

A new species of the genus *Pseudolycoriella* (Diptera: Sciaridae) bred from an ornamental plant

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Abstract

A new species, *Pseudolycoriella villabonensis* sp. n., belonging to the newly defined subgenus *Ostroverkhovana* stat. n., is described based on a material of Sciaridae bred from the ornamental plant *Plectranthus australis*.

Key words: Diptera, Sciaridae, *Pseudolycoriella*, *Ostroverkhovana*, new species, Spain.

Resumen

Una especie nueva del género *Pseudolycoriella* (Diptera: Sciaridae) criada a partir de una planta ornamental

Se describe una especie nueva, *Pseudolycoriella villabonensis* sp. n., perteneciente al subgénero recién descrito *Ostroverkhovana* stat. n., basada en material de Sciaridae criado a partir de la planta ornamental *Plectranthus australis*.

Palabras clave: Diptera, Sciaridae, *Pseudolycoriella*, *Ostroverkhovana*, especie nueva, España.

Laburpena

***Pseudolycoriella* generoko (Diptera: Sciaridae) espezie berri bat ornamentazio-landare batetik hazia**

Duela gutxi deskribaturiko *Ostroverkhovana* stat. n. subgeneroari dagokion espezie berri bat deskribatzen da, *Pseudolycoriella villabonensis* sp. n., *Plectranthus australis* ornamentazio-landareetik hazitako Sciaridae materiala dela eta.

Gako-hitzak: Diptera, Sciaridae, *Pseudolycoriella*, *Ostroverkhovana*, espezie berria, Espainia.

Introduction

In a small material collected in Guipúzcoa (Spain), an unusual species of Sciaridae was found. It was bred from flower pots of the ornamental plant *Plectranthus australis* (Swedish ivy).

A number of sciarid species are known to develop in inhouse plants. The most common of them are *Bradysia tilicola* (Loew, 1850), formerly known as *Bradysia amoena* (Winnertz, 1867), and *Bradysia ocellaris* (Comstock, 1882) (Menzel *et al.*, 2003). A third species, *Bradysia impatiens* (Johannsen, 1912), also known as *B. difformis* Frey, 1948 or *B. pauperu* Tuomikoski, 1960,

can even become destructive to greenhouse cultures. All these species are distributed by man worldwide and have been described various times.

Species of *Pseudolycoriella* Mohrig & Menzel, 1998 have also been found to be associated with plants as pollinators (Rulik *et al.*, 2008). Even the type species of the genus, *Pseudolycoriella bruckii* (Winnertz, 1867), has firstly been collected on Apiaceae (Winnertz, 1867). The genus *Pseudolycoriella* was only recently described (Menzel and Mohrig, 1998), but is probably one of the largest genera of Sciaridae. The distribution covers all zoogeographic regions (Rudzinski, 2003; Vilkamaa *et al.*, 2012; Mohrig *et al.*, in prep.),

but the genus is not so species rich in the well studied Palaearctic Region. In Europe only 18 of 654 species of Sciaridae belong to *Pseudolycoriella* (Heller and Menzel, 2012). It is possible that the new species was recently introduced to Europe by the trade of ornamental plants and it is therefore not sure that it has not been described before from other parts of the world which have not yet been revised. But at least in the Palaearctic Region this species has not been recorded earlier.

Material and methods

The specimens were captured by hand and stored in ethanol before they were transferred to microscopic slides and embedded in Euparal. The photos were made by a USB microscope camera of the type MCA-510. Different layers were combined with the help of the free-ware software CombineZP. The pictures were finally retouched with the graphic program GIMP. The description of the species was produced semi-automatically on the base of a character matrix, with the aid of the DELTA-Intkey (Dallwitz *et al.*, 1999) software.

Results

Pseudolycoriella (Ostroverkhovana) stat. n.

Type species: *Ostroverkhovana borealis* Komarova, 2002 (orig. des. and monotypy) – Int. J. Dipt. Res. 112: 27-29; fig. 1.

Ostroverkhovana Komarova, 2002 was described as a monotypic genus based on the type species *Ostroverkhovana borealis* (Komarova, 2002). That species is very similar, if not identical, to *Pseudolycoriella nodulosa* (Mohrig & Krivosheina, 1987), so that the generic identity of both species is without any question. There are only slight differences in the colour of the abdominal hairs and the width of the eye bridge, which may be due to interspecific variation. Nevertheless the species complex around *Ps. nodulosa* shares some common characters, which allow treating it as a subgenus.

Description:

The characters of the subgenus agree with the de-

scription of the genus (Menzel and Mohrig, 1998). Distinguishing characters from typical *Pseudolycoriella* species are the presence of a lobe at the base of the hypopygium, the more oval and not parallel shape of the gonostyles and the lobe-like protuberance at the base of the gonostyles bearing a patch of stronger bristles. The megasetae at the gonostyles are strong and longer than in *Pseudolycoriella s. str.*

The following four species are assigned to the subgenus: *Pseudolycoriella (Ostroverkhovana) borealis* (Komarova, 2002) **comb. n.**, *Pseudolycoriella (Ostroverkhovana) lobosa* (Pettey, 1918), *Pseudolycoriella (Ostroverkhovana) nodulosa* (Mohrig & Krivosheina, 1918) and *Pseudolycoriella (Ostroverkhovana) villabonensis* **sp. n.**

Discussion:

Although *Ostroverkhovana* is surely a monophyletic group, it cannot be decided at present how the remaining species of *Pseudolycoriella* will have to be treated in the future. Apart from the *bruckii* group containing the type species, two more species groups, the *morenae* group and the *horribilis* group, have already been defined based on morphological differences (Menzel and Mohrig, 2000). These might also be treated as subgenera. Other species like *Pseudolycoriella brunnea* (Bukowski & Lengersdorf, 1936) also appear to be isolated from the rest of the genus. The also flower visiting North American genus *Eugnoriste* Coquillett, 1896 is also very similar to *Pseudolycoriella* and is distinguished mainly by the extraordinarily long proboscis. Further studies, especially of African and South American species, are necessary to decide the matter.

Pseudolycoriella (Ostroverkhovana) villabonensis **sp. n.** (Figs. 1-2)

Type material:

HOLOTYPE: ♂, Spain, Guipúzcoa, Villabona, bred from *Plectranthus australis*, leg. Santiago Pagola Carte, 02.2012, in the collection of German Entomological Institute (SDEI) no. 8081.

PARATYPES: 4 ♂♂, same data, private collection of Kai Heller (PKHH) no. 8077-8080.

Description (♂):

Head. Eye bridge 3 rows of facets. LW-index of 4th antennal flagellar segment 1.85–2.15; neck 0.35–0.45 of segment width; transition of basal part to neck

pronounced. Colour of neck unicolour. First flagellar segments of antennae slightly brightened and with some conspicuous dark bristles. Antennal hairs shorter than segment width; dense; salient. Palps darkened; normal; palpomeres 3. First palpomere elongate; with 4-6 bristles; with only some sparse sensillae. Second palpomere shortly oval, or elongate. Third palpomere as long as first segment. **Thorax.** Colour reddish, or bicolour. Notum partially brightened. Thoracic setae normal; dark. Mesonotum with very fine hairs. Posterior pronotum bare. Laterotergite bare. **Legs.** Colour yellow. Hind coxae of same colour as femora. Hairs on fore coxae black. Frontal tibia with comblike structure. Front tibial organ bright, with weakly indicated border. Tibial setae on hind legs normal, shorter than tibial width. Tibial spurs of equal length. Claws with some fine teeth. **Wings.** Wings slightly darkened; of normal shape. Wing membrane without macrotrichia. Wing venation weak, with faint m-base. M-fork of normal shape. R1 inserting clearly before base of m-fork; posterior veins bare; bM bare; r-m with a few setae; bM:r-M 1.0–1.2; st-Cu:bM 0.55–0.75; r1:r 0.9–1.1; C:w 0.66–0.77. Halteres dark; of normal length. **Abdomen.** Abdominal setae strong and dense; dorsally dark; ventrally dark. Hypopygium concolour with abdomen; Length/Width 0.55–0.65 longer than wide. Base of gonocoxites with lobelike structure; gonocoxites fused; inner margin of gonocoxites normally U-shaped; inner part of hypopygium bare; elongated setae on valves of hypopygium absent. Gonostylus elongate; 2.25–2.45 × longer than wide; inner margin convex; apex equally rounded. Apical tooth absent. Awl-like setae absent. Megasetae on inner part of gonostylus present; number of megasetae 2; thick; curved; in one group; position of lowest megaseta 25–32% from top. Whiplash-hair missing, or present; whiplash-hairs 0-1; position of lowest whiplash-hair 20–26% from top. Tegmen 0.45–0.57 × longer than broad; equally rounded, or rectangular with rounded edges; normal; central process absent. Length of aedeagus/hypopygium 17–23%. Aedeagus with apical structure. **Measurements.** Body size 3.0–3.5 mm. Wing length 2.4–2.7 mm.

Diagnosis and discussion:

Pseudocoriella villabonensis sp. n. is a typical member of the genus *Pseudocoriella* by the toothed claws, the gonostyles lacking an apical tooth and the elongated cu-stem. The jagged structure (Fig. 2h) at the dorsal side of the tegmen is also common character in the genus. The genus typical whiplash-hair is only present on one gonostylus in the holotype (Fig. 2b, c) and not

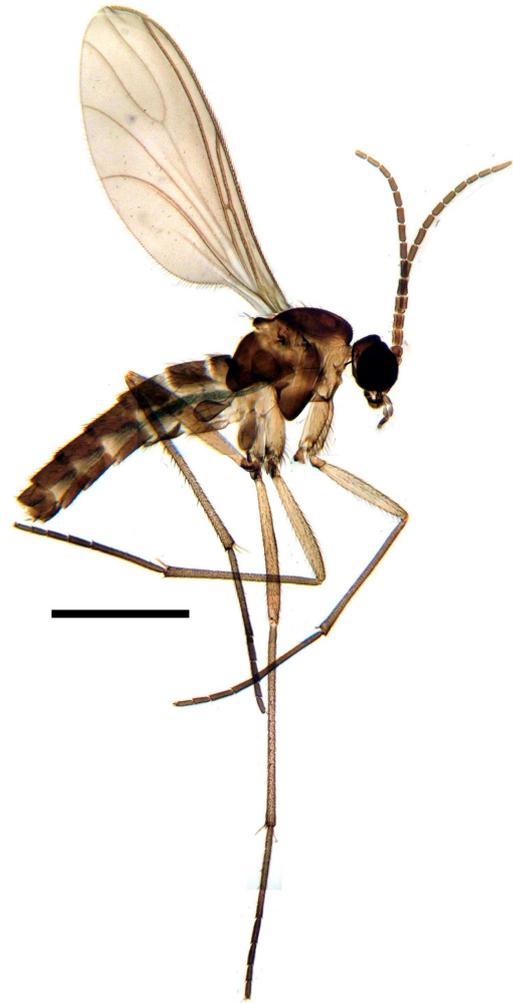


FIGURE 1. *Pseudocoriella villabonensis* sp. n., holotype: Habitus without hypopygium (Scale bar = 1 mm).

in any of the paratypes, so it seems to be secondarily reduced in most cases. Otherwise the new species resembles *Pseudocoriella nodulosa* (Mohrig & Krivosheina, 1985) and *Pseudocoriella lobosa* (Petty, 1918), but in those species the placement of the megasetae are different. *Pseudocoriella villabonensis* sp. n. is unmistakable by the characters of the male genitalia, but also quite distinct by the coloured thorax and the brightened antennal base. The strong, dark setae on the first segments (Fig. 2f) are also present only in *Pseudocoriella nodulosa*.

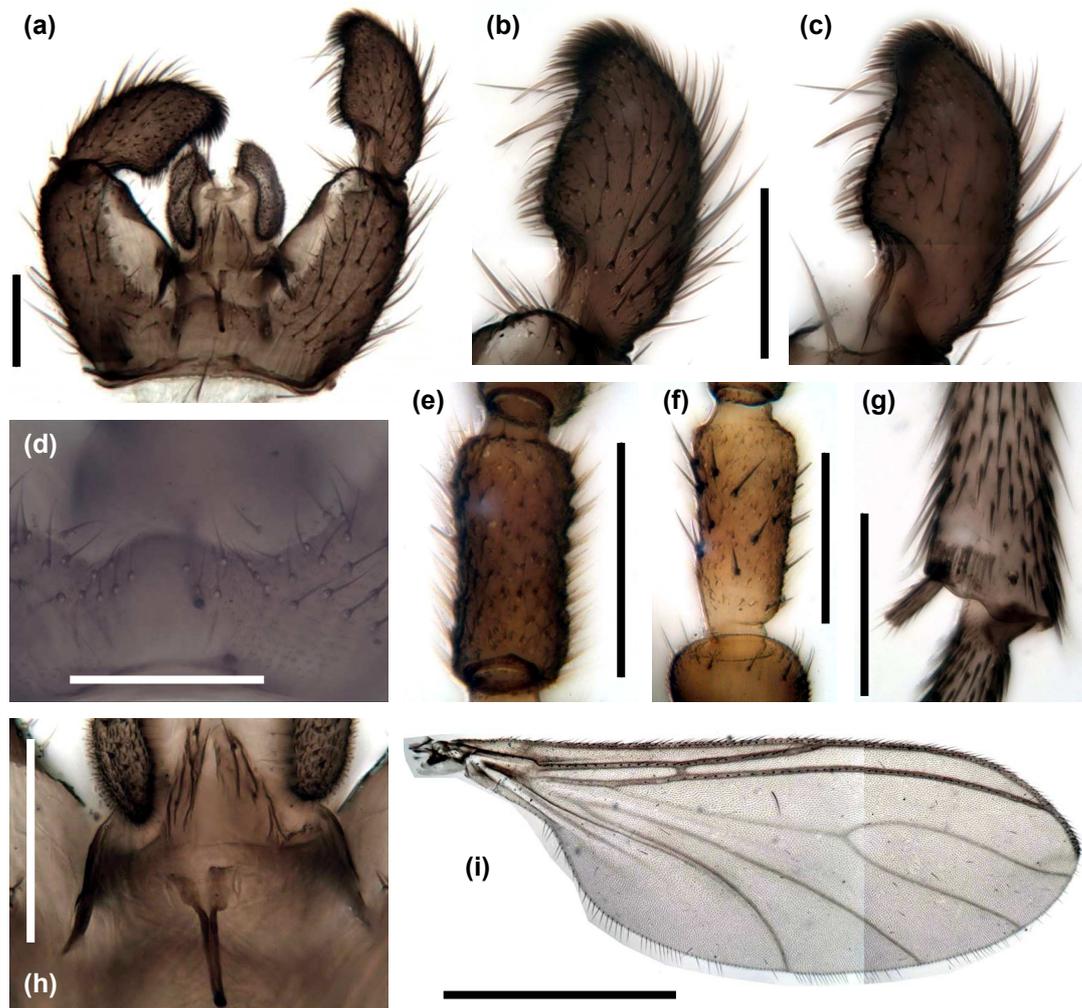


FIGURE 2. *Pseudolycoriella villabonensis* sp. n.: (a) Hypopygium, ventral view; (b) Stylus, ventral view; (c) Stylus, dorsal view; (d) Basal lobe; (e) 4th antennal flagellar segment; (f) 1st antennal flagellar segment; (g) Apex of front tibia; (h) Tegmen and aedeagus; (i) Wing (Scale bars: (a)-(h) = 0.1 mm; (i) = 1 mm).

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