ISSN 2336-3193
DOI: 10.2478/cszma-2020-0017
Acta Mus. Siles. Sci. Natur., 69: 193-229, 2020
Published: online 20 December 2020, print January 2021

First records of Palaearctic Agromyzidae (Diptera) from 40 countries and major islands

Miloš Černý, Michael von Tschirnhaus & Kaj Winqvist

First records of Palaearctic Agromyzidae (Diptera) from 40 countries and major islands. – Acta Mus. Siles. Sci. Natur., 69: 193-229, 2020.

Abstract: First records of 151 species in the family Agromyzidae are presented for 40 countries and major islands in the Palaearctic Region (Russia being split into four subregions): from Afghanistan (1 sp.), Albania (15 spp.), Algeria (1 sp.), Andorra (2 spp.), Armenia (4 spp.), Austria (14 spp.), Balearic Islands (4 spp.), Canary Islands (2 spp.), China - Palaearctic part (2 spp.), Corsica (5 spp.), Crete (6 spp.), Croatia (16 spp.), Czech Republic (4 spp.), Dodekanese Islands incl. Rhodes (5 spp.), Egypt (1 sp.), European Russia (2 spp.), Finland (12 spp.), France (1 sp.), Georgia (1 sp.), Germany (14 spp.), Great Britain (2 spp.), Greece (4 spp.), Iceland (1 sp.), Iran (8 spp.), Israel (1 sp.), Italy (12 spp.), Jordan (6 spp.), Kyrgyzstan (6 spp.), Lithuania (2 spp.), Macedonia (2 spp.), Mongolia (2 spp.), Morocco (6 spp.), Netherlands (1 sp.), Norway (3 spp.), Oman (1 sp.), Poland (1 sp.), West Siberia (1 sp.), East Sibiria (3 spp.), Kamchatka (5 spp.), Sardinia (1 sp.), Slovakia (4 spp.), South Korea (13 spp.), Spain (10 spp.), Sweden (7 spp.), Switzerland (5 spp.) and Turkey (1 sp.). For a few species morphological details or plant genera from the collecting localities are added as possible host plants. *Phytomyza parvicella* (Coquillett, 1902) exhibits an extremely disjunct distribution, occurring in the high Arctic from Alaska to west Greenland and on the highest mountains of Germany and Poland. Other rare species with Boreo-alpine disjunctions are recorded. *Cerodontha* (*Cerodontha*) *phragmitophila* Hering, 1935 reached a tiny artificial patch of its host plant within the Sahara sand desert. The thermophilic mediterranean *Phytoliriomyza pectoralis* (Becker, 1908) was detected on the Swedish sun-blessed island Öland. *Chromatomyia obscuriceps* (Hendel, 1936) (emerged from *Triticum* crop) is specified as a valid species occurring from Iceland to Kamchatka. A new definition for *Chromatomyia nigra* (Meigen, 1830) sensu stricto is presented. The American *Amauromyza* (*Cephalomyza*) *abnormalis* (Malloch, 1913), a possible agent against the harmful neophyte *Amaranthus retroflexus*, was detected for the first time in the Palaearctic Region. *Gnaphalium* is attributed as a first detected host plant genus of *Phytoliriomyza venustula* Spencer, 1976.

Key words: Diptera, Agromyzidae, new records, faunistics, distribution, Palaearctic Region

Introduction

The family Agromyzidae is represented by more than 1.260 species in the Palaearctic Region; in Europe over 950 species are currently known. The present faunistic study is mainly aimed to supplement the contemporary knowledge of the distribution and the occurrence of leaf-miner flies in the Palaearctic Region, with special regards to its western part. The faunistic data from the latter area have been continously supplemented by Černý (2012, 2014, 2017, 2018). Most recently, a monographic compendium devoted to Agromyzidae of Central Europe (with special regard to the fauna of Hungary) has been published by Papp & Černý (2015, 2016, 2017, 2020). New faunal knowledge of Agromyzidae in Switzerland can be found in Černý & Bächli (2018) and in Portugal in Černý *et al.* (2018). From northern Europe Agromyzidae have recently been recorded in a series of papers dealing with the fauna of Norway (Andersen 2012, 2013, 2016, 2018) and also in the new Checklist of the leaf-miner flies of Finland by Kahanpää (2014) which is supplemented by faunal data in a recent paper on new additions to the Finnish fauna of Diptera (Haarto *et al.* 2019). In the Netherlands a large study on the fauna and flora of the locality *De Kaaistoep,* has been presented; it also includes 19 species of Agromyzidae found in the Netherlands for the first time (see von Tschirnhaus & van Wielink 2020). A series of short papers have also been published on Agromyzidae from Great Britain and Ireland

(e.g. Gibbs & von Tschirnhaus 2019, Warrington 2017, 2018a,b,c, 2019a,b,c, 2020a,b, Warrington & Perry 2020). Papp (2018) has recorded 38 species of Agromyzidae from Romania. New faunistic data on Agromyzidae are also given from Russia in a paper by Nartshuk & von Tschirnhaus (2017) which is focused on the genus *Agromyza* and in the most recent paper by Nartshuk (2019) devoted to species of the subfamily Agromyzinae found in several countries of the Palaearctic region. We used the political countries and Mediterranean islands according to the Fauna Europaea, but Russia was divided into four zoogeographical realms: European Russia, West Siberia until the Jenissei, East Siberia until the Ussuri and Far East incl. Kamchatka. A series of papers by Guglya (2010, 2011, 2012, 2013a,b, 2014a,b, 2016a,b,c, 2017) on the fauna of Agromyzidae of Ukraine is mainly aimed on species of the subfamily Agromyzinae. New faunistic data presented below have been obtained during the identification of Agromyzidae in eight collections of Diptera and include new records of 151 species from 40 countries of Europe, the Near East (Armenia, Georgia, Iran, Israel, Jordan, Oman, Turkey), North Africa (Algeria, Egypt, Morocco), Middle East (Kyrgyzstan), West and East Siberia, Far East (Kamchatka), Central Asia (China, Mongolia) and East Asia (South Korea).

Material and methods

The material examined was mainly collected by sweeping over vegetation, by Malaise traps, yellow pan traps, rarely by some other collecting methods. It is deposited in the following collections: CCTB – private collection of Miguel Carles-Tolrá, Barcelona, Spain; CKWT – private collection of Kaj Winqvist, Turku, Finland; CMBP – private collection of Miroslav Barták, Prague, Czech Republic; CMCH – private collection of Miloš Černý, Halenkovice, Czech Republic; CMNH – Cantonal Museum of Natural History in Lugano, Switzerland; CMTB – private collection of Michael von Tschirnhaus, Bielefeld, Germany, later to be deposited in the Bavarian State Collection of Zoology (ZSM), Munich; NHML – The Natural History Museum London, England; TAUI – Israel National Collection of Insects, Zoological Museum, Tel Aviv University, Tel Aviv, Israel. Unless otherwise indicated the material listed below has been identified by the first author.

Abbreviations used in text: CHKO = Protected Landscape Area (PLA), distr. = district, det. = determined, env. = environment, leg. = legit (collected), m a.s.l. = meter above sea level, MT = Malaise trap, NP = National Park, NPP = National Nature Monument, PP = Natural Monument, res. = reserve, N E S W and combinations = north, east, south, west.

Nomenclature and distribution are based on the Fauna Europaea (Martinez 2013) and follows Papp & Černý (2015, 2016, 2017, 2020) and Spencer (1990).

Results

LIST OF SPECIES

SUBFAMILY: AGROMYZINAE

Agromyza abdita L. Papp in Papp & Černý 2015

Material examined: SLOVAKIA: Komárno distr., Iža, 47°45'3.6"N, 18°15'14.4"E, 106 m a.s.l., 1 ♂, 16.-26.v.2017, salt marsh Bokroš, MT, Ľ. Vidlička & O. Majzlan leg. (CMBP).

Distribution: Europe: Hungary (Papp & Černý 2015), Great Britain - East Yorkshire (Warrington 2018a), Netherlands (von Tschirnhaus & van Wielink 2020), Ukraine (Guglya 2016b). **First record from Slovakia.**

Agromyza albipennis Meigen, 1830

Material examined: ANDORRA: Santa Coloma, 42°49'N, 01°49'E, 1050 m a.s.l., 1 ♀, 1.-15.vi.1993, J. Pujade-Villar leg. (CCTB). ITALY: Sardinia, shore of lagoon Stagni di Cabrás, 39°55'36"N, 8°31'36"E, 1 ♂, 1 ♀, 6.v.2011, *Phragmites australis* abundant, M. v. Tschirnhaus leg. et det. (CMTB). MACEDONIA: Lake Ohrid, southern shore, 40°55'02"N, 20°44'48"E, 700 m a.s.l., 1 ♀, 12.v.2011, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Belgium, Czech Republic, Denmark, Estonia, Finland, France incl. Corsica, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Montenegro (Spasić 1996), Netherlands, Norway, Poland, Portugal (Černý *et al.* 2018), Russia

(Nartshuk & von Tschirnhaus 2017), Slovakia, Spain, Sweden, Switzerland and Ukraine (Guglya 2012); China, Iraq, Japan, Kazakhstan (Nartshuk & von Tschirnhaus 2017), Mongolia (Nartshuk & von Tschirnhaus 2017), South Korea, Asian Russia (Nartshuk & Bagachanova 2010), Tajikistan; Canada, United States. **First record from Andorra, Macedonia and Sardinia.**

Agromyza bicaudata (Hendel, 1920)

Material examined: ITALY: Apulia, road no.378 from Gravina to Corato (at km 46), 8 km NNE Gravina, 40°53'31"N, 16°26'44"E, 530 m a.s.l., 1 ♂, 2 ♀♀, 6.iv.2000, swept in shade below *Pinus* trees, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Czech Republic, Finland, Germany, Great Britain, Greece, Hungary, Lithuania, Netherlands, Poland, Russia, Slovakia, Switzerland, Ukraine. **First record from Italy.**

Agromyza bromi Spencer, 1966

Material examined: AUSTRIA: River „Obere Lobau" E of Vienna, 48°11'50"N, 16°29'40"E, 1 ♂, 16.v.1991, grain field, J. Idinger leg., M. v. Tschirnhaus det. (CMTB). FINLAND: Helsinki, 60°12'6.14"N, 24°57'26.72"E, 140 m a.s.l., 2 ♂♂, 31.vii.-6.viii.2006, botanical garden, MT, J. Paukkunen leg., K. Winqvist det. (CKWT).

Distribution: Europe: Belarus (Nartshuk 2019), Belgium, Bulgaria, Croatia (Černý 2018), Czech Republic, Denmark, France, Germany, Great Britain, Greece, Hungary, Lithuania, Netherlands (Warrington 2018c), Poland, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine (Guglya 2011); Turkey. **First record from Austria and Finland.**

Agromyza erythrocephala Hendel, 1920

Material examined: SLOVAKIA: Komárno distr., Iža, 47°45'3.6"N, 18°15'14.4"E, 106 m a.s.l., 2 ♂♂, 21.iv.-5.v.2017, salt marsh Bokroš, MT, Ľ. Vidlička & O. Majzlan leg. (CMBP). SPAIN: Province Lleida, Coll de Jou, 96 km NNW Barcelona, 42°08'15"N, 1°32'22"E, 1450 m a.s.l., 1 ♀, 19.-27.v.1994, mountain forest, MT, F. Bahr & U. Bosch leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria, Czech Republic, Finland, Germany, Great Britain, Greece, Hungary (Papp & Černý 2015), Norway (Černý 2013), Russia (Nartshuk & von Tschirnhaus 2017), Sweden, Switzerland (Černý 2013), Ukraine (Guglya 2016a). **First record from Slovakia and Spain.**

Agromyza filipendulae Spencer, 1976

Material examined: FINLAND: Heinävesi, 62°33'55.45"N, 28°47'16.13"E, 1 ♂, 14.vi.-16. vi.2018, meadow, MT, J. Paukkunen leg., K. Winqvist det. (CKWT).

Distribution: Europe: Belgium, Czech Republic, France, Germany, Great Britain, Hungary (Papp & Černý 2015), Ireland, Latvia, Lithuania, Montenegro (Spasić 1996), Netherlands (von Tschirnhaus & van Wielink 2020), Norway (Andersen 2016), Poland, Russia (Nartshuk & von Tschirnhaus 2017), Switzerland (Černý & Bächli 2018); East Russia (Nartshuk & von Tschirnhaus 2017). **First record from Finland.**

Agromyza flaviceps Fallén, 1923

Material examined: SOUTH KOREA: Gangwong-do, Jeong seon-gun, Mt. Mindungsa, 37°16.2'N, 128°18.0'E, 900-1120 m a.s.l., 1 ♂, 20.vi.2005, forest, meadow, Merz, Han, Ro, Choi, Lee, Hwang & Sok leg. (CMCH).

Distribution: Europe: Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Lithuania, Netherlands, Moldova, Poland, Russia (Nartshuk & von Tschirnhaus 2017), Slovakia, Sweden, Switzerland (Černý 2013). **First record from South Korea.**

Agromyza flavipennis Hendel, 1920

Material examined: CROATIA: Island of Lošinj, Nerezine, 44°39'47"N, 14°23'55"E, 1 ♂, 2 ♀♀, 11.iv.1981, campsite along shore, M. v. Tschirnhaus leg. et det. (CMTB). FINLAND: Helsinki, 60°12'6.14"N, 24°57'26.72"E, 2 ♂♂, 20.v.-26.v.2016, botanical garden, MT, J. Paukkunen leg., K. Winqvist det. (CKWT). FRANCE: Provence, Le Plan-de-la-Tour, 43°20'N, 6°32'E, 105 m a.s.l., 1 ♂, 19.-30.iii.1984, abandoned vine yards and garrigue, yellow pan traps, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belgium (Mortelmans *et al.* 2014), Bulgaria, Czech Republic, Estonia, Germany, Great Britain, Greece, Hungary (Papp & Černý 2015), Lithuania, Montenegro (Spasić 1996), Netherlands, Poland, Romania, Russia (Nartshuk & von Tschirnhaus 2017), Serbia (Dobrosavljević *et al.* 2018), Slovakia, Slovenia, Sweden, Ukraine (Guglya 2016c); Israel, Turkey, Uzbekistan. **First record from Croatia, Finland and France.**

Agromyza hiemalis Becker, 1908

Material examined: JORDAN: Ancient ruins of Umm Qeis (= Gadara), 9.5 km SE Lake Genezareth, 32°39'19"N, 35°40'45"E, 358 m a.s.l., 1 ♂, 2 ♀♀, 9.iv.1992, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: France, Greece, Italy incl. Sicily, Maltese Islands, Portugal (Černý *et al.* 2018), Spain incl. Balearic and Canary Islands; Algeria (Černý 2018), Egypt (Černý 2018), Israel, Morocco, Turkey. **First record from Jordan.**

Agromyza hierroensis Spencer, 1957

Material examined: ITALY: East coast 4 km NW Vieste, 0.4 km W Torre di Porticello, 41°54'48"N, 16°08'08"E, 1 ♂, 11.iv.2000, on rocky slopes, swept on *Spartium junceum, Coronilla, Helichrysum, Aegilops, Trifolium, Medicago, Anthyllis*, M. v. Tschirnhaus leg. et det. [other material not seen before] (CMTB).

Distribution: Europe: Balearic Islands, Canary Islands. **First record from Italy.**

Agromyza intermittens (Becker, 1907)

Material examined: ITALY: Apulia, rocky coast N Sant'Andrea, 2.3 km SSE Torre Dell'orso, 40°15'24"N, 18°26'37"E, 1 ♀, 4.iv.2000, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Belarus, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, Lithuania, Moldova (Nartshuk & von Tschirnhaus 2017), Montenegro, Netherlands, Norway, Poland, Russia (Nartshuk & von Tschirnhaus 2017), Serbia, Slovakia, Spain incl. Canary Islands, Ukraine; Israel, Kasakhstan, Kyrgyzstan, Mongolia (Nartshuk & von Tschirnhaus 2017), Tunisia, Turkey, Uzbekistan. **First record from Italy.**

Agromyza lapponica Hendel, 1931

Material examined: AUSTRIA: Land Salzburg (= Carinthia), Hohe Tauern National Park, Grossglockner Hochalpenstrasse, valley „Fuscher Tal", 4 km S Ferleiten, 1 km NW „Museum Alpine Nature", 47°07'50"N, 12°48'49"E, 2130 m a.s.l., 1 ♂, vii.2016, meadow, M. Lechleitner leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Belarus (Nartshuk 2019), Finland, Russia (Narthuk & von Tschirnhaus 2017), Sweden; Armenia, Kamchatka, Kazakhstan, Mongolia, Yakutia (Narthuk & von Tschirnhaus 2017). **First record from Austria.**

Agromyza lathyri Hendel, 1923

Material examined: SLOVAKIA: Komárno distr., Iža, 47°45'3.6"N, 18°15'14.4"E, 106 m a.s.l., 4 ♂♂, 5.-16.v.2017, salt marsh Bokroš, MT, Ľ. Vidlička & O. Majzlan leg. (CMBP).

Distribution: Europe: Czech Republic, Denmark, France incl. Corsica, Germany, Great Britain, Italy, Lithuania, Netherlands, Poland, Romania, Spain, Sweden. **First record from Slovakia.**

Agromyza megalopsis Hering, 1933

Material examined: MOROCCO: Castle „Agadir Id Aissa“, western end of gorge and village Amtoudi, 29°14'40"N, 9°11'23"W, 854 m a.s.l., 2 ♂♂, 27.xii.2016, grain garden near river, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Bulgaria, Corfu, Crete, Croatia (Černý 2009), Czech Republic, France, Germany, Hungary, Poland, Rhodes, Serbia, Slovakia, Spain, Ukraine (Guglya 2016c), former Yugoslavia; Egypt, Cyprus, Saudi Arabia, Turkey, Uzbekistan. **First record for Morocco.**

Agromyza mobilis Meigen, 1830

Material examined: CORSICA: Corte valley env., 700 m a.s.l., 2 ♂♂, 10.v.1993, of the Le Tavignano river, pasture; 10 km N Vizzavona Canaglia, 700 m a.s.l., 1 ♂, 11.v.1993, pine forest, pasture, all B. Mocek leg. (CMCH). GREECE, Dodekanese Islands: Kós, center of town Kós, ancient ruins, 3 ♂♂, 2 ♀♀, 6.iv.1982, flowering spring vegetation; pathes betweeen agricultural fields W of town Kós and 1.5 km SSW Pili, 1 ♂, 1 ♀, 14. & 16.iv.1982; Rhodes, mountains 4.3 km NW Laerma, 36°10'N, 27°24'E, 616 m a.s.l., 2 ♀♀, 1.iv.1997, edge of pine forest; River mouth of Stegna along eastern coast, E of Arhangelos, 36°13'N, 28°08'E, 1 ♂, 6.iv.1997, flooding area; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Andorra, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Russia (Nartshuk & von Tschirnhaus 2017), Slovakia, Spain, Sweden, Switzerland, Ukraine, former Yugoslavia; Japan, Turkey. **First record from Corsica, Dodekanese and Rhodes.**

Agromyza nigrociliata Hendel, 1931

Material examined: CROATIA: Split, Marjan abandoned zoo, 43°30'28.8"N, 16°25'33.6"E, 1 ♂, 30.iii.-16.iv.2017, B. Kokan & M. Cvitanić leg. (CMBP). NORWAY**:** Northern Finmark, Pasvik valley, 9 km WNW Skogfoss at Russian border, 69°23'N, 29°28'E, 75 m a.s.l., 2 ♂♂, 4.vii.1991, birch forest taiga, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Great Britain, Hungary, Italy, Lithuania, Poland, Portugal (Černý *et al.* 2018), Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine; Kazakhstan (Černý 2018), Kuril Islands, Russia - Yakutia (Nartshuk & Bagachanova 2010). **First record from Croatia and Norway.**

Agromyza pittodes Hendel, 1931

Material examined: GERMANY: Bavaria, 11 km SSW Garmisch-Partenkirchen, mountain Zugspitze, 47°24'19.15"N, 11°00'32.90"E, 1980 m a.s.l., 1 ♂, 20.vi.-5.vii.2018, MT, alpine dwarf pine zone, D. Doczkal & J. Voith leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria, Czech Republic, Finland, Hungary, Norway, Poland, Russia, Slovakia, Sweden, Ukraine (Guglya 2016a); Japan, Turkey. **First record from Germany.**

Agromyza prespana Spencer, 1957

Material examined: CROATIA: Split, Marjan abandoned zoo, 43°30'28.8"N, 16°25'33.6"E, 1 ♂, 14.iv.-18.v.2017, B. Kokan & M. Cvitanić leg. (CMBP).

Distribution: Europe: Austria, Bulgaria, Czech Republic, France, Germany, Great Britain, Greece, Hungary, Macedonia, Netherlands (von Tschirnhaus & van Wielink 2020), Poland, Slovakia, Sweden, Switzerland, Ukraine, former Yugoslavia; Kazakhstan (Černý 2018), Turkey. **First record from Croatia.**

Agromyza rondensis Strobl, 1900

Material examined: MOROCCO: Castle „Agadir Id Aissa“, western end of gorge and village Amtoudi, 29°14'40"N, 9°11'23"W, 854 m a.s.l., 1 ♂, 1 ♀, 27.xii.2016, grain garden below date palms; River Aoulouz (= Asif Tifnout), bridge of road N10, 30°41'45"N, 8°09'16"W, 697 m a.s.l., 6 ♀♀, 31.xii.2016; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria**,** Belarus, Belgium, Croatia, Czech Republic, Estonia, Hungary, France, Germany, Great Britain, Greece incl. Crete and Dodecanes Is., Italy incl. Sicily, Lithuania, Netherlands (von Tschirnhaus & van Wielink 2020), Norway, Poland, Portugal (Černý *et al.* 2018), Romania, Russia, Spain incl. Balearic and Canary Islands, Slovakia, Sweden, Switzerland, Ukraine, former Yugoslavia; Cyprus, Egypt, Iran (Nartshuk & von Tschirnhaus 2017), Israel, Russia - Yakutia, South Korea, Tunisia, Turkey. **First record for Morocco.**

Agromyza spiraeoidearum Hering, 1954

Material examined: SWITZERLAND: Ticino: Lugano, Davesco, Via Navrée 25, 46°02'16.91"N, 8°59'07.56"E, 500 m a.s.l., 1 ♂, 8.-22.vi.2016, 1 ♂, 3.-17.viii.2016, MT, forest and semi-natural meadow, all L. Pollini Paltrinieri leg. (CMNH).

Distribution: Europe: Belgium (Mortelmans *et al.* 2014), Czech Republic, Germany, Lithuania, Montenegro (Spasić 1996), Netherlands, Norway, Poland, Slovakia, Sweden; Japan, Kuril Islads (Iwasaki 2000); India; Canada. **First record from Switzerland.**

Melanagromyza moatesi Warrington, 2019

Material examined: NETHERLANDS: Nordbrabant, 1.5 km W Tilburg, 0.5 km N road A58, De Kaaistoep, 51°32'32.9"N, 5°0'55.1"E, 10 m a.s.l., 91 ♂♂, 99 ♀♀, 9.-16.v.1998, mixed grass and shrub land, MT, leg. J.W. van Zuijlen *in* „Insect Working Group KNNV Tilburg“, M. v. Tschirnhaus det. (compared with paratypes) (CMTB).

Distribution: Great Britain. **First record from Netherlands.**

Melanagromyza pubescens Hendel, 1923

Material examined: SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 3 ♂♂, 19.vi.2005, Light-Trap, 37°17.2'N, 127°53.5'E, 275 m a.s.l., 5 ♂♂, 13.vi.2005, Light-Trap, all B. Merz, Choi, Byun, Lee, Hwang & Suk (CMCH).

Distribution: Europe: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, Germany, Great Britain, Greece, Hungary, Italy, Lithuania, Netherlands (von Tschirnhaus & van Wielink 2020), Norway (Andersen 2018), Poland, Portugal (Černý *et al.* 2018), Romania, Russia, Spain, Sweden, Switzerland (Černý & Bächli 2018), Ukraine; China, Japan, Mongolia, Nepal, North Korea, Kuril Islands, Asian Russia, Turkey. **First record from South Korea.**

Ophiomyia asparagi Spencer, 1964

Material examined: TURKEY: Mugla, University campus, 37°09'42"N, 28°22'13"E, 720 m a.s.l., 1 ♂, Juli. 2016, MT, H. Pala leg. (CMBP).

Distribution: Europe: Croatia, France, Greece, Hungary (Papp & Černý 2015), Italy, Maltese Islands, Slovenia, Spain; China (Sasakawa 2006), Japan (Sasakawa 2005). **First record from Turkey.**

Ophiomyia galii Hering, 1937

Material examined: FINLAND: Turku, 60°21'35.96"N, 22°6'53.58"E, 1 ♂, 13.vii.2018, seashore with alder, K. Winqvist leg. et det. (CKWT).

Distribution: Europe: Andorra, Bulgaria, Czech Republic, France incl. Corsica, Germany, Greece, Hungary (Papp & Černý 2015), Italy, Lithuania, Netherlands (von Tschirnhaus & van Wielink 2020), Poland, Portugal (Černý *et al.* 2018), Slovakia, Spain, Sweden, Switzerland; North Korea, Turkey. **First record from Finland.**

Ophiomyia georginae Černý, 2007

Material examined: SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0E, 240 m a.s.l., 1 ♂, 19.vi.2005, Light-Trap, 37°17.2N, 127°53.5'E, 275 m a.s.l., 1 ♂, 13.vi.2005, Light-Trap, all B. Merz, Choi, Byun, Lee, Hwang & Suk (CMCH).

Distribution: Hitherto known only from North Korea from the type locality (Černý 2007). **First record from South Korea.**

Ophiomyia heracleivora Spencer, 1957

Material examined: CROATIA: Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 24.viii.-14.ix.2014, abandoned garden, MT, B. Kokan leg. (CMBP). FINLAND: Turku, 60°22'39.05"N, 22°8'21.91"E, 1 ♂, 6.vi. 2019, roadside, K. Winqvist leg. et det. (CKWT).

Distribution: Europe: Czech Republic, Estonia, France, Germany, Greece, Hungary (Papp & Černý 2015), Lithuania, Montenegro (Spasić 1996), Poland, Portugal, Slovakia, Spain, Switzerland, Ukraine (Guglya 2011). **First record from Croatia and Finland.**

Ophiomyia improvisa Spencer, 1966

Material examined: SPAIN: Province Barcelona, Catalan Cordillera Prelitoral, mountain La Mola, 41°38'27"N, 2°01'02"E, 1100 m a.s.l., 3 ♂♂, 1 ♀, 21.vi.1980, swept on *Colutea arborescens*, Ò. Alomar i Kurz leg., M. v. Tschirnhaus det. (1 ♂ in CMBP); Torres de la Alameda, 1 ♂, 30.v.2000, MT, A. Baz leg. (CCTB).

Distribution: Europe: Germany, Hungary, Macedonia. **First record from Spain.**

Ophiomyia melandricaulis Hering, 1943

Material examined: SWITZERLAND: Ticino: Lugano, Davesco, Via Navrée 25, 46°02'16.91"N, 8°59'07.56"E, 500 m a.s.l., 1 ♀, 31.8.-14.9.2016, MT, forest and semi-natural meadow, all L. Pollini Paltrinieri leg. (CMNH).

Distribution: Europe: Andorra, Austria, Czech Republic, France, Germany, Great Britain, Hungary (Papp & Černý 2015), Lithuania, Poland, Russia, Slovakia, Spain, Sweden, Ukraine. **First record from Switzerland.**

Ophiomyia ononidis Spencer, 1966

Material examined: ITALY: Apulia, southern slopes of Promontório del Gargano, S San Marco in Lames, road sepentines to Rignano Garganico, 41°42'10"N, 15°37'14"E, 660 m a.s.l., 1 ♂, 1 ♀, 8.iv.2000, diverse herb vegetation incl. Fabaceae, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Czech Republic, Germany, Great Britain, Hungary (Papp & Černý 2015), Lithuania, Spain, Ukraine (Guglya 2017). **First record from Italy.**

Ophiomyia orbiculata (Hendel, 1931)

Material examined: ARMENIA: District Aragazotn, Nor Ambert Cosmic (= Ray Research Station), 6 km NW Ghazaravan, 29 km NW Jerevan, 40°22'39"N, 44°15'45"E, 2008 m a.s.l., 1 ♂, 4 ♀♀, 8.vi.2019, wet meadow with rivulet, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Bulgaria, Croatia (Černý 2018), Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy incl. Sicily, Latvia, Liechtenstein (Černý 2018), Lithuania, Norway, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine, former Yugoslavia; China, Cyprus, Iran (Ranji *et al.* 2015) Kazakhstan (Černý 2018), Uzbekistan, Turkey. **First record from Armenia.**

Ophiomyia pannonica Černý in Papp & Černý 2015

Material examined: CZECH REPUBLIC: Moravia, Podyjí NP, pod Ledovými slujemi, 48°51'09"N, 15°50'29"E, 2 ♂♂, 5.vii.1988, wetland nr. River, PT, M. Barták & Š. Kubík leg. (CMBP).

Distribution: Europe: Hungary, Slovakia (Papp & Černý 2015), Switzerland (Černý & Bächli 2018), Ukraine (Guglya 2016b). **First record from Czech Republic.**

Ophiomyia pinguis Fallén, 1820

Material examined: ALBANIA: Western shore of lake Ohrid, S village Lin, 41°03'43"N, 20°38'52"E, 693 m a.s.l., 1 ♂, 11.v.2011; 13 km SSE Korça, S village Ujëbardhë, 40°30'38"N, 20°41'36"E, 1 ♂, 13.v.2011; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Italy, Lithuania, Montenegro (Černý 2018), Norway, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Netherlands, Ukraine; China, Egypt, Israel, Japan (Kamiji & Iwaizumi 2013), Kashmir, Tajikistan, Uzbekistan, Turkey. **First record from Albania.**

Ophiomyia ranunculicaulis Hering, 1949

Material examined: AUSTRIA: Land Salzburg (Carinthia), Hohe Tauern National Park, Grossglockner Hochalpenstrasse, valley „Fuscher Tal", 1.7 km S village Fusch-Verleuten, 47°09'10"N, 12°48'50"E, 1512 m a.s.l., 1 ♂, vii.2016, meadow above scattered forest, M. Lechleitner leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Belarus, Czech Republic, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2015), Latvia, Lithuania, Netherlands (von Tschirnhaus & van Wielink 2020), Norway (Andersen 2018), Poland, Russia (Nartshuk 2019), Slovakia, Sweden, Ukraine. **First record from Austria.**

SUBFAMILY: PHYTOMYZINAE

Amauromyza (*Amauromyza*) *chamaebalani* (Hering, 1960)

Material examined: ITALY: Apulia, road from Gióia del Colle to Alberobello, road no. 604, (mile stone km 21.0), near a road bridge close to town Noci, 40°47'41"N, 17°07'24"E, 1 ♂, 2.iv.2000, fallow land with rocks, much *Euphorbia*, *Asphodelus*, swept from flowering herb vegetation, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: France (Buhr 1960), Germany, Hungary, Lithuania, Moldova (de Meijere, 1937: 201 as *Liriomyza* spec. „Bessarabien, Tighina" [= Bender]). **First record from Italy.**

Amauromyza (*Amauromyza*) *lamii* (Kaltenbach, 1858)

Material examined: CROATIA: Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 24.viii.-14.ix.2014, abandoned garden, MT, B. Kokan leg. (CMBP).

Distribution: Europe: Austria, Belgium, Czech Republic, Germany, Greece, Hungary, Italy, Moldova, Poland, Romania, Serbia (Dobrosavljević *et al.* 2018), Slovakia; Japan. **First record from Croatia.**

Amauromyza (*Cephalomyza*) *abnormalis* (Malloch, 1913)

Material examined: GERMANY: Land Sachsen-Anhalt, Hecklingen, 51°50'49.42"N, 11°33'16.03"E, 65 m a.s.l., 2 ♂♂, 1 ♀, 25.v.-20.viii.2010, wet salt marsh close to a saltwater ditch, MT, M. Süssmuth leg., M von Tschirnhaus det. (CMTB).

Comments: This American species boring in *Amaranthus* roots is the sister species of the European *Am.* (*C.*) *chenopodivora* Spencer, 1971 which in earlier times was misidentified by different authors in Europe and Japan as „*abnormalis*". Since the spreading of the harmful neophyte *Amaranthus retroflexus* in Europe it could be awaited that one day this antagonistic monophagous fly appeared east of the Atlantic Ocean.

Distribution: Nearctic: Canada, United States. **Surprising first record from Palaearctic Region, Europe and Germany**.

Amauromyza (*Cephalomyza*) *chenopodivora* Spencer, 1971

Material examined: CHINA: Jilin prov., Erdaocun, 42°25'15.6"N, 128°4'37.2"E, 800 m a.s.l., 2 ♂♂, 25.-26.vi.2017, E. Jendek & O. Šauša leg. (CMBP).

Distribution: Europe: Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Lithuania, Netherlands, Norway, Poland, Russia (Zlobin pers. com.), Serbia (Dobrosavljević *et al.* 2018), Slovakia, Sweden. **First record from China.**

Amauromyza (*Cephalomyza*) *flavifrons* (Meigen, 1830)

Material examined: CROATIA: Gorni Mući, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 1.-28.ix.2018, abandoned garden, MT, B. Kokan leg. (CMBP).

Distribution: Europe: Albania, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France incl. Corsica, Germany, Great Britain, Hungary, Italy incl. Sardinia, Lithuania, Montenegro (Spasić 1996), Netherlands, Norway, Poland, Portugal (Černý & Bächli 2018), Romania, Russia, Serbia (Dobrosavljević *et al.* 2018), Slovenia (Maček 1968), Spain, Sweden, Switzerland; Kyrgyzstan, North Korea, Tunisia (Zlobin 2007), Turkey; Canada, United States. **First record from Croatia.**

Amauromyza (*Cephalomyza*) *karli* (Hendel, 1927)

Material examined: SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°17.2'N, 127°53.5'E, 275 m a.s.l., 1 ♂, 13.vi.2005, Light-Trap, Merz, Choi, Byun, Lee, Hwang & Sok leg. (CMCH).

Distribution: Europe: Croatia (Černý 2018), Czech Republic, Finland, France, Germany, Greece, Hungary, Poland, Romania, Slovakia (Černý 2018), Spain, Sweden, Switzerland (Černý & Bächli 2018); Mongolia (Spencer 1977); Canada. **First record from South Korea.**

Amauromyza (*Cephalomyza*) *monfalconensis* (Strobl, 1909)

Material examined: ALBANIA: Western shore of Lake Ohrid, hilltop near village Lin with ancient Illyrian mosaics, 41°03'57"N, 20°45'52"E, 760 m a.s.l., 3 ♂♂, 1 ♀, 11.v.2011, ungrazed diverse herb vegetation, M. v. Tschirnhaus leg. et det. (CMTB). IRAN: 28 km N Miyaneh, 1.6 km WNW village Neshlandeh, 116 km W Caspian Sea, 37°41'08"N, 47°40'49"E, 1780 m a.s.l., 2 ♀♀, 2.vi.2019, diverse meadow below apple trees, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Croatia (Spasić & Spencer 1992), Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Lithuania, Montenegro, Netherlands, Norway, Poland, Romania, Russia, Serbia, Slovakia, Spain, Sweden, Switzerland; Turkey, Uzbekistan. **First record for Albania and Iran.**

Aulagromyza discrepans (van der Wulp, 1871)

Material examined: ITALY: Apulia, road no. 378 from Gravina to Corato (at km 46), 8 km NNE Gravina, 40°53'31"N, 16°26'44"E, 530 m a.s.l., 2 ♂♂, 2 ♀♀, 6.iv.2000, swept on *Galium aparine*. SWEDEN: Isle of Öland, Jordtorpsäsen Nature Reserve 6 km NE Färjestaden, 56°40'27"N, 16°33'30"E, 47 m a.s.l., 1 ♂, 31.v.2008, mixed decidous forest and dry grassland, *Galium* spp. present.; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belgium, Czech Republic, France, Finland, Germany, Great Britain, Greece incl. Crete and Rhodes, Hungary (Papp 2004), Netherlands, Poland, Portugal, Slovakia, Spain incl. Balearic Islands, Switzerland. **First record from Italy and Sweden.**

Aulagromyza hamata (Hendel, 1932)

Material examined: SPAIN: Cabo de Gata, „Morón de los Genoveses“, eastern closed gate of coastal road, 20 km ESE Almería, 36°44'00"N, 2°09'37"W, 44 m a.s.l., 1 ♂, 14.iv.1993, dry mountain vegetation, swept on several tall thistle species, *Salvia* with violet flowers, *Thymus* and *Stipa,* M. v. Tschirnhaus leg. et det. (CMTB). M.Pina de Ebro, 1 ♂, 20.iv.1996, sweeping vegetation, J.A. Pinzolas leg. (CCTB).

Distribution: Europe: Crete (von Tschirnhaus 1991); Israel, Tunisia (Černý 2009), Turkey. **First record from Spain.**

Aulagromyza orphana (Hendel, 1920)

Material examined: CROATIA: Gorni Mući, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 21.iv.-19.v.2018, abandoned garden, MT, B. Kokan leg. (CMBP). GREECE: Dodekanese, Isle of Kós, center of town Kós, ancient

ruins, swept from *Galium aparine*; Dodekanese, Rhodes, Lindos, 36°05'38"N, 28°05'02"E, 1 ♂, 1 ♀, 28.iii.1997, swept on *Galium aparine*; Crete (east), road from Sifia to Skafa, 1.5 km E Exo Mouliana and W Hamezi (Chameizi), 35°10'02"N, 26°00'02"E, 1 ♂, 24.iii.1987, swept, the only *Galium* species present was *G. aparine*; all M. v. Tschirnhaus leg. et det. (CMTB). ISRAEL: Herzliyya, 1 ♂, 19.ii.1982, MT, A. Freidberg leg. (TAUI). ITALY: Apulia, road no. 378 from Gravina to Corato (at km 46), 8 km NNE Gravina, 40°53'31"N, 16°26'44"E, 530 m a.s.l., 1 ♂, 1 ♀, 6.iv.2000, swept on *Galium aparine*, M. v. Tschirnhaus leg. et det. (CMTB). SPAIN: Balearic Islands, Mallorca, Artá, castle „Santuari de San Salvador", 39°41'46"N, 3°21'13"E, 150 m a.s.l., 6 ♂♂, 3 ♀♀, 6.iv.1986, swept on *Galium aparine*, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Andorra, Austria, Belgium, Bulgaria, Czech Republic, Denmark, France, Germany, Great Britain, Greece, Hungary, Ireland, Netherlands, Poland, Portugal (Černý *et al.* 2018), Slovakia, Spain, Sweden, Switzerland; Kazakhstan (Černý 2018), Turkey. **First record from Balearic Islands, Croatia, Dodecanes, Crete, Israel and Italy.**

Cerodontha (*Butomomyza*) *angulata* (Loew, 1869)

Material examined: CROATIA: Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 1.-28.ix.2018, abandoned garden, MT, B. Kokan leg. (CMBP). FINLAND: Obb: Ylitornio, 66°24'39.6"N, 24°55'51.6"E, 160 m a.s.l., 1 ♂, 25.vi.-12.vii.2018, minerotrophic peat bog, J. Salmela leg. (CMBP).

Distribution: Europe: Andorra, Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal (Černý *et al.* 2018), Romania, Slovakia, Slovenia (Černý 2018), Spain (Carles-Tolrá 2019), Sweden, Switzerland; Israel, Japan, North and South Korea, Turkey, Kuril Islands and Yakutia; Canada, United States; Guiana (SPENCER 1990). **First record from Croatia and Finland.**

Cerodontha (*Butomomyza*) *mellita* Spencer, 1971

Material examined: GERMANY: Bavaria, saw-mill Petersmühle at stream Schambach, 1.7 km NNE Arnsberg/Altmühl (river), 48°54'43"N, 11°21'52"E, 382 m a.s.l., 21 ♂♂, 15 ♀♀, 21.v.2018, swept on dams between fish ponds, *Carex paniculata* dominant, further *Carex* species, *Scirpus silvaticus, Juncus effusus, J. inflexus, Phragmites australis* (and dicots), M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Belgium, Czech Republic, Great Britain, Poland, Portugal (Černý *et al.* 2018), Slovakia, Switzerland (Černý & Bächli 2018). **First record from Germany.**

Cerodontha (*Butomomyza*) *scutellaris* (von Roser, 1840)

Material examined: FINLAND: Turku, 60°22'35.33"N, 22°9'35.99"E, 1 ♂, 7.vi.2010, roadside with ditches, K. Winqvist leg. et det. (CKWT).

Distribution: Europe: Austria, Belgium, Czech Republic, Denmark, France, Germany, Great Britain, Ireland, Latvia, Lithuania, Norway, Poland, Slovakia, Sweden; Turkey. **First record from Finland.**

Cerodontha (*Cerodontha*) *phragmitophila* Hering, 1935

Material examined: GEORGIA: Region Kachetia, northern end of Dali-Reservoir, river mouth of Iori, 26 km SW Dedopliszqaro, 41°18'45.5"N, 45°52'26.2"E, 290 m a.s.l., 1 ♀, 14.x.2017, swept in large *Phragmites* and *Typha* beds, M. v. Tschirnhaus leg. et det. (CMTB). JORDAN: Oasis „Al Asraq ash Shamali", 85 km E Amman, 31°52'41"N, 36°49'50"E, 510 m a.s.l., 16 ♂♂, 5 ♀♀, 11. & 15.iv.1992, swept on *Phragmites australis*, M. v. Tschirnhaus leg. et det. (CMTB). EGYPT: Pure sand desert, road from Bahariya to Farafra, 100 km SSW Oasis Bawiti, 230 km W river Nile, 27°35'N, 28°20'E, 1 ♂, 16.iii.1992, swept from a 100 m² patch of *Phragmites australis* around a slightly damaged dripping water pipeline at roadside, S. Beeg & R. Mannesmann leg., M. v. Tschirnhaus det. (CMTB).

Comments: Abdomen of all specimens dark above, scutum without light stripes. This species follows its host plant deep into the desert. Although already recorded for Egypt (Černý & Merz 2006) we report here a remote Saharan locality above.

Distribution: Europe: Belgium, Bulgaria, Croatia, Czech Republic, France incl. Corsica, Great Britain, Greece, Hungary, Italy, Poland, Portugal (Černý *et al.* 2018), Slovenia, Spain incl.

Canary Islands, Switzerland (Černý & Bächli 2018), former Yugoslavia; Cyprus, Egypt, Israel, Kazakhstan, Pakistan, Turkey, Uzbekistan. **First record from Georgia, Jordan and Sahara desert.**

Cerodontha (*Dizygomyza*) *chaixiana* (Hering, 1956) sensu Nowakowski 1973, figs. 171

Material examined: ANDORRA: Santa Coloma, 42º49'N, 01º49'E, 1050 m a.s.l., 1 ♀, 1.-15.vi.1993, J. Pujade-Villar leg. (CCTB). FINLAND: Obb: Ylitornio, 66°24'39.6"N, 24°55'51.6"E, 160 m a.s.l., 1 ♂, 25.vi.-12.vii.2018, minerotrophic peat bog, J. Salmela leg. (CMBP).

Distribution: Europe: Czech Republic, Germany, Hungary (Papp & Černý 2016), Poland, Slovakia (Černý & Roháček 2020), Switzerland (Černý & Bächli 2018). **First record from Andorra and Finland.**

Cerodontha (*Dizygomyza*) *handlirschi* Nowakowski, 1967

Material examined: SWITZERLAND: Bern: Birner Alpen, Grindelwald env., 2500 m a.s.l., 1 ♂, 16.vi.1997, alpine zone, B. Mocek leg. (CMCH).

Distribution: Europe: Czech Republic, Italy (Martinez 2013), Poland. **First record from Switzerland.**

Cerodontha (Dizygomyza) hirtae Nowakowski, 1967

Material examined: ALBANIA: road between Gërmenj (in the north) and Koma Kabash (in the south), „Farma Sotira Hotel Taverne Peshku“, 8.3 km SSW Leskovik, 40°12'54"N, 20°38'54"E, 1100 m a.s.l., 1 ♂, 13.v.2011, wet meadow, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belgium, Czech Republic, Germany, Greece, Hungary (Papp & Černý 2016), Netherlands, Poland, Slovakia, Switzerland (Černý & Bächli 2018); United States. **First record from Albania.**

Cerodontha (*Dizygomyza*) *luzulae* (Groschke & Hering, 1957)

Material examined: AUSTRIA: Vorarlberg, Lechtaler Alpen, mountain hut „Freiburger Hütte“, 5 km N Dalaas, 47°09'45"N, 9°59'26"E, 1914 m a.s.l., 1 ♂, 27.vii.1983, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Germany, Great Britain, Greece, Hungary, Montenegro (Spasić 1996), Poland, Portugal (Černý *et al.* 2018), Slovakia (Černý 2012), Switzerland. **First record for Austria.**

Cerodontha (*Dizygomyza*) *silvatica* (Groschke & Hering 1957)

Material examined: AUSTRIA: Gerlos, 47º16'N, 12º03'E, 1400 m a.s.l., 2 ♂♂, 9.viii.1988, edge of spruce wood, M. Barták leg. (CMBP). SLOVAKIA: Komárno distr., Iža, 47°45'3.6"N, 18°15'14.4"E, 106 m a.s.l., 1 ♂, 5.-16.v.2017, salt marsh Bokroš, MT, Ľ. Vidlička & O. Majzlan leg. (CMBP).

Distribution: Europe: Czech Republic, Germany, Great Britain, Hungary, Poland, Switzerland (Černý & Bächli 2018). **First record from Austria and Slovakia.**

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

Material examined: ALBANIA: 13 km SSE Korça, S village Ujëbardhë, 40°30'38"N, 20°41'36"E, 1 ♀, 12.vi.2003, 1 ♀, 13.v.2011, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Latvia, Lithuania, Macedonia (Coe 1958), Netherlands, Poland, Portugal (Černý *et al.* 2018), Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine; Afghanistan, China, Israel, Iran, Japan, Kasakhstan, Kyrgyzstan, Mongolia, Russia – Yakutia, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Uzbekistan; South Africa. **First record from Albania.**

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

Material examined: ARMENIA: Province Wajoz Dsor, 51 km S Lake Sewan, 6 km S village Gnevaz, 39°42'12"N, 45°36'17"E, 1483 m a.s.l., 2 ♀♀, 12.vi.2019, distinction from *C.* (*P.*) *superciliosa* (Zetterstedt, 1860) after von Tschirnhaus (2000). IRAN: East Aserbaijan, 26 km NE Täbris, 5.5 km NNE Khaje, 38°11'46"N, 46°37'08"E, 1532 m a.s.l., 3 ♂♂, 2 ♀♀, 1.vi.2019, Phragmitetum and adjoining meadows; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Occurring in most countries except Iceland and Faroe Islands; Afghanistan, China, Japan, Kazakhstan, Mongolia, Morocco, Russia: West and East Sibiria, Tunisia, Turkey, Uzbekistan; 332 publications collected by the second author deal with this species which is treated also as harmful miner in different cereal species. **First record from Armenia and Iran.**

Cerodontha (*Poemyza*) *muscina* (Meigen, 1830)

Material examined: KYRGYZSTAN: Kerskej-Ala-Too mountains along stream „Reka Arašan“, 18 km SE Karakol, 42°24'41"N, 78°34'34"E, 2240 m a.s.l., 1 ♀, 26.viii.2003, rich herbacous flora contains the grasses *Poa angustifolia, Dactylis glomerata* and *Milium effusum*, M. v. Tschirnhaus leg. et det. (CMTB). RUSSIA: West Siberia, Oblast Tomsk, 86 km NNE Novosibirsk, NW Bazoj, 55°45'40"N, 83°20'58"E, 120 m a.s.l., 4 ♂♂, 2.viii.2000, *Pinus cembra* forest, swept above swampy ditch with *Agrostis* sp., M. v. Tschirnhaus leg. et det. (CMTB). SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°17.2'N, 127°53.5'E, 275 m a.s.l., 1 ♂, 13.vi.2005, Light-Trap, Merz, Choi, Byun, Lee, Hwang & Sok leg. (CMCH).

Distribution: Europe: Andorra, Austria, Belarus, Belgium, Czech Republik, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy incl. Sicily, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal (Černý *et al.* 2018), Romania, Russia, Slovakia, Spain, Sweden, Switzerland, former Yugoslavia; Russia - Yakutia; Canada, United States incl. Alaska. **First record from Kyrgyzstan, South Korea and West Siberia.**

Cerodontha (*Poemyza*) *pygmella* (Hendel, 1931)

Material examined: CROATIA: Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 8.vii.-1.ix.2018, abandoned garden, MT, B. Kokan leg. (CMBP).

Distribution: Europe: Czech Republic, Estonia, Denmark, Finland, Germany, Great Britain, Hungary, Lithuania, Netherlands (von Tschirnhaus & van Wielink 2020), Norway, Poland, Slovakia, Spain incl. Canary Islands, Sweden; Iran (Ranji *et al.* 2015), Kamchatka, Kuril Islands (Iwasaki 2000). **First record from Croatia.**

Cerodontha (*Poemyza*) *spencerae* Zlobin, 1993

Material examined: GERMANY: Bavaria, upper valley of Isar, western end of Sylvenstein reservoir, 15 km SSW Lenggries, 47°33'36"N, 11°28'54"E, 770 m a.s.l., 1 ♂, 15.vi.2002, gravel bank of Isar, *Juncus bufonius, J. inflexus, Carex, Agropyron*; Bavaria, Karwendel trail „Leitersteig“ from hut „Brunnsteinhütte“ northwards and down to Mittenwald, 47°24'54"N, 11°16'58"E, 1616 m a.s.l., 3 ♂♂, 1 ♀, 9.vii. 2011; all M. v. Tschirnhaus leg. et det. (CMTB). SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 1 ♂, 22.vi.2005, dry & wet forest park behind stud. home, B. Merz leg. (CMCH).

Distribution: Europe: Belarus, Croatia, Czech Republic, Estonia, Finland, Hungary, Italy, Latvia, Lithuania, Netherlands (von Tschirnhaus & van Wielink 2020), Poland, Russia, Slovakia, Switzerland; Kazakhstan, East Siberia, Russian Far East, including Sakhalin Island, Yakutia. **First record from Germany and South Korea.**

Chromatomyia beigerae Griffiths, 1980

Material examined: CZECH REPUBLIC: Bohemia, Šumava Mts, Rokytecká slať, 49°00'59"N, 13°25'05"E, 1100 m a.s.l., 1 ♂, 17.vi.-21.vii.1999, forest, MT, M. Barták leg. (CMBP); Šumava Mts, Trojmezná Mt., 3 ♂♂, 1.-12.vi.2003, 2 ♂♂, 12.-24.vi.2003, 2 ♂♂, 24.vi.-2.vii.2003, MT, all J. Farkač leg. (CMBP).

Distribution: Europe: Germany, Italy, Poland, Slovakia, Switzerland (Černý & Bächli 2018). **First record from Czech Republic.**

Chromatomyia centaurii Spencer, 1990

Material examined: ITALY: Apulia, northern Gargano, mountain top of road at Casa Rignanese, about 41°45'N, 15°48'E, 671 m a.s.l., 1 ♂, 8.iv.2000, beech forest mixed with oak, diverse herb flora, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Germany, Great Britain, Greece (Papp & Černý 2020), Hungary (Papp & Černý 2020), Ireland, Lithuania. **First record from Italy.**

Chromatomyia cepelaki Černý, 2012

Material examined: CZECH REPUBLIC: Bohemia, Šumava Mts, PP Malá Niva res., 48º55'N, 13º49'E, 780 m a.s.l., 1 ♂, 5.vii.1988, peat-bog, M. Barták leg. (CMBP).

Distribution: Europe: Slovakia. **First record from Czech Republic.**

Chromatomyia farfarella Hendel, 1935

Material examined: IRAN: NW-shore of Lake Neor (Nior, Neur), 31 km W Caspian Sea, 34 km SE Ardabil, 3 ♂♂, 11 ♀♀, 28.v.2019, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Croatia (Papp & Černý 2020), Denmark, Faroe Islands, Finland, France, Germany, Iceland, Ireland, Latvia, Lithuania, Norway, Poland, Portugal (Černý *et al.* 2018), Slovenia, Sweden. **First record for Iran.**

Chromatomyia gentianella (Hendel, 1932)

Material examined: GERMANY**:** Bavaria, 11 km SSW Garmisch-Partenkirchen, mountain Zugspitze, 47°24'24.48"N, 11°00'28.91"E, 2005 m a.s.l., 1 ♂, 2.-13.viii.2018, MT, fine limestone rock waste with sparse *Thlaspion* plant association; 47°24'22.36"N, 11°00'34.20"E, 1965 m a.s.l., 1 ♂, 1 ♀, 18.vii.-2.viii.2018, MT, dwarf pine zone on alpine limestone; all MT, D. Doczkal & J. Voith leg., M. v. Tschirnhaus det. (CMTB).

Comments: Among 49 publications mentioning this species there is one with original data from „Germany“, the description of the parasitoid *Chorebus gentianellus* (Braconidae) (Griffiths 1967), which was reared 1.v.1953 by [Franz] Groschke, collected in „Pappling“ near Wolfratshausen, Upper Bavaria, being a misspelling of Puppling, 47°55'07"N, 11°26'58"E, 579 m a.s.l. Groschke in his three papers on Agromyzidae did not mention the former „*Napomyza*“ *gentianella* before his early death 4.i.1956. It remains questionable if this high alpine species really occurred and propagated on a *Gentiana* species in the Bavarian agricultural and forestry lowlands. A specimen of *Ch. gentianella* or *Ch. gentianae* (Hendel, 1920) from Groschke's rearing activity was never mentioned. As such we don't accept this German record was repeated at least twice in the Braconidae literature but we don't regard it as trustworthy as such. Four further European *Chromatomyia* species reared from *Gentiana* species have been described since Groschke's identification.

Distribution: Europe: Austria (Franz, 1989), Bulgaria, Italy, Montenegro (Spasić 1996), Poland, Slovenia (Maček 1967), Switzerland (Černý & Merz 2007); Kyrgyzstan (Pėc 1996). **First confirmed record from Germany.**

Chromatomyia gentii (Hendel, 1920)

Material examined: GERMANY: Bavaria, Karwendel mountain, path „Ochsenbodensteig“ from Dumkerhütte down to Mittenwald, 47°26'27"N, 11°18'06"E, 1549 m a.s.l., 6 ♂♂, 6.vii.2011, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, France, Italy, Poland, Slovakia. **First record from Germany.**

Chromatomyia hoppiella Spencer, 1990

Material examined: GERMANY: Bavaria, Allgäu, 6 km E Oberstdorf, Schochen mountain, 47°23'24"N, 10°21'58"E, 1980 m a.s.l., 2 ♂♂, 3 ♀♀, 4.-29.ix.2014, MT, snow valley, D. Doczkal, S. Schmidt & J. Voith leg, M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Switzerland. **First record from Germany.**

Chromatomyia horticola (Goureau, 1851)

Material examined: AFGHANISTAN: Kabul, 2 ♂♂, 15.V.1971, house garden, M. Spindler leg., M. v. Tschirnhaus det. (CMTB). ALGERIA: Sahara, Hoggar mountain massif, Gueltas, Issakkavassene, Assekrem-Hirhafok, about 23°25'N, 25°46'E, 1800 m a.s.l., 1 ♂, 8.-9.iv.1984, P. Ohm leg., M. v. Tschirnhaus det. (CMTB). KYRGYZSTAN: prov. Chuy Kashka Suu, 42°40'30"N, 74°30'57.6"E, 1200 m a.s.l., 8 ♂♂, 28.v.-15.vi.2019, peat-bog, J. & L. Halada leg. (CMBP). MONGOLIA: Province Uvurkhangai, Orkhon waterfall, 396 km WSW Ulaanbaatar, 46°47'14"N, 101°57'37"E, 1800 m a.s.l., 1 ♀, 31.viii.2001, identified after the specific arista (von Tschirnhaus 1969), D. Muschiol leg., M. v. Tschirnhaus det. (CMTB).

Distribution: It is probably the most widely distributed (semi-cosmopolitan) species, known from Palaearctic, Afrotropical and Oriental regions (pest status on Flores, SE Indonesia, close to the Australasian realm was observed in pea crops September 1992 by M. v. Tschirnhaus). **First record from Afghanistan, Algerian Sahara, Kyrgyzstan and Mongolia.**

Chromatomyia isicae (Hering, 1962)

Material examined: CORSICA: Vizzavona env., 800-1000 m a.s.l., 1 ♂, 12.v.1993, Pinetum, pasture, B. Mocek leg. (CMCH).

Distribution: Europe: Austria, Czech Republic, Finland, Hungary (Papp & Černý 2020), France (Černý 2018), Germany, Greece, Iceland, Latvia, Lithuania, Norway, Russia, Slovakia, Sweden, Switzerland. **First record from Corsica.**

Chromatomyia linnaeae Griffiths, 1974

Material examined: SWEDEN: Norrbottens län, Abisko, 1 km SE railway station, 68°20'35"N, 18°50'59"E, 401 m a.s.l., 10 ♂♂, 2 ♀♀, 13.-17.vii.1991, 170 yellow pan traps in a 1.5 km long row (no specimens in 170 white pan traps in a further row!), tundra with scattered *Betula* shrubs, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Finland, Norway; Canada, United States (Eiseman & Lonsdale 2018). **First record from Sweden.**

Chromatomyia milii (Kaltenbach, 1864)

Material examined: IRAN: NW-shore of Lake Neor (Nior, Neur), 31 km W Caspian Sea, 34 km SE Ardabil, 1 ♂, 28.v.2019, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Confirmed in most Palaearctic countries and also in Canada, the USA and in a few countries in the Oriental region. Records since 1980 that are not based on careful examination of genitalia can no longer be accepted as reliable. **First record from Iran.**

Chromatomyia nigra (Meigen, 1830) sensu stricto

Material examined: ALBANIA: In the course of the taxonomic discussion below M.Č. dissected male genitalia of this material again and confirmed the determination as *Ch. nigra* sensu stricto. In addition we report here a second confirmation: Western shore of lake Ohrid, S village Lin, 41°03'43"N, 20°38'52"E, 693 m a.s.l., 1 ♂, 3 ♀♀, 11.v.2011, M. v. Tschirnhaus leg. et det. (CMTB). SPAIN: Catalonia, 0.8 km E La Vall de Santa Creu, E Puerta de la Selva, 3 km SSE Llança, 42°20'08"N, 3°10'24"E, 4 ♂♂, 10.iv1980; Catalonia, Dosrius, 25 km N Barcelona, 41°34'57"N, 2°25'21"E, 1 ♀, 8.iv.1980, alfalfa field (during the time before and after, 29.iii.-11.iv.1980, in southern France further 94 ♂♂, 33 ♀♀ were collected); all M. v. Tschirnhaus leg. et det. (CMTB).

Comments: This is the species treated and figured by Papp & Černý (2020) and by Griffiths (1980: Figs. 62-63). The phallus has two pairs of uneven long supporting sclerites in the upper lobe of which the longer sclerites are curved downwards distally and partly lancet-like widened at their ends. This abundant species mostly possesses a yellowish or orange frons. After the issue of Griffiths‘ revision (1980) in correspondance with the second author of this article Griffiths became convinced that his Fig. 64 in the same article belongs to a separate species described by Hendel (1931-1936) as *Phytomyza nigra obscuriceps*. This taxon was raised to specific rank by von Tschirnhaus (1981: 32) and can also be distinguished by a dirty grey or dark frons. The third antennal segment of both species are slightly shorter than deep while in *Ch. fuscula* (Zetterstedt, 1838) it is evenly rounded and as long as deep. With experience

females of *Ch. fuscula* can be distinguished by this feature and its light frons. *Ch. obscuriceps* occurs throughout the whole Palaeartic Region until Kamchatka and also in North America (see also below). It is the more abundant species in coastal areas of temperate climate. One of its preferred host plants are species of the genus *Puccinella* (Poaceae) covering the lower tidal salt marshes.

Distribution: Europe: Albania, Andorra, Austria, Belarus, Belgium, Bulgaria, Channel Is., Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Montenegro, Netherlands, Norway, Poland, Portugal incl. Azores and Madeira Islands, Romania, Russia, Serbia, Slovakia, Slovenia (Maček 1999), Spain, Sweden, Switzerland; China, East Siberia, Egypt, Iran (Shahreki *et al.* 2012) [confirmed identification: NW-shore of Lake Neor (Nior, Neur), 31 km W Caspian Sea, 34 km SE Ardabil, 1 ♂, 28.v.2019, together with 1 ♂ *Ch. milii*, M. v. Tschirnhaus leg. et det.], Japan, South Korea, Turkey; Canada, United States; Greenland, India, Nepal, Taiwan, Thailand. From Spain *Ch. nigra* was first reported from Irun [Basque Country, Province Gipuzkoa] as a female of „*Phytomyza obscurella* Fall., var. *nigra* Mg.“ by Strobl (1900: 61). Under the same name Czerny & Strobl (1909: 265) listed the species from Monistrol (leg. Strobl) [after the introduction chapter it was collected 14.v.1907 in Monistrol along the Llobregat river below the Montserrat monastry in Catalonia]. Both findings were included in the checklist of Diptera by Arias Encobet (1912: 228, 238). Neglecting these three articles finally Carles-Tolrá (2019: 86, 90) added *Ch. nigra* as new for Spain. The three old references cannot serve as reliable records, also the latter remains doubtful without male genitalia preparation and reliable distinction from *Ch. obscuriceps.* Therefore here we report a **first confirmed record from Albania and Spain.**

Chromatomyia norwegica (Rydén, 1957)

Material examined: AUSTRIA: Vorarlberg, Lechtaler Alpen, Lechtal, 2.5 km SW Lech, 47°11'38"N, 10°06'37"E, 1596 m a.s.l., 1 ♂, 31.vii.1983, spruce forest along stream, M. v. Tschirnhaus leg. et det. (CMTB). Already von Tschirnhaus *in* Stockner (1982: 58) listed this species from Austria. As detailed collecting data were excluded we add here those of a further Austrian locality.

Distribution: Europe: Czech Republic, Finland, Germany, Italy (Hellrigl 1996), Latvia, Lithuania, Norway, Poland, Slovakia, Sweden, Switzerland (Černý & Bächli 2018); Canada, United States. **First complete record from Austria.**

Chromatomyia obscuriceps (Hendel, 1936)

Material examined: AUSTRIA: River „Obere Lobau“ E Vienna, 48°11'50"N, 16°29'40"E, 1 ♂, 1 ♀, 5.vi.1991, emerged into 0.25 m² eclector on winter wheat crop (*Triticum aestivum*), first record of this host plant, J. Idinger leg., M. v. Tschirnhaus det. (CMTB). GREAT BRITAIN: Scotland, Orkney (main island), „Skara Brae“ prehistoric village at Bay of Skale, 3.6 km WSW Sandwick, 9.4 km NNW Stromness, 59°02'55"N, 3°20'30"W, 9 ♂♂, 4 ♀♀, 26.vi.2014, swept together with 2 ♂♂ of *Chromatomyia nigra*; Brough of Bursey, island with lighthouse, 19 km N Stromness, 59°08'10"N, 3°20'07"W, 1 ♂, 28.vi.2014; Yesnaby (historic place at coast), 7.3 km N Stromness, 59°01'49"N, 3°21'10"W, 4 ♂♂, 28.vi.2014, caught together with 1 ♂ *Ch. nigra*; Cottascarth Rendell Moss Reserve, 15 km NE Stromness, 59°03'27"N, 3°05'18"W, 2 ♂♂, 29.vi.2014, on bog with heather; South Ronaldsay Island at most southern end E lake Liddel Loch, 33.3 km SE Stromness (on main island), 58°44'04"N, 2°56'14"W, 2 ♂♂, 2 ♀♀, 29.vi.2014, swept above *Glyceria fluitans* and *Holcus* sp. around a pond. Further comments see above under *Ch. nigra*; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Denmark (Petersen & von Tschirnhaus 2001), Faroe Islands, Finland (Griffiths 1980), Germany and many further countries but not yet documented by original data; Kamchatka, Russia: Kuril Islands (Iwasaki 2000), Nearctic Region (Griffiths 1980). **First record from Austria and Great Britain.**

Chromatomyia ochracea Hendel, 1920

Material examined: ITALY: Trentino-Alto-Adige, Provincia Bolzano, Parco Nazionale dello Stelvio, Sulden Valley E Gomagoi, 46°34'34"N, 10°32'51"E, 1220 m a.s.l., 1 ♂, 21.-31.v.2005, *Vaccinio-Pineecio* association, MT, C. Lange & J. Ziegler leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria, Czech Republic, Finland, Germany, Poland, Russia, Sweden, Switzerland (Černý & Bächli 2018). **First record from Italy.**

Chromatomyia scolopendri (Robineau-Desvoidy, 1851)

Material examined: SWITZERLAND: Ticino: Losone Arcegno, Collina di Maia, Arcegno, 46°09'45.50"N, 8°45'00.38"E, 363 m a.s.l., 1 ♀, 7.-26.vii.2016, 46°10'02.17"N, 8°44'46.83"E, 407 m a.s.l., 1 ♀, 7.-26.vii.2016, MT; Centovalli, Costa, Alla Poma, 46°9'31.29"N, 8°36'25.12"E, 817 m a.s.l., 1 ♀, 27.vii.-10.viii.2017; Isorno, Auressio, Giardino, 46°12'0.20"N, 8°41'31.23"E, 713 m a.s.l., 1 ♀, 4.-17.vii.2018, all L. Pollini P. & M. Abderhalden leg. (CMNH).

Distribution: Europe: Austria, Belgium, Denmark, France, Germany, Great Britain, Ireland, Italy, Netherlands, Poland, Slovakia (Černý & Roháček 2020), Spain; Japan, Turkey. **First record from Switzerland.**

Chromatomyia succisae (Hering, 1922)

Material examined: BALEARIC ISLANDS: Mallorca, Nature reserve „La Albufera“ 39°47'58"N, 3°06'44"E, 6 ♂♂, 8 ♀♀, 30.iii.1986; NE coast at 39°51'48"N, 3°05'19"E, 1 ♂, 2 ♀♀, 4.iv.1986, leg. et det. M. v. Tschirnhaus (CMTB). CROATIA: Hvar, E of Jelsa, 1 ♂, 1 ♀, 10.v.1963, caught on *Scabiosa columbaria*, M. Hering leg. Nr. 7409, K.A. Spencer det. as *Chromatomyia scabiosae* (Hendel 1935) (NHML). GREECE: Crete: River mouth E Sitia at northern coast, 35°12'10"N, 26°06'41"E, 1 ♀, 17.iii.1987, leg. et det. M. v. Tschirnhaus (CMTB). SPAIN: Mongat and surrounding, N Barcelona, 9 ♂♂, 5 ♀♀, 25.v. & 5.vi.1979, 8.vi.1980, reared from *Knautia*, leg. Ò. Alomar in Kurz, det. M. v. Tschirnhaus (partly in CMTB).

Distribution: Europe: Andorra, Denmark, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Ireland, Italy, Lithuania, Netherlands, Poland, Sweden, Switzerland (Černý & Bächli 2018); Cyprus, Israel, Turkey, Uzbekistan. **First record from Balearic Islands, Crete, Croatia, Greece and Spain (mainland).**

Chromatomyia tschirnhausi Griffiths, 1980

Material examined: GERMANY: Bavaria, 11 km SSW Garmisch-Partenkirchen, mountain Zugspitze, 47°24'58.82"N, 10°59'19.73"E, 2500 m a.s.l., 1 ♂ 20.vi.-5.vii, 2 ♀♀, 18.vii.-2.viii., 5 ♂♂, 1 ♀, 2.-13.viii., 15 ♂♂, 34 ♀♀, 13.viii.-11.ix.2018, MT on bare limestone rock; 47°24'24.48"N, 11°00'28.91"E, 2005 m a.s.l., 2 ♂♂, 20.vi.-5.vii., 4 ♂♂, 2 ♀♀, 18.vii.-2.viii., 11 ♂♂, 2 ♀♀, 2.-13.viii., 4 ♂♂, 1 ♀, 13.viii.-11.ix.2018, MT, fine limestone rock waste with sparse *Thlaspion* plant association. [The species was absent in three simultaneously run MTs in altitudes of 1980 and 1965 m a.s.l.]; all MT, D. Doczkal & J. Voith leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria, Czech Republic, Poland, Norway, Slovakia, Switzerland. **First record from Germany.**

Galiomyza galiivora (Spencer, 1969)

Material examined: RUSSIA: Moscow - Lozinsk. ostr., 55°49'N, 37°45'E, 1 ♀, 4.ix.1988, park, M. Barták leg. (CMBP).

Distribution: Europe: Belgium, Corsica, Czech Republic, Germany, Greece, Hungary, Italy, Lithuania, Poland, Slovakia, Switzerland; Canada, United States. **First record from European Russia.**

Liriomyza artemisiae Spencer, 1981

Material examined: SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 2 ♂♂, 19.vi.2005, wet forest, meadow behind institute, B. Merz leg. (CMCH).

Distribution: Japan (Sasakawa 1994); Canada, United States (Spencer & Steyskal 1986, Lonsdale 2017). **First record from South Korea.**

Liriomyza artemisicola de Meijere, 1924

Material examined: SOUTH KOREA: Gangwon-do, Wonjusi, Mt. Baegunsan, 37°15.0'N, 127°57.5'E, 750-1087 m a.s.l., 1 ♂, 14.vi.2005, forest, hilltop, B. Merz, Han, Lee & Hwang leg. (CMCH). SPAIN: Province Segovia, Chañe, 3 ♀♀, 18.v.-3.vii.2000, *Ribes* culture, MT, J. F. Gómez Sánchez leg., M. v. Tschirnhaus det. (CMTB); Barcelona, mountain Tibidabo above „Museu de Ciencia" between Paseo del Valle Hebron and Carretera de las Aguas, 1 ♂, 30.iii.1999; Canary Islands, Tenerife NW, five localities along the NW coast, W Buenavista del Norte until Punta de Teno and Barranco de las Cuevas near Las Casas, 7 ♂♂, 5 ♀♀, 1.-2.iv.1985; same area along coast W Buenavista del Norte, 3 ♂♂, 1 ♀, 17.iii.2004, salt influenced coastal vegetation; Tenerife NE, Las Montanas de Anaga, village Igueste de San Andrés, foot path towards to Lomo Bermejo and to higher altitudes, 3 ♂♂, 13.iii.2004; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Andorra, Austria, Belgium, Croatia, Czech Republic, Denmark, Finland, France incl. Corsica, Germany, Great Britain, Greece, Hungary (Papp & Černý 2017), Ireland, Italy, Lithuania, Netherlands, Norway, Poland, Portugal incl. Azores Islands (Černý *et al.* 2018), Slovakia, Sweden, Switzerland; China, Japan, North Korea, Yakutia; India. **First record from South Korea, Spain (mainland) and Canary Islands.**

Liriomyza asphodeli Spencer, 1957

Material examined: ITALY: Apulia, road from Gióia del Colle to Alberobello, road no. 604, (mile stone km 21.0), near a road bridge close to town Noci, 40°47'41"N, 17°07'24"E, 1 ♂, 2.iv.2000, fallow land with rocks, much *Euphorbia*, *Asphodelus*; also present *Anemone hortensis*, *Asparagus*, *Cistus*, *Quercus pubescens*, swept from flowering *Asphodelus*, M. v. Tschirnhaus leg. et det. (CMTB).

Comments: The above specimen is the first collected specimen and male after the female holotype from Algeciras. The phylogenetically isolated species (judged after the male genitalia) seems to be extremely rare, though *Asphodelus* spp. are abundant around the Mediterranean Sea. The second author tried to obtain it in Croatia, Albania, Greece (incl. Rhodes, Kós, Nisiros, Corfu, Crete), SW Turkey, Italy, Sardinia, Southern France and Spain (incl. the Canary Islands) during many collecting trips in spring and one stay in autumn. Also leaf mines could never be found. Kenneth Spencer must be admired for his detection in two localities.
Distribution: Spain. **First record from Italy.**

Liriomyza centaureae Hering, 1927

Material examined: ALBANIA: road between Gërmenj (in the north) and Koma Kabash (in the south), „Farma Sotira Hotel Taverne Peshku", 8.3 km SSW Leskovik, 40°12'54"N, 20°38'54"E, 1100 m a.s.l., 1 ♂, 13.v.2011, wet meadow, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Great Britain, Hungary, Italy, Latvia, Lithuania, Norway, Poland, Russia, Serbia (Coe 1958), Slovakia, Slovenia (Coe 1962), Spain, Sweden, Switzerland (Černý & Bächli 2018); East Siberia: Yakutia, Kyrgyzstan, Turkey. **First record from Albania.**

Liriomyza chinensis (Kato, 1949)

Material examined: AUSTRIA: Heinburger Berge (mountains), Hundsheimer Kogel, S Dunube river, 12 km W Bratislava, 1 ♂, 1983 or 1984, in photo-eclectors on dry limestone grassland dominated by *Dianthus lumnitzeri*, C. Kampichler leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Czech Republic, France, Hungary (Papp & Černý 2020), Ukraine (Martynov *et al*. 2016); China, East Siberia [redetected 50°57'60"N, 106°15'31"E, river Temnik, 135 km SW Ulan Ude, 2 ♂♂, 1 ♀, 30.7.2016, M. v. Tschirnhaus leg. et det.], Bangladesh (Mazumdar & Bhuija 2014), Indonesia: Sulawesi (Nonci & Muis 2011), Japan, South Korea; Taiwan, Thailand, Malaysia, Vietnam (Tran *et al.* 2006). **First record from Austria.**

Liriomyza congesta (Becker, 1903)

Material examined: ARMENIA: District Kotajk, 2 km E Hatsavan, 15 km ESE Jerevan, 40°07'60"N, 44°40'43"E, 1478 m a.s.l., 1 ♂, 7.vi.2019, mountain agricultural steppe, M. v. Tschirnhaus leg. et det. (CMTB). JORDAN:

Road Amman to Abdalla Bridge, valley ground N of the Dead Sea near Shagur and along a reservoir, 1 ♂, 10.iv.1992, on swamp vegetation below the reservoir wall, M. v. Tschirnhaus leg. et det. (CMTB). MOROCCO: River bed of Ougni, 0.6 km N Akka N'Ait Sidi and 1.8 km NW Tissint, 29°55'03"N, 7°19'56"W, 582 m a.s.l., 1 ♂, 3 ♀♀, 30.xii.2016; River Aoulouz (= Asif Tifnout), bridge of road no. N10, 30°41'45"N, 8°09'16"W, 697 m a.s.l., 1 ♂, 31.xii.2016; River Oued Draa near hotel „Gardin Oued Tamnougalt", 30°40'22"N, 6°23'53"E, 911 m a.s.l., 2 ♂♂, 2.i.2017, vegetable gardens; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: nearly all countries incl. Canary and Madeira Islands (except Faeroe Is. and Iceland); Afghanistan (Černý 2018), China, Cyprus, Egypt, India, Iran, Iraq, Israel, Japan, Oman, Turkey, East Siberia, South Korea, Tunisia, Uzbekistan, Yemen. **First record for Armenia, Jordan and Morocco.**

Liriomyza demeijerei Hering, 1930

Material examined: ALBANIA: 13 km SSE Korça, S village Ujëbardhë, 40°30'38"N, 20°41'36"E, 953 m a.s.l., 1 ♂, 12.vi.2003, 1 ♂, 13.v.2011, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belgium, Bulgaria (Beschovski 2006), Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Italy, Lithuania, Netherlands, Poland, Russia, Serbia, Slovakia, Slovenia (Maček 1994), Sweden, Switzerland; Kyrgyzstan, North Korea. **First record from Albania.**

Liriomyza europaea Zlobin, 2003

Material examined: AUSTRIA: Salzburger Land, Hohe Tauern, path from „Almgasthaus Glocknerblick" to „Sadnighaus", 19 km NE Lienz, 46°57'25"N, 12°56'50"E, 2057 m a.s.l., 1 ♂, 1 ♀, 24.vi.2004, grazed meadow in conifer forest, M. v. Tschirnhaus leg.et det. (CMTB). FINLAND: Obb: 28 km E of Rovaniemi, 66°25'33.6"N, 25°4'48"E, 150 m a.s.l., 1 ♂, 3.vii.-7.viii.2017, boreal forest, MT, J. Salmela leg. (CMBP). GERMANY: Land Sachsen-Anhalt, „Salziger See", salt spring „Franzosenberg", 22 km W Halle (Saale), 10 km SE Lutherstadt-Eisleben, 1 ♀, 17.vi.2006, salt vegetation; Bavaria, Karwendel mountain, path „Ochsenbodensteig" from Dumkerhütte down to Mittenwald, 47°26'27"N, 11°18'06"E, 1549 m a.s.l., 2 ♂♂, 6.vii.2011; all M. v. Tschirnhaus leg. et det. (CMTB); Allgäu, 6 km E Oberstdorf, Schochen mountain, 47°23'24"N, 10°21'58"E, 1980 m a.s.l., 2 ♂♂, 2 ♀♀, 21.vi.-4.vii.2014, 1 ♀, 4.-14.vii. 2014, MT, snow valley, D. Doczkal, S. Schmidt & J. Voith leg, M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Czech Republic, Great Britain, Greece, Netherlands (von Tschirnhaus & van Wielink 2020), Russia, Spain, Sweden, Switzerland (Černý & Bächli 2018). **First record from Austria, Finland and Germany.**

Liriomyza flavopicta Hendel, 1931

Material examined: KYRGYZSTAN: prov. Chuy Kashka Suu, 42°40'30"N, 74°30'57.6", 1200 m a.s.l., 2 ♂♂, 28.v.-15.vi.2019, peat-bog, J. & L. Halada leg. (CMBP).

Distribution: Europe: Andorra, Czech Republic, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2017), Italy, Lithuania, Poland, Portugal, Slovakia, Sweden; Russia – Yakutia (Nartshuk & Bagachanova 2010). **First record from Kyrgyzstan.**

Liriomyza hampsteadensis Spencer, 1971

Material examined: KYRGYZSTAN: Suusamyr Too mountains, Metereological Station It-Agar at river It-Agar, 42°09'36.6"N, 72°53'12.8"E, 1972 m a.s.l., 6 ♂♂, 8 ♀♀, 19.viii. 2003, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Belgium, Czech Republic, Germany, Great Britain, Greece, Hungary (Papp & Černý 2017), Italy, Lithuania, Slovakia (Černý 2018), Switzerland (Černý & Bächli 2018); Egypt. **First record from Kyrgyzstan.**

Liriomyza katoi Sasakawa, 1961

Material examined: SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 1 ♂, 15.vi.2005, forest grassland, behind institute, B. Merz, Byun & Lee leg. (CMCH).

Distribution: Japan; Malaysia, Indonesia (Sulawesi). **First record from South Korea.**

Liriomyza labanoro Pakalniškis, 1992

Material examined: FINLAND: Obb: Ylitornio, 66°24'39.6"N, 24°55'51.6"E, 160 m a.s.l., 1 ♂, 4.25.vi.2018, 3 ♂♂, 25.vi.-12.vii.2018, minerotrophic peat bog, all J. Salmela leg. (CMBP).

Distribution: Europe: Latvia (Karpa 2008), Lithuania. **First record from Finland.**

Liriomyza lituanica Pakalniškis, 1992

Material examined: SOUTH KOREA: Gangwon-do, Wonju Yonsei, Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 1 ♂, 22.vi.2005, dry & wet forest park behind stud. home, B. Merz leg. (CMCH).

Distribution: Europe: Czech Republic, Hungary (Papp & Černý 2017), Italy, Latvia Switzerland (Černý & Bächli 2018). **First record from South Korea.**

Liriomyza lutea (Meigen, 1830)

Material examined: RUSSIA: Kamchatka, Nalyčevo Prirodnyj Park, 22.5 km NNE of peak of volcano „Koryakskaja Sopka", 53°31'03"N, 158°46'42"E, 5 ♂♂, 8 ♀♀, 27.vii.1999, M. v. Tschirnhaus leg. et det. (CMTB). SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 1 ♂, 15.vi.2005, forest grassland, behind institute, B. Merz, Byun & Lee leg. (CMCH); dry & wet forest park behind stud. home, 37°17.2'N, 127°53.5'E, 275 m a.s.l., 1 ♂, 25.vi.2005, Light-Trap, B. Merz, Choi, Byun, Lee, Hwang & Suk leg. (CMCH).

Distribution: Europe: Belarus, Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Italy, Latvia, Lithuania, Netherlands, Norway (Andersen 2016), Poland, Russia, Slovakia (Černý 2018), Spain, Sweden, Switzerland; China, Turkey. **First record from Kamchatka and South Korea.**

Liriomyza pedestris Hendel, 1931

Material examined: CROATIA: Split, Marjan abandoned zoo, 43°30'28.8"N, 16°25'33.6"E, 2 ♂♂, 17.iii.-14.iv.2017, B. Kokan & M. Cvitanić leg. (CMBP).

Distribution: Europe: Austria, Corsica, Czech Republic, Denmark, Great Britain, Greece, Hungary (Papp & Černý 2017), Italy incl. Sicily, Maltese Islands, Norway, Portugal (Černý *et al.* 2018), Russia, Slovakia, Spain (Carles-Tolrá 2019), Sweden, Switzerland, Ukraine; Cyprus, Egypt (Černý 2018), Iran, Israel, Morocco, Saudi Arabia, Turkey, Uzbekistan. **First record from Croatia.**

Liriomyza puella (Meigen, 1830)

Material examined: CROATIA: Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 8.vii.-1.ix.2018, abandoned garden, MT, B. Kokan leg. (CMBP).

Distribution: Europe: Austria, Bulgaria, Czech Republic, Denmark, France, Germany, Great Britain, Greece, Hungary (Papp & Černý 2017), Lithuania, Netherlands, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, former Yugoslavia; Turkey. **First record from Croatia.**

Liriomyza pusio (Meigen, 1830)

Material examined: JORDAN: Road Amman to Abdalla Bridge, valley ground N of Dead Sea near Shagur and along a reservoir, 1 ♂, 10.iv.1992, on swamp vegetation below the reservoir wall, M. v. Tschirnhaus leg. et det. (CMTB). SPAIN: Pina de Ebro, 1 ♂, 28.x.1995, sweeping on *Dorycnium*, J. A. Pinzolas leg. (CCTB).

Distribution: Europe: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, Netherlands, Poland, Russia, Slovakia, Sweden, Switzerland, Ukraine; Iran, Kazakhstan, Tajikistan, Tunisia, Turkmenistan. **First record from Jordan and Spain.**

Liriomyza solivaga Spencer, 1971

Material examined: GERMANY**:** Bavaria, „Dumkerhütte“, W Karwendel mountain, 47°26'15"N, 11°18'32"E, 1650 m a.s.l., 2 ♂♂, 1 ♀, 6.vii.2011; N Mittenwald, W river Isar, 47°27'57"N, 11°15'37"E, 960 m a.s.l., 2 ♀♀, 7.vii.2011, M. v. Tschirnhaus leg. et det. (CMTB); Garmisch-Partenkirchen, mountain Zugspitze, 47°24'19.15"N, 11°00'32.90"E, 1980 m a.s.l., 11 & 4 ♂♂, 20.vi.-5.vii. & 5.-18.vii.2018, dwarf pine zone, MT, D. Doczkal & J. Voith leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Bulgaria (Černý 2018), France, Great Britain, Hungary, Spain, Switzerland (Černý & Bächli 2018). **First record from Germany.**

Liriomyza taraxaci Hering, 1927

Material examined: CROATIA: Ruins of castl Dvigrad, S of valley Limska draga, 18 km ENE Rovinj, 45°07'38"N, 13°48'43"E, 140 m a.s.l., 1 ♂, 17.iv.1981, M. v. Tschirnhaus leg. et det. (CMTB); Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 1.-28.ix.2018, abandoned garden, MT, B. Kokan leg. (CMBP). RUSSIA: West Siberia, Oblast Tomsk, 86 km NNE Novosibirsk, NW Bazoj, 55°45'40"N, 83°20'58"E, 120 m a.s.l., 1 ♂, 2.viii.2000, road through *Pinus cembra* forest., M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia (Dobrosavljević *et al*. 2018), Slovakia, Slovenia, Spain, Sweden, Switzerland; Canada, United States. **First record from Croatia and West Siberia.**

Metopomyza junci von Tschirnhaus, 1981

Material examined: IRAN: Kashpal (= Kashpel) Park, Hyrkanian moist coastal forest, 16.5 km SSE town Nūr at Caspian Sea, 36°26'10.3"N, 52°03'57.5"E, 300 m a.s.l., 1 ♂, 1 ♀, 24.v.2019; East Aserbaijan, 26 km NE Täbris, 5.5 km NNE Khaje, 38°11'46"N, 46°37'08"E, 1532 m a.s.l., 1 ♀, 1.vi.2019, swept from *Juncus gerardii* near a Phragmitetum; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Denmark, Germany, Hungary, Lithuania, Netherlands, Poland, Slovakia; Kyrgyzstan, Russia: West Siberia (see Warrington & Perry 2020). **First record from Iran.**

Metopomyza scutellata (Fallén, 1823)

Material examined: ALBANIA: Western shore of Lake Ohrid, a.s.l., S village Lin, 41°03'43"N, 20°38'52"E, 693 m, 1 ♀, 11.v.2011, garden with much *Brachypodium*, M. v. Tschirnhaus leg. et det. (CMTB). BALEARIC ISLANDS: Mallorca: road from Lloseta to Alaró, ENE Alaró, 1 ♂, 31.iii.1986; „La Albufera“ nature reserve along NE coast, 39°47'58"N, 3°06'44"E, 1 ♂, 4.iv.1986, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Albania, Austria, Belarus, Croatia (von Tschirnhaus 1981), Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Italy, Latvia, Liechtenstein, Lithuania, Montenegro, Norway, Poland, Russia, Slovakia, Serbia, Sweden, Switzerland; East Siberia, Far East, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Uzbekistan. **First record from Albania and Balearic Islands.**

Metopomyza xanthaspis (Loew, 1858)

Material examined: ALBANIA: Western shore of Lake Ohrid, S village Lin, 41°03'43"N, 20°38'52"E, 693 m a.s.l., 1 ♂, 1 ♀, 11.v.2011, garden with much *Brachypodium*, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Andorra, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Italy, Latvia, Lithuania, Netherlands, Norway (Andersen 2018), Poland, Russia, Slovakia, Spain, Sweden, Switzerland; Kazakhstan, Russia: East Siberia, Far East, Turkey. **First record for Albania.**

Napomyza carotae Spencer, 1966

Material examined: AUSTRIA: Tyrol, Tuxer Alpen, 17.5 km SE Insbruck, mountain hut „Naviser Hütte“, 47°08'38"N, 11°34'43"E, 2010 m a.s.l., 1 ♂, 20.-24.vii.1983, grazed and mowed meadows, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Belarus, Belgium, Czech Republic, Estonia, Finland, France, Germany, Great Britain, Hungary, Latvia, Lithuania, Maltese Islands, Netherlands, Russia, Slovakia (Černý 2018), Spain, Sweden, Switzerland; East Siberia, Kyrgyzstan, Turkey. **First record for Austria.**

Phytobia bohemica Černý, 2001

Material examined: GERMANY: Thuringia, National Park Hainich, 51°11'37"N, 10°20'00"E, 480 m a.s.l., 1 ♂, vi.2008, cross-window-trap near ground, *Fagus sylvatica* forest, M. Gossner leg., M. v. Tschirnhaus det. (CMTB).

Comments: This is the third known record but its detection in France is only documented by the presence in Fauna Europaea (Martinez 2013). In addition to the thorough original description some features may be documented here: Length of fly and wing 4.15 mm and 4.24 mm, 4 long *ors* and 4 long *ori* (Fig. 9 in description: 3 plus 5), orbital setulae all recurved, basal: distal section of vein M_{3+4} as 88 : 80, subcosta slightly Agromyzinae-like as worldwide in many *Phytobia* spp., proboscis on each side of labellum with 13 pseudotracheae, claws of all legs relatively short and curved as usual. Couplet 3 of the key for the European species of *Phytobia* (Černý 2001) was corrected by Zlobin (2008: 65); instead of „half“ read „one and a half“. In the meantime *Phytobia brevicosta* Zlobin, 2007 was described as a 10th European species and included in a further key.

Distribution: Europe: Czech Republic, France. **New record for Germany.**

Phytobia carbonaria (Zetterstedt, 1848)

Material examined: FINLAND: Parikkala, 61°31'24.93"N, 29°22'5.26"E, 1 ♂, 26.vi.-29.vi.2016, meadow at a forest edge, MT, J. Paukkunen leg., K. Winqvist det. (CKWT). ITALY: Trentino-Alto Adige, Provincia Bolzano, Parco Nazionale dello Stelvio, south of Tafoi, 46°32'33"N, 10°30'17"E, 1630 m a.s.l., 2 ♂♂, 25.vii.-1.viii. & 8.-15.viii.2005, MT, J. Ziegler leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria, Belgium, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, Lithuania, Netherlands, Norway, Poland, Slovakia (Černý & Roháček 2020), Spain, Sweden. **First record from Finland and Italy.**

Phytoliriomyza alpicola (Strobl, 1898)

Material examined: ICELAND: slopes above lake Stifluvatn, 20 km W Dalvík (at coast), SE of river mouth of Tungudalur, 65°58'N, 18°59'W, 1 ♂, 3.-4.viii.2001, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Austria, Great Britain. **First record from Iceland.**

Phytoliriomyza arctica (Lundbeck, 1901)

Material examined: CORSICA: 10 km W Corte, Valdo Nello Mts., Calacuccia env., 700 m a.s.l., 1 ♂, 9.v.1993, B. Mocek leg. (CMCH). IRAN: NW shore of Lake Neor (Nior, Neur), near Kocheana, 31 km W Caspian Sea, 34 km SE Arbil, 38°00'29"N, 48°33'41"E, 2491 m a.s.l., 1 ♂, 28.v.2019, swamp along river mouth, M. v. Tschirnhaus leg. et det. (CMTB). SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°17.2'N, 127°53.5'E, 275 m a.s.l., 1 ♂, 25.vi.2005, Light-Trap, B. Merz, Choi, Byun, Lee, Hwang & Suk (CMCH); Gangwon-do, Wonjusi, Mt. Baegunsan, 37°15.0'N, 127°57.5'E, 750-1087 m a.s.l., 1 ♂, 21.vi.2005, forest, hilltop, B. Merz, Han, Lee & Hwang leg. (CMCH).

Distribution: This is a cosmopolitan species known from Holarctic, Afrotropical, Neotropical and Oriental Regions. **First record from Corsica, Iran and South Korea.**

Phytoliriomyza dorsata (Siebke, 1863)

Material examined: RUSSIA: Kamchatka, Nalyčevo Prirodnyj Park, 22.5 km NNE of peak of volcano „Koryakskaja Sopka“, 53°31'03"N, 158°46'42"E, 3 ♀♀, 27.vii.1999, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Czech Republic, Denmark, Estonia, Finland, Germany, Great Britain, Hungary (Papp & Černý 2017), Lithuania, Norway, Poland, Portugal (Černý *et al.* 2018), Romania, Russia, Slovakia, Sweden; Iran (Shahreki *et al.* 2012), Japan, Kuril Islands (Iwasaki 2000), Russia – Yakutia (Nartshuk & Bagachanova 2010), Turkey; Canada, United States. **First record from Kamchatka.**

Phytoliriomyza immoderata Spencer, 1963

Material examined: ITALY: Apulia, coastal dunes at Speccabella NW Torre Rinalda, 25.6 km SE Brindisi, 40°28'50"N, 18°09'44"E, 1 ♂, 4.iv.2000, aspirated from dicots: *Anagallis* sp., *Cistus* sp., *Lathyrus ochrus*, *Lotus* sp., M. v. Tschirnhaus leg. et det. (CMTB). OMAN: Dhofar prov., Jabel Samhan, 17°05'N, 56°00'E, 8 ♂♂, 7.x.2013, J. Halada leg. (CMBP).

Distribution: Europe: Andorra, Greece, Portugal (Černý *et al.* 2018), Sardinia, Serbia, Spain incl. Canary Islands; Israel, Morocco, Turkey (Černý 2018); South Africa, Namibia (von Tschirnhaus *et al.* 2000). **First record from Italy and Oman.**

Phytoliriomyza melampyga (Loew, 1869)

Material examined: RUSSIA: Kamchatka, Nalyčevo Prirodnyj Park, 22.5 km NNE of peak of volcano „Koryakskaja Sopka“, 53°31'03"N, 158°46'42"E, 5 ♂♂, 8 ♀♀, 27.vii.1999, M. v. Tschirnhaus leg. et det. (CMTB). SOUTH KOREA: Gangwon-do, Wonju Yonsei Univ. Campus Maeji-ri, 37°16.5'N, 127°54.0'E, 240 m a.s.l., 1 ♂, 14.vi.2005, wet forest, meadow behind institute, B. Merz & Choi leg. (CMCH).

Distribution: Europe: Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, Lithuania, Netherlands, Norway, Poland, Romania, Slovakia, Sweden, Switzerland; Kazakhstan; Canada, United States. **First record from Kamchatka and South Korea.**

Phytoliriomyza pectoralis (Becker, 1908)

Material examined: SWEDEN: Isle of Öland, Nature Reserve Möckelmossen, 8 km E Mörbyllånga, 56°31'43"N, 16°32'21"E, 25 m a.s.l., 1 ♂, 31.v.2005, flat limestone ground with few soil, *Globularia vulgaris*, *Galium, Lotus, Campanula, Helianthemum* [host plant of species is unknown], water covered areas with *Carex, Juncus, Eleocharis, Eriophorum*, M. v. Tschirnhaus leg. et det. (CMTB).

Comments: Zlobin (2005) included this species in his Swedish checklist though only accompanying data are added as „SÖ: Tyresta NR: Malaise fälla, 10-26.05.2001 (leg. B. Viklund, L.-O. Wikars & H. Ahnlund)“. Hafez *et al.* (1970) reported *Liriomyza pectoralis* from upper Egypt as reared from *Trigonella*, Hanson (1994) mentioned it as *Agromyza pectoralis* [as host of treated Chalcidoidea] with added host genus *Amelanchier* (Rosaceae), Ringdahl (1941) listed it as *? pectoralis* Mall[och] from the Swedish island Halland Väderö; all these records are not trustworthy and Spencer (1976) corrected a record from Finland (Frey 1946) as a misidentification of *Phytoliriomyza dorsata* (Siebke, 1864). The above male (identification based on genitalia preparation) is the first or second reliable record for Sweden and Scandinavia. Among the above listed plant genera from the limestone ground may be the hitherto unknow host plant genus of this theromophilic and predominantly mediterranean leaf miner fly. The Baltic Sea islands Bornholm and Öland are known as refugia for thermophilic organisms.

Distribution: Europe: Austria (Hering 1927), Great Britain, Greece, Portugal incl. Madeira Islands, Sicily, Spain incl. Canary Islands; ? Egypt. **First confirmed record for Sweden.**

Phytoliriomyza perpusilla (Meigen, 1830)

Material examined: ALBANIA: Western shore of Lake Ohrid, S village Lin, 41°03'43"N, 20°38'52"E, 693 m a.s.l., 1 ♂, 11.v.2011, garden with much *Brachypodium*. M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Bulgaria, Czech Republic, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Lithuania, Netherlands, Norway, Poland, Portugal incl. Azores Islands, Russia, Sardinia, Serbia, Romania, Spain incl. Canary Islands, Sweden, Switzerland; East Siberia (Yakutia), Japan, Oman, Tunisia, Turkey; Cape Verde Islands, Lesotho, South Africa, Yemen; Nepal, Taiwan. **First record from Albania.**

Phytoliriomyza pteridii Spencer, 1973

Material examined: SWITZERLAND: Ticino: Losone Arcegno, Collina di Maia, 46°09'52.20"N, 8°44'54.08"E, 419 m a.s.l., 2 ♂♂, 2 ♀♀, 7.-18.viii.2015, Castagneto con querce, L. Pollini P. & M. Abderhalden leg. (CMNH).

Distribution: Europe: Andorra, Croatia, France, Germany, Great Britain, Hungary (Papp & Černý 2017), Ireland, Italy, Poland, Portugal, Slovakia, former Yugoslavia. **First record from Switzerland.**

Phytoliriomyza scotica Spencer, 1962

Material examined: SPAIN: Pina de Ebro, 1 ♂, 15.vi.1996, sweeping on *Dorycnium* (Fabaceae), J.A. Pinzolas leg. (CCTB).

Distribution: Europe: Canary Islands, Czech Republic, France, Germany, Great Britain, Hungary (Papp & Černý 2017), Portugal incl. Madeira Islands, Slovakia (Černý 2018). **First record from Spain.**

Phytoliriomyza venustula Spencer, 1976

Material examined: RUSSIA: East Siberia, Oblast Buryatia, river Temnik, 5 km SSW Selenduma, 135 km SW Ulan Ude, 50°57'60"N, 106°15'31"E, 559 m a.s.l., 9 ♂♂, 4 ♀♀, 30.vii.2016, gravel shore of river with swampy calm water zones, M. v. Tschirnhaus leg. et det. (CMTB).

Comments: Thousands of this tiny species occurred 11.ix.1983 in the Nature Reserve „Barrelpäule“ 19 km W Bielefeld (Germany) on wet sandy ground of an emptied fish pond which was densely covered by young *Gnaphalium uliginosum* (Asteraceae) in which the larvae developed (first published host record).

Distribution: Europe: Czech Republic (Černý 2018), Denmark, Finland (Haarto *et al.* 2019), Germany, Great Britain, Hungary (Papp & Černý 2017), Lithuania, Poland, Norway. **First record from East Siberia.**

Phytomyza aegopodii Hendel, 1923

Material examined: FINLAND: Turku, 60°21'49.25"N, 22°7'8.99"E, 1 ♂, 9.vi.2018, cottage yard with *Aegopodium,* K. Winqvist leg. et det. (CKWT).

Distribution: Europe: Austria, Lithuania, Poland. **First record from Finland.**

Phytomyza albipennis Fallén, 1823

Material examined: CORSICA: Vizzavona env., 800-1000 m a.s.l., 1 ♂, 12.v.1993, Pinetum, pasture, B. Mocek leg. (CMCH).

Distribution: Europe: Andorra, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Lithuania, Montenegro (Papp & Černý 2020), Netherlands, Norway, Poland, Portugal (Černý *et al*. 2018), Russia, Slovakia, Spain incl. Canary Islands, Sweden, Switzerland; North Korea, Turkey. **First record from Corsica.**

Phytomyza artemisivora Spencer, 1971

Material examined: CHINA: Jilin prov., Erdaocun, 42°25'15.6"N, 128°4'37.2"E, 800 m a.s.l., 1 ♂, 25.-26.vi.2017, E. Jendek & O. Šauša leg. (CMBP).

Distribution: Europe: Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Ireland, Italy, Lithuania, Montenegro (Spasić 1996), Norway, Poland, Romania, Sweden, Switzerland; Kyrgyzstan. **First record from China.**

Phytomyza ciliata Hendel, 1935

Material examined: GERMANY: Bavaria, 11 km SSW Garmisch-Partenkirchen, mountain Zugspitze, 47°24'24.48"N, 11°00'28.91"E, 2005 m a.s.l., 4 ♂♂, 18.vii.-2.viii. 2018, 1 ♂, 2.-13.viii.2018, MT, limestone rock with scarce vegetation; 47°24'22.36"N, 11°00'34.20"E, 1965 m a.s.l., upper dwarf pine zone, 4 ♂♂, 5.-18.7.2018, 4 ♂♂, 1 ♀, 18.vii.-2.viii.2018; 47°24'19.15"N, 11°00'32.90"E, 1980 m a.s.l., 1 ♂, 20.vi.-5.vii.2018, MT, upper dwarf pine zone; all D. Doczkal & J Voith leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Austria, Finland, Italy, Montenegro (Spasić 1996), Norway, Poland, Spain, Sweden, Switzerland; Turkey **First record from Germany.**

Phytomyza crassiseta Zetterstedt, 1860

Material examined: ALBANIA: road between Gërmenj (in the north) and Koma Kabash (in the south), „Farma Sotira Hotel Taverne Peshku“, 8.3 km SSW Leskovik, 40°12'54"N, 20°38'54"E, 1100 m a.s.l., 2 ♂♂, 13.v.2011, wet meadow, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Andorra, Austria, Belarus, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein (Černý 2018), Lithuania, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia (Coe 1958), Slovakia, Slovenia, Spain incl. Canary Islands, Sweden, Switzerland, Ukraine (Guglya 2013b); East Siberia - Yakutia, Japan, Turkey; India: Kashmir; United States; Argentina, Chile; **First record from Albania.**

Phytomyza diversicornis Hendel, 1927

Material examined: POLAND: Białowieża forest, 52°44'43"N, 23°43'02"E, 156 m a.s.l., 1 ♀, v.1998, swampy bog with *Pedicularis palustris*, M. v. Tschirnhaus leg. et det. (CMTB). This ♀ was identified together with the following reared material: GERMANY: Baden-Württemberg, Nature Reserve [lake] Federsee, 12 km W Biberach an der Riss, 48°05'04"N, 9°38'27"E, 582 m a.s.l., 15 ♂♂, 9 ♀♀, 25.ii.1994, reared from 29 stems of *Pedicularis sceptrum-carolinum*, T. Schlemmermeyer leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria, Denmark, Finland, Germany, Great Britain, Lithuania, Norway, Russia (Hering 1941), Sweden. **First record for Poland.**

Phytomyza euphrasiae Kaltenbach, 1860

Material examined: LITHUANIA: Kuršiu Nerija (Kurische Nehrung), Baltic Sea, road km 29 N of Nida, 5 ♂♂, 2.viii.1997, white dune with much *Euphrasia*, M. v. Tschirnhaus leg. et det. (CMTB). SWEDEN: Norrbottens län, Abisko, 1 km SE railway station, 68°20'35"N, 18°50'59"E, 401 m a.s.l., 1 ♂, 13.-17.vii.1991, 170 yellow pan traps in a 1.5 km long row (no specimens in 170 white pan traps in a further row!), tundra with scattered *Betula* shrubs, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Germany. **First record for Lithuania and Sweden.**

Phytomyza ferulae Hering, 1927

Material examined: CROATIA: Split, Marjan abandoned zoo, 43°30'28.8"N, 16°25'33.6"E, 1 ♂, 17.iii.-14.iv.2017, B. Kokan & M. Cvitanić leg. (CMBP).

Distribution: Europe: France, Greece, Hungary (Papp & Černý 2020), Italy, Maltese Islands, Spain incl. Balearic and Canary Islands; Cyprus, Israel, Morocco, Turkey. **First record from Croatia.**

Phytomyza grisescens Hendel, 1920

Material examined: NORWAY: Jotunheimen mountain area, Leirvassbu, 61°32'59"N, 8°14'52"E, 1411 m a.s.l., 13 ♂♂, 2 ♀♀, 26.-28.vii.1973; ditto, but slopes of mountain Tverrbotthornet, 61°33'21"N, 8°15'46"E, 1500 m a.s.l., 1 ♂, 1 ♀; ditto, but below Leirpass of road no.55, 950 m a.s.l., „Jotunheimen Fjellstue", 1 ♂, 26.vii.1973, meadow with very much *Ranunculus acer, Polygonum viviparum, Geum rivale, Alchemilla, Solidago, Equisetum, Urtica, Stellaria, Geranium, Achillea*; Fjellplateau N Lesjakog (Romsdalen), rivulet „Mölmsåa" along mountain Storhöhalsen, about 62°17'38"N, 8°20'13"E, 1450 m a.s.l., 1 ♂, 1 ♀, 22.vii.1973; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Great Britain, Sweden. **First record from Norway.**

Phytomyza hedingi Rydén, 1953

Material examined: GERMANY: Bavaria, 11 km SSW Garmisch-Partenkirchen, mountain Zugspitze, 47°24'24.48"N, 11°00'28.91"E, 2005 m a.s.l., 1 ♂, 15.vii.-2.viii.2018, MT, fine limestone rock waste with sparse *Thlaspion* plant association, D. Doczkal & J. Voith leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Austria (von Tschirnhaus *in* Stockner 1982), Czech Republic, Estonia, Iceland, Italy (Hellrigl 1996), Latvia, Norway. **First record from Germany.**

Phytomyza lappae Goureau, 1851

Material examined: SPAIN: Pina de Ebro, 1 ♂, 7.ix.1996, sweeping on *Ditrichia viscosa*, J.A. Pinzolas leg. (CCTB).

Distribution: Europe: Albania, Austria, Belgium, Czech Republic, Denmark, Finland, France incl. Corsica, Germany, Great Britain, Hungary (Papp & Černý 2020), Italy, Lithuania, Moldova, Montenegro (Spasić 1996), Netherlands, Norway, Poland, Romania, Russia, Slovakia, Sweden; Israel, Japan, Kamchatka, Turkey. **First record from Spain.**

Phytomyza minuscula Goureau, 1851

Material examined: RUSSIA: Kamchatka, Nalyčevo Prirodnyj Park, 22.5 km NNE of peak of volcan „Koryakskaja Sopka", 53°31'03"N, 158°46'42"E, 4 ♂♂, 2 ♀♀, 27.vii.1999, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria (Černý 2018), Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Ireland, Lithuania, Netherlands, Norway, Poland, Slovakia, Spain, Sweden, Switzerland; Iran, Japan. **First record from Kamchatka.**

Phytomyza nigripennis Fallén, 1823

Material examined: GREECE: Thracia, Dasos Stefaninon mountains 7 km NW Asprovalta (along Strymonish Gulf), about 40°45'58"N, 23°38'47"E, 934 m a.s.l., 1 ♂, 1 ♀, 7.v.1999, climax stage of *Fagus sylvatica* forest, underground covered with wilting *Anemone nemorosa*, M. v. Tschirnhaus leg. et det. (CMTB).

Comments: in Germany the second author (1991) first detected that females deposit single eggs in the thin flower stem of this anemone, the larva tunneling down into the root system where it feeds inside the amylum-rich rhizome. This Thracian locality is the most southerly detection of this univoltine early spring species in Europe.

Distribution: Europe: Austria, Belgium, Bosnia Hercegowina, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Italy, Latvia, Lithuania, Moldova, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Sweden, Switzerland, Ukraine (Nowicki 1873); United States: Ontario, Washington, Wisconsin. **First record from Greece.**

Phytomyza notata Meigen, 1830

Material examined: ALBANIA: 13 km SSE Korça, S village Ujëbardhë, 40°30'38"N, 20°41'36"E, 953 m a.s.l., 3 ♀♀, 12.vi.2003, 13.v.2011; S village Tragjas, 8th century church „Marmiroi", 16 km S Vlorë (Vlora), 40°19'08"N, 19°30'58"E, 85 m a.s.l., 3 ♀♀, 13.v.2011, M. v. Tschirnhaus leg. et det. (CMTB). NORWAY: District Eidfjord, Hardangervidda mountains, 0.7 km ENE „Stigstuv Turisthytte" at southern slope of Stigstuvtuva, 60°18'N, 7°40'E, 1290 m a.s.l., 7 ♂♂, 3 ♀♀, 30.vii.-1.viii.1973, 94 yellow pan traps, temperature between 7°C and 12°C, partly rain and fog [sum of Agromyzidae 75 specimens /12 species in 48 hours], sweeping in the same

area and time resulted in 15 ♂♂, 12 ♀♀; northern end of Isterdalen S Andesnes, near Hanekamhang, 2 ♂♂, 5 ♀♀, 23.vii.1973, pasture with much flowering *Ranunculus repens*; western Ottadalen near Sjåk, 61°52'39"N, 8°23'18"E, 370 m a.s.l., 3 ♂♂, 3 ♀♀, 25.vii.1973, meadow; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Belgium (Mortelmans *et al.* 2013), Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Italy, Latvia, Lithuania, Poland, Romania (Černý 2018), Russia, Serbia, Slovakia, Slovenia (Maček 1977), Spain (Carles-Torlá 2019), Sweden, Switzerland. **First record from Albania and Norway.**

Phytomyza parvicella (Coquillett, 1902)

Material examined: GERMANY: Bavaria, 11 km SSW Garmisch-Partenkirchen, mountain Zugspitze, 47°24'58.07"N, 10°59'16.48"E, 2500 m a.s.l., 1 ♂, 18.vii.-2.viii.2018, MT, pure alpine limestone, D. Doczkal & J. Voith leg., M. v. Tschirnhaus det. (CMTB)

Distribution: Europe: Poland; Canada (NW Territories, Baffin Isl.; Yukon Territory), United States (Alaska, St. Paul Isl.) and west Greenland (Thule), reared from *Papaver radicatum*. This high arctic disjunct species with its very peculiar male genitalia and thick globular palpi was rediscovered and reared from *Papaver buneri* in Polish Tatra Mountains (Beiger 1973: 679-681). **First record from Germany, second from Palaearctic Region.**

Phytomyza penicilla Hendel, 1935

Material examined: SPAIN: Barcelona, lower slopes of mountain Tibidabo above „Museu de Ciencia", between „Paseo del Valle Hebron" and „Carretera de las Aguas", 1 ♂, 30.iii.1999, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Austria, Czech Republic, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Ireland, Netherlands (von Tschirnhaus & van Wielink 2020), Poland, Russia, Slovakia, Slovenia (Coe 1962), Spain (Warrington 2019a), Switzerland. **First record from Spain**.

Phytomyza plantaginis Robineau-Desvoidy, 1851

Material examined: ALBANIA: Western shore of Lake Ohrid, hilltop near village Lin with ancient Illyrian mosaics, 41°03'57"N, 20°45'52"E, 760 m a.s.l., 1 ♂, 11.v.2011, ungrazed diverse herb vegetation; 13 km SSE Korça, S village Ujëbardhë, 40°30'38"N, 20°41'36"E, 1 ♂, 13.v.2011; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: A cosmopolitican species, totally parthenogenetic in the Neotropics and Australia. Countries see Černý & Merz (2006). **First record from Albania.**

Phytomyza pullula Zetterstedt, 1848

Material examined: ARMENIA: Province Wajoz Dsor, 51 km S Lake Sewan, 6 km S village Gnevaz, 39°42'12"N, 45°36'17"E, 1483 m a.s.l., 1 ♂, 12.vi.2019, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Andorra, Austria, Bulgaria, Czech Republic, Denmark, Estonoia, Faroe Islands, Finland, France incl. Corsica, Germany, Great Britain, Greece, Hungary, Italy incl. Sardinia and Sicily, Madeira Islands, Netherlands, Poland, Lithuania, Romania [as *matricariae*], Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland; Kyrgyzstan, Turkey; Canada, United States. **First record from Armenia.**

Phytomyza ranunculella (Spencer, 1974)

Material examined: ALBANIA: road between Gërmenj (in the north) and Koma Kabash (in the south), „Farma Sotira Hotel Taverne Peshku", 8.3 km SSW Leskovik, 40°12'54"N, 20°38'54"E, 1100 m a.s.l., 2 ♂♂, 1 ♀, 13.v.2011, wet meadow with much *Ranunculus*. GREAT BRITAIN: Scotland, Orkney Islands, South Ronaldsay, 33.3 km SE Stromness (Orkney mainland), restaurant E of lake Liddel Loch, 58°44'04"N, 2°56'14"W, 1 ♂, 29.vi.2014, swept on lawn and around pond, *Ranunculus* sp. Present. GREECE: Crete (north), Limin Hersonisou [Cherssonissou] along coast, 24 km ESE Iraklio, ancient ruins close to Hotel Ilios, 28 ♂♂, 4 ♀♀, 25.iii.1987, all swept from flowering *Ranunculus asiaticus*; Crete (west), monastry Moni Préveli, W river Kourtaliotiko, 2 ♂♂, 26.iii.1987; Plakias, southern coast SSW Rhetimno, 1 ♂, 27.iii.1987; southern coast W Kalo Nero,

25 km E Ierapetra, 1 ♂, 15.iii.1987. JORDAN: Ancient ruins of Umm Qeis (= Gadara), 9.5 km SE Lake Genezareth, 32°39'19"N, 35°40'45"E, 358 m a.s.l., 1 ♂, 2 ♀♀, 9.iv.1992; Road Amman to Abdalla Bridge, valley ground N of Dead Sea near Shagur and along a reservoir, 1 ♂, 10.iv.1992, on swamp vegetation below the reservoir wall. All M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Israel, Turkey. **First record from Albania, Crete, Great Britain and Jordan.**

Phytomyza ranunculi (Schrank, 1803)

Material examined: CORSICA: Vizzavona env., 1100 m a.s.l., 1 ♀, 9.v.1993, Vizzanova Fagetum; 10 km W Corte, Valdo Nello Mts., Calacuccia env., 700 m a.s.l., 3 ♂♂, 3 ♀♀, 9.v.1993, all B. Mocek leg. (CMCH). DODEKANESE ISLANDS: Island of Kós, 3 ♂♂, 2 ♀♀, 4.-17.iv.1982, several samples all over the island, M. v. Tschirnhaus leg. et det. (CMTB).

Comments: Leafmines on Corsica were reported by Buhr (1941: 110-111) but subsequently sibling species have been described with similar indistinguishable mines. Our record is now based on genitalia preparations.

Distribution: This species is known from the Holarctic and Oriental regions, one record from the Afrotropical Region (on Tanzania, Mt. Kilimanjaro) (Černý & von Tschirnhaus 2014), widespread throughout Europe (Iceland excluded) until the Azores and Madeira Islands. **First confirmed record from Corsica and Dodekanese Islands.**

Phytomyza ranunculicola Hering, 1949

Material examined: SWEDEN: Jämtlands län, Åsarna, 60 km SSW Östersund, 155 km WNW Sundsvall, 62°38'38"N, 14°22'29"E, 355 m a.s.l., 1 ♂, 2 ♀♀, 16.vi.1988, unmowed meadow near lake, swamp plants include *Ranunculus* spp., M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Czech Republic, Denmark, Estonia, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Italy, Liechtenstein (Černý 2018), Lithuania, Norway, Poland, Slovakia, Switzerland. **First record from Sweden.**

Phytomyza rhabdophora Griffiths, 1964

Material examined: AUSTRIA: Tyrol, Stubaier Alpen, 1 km E mountain hut „Winnebachseehütte“, 47°05'07"N, 11°04'00"E, 2509 m a.s.l., 1 ♂, 16.-19.viii.1973, yellow pan traps; Tyrol, Tuxer Alpen, 17.5 km SE Insbruck, mountain hut „Naviser Hütte“, 47°08'38"N, 11°34'43"E, 2010 m a.s.l., 1 ♂, 23.vii.1983; Vorarlberg, Lechtaler Alpen, shore of lake „Spuller See“, 47°09'34"N, 10°05'06"E, 1832 m a.s.l., 1 ♂, 31.vii.1983, swamp along lake, all M. v. Tschirnhaus leg. et det. (CMTB). CROATIA: Gorni Muć, 43°41'27"N, 16°29'44"E, 500 m a.s.l., 1 ♂, 21.iv.-19.v.2018, abandoned garden, MT, B. Kokan leg. (CMBP); Istria, valley of subterraneous river Čipri, W Vidulini, about 45°09'N, 13°50'E, 1 ♂, 18.iv.1981, M. v. Tschirnhaus leg. et det. (CMTB). IRAN: 1.5 km N village Ghareshiran, 5 km S town Nir, 37°59'10"N, 48°00'41"E, 1617 m a.s.l., 1 ♂, 29.v.2019, wet cattle pasture, M. v. Tschirnhaus leg. et det. (CMTB). KYRGYZSTAN: 20 km NE Bishkek, 8 km NNE Ozernoe, 43°03'49"N, 74°33'35"E, 654 m a.s.l., 2 ♂♂, 20.vii. 2012, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Albania, Czech Republic, Denmark, Estonia, Finland, Germany, Great Britain, Hungary (Papp & Černý 2020), Ireland, Italy, Lithuania, Montenegro (Spasić 1996), Norway, Poland, Russia, Slovakia, Spain (Černý 2018), Sweden, Switzerland; Turkey. **First record from Austria, Croatia, Iran and Kyrgyzstan.**

Phytomyza rostrata Hering, 1934

Material examined: ALBANIA: 13 km SSE Korça, S village Ujëbardhë, 40°30'38"N, 20°41'36"E, 953 m a.s.l., 3 ♂♂, 1 ♀, 13.v.2011, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Sweden, Switzerland; Japan (Sasakawa 2005), North Korea (Papp & Černý 2020), Turkey. **First record from Albania.**

Phytomyza rufipes Meigen 1830

Material examined: BALEARIC ISLANDS: Mallorca, Nature reserve „La Albufera“ along NE coast,

39°47'58"N, 3°06'44"E, 1 ♀, 30.iii.1986, M. v. Tschirnhaus leg. et det. (CMTB). GREECE: Crete, Southern coast W Kalo Nero, 25 km E Ierapetra, 18 ♂♂, 10 ♀♀, 15.iii.1987, acre with yellow and white flowering Brassicaceae, M. v. Tschirnhaus leg. et det. (CMTB). DODEKANESE ISLANDS: Rhodes, Archangelos-Gennadion, along eastern coast, 2 ♂♂, 2.iv.1985, H. Meyer leg., M. v. Tschirnhaus det. (CMTB). JORDAN: Ancient ruins of Umm Qeis (= Gadara), 9.5 km SE Lake Genezareth (= Kinneret), 32°39'19"N, 35°40'45"E, 358 m a.s.l., 1 ♂, 2 ♀♀, 9.iv.1992, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belgium, Croatia (Spacić & Spencer 1992), Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary (Papp & Černý 2020), Iceland, Ireland, Italy, Latvia, Lithuania, Madeira Islands, Netherlands, Norway, Poland, Portugal incl. Azores and Madeira Islands (Černý *et al.* 2018), Romania (Dobreanu 1937), Russia, Slovakia, Spain incl. Canary Islands, Sweden, Switzerland; China (Chen *et al.* 2003), Egypt, Iraq, Turkey; Canada, United States (Scheffer & Winkler 2008), Argentina (Valladares *et al.* 1999); colleted also in South Argentina ii.-iii.1996 by M. v. Tschirnhaus). **First record from Balearic Islands, Crete, Jordan and Rhodes.**

Phytomyza sitchensis Griffiths, 1973

Material examined: AUSTRIA: Tyrol, Tuxer Alpen, 20 km SE Innsbruck, 1.8 km E mountain hut „Schranzberghaus“, 47°08'19"N, 11°35'37"E, 2305 m a.s.l., 1 ♂, 1 ♀, 18.vii.1983, mountain meadows; Vorarlberg, Lechtaler Alpen, mountain hut „Freiburger Hütte“, 5 km N Dalaas, 47°09'45"N, 9°59'26"E, 1914 m a.s.l., 59 ♂♂, 37 ♀♀, 26.vii.-1.viii.1983, swept around hut and lake „Formarinsee“; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Denmark, Germany, Great Britain, Lithuania, Switzerland (Černý & Bächli 2018); Canada. **First record from Austria.**

Phytomyza socia Brischke, 1880

Material examined: AUSTRIA: Tyrol, Tuxer Alpen, 17.5 km SE Insbruck, mountain hut „Naviser Hütte“, 47°08'38"N, 11°34'43"E, 2010 m a.s.l., 1 ♂, 20.-24.vii.1983, grazed and mowed meadows. M. v. Tschirnhaus leg. et det. (CMTB). MONGOLIA: Terelj, 40 km ENE Ulaanbaatar, 47°59'15"N, 107°27'40"E, 1540 m a.s.l., 1 ♂, 18.viii.2001, D. Muschiol leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Andorra, Czech Republic, Finland, Germany, Hungary (Papp & Černý 2020), Italy, Lithuania, Norway (Andersen 2018), Poland, Sweden; Turkey. **New record from Austria and Mongolia.**

Phytomyza soenderupi Hering, 1941

Material examined: AUSTRIA: Tyrol, Tuxer Alpen, Naviser Hütte, 47°08'32"N, 11°34'09"E, 1787 m a.s.l., 1 ♂, 21.vii.1983, swept on *Caltha palustris* in nearby wet spruce forest. SWEDEN: Norrbottens län, Abisko, 1 km SE railway station, 68°20'35"N, 18°50'59"E, 401 m a.s.l., 1 ♂, 13.-17.vii.1991, 170 yellow pan traps in a 1.5 km long row (no specimens in 170 white pan traps in a further row!), tundra with scattered *Betula* shrubs; all M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Ireland, Latvia, Lithuania, Norway, Romania (Papp & Černý 2020), Slovakia, Switzerland. **First record for Austria and Sweden.**

Phytomyza spinaciae Hendel, 1935

Material examined: RUSSIA: Kamchatka, Mountain tundra above „Blue Lakes“, 15 km W Elisovo, 53°09'48"N, 158°08'15"E, 843 m a.s.l., 1 ♂, leaf mine in *Cirsium* sp. with white puparium 10.viii.1999, fly emerged in same month, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Belgium, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary (Papp & Černý 2020), Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Slovakia, Slovenia (Maček 1999), Spain, Sweden, Ukraine (Guglya 2013b). **First record from Kamchatka**.

Phytomyza tanaceti Hendel, 1923

Material examined: RUSSIA: Moscow, Orechovo, 55°48'N, 37°45'E, 2 ♂♂, 23.vi.1987, sweeping vegetation, M. Barták leg. (CMBP).

Distribution: Europe: Austria, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Ireland, Norway, Poland, Romania, Slovakia, Spain, Sweden; Kuril Islands. **First record from European Russia.**

Phytomyza trolliophila Hering, 1949

Material examined: SWEDEN: Norrbottens län, Abisko, 1 km SE railway station, 68°20'35"N, 18°50'59"E, 401 m a.s.l., 1 ♂, 13.-17.vii.1991, 170 yellow pan traps in a 1.5 km long row (no specimens in 170 white pan traps in a further row!), tundra with scattered *Betula* shrubs, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Germany, Great Britain. **First record from Sweden.**

Phytomyza vilnensis Pakalniškis, 1998

Material examined: CZECH REPUBLIC: Moravia, Zlaté Hory, 0.5 km N, PP Zlaté Jezero res., 50°16'32"N, 17°23'43"E, 375 m a.s.l., 1 ♂, 21.vi.2017, 50.16.33N, 17.23.39E, 380 m a.s.l., 3 ♂♂, 21.vi.2017, meadow near stream Zlatý potok, sweeping, M. Černý leg. (CMCH).

Distribution: Europe: Hungary (Papp & Černý 2020), Lithuania, Slovakia (Černý & Roháček 2020). **First record from Czech Republic.**

Phytomyza wahlgreni Rydén, 1949

Material examined: MACEDONIA: Lake Ohrid, southern shore, 40°55'02"N, 20°44'48"E, 700 m a.s.l. 4 ♂♂, 1 ♀, 12.v.2011, M. v. Tschirnhaus leg. et det. (CMTB). KYRGYZSTAN: Tschui area, Töö-Ashun-Pass, southerrn end of road tunnel, 88 km SW Bishkek, 42°19'50"N, 73°49'00"E, 3209 m a.s.l., 3 ♂♂, 4 ♀♀, 13.viii.2003, diverse alpine mountain herb vegetation, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Austria, Belarus, Czech Republic, Denmark, Estonia, Faroes Islands, Finland, France, Germany, Great Britain, Hungary (Papp & Černý 2020), Ireland, Italy, Latvia, Lithuania, Montenegro (Spasić 1996), Norway, Poland, Portugal (Černý *et al.* 2018), Russia, Slovakia, Sweden, Switzerland; China, Japan, Kuril Islands (Iwasaki 2000), Morocco, Turkey, Uzbekistan; United States. **First record from Macedonia and Kyrgyzstan.**

Pseudonapomyza atra Meigen, 1830

Material examined: As *Pseudonapomyza* species can only be identified after their male genitalia in many cases it remains uncertain if an identification was done in this way. For the record of Dousti (2010) from Shiraz now a supplement can be added: IRAN: 25 km WSW Khalkal, 3.6 km SSE Firouzabad, 37°33'35"N, 48°14'51"E, 1188 m a.s.l., 2 ♂♂, 1 ♀, 28.v.2019, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Palaearctic: Most countries confirmed; Canada, USA and some few countries in the Oriental and Afrotropical Regions; compare Papp & Černý (2017). **First confirmed record from Iran.**

Pseudonapomyza atratula Zlobin, 2003

Material examined: MOROCCO: Mountain road R104, 6 km ESE Quijjane, 85 km S Agadir, 29°36'42"N, 9°28'46"W, 353 m a.s.l., 2 ♂♂, 8.i.2017, meadow along a wadi and water ditch, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Spain; Israel, Tunisia. **First record for Morocco.**

Pseudonapomyza bifida Zlobin, 2003

Material examined: MOROCCO: Road no. 109/165 from Akna to Taroudant, 29°41'08"N, 8°11'46"W, 841 m a.s.l., 2 ♂♂, 6 ♀♀, 7.i.2017, small depression (wadi) with young *Asphodelus* sp., M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Uzbekistan: **First record for Morocco.**

Pseudonapomyza confusa Zlobin, 1993

Material examined: GREECE: Crete, south coast, Matala, „Valley Village Hotel“, 34°59'56"N, 24°45'28"E, 8 ♂♂, 14 ♀♀, 13.x.2018, swept on irrigated and moderately short mowed lawn, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Afrotropical Region: Cape Verde Islands, Namibia (von Tschirnhaus *et al.* 2000), Madagascar (Černý & von Tschirnhaus 2014). **First record from Palaearctic Region and Greece: Crete.**

Pseudonapomyza hungarica Spencer, 1973

Material examined: LITHUANIA: Kuršiu Nerija (Kurische Nehrung)/Baltic Sea, 8 km S Klaipeda, 10 km N Juodkrantė, 55°3718"N, 21°07'18"E, 1 ♂, 1.viii.1997, white dune with *Carex arenaria*, *Cakile, Jasione,, Hieracium, Gypsophila, Hypericum,* swept together with 1 ♂ *Ps. atra* (Meigen), M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Hungary, Poland. **First record for Lithuania.**

Pseudonapomyza moraviae Černý, 1992

Material examined: RUSSIA: East Siberia, Oblast Buryatia, western edge of steppe lake N of road A-340, 5 km NW Orongoy, 50 km SW Ulan Ude, 51°33'31"N, 106°59'57"E, 551 m a.s.l., 1 ♂, 28.vii.2016, swampy reed belt, dominant monocots are *Phragmites australis*, *Schoenoplectus tabernaemontani*, *Triglochin palustris, Butomus umbellatus*, *Eleocharis* sp., M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Czech Republic, Hungary, Lithuania, Poland, Russia, Slovakia, Switzerland (Černý & Bächli 2018). **First record from Asia and East Siberia.**

Pseudonapomyza spicata (Malloch, 1914)

Material examined: MOROCCO: River bed of Ougni, 0.6 km N Akka N'Ait Sidi and 1.8 km NW Tissint, 29°55'03"N, 7°19'56"W, 582 m a.s.l., 1 ♂, 30.xii.2016, alfalfa field, M. v. Tschirnhaus leg. et det. (CMTB).

Distribution: Europe: Spain incl. Canary Islands; Near East; Oriental and Australasian Regions (India, Taiwan, Philippines, Thailand; Australia, Hawaii, Micronesia, Polynesia). **First record for Morocco.**

Ptochomyza asparagivora Spencer 1964

Material examined: CANARY ISLANDS: Gomera, „Barranco de Santiago“, 28°02'12"N, 17°11'58"W, 211 ♂♂, 227 ♀♀ together with 140 green and 9 yellow Chalcidoidea, 26.iii.1985, reared from *Asparagus* sp., M. v. Tschirnhaus leg. et det. (CMTB). CROATIA: Isle of Cres, 110 ♂♂, 92 ♀♀, 16.iv.1981, reared from *Asparagus acutifolius*, M. v. Tschirnhaus leg. et det. (CMTB); Split, Marjan abandoned zoo, 43°30'28.8"N, 16°25'33.6"E, 16 ♂♂, 1 ♀, 17.iii.-14.iv.2017, 3 ♂♂, 14.iv.-18.v.2017, B. Kokan & M. Cvitanić leg. (CMBP). GREECE: Crete, Nida plain, 1 ♂, 6.-12.vi. 1983, yellow pan trap, J. Hager leg., M. v. Tschirnhaus det. (CMTB).

Distribution: Europe: Balearic Islands, Greece, Italy, Spain, former Yugoslavia; Ethiopia, Kenya; Pakistan. **First record from Canary Islands, Crete and Croatia.**

Discussion and conclusion

The European fauna of the family Agromyzidae is relatively well studied in its central, northern and western part. Knowledge is distinctly poorer in most countries of southern Europe and, particularly, in the Mediterranean subregion, because of the underinvestigation of these areas. Croatia is to be counted among countries insufficiently studied for Agromyzidae, having only 11 species listed in the Fauna Europaea (Martinez 2013). With recent additions of records (Černý & Merz 2006, Černý 2009, 2018, Gibbs & von Tschirnhaus 2016, Papp & Černý 2020) from occasional collecting events and including those presented above, the Agromyzid fauna of Croatia currently stands at 95 species. However, in comparison with the fauna of Italy (with 316 species) and Greece (with 218 species) numerous additional records of species of this species-rich family can be expected in this country.

One species from the American continent, *Amauromyza abnormalis* (Malloch, 1913), was detected for the first time in the Palaearctic Region. As a borer in the roots of the allergenic neophyte *Amaranthus* it could serve as a useful agent against this problematic invader. The second species newly detected in the Palaearctic is *Pseudonapomyza confusa* Zlobin, 1993, formerly known only from the Afrotropical Region. The European *Pseudonapomyza moraviae* Černý, 1992 was collected for the first time in Asia (East Sibiria). Both species confirm the very wide distribution of several of the 102 valid *Pseudonapomyza* species. Out of 16 species one occurs in five, two occur in four, two in three, and eleven in two global zoogeographic realms. *Ophiomyia improvisa* Spencer, 1966 belongs to interesting findings in Europe because the above record in Spain is only the fourth from Europe and represents the westernmost limit of its occurrence. An exemplary disjunction and glacial relict is *Chromatomyia parvicella* (Coquillett, 1902), detected at the aestival snow border of Germany's highest mountain and known only from few findings in the high arctic of Alaska, the NW Territories and East Greenland and one time on the Polish High Tatra.

A poorly known species, *Aulagromyza hamata* (Hendel, 1932), has hitherto been obtained only from Crete, Israel, Turkey and Tunisia; its records from Spain are new westernmost findings, too. Discovery of *Cerodontha* (*Dizygomyza*) *handlirschi* Nowakowski, 1967 in the Bernese Alps, Switzerland at 2500 m a.s.l., is also unexpected because this species has only been known to occur at lower altitudes in the Czech Republic, Italy and Poland (Nowakowski 1973). *Chromatomyia cepelaki* Černý, 2012, a species recently described from a single specimen (holotype) from the Muránska planina Mts is here confirmed from the Malá Niva res., Šumava Mts in the Czech Republic. The agromyzid fauna of Finland is enriched with an insufficiently known species *Liriomyza labanoro* Pakalniškis, 1992 which has formerly only been reported from Latvia and Lithuania. *Phytomyza aegopodii* Hendel, 1923, another rare species, has hitherto been only known from Austria, Lithuania and Poland; its first record from Finland represents a new northernmost occurrence limit of this species in Europe. Originally, Spencer (1976) synonymised *Ph. aegopodii* with *Phytomyza angelicae* Kaltenbach, 1872 but later Pakalniškis (2000) re-instated the validity of both species on the basis of external body characters and anatomy of male genitalia. The new finding of *Phytomyza vilnensis* Pakalniškis, 1998 in the Czech Republic is less surprising. It has formerly been confused with *Ph. aurei* Hering, 1931 because of very similar body appearance as well as formation of the male terminalia (for differences see Papp & Černý 2020). Consequently, its occurrence area will obviously be much larger than shown by the hitherto published records from Hungary, Lithuania and Slovakia.

The fauna of the Korean Agromyzidae is also very little known: only 8 species are given in the 'Check List of Insect from Korea' by Ryu (1994) from central and southern areas of South Korea. Subsequently, several additional studies were published on species of the genera *Agromyza*, *Cerodontha*, *Liriomyza* and *Phytomyza* by Korean authors from South Korea (cf. Suh 2000, Suh & Kwon 1998a,b,c, Kwon *et al.* 2009) and there are also some papers dealing with economically important species damaging agricultural plants (Han *et al.* 1996, Maharjan *et al.* 2014). The 13 species recorded here significantly contribute to the enlargement of the knowledge of the agromyzid fauna of South Korea which currently includes 42 species of Agromyzidae. The records of *Agromyza flaviceps* Fallén, 1923, *Amauromyza* (*Cephalomyza*) *karli* (Hendel, 1927), *Cerodontha* (*Poemyza*) *muscina* (Meigen, 1830), *Liriomyza lituanica* Pakalniškis, 1992, *L. lutea* (Meigen, 1830), *Ophiomyia georginae* Černý, 2007 (second Palaearctic record, also from the Korean peninsula) and *Phytoliriomyza melampyga* (Loew, 1869) from South Korea and *Amauromyza* (*C.*) *chenopodivora* Spencer, 1971 and *Phytomyza artemisivora* Spencer, 1971 from China represent new easternmost limits of occurrence of these species in the Palaearctic Region.

Thirteen species, viz. *Agromyza flaviceps* Fallén, 1923, *Amauromyza* (*Cephalomyza*)

chenopodivora Spencer, 1971, *Chromatomyia farfarella* Hendel, 1935, *Liriomyza artemisiae* Spencer, 1981, *L. hampsteadensis* Spencer, 1971, *L. katoi* Sasakawa, 1961, *L. lituanica* Pakalniškis, 1992, *L. taraxaci* Hering, 1927, *Phytoliriomyza venustula* Spencer, 1976, *Phytomyza socia* Brischke, 1880, *Ph. spinaciae* Hendel, 1935, *Pseudonapomyza confusa* Zlobin, 1993 and *Ps. moraviae* Černý, 1992 have been found on the Asian continent for the first time.

One taxonomical change became necessary for this faunistic article: Since the revision of the genus *Chromatomyia* Hardy, 1849 (nec Walker, 1849) by Griffiths (1980) it remained uncertain how to treat the „Baltic form" and the „Kamchatka form" of *Ch. nigra* (Meigen, 1830). Shortly after the issue of that paper Griffiths in personal correspondance with the second author came to the conviction that those two „forms" must be raised to the separate valid species *Ch. obscuriceps* (Hendel, 1935). Though already published in a short note (von Tschirnhaus, 1981) the species status was not used for this „form" until today as now substantiated.

In conclusion, it can be stated that plentiful material of Agromyzidae is awaiting examination, especially in the Diptera collections of various museums and other institutions. Investigations of such unidentified materials would surely essentially contribute to a better knowledge of the taxonomy and distribution of species of this diverse and very interesting family of acalyptrate Diptera.

Acknowledgement: We express our sincerest thanks to Miroslav Barták (Praha, Czech Republic), Amnon Freidberg † (Tel Aviv, Israel), Bernhard Merz (Genéve, Switzerland), Bohuslav Mocek (Hradec Králové, Czech Republic), Lucia Pollini Paltrinieri (Lugano, Switzerland), Miguel Carles-Tolrá (Barcelona, Spain) and Nigel Wyatt (London, Great Britain), who kindly provided the material to be studied for the purpose of this paper. Jindřich Roháček (Opava, Czech Republic) is acknowledged for valuable comments and assistance with the early draft of the manuscript and David Gibbs (Weston-super-Mare, Great Britain) for the language revision and other improvement of the manuscript.

References

Andersen A. (2012): On the Agromyzidae (Diptera) in Norway, Part 1. – Norwegian Journal of Entomology 59: 5-30.
– (2013): On the Agromyzidae (Diptera) in Norway, Part 2. – Norwegian Journal of Entomology 60: 39-56.
– (2016): On the Agromyzidae (Diptera) in Norway, Part 3. – Norwegian Journal of Entomology 63: 71-95.
– (2018): On the Agromyzidae (Diptera) in Norway, Part 4. – Norwegian Journal of Entomology 65: 32-48.
Arias Encobet J. (1912): Datos para el conocimiento de la distribución geográfica de los Dípteros de España. – Memorias de la Real Sociedad española de Historia natural 7(2): 61-246.
Beiger M. (1973): Studies on Mining Insects of the Tatry National Park. 8. Description of the Larvae of Some Species of *Phytomyza* Fall. (Diptera, Agromyzidae). – Bulletin de l'Académie polonaise des Sciences (Cl. II) 21(10): 675-681.
– (1979): Materials to the knowledge of mining insects of Bulgaria. – Polskie Pismo entomologiczne 49: 485-534. (In Pol., Engl. summ.).
Beschovski V.L. (2006): Diptera Brachycera (Insecta) established in the Western Rhodopes Mountains (Bulgaria). Pp. 671-674. In: Beron P. & Popov A. (eds): Biodiversity of Bulgaria. 3. Biodiversity of Western Rhodopes (Bulgaria and Greece) I., 974 pp.; Pensoft & National Museum of Natural History, Sofia.
Buhr H. (1941): Dipteren-, insbesondere Agromyziden-Minen aus Südeuropa [Leaf mines of Diptera, especially Agromyzidae from Southern Europe]. – Stettiner entomologische Zeitung 102: 73-119.
– (1960): Bemerkenswerte oder neue Gallen und Minen aus Thüringen [Noteworthy and new galls and leaf mines from Thuringia]. – Mitteilungen der thüringischen botanischen Gesellschaft 2(1): 56-150.
Carles-Tolrá M. (2019): Estudio faunístico y comparativo de dípteros capturados en un hayedo y un bosque mixto situados en Artikutza (Navarra, España) (Insecta, Diptera). – Boletín de la Sociedad entomológica aragonesa (S.E.A.): 64: 75-88.
Chen X.L. & Wang X.J. (2003): The list and taxonomy of *Phytomyza* Fallen and *Paraphytomyza* Enderlein with economic importance in the world [in Chinese]. – Plant Protection (= Zhiwu-baohu: shuangyuekan), Beijing 29(2): 47-49.
– (2006): ESEN observation of *Liriomyza sativae* Blanchard, *Liriomyza huidobrensis* (Blanchard) and *Chromatomyia horticola* (Goureau) (Diptera; Agromyzidae). Pp. 41. In: Suwa Masaaki (ed.): 6th International Congress of Dipterology, 23-28 September 2006, Fukuoka, Japan. Abstract Volume, 354 pp.

Coe R.L. (1958): Diptera taken in Jugoslavia from May to July, 1955, with localities and notes. Part 2. – Glasnik Prirodnjaćkog Muzeja u Beogradu (Serija B) 12: 181-206.
– (1962): A further collection of Diptera from Jugoslavia, with localities and notes. Part two. – Bulletin du Muséum d'Histoire naturelle Belgrade (Série B)18(2): 95-136.
Czerny L. (1909 [1910 ?]): Cyclorrhapha Schizophora. Holometopa. In: Czerny L. & Strobl G.: Spanische Dipteren. III. Beitrag. – Verhandlungen der kaiserlich–königlich zoologisch–botanischen Gesellschaft in Wien 59(6): 247-290 [in 121-301].
Černý M. (2001): *Phytobia bohemica* sp. n. from the Czech Republic (Diptera: Agromyzidae). – Folia heyrovskyana 9(1): 57-63.
– (2007): Description of eight new species of Agromyzidae (Diptera) from North Korea, including new records. – Studia dipterologica 14(1): 209-229.
– (2009): New faunistic data on the Agromyzidae (Diptera) from the West Palaearctic Region. – Klapalekiana 45: 9-21.
– (2012): The fauna of Agromyzidae (Diptera) in the Gemer region (Central Slovakia), with descriptions of three new species from Slovakia. – Časopis Slezského Muzea Opava (A) 61: 49-76.
– (2013): Additional records of Agromyzidae (Diptera) from the West Palaearctic Region. – Časopis Slezského Muzea Opava (A) 62: 281-288.
– (2018): Additional new records of Agromyzidae (Diptera) from the Palaearctic Region. – Acta Musei Silesiae, Scientiae naturales, 67: 117-137.
Černý M., Andrade R., Gonçalves A.R. & von Tschirnhaus M. (2018): New records of Agromyzidae (Diptera) from Portugal, with an updated checklist. – Acta Musei Silesiae, Scientiae naturales 67: 7-57.
Černý M. & Merz B. (2006): New records of Agromyzidae (Diptera) from Palaearctic Region. – Mitteilungen der schweizerischen entomologischen Gesellschaft 79: 77-106.
– (2007): New records of Agromyzidae (Diptera) from the West Palaearctic Region, with an updated checklist for Switzerland. – Mitteilungen der schweizerischen entomologischen Gesellschaft 80(1/2): 107-121.
Černý M. & Roháček J. (2020): New records of the Agromyzidae (Diptera) from the Muránska planina National park (Central Slovakia). – Acta Musei Silesiae, Scientiae naturales 69: 97-140.
Dimić N.Lj., Perić P.V. & Cvetković M.N. (2000): Leaf miners on wild and cultivated medicinal plants in Serbia. Pp. 363-371 or 362-370. In: Proceedings of the First Conference on Medicinal and Aromatic Plants of Southeast European Countries - Aranþjelovac, FR Yugoslavia, May 29 - June 3 (1st CMAPSEEC); Association for Medicinal and Aromatic Plants of Southeast European Countries, Belgrade.
Dobreanu E. (1937): Contribuţiuni la studiul sistematic, morfologic şi biologic al insectelor miniere din Romănia [Contributions to the study of systematics, morphology and biology of mining insects of Romania]. – Teža doctorat, Facultatea de Ştiinţe, Laboratorul de Zoologie Descriptivă din Bucureşti. Pp. 3-128, 1 Tab.; Institutul de Arte Grafice "Tiparul Universitar", Bucureşti.
Dobrosavljević J., Marković C. & Bojić S. (2018): Overview of leaf miner fauna in Serbia. Pp. 1490-1498. In: Kovačević D. (ed. in chief): VIII International Scientific Agriculture Symposium, "AgroSym 2017", Jahorina [Bosnia and Herzegovina], October 05-08, 2017, 2232 pp.
Eiseman C.S. & Owen Lonsdale O. (2018): New State and Host Records for Agromyzidae (Diptera) in the United States, with the Description of Thirty New Species. – Zootaxa 4479(1): 1-156.
Franz H. (1989): Die Nordost-Alpen im Spiegel ihrer Landtierwelt. Eine Gebietsmonographie. Universitätsverlag Wagner, Innsbruck. Band 6/2 Diptera Cyclorapha [sic!], 445 pp.
Frey R. (1946): Anteckningar om Finlands agromyzider. Anhang: Beschreibungen neuer oder wenig bekannter Agromyziden aus Finnland. – Notulae entomologicae 26(1-2): 13-55.
Gibbs D. & von Tschirnhaus M. (2016): *Liriomyza intonsa* Spencer (Diptera, Agromyzidae) new to Britain, with new European data and a literature overview. – Dipterists Digest 23(2): 219-224.
– (2019): *Agromyza macedonica* Černý (Diptera, Agromyzidae) new to Britain. – Dipterists Digest 26: 67-71.
Griffiths G.C.D. (1967): The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera). III. The parasites of *Paraphytomyza* ENDERLEIN, *Phytagromyza* HENDEL and *Phytomyza* FALLÉN. – Beiträge zur Entomologie 16(1966) (7-8): 775-951.
– (1980): Studies on boreal Agromyzidae (Diptera). XIV. *Chromatomyia* miners on Monocotyledones. – Entomologica scandinavica Supplement 13: 1-61.
Guglya Y.A. (2010): Rearing of mining flies from subfamily Agromyzinae (Diptera: Agromyzidae) and new faunistic data from the territory of Kharkiv Region of Ukraine. – The Kharkov entomological Society Gazette 18(2): 57-59. (In Russ.).
– (2011): A study of the fauna of leaf-miner flies of subfamily Agromyzinae (Diptera: Agromyzidae) of Ukraine. Report 1. 28 new species for the fauna of Ukraine. – The Kharkov entomological Society Gazette 19(2): 61-66. (In Russ.).

– (2012): A study of the fauna of leaf-miner flies of subfamily Agromyzinae (Diptera: Agromyzidae) of Ukraine. Report 2. 15 new species for the fauna of Ukraine. The first record of *Melanagromyza provecta* (de Meijere, 1910) for Europe – The Kharkov entomological Society Gazette 20(1): 56-62. (In Russ.)
– (2013a): Mining flies of the genus *Ophiomyia* (Diptera, Agromyzidae) of Eastern Ukraine and adjacent territories. Review of species with a fasciculus – Vestnik zoologii 47(6): 507-529.
– (2013b): Mining flies Agromyzidae (Insecta: Diptera) in the conditions of the anthropogenic pressing – Belgorod State University scientific Bulletin. Natural Science 22, N 3 (146): 46-49. (In Russ.).
– (2014a): Mining Flies of the Genus *Ophiomyia* (Diptera, Agromyzidae) of Eastern Ukraine and Adjacent Territories: Review of the Species Without a Fasciculus. – Vestnik zoologii 48(1): 51-66.
– (2014b): Mining flies of the family Agromyzidae (Insecta: Diptera) of National Nature Park "Dvorichanskyi" (Kharkiv Region, Ukraine). – The Journal of V.N. Karazin Kharkiv National University. Series: biology 19, No 1097: 14-16: (In Russ.).
– (2016a): A study of the fauna of leaf-miner flies of the subfamily Agromyzinae (Diptera: Agromyzidae) of Ukraine. Report 3. Eleven new species for the fauna of Ukraine. – The Kharkov entomological Society Gazette 23(2): 2015: 29-38.
– (2016b): Four New Species of the Genus *Melanagromyza* (Diptera, Agromyzidae) from Ukraine. – Vestnik zoologii 50(5): 407-414.
– (2016c): A study of the fauna of leaf-miner flies of the subfamily Agromyzinae (Diptera: Agromyzidae) of Ukraine. Report 4. Thirteen new species for the fauna of Ukraine. – The Kharkov entomological Society Gazette 24(2): 17-24.
– (2017): A study of the fauna of leaf-miner flies of the subfamily Agromyzinae (Diptera: Agromyzidae) of Ukraine. Report 5. Seven new species for the fauna of Ukraine. – The Kharkov entomological Society Gazette, 25(1): 48-56.
Haarto A., Kakko I. & Winqvist K. (2019): Lisäyksiä Suomen Diptera-faunaan vuoden 2014 jälkeen. (Additions on the Finnish Diptera fauna after 2014) – w-album 22: 3-31. (In Finn.)
Hafez M., El-Ziady S. & Dimetry N. Z. (1970): Leaf mining Diptera of vegetables and crops in Egypt. – Bulletin de la Société entomologique d'Égypte 54: 389-414.
Han M.J., Lee S.H., Choi J.Y., Ahn S.B. & Lee M.H. (1996): Newly introduced insect pest, American serpentine leafminer, *Liriomyza trifolii* (Burgess) (Diptera: Agromyzidae) in Korea. – Korean Journal of applied Entomology 35(4): 309-314.
Hansson C. (1994): Re-evaluation of the genus *Closterocerus* Westwood (Hymenoptera: Eulophidae), with a revision of the Nearctic species. – Entomologica scandinavica 25: 1-25.
Hedström L. (1964): Lounais-Hämeen Kärpäsiä, Brachycera (Diptera) [True flies, Brachycera (Diptera), from southwestern Häme (Finland)]. – Lounais-Hämeen Luonto 15: 77-89.
Hellrigl K. [in cooperation with numerous scientists] (1996): Die Tierwelt Südtirols. Kommentiertes systematisch-faunistisches Verzeichnis der auf dem Gebiet der Provinz Bozen-Südtirol (Italien) bekannten Tierarten [Enumeration of animals from the area of the province of Bolzano-South Tyrol (Italy)], 831 pp.
Hendel F. (1931-1936): 59. Agromyzidae. In: Lindner, E. (ed.): Die Fliegen der paläarktischen Region VI 2: XI + 570 pp., Taf. I-XVI + 16 pp. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart.
Hering M. (1927): Agromyzidae (80. Familie). In: Dahl F. (ed.): Die Tierwelt Deutschlands und der angrenzenden Meeresteile nach ihren Merkmalen und nach ihrer Lebensweise. 6. Teil, Zweiflügler oder Diptera I: iv + 172 pp.
– (1941): Zur Lebensweise nichtminierender Minierfliegen (Dipt. Agrom.). – Mitteilungen der deutschen entomologischen Gesellschaft 10(5-6): 67-68.
Iwasaki A. (2000): Agromyzidae (Insecta: Diptera) of Kuril Islands. – Natural History Research, Special Issue 7: 141-162.
Kahanpää J. (2014): Checklist of the leaf-mining flies (Diptera, Agromyzidae) of Finland. In: Kahanpää J. & Salmela J. (Eds): Checklist of the Diptera of Finland. ZooKeys 441: 291-303.
Kamiji T. & Iwaizumi R. (2013): Four Species of Agromyzidae (Diptera) Intercepted by Japanese Import Plant Quarantine. – Research Bulletin of the Plant Protection Service, Japan 49: 53-61.
Karpa A. (2008): Catalogue of Latvian Flies (Diptera: Brachycera). – Latvijas entomologs 46: 4-43.
Kwon Y.J., Kim J. & Suh S.J. (2009): Taxonomy of the genus *Phytomyza* Fallén (Diptera: Agromyzidae) in Korea. – Entomological Research (Oxford) 39(3): 207-213.
Lonsdale O. (2017): The *Liriomyza* (Diptera: Schizophora: Agromyzidae) of Canada & Alaska. – Zootaxa 4234(1): 1-156.
Maček J. (1967): Listni zavrtači Slovenije. I. [Leaf mines of Slovenia. I]. – Zbornik biotehniške Fakultete v Ljubljani, Kmetijstvo 14A: 173-177.
– (1977): Listni zavrtači Slovenije. VII (Leaf mines of Slovenia. VII). – Zbornik biotehniške Fakultete Univerze v Ljubljani 30: 131-138.

– (1994): Hyponomological fauna of Slovenia. XXIV. – Zbornik biotehniške Fakultete, Univerze v Ljubljani, Kmetijstvo, (Research Reports of the biotechnical Faculty, University of Ljubljana, Agricultural Issue) 63: 153-164.
– (1999): Hiponomološka favna Slovenije / Hyponomologische Fauna Sloweniens. - *Slovenska akademija znanosti in umetnosti, Razred za naravoslovne vede / Academia Scientiarum et Artium slovenica, Classis IV: Historia naturalis. Dela /Opera* 37: 1-386; Ljubljana. (The leafminer fauna of Slovenia; ISBN 961-6242-16-4).
Maharjan R., Oh H.W. & Jung C. (2014): Morphological and genetic characteristics of *Liriomyza huidobrensis* (Blanchard) (Diptera: Agromyzidae) infesting potato crops in Korea. – Journal of Asia-Pacific Entomology 17(3): 281-286
Martinez M. (2013): Fauna Europaea: Agromyzidae. In: Beuk P. & Pape T. (2017): Fauna Europaea: Diptera, Flies. Fauna Europaea version 2017.06, http://fauna-eu.org. Hosted by: Museum für Naturkunde in Berlin - Leibniz Institute for Evolution and Biodiversity Science.
Martynov V.V., Nikulina T.V. & Gubin A.I. (2016): Range expansion of invasive stone leek leafminer Liriomyza chinensis (Kato, 1949) (Diptera: Agromyzidae) in Eastern Europe. – Euroasian Entomological Journal 15(5): 420-421.
Mazumdar S. & Bhuiya B.A. (2014): Vegetable leafminers (Diptera: Agromyzidae) and their plant hosts in Bangladesh. – Journal of threatened Taxa, Tamil Nadu, India 6(6): 5894-5899.
Meijere J.C.H. de (1937): Die Larven der Agromyzinen. Dritter Nachtrag. – Tijdschrift voor Entomologie 80: 167-243.
Mortelmans J., Dekeukeleire D. & Baugnée J.-Y. (2013): Four leaf mining flies on *Ranunculus* sp. new for Belgium (Diptera: Agromyzidae). – Bulletin de la Société royale belge d'Entomologie 49(1): 29-33.
Mortelmans J., Boeraeve M., Tamsyn W., Proesmans W. & Dekeukeleire D. (2014): Thirteen new Agromyzidae for Belgium (Diptera: Agromyzidae). – Bulletin de la Société royale belge d'Entomologie 150(2): 141-148.
Nartshuk E.P. (2019): Leafminer flies (Diptera: Agromyzidae: Agromyzinae) of the fauna of Russia and other countries of the Palaearctic. – Caucasian entomological Bulletin 15(2): 405-411.
Nartshuk E.P. & Bagachanova A.K. (2010): Leaf-miners flies (Diptera, Agromyzidae) of Yakutia (Russia). – Euroasian entomological Journal 9(3): 525-534.
Nartshuk E. P. & Tschirnhaus M. von (2017): Leafminer flies (Diptera: Agromyzidae) of the fauna of Russia and adjacent countries: The genus *Agromyza* Fallén. – Studia dipterologica 22(2) 2015: 215-232.
Nonci N. & Muis A. (2011): Bioekologi dan pengendalian pengorok daun *Liriomyza chinensis* Kato (Diptera: Agromyzidae) pada bawang merah [Bioecology and management of leaf miner (*Liriomyza chinesis*) Kato (Diptera: Agromyzidae) on onion]. – Jurnal Litbang Pertanian (= Jurnal Penelitian dan Pengembangan Pertanian; = Indonesian agricultural Research and Development Journal) 30(4): 148-155.
Nowakowski J.T. (1973): Monographie der europäischen Arten der Gattung *Cerodontha* ROND. (Diptera, Agromyzidae). – Annales zoologici (Warszawa) 31(1): 1-327.
Nowicki M. (1873): Beiträge zur Kenntnis der Dipterenfauna Galiziens [Contributions to the knowledge of the dipterous fauna of Galicia]. – 35 pp.; Universität Jagiel; Jagellonische Universitäts-Buchdruckerei, Krakau.
Papp L. (2004): Twenty species of Diptera new to Hungary. – Folia entomologica hungarica 65: 125-144.
– (2018): Sixty dipterous species new for the fauna of Romania (Diptera). – Folia entomologica hungarica 79: 177-182.
Papp L. & Černý M. (2015): Agromyzidae (Diptera) of Hungary. Volume 1. Agromyzinae. Pars Ltd, Nagykovácsi, Hungary 2015, 416 pp.
– (2016): Agromyzidae (Diptera) of Hungary. Volume 2. Phytomyzinae I. Pars Ltd, Nagykovácsi, Hungary 2016, 385 pp.
– (2017): Agromyzidae (Diptera) of Hungary. Volume 3. Phytomyzinae II. Pars Ltd, Nagykovácsi, Hungary 2017, 427 pp.
– (2020): Agromyzidae (Diptera) of Hungary. Volume 4. Phytomyzinae III. Pars Ltd, Nagykovácsi, Hungary 2019, 708 pp.
Petersen F.T. & Tschirnhaus M. von (2001): Agromyzidae. Pp. 179-182. In: Petersen F.T. & Meier R. (eds): A Preliminary list of the Diptera of Denmark. – Steenstrupia 26(2): 1-276.
Ranji H., Karimpour Y. & Dousti A. (2015): A checklist of the Iranian Agromyzid leaf-miner flies with 11 new records. – Journal of entomological Society of Iran 35(1): 45-55.
Ringdahl O. (1941): Bidrag till kännedomen om flugfaunan (Diptera Brachycera) på Hallands Väderö [Contribution to the knowledge of the fly fauna (Diptera Brachycera) of (the island of) Hallands Väderö)]. – Entomologisk Tidskrift 62(1-2): 1-23.
Ryu H.S. (1994): Check List of Insects from Korea 1994. Agromyzidae. P. 296. – The Entomological Society of Korea & Korean Society of Applied Entomology, 744 pp.
Sasakawa M. (1994): Notes on the Japanese Agromyzidae (Diptera), 3. *Liriomyza*-miners on *Artemisia* spp. (Asteraceae). – Japanese Journal of Entomology 62(1): 55-64.

– (2005): Notes on the Japanese Agromyzidae (Diptera). 5. Japanese species of the genus *Cerodontha* Rondani, with the description of five new species. – Scientific Reports of the Kyoto prefectural University, Human Environment and Agiculture 57: 47-64.
– (2006): Agromyzidae (Diptera) from Hong Kong. – Acta entomologica sinica 49(5): 835-842.
Scheffer S.J. & Winkler I.S. (2008): The first confirmed record of the leafminer *Phytomyza rufipes* (Diptera: Agromyzidae) in the United States. – Proceedings entomological Society Washington 110(3): 674-678.
Shahreki Z., Rakhshani E. & Sasakawa M. (2012): A Contribution to the agromyzid leaf miners (Diptera: Agromyzidae) of Iran. – Biologica nyssana 3(1): 31-36.
Souliotis C. & Süss L. (2004): Agromyzidae of Greece. – Bolletino di Zoologia agraria e di Bachicoltura, Serie II 36(2): 229-239.
Spasić R. (1996): Agromyzidae (Insecta, Diptera). The fauna of Durmitor, 5. Agromyzidae (Insecta, Diptera). The Montenegrin Academy of Sciences and Arts. Special Editions 32, Section of Natural Sciences 18, Podgorica: 107-135 [in 1-180].
Spasić R. & Spencer K.A. (1992): Agromyzidae (Diptera) u zbirci hrvatskog prirodoslovnog muzeja u Zagrebu [Agromyzidae (Diptera) in the collection of the Croatian natural History Museum, Zagreb]. – Glasnik Priroidnjačkog Muzeja u Beogradu (= Bulletin of natural History Museum in Belgrade) 47: 139-143.
Spencer K.A. (1976): The Agromyzidae (Diptera) of Fennoscandia and Denmark. Fauna Entomologica Scandinavica, Vol. 5, parts 1-2. – Scandinavian Science Press Ltd., Klampenborg, pp. 1-304, pp. 305-606.
– (1977): Notes on world Agromyzidae, with the description of l6 new species. – Beiträge zur Entomologie, Berlin 27 (2): 233-254.
– (1990): Host Specialization in the World Agromyzidae (Diptera). Series entomologica. Kluwer Academic Publishers (Dordrecht, Boston, London) 45: i-xiii, 1-444.
Spencer K.A. & Steyskal G.C. (1986): Manual of the Agromyzidae (Diptera) of the United States. – United States Department of Agriculture, Agriculture Handbook 638: vi + 478 pp.
Strobl G. (1900): Spanische Dipteren. IX. Theil. – Wiener entomologische Zeitung 19(2-3): 61-70.
Suh S.J. (2000): Four unrecorded species of the genus *Cerodontha* Rondani (Diptera: Agromyzidae) from Korea. – Korean Journal of Entomology 30(2): 121-124.
Suh S.J. & Kwon Y.J. (1998a): Classification of the genus *Agromyza* Fallén from Korea (Diptera: Agromyzidae). – Korean Journal of Entomology 28(4): 295-299.
– (1998b): A taxonomic review of the genus *Liriomyza* (Diptera: Agromyzidae) from Korea. – The Korean Journal of systematic Zoology 14(4): 311-318.
– (1998c): Two unrecorded species of the genus *Phytomyza* (Diptera: Agromyzidae) from Korea. – The Korean Journal of Biology Science 2: 415-418.
Tran D.H., Le V.H., Luong T.B.P. & Takagi M. (2006): Field Evaluation of Cartap, Cyromazine, Permethrin and Phenthoate for Control of the Stone Leek Leafminer *Liriomyza chinensis* (Diptera: Agromyzidae). – Journal of the Faculty of Agriculture, Kyushu University 51(2): 265-268.
Tschirnhaus M. von (1969): Zur Kenntnis der Variabilität, Eidonomie und Verwandtschaft bemerkenswerter Agromyzidae (Diptera) [Notes on the variability, eidonomy, and relationships of noteworthy Agromyzidae (Diptera)]. – Senckenbergiana biologica 50(3/4): 143-157.
– (1981): Die Halm- und Minierfliegen im Grenzbereich Land-Meer der Nordsee. Eine ökologische Studie mit Beschreibung von zwei neuen Arten und neuen Fang- und Konservierungsmethoden (Diptera: Chloropidae et Agromyzidae) [The Chloropidae and Agromyzidae (Diptera) at the terrestrial-marine border of the North Sea. An ecological study, with description of two new species and new sampling and preservation methods] – Spixiana Supplement 6: 1-405, pls 1-11.
– (1982): Agromyzidae. P. 58 In: Stockner J.: Flugaktivität und Flugrhythmik von Insekten oberhalb der Waldgrenze. – Alpin-biologische Studien 16: 1-104.
– (1991): New results on the ecology, morphology, and systematics of Agromyzidae (Diptera). Pp. 285-313. In: Weismann I., Országh L. & Pont A.C. (eds): Proceedings of the second International Congress of Dipterology held in Bratislava, Czechoslovakia, August 27 – September 1, 1990: 368 pp.; VEDA, Publishing House of the Slovak Academy of Sciences; Bratislava; SPB Academic Publishing, The Hague.
Tschirnhaus M. von & Wielink P. van (2020): Agromyzidae. P. 361. In: Wieling P. van, Felix R., Kemenade J. van, Mol A., Peeters T. & Stooker G. (eds): De Kaaistoep, het best onderzochte stuk natuur in Nederland [De Kaaistoep, the best studied nature area in The Netherlands]. KNNV [Koninklijke Nederlandse Natuurhistorische Vereniging]-afd. Tilburg, Tilburg, 720 pp.
Valladares G., Vasicek A. & Ricci M. (1999): Presencia de la mosca minadora *Phytomyza rufipes* (Diptera: Agromyzidae) en crucíferas cultivadas de la Argentina. – Revista de la Sociedad entomólogica Argentina 58(3-4): 139-140.
Walker F. (1849): List of the specimens of dipterous insects in the collection of the British Museum. Part IV. – I-III, 689-1172; British Museum, London. [p. 801, 1162 *Chromatomyia* Walker, Platystomatidae].

Warrington B.P. (2017): *Phytomyza scotina* Hendel (Diptera, Agromyzidae) new to Britain. – Dipterists Digest 24: 157-160.
– (2018a): *Agromyza abdita* Papp (Diptera, Agromyzidae) new to Britain. – Dipterists Digest 25: 4-6.
– (2018b): Additions to the Irish list of Agromyzidae (Diptera). – Dipterists Digest 25: 132-134.
– (2018c): The leaf-miner fly *Agromyza bromi* new to the Netherlands. – Nederlandse faunistische Mededelingen 51: 69-71.
– (2019a): *Phytomyza penicilla* Hendel (Diptera, Agromyzidae) new to Great Britain and Spain, with notes on the *robustella*-group. – Dipterists Digest, second Series 26: 105-110.
– (2019b): *Cerodontha* (*Poemyza*) *pygmella* (Hendel) (Diptera, Agromyzidae) new to Wales, and reinstatement as a British species. – Dipterists Digest 26: 175-177.
– (2019c): *Cerodontha* (*Poemyza*) *zuskai* Nowakowski (Diptera, Agromyzidae) new to Britain, with additional European records. – Dipterists Digest 26: 178-180.
– (2020a): *Phytoliriomyza nigrifrons* (Hendel) comb. nov. (Diptera, Agromyzidae) new to Great Britain and comparison with *Phytoliriomyza mikii* (Strobl) (Diptera, Agromyzidae). – Dipterists Digest 27: 31-36.
– (2020b): *Liriomyza virgula* Frey (Diptera, Agromyzidae) new to Great Britain. – Dipterists Digest 27: 37-40.
Warrington B.P. & Perry I. (2020): Three species of Agromyzidae (Diptera) new to Great Britain with additional European data and morphological notes. – Dipterists Digest 27: 121-126.
Zlobin V.V. (2005): A revised check list of Swedish Agromyzidae (Diptera). – International Journal of dipterological Research 16(3): 175-189.
– (2007): Review of mining flies of the genus *Amauromyza* Hendel (Diptera: Agromyzidae). I. The description of a new species from Tunisia. – International Journal of dipterological Research 18(3): 165-170.
– (2008): Review of mining flies of the genus *Phytobia* Lioy (Diptera: Agromyzidae): Western Palaearctic species. – Zootaxa 1725: 61-66.

Authors´ addresses: Miloš Černý, CZ–763 63 Halenkovice 1, Czech Republic.
E-mail: cerny.milos@centrum.cz

Michael von Tschirnhaus, Fakultät Biologie, Universität Bielefeld,
Postfach 100 131, 33501 Bielefeld, Germany.
E-mail: m.tschirnhaus@uni-bielefeld.de

Kaj Winqvist, Kastuntie 45 D 36, 20300 Turku, Finland.
E-mail: zeitkajw@gmail.com