

Short communication

## CHEILOSIA HERCULANA BRĂDESCU, 1982, A NEW HOVERFLY (DIPTERA: SYRPHIDAE) SPECIES FOR THE FAUNA OF SERBIA

MIHAILO VUJIĆ

HabiProt, Janka Čmelika 28a 3/25, 21000 Novi Sad, Serbia  
E-mail: mihailovujic01@gmail.com

Hoverflies (Syrphidae) represent one of the most species-rich families within Diptera, with over 6 000 species from 188 genera (Thompson, 2013). This family of flies has a worldwide distribution and represents an ecologically important group of insects (Rotheray & Gilbert, 2011). The European hoverfly fauna numbers more than 950 species, 412 of which are registered in Serbia (Speight, 2018; Vujić *et al.* 2018).

*Cheilosia* Meigen, 1822 represents a large genus of blackish hoverflies, with nearly 300 species in the Palaearctic. In Europe, about 175 species occur (78 of them is registered in the Balkans), making it Europe's largest genus (Peck, 1988; Vujić, 1996; van Veen, 2004; Speight, 2018). The *Cheilosia caerulescens* group includes 7 species: *Cheilosia armeniaca* Stackelberg, 1960, *C. caerulescens* (Meigen, 1822) (with two subspecies: *C. caerulescens caerulescens* (Meigen, 1822) and *C. caerulescens calculosa* Skufjin, 1977), *C. circassica* Ståhls & Barkalov, 2017, *C. herculana* Brădescu, 1982, *C. kerteszi* Szilády, 1938, *C. laeviventris* Loew, 1857, and *C. venosa* Loew, 1857 (Ståhls & Barkalov, 2017). Ståhls & Barkalov (2017) gave a combination of characters for separating all the other species of *Cheilosia* from the *C. caerulescens* group: eyes bare, distinctly darkened cross veins of the wings, broad body, usually bi-colored legs (black and yellow) and characteristics of male genitalia structures.

During a survey of hoverflies on Mt. Jadovnik, one female individual was collected by a standard sweeping net method. Identification was based on the key in Ståhls & Barkalov (2017). The prepared individual is deposited in the author's private collection.

*Cheilosia herculana* Brădescu, 1982 (Fig. 1)

Material examined: Mt. Jadovnik, N 43°18'19.58", E 19°46'41.97", 17.08.2019, 1 ♀, leg. M. Vujić.

Adult habitat and habits: flies in open, rocky areas, settling on stones in the sun; males hover at 2-4m (Vujić, 1996). On Mt. Jadovnik, the habitat is the edge of a spruce (*Picea abies* (L.) Karst.) forest, next to the

road and a subalpine meadow covered with grasses, *Centaurea* sp., *Cirsium* sp., *Carduus* sp., Fabaceae and Apiaceae (Fig. 2). Preferred environment: forest/open ground; open, rocky areas in humid *Fagus* forest, up to 2000 m a.s.l. in the Balkans (Vujić, 1996). Flowers visited: *Alyssum*, *Ranunculus* (Vujić, 1996). Flight period: beginning June/end August (Speight, 2018). Developmental stages: undescribed (Speight, 2018).

Remarks: New for the fauna of Serbia.

*Cheilosia herculana* Brădescu, 1982 is a rare species, registered only on the Carpathians (Romania) and in the Balkans (Montenegro and North Macedonia) (Vujić, 1996; Ståhls & Barkalov, 2017). It species resembles other species from the *C. caeruleascens* group, but can be distinguished from the others by a combination of the following characters from Ståhls & Barkalov (2017): presence of areas without microtrichia on wing membrane (Fig. 3), arista plumose, R4+5 vein on wing straight (not distinctly curved), black bristles on post-alar callus absent, black and some pale pilosity on vertex, antennal pits confluent, katepisternum with dorsal and ventral pile patches broadly divided posteriorly and narrowly connected anteriorly, apico-posterior area of mesofemur with yellow pile and antero-basal area of metafemur with long yellow pile.

The only registered species from the *C. caeruleascens* group in Serbia is *Cheilosia kerteszi* (Szilády, 1938), collected on Mt. Rtanj (Radenković, 2008; Vujić *et al.* 2018).



Figure 1. *Cheilosia herculana* Brădescu, 1982, habitus, female. Photo: M. Vujić.



Figure 2. Habitat of *Cheilosia herculana* Brădescu, 1982 on Jadovnik Mt. Photo: M. Vujić.



Figure 3. Areas without microtrichia on wing membrane Photo: M. Vujić.

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**References:** Peck, L. V. (1988). Family Syrphidae. In A. Soós & L. Papp (Eds.), *Catalogue of Palaearctic Diptera. Syrphidae – Conopidae* (pp. 363). Budapest: Akadémiai Kiadó; Radenković, S. (2008). Doktorska disertacija. Univerzitet u Novom Sadu, 352 pp.; Rotheray, G. E., & Gilbert, F. (2011). *Forest Text, Ceredigion, UK*, 334 pp.; Speight, M. C. D. (2018). *Syrph the Net, the database of European Syrphidae (Diptera)*. Syrph the Net publications. 103, 302 pp.; Ståhls, G., & Barkalov, V. A. (2017). *ZooKeys* 662, 137-171; Thompson, F. C. (2013). *Syrphidae. Systema Dipteroorum*. <http://www.diptera.org/>; Van Veen, M. (2004). *Hoverflies of Northwest Europe. Identification keys to the Syrphidae*. Utrecht: KNNV Publishing.; Vujić, A. (1996). *Matica Srpska Journal for Natural Sciences*, Novi Sad, 194 pp.; Vujić, A., Radenković, S., Nedeljković, Z., & Šimić, S. (2018). *Matica Srpska Journal for Natural Sciences*, Novi Sad, 135, 7-51.

## CHEILOSIA HERCULANA BRĂDESCU, 1982, NOVA VRSTA OSOЛИКЕ МУВЕ (DIPTERA: SYRPHIDAE) ЗА ФАУНУ СРБИЈЕ

МИХАИЛО ВУЈИЋ

### Извод

Током теренског истраживања спроведеног 2019. године на планини Јадовник, забележена је нова врста осолике муве за фауну Србије – *Cheilosia herculana* Brădescu, 1982. Ова врста је до сада забележена само на Карпатима (Румунија) и на Балканском полуострву (Црна Гора и Северна Македонија).

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