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A new species of *Ellipteroides* from the Iberian Peninsula in the subgenus *Ramagonomyia* new to the Palaearctic Region (Diptera: Limoniidae)

E. GEOFFREY HANCOCK

Hunterian Museum, University of Glasgow, Glasgow G12 8QQ, Scotland, U.K.
geoff.hancock@glasgow.ac.uk

JAROSLAV STARÝ

Neklanova 7, CZ-779 00 Olomouc-Nedvězí, Czech Republic & Silesian Museum, Nádražní okruh 31, CZ-746 01 Opava, Czech Republic
stary.cranefly@gmail.com

Abstract

A new species of *Ellipteroides* (Diptera: Limoniidae) is described from a number of specimens collected in Spain and Portugal over the last 35 years. It is placed in the subgenus *Ramagonomyia*, previously unknown from the Palaearctic.

Key words: Spain, Portugal, Iberia, short-palped craneflies

Introduction

In the western part of the Palaearctic Region, members of three subgenera of *Ellipteroides* Becker, 1907 have been described. In the nominotypical *Ellipteroides* are four species, *Protogonomyia* Alexander, 1934 contains eight species and *Ptilostenodes* Alexander, 1931 one species. The occurrence of an undescribed species in *Ellipteroides* has been known for some time from several collecting events in Spain and Portugal but it has features that are not a good fit for any of these subgenera. In a worldwide view, *Ellipteroides* is a medium-sized group of the chioneine Limoniidae, comprising 123 taxa (three are subspecies) in six subgenera. Many unidentified specimens are found in collections and remain to be studied; a taxonomic revision of the genus is needed. Representatives of the genus occur in all zoogeographic areas, except for the Australian/Oceanian/Antarctic regions, most numerously in the Oriental and Neotropical Regions. In the Palaearctic, 16 species of *Ellipteroides* are known, with 13 from the West Palaearctic (Oosterbroek 2019).

From the Iberian Peninsula, we have samples of a new *Ellipteroides* species that differs considerably in general structure of male terminalia from its Palaearctic congeners. Its traits go somewhat beyond the subgeneric characteristics for the known West Palaearctic subgenera mentioned above. Alexander (1968) established the subgenus *Ramagonomyia* for two Oriental species, *E. bisiculifera* (Alexander, 1963) and *E. protensa* (Alexander, 1963), both from Sikkim, India. Surprisingly, this subgenus is suitable to receive the new Iberian species, based on lacking the anterior arculus in the wing and the male terminalia with the apex of the gonocoxite produced into a slender spine and the outer gonostylus pale, almost transparent (Alexander 1968). Although the venation of the new species differs from that of *Ramagonomyia* in lacking R_2 (cross-vein r), the general structure of the male terminalia best places the new species in this subgenus (*cf.*

Alexander 1968, figs 8, 25, 26). Therefore, a description of both sexes of a new species of *Ellipteroides* (*Ramagonomyia*) can be given, recording the subgenus for the first time in the Palaearctic Region.

Description of a new species

Ellipteroides (Ramagonomyia) mendli Hancock & Starý, **sp. nov.**

(Figs 1–5)

Holotype: male, Spain: Jaen, Sierra de Cazorla, Arroya de las Aquacebas, 2 June 2018, swept by streamside, E.G. Hancock, 38.168°N, 2.889°W, Hunterian Museum, Glasgow, UK: Acc. No. 162477; Entry No.2018.7.5.

Paratypes (63 males, 20 females): **Spain:** Jaen, Sierra de Cazorla, Arroya de las Aquacebas, 2 June 2018, swept by streamside, E.G. Hancock, 38.168°N, 2.889°W, Hunterian Museum, Glasgow, UK: Acc. Nos 162478–162481; Entry No.2018.7.5 (3 females, 3 males; one of each sex deposited in the University of Alicante, Spain); Sierra de Cazorla, Rio Guadalquivir, 31 May 2018, exposed riverside sediment, S.M. Hewitt, 38.033°N, 2.865°W, specimens deposited in National Museums Scotland, Edinburgh, Sotland, UK (2 males, 1 female). Coceros (= Cáceres) Province: Arroyo de la Vid, road E4, N Rio Almonte, 12–13 June 1984, W. Schacht (1 male, 1 female), coll. J. Starý, Olomouc, Czech Republic (additional specimens, unexamined by the authors, are deposited in Zoological Research Museum Alexander Koenig, Bonn, Germany). Andalucía: Málaga env., Coin, Rio Seco, 7 April 2005, J. Starý (8 males, 3 females), coll. J. Starý, Olomouc, Czech Republic. **Portugal:** Algarve Region: Serra do

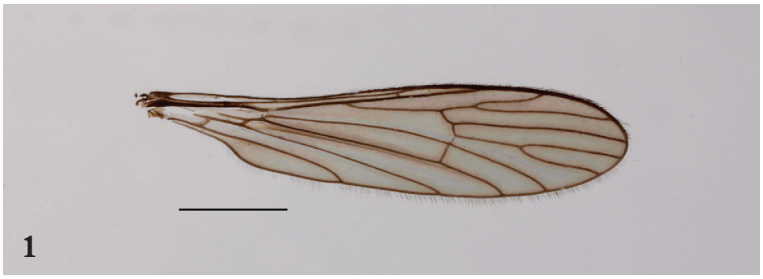
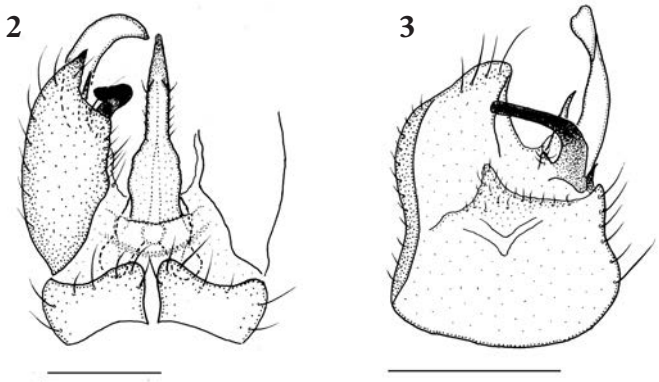
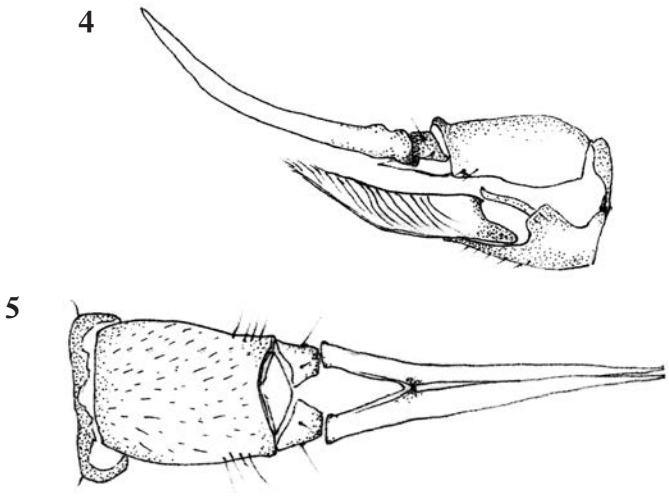


Fig. 1. *E.* (*R.*) *mendli* sp. nov., wing of male (photo by J. Roháček). Scale bar 1.0 mm.



Figs 2, 3. *E.* (*R.*) *mendli* sp. nov., male terminalia; **2**, general view, dorsal; **3**, gonocoxite and gonostyli, medial. Scale bars 0.25 mm.



Figs 4, 5. *E.* (*R.*) *mendli* sp. nov., female terminalia; **4**, general view, lateral; **5**, dorsal.

Aloportal, alt. 336 m, 1–20 May 2017, R. Lyszkowski, 37.169°N, 7.913°W, Hunterian Museum, Glasgow, UK: Acc. No. 162482 (1 female). Algarve Region: Tavira env., Casa Queimada, 1 km N, 31 March 2009, J. Starý (12 males, 5 females); Tavira env., Currais Boleiros, 31 March 2009, J. Starý (6 males); Anzinhal env., Barreiros, 1 km S, Beliche river, 2 April 2009, J. Starý (17 males), 4 April 2009 (6 males, 3 females); Serra de Monchique, Caidas de Monchique, 3 April 2009, J. Roháček (1 male); Esgravatadouro env., nr. Caidas de Monchique, 1 May 2010, J. Starý, 37°18′N 8°31′W (2 males); Vila do Bispo, 4 km NE, Lagoa Funda, 30 April 2010, J. Starý, 37°07′N 8°54′W (1 female); Rasmalho, 1 km N, Boina river & tributary, 37°14′N 8°33′W, 28 April 2010 J. Starý (4 males, 1 female), 2 May 2010 (1 male); Monta Ruivo, 2 km E, 3 May 2010, J. Starý, 37° 13′N 8°47′W (1 female); Porto de Lagos, 1.5 km NW, Boina river, 29 April 2010, J. Starý, 37°12′N 8°32′W (1 male); all specimens deposited in coll. J. Starý, Olomouc, Czech Republic.

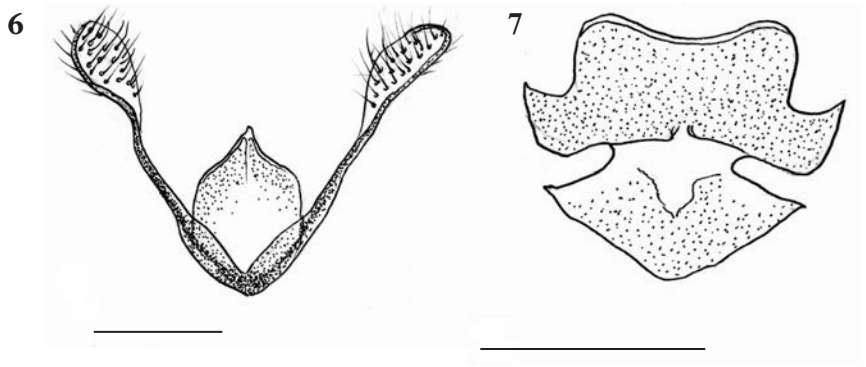
Description

Male. Head black, grey dusted apart from shiny medial area of frons, all setae also black; antenna 16-segmented, scape dusted, twice length of shiny black pedicel; flagellomeres shiny black and twice as long as wide diminishing in size but not proportions towards apex, pale haired and each with a short mid dorsal black verticil.

Thorax with dorsum, including pronotum, scutellum and metatergite shiny black, prescutum lacking anterior pits; paratergite yellow; pleuron black grey dusted, dorsopleural membrane markedly yellow, with yellow extending distally towards wing base; hind margin of katepisternum, lower part of anepimeron and part of meron suffused also yellow. Coxae and all legs shiny black. Wing (Fig. 1) average length 3.6 mm, membrane slightly grey tinged, veins dark; open discal cell, R_2 absent. Halter dark.

Abdomen shiny black, apart from basal margin of 1st tergite narrowly yellow and distal margins to sternites faintly and narrowly pale yellowish. Male terminalia (Figs 2–3) black; outer gonostylus pale, flattened, and twisted, almost transparent; inner gonostylus heavily chitinised, bent dorsally at right angle and blunt tipped; another pale process apparent between gonostyli, probably representing third gonostylus, commonly present in this and related genera; gonocoxite produced into a slender spine; long aedeagus broad and yellow, bent ventrally at about two thirds its length in lateral aspect, narrowing to darker lanceolate tip; laterally with small setae in narrowed part.

Female: Overall colouration as in male, although hind margins of abdominal sternites more obviously yellow; slightly larger, with average wing length 4.0 mm. Cercus blackish basally then



Figs 6, 7. 9th sternite of female *Ellipteroides*; **6**, *E.* (*R.*) *mendli* sp. nov; **7**, *E.* (*E.*) *lateralis*. Scale bars 0.1 mm.

yellowish brown, evenly up-curved to sharply pointed apex, almost twice as long as 8th tergite; valve lighter brownish-yellow, extending to half length of cercus, slightly curved, small tuft of hairs apically, laterally with diagonal striations (Figs 4–5). 9th sternite bifurcated, with lateral forks expanded and covered with setae (Fig. 6).

Etymology. We have pleasure in naming this species for the late Hans Mendl (Kempten/Allgäu, Germany) who first recognized it as undescribed.

Discussion

The female ovipositor has some differences from other species of *Ellipteroides* for which figures are available. The 9th sternite is a character not examined in earlier studies. In the new species (Fig. 6) it is very different from that of *E.* (*E.*) *lateralis* (Fig. 7). Figures for two species in the nominotypical subgenus by Starý & Rozkośný (1970), show similarity in the slender, curved and apically pointed cerci and with the valves terminating in a small tuft. Females of the known two species of *E.* (*Ramagonomyia*) are unknown; they were described from males only.

The 9th sternite is a most useful character for distinguishing closely allied species in a number of families of the Nematocera as well as in the Tipuloidea. It can be the only reliable means of separating females of sibling species. It is small in size and lies within the internal base of the ovipositor. Unless specimens are fresh (when some physical manipulation under a microscope can be sufficient to reveal it) dissection following maceration is required. In some literature it is referred to as the vaginal apodeme or genital fork. The central usually plate-like structure contains the vaginal opening and hence the spermathecal duct. The associated apodemes that support it usually provide the distinguishing features (see for example, Hutson & Vane-Wright, 1969).

Of the *Ellipteroides* across the Palaearctic and Oriental Regions the nominotypical subgenus has 10 Oriental species and four Palaearctic; there is one species in Africa. *Ellipteroides* (*Protogonomyia*) has 25 Oriental species and nine Palaearctic; *E.* (*Ptilostenodes*) has 7 Oriental species and two Palaearctic and *E.* (*Sivagonomyia*) Alexander, 1968 is represented by one Oriental species. So, the apparent tendency to greater species diversity in the Oriental Region according to current understanding, makes the discovery of a species of *E.* (*Ramagonomyia*) as far west in the Palaearctic as Iberia of some interest.

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