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## New records of Agromyzidae (Diptera) from Switzerland

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New faunistic data about Swiss Agromyzidae are given. 61 species are recorded including 11 species found in Switzerland for the first time, increasing the number of recorded species to 243 for this country.

Keywords: Diptera, Agromyzidae, faunistics, biology, Switzerland.

### INTRODUCTION

The Agromyzidae are a large family with over 900 species known from Europe. Despite the economic importance of many species in agriculture as leaf miners of commercially grown plants, they are still insufficiently studied. Tschirnhäus (1999), for instance, mentioned over 100 undescribed species from Central Europe. It is therefore not surprising that the Agromyzidae fauna of Switzerland has received only little attention so far.

For the Checklist of Diptera of Switzerland Martínez (1998) mentioned 140 species after carefully reviewing literature data and the identification of additional species. Later, Černý (in press) studied over 300 specimens from various localities in Switzerland and added 92 species to the list. Since then, the first author identified another series of Agromyzidae from Switzerland, mainly collected by the 2nd author. As was to be expected, again an important number of species are new for Switzerland, and new localities are presented for already recorded species.

### MATERIAL AND METHODS

The localities are grouped according to cantons of Switzerland and the following abbreviations are used: AG = Aargau; BL = Baselland, GE = Genève; GR = Graubünden (= Grisons); JU = Jura; NE = Neuchâtel; SG = St. Gallen; SH = Schaffhausen; TI = Ticino; VS = Valais; ZH = Zürich. An asterisk (\*) before a species name indicates a species which is recorded here for the first time from Switzerland.

The specimens of this study are deposited in the entomological collection of the «Muséum d'histoire naturelle Genève», some duplicates are retained in the private collection of the first author. Arrangement of species and nomenclature follow Černý (in press).

## LIST OF SPECIES

**Subfamily Agromyzinae***Agromyza anthracina* Meigen, 1830

Reference: Martinez 1998: 269.

Material examined. ZH: Flaach, Thurauen, 350 m a.s.l., 1 ♂, 1.ix.1993, B. Merz leg.

Notes. This species is widespread throughout Europe and it is also known from China. The larva forms a linear blotch mine on *Urtica dioica* (Urticaceae).

*Agromyza cinerascens* Macquart, 1835

Reference: Černý (in press).

Material examined. TI: Biasca-Loderio, 350 m a.s.l., 1 ♂, 15.iii.1994, B. Merz leg. ZH: Zürich-Allmend, 450 m a.s.l., 1 ♂, 1.v.1995, B. Merz leg.; Zürich, Chlösslerli, 600 m a.s.l., 1 ♂, 22.iv.1995, B. Merz leg.

*Agromyza idaeiana* Hardy, 1853

Reference: Černý (in press).

Material examined. ZH: Zürich-Allmend, 450 m a.s.l., 1 ♂, 1.v.1995, B. Merz leg.

*Agromyza mobilis* Meigen, 1830

References: Martinez 1998: 269; Černý (in press).

Material examined. GE: Corsier-Port, vitre veranda, 1 ♂, 1.–31.viii.2004, C. Besuchet leg. SH: Rüdlingen, 350 m a.s.l., 1 ♂, 2.–3.vii.1994, Eggenberger & B. Merz leg. TI: Lavertezzo, 550 m a.s.l., 1 ♂, 31.viii.1993, B. Merz leg.

*Agromyza nana* Meigen, 1830

References: Martinez 1998: 269; Černý (in press).

Material examined. SH: Merishausen-Ladel, 700 m a.s.l., 1 ♂, 13.v.1991, B. Merz leg.

*Agromyza nigripes* Meigen, 1830

References: Griffiths 1963: 132; Martinez 1998: 269; Černý (in press).

Material examined. VS: Visperterminen, Giw-Gebidempass, 1900–2200 m a.s.l., 1 ♂, 21.vii.2004, B. Merz leg. ZH: Zürich-Allmend, 450 m a.s.l., 1 ♂, 5.v.1995, B. Merz leg.; Zürich-Hönggerberg, 600 m a.s.l., 1 ♂, 18.vi.1992, B. Merz leg.; Zürich-Zürichberg, 650 m a.s.l., 1 ♂, 10.viii.1991, B. Merz leg.

*Agromyza polygoni* Hering, 1941

References: Martinez 1998: 269; Černý (in press).

Material examined. GR: Ausserferrera, 1300 m a.s.l., 1 ♂, 17.viii.1991, B. Merz & A. Freidberg leg.

*Agromyza reptans* Fallén, 1823

References: Meier & Sauter 1989: 241; Martinez 1998: 269.

Material examined. ZH: Zürich, 500 m a.s.l., 1 ♂, 15.–17.v.1995, S. Ungricht leg.

Notes. A common species which is widespread in Europe and also confirmed from Turkey, China, India, Kuril Islands and Japan. Recorded also from North America (Canada, United States). The mine generally follows the leaf margin, widening from the initial linear section into an irregular broad blotch on *Urtica dioica* and other *Urtica* spp. (Urticaceae), more rarely on species of *Parietaria* (Urticaceae), *Cannabis*, *Humulus* (Cannabinaceae) and *Mentzelia* (Loasaceae).

*Melanagromyza aeneoventris* (Fallén, 1823)

Reference: Martinez 1998: 269.

Material examined. ZH: Zürich, 600 m a.s.l., 1 ♀, 10.vi.1991, B. Merz leg.

Notes. The species is common and widespread throughout much of Europe, including the Mediterranean area (Italy, S. Spain). *M. aeneoventris* was also recorded from Pakistan, Russia (Asian part) and Japan. The larva feeds as an internal stem borer on *Cirsium* spp., more rarely on species of *Carduus* and *Inula* (Asteraceae).

*Melanagromyza cunctans* (Meigen, 1830)

References: Martinez 1998: 269; Černý (in press).

Material examined. VS: Hohtenn-Bahnhof, 1250 m a.s.l., 1 ♂, 3.ix.1991, B. Merz leg.

\**Ophiomyia beckeri* (Hendel, 1923)

Material examined. TI: Gordola, 220 m a.s.l., 1 ♂, 11.ix.1989, B. Merz leg.

Notes. *O. beckeri* is widespread in Europe, but more common in the Mediterranean area (Canary Islands, Egypt, Greece including Crete, Israel, Italy incl. Sicily, Madeira, Maltese Islands, Morocco, Spain and Tunisia). Also recorded from the Afrotropical Region and India. The larva is feeding internally along the midrib, with short offshoots into the leaf blade on Asteraceae, e.g. on species of *Crepis*, *Hypochoeris*, *Leontodon*, *Picris*, *Sonchus* and *Taraxacum*. New for Switzerland.

*Ophiomyia nasuta* (Melander, 1913)

References: Martinez 1998: 269; Černý (in press).

Material examined. GE: Chancy, La Laire, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg.

*Ophiomyia orbiculata* (Hendel, 1931)

References: Spencer 1964: 800; Martinez 1998: 269; Černý (in press).

Material examined. TI: Gordola, 230 m a.s.l., 1 ♂, 1.iv.1988, B. Merz leg. VS: Branson, Le Pont du Rhône, 460 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.; Leuk, 640 m a.s.l., 1 ♂, 27.vii.1991, B. Merz leg.

*Ophiomyia pulicaria* (Meigen, 1830)

Reference: Martinez 1998: 269.

Material examined. GE: Chancy, La Laire, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg. SH: Barga-Mülital, 650 m a.s.l., 1 ♂, 28.vii.1992, B. Merz leg.

Notes. Occurring throughout Europe and Turkey and ranging east to the East Palaearctic (Siberia, China and Japan). Also recorded from Canada, Costa Rica, Kenya. The larva forms a whitish blotch mine along the midrib, with lateral offshoots into the leaf blade on species of *Crepis*, *Hieracium*, *Hypochoeris*, *Leontodon*, *Picris*, *Sonchus* and *Taraxacum* (Asteraceae).

**Subfamily Phytomyzinae***\*Amauromyza (Amauromyza) leonuri* Spencer, 1971

Material examined. TI: Clivio, Arzo, 460 m a.s.l., 1 ♂, 4.x.2003, H. Vicentini leg.

Notes. *A. leonuri* was described from Germany where it was bred from leaf mines on *Leonurus cardiaca* (Lamiaceae). Later it was also recorded from the Czech Republic and Poland. New for Switzerland.

*\*Amauromyza (Cephalomyza) labiatarum* (Hendel, 1920)

Material examined. GR: Valbella-Casoja, 1530 m a.s.l., 1 ♂, 14.vii.1998, B. Merz leg.

Notes. Widespread in Europe where it is especially abundant in the temperate and northern parts. The larva forms a leaf mine on species of *Lamium*, *Ballota*, *Stachys* (Lamiaceae). New for Switzerland.

*Cerodontha (Cerodontha) affinis* (Fallén, 1823)

References: Spencer 1976: 177; Martinez 1998: 270; Černý (in press).

Material examined. GR: Samnaun, 1950 m a.s.l., 1 ♂, 10.vii.1987, B. Merz leg.

*Cerodontha (Cerodontha) denticornis* (Panzer, 1806)

References: Martinez 1998: 270; Černý (in press).

Material examined. BL: Birsfelden, 265 m a.s.l., 1 ♀, 16.vi.1989, B. Merz leg. GE: Chancy, La Laire, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg. TI: Biasca, 350 m a.s.l., 1 ♂, 18.v.1991, B. Merz leg.; Gordola, 210 m a.s.l., 1 ♀, 14.ix.1989, B. Merz leg. ZH: Zürich, 600 m a.s.l., 1 ♂, 10.vi.1991, B. Merz leg.

*Cerodontha (Cerodontha) fulvipes* (Meigen, 1830)

References: Spencer 1976: 177, 180; Martinez 1998: 270; Černý (in press).

Material examined. ZH: Zürich, 520 m a.s.l., 1 ♂, 5.ix.1987, B. Merz leg.

*Cerodontha (Cerodontha) unguicornis* Hendel, 1932

Reference: Černý (in press).

Material examined. GR: Lenzerheide, Piz Danis, 2400 m a.s.l., 2 ♂♂, 6.viii.1992, B. Merz leg.

*Cerodontha (Dizygomyza) bimaculata* (Meigen, 1830)

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 750–900 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

\**Cerodontha (Dizygomyza) caricicola* (Hering, 1926)

Material examined. ZH: Zürich-Zürichberg, 650–670 m a.s.l., 1 ♂, 11.v.1995, B. Merz leg.

Notes. This species is mainly distributed in temperate and northern Europe but also recorded from China, Mongolia and Japan. It is still not confirmed from the Mediterranean area. The larvae form a narrow, greenish mine on *Carex* spp. (Cyperaceae). New for Switzerland.

*Cerodontha (Icteromyza) geniculata* (Fallén, 1823)

Reference: Martinez 1998: 270.

Material examined. ZH: Zürich-Allmend, 450 m a.s.l., 1 ♂, 4.iv.1995, B. Merz leg.

Notes. The species is widespread in Europe including the Mediterranean area and reliably confirmed also from South Africa, Afghanistan, China, India, Mongolia, Russia (Asian part), Sri Lanka, Taiwan and Thailand. The larvae form a linear mine on *Eriophorum latifolium* (Cyperaceae).

*Cerodontha (Poemyza) lateralis* (Macquart, 1835)

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

*Cerodontha (Poemyza) lyneborgi* Spencer, 1972

Reference: Černý (in press).

Material examined. GE: Corsier-Port, vitre veranda, 1 ♂, 1.–31.viii.2004, C. Besuchet leg.

*Chromatomyia fuscula* (Zetterstedt, 1838)

Reference: Černý (in press).

Material examined. TI: Biasca-Loderio, 300 m a.s.l., 2 ♂♂, 9.iv.1995, B. Merz leg.

*Chromatomyia hoppiella* Spencer, 1990

References: Spencer 1990: 396; Martinez 1998: 270.

Material examined. GR: Lenzerheide-Sanaspans, 1800 m a.s.l., 1 ♂, 2.x.1992, B. Merz leg.

Notes. This species is, for the time being, known only from Switzerland, where Spencer (1990) described it from the male holotype «bei Lenzerheide, 22.vii.1927, ex *Gentiana excisa*» (Gentianaceae). Herewith we present the second record of *C. hoppiella*. The larva initially forms a linear mine which later develops into a large blotch.

*Chromatomyia horticola* (Goureau, 1851)

References: Martinez 1998: 270; Černý (in press).

Material examined. GR: Juf-Stallerberg, 2400 m a.s.l., 1 ♂, 18.viii.1991, B. Merz leg. SH: Merishausen-Ladel, 600 m a.s.l., 1 ♂, 28.vii.1992, B. Merz leg. ZH: Zürich-Oerlikon, 430 m a.s.l., 1 ♂, 23.v.1992, B. Merz leg.

*Chromatomyia milii* (Kaltenbach, 1864)

References: Martinez 1998: 270; Černý (in press).

Material examined. ZH: Zürich, 520 m a.s.l., 1 ♂, 5.vii.1987, B. Merz leg.; Zürich, Chlösterli, 600 m a.s.l., 2 ♂♂, 22.iv.1995, B. Merz leg.

*Chromatomyia periclymeni* (Hendel, 1922)

References: Griffiths 1974: 49; Martinez 1998: 270.

Material examined. VS: Leuk-Pfynwald, 650 m a.s.l., 1 ♂, 2.v.1993, B. Merz leg.

Notes. This species is distributed in temperate and northern Europe, but also recorded from Spain and Canada. The larvae form an irregular blotch leaf mine on *Lonicera* spp., particularly on *L. periclymenum* and *L. xylosteum* (Caprifoliaceae).

*Chromatomyia ramosa* (Hendel, 1923)

References: Spencer 1992: 142; Martinez 1998: 270; Černý (in press).

Material examined. VS: Grächen, 1450 m a.s.l., 1 ♂, 5.vi.1987, B. Merz leg. ZH: Zürich-Zürichberg, 450–650 m a.s.l., 1 ♂, 22.v.1995, B. Merz leg.

*Liriomyza artemisicola* de Meijere, 1924

References: Spencer 1992: 142; Martinez 1998: 270.

Material examined. GE: Chancy, La Laire, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg.

Notes. The species is widespread in temperate and northern Europe, and also known from Lithuania, the East Palaearctic (China, Japan) and India. The larva forms a rather short and broad mine on *Artemisia vulgaris* (Asteraceae).

*\*Liriomyza balcanica* (Strobl, 1898)

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

Notes. *L. balcanica* was described from Trebinje (Bosnia and Herzegovina) from one female. Later it was recorded from other countries of central and southern Europe. It is also known from Turkey, Japan and South Africa. *Euphorbia* spp. (Euphorbiaceae) is a known host genus of this species. New for Switzerland.

*Liriomyza congesta* (Becker, 1903)

Reference: Martinez 1998: 270.

Material examined. TI: Brè, near Lugano, 900 m a.s.l., 1 ♂, 19.v.1991, B. Merz leg.

Notes. Generally distributed in the West Palaearctic but also recorded from China, Japan and India. The larva forms an upper surface linear mine with frass in conspicuous greenish strips, mostly alternating on each side of the channel, on species of *Medicago*, *Lathyrus*, *Pisum* and *Vicia* (Leguminosae).

*\*Liriomyza dracunculi* Hering, 1932

Material examined. VS: Leuk-Pfynwald, 650 m a.s.l., 1 ♂, 2.v.1993, B. Merz leg.

Notes. Described from Germany, it was later also recorded from Poland and Sweden. Spencer (1976) described *L. furva* Spencer, 1976 from Sweden which was later also recorded from Lithuania. Tschirnhaus (1994) synonymized the two species. The larva is mining in very fine leaves of *Artemisia absinthium* and *A. campestris*. New for Switzerland.

*Liriomyza erucifolii* de Meijere, 1944

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

*Liriomyza flaveola* (Fallén, 1823)

References: Martinez 1998: 271; Černý (in press).

Material examined. GE: Jussy, Prés de Villette, 675 m a.s.l., 1 ♂, 18.v.2004, B. Merz leg. TI: Gordola, 180 m a.s.l., 1 ♀, 13.x.1987, B. Merz leg.

*Liriomyza orbona* (Meigen, 1830)

Reference: Martinez 1998: 271.

Material examined. JU: Lucelle, 560 m a.s.l., 1 ♂, 30.iv.1990, B. Merz leg.

Notes. The species is widespread in much of Europe, and also recorded from Egypt, Tunisia, Azerbaijan, Iraq and Turkey. Host plant unknown but certainly a Gramineae.

\**Liriomyza pusilla* (Meigen, 1830)

Material examined. GE: Chancy, La Laitre, 350 m a.s.l., 2 ♂♂, 25.vii.2004, B. Merz leg.

Notes. A Palaearctic species. The larva forms an irregular linear mine on *Bel-lis* spp., less frequently on species of *Aster* and *Solidago* (Asteraceae). In Japan it occurs commonly on both *Artemisia* and *Kalimeris* spp. New for Switzerland.

*Liriomyza strigata* (Meigen, 1830)

Reference: Martinez 1998: 271.

Material examined. GE: Chancy, La Laitre, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg.

Notes. This species is widespread and common in Europe and also recorded from Kazakhstan, Kyrgyzstan, Uzbekistan and India. It has a very wide host-plant range. The larva forms a characteristic leaf mine feeding primarily above the mid rib, with irregular lateral offshoots into the leaf blade.

\**Liriomyza yasumatsui* Sasakawa, 1972

Material examined. GE: Chancy, La Laitre, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg.

Notes. This species was described by Sasakawa (1972) from one male from Taiwan and later recorded also from Japan (Sasakawa, 1994). It was reared from *Artemisia principes* (Asteraceae). The first record in Central Europe and new record for Switzerland.

*Napomyza cichorii* Spencer, 1966

References: Martinez 1998: 271; Černý (in press).

Material examined. VS: Leuk-Brentjong, 900 m a.s.l., 1 ♂, 2.iv.1991, B. Merz leg.

\**Phytomyza campanulae* Hendel, 1920

Material examined. GR: Lenzerheide-Tgantieni, 1900 m a.s.l., 1 ♂, 8.viii.1992, B. Merz leg.

Notes. This species is widespread in temperate and northern Europe, but also recorded from Kyrgyzstan. The larva forms an irregular whitish linear mine on *Campanula* spp. (*C. glomerata* and *C. trachelium*) (Campanulaceae) which can broaden at the end and become blotch-like. New for Switzerland.

*Phytomyza crassiseta* Zetterstedt, 1860

Reference: Černý (in press).

Material examined. VS: Leuk-Brentjong, 930 m a.s.l., 1 ♀, 3.v.1990, B. Merz leg.

*Phytomyza flavicornis* Fallén, 1823

Reference: Černý (in press).

Material examined. SH: Merishausen, 550 m a.s.l., 1 ♀, 26.iv.1990, B. Merz leg.

*Phytomyza ilicis* Curtis, 1846

References: Deshusses & Deshusses 1931: 93; Martinez 1998: 271.

Material examined. NE: Cornaux, Roches de Châtillon, 670 m a.s.l., 1 ♂, 18.v.2001, ex *Ilex aquifolium*, R. Bryner leg.

Notes. Occurring in temperate and northern Europe, but records are also available from the Mediterranean area (Italy including Sicily). Further, it is well known from Canada and the United States. The larva forms a conspicuous upper surface linear blotch mine on *Ilex aquifolium* (Aquifoliaceae).

\**Phytomyza kyffhusana* Hering, 1928

Material examined. SH: Merishausen-Ladel, 700 m a.s.l., 1 ♂, 13.v.1991, B. Merz leg.

Notes. Described from Germany as leaf miner on *Inula hirta*. Later recorded from Austria and the Czech Republic. *P. kyffhusana* has a wide host range including species of *Antennaria*, *Bupthalmum*, *Filago*, *Gnaphalium*, *Helichrysum*, *Inula*, *Leontopodium* and *Pulicaria* (Asteraceae). New for Switzerland.

*Phytomyza nigripennis* Fallén, 1823

References: Hendel 1931–36: 439; Martinez 1998: 272; Černý (in press).

Material examined. ZH: Glattfelden-Bahnhof., 410 m a.s.l., 1 ♂, 15.v.1993, B. Merz leg.; Zürich-Chlöstlerli, 600 m a.s.l., 1 ♂, 22.iv.1995, B. Merz leg.; Zürich-Zürichberg, 650 m a.s.l., 1 ♂, 6.v.1995, B. Merz leg.

*Phytomyza origani* Hering, 1931

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

*Phytomyza plantaginis* Robineau-Desvoidy, 1851

References: Martinez 1998: 272; Černý (in press).

Material examined. SH: Merishausen, 750 m a.s.l., 1 ♂, 3.x.1987, B. Merz leg. VS: Branson, Le Pont du Rhône, 460 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

*Phytomyza pullula* Zetterstedt, 1848

Reference: Černý (in press).

Material examined. TI: Mte. Caslano, 400 m a.s.l., 1 ♂, 20.v.1991, B. Merz leg. VS: Leuk-Brentjong, 900 m a.s.l., 2 ♂♂, 2.iv.1991, B. Merz leg. ZH: Zürich-Zürichberg, 650–670 m a.s.l., 1 ♂, 10.ix.1995, B. Merz leg.

*Phytomyza ranunculi* (Schrank, 1803)

References: Hendel 1931–36: 467; Martinez 1998: 272; Černý (in press).

Material examined. AG: Remigen, 570 m a.s.l., 1 ♂, 9.v.1989, B. Merz leg.; Villnachern, 345 m a.s.l., 2 ♂♂, 1 ♀, 9.v.1989, B. Merz leg. GR: Lenzerheide, 1600 m a.s.l., 1 ♂, 8.x.1991, B. Merz & Eggenberger leg.; Lenzerheide-Tgantieni, 1900 m a.s.l., 1 ♂, 8.viii.1992, B. Merz leg.; Rothenbrunnen, 350 m a.s.l., 1 ♂, 25.xi.1992, B. Merz leg. JU: Lucelle, 560 m a.s.l., 1 ♂, 1 ♀, 30.iv.1990, B. Merz leg. SG: Betlis a. Walensee, 450–520 m a.s.l., 1 ♂, 24.vi.1995, B. Merz & Eggenberger leg. SH: Bargemer Randen, 800 m a.s.l., 1 ♂, 28.vii.1992, B. Merz leg.; Barmen-Mülital, 650 m a.s.l., 1 ♂, 28.vii.1992, B. Merz leg.; Merishausen, 715 m a.s.l., 1 ♀, 3.x.1987, B. Merz leg. TI: Gordola, 200 m a.s.l., 1 ♂, 17.ix.1989, B. Merz leg.; Porza, 500 m a.s.l., 1 ♂, 3.vi.1992, B. Merz leg. ZH: Horgen, 550 m a.s.l., 1 ♂, 24.v.1989, B. Merz leg.; Otelfingen, 460 m a.s.l., 1 ♂, 3.v.1989, B. Merz leg.; Zürich, 460 m a.s.l., 1 ♂, 3.v.1989, B. Merz leg.; Zürich-Allmend, 450 m a.s.l., 1 ♂, 4.iv.1995; 1 ♂, 14.vi.1995, B. Merz leg.; Zürich-Hönggerberg, 600 m a.s.l., 1 ♂, 18.vi.1992, B. Merz leg.; Zürich-Zürichberg, 600 m a.s.l., 1 ♂, 5.v.1993; 630 m a.s.l., 1 ♂, 4.ix.1992; 450–650 m a.s.l., 1 ♂, 20.viii.1992, B. Merz leg.

*Phytomyza sedi* Kaltenbach, 1869

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 750–900 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

*Phytomyza spondylii* Robineau-Desvoidy, 1851

References: Griffiths 1973: 224; Martinez 1998: 272.

Material examined. VS: Grächen, 1850 m a.s.l., 1 ♂, 3.vi.1987, B. Merz leg.

Notes. Described from France, widespread and common throughout Europe, but also known from Canada and the United States. The larva forms a conspicuous, whitish linear mine on *Heracleum* spp., incl. *H. spondylium*, *H. mantegazzianum*, *H. sibiricum*, *Pastinaca sativa* and *Astrantia* spp. (Apiaceae).

*Phytomyza tenella* Meigen, 1830

Reference: Martinez 1998: 272.

Material examined. GR: Juf-Stallerberg, 2400 m a.s.l., 1 ♂, 18.viii.1991, B. Merz & A. Freidberg leg. TI: Mte. Generoso, 1600 m a.s.l., 1 ♂, 16.ix.1989, B. Merz leg.

Notes. *P. tenella* is widespread in Europe but also known from Ethiopia, China, Turkey and North America (Canada, United States). This species belongs to a group of morphologically similar species which feed on *Pedicularis palustris* and almost certainly other *Pedicularis* spp. (Scrophulariaceae).

*\*Phytomyza veronicicola* Hering, 1925

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

Notes. Described from Germany and later recorded from the Czech Republic, Lithuania and Poland. *Veronica* sp. (Scrophulariaceae) is a host plant of this species. New for Switzerland.

*Phytomyza vitalbae* Kaltenbach, 1872

References: Martinez 1998: 272; Černý (in press).

Material examined. SH: Siblingen, 810 m a.s.l., 1 ♂, 6.vi.1989, B. Merz leg.

*Pseudonapomyza atra* (Meigen, 1830)

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

*Pseudonapomyza errata* Zlobin, 1993

Reference: Černý (in press).

Material examined. GE: Chancy, La Laire, 350 m a.s.l., 1 ♂, 25.vii.2004, B. Merz leg.

*Pseudonapomyza eurasiatica* Zlobin, 2003

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 1 ♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.; Visperterminen, Kreuz, 1500 m a.s.l., 1 ♂, 21.vii.2004, B. Merz leg.

*Pseudonapomyza vota* Spencer, 1973

Reference: Černý (in press).

Material examined. VS: Branson, Follatères, 460–750 m a.s.l., 3 ♂♂, 9.vi.2004, B. Merz & J.-P. Haenni leg.

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## ZUSAMMENFASSUNG

Neue Fundortsangaben zu 61 Arten von Agromyziden der Schweiz werden vorgestellt. Darunter befinden sich 11 Arten, die zum ersten Mal für die Schweiz nachgewiesen werden. Damit erhöht sich die Artenzahl auf 243 für dieses Land.

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