

## The first reliable record of *Pipiza carbonaria* (Diptera, Syrphidae) from Ukraine

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**Prokhorov, A. V. & Popov, G. V. The first reliable record of *Pipiza carbonaria* (Diptera, Syrphidae) from Ukraine.** — The rare hoverfly, *Pipiza carbonaria* Meigen, 1822, collected in Odesa Region, is recorded for the first time as confirmed by existing collection material from Ukraine. Summarized distribution and diagnosis of this species are given.

**Key words:** Diptera, Syrphidae, *Pipiza carbonaria*, Ukraine.

**Прохоров, О. В. і Попов, Г. В. Перша вірогідна знахідка *Pipiza carbonaria* (Diptera: Syrphidae) в Україні.** — Рідкісний вид мухи-повисюхи *Pipiza carbonaria* Meigen, 1822, знайдений в Одеській області, зазначено як перша знахідка виду в Україні, яка підтверджена фактичним матеріалом. Узагальнено відомості про поширення виду та наведено його діагноз.

**Ключові слова:** Diptera, Syrphidae, *Pipiza carbonaria*, Україна.

### Introduction

The genus *Pipiza* is represented in Europe by 12 species (Vujić *et al.*, 2013; Speight, 2020), 10 species have been already recorded in Ukraine (Prokhorov *et al.*, 2018). One of them, *Pipiza carbonaria* Meigen, 1822, was registered only based on the literature data (Anikina, 1971). We were unable to verify these data, as Anikina's collection is lost. However, we most likely assume that Anikina based her record on another misidentified species, *Trichopsomyia joratensis* (Goeldlin de Tiefenau, 1997). This is assumed not only from the known fact of misidentification of these species (Goeldlin de Tiefenau, 1997), but also by the date of the specimen captured in the Anikina (1971) — July, 15. The flight period of *Pipiza carbonaria* is restricted to May/early June (Vujić *et al.*, 2013).

Recently among unsorted material from our collection, a male specimen collected in 2010 by G. Popov from Odesa Region of Ukraine was found. Once the surstylus of this specimen was examined, it became clear that this is the first reliably identified specimen of *Pipiza carbonaria* from Ukraine.

### Material and methods

The specimen is deposited in I. I. Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine (Kyiv).

The morphological terminology follows of Cumming & Wood (2017). Diagnosis is based on the data by Vujić *et al.* (2013).

Photos of flies are taken using a Canon PowerShot A640 camera mounted on Carl Zeiss Stemi 2000 binocular microscope; all images were subsequently combined with Helicon Focus (version 6.0.18) and processed in Adobe Photoshop CS6 by the author.

### Results

#### *Pipiza carbonaria* Meigen, 1822 (fig. 1–6)

Anikina, 1971: 21 [Zakarpatska Region], 1973: 17 [Carpathians].

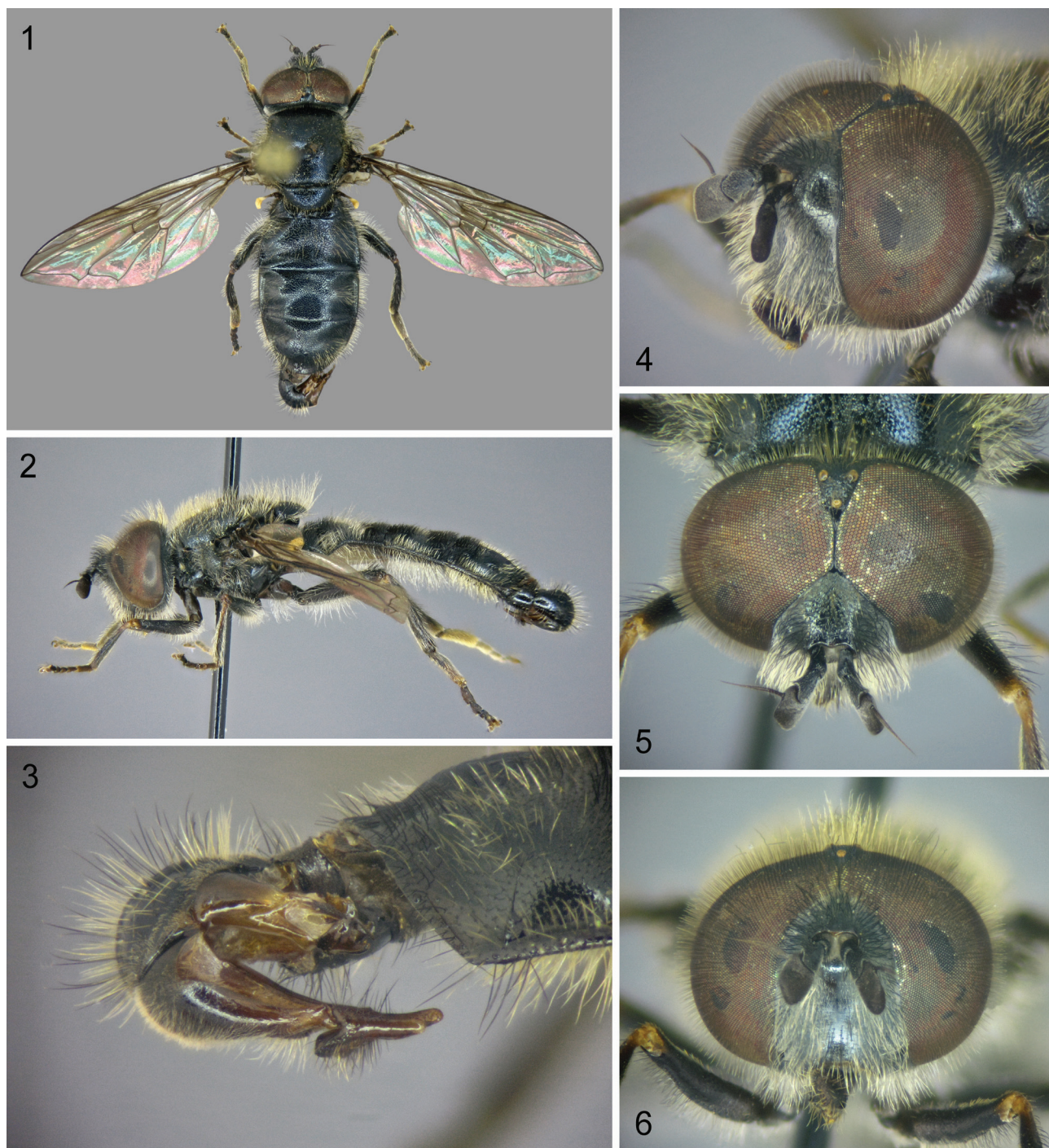


Fig. 1–6. *Pipiza carbonaria*, male: 1 — habitus, dorsal view; 2 — habitus, lateral view; 3 — terminalia (elongated surstylus is clearly visible); 4 — head, anterolateral view; 5 — head, anterodorsal view; 6 — head, frontal view.

**Literature data.** Ukraine, Zakarpatska Region, Marmarosh (= Marmarosky) Ridge, Dilove vil., 15.07.1964, 1 ♂ (Z. Anikina) (not located).

**Material examined.** Ukraine, Odesa Reg., Budei env., 48.04337N 29.231838E, edge of oak ravine forest, waterlogged meadow, 15.05.2010, on flowers of *Ranunculus* sp., 1 ♂ (G. Popov).

**Distribution.** Austria, ?France, Serbia, Switzerland, Ukraine (Anikina, 1971; Maibach *et al.*, 1992; Vujić *et al.*,

2013; Speight *et al.*, 2018; Vujić *et al.*, 2018; Milić *et al.*, 2019; Speight, 2020; Wakkie, 2021).

**Diagnosis.** Very variable species with characteristic styli (Vujić *et al.*, 2013). By external morphological features, **male** of *Pipiza carbonaria* is similar with several species of the genus with black postpedicel (basoflagellomere) and apical tarsal segments black. From *Pipiza austriaca* Meigen, 1822, *P. carbonaria* easily



separated by hind femur without distinct bulge on ventral apical third (in *P. austriaca*, hind femur with distinct bulge on ventral apical third). From *Pipiza fasciata* Meigen, 1822, especially from the dark forms (without yellow spots on tergites), *P. carbonaria* (at least our specimen) can be distinguished by: mesopleura, sides of abdomen and hind femur and tibia predominantly with pale pile (in dark forms of *P. fasciata*, these parts of the body predominantly with black pile); the distance from the anterior ocellus to the posterior ocellus looks little different from the distance between the posterior ocelli (in *P. fasciata*, the distance from the anterior ocellus to the posterior ocellus is distinctly greater than the distance between the posterior ocelli). *Pipiza carbonaria* differs from *P. noctiluca* (Linnaeus, 1758) and *P. notata* Meigen, 1822 by the tergites 1–2 with predominantly with pale pile (in other species, tergites 1–2 predominantly with black pile).

*Pipiza carbonaria* is most similar to *Pipiza lugubris* (Fabricius, 1775) in having lateral sides of tergites 1–2 predominantly with pale pile, hind femora thickened, but without bulge on apical third. *Pipiza carbonaria* can be separated from *P. lugubris* by the almost hyaline wing (in *P. lugubris*, wing with quite distinct dark area in the middle part); shortened and truncated postpedicel as on fig. 4 (in *P. lugubris*, postpedicel usually distinctly longer). Nothing is said about the darkening of the wing of *P. carbonaria*, and about possible variations of this character. Wings of our specimen with very faint darkening.

*Pipiza carbonaria* clearly differs from all the species by elongated surstylus (fig. 3). This character is unique among European *Pipiza*. At the same time, it is difficult to reliably distinguish this species by external morphological character, especially considering their significant variability. It can be distinctly identified only based on male genitalia (Vujić *et al.*, 2013).

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