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## New records of Anthomyiidae (Diptera) from Switzerland

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In this study, 32 species of Anthomyiidae are recorded for the first time from Switzerland. For 15 species which were known only from old literature records, new data are presented. A revised checklist of the 160 species of Anthomyiidae currently known from Switzerland is given. The present state of knowledge of the Swiss fauna is briefly discussed.

Key-words: Diptera, Anthomyiidae, distribution, Switzerland

### INTRODUCTION

From a biogeographical point of view the family Anthomyiidae is remarkable in having a mainly Holarctic distribution. Of the approximately 1560 species described worldwide, not less than 80% are known from the Palaearctic and Nearctic region, and only 2 Neotropical genera do not occur in the Holarctic (Suwa & Darvas, 1998). The family is particularly rich in species and specimens in higher altitudes in the Alps and in Northern parts of the Holarctic region, whereas the lowlands of the Mediterranean basin have a low diversity. For instance, only about 40 species have been recorded from Israel, and most of them only occur in the mountains of the Northern part (Freidberg, 1988). It may therefore be concluded that the fauna of Switzerland, a country with a large surface area at higher elevation, should be particularly diverse.

In the first checklist of Swiss Diptera, some 118 species were recorded (Michelsen & Merz, 1998), and 5 species were added in the 1st supplement by Merz *et al.* (2001). These two lists were based on 76 species which were identified by the authors, and 47 species which were included from reliable literature records, mainly taken from the Catalogue of Palaearctic Diptera (Dely-Draskovits, 1993). Another 5 species can be added to these 123 species which were recorded in three publications not included in the previous checklists: *Heterostylodes annularis* (Tiensuu, 1936) (Hennig, 1966-1976), *Leucophora sericea* Robineau-Desvoidy, 1830 (Volkart, 1986) and 3 species of *Strobilomyia* in Roques & Hirschheydt (1990): *S. infrequens* (Ackland, 1964), *S. laricicola* (Karl, 1928) and *S. melania* (Ackland, 1964). Compared with surrounding countries it was argued that the quality of the list is poor, e.g. that numerous species wait to be discovered in Switzerland. A superficial survey of the specimens housed in various entomological collections in Switzerland revealed that several thousand specimens were still unidentified or their identification had not been revised in the past 50 years. Moreover, the family

Anthomyiidae has never been the subject of a comprehensive study in Switzerland. Only 3 studies deal more or less specifically with this family: Günthart (1949), Ringdahl (1957) and Volkart (1982). Therefore, it is not surprising that the study of 490 specimens by the authors revealed a number of new records for this country.

#### MATERIAL AND METHODS

The present study is based on 490 specimens collected mainly by the second author. The specimens were mainly collected in the following 5 regions of Switzerland (in brackets the abbreviations used in the paper): (a) Canton Geneva (GE); (b) Canton Grisons (GR), mainly in the Lower Engadine Valley and in the Lenzerheide area; (c) Canton Ticino (TI), mainly in lowlands around Locarno and on the Monte San Giorgio; (d) Canton Valais (VS), in the Central Valais between Leuk and Brig, and around the village of Visperterminen; (e), Canton Zürich (ZH), mostly in the town of Zürich. A few specimens are from the following cantons: Aargau (AG), Berne (BE), Glarus (GL), Obwalden (OW), St. Gallen (SG), Schaffhausen (SH), Schwyz (SZ). The specimens are deposited in the Muséum d'histoire naturelle Genève (MHNG), with duplicate specimens in the private collections of the authors. Nomenclature follows Dely-Draskovits (1993), with some modifications. The species are arranged in alphabetical order of genera and species.

The distribution records are based on Dely-Draskovits (1993) with some additions. The term "Entire Palaearctic region" means that the species is recorded from many European countries as well as from Eastern Palaearctic region. It should be noted, however, that most species only occur in mountains in warmer countries (Mediterranean region, Southern Palaearctic region).

#### RESULTS

##### New species for Switzerland

###### *Acyglossa atramentaria* (Meigen, 1826)

*Material:* GE, Cartigny, Moulin de Vert, 350m, 24.V.1999, leg. Merz & Müller, 1 ♂.

*Distribution:* Central and Southern Europe, Near East.

###### *Anthomyia pluvialis* (Linnaeus, 1758)

*Material:* VS, Visperterminen, Rothorn, 2000-2200m, 15.VII.1995, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region excluding Japan.

###### *Anthomyia procellaris* Rondani, 1866

*Material:* VS, Raron, Heidnischbiel, 700-770m, 26.V.1999, leg. Merz, 1 ♂; ZH, Zürich-Allmend, 1.V.1995, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

###### *Botanophila maculipes* (Zetterstedt, 1845)

*Material:* GR, Valbella/Casoja, 1530m, 14.VII.1998, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Botanophila profuga* (Stein, 1916)**

*Material:* VS, Visperterminen, Rothorn, 2000-2250m, 15.VII.1995, leg. Merz, 1 ♂; VS, Visperterminen, 1400m, 14.VII.1995, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Botanophila seneciella* (Meade, 1892)**

*Material:* GL, Schwanden/Niderntal, 1000m, 21.VI.1997, leg. Merz & Eggenberger, 1 ♂.

*Distribution:* Northern and Central Europe to East Palaearctic including Japan.

***Calythea dedecorata* (Rondani, 1866)**

*Material:* VS, Jeitzinen, 1550m, 16.VI.1999, leg. Merz & Eggenberger, 1 ♂.

*Distribution:* Central and Southern Europe, North Africa, to East Palaearctic but excluding Japan.

***Calythea nigricans* (Robineau-Desvoidy, 1830)**

*Material:* VS, Grächen, 1650m, 3.VI.1987, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Chirosia cinerosa* (Zetterstedt, 1845)**

*Material:* GL, Schwanden/Niderntal, 1000m, 21.VI.1997, leg. Merz & Eggenberger, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Delia brassicaeformis* (Ringdahl, 1926)**

*Material:* GR, Lenzerheide, Piz Danis, 2490m, 19.VII.1996, leg. Merz, 1 ♂; GR, Lenzerheide, Piz Scalottas, 2050m, 12.VII.1996, leg. Merz, 1 ♂; Valbella, Stätzerhorn, 2574m, 30.VII.1999, leg. Merz, 2 ♂♂.

*Distribution:* Scandinavia and the Alps.

***Delia cardui* (Meigen, 1826)**

*Material:* VS, Visperterminen-Rothorn, 2250m, 26.VIII.2001, leg. Merz & Landry, 1 ♂.

*Distribution:* Widespread in the Palaearctic region excluding Japan.

***Delia crinita* Hennig, 1974**

*Material:* VS, Visperterminen, Giw-Gebidemsee, 1900-2200m, 28.VIII.2001, leg. Merz & Landry (coll. M. Ackland), 1 ♂.

*Distribution:* Austrian, Italian and Swiss Alps.

***Delia floricola* Robineau-Desvoidy, 1830**

*Material:* VS, Baltschieder-Kumme, 650m, 24.VI.2000, leg. Merz, 1 ♂.

*Distribution:* Central and Southern Europe to the Near East.

***Delia majuscula* (Pokorny, 1889)**

*Material:* VS, Visperterminen, Giw-Gebidemsee, 1900-2200m, 28.VIII.2001, leg. Merz & Landry (coll. M. Ackland), 1 ♂.

*Distribution:* Central and Southern Europe, North Africa to East Palaearctic, excluding Japan.

***Delia penicillaris* (Rondani, 1866)**

*Material:* VS, Visperterminen, ob Dorf, 27.VIII.2001, 1550m, leg. Merz & Landry (coll. M. Ackland), 1 ♂.

*Distribution:* Northern and Central Europe eastwards to Mongolia.

***Delia pseudofugax* (Strobl, 1893)**

*Material:* VS, Visperterminen, Giw-Gebidemsee, 1900-2200m, 28.VIII.2001, leg. Merz & Landry, 1 ♂.

*Distribution:* Alps in Central and Southern Europe.

***Egle concomitans* (Pandellé, 1900)**

*Material:* VS, Leuk-Pfynwald, 650m, 21.IV.1998, leg. Merz & Botta, 1 ♂.

*Distribution:* Widespread in Palaearctic region excluding Japan.

***Eutrichota praepotens* (Wiedemann, 1817)**

*Material:* GR, S'Chanf/Flin, 1600m, 7.VIII.1996, leg. Merz & Bächli, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Heterostylodes obscurus* (Macquart, 1835)**

*Material:* GR, Lenzerheide, Lavozy-Piz Danis, 2000-2200m, 19.VII.1996, Merz, 1 ♂; VS, Jeitzinen, Untere Fäsialp, 2000m, 3.VII.2001, leg. Merz, 1 ♂; VS, Visperterminen, Giw, 1900m, 16.VII.1995, leg. Merz, 1 ♂; VS, Visperterminen, Rothorn, 2000-2200m, 15.VII.1995, leg. Merz, 1 ♂.

*Distribution:* West Palaearctic region.

***Hydrophoria diabata* (Pandellé, 1899)**

*Material:* GR, Lenzerheide, Piz Danis, 2490m, 19.VII.1996, leg. Merz, 2 ♂♂.

*Distribution:* West Palaearctic region south as far as Greece.

***Hylemya urbica* van der Wulp, 1896**

*Material:* GR, S'Chanf/Flin, 1600m, 7.VIII.1996, leg. Merz & Bächli, 1 ♂.

*Distribution:* Widespread in Palaearctic region including Japan.

***Lasiomma anthomyinum* (Rondani, 1866)**

*Material:* TI, Monte S. Giorgio, 600-1100m, 18.VI.1995, leg. Merz & Bächli, 1 ♂; VS, Leuk-Platten, 625m, 2.V.1999, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region excluding Japan.

***Pegomya calyptrata* (Zetterstedt, 1846)**

*Material:* VS, Jeitzinen, 1550m, 26.VI.1999, leg. Merz & Eggenberger, 1 ♂; VS, Visperterminen, Rothorn-Giw, 1900-2300m, 30.VII.1998, leg. Merz & Bächli, 1 ♂.

*Distribution:* Western Palaearctic region.

***Pegomya maculata* (Stein, 1906)**

*Material:* GR, Andeer/Clugin, 980m, 17.VI.1994, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Pegomya meridiana* (Villeneuve, 1923)**

*Material:* GE, Cartigny, Moulin de Vert, 350m, 24.V.1999, leg. Merz & Müller, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Pegomya rufina* (Fallén, 1825)**

*Material:* GR, Zernez/Gondas, 1480m, 4.VIII.1996, leg. Merz & Bächli, 1 ♂.

*Distribution:* Widespread in Palearctic region including Japan.

***Pegomya winthemi* (Meigen, 1826)**

*Material:* VS, Leuk-Pfynwald, 600m, 25.VIII.2001, leg. Merz & Landry, 1 ♂; VS, Visperterminen, ob Dorf, 1550m, 27.VIII.2001, leg. Merz & Landry, 1 ♂.

*Distribution:* Widespread in the Palearctic region.

***Pegoplata patellans* (Pandellé, 1900)**

*Material:* VS, Visperterminen, Rothorn-Giw, 1900-2300m, 30.VII.1998, leg. Merz & Bächli, 1 ♂.

*Distribution:* Widespread in the Palearctic region.

***Phorbia atrogrisea* Tiensuu, 1936**

*Material:* ZH, Zürich-Ziegelhütte, 480m, 13.IV.1997, leg. Merz., 1 ♂

*Distribution:* Palearctic region eastwards as far as Siberia excluding Japan.

***Phorbia bartaki* Ackland & Michelsen, 1987**

*Material:* GE, Bernex-Signal, 510m, 21.IV.1999, leg. Merz, 1 ♂.

*Distribution:* West Palearctic region as far as the Middle East.

***Phorbia moliniaris* (Karl, 1917)**

*Material:* GE, Russin, Verbois, bord du Rhône, 380m, 10.IV.1999, leg. Merz, 1 ♂.

*Distribution:* North and Central Europe.

***Phorbia unipila* (Karl, 1917)**

*Material:* VS, Leuk-Pfynwald, 630m, 21.IV.1998, leg. Merz & Botta, 1 ♂; 1\$, ZH, Zürich-Allmend, 450m, 10.IX.1996, leg. Merz, 1 ♂.

*Distribution:* Central Europe.

**Confirmed species**

The species in this section were included in the checklist of Swiss Diptera based only on reliable literature records (Michelsen & Merz, 1998) or recorded for the first time from Switzerland by Roques & Hirschheydt (1990). Here we present data for recently collected specimens, confirming the presence of these species in Switzerland.

***Botanophila brunneilinea* (Zetterstedt, 1845)**

*Material:* VS, Visperterminen, Giw-Gebidemsee, 1900-2200m, 28.VIII.2001, leg. Merz & Landry, 1 ♂.

*Distribution:* Europe and the Middle East.

***Botanophila latifrons* (Zetterstedt, 1845)**

*Material:* GR, Juf-Stallerberg, 2200-2550m, 19.VI.1994, leg. Merz, 1 ♂; GR, Valbella/Stätzerhorn, 2574m, 30.VII.1999, leg. Merz, 1 ♂; TI, Piora, 1965m, 11.VI.1996, leg. Bernasconi, 1 ♂.

*Distribution:* Widespread in the Palearctic region.

***Botanophila rubrigena* (Schnabl, 1915)**

*Material:* VS, Visperterminen, Rothorn, 2150-2320m, 11.VIII.1997, leg. Merz, 1 ♂.

*Distribution:* North and Central Europe, East Palaearctic.

***Delia piliventris* (Pokorny, 1899)**

*Material:* GR, Lenzerheide, Parpaner Rothorn, 2850m, 14.VII.1996, leg. Merz, 2 ♂ ♂.

*Distribution:* North and Central Europe.

***Delia tornensis* (Ringdahl, 1926)**

*Material:* GR, Lenzerheide, Sundroina, 1520m, 17.V.1997, leg. Merz, 1 ♂.

*Distribution:* Scandinavia and the Alps.

***Emmesomyia grisea* (Robineau-Desvoidy, 1830)**

*Material:* GR, Zernez-Gondas, 1480m, 4.VIII.1996, leg. Merz & Bächli, 1 ♂; TI, Monte San Giorgio, 600-1100m, 5.VII.2001, leg. Merz, 2 ♂ ♂; ZH, Zürich-Ziegelhütte, 460m, 11.V.1997, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Hylemya partita* (Meigen, 1826)**

*Material:* GE, Cartigny, Moulin de Vert, 350m, 9.VII.2001, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Hyporites montanus* (Schiner, 1862)**

*Material:* ZH, Embrach-Haumüli, 400m, Malaisefalle, 13.V.1998, leg. Wolf, 1 ♂; ZH, Zürich-Zürichberg, 450-650m, 25.V.1995, leg. Merz, 1 ♂.

*Distribution:* Central Europe and east to the Urals.

***Pegomya bicolor* (Wiedemann, 1817)**

*Material:* TI, Gordola/Bolle, 220m, 1.VIII.1993, leg. Merz & Eggenberger, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Pegomya geniculata* (Bouché, 1834)**

*Material:* TI, Biasca-Loderio, 350m, 17.VI.1995, leg. Merz & Bächli, 1 ♂; ZH, Embrach-Haumüli, 400m, 10.VII.1997, leg. Merz, 1 ♂; ZH, Zürich-Ziegelhütte, 20.VI.1998, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Pegomya haemorrhoum* (Zetterstedt, 1838)**

*Material:* VS, Visperterminen, ob Dorf, 1550m, 27.VIII.2001, leg. Merz & Landry, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Pegomya solennis* (Meigen, 1826)**

*Material:* TI, Biasca-Loderio, 350m, 31.III.1994, leg. Merz, 1 ♂.

*Distribution:* Widespread in the Palaearctic region.

***Phorbia curvicauda* (Zetterstedt, 1845)**

*Material:* ZH, Zürich-Allmend, 450m, 1.V.1995, leg. Merz, 2 ♂ ♂; GR, Lenzerheide/Sundroina, 1520m, 17.V.1997, leg. Merz, 1 ♂.

*Distribution:* Widespread in Palaearctic region excluding Japan.

***Strobilomyia infrequens* (Ackland, 1964)**

*Material*: ZH, Zürich-Hönggerberg, 530m, 20.IV.1996, leg. Merz, 1 ♂.

*Distribution*: Widespread in the Palaearctic region.

***Subhylemyia longula* (Fallén, 1824)**

*Material*: SH, Bargener Randen, 800m, 28.VII.1992, leg. Merz, 1 ♂; VS, Leuk-Platten, 630m, 22.IV.1998, leg. Merz & Botta, 1 ♂; VS, Visperterminen, Giw-Gebidemsee, 28.VIII.2001, leg. Merz & Landry, 1 ♂; VS, Visperterminen, Rothorn, 2000-2200m, 15.VII.1995, leg. Merz, 1 ♂.

*Distribution*: Widespread in the Palaearctic region.

**Revised checklist of the Anthomyiidae of Switzerland**

Because of the numerous additions in this paper a revised checklist for Switzerland is presented. Synonyms or new combination are only presented when different from Michelsen & Merz (1998) or Merz *et al.* (2001). Each species is followed by a number in brackets, indicating the origin of the record:

(1): In this paper newly recorded for Switzerland.

(2): confirmed records; in Checklist (Michelsen & Merz, 1998) included only from literature records, new specimens were examined in course of the present study.

(3): new material examined during the present study, but the species was already known from personally examined Swiss specimens in Michelsen & Merz (1998) and Merz *et al.* (2001).

(4): recorded by Michelsen & Merz (1998) or Merz *et al.* (2001) based on personally examined specimens, but not seen in the present study.

(5): recorded by Michelsen & Merz (1998) based on reliable literature records only (see Michelsen & Merz, 1998 for list of references).

*Acyglossa atramentaria* (Meigen, 1826) (1)

- *pollinosa* Villeneuve, 1908 (5)

*Adia cinerella* (Fallén, 1825) (3)

- *grisella* (Rondani, 1871) (3)

*Alliopsis billbergi* (Zetterstedt, 1838) (4)

- *conifrons* (Zetterstedt, 1845) (5)

- *glacialis* (Zetterstedt, 1845) (5)

- *pilitarsis* (Stein, 1900) (5)

- *silvestris* (Fallén, 1824) (5)

- *teriolensis* (Pokorny, 1893) (5)

*Anthomyia liturata* (Robineau-Desvoidy, 1830) (3)

- *monilis* (Meigen, 1826) (3)

- *pluvialis* (Linnaeus, 1758) (1)

- *procellaris* Rondani, 1866 (1)

*Botanophila bompadrei* (Bezzi, 1918) (3)

- *brunneilinea* (Zetterstedt, 1845) (2)

- *centaureae* (Hennig, 1970) (5)

- *discreta* (Meigen, 1826) (5)

- *flavisquama* (Stein, 1906) (5)

- *fugax* (Meigen, 1826) (3)

- *gentianae* (Pandellé, 1900) (5)



- *latifrons* (Zetterstedt, 1845) (2)
- *lobata* (Collin, 1967) (4)
- *maculipes* (Zetterstedt, 1845) (1)
- *profuga* (Stein, 1916) (1)
- *rubrigena* (Schnabl, 1915) (2)
- *sanctimarci* (Czerny, 1906) (4)
- *seneciella* (Meade, 1892) (1)
- *spinosa* (Rondani, 1866) (4)
- *striolata* (Fallén, 1824) (3)
- *trapezina* (Zetterstedt, 1845) (3)
- *tuxeni* (Ringdahl, 1953) (3)
- *varicolor* (Meigen, 1826) (3)
- *verticella* (Zetterstedt, 1838) (4)
- Calythea dedecorata* (Rondani, 1866) (1)
- *nigricans* (Robineau-Desvoidy, 1830) (1)
- Chiastocheta dentifera* Hennig, 1953 (4)
- *lophota* Karl, 1943 (3)
- *macropyga* Hennig, 1953 (3)
- *rotundiventris* Hennig, 1953 (4)
- *setifera* Hennig, 1953 (4)
- *trollii* (Zetterstedt, 1845) (4)
- Chirosia cinerosa* (Zetterstedt, 1845) (1)
- Delia antiqua* (Meigen, 1826) (5)
- *brassicaeformis* (Ringdahl, 1926) (1)
- *cardui* (Meigen, 1826) (1)
- *carduiiformis* (Schnabl, 1911) (5)
- *coarctata* (Fallén, 1825) (3)
- *commixta* (Séguy, 1925) (4)
- *crinita* Hennig, 1974 (1)
- *criniventris* (Zetterstedt, 1860) (3)
- *echinata* (Séguy, 1923) (5)
- *elongata* (Pokorny, 1889) (5)
- *floralis* (Fallén, 1824) (4)
- *floricola* Robineau-Desvoidy, 1830 (1)
- *florilega* (Zetterstedt, 1845) (3)
- *frontella* (Zetterstedt, 1838) (3)
- *gallica* Hennig, 1974 (3) (Fig. 1)
- *interflua* (Pandellé, 1900) (5)
- *longicauda* (Strobl, 1898) (3)
- *majuscula* (Pokorny, 1889) (1)
- *nasutula* (Pandellé, 1900) (5) (= *Delia aconiti* (Ringdahl, 1948); see Michelsen & Baez 2002)
- *nigrescens* (Rondani, 1877) (3)
- *nuda* (Strobl, 1901) (5)
- *penicillaris* (Rondani, 1866) (1)
- *penicillosa* Hennig, 1974 (5)
- *pilitibia* (Stein, 1916) (3)
- *piliventris* (Pokorny, 1889) (2)
- *planipalpis* (Stein, 1898) (5)
- *platura* (Meigen, 1826) (3)

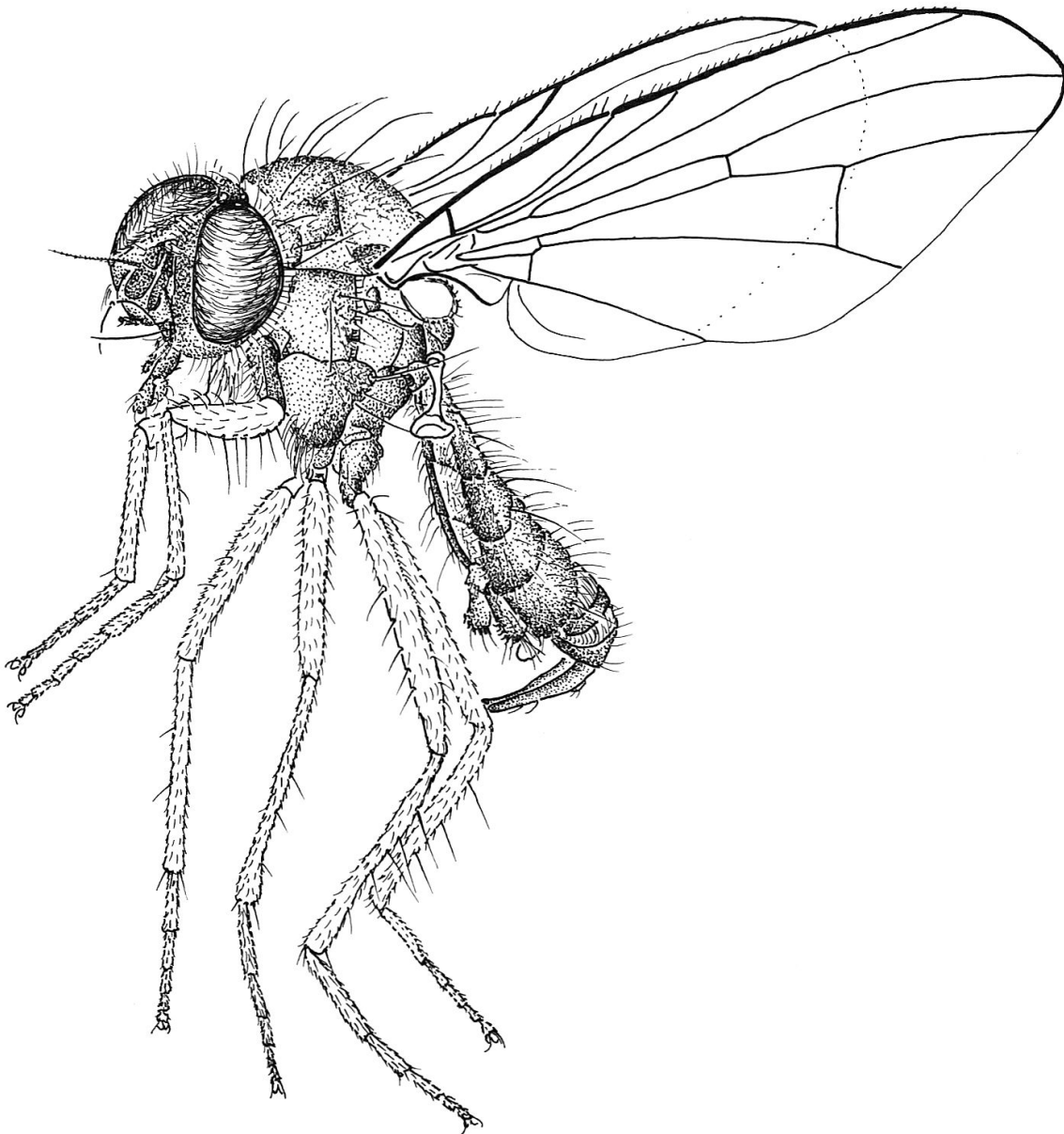


Fig. 1. Habitus of *Delia gallica* Hennig, 1974.

- *pruinosa* (Zetterstedt, 1845) (5)
- *pseudofugax* (Strobl, 1893) (1)
- *radicum* (Linnaeus, 1758) (3)
- *tenuiventris* (Zetterstedt, 1860) (3)
- *tornensis* (Ringdahl, 1926) (2)
- Egle brevicornis* (Zetterstedt, 1838) (4)
- *ciliata* (Walker, 1849) (3)
- *concomitans* (Pandellé, 1900) (1)
- *minuta* (Meigen, 1826) (4)
- *parva* Robineau-Desvoidy, 1830 (4)
- Emmesomyia grisea* (Robineau-Desvoidy, 1830) (2)
- *socia* (Fallén, 1825) (3)
- Eustalomyia festiva* (Zetterstedt, 1845) (4)
- *hilaris* (Fallén, 1823) (3)

- *histrion* (Zetterstedt, 1838) (4)
- *vittipes* (Zetterstedt, 1845) (4)
- Eutrichota frigida* (Zetterstedt, 1845) (3)
- *longimana* (Pokorny, 1887) (5)
- *paratunicata* (Hennig, 1973) (3)
- *partita* (Huckett, 1939) (5) (= *Eutrichota stenometopa* (Hennig, 1973); see Griffiths 1984)
- *praeclara* (Stein, 1914) (5)
- *praepotens* (Wiedemann, 1817) (1)
- *triticiperda* (Stein, 1900) (3)
- Heterostylodes annularis* (Tiensuu, 1946) (5) (Hennig 1966-1976)
- *nominabilis* (Collin, 1947) (4)
- *obscurus* (Macquart, 1835) (1)
- *pilifer* (Zetterstedt, 1845) (4)
- *pratensis* (Meigen, 1826) (4)
- Hydrophoria diabata* (Pandellé, 1899) (1)
- *lancifer* (Harris, 1780) (3)
- *linogrisea* (Meigen, 1826) (3)
- *ruralis* (Meigen, 1826) (3)
- *silvicola* (Robineau-Desvoidy, 1830) (3)
- Hylemya nigrimana* (Meigen, 1826) (3)
- *partita* (Meigen, 1826) (2) (= *Hylemyza partita* in Michelsen & Merz 1998)
- *urbica* van der Wulp, 1896 (1)
- *vagans* (Panzer, 1798) (3)
- *variata* (Fallén, 1823) (3)
- Hyporites montanus* (Schiner, 1862) (2)
- Lasiomma anthomyinum* (Rondani, 1866) (1)
- *latipenne* (Zetterstedt, 1838) (4) (= *Chirosia latipennis*; see Griffiths 2003)
- *picipes* (Meigen, 1826) (5)
- *seminitidum* (Zetterstedt, 1845) (3)
- *strigilatum* (Zetterstedt, 1838) (3)
- Leucophora brevifrons* (Stein, 1916) (3)
- *cinerea* Robineau-Desvoidy, 1830 (3)
- *dorsalis* (Stein, 1916) (4)
- *grisella* Hennig, 1967 (3)
- *obtusa* (Zetterstedt, 1838) (3)
- *sericea* Robineau-Desvoidy, 1830 (5) (Volkart 1986)
- Mycophaga testacea* (Gimmerthal, 1835) (3)
- Paradelia intersecta* (Meigen, 1826) (3)
- Paregle audacula* (Harris, 1780) (3)
- *coerulescens* (Strobl, 1893) (3)
- Pegomya bicolor* (Wiedemann, 1817) (2)
- *conformis* (Fallén, 1825) (4)
- *calyptrata* (Zetterstedt, 1846) (1)
- *flavoscutellata* (Zetterstedt, 1838) (5)
- *geniculata* (Bouché, 1834) (2)
- *haemorrhoum* (Zetterstedt, 1838) (2)
- *maculata* (Stein, 1906) (1)
- *meridiana* (Villeneuve, 1923) (1)
- *nigrisquama* (Stein, 1888) (5)

- *pallidoscutellata* (Zetterstedt, 1852) (5)
- *rufina* (Fallén, 1825) (1)
- *rugulosa* (Zetterstedt, 1845) (5)
- *solennis* (Meigen, 1826) (2)
- *transversa* (Fallén, 1825) (3)
- *winthemi* (Meigen, 1826) (1)
- Pegoplata aestiva* (Meigen, 1826) (3)
- *infirma* (Meigen, 1826) (3)
- *patellans* (Pandellé, 1900) (1)
- Phorbia atrogrisea* Tiensuu, 1936 (1)
- *bartaki* Ackland & Michelsen, 1987 (1)
- *curvicauda* (Zetterstedt, 1845) (2)
- *fumigata* (Meigen, 1826) (3)
- *genitalis* (Schnabl, 1911) (4)
- *longipilis* (Pandellé, 1900) (3)
- *moliniaris* (Karli, 1917) (1)
- *penicillaris* (Stein, 1916) (4)
- *unipila* (Karl, 1917) (1)
- Strobilomyia anthracina* (Czerny, 1906) (3) (= *Lasiomma anthracinum* in Merz *et al.* 2002)
- *infrequens* (Ackland, 1964) (2)
- *laricicola* (Karl, 1928) (5) (Roques & Hirschheydt 1990)
- *melania* (Ackland, 1964) (5) (Roques & Hirschheydt 1990)
- Subhylemyia longula* (Fallén, 1824) (2)
- Zaphne caudata* (Zetterstedt, 1855) (5)
- *frontata* (Zetterstedt, 1838) (5)
- *septimalis* (Pandellé, 1899) (3)
- *spiniclunis* (Pandellé, 1899) (4)

Tab. 1. Number of species of Anthomyiidae in various European countries.

Country	Nr of species	Source
Andorra	51	Michelsen & Baez, 2002
Austria	201	Franz, 1989
Belgium	91	Gosseries & Ackland, 1991
Czech Republic	196	Rozkošný, 1997
Denmark	212	Petersen, 2001
Finland	177	Hackman, 1980
Germany	227	Teschner, 1999
Great Britain	237	Chandler, 1998
Hungary	116	Darvas, 2001
Ireland	43	Chandler, 1998
Italy	143	Rozkošný, 1995
Netherlands	121	Beuk <i>et al.</i> 2002
Poland	202	Draber-Monko, 1991
Portugal	24	Michelsen & Baez, 2002
Slovak Republic	157	Rozkošný, 1997
Spain	180	Michelsen & Baez, 2002
Switzerland	160	present paper

## PRESENT STATE OF KNOWLEDGE

In the course of the present study, some 100 species from Switzerland were identified, of which 32 species have never been recorded from this country. Another 15 species were only known from literature records, and new material was examined here. The remaining 53 species were already listed by Michelsen & Merz (1998) and Merz *et al.* (2001). In total, 160 species are known from Switzerland, of which 33 species are known from literature records only. Compared with the old checklists, where over 40% of the species were known only from literature, this percentage is reduced to about 20%.

A comparison with the checklists of other European countries (Tab. 1) reveals that the fauna of Switzerland still remains insufficiently known. Further efforts in identifying specimens in collections, as well as specific collecting trips are needed for better understanding the diversity in this country.

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