

New host and country records for European Tachinidae (Diptera)

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Mückstein, P., Tschorsnig, H.-P., Vaňhara, J. & Michalková, V. 2007: New host and country records for European Tachinidae (Diptera). — Entomol. Fennica 18: 179–183.

The paper presents host records for 17 species of Tachinidae (of subfamilies Exoristinae and Tachininae) from the Czech Republic, Slovakia, Austria, Croatia, Macedonia, Italy, Spain, Portugal, and Bulgaria. New parasitoid-host couples are *Exorista larvarum* – *Melanchra pisi*; *Exorista segregata* – *Catocala nymphaea*; *Sturmia bella* – *Hadena compta*; *Spallanzania multisetosa* – *Cynia sordida* (first host record); *Tachina praeceps* – *Cucullia bubaceki*; and *Bithia modesta* – *Bembecia megillaeformis*. New country records of tachinid species *Rhacodinella apicata* from the Czech Republic, *Masicera pavoniae* from Macedonia and *Bithia demotica* from Portugal are presented.

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Received 20 October 2006, accepted 8 December 2006

1. Introduction

The tachinid fauna of Europe is well known, but new records are done every year. Information on distribution of the European Tachinidae is available on-line in Fauna Europaea (Tschorsnig *et al.* 2005), for the Czech Republic see Vaňhara *et al.* (2004). New on-line and CD versions of the checklist for the Czech Republic and Slovakia were completed by Vaňhara and Tschorsnig (2006).

All tachinids are parasitoids of insects or other

arthropods. Knowledge on their biology, including host insect species is still rather poor. Many problems concerning the host specificity of this large family have not been solved yet, so every host record is important. The short history concerning the research on hosts has been presented in our previous paper (Mückstein *et al.* 2004), including general references.

At present, the authors look for further tachinid hosts by the systematic cooperation particularly with lepidopterologists, who contribute reared tachinids from their breeding of caterpil-

lars from the Czech Republic. But findings from this country yield only a small part of new results. After 1989 our lepidopterologists started freely move out for collection abroad, and so there are new hosts especially from southern and western Europe.

2. Material and methods

As far as not explicitly cited in the text, information on hosts is based on a critical host catalogue for the Czech Tachinidae which is currently compiled by the same authors of the present paper and on Tschorsnig's database on Palaearctic host records (unpubl.).

The tachinid species were identified by the authors of the present paper, hosts by the collectors. Nomenclature and arrangement of the tachinids follow Herting and Dely-Draskovits (1993), the names of the lepidopteran hosts follow Karsholt and Razowski (1996).

The material provided by various breeders is stored in the collections of P. Mückstein (cM) and J. Vaňhara (cV).

3. Faunistic records

3.1. Exoristinae

3.1.1. *Exorista larvarum* (Linnaeus, 1758)

Material: 3 ♀♀, reared from *Melanchra pisi* (Linnaeus) (Lepidoptera, Noctuidae), Czech Republic, Moravia, Přeckov, 1984, leg. Z. Laštůvka (cM, cV); 2 ♂♂, reared from pupa of *Euthrix potatoria* (Linnaeus) (Lepidoptera, Lasiocampidae), Czech Republic, Bohemia, Týniště nad Orlicí, 13.VII.1986, leg. J. Voda (cM).

Notes: A common tachinid which develops in many lepidopteran families.

Melanchra pisi is a new host record.

3.1.2. *Exorista segregata* (Rondani, 1859)

Material: 1 ♀, reared from *Catocala nymphaea* (Esper) (Lepidoptera, Noctuidae), Spain, Andalusia, NW Sierra Nevada, El Molinillo near Diezma, 1200 m a.s.l., VII.2004, leg. Z. Laštůvka (cV).

Notes: *Exorista segregata* is an unspecialised species (common in southern Europe), parasitising many lepidopteran families.

Catocala nymphaea is a new host record.

3.1.3. *Meigenia mutabilis* (Fallén, 1810)

Material: 1 ♂, reared from larva of *Gastrophysa viridula* (Degeer) (Coleoptera, Chrysomelidae), Czech Republic, Praha, Ruzyně, 10.VI.2003, leg. M. Honěk (cM).

Notes: A common parasitoid of Coleoptera larvae. Already known from the host *Gastrophysa viridula* (many records).

Gastrophysa viridula is a new host record for the Czech Republic.

3.1.4. *Compsilura concinnata* (Meigen 1824)

Material: 2 ♀♀, reared from *Aglaope infausta* (Linnaeus) (Lepidoptera, Zygaenidae), Portugal, Bragança, VII.2004, leg. Z. Laštůvka (cV).

Notes: *Compsilura concinnata* is the tachinid species with the highest number of known host species (currently at least 230 in the Palaearctic). *Aglaope infausta* was already known as host from Spain and France (Benlloch & Cañizo 1934, Herting 1960).

Aglaope infausta is a new host record for Portugal.

3.1.5. *Winthemia quadripustulata* (Fabricius, 1794)

Material: 1 ♀, reared from larva of *Cucullia lactucae* (Denis & Schiffermüller) (Lepidoptera, Noctuidae), Czech Republic, Rokytnice nad Jizerou, 30.VII.2003, leg. L. Traxler (cM).

Notes: Hosts of this common species are mainly Noctuidae. Herting (1960) records *Cucullia lactucae* as a host from Germany.

Cucullia lactucae is a new host record for the Czech Republic.

3.1.6. *Phryxe prima* (Brauer & Bergenstamm, 1889)

Material: 1 ♀, reared from larva of *Zygaena carniolica* (Scopoli) (Lepidoptera, Zygaenidae), Czech Republic, Bohemia, Květná near Lito-

myšl, TCP Stráně 6264C, 18.VII.1998, leg. B. Mocek (cV).

Notes: A parasitoid of *Zygaena* spp. Already known from the host *Zygaena carniolica*.

Zygaena carniolica is a new host record for *Phryxe prima* from the Czech Republic.

3.1.7. *Lydella stabulans* (Meigen, 1824)

Material: 1 ♀, reared from *Hydraecia micacea* (Esper) (Lepidoptera, Noctuidae), Czech Republic, Bohemia, Píšťany near Louny, 10.VII.2002, leg. Šedivý (cV).

Notes: A known parasitoid of noctuid larvae which feed hidden in stems of herbaceous plants. *Hydraecia micacea* is a common host of *Lydella stabulans*.

Hydraecia micacea is a new host record for the Czech Republic.

3.1.8. *Huebneria affinis* (Fallén, 1810)

Material: 1 ♂, reared from *Arctia caja* (Linnaeus) (Lepidoptera, Arctiidae), Czech Republic, Bohemia, Vracov, VII.1983, leg. Havel [“59884”] (cV); 1 ♀, same host, Czech Republic, Moravia, Karlova Studánka env., 29.V.2003, leg. L. Traxler (cM); 1 ♂, same host, Slovakia, Strážcovské vrchy, Široká dolina, 18.VI.2004, leg. J. Rybár (cV).

Notes: Usually a common parasitoid of Arctiidae. There are numerous records from the host *Arctia caja*.

Arctia caja is a new host record for *Huebneria affinis* from the Czech Republic.

3.1.9. *Carcelia rasa* (Macquart, 1849)

Material: 1 ♂, 2 ♀♀, reared from larva of *Calliteara pudibunda* (Linnaeus) (Lepidoptera, Lymantriidae), Czech Republic, Bohemia, Týniště nad Orlicí, 16.XII.1986, leg. J. Voda (cM).

Notes: This species develops in Lymantriidae. Known from many countries as parasitoid of *Calliteara pudibunda*.

Calliteara pudibunda is a new host record for *Carcelia rasa* from the Czech Republic.

3.1.10. *Rhacodinella apicata* (Pandellé, 1896)

Material: 1 ♀ (in bad condition), reared from pupa of *Phyllodesma ilicifolia* (Linnaeus) (Lepidoptera, Lasiocampidae), Czech Republic, Příbram, 28.VI.2002, leg. L. Traxler (cM).

Notes: An unspecialised and normally rare species. The host *Phyllodesma ilicifolia* is already recorded by Herting (1960) from Switzerland.

The tachinid species *Rhacodinella apicata* is recorded for the first time from the Czech Republic.

3.1.11. *Sturmia bella* (Meigen, 1824)

Material: 1 ♀, reared from *Hadena compta* (Denis & Schiffermüller) (Lepidoptera, Noctuidae), Austria, Dachstein-Gruppe, Ramsau a. D., 46°54' N, 13°36' E, 26.–31.VII.2003, leg. V. Červenka (cV).

Notes: A common species which is predominantly reared from Nymphalidae, but also members of several other lepidopteran families are known as hosts, including a few Noctuidae.

Hadena compta is a new host record.

3.1.12. *Masicera pavoniae* (Robineau-Desvoidy, 1830)

Material: 4 ♂♂, 2 ♀♀, reared from *Saturnia pyri* (Denis & Schiffermüller) (Lepidoptera, Saturniidae), Croatia, Istria, Rabac, IV.2005, leg. Z. Laštůvka (cV); 2 ♀♀, same host, Bulgaria, Zlaté Písky, 5.V.1963, leg. V. Zeman (cM); 2 ♂♂, 5 ♀♀, reared from *Saturnia spini* (Denis & Schiffermüller), Macedonia, Tetovo, 15.V.1992, leg. L. Traxler (cM).

Notes: *Masicera pavoniae* is – as a main parasitoid of *Saturnia* spp. – often reared from *S. pyri* and *S. spini*. One of the four males of the series from Croatia is aberrant because it shows two proclinate orbital bristles (instead of one).

The tachinid species *Masicera pavoniae* is recorded for the first time from Macedonia.

3.1.13. *Spallanzania multisetosa*
(Rondani, 1859)

Material: 1 ♀, reared from *Cycnia sordida* (Hübner) (Lepidoptera, Arctiidae), Italy, Vall d'Aosta, VII.2003, (cV).

Notes: *Spallanzania multisetosa* is not rare in southern Europe and the warmer parts of the Alps. Other species of the genus *Spallanzania*, *S. hebes* and *S. rectistylum*, are known as parasitoids of Noctuidae. It would be of interest to revise the old record of "*Cnephalia bucephala*" reared from the arctiid *Phragmatobia fuliginosa*, as it cannot be ruled out that this might have been *S. multisetosa*. This record, however, is only cited in a footnote of Bezzi (1907) and given without any reference.

Cycnia sordida is the first host record.

3.2. Tachininae

3.2.1. *Tachina praeceps* Meigen, 1824

Material: 1 ♂, reared from *Cucullia bubaceki* Kitt (Lepidoptera, Noctuidae), Spain, Aragón, Belchite, 41°25'30" N, 00°45'02 E, 22".X.2003, leg. V. Červenka (cV).

Notes: A predominantly southern European species which develops in various host families (Lymantriidae, Lasiocampidae, Arctiidae, Noctuidae, Sphingidae).

Cucullia bubaceki is a new host record.

3.2.2. *Bithia demotica* (Egger, 1861)

Material: 1 ♀, reared from *Bembecia psoraleae* Bartsch & Bettag (Lepidoptera, Sesiidae), Portugal, Algarve, Messines Baixo, 25.VII.2003, leg. Z. Laštůvka (cV).

Notes: A parasitoid of Sesiidae (*Bembecia*, *Chamaesphecia*, *Synansphecia*). *Bembecia psoraleae* was recorded as host by Bartsch and Bettag (1997) from Spain.

The tachinid species *Bithia demotica* is recorded for the first time from Portugal.

3.2.3. *Bithia glirina* (Rondani, 1861)

Material: 1 ♂, 1 ♀, reared from larva of *Chamaesphecia empiformis* (Esper) (Lepidoptera, Sesiidae), Slovakia, Hrádok nad Váhom, 1987, leg. Z. Laštůvka (cM).

Notes: A parasitoid of Sesiidae (*Chamaesphecia*, *Bembecia*). *Chamaesphecia empiformis* was already recorded as host by Herting (1960).

Chamaesphecia empiformis is the first host record for Slovakia.

3.2.4. *Bithia modesta* (Meigen, 1824)

Material: 3 ♂♂, 1 ♀, reared from larva of *Bembecia megillaeformis* (Hübner) (Lepidoptera, Sesiidae), Slovakia, Zádiel, 25.VII.1987, 1990 and 1993, leg. Z. Laštůvka (cM, cV); 2 ♀♀ (in bad condition), reared from *Synansphecia triannuliformis* (Freyer) (Lepidoptera, Sesiidae), Bulgaria, Mičurin, VI.1982, leg. Z. Laštůvka (cV).

Notes: A parasitoid of Sesiidae (*Bembecia*, *Synansphecia*, *Pyropteron*).

Bembecia megillaeformis is a new host record.

Acknowledgements. The reared material was kindly provided by L. Traxler (Pardubice, CZ), B. Mocek (Hradec Králové, CZ), Z. Laštůvka (Brno, CZ) and P. Bitušik (Bánská Štiavnica, SK). For financial supporting we are indebted to the Ministry of Education/Masaryk University (MSM 0021622416) and the Grant Agency CR (524/05/H536).

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