye.

Thorax with pleura, postpronotum, notopleuron and scutellum with blue pruinescence; scutum with median stripe, expanded into prescutellar depression; lateral margins of stripe faintly bivittate. Thoracic setae long, some longer than width of eye; acrostichal setulae lacking; 5 pairs of dorsocentral setae; 1 postpronotal; 1 presutural supra-alar; 2 notopleurals; 2 postsutural supra-alars; 1 postalar; 1 pair of scutel-

lar setae, lacking setulae on disc; several setulae on postpronotum. Laterotergite with patch of pale setae; prothoracic episternum with several long pale setae.

Legs generally dark, with coxae blue pruinose, concolorous with pleura; femora with pale pruinescence fading distally. Coxae with long pale marginal setae. Fore femur with 2 stout anterior setae in oblique row on apical third; anteroventral margin with continuous row of spine-like setae, increasing in length basally, lacking posteroventral row; antero- and posteroventral basal setae long and pale, some longer than width of femur. Fore tibia with biserial row of short stout setae beneath. Foreleg tarsomeres lacking pale ventral pubescence. Mid and hind femora lacking preapical, anterodorsal and posterodorsal setae. Hind tibia lacking pair of posterodorsal and anterodorsal basal setae; row of short setae or preapical setae lacking. Tarsi combined longer than corresponding fore and mid tibiae, shorter than hind tibia. Empodium pulvilliform, slightly shorter than claw, shorter than half length of tarsomere 5.

Wing narrow, faintly infuscate; pterostigma absent. Basal costal seta slightly shorter than length of posterior dorsocentral seta. Apical half of  $R_1$  lacking setulae; cell dm produced apically;  $R_4$  and  $R_5$  divergent beyond mid-length;  $R_4$  with short basal appendix. Halter brown with slightly pale base.

Abdomen with black dorsal setae and pale ventral setae. Terminalia (Figs 3, 4): Hypandrium broad, long, 1.5 times longer and broader than epandrium. Phallus attached subapically on hypandrium, stout, with basal curve; apex expanded into membranous lobe extending nearly perpendicular to phallic shaft; ejaculatory apodeme large, bent at anterior third. Surstylus lacking teeth-like processes; strongly bent at mid-length; apex rounded with pair of subapical setulae. Clasper straight, digitiform, parallel-sided, not tapered; bearing peg-like setae on inner dorsal margin (Fig. 3).

*Female.* Unknown.

*Length* (mm). Wing 4.1.

**Comparison.** Apart from a single northern European species [*T. lapponica* (Ringdahl, 1933)], *T. grichanovi* sp. nov. is the most eastern Palaearctic record of *Trichoclinocera* (Sinclair 1994). The closest allies are known from Tajikistan (Vaillant 1960). On the basis of the apex of the phallus, *T. grichanovi* sp. nov. appears phylogenetically close to *T. tadjikistana* Vaillant, 1960 (but face not noticeably convex and lacks certain other characteristic features).

**Distribution.** PALAEARCTIC: Russia (Kabardino-Balkaria).

### *Wiedemannia Zetterstedt, 1838*

*Wiedemannia* Zetterstedt, 1833: 207. Nomen nudum.

*Wiedemannia* Zetterstedt, 1837: 32. Nomen nudum.

*Wiedemannia* Zetterstedt, 1838: 559. Type-species, *Wiedemannia borealis* Zetterstedt (des. Coquillett, 1903: 258) [= *Heleodromia bistigma* Curtis].

**Remarks.** Joost (1981a) listed eight species of *Wiedemannia* from the Caucasus [*W. beckeri* (Mik, 1889), *W. braueri* (Mik, 1880), *W. caucasica* Joost, 1981, *W. chvalai* Joost, 1981, *W. klausnitzeri* Joost, 1981, *W. pseudovaillantii* Joost, 1981, *W. vaillantii* Joost, 1981 and *W. zetterstedti* (Fallén, 1826) (= *W. escheri* (Zetterstedt, 1838)]. In addition, Engel (1940) listed *W. fallaciosa* (Loew, 1873) from this region and another new species is described below.

### *Wiedemannia kustovi* sp. nov.

(Fig. 5)

**Etymology.** This species is named after the collector of the type series, Russian dipterologist Dr. Semen Kustov (Krasnodar).

**Type material.** Holotype – male, “RUSSIA: Republic of Adygeya/ Caucasus State Nature/ Biosphere Res., source of/ Kurdzhips, 1570 m, nr Plateau”; “Lago-Naki, shore of stream/ N44°04′44″ E40°00′08″; alpine/ crooked for., 30.v.–15.vi.2011/ leg. Kustov S. Yu.; MT” (ZIN). Paratypes: 1 male, 2 females, same data as holotype (CNC); 2 males, 11 females, same data as holotype, 16–29 June 2011 (ZIN); 1 male, 1 female, same data as holotype, 15–28 July 2011 (CNC); 2 males, 1 female, same data as holotype, 29 July–30 August 2011 (KSU); 2 females, same data as holotype, 30 June–14 July 2011 (ZIN).

**Recognition.** This species is distinguished from other *Wiedemannia* from the Caucasus by the elongate pterostigma, acrostichals confined anterior to third dorsocentral setae, scutellum with several marginal setulae and shape of the male clasper.

**Description.** *Male.* Head with face, gena and ventrolateral margin of postgenal with faint blue pruinescence; frons and vertex brown; ocellar seta subequal in length to postpronotal seta. Gena narrow, one-eighth height of eye. Arista short, subequal to length of basal segments, tip blunt. Setae on palpus dark.

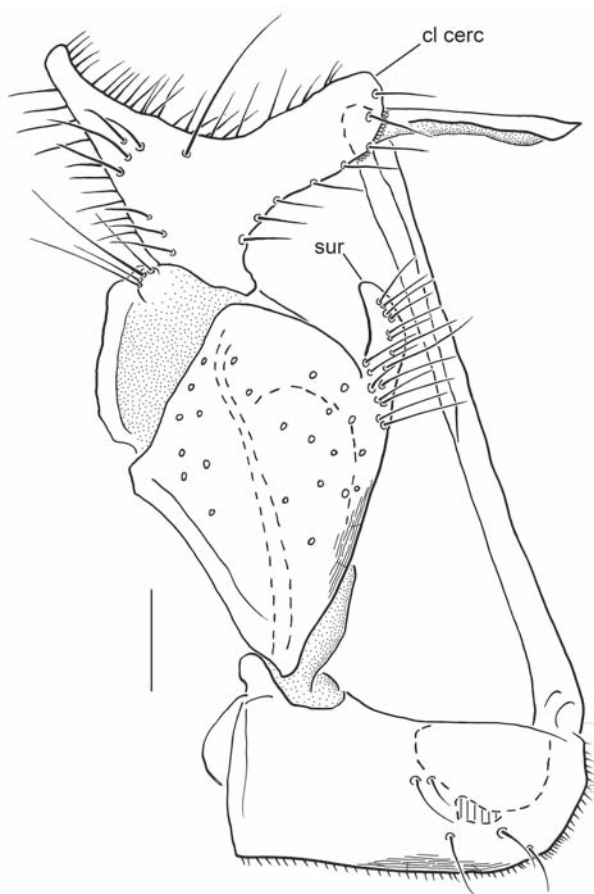


Fig. 5. Male terminalia of *Wiedemannia kustovi* sp. nov., lateral view. Scale bar is 0.1 mm. Abbreviations: cl cerc – clasper, sur – surstylus.

Thoracic pleura with faint blue pruinescence; scutum brown, faintly bivittate from anterior view. Acrostichals biserial, extending to third pair of dorsocentral setae; 5 dorsocentral setae, 1–2 short setae interspersed; 1 postpronotal seta; 1 presutural supra-alar seta; 2 notopleural setae; 0 postsutural supra-alar setae; 1 postalar seta; 2 scutellar setae and 3–4 pairs of marginal setulae; scattered setulae on notopleuron and presutural supra-alar regions. Laterotergite with patch of pale setae; anteprenotum with pale setae.

Legs dark brown, coxae with pale blue pruinescence. All legs with evenly distributed setae. Anterior surface of fore femur lacking macrosetae. Tarsomere 5 with dorsoapical extension; empodium pulvilliform, subequal to length of claw.

Wing narrow, infusate; pterostigma elongate; single basal costal seta extending to humeral cross-

vein. M acutely branched, fused for short distance or  $M_1$  and  $M_2$  separately arising from cell dm;  $R_4$  and  $R_5$  straight and divergent.

Abdominal sclerites with pale blue pruinescence. Tergite 8 bilobed. Terminalia (Fig. 5): Hypandrium long and tubular. Epandrial lamellae not greatly expanded laterally. Phallus straight, distiphallus broadly flattened, lacking median membranous swelling; ejaculatory apodeme short and narrow. Surstylus long and pointed apically, densely clothed in setae. Cercal plate with macrosetae confined to narrow area. Clasper broadly V-shaped, inner face densely clothed in long, dark stout setae; anteriorly directed lobe short and broad basally; posteriorly directed lobe thumb-like with rounded apex.

*Female*. Similar to male; abdominal segment subequal in length to segment 7.

*Length* (mm). Wing 4–4.5.

**Comparison.** *Wiedemannia kustovi* sp. nov., along with *W. chvalai*, *W. klausnitzeri*, *W. pseudovaillanti*, and *W. vaillanti* are assigned to the *W. lepida* species group. Species of this group share similarly shaped clasper, head shape and reduced number of acrostichal setulae. The *W. lepida* group is known from western North America, Burma, India, Japan and South Korea (Sinclair 1998). *Wiedemannia kustovi* sp. nov. is most similar to *W. klausnitzeri* differing by shape of clasper (see the key). Six species of *Wiedemannia* (incl. *W. kustovi* sp. nov.) are known only from the Caucasus.

**Distribution.** PALAEARCTIC: Russia (Republic of Adygea).

#### Key to species of Clinocerinae recorded from the Caucasus

- 1 Neck arising high on occiput, head extending obliquely forward; wing normally with white irrorations or circular spots . . . . . *Dolichocephala* Macquart . . . . . 2
  - Neck arising near centre of occiput, head hypognathous; wing lacking white irrorations or circular spots . . . . . 3
- 2 Wings with conspicuous hyaline spots in cell  $r_1$  (along costa) as well as elsewhere; clasper strongly bent with short rounded apex . . . . . *D. irrorata* (Fallén)
  - Wings without spots in cell  $r_1$  (along costa); seven clear round white spots elsewhere on wing; clasper deeply forked, apex of posterior branch densely clothed in setae . . . . . *D. monae* Joost
- 3  $R_1$  with macrotrichia extending along dorsal surface; fore femur of both sexes with stout setae beneath; female abdomen truncate apically . . . . . *Trichoclinocera grichanovi* sp. nov.

- $R_1$  lacking macrotrichia; fore femur lacking modified setae or only simple biserial row of short setae present, often only on males; female abdomen attenuated apically ..... 4
- 4 Face with setulae along inner margin of eye ..... 5
  - ..... *Kowarzia* Mik ..... 5
  - Face lacking setulae along inner margin of eye ..... 6
- 5 Claspings cercus straight, digitiform; apex hooked to narrow beak-like tip (Figs 1, 2) .... *K. caucasica* sp. nov.
  - Claspings cercus strongly bent at mid-length, L-shaped; apex rounded ..... *K. plectrum* (Mik)
- 6 Lower margin of face (clypeal region) lacking notch;  $M_1$  and  $M_2$  widely separated on cell dm; phallus normally with non-articulated apical filament or distiphallus ....
  - ..... *Clinocera* Meigen ..... 7
  - Lower margin of face (clypeal region) with notch;  $M_1$  acutely branched, fused for short distance or  $M_1$  and  $M_2$  separately arising from cell dm; phallus normally with articulated apical filament or distiphallus .....
    - ..... *Wiedemannia* Zetterstedt ..... 9
- 7 Comb of preapical anterior setae on fore femur absent; postpronotal seta reduced, shorter and thinner than notopleural setae; postsutural supra-alar setae absent ..
  - ..... *C. nigra* Meigen
  - Comb of preapical anterior setae on fore femur present; postpronotal seta well developed, similar to scutal setae; postsutural supra-alar setae present ..... 8
- 8 Base of  $R_4$  with short spur or appendix (Sinclair 1999, fig. 1); femora evenly darkly coloured .....
  - ..... *C. appendiculata* (Zetterstedt)
  - Base of  $R_4$  without short spur or appendix; apex of femora (“knees”) light brown, compared to bluish pruinose femur ..... *C. stagnalis* (Haliday)
- 9 Pterostigma rounded, usually very distinct and large ...
  - ..... 10
  - Pterostigma elongate and narrow, often indistinct ... 11
- 10 Claspings cercus elongate, projecting well beyond tip of phallus, narrower at mid length and long slender basal process projecting anteriorly (see Engel 1940, fig. 90, pl. 10) .....
  - ..... *W. braueri* (Mik)
  - Claspings cercus shorter, extending to tip of phallus, broader at base, without basal process (see Joost 1981a, fig. 3) ..... *W. caucasica* Joost
- 11 All femora with distinct anterior and posterior preapical setae; fore coxae with 1–2 erect projecting setae, longer than surrounding setae and longer than width of coxa .....
  - ..... *W. zetterstedti* (Fallén)
  - Femora without distinct preapical setae, or at least only anterior seta present on fore femur; fore coxae without erect setae ..... 12
- 12 Acrostichal setae extending around prescutellar depression ..... 13
  - Acrostichal setae extending only to third dorsocentral seta ..... 14
- 13 Notopleuron with bright blue pruinescence; claspings cercus bilobed, mitten-shaped .... *W. fallaciosa* (Loew)
  - Notopleuron with dull blue pruinescence; claspings cercus undivided, apex broad and truncate . . . *W. beckeri* Mik
- 14 Claspings cercus prolonged dorsally into an apically expanded lobe ..... 15
  - Claspings cercus prolonged anterior-posteriorly, if dorsal lobe present, not expanded apically ..... 16
- 15 Claspings cercus with anterior lobe short, pointed, bearing cluster of apical setae; dorsal process subtriangular, inner margin clothed in dense setae (see Joost 1981a, figs 11, 12) .....
  - ..... *W. pseudovallanti* Joost
  - Claspings cercus with anterior lobe, prolonged, digitiform and slender, without cluster of apical setae; dorsal process anvil-shaped, inner margin without dense setae (see Joost 1981a, figs 13, 14) ..... *W. vallanti* Joost
- 16 Claspings cercus broad, mitten-shaped, lobes not slender (see Joost 1981a, figs 7, 8) .....
  - ..... *W. chvalai* Joost
  - Claspings cercus with anterior lobe slender, digitiform . . . . . 17
- 17 Lobes of claspings cercus orientated at right angles, L-shaped; digitiform lobe nearly directed vertically (see Joost 1981a, figs 9, 10) .....
  - ..... *W. klausnitzeri* Joost
  - Lobes of claspings cercus more broadly orientated, beyond right angles (Fig. 5) ..... *W. kustovi* sp. nov.

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## NOTE ADDED IN PROOF

Details of the holotype of *Clinocera schumanni* Joost were received at the same time as the final proof was made available. This species should be transferred to *Kowarzia*, and is here listed as *Kowarzia schumanni* (Joost) comb. nov. There are now 19 species of Clinocerinae recorded from the Caucasus.

*Kowarzia schumanni* appears closely related to *K. plectrum* (Mik) and can be distinguished by the following modification to the Key to species of Clinocerinae from the Caucasus:

- 5 Claspings cercus straight, digitiform; apex hooked to narrow beak-like tip (Figs 1, 2) . . . . . *K. caucasica* sp. nov.
- Claspings cercus not straight, bent at mid-length; apex rounded or truncate . . . . . 5A
- 5A Claspings cercus strongly bent, L-shaped; base of claspings cercus subequal in length to apical portion; apex rounded; inner setae of claspings cercus not denser along dorsal margin . . . . . *K. plectrum* (Mik)
- Claspings cercus more gradually bent or curved, not L-shaped; base of claspings cercus shorter in length to apical portion; apex truncate; inner setae of claspings cercus dense along dorsal margin (Joost 1981a, fig. 2) . . . . . *K. schumanni* (Joost)