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Contribution to the knowledge of tachinid fauna in Serbia

Short Communication

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Abstract:

Tachinid flies were reared from several species of Lepidoptera larvae during the year 2018. Eight species were recorded from two subfamilies, Exoristinae and Tachininae. The species *Ceromya bicolor* is new for the Serbian fauna. Also, for the same territory, the genus *Ceromya* is recorded for the first time.

Key words:

Tachinidae, Ceromya bicolor, parasitoids, Serbia

Apstract:

Doprinos poznavanju faune muva guseničarki u Srbiji

Muve guseničarke su odgajene iz nekoliko vrsta larvi Lepidoptera tokom 2018. godine. Registrovano je osam vrsta iz dve podfamilije, Exoristinae i Tachininae. Vrsta *Ceromya bicolor* je nova za faunu Srbije. Takođe, za istu teritoriju je prvi put registrovan rod *Ceromya*.

Ključne reči:

Tachinidae, Ceromya bicolor, parazitoidi, Srbija

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Tachinid flies are well known parasitoids of other arthropods. They parasitize almost exclusively insects, especially larval Lepidoptera, but very rarely spiders, scorpions and centipedes (Vincent, 1985; Williams et al., 1990; Stireman et al., 2006). Besides various parasitic Hymenoptera, tachinids are the second most important natural enemies of many pest insects in both natural and agroecosystems. Many tachinid species are being used in pest managements in forestry and crop production systems with notable success (Greathead, 1986; Grenier, 1988).

The family Tachinidae is one of the most diverse among Diptera order, so far over 10,000 species are described worldwide from about 1,520 genera (Irwin et al., 2003). The family is divided in four subfamilies: Exoristinae, Dexiinae, Phasiinae and Tachininae (Herting & Dely - Draskovits, 1993). Although, the group is the most diverse in tropical regions, in Europe there are registered about 877 species (according to Fauna Europaea, Internet Database). This database listed 242 species for the territory of Serbia and Montenegro. However, some recent faunistic papers reported several more species for the territory of Serbia. For example, Hubenov (2008) reported 288 species for the Serbian fauna, Stanković et al. (2014) reported two more species and later Stanković et al. (2018) published an updated list of 295 species from which five are newly recorded and the new genus *Buquetia* for the investigated territory.

Tachinids were reared from Lepidoptera larvae during the year 2018 mostly from the southern part of Serbia. The host larvae were grown in special plastic boxes in the laboratory until parasitoids emergence. After rearing the adults of tachinid flies, they were put in small plastic vials and preserved in 96 % ethanol. The identification of the species was done by the last author of the paper. The rearing of parasitoids and all the material is stored at the Department of Biology and Ecology, Faculty of Science and Mathematics, University of Niš, Serbia. The remarks are based on a catalogue on Palaearctic tachinid-host records (Tschorsnig, 2017). New species and genus is newly reported for the investigated territory and marked by an asterisk (*).

Species list

Subfamily Exoristinae

Erycia fatua (Meigen, 1824)

3 ♂, 1 ♀, Serbia, Vlasina lake, 27.V 2018. ex *Melitaea didyma* (Esper, 1778) (Nymphalidae), on *Centaurea jacea* L., leg. V. Žikić. Remark: A parasitoid of *Melitaea, M. didyma* was already known (see Tschorsnig, 2017: 181).

Erycia festinans (Meigen, 1824)

2 ♂, 4 ♀, Serbia, Vlasina lake, 27.V 2018. ex *Melitaea phoebe* (Denis & Schiffermüller, 1775) (Nymphalidae), on *Centaurea jacea* L., leg. S. Stanković. Remark: A parasitoid of Melitaea, *M. phoebe* was already known. *Erycia festinans* is morphologically very similar to *Erycia fatua* (see Herting, 1973; Tschorsnig & Herting, 1994). Having the same hosts, there remains some doubt if both are really separate species. (see Tschorsnig, 2017: 182).

Eumea mitis (Meigen, 1824)

1 ♂, Serbia, Niš, Brzi brod, 3.V 2018. unknown host, on *Sambucus ebulus* L., leg. V. Žikić. Remark: A parasitoid of Noctuidae and several microlepidoteran families (see Tschorsnig, 2017: 187-188).

Eurysthaea scutellaris (Robineau-Desvoidy, 1848)

1 ♂, Serbia, Sićevačka klisura (gorge), Ostrovica, 1.V 2018. ex *Yponomeuta* sp. (Yponomeutidae) on *Euonymus japonicus* Thunb, leg. V. Žikić. Remark: Common parasitoid of *Yponomeuta* spp. (see Tschorsnig, 2017: 215-216).

Masicera sphingivora (Robineau-Desvoidy, 1830)

2 ♀, Serbia, Vlasina lake, 27.V 2018. ex *Melitaea didyma* (Esper, 1778) (Nymphalidae), on *Centaurea jacea* L., leg. S. Stanković. Remark: A parasitoid with many hosts, also *M. didyma* was already known (see Tschorsnig, 2017: 232).

Phryxe hirta (Bigot, 1880)

1 ♂, Serbia, Vlasina lake, 27.V 2018. ex *Heterogynis zikici* de Freina, 2018 (Heterogynidae) on *Chamaecytisus heuffelii* (Wierzb. ex Griseb. and Schenk) Rothm, leg V. Žikić. Remark: Typical parasitoid of *Heterogynis* spp. (see Tschorsnig, 2017: 117).

Phryxe vulgaris (Fallén, 1810)

1 ♀, Serbia, Sićevačka klisura (gorge), 7.V 2018. ex *Brenthis daphne* (Bergsträsser, 1780) (Nymphalidae), on *Rubus* sp. leg V. Žikić. Remark: A common species which has many hosts; also *B. daphne* is among it (see Tschorsnig, 2017: 133).

Subfamily Tachininae

**Ceromya bicolor* (Meigen, 1824)

2 ♂, 2 ♀, Serbia, Paraćin, Bukovik, 5.V 2018. unknown host, on unknown plant, leg N. Veljković. Remark: A small species which occasionally develops in numbers in large Lasiocampidae (see Tschorsnig, 2017: 272).

Here we present eight tachinid species collected in Serbia from two subfamilies, seven from Exoristinae and one from Tachininae. The species *Erycia festinans* is still not listed in Fauna Europaea for the territory of Serbia although it is reported recently as a new species for this country in Stanković et al. (2018). The same is with the species *Phryxe hirta* which is reported as a new species for Serbia in Stanković et al. (2014). The species *Ceromya bicolor* is the new species for the Serbian fauna, as well as the genus *Ceromya*.

These observations of *L. senator* represent a contribution to the distribution and population census of this species, and also the need of protection of its habitat.

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