

Revised checklist of Turkish Agromyzidae (Diptera) fauna of Turkey

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Abstract: This study was carried out in the years of 2007 and 2008 in some provinces of Turkey. Specimens of leafminers were collected on cultured and non-cultured plants during 1 year. In this study, 29 new records belonging to 7 genera were found for the Turkish fauna. With this study, the number of leafminer species, which was 136 previously, has been updated to 165 species.

Key words: Checklist, new records, Agromyzidae, Turkey

Türkiye Agromyzidae (Diptera) faunasının gözden geçirilmiş tür listesi

Özet: Bu çalışma 2007–2008 yılları arasında Türkiye’de bazı yörelerde yürütülmüştür. Galerisineği örnekleri bir yıl boyunca kültürü yapılan ve kültürü yapılmayan bitkiler üzerinden toplanmıştır. Bu çalışmada Türkiye faunası için yedi cinse ait 29 yeni kayıt bulunmuştur. Bu çalışmayla birlikte önceden 136 türü bilinen galerisineği tür sayısı 165 türe yükselmiştir.

Anahtar sözcükler: Kontrol listesi, yeni kayıt, Agromyzidae, Türkiye

Introduction

Agromyzidae (leafminer flies) is one of the largest fly families, with more than 2790 valid species belonging to 27 genera worldwide (Spencer, 1989; Gu et al., 1991; Pakalniskis, 1992, 1994; Woodley and Janzen, 1995; Pakalniskis, 1996; Sasakawa, 1997; Pakalniskis, 2000; Cerny, 2001, 2005a, 2005b, Sasakawa, 2005; Cerny, 2007a, 2007b; Çıkman and

Sasakawa, 2008). From this family, about 1171 species have been identified in the Palearctic region (Scheirs et al., 1999; Pakalniskis, 2000; Cerny, 2005b; Çıkman and Sasakawa, 2008). Many species were described in the period from the 19th century to the 60s of the last century but only a few isolated cases of damage by Agromyzidae were recorded during this period. Hering (1957) made a special study of all leaf-mining insects in various orders, and produced keys to

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European leafminers arranged by plant genera. However, in his study, Hering (1957) attached too great an importance to the food plant and trivial differences in the leafminers as diagnostic characters, and many new species that he described on these bases have been reduced to synonyms since then. An even more significant advance in clarifying the systematics of the family has been made during the past 45 years with the study of male genitalia. Spencer (1964, 1972, 1973, 1976, 1989, 1990) and Tschirnhaus (1991, 1994, 1999) contributed to the Agromyzidae both in terms of number of taxa and systematics with many studies from 1960 to the present. Adults can be minute, with a wing length of little more than 1 mm. The maximum size known is 6.5 mm. The majority of species are in the wing length range of 2 to 3 mm. Agromyzids are typically phytophagous, with larvae living in the tissues of living plants. Larvae of all the agromyzid species are internal plant feeders with a family specific morphology. Larvae of the most leafminers feed within the leaf parenchyma. Some species are stem-borers or develop in roots, seeds or galls. One genus develops exclusively in the cambium of the young and old trees.

The Agromyzidae are one of the most important fly families in Turkey, because of their pest status, especially on vegetable and ornamental plants in the greenhouses. The Turkish agromyzid fauna is poorly known. One of the reasons is that only few entomologists identified Agromyzidae captured in the Turkish territory (e.g. Giray, 1980; Uygun et al., 1995;

Yabaş et al., 1995; Civelek et al., 2000a, 200b). Another important reason is the difficulties in identification of the Agromyzidae in general. As a result, in the past 15 years, many studies have been carried out. Over the past 70 years some 136 agromyzid species have been identified and reported in Turkey in various publications (Civelek, 2003; Cerny and Merz, 2006; Civelek et al., 2008). It is estimated that the actual Agromyzidae fauna of Turkey is in the range of at least 200–300 species.

The goal of this study was to contribute to the knowledge of the leafminer fauna of Turkey and to clarify which valid leafminer species are in Turkey. Also this study will provide a base for future researches regarding the fauna of leafminer species.

Materials and methods

Seven geographical regions of Turkey divided into latitudes and longitudes stated by Yiğit and Çolak (1998) were chosen to make the survey economic and practical. The regions are shown in the Figure. The field studies carried out in 6 regions formed 5 longitudes every month between May and October in 2007 and between May and July in 2008. The leafminer species were collected from the selected provinces stated in the Table for each region.

The leafminer specimens were collected from both cultured and non-cultured plants. A GPS (Global Positioning System) was used while the samples were being collected. The adults were obtained by

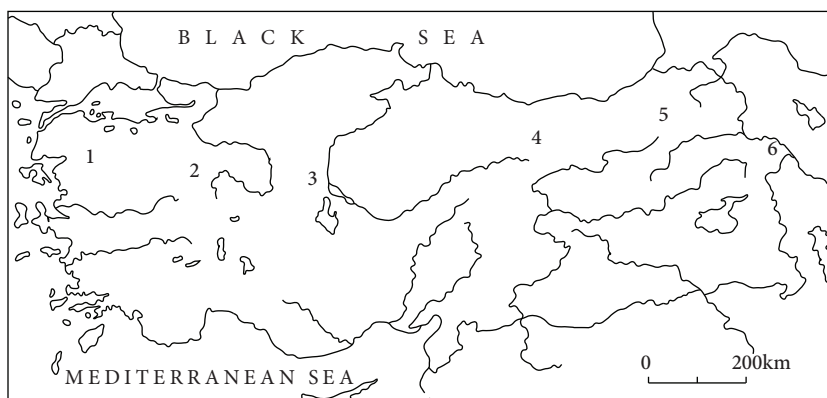


Figure. Six regions of Turkey formed 5 longitudes as stated by Yiğit and Çolak (1998).

Table. Degree of the longitude, number of the region and name of the selected cities.

Degree of the longitude	Number of the region	Name of the selected cities
24- 28	1	Edirne, Tekirdağ, Çanakkale, İzmir
28- 32	2	İzmit, Manisa, Isparta, Antalya
32- 36	3	Kastamonu, Yozgat, Aksaray, Mersin
36- 40	4	Ordu, Kayseri, Malatya, Hatay
40- 44	5	Trabzon, Artvin, Bingöl, Mardin
44- 48	6	Ardahan, Ağrı, Van, Hakkari

sweeping. Since the male genitalia are important characters for identification of the leafminers, slide preparations were made. The following general procedures were applied: the abdomen of each male was boiled in 10% KOH, then transferred into 5% glacial acetic acid for 5 min and subsequently transferred to 96% alcohol for 5 min. Afterwards the abdomen was further dissected under a stereoscopic microscope. The male genitalia were transferred into euparal on a micromount pinned under the individual specimen in order to preserve the material perpetuity (Civelek et al., 2000a). Identifications of the species were made using Spencer (1972, 1973, 1976, 1989, 1990) and Cerny (2007a, 2007b).

Results

In this study, 29 newly recorded species were added to the Turkish leafminer fauna. Representative specimens were deposited at the laboratories in the Science and Arts Faculty, Biology Department, Entomology Laboratory, Muğla, and Harran University, Agriculture Faculty, Plant Protection Department, Şanlıurfa, Turkey.

The taxa are presented alphabetically with their distributions in Turkey.

Subfamily 1. Agromyzinae

Genus 1. *Agromyza* Fallén, 1810

Agromyza abiens Zetterstedt, 1848

Mardin (Çıkman and Civelek, 2005)

Agromyza albipennis Meigen, 1830

Şanlıurfa (Çıkman and Uygun, 2003)

Agromyza albitarsis Meigen, 1830

İzmir (Giray, 1980); Mardin (Çıkman and Civelek, 2005)

Agromyza ambigua Fallén, 1823

Aydın (new record)

Agromyza anderssoni Spencer, 1976

Kırklareli (European part of Turkey, new record)

Agromyza anthracina Meigen, 1830

Erzurum (Civelek et al., 2007)

Agromyza apfelbecki Strobl, 1902

İzmir (Giray, 1980)

Agromyza bromi Spencer, 1966

Erzurum (Civelek et al., 2007)

Agromyza felleri Hering, 1941

Diyarbakır, Mardin (Çıkman and Sasakawa, 2005)

Agromyza flavipennis Hendel, 1920

Isparta (new record)

Agromyza frontella (Rondani, 1875)

İzmir (Civelek et al., 2000a).

Agromyza graminicola Hendel, 1931

Erzurum (Civelek et al., 2007)

Agromyza hiemalis Becker, 1908

İzmir (Giray, 1980); Adana and Hatay (Uygun et al., 1995)

Agromyza idaeiana Hardy, 1853

Artvin (Civelek et al., 2007)

Agromyza intermittens Becker, 1907

- İzmir (Deeming and Civelek, 1997)
Agromyza marionae Griffiths, 1963
 Hatay (new record)
Agromyza megalopsis Hering, 1933
 Turkey (Cerny and Merz, 2006)
Agromyza myosotidis Kaltenbach, 1864
 Isparta (new record)
Agromyza nana Meigen, 1830
 İzmir (Deeming and Civelek, 1997)
Agromyza nigrescens Hendel, 1920
 Turkey (Cerny and Merz, 2006)
Agromyza nigripes Meigen, 1830
 Turkey (Cerny and Merz, 2006)
Agromyza phylloposthia Sasakawa, 2008
 Adıyaman (Çıkman and Sasakawa, 2008)
Agromyza pittodes Hendel, 1931
 Muğla (new record)
Agromyza prespana Spencer, 1957
 Turkey (Cerny and Merz, 2006)
Agromyza reptans Fallén, 1823
 Turkey (Hering, 1931-1936); Şanlıurfa (Çıkman and Uygun, 2003)
Agromyza rondensis Strobl, 1900
 İzmir (Deeming and Civelek, 1997); Şanlıurfa (Çıkman and Uygun, 2003)
Agromyza trebinjensis Strobl, 1900
 İzmir (Giray, 1980)
Agromyza vicifoliae Hering, 1932
 Mardin (Çıkman and Sasakawa, 2005).
- Genus 2. **Hexomyza** Enderlein, 1936
Hexomyza simplex (Loew 1869)
 Kırklareli (European part of Turkey, new record)
- Genus 3. **Japanagromyza** Sasakawa, 1958
Japanagromyza salicifolii (Collin, 1911)
 Turkey (Hering, 1957); İzmir (Giray, 1980)
- Genus 4. **Melanagromyza** Hendel, 1920
Melanagromyza aeneoventris (Fallén, 1823)
 Adıyaman (Çıkman and Sasakawa, 2006)
Melanagromyza cunctans (Meigen, 1830)
 Muğla (Civelek, 2003)
Melanagromyza pubescens Hendel, 1923
 Adıyaman (Çıkman and Sasakawa, 2006)
Melanagromyza tripolii Spencer, 1957
 Elazığ (Civelek et al., 2007)
Melanagromyza vignalis Spencer, 1959
 Şanlıurfa (Çıkman and Uygun, 2003)
- Genus 5. **Ophiomyia** Braschnikov, 1897
Ophiomyia beckeri (Hendel, 1923)
 Mardin (Çıkman and Sasakawa, 2005)
Ophiomyia cunctata (Hendel, 1920)
 İzmir (Civelek et al., 2000a); Şanlıurfa (Çıkman and Uygun, 2003)
Ophiomyia curvipalpis (Zetterstedt, 1848)
 İzmir (Civelek et al., 2000a)
Ophiomyia delphinii Hendel, 1928
 Muğla (Cerny and Merz, 2007)
Ophiomyia galii Hering, 1937
 Muğla (Cerny and Merz, 2007)
Ophiomyia inaequabilis (Hendel, 1931)
 Turkey (Hendel, 1931-1936); İzmir (Civelek et al., 2000a)
Ophiomyia labiatarum Hering, 1937
 Turkey (Cerny and Merz, 2006)
Ophiomyia maura (Meigen, 1838)
 Çanakkale (Hepdurgun et al., 2007)
Ophiomyia memorabilis Spencer, 1974
 Turkey (Cerny and Merz, 2006)
Ophiomyia orbiculata (Hendel, 1931)
 İzmir (Deeming and Civelek, 1997)
Ophiomyia phaseoli (Tryon, 1895)
 Adana, Hatay (Civelek and Ulusoy, 2000)
Ophiomyia pinguis (Fallén, 1820)
 Turkey (Hendel, 1931-1936); Şanlıurfa (Çıkman and Uygun, 2003)

Ophiomyia pulicaria (Meigen, 1830)

Muğla (Civelek, 2002)

Ophiomyia submaura Hering, 1926

Turkey (Hendel, 1931-1936).

Subfamily 2. Phytomyzinae

Genus 1. *Amauromyza* Hendel, 1931

Subgenus 1. *Amauromyza* Hendel, 1931

Amauromyza (*Amauromyza*) *morionella*
(Zetterstedt, 1848)

İzmir (Giray, 1980).

Subgenus 2. *Cephalomyza* Hendel, 1931

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

İzmir (Civelek et al., 2000b).

Amauromyza (*Cephalomyza*) *luteiceps* (Hendel,
1920)

Muğla (Civelek et al., 2000b)

Genus 2. *Aulagromyza* Enderlein, 1936

Aulagromyza buhri (de Meijere, 1938)

Muğla (Civelek, 2002).

Aulagromyza hamata (Hendel, 1932)

İzmir (Giray, 1980).

Aulagromyza heringii (Hendel, 1920)

Muğla (Giray, 1980)

Aulagromyza orphana (Hendel, 1920)

İzmir (Civelek et al., 2000).

Aulagromyza populi (Kaltenbach, 1864)

Isparta, İzmir (Giray, 1980)

Aulagromyza trivittata (Loew, 1873)

Balıkesir (Hepdurgun et al., 2007)

Genus 3. *Calycomyza* Hendel, 1931

Calycomyza humeralis (von Roser, 1840)

İzmir (Civelek et al., 2000a); Şanlıurfa (Çıkman
and Uygun, 2003); Mardin (Çıkman and Civelek,
2005)

Genus 4. *Cerodontha* Rondani, 1861

Subgenus 1. *Butomomyza* Nowakowski, 1967

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

Turkey: (Hendel, 1931-1936)

Cerodontha (*Butomomyza*) *pseuderrans* (Hendel,
1931)

Rize (new record)

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

Şanlıurfa (new record)

Subgenus 2. *Cerodontha* Rondani, 1861

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

Turkey (Hendel, 1931-1936); İzmir (Civelek,
1998); Şanlıurfa (Çıkman and Uygun, 2003);
Diyarbakır and Mardin (Çıkman and Civelek, 2005)

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

Artvin, Rize, Trabzon (new record)

Subgenus 3. *Dizygomyza* Hendel, 1920

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

Isparta (new record)

Subgenus 4. *Poemyza* Hendel, 1931

Cerodontha (*Poemyza*) *imbuta* (Meigen, 1838)

Rize (new record)

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

Mersin (new record)

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

Turkey (Cerny and Merz, 2006)

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

Turkey (Cerny and Merz, 2006)

Genus 5. *Chromatomyia* Hardy, 1849

Chromatomyia ciliata (Hendel, 1935)

Erzurum (Civelek et al., 2007)

Chromatomyia fuscula (Zetterstedt, 1838)

- Kahramanmaraş (Mart et al., 2005)
Chromatomyia horticola (Goureau, 1851)
 Adana, İstanbul, İzmir, Muğla (Giray, 1980);
 Adana and Hatay (Uygun et al., 1995); Şanlıurfa
 (Çıkman and Uygun, 2003); Ankara (Gençer, 2004);
 Diyarbakır and Mardin (Çıkman and Civelek, 2005)
Chromatomyia luzulae (Hering, 1924)
 Rize (Civelek et al., 2007)
Chromatomyia milii (Kaltenbach, 1864)
 İzmir (Civelek et al., 2000a)
Chromatomyia nigra (Meigen, 1830)
 Elazığ (Civelek et al., 2007)
Chromatomyia scolopendri (Robineau-Desvoidy,
 1851)
 Muğla (Civelek, 2002).
Chromatomyia succisae (Hering, 1922)
 Turkey (Cerny and Merz, 2006).
- Genus 6. ***Galiomyza*** Spencer, 1981
Galiomyza violiphaga (Hendel, 1932)
 Çanakkale (Hepdurgun et al., 2007)
- Genus 7. ***Liriomyza*** Mik, 1894
Liriomyza alyssi (Hering, 1960)
 Turkey (Cerny and Merz, 2006)
Liriomyza amarellae Hering, 1963
 Çanakkale (Hepdurgun et al., 2007)
Liriomyza amoena (Meigen, 1830)
 İzmir (Giray, 1980)
Liriomyza balcanica (Strobl, 1900)
 İzmir (Civelek et al., 2000a).
Liriomyza brassicae (Riley, 1884)
 Antalya, İzmir (Giray, 1980).
Liriomyza bryoniae (Kaltenbach, 1858)
 İzmir (Giray, 1980); Adana and Hatay (Uygun et
 al., 1995).
Liriomyza buhri Hering, 1937
 Antalya (new record)
- Liriomyza cannabis* Hendel, 1931
 İzmir, Kastamonu (Giray, 1980)
Liriomyza cardariae Sasakawa, 2008
 Adıyaman (Çıkman and Sasakawa, 2008)
Liriomyza centaureae Hering, 1927
 İzmir (Civelek et al., 2000a)
Liriomyza cepae (Hering, 1927)
 İzmir (Giray, 1980)
Liriomyza cicerina (Rondani, 1875)
 İzmir (Lodos, 1962); Adana and Hatay (Uygun et
 al., 1995); Şanlıurfa (Çıkman and Uygun, 2003).
Liriomyza congesta (Becker, 1903)
 İzmir, Manisa (Giray, 1980) Şanlıurfa (Çıkman
 and Uygun, 2003); Mardin (Çıkman and Civelek,
 2005)
Liriomyza dracunculi Hering, 1932
 Rize (Civelek et al., 2007)
Liriomyza eupatorii (Kaltenbach, 1873)
 Mersin (new record)
Liriomyza euphorbiae Martinez, 1999
 Isparta (Martinez and Sobhian, 1999)
Liriomyza flaveola (Fallén 1823)
 Muğla (Civelek, 2002)
Liriomyza freyella Spencer, 1976
 Kırklareli (European part of Turkey, new record)
Liriomyza hieracivora Spencer, 1971
 Şanlıurfa (Çıkman and Uygun, 2003)
Liriomyza huidobrensis (Blanchard, 1926)
 Adana, İzmir (Yabaş et al., 1995); Aydın (Yıldırım,
 2002)
Liriomyza orbona (Meigen, 1830)
 İzmir (Deeming and Civelek, 1997)
Liriomyza pascuum (Meigen, 1838)
 Muğla (Civelek, 2004)
Liriomyza pedestris Hendel, 1931
 Turkey (Cerny and Merz, 2006)
Liriomyza pusilla (Meigen, 1830)

Turkey (Hendel, 1931–1936)
Liriomyza sativae Blanchard, 1938
 Muğla (Civelek, 2002); Diyarbakır (Çıkman and Civelek, 2005)

Liriomyza strigata (Meigen, 1830)

Denizli, İzmir (Giray, 1980); Adana and Hatay (Uygun et al., 1995); Şanlıurfa (Çıkman and Uygun, 2003); Mardin (Çıkman and Civelek, 2005)

Liriomyza trifolii (Burgess in Comstock, 1880)

Adana, Hatay (Uygun et al., 1995); Şanlıurfa (Çıkman and Uygun, 2003); Aydın (Yıldırım, 2002); Muğla (Civelek and Weintraub, 2003); Ankara (Gençer, 2004); Diyarbakır and Mardin (Çıkman and Civelek, 2005)

Liriomyza virgula Frey, 1946

Mersin (new record)

Genus 8. *Metopomyza* Enderlein, 1936

Metopomyza scutellata (Fallén, 1823)

Mersin (new record)

Metopomyza xanthaspis (Loew, 1858)

Mersin (new record)

Genus 9. *Napomyza* Westwood, 1840

Napomyza bellidis Griffiths, 1967

Hatay (new record)

Napomyza carotae Spencer, 1966

Erzurum (Civelek et al., 2007).

Napomyza cichorii Spencer, 1966

Isparta (new record)

Napomyza elegans (Meigen, 1830)

Mardin (Çıkman and Civelek, 2005).

Napomyza lateralis (Fallén, 1823)

İzmir (Civelek et al., 2000a); Diyarbakır (Çıkman and Civelek, 2005)

Genus 10. *Phytoliriomyza* Hendel, 1931

Phytoliriomyza arctica (Lundbeck, 1901)

Turkey (Spencer, 1964); İzmir (Civelek et al., 2000a)

Phytoliriomyza dorsata (Siebke, 1863)

Diyarbakır (Çıkman and Civelek, 2005)

Phytoliriomyza oasis (Becker, 1907)

Turkey (Cerny and Merz, 2006)

Phytoliriomyza perpusilla (Meigen, 1830)

Kahramanmaraş (Mart et al., 2005)

Genus 11. *Phytomyza* Fallén, 1810

Phytomyza aconitophila Hendel, 1927

Muğla (Civelek, 2004)

Phytomyza affinis Fallén, 1823

Turkey (Bodenheimer, 1958); Şanlıurfa (Çıkman and Uygun, 2003)

Phytomyza albipennis (Fallén, 1823)

Muğla (Civelek et al., 2007)

Phytomyza angelicae Kaltenbach, 1872

Muğla (Civelek, 2002)

Phytomyza astraintiae Hendel, 1924

Trabzon (Civelek et al., 2007)

Phytomyza aquilonia Frey, 1946

Diyarbakır (Çıkman and Civelek, 2005)

Phytomyza aurei Hering, 1931

Kırklareli (European part of Turkey, new record)

Phytomyza brevifacies Hendel, 1934

Rize (Civelek et al., 2007)

Phytomyza cecidonomia Hering, 1937

Muğla (new record)

Phytomyza chelonei Spencer, 1969

Şanlıurfa (Çıkman and Uygun, 2003)

Phytomyza cirsii Hendel, 1923

Turkey (Hering, 1957)

Phytomyza clematidis Kaltenbach, 1859

İzmir (Civelek et al., 2000a).

Phytomyza continua Hendel, 1920

Turkey (Cerny and Merz, 2006).

Phytomyza conyzae Hering, 1920

- Muğla (Civelek, 2002)
Phytomyza crassiseta Zetterstedt, 1860
 Bursa, Çanakkale, İzmit, Muğla (new record)
Phytomyza fallaciosa Brischke, 1880
 Kahramanmaraş (Mart et al., 2005).
Phytomyza ferulae Hering, 1927
 İzmir (Giray, 1980)
Phytomyza flavicornis Fallén, 1823
 Turkey (Cerny and Merz, 2006).
Phytomyza geminata Sasakawa, 2008
 Adıyaman (Çıkman and Sasakawa, 2008)
Phytomyza glabra Hendel, 1935
 Erzurum (Civelek et al., 2007).
Phytomyza gymnostoma Loew, 1858
 İzmir (Civelek et al., 2000a)
Phytomyza kaltenbachi Hendel, 1922
 Balıkesir, İzmir, Manisa (Giray, 1980)
Phytomyza lappae Goureau, 1851
 Ankara (Gençer, 2004)
Phytomyza nigrifulva Zetterstedt, 1838
 Burdur (Civelek et al., 2007)
Phytomyza origani Hering, 1931
 Çanakkale (new record)
Phytomyza orobanchia Kaltenbach, 1864
 Balıkesir, Bursa, Manisa (Civelek and Demirkan, 1998); Şanlıurfa (Çıkman and Uygun, 2003);
 Diyarbakır, Mardin (Çıkman and Civelek, 2005)
Phytomyza petoei Hering, 1924
 İzmir (Civelek et al., 2000a)
Phytomyza phillyreae Hering in Buhr, 1930
 Turkey (Cerny and Merz, 2006)
Phytomyza plantaginis Robineau-Desvoidy, 1851
 İzmir (Civelek et al., 2000a); Mardin (Çıkman and Civelek, 2005)
Phytomyza podagrariae Hering, 1954
 Çanakkale (new record)
Phytomyza pubicornis Hendel, 1920
 Isparta (new record)
Phytomyza ranunculi (Schrank, 1803)
 İzmir (Deeming and Civelek, 1997)
Phytomyza rostrata Hering, 1934
 İzmit (new record)
Phytomyza rufescens von Roser, 1840
 İzmir (Civelek et al., 2000a)
Phytomyza rufipes Meigen, 1830
 İzmir (Civelek et al., 2000a); Mardin (Çıkman and Civelek, 2005)
Phytomyza sii Hering, 1930
 Kırklareli (European part of Turkey, new record)
Phytomyza spoliata Strobl, 1906
 Turkey (Hering, 1957)
Phytomyza socia Brischke, 1880
 Diyarbakır (Çıkman and Sasakawa, 2005)
Phytomyza tenella Meigen, 1830
 İzmir (Civelek et al., 2000a)
Phytomyza tetrasticha Hendel, 1927
 İzmir (Giray, 1980)
Phytomyza thysselinivora Hering, 1924
 Muğla (Civelek, 2002)
 Genus 12. ***Pseudonapomyza*** Hendel, 1920
Pseudonapomyza atra (Meigen, 1830)
 Şanlıurfa (Çıkman and Uygun, 2003)
Pseudonapomyza europaea Spencer, 1973
 Turkey (Cerny, 2005b)
Pseudonapomyza hispanica Spencer, 1973
 İzmir (Civelek et al., 2000a)
Pseudonapomyza pyriformis Sasakawa, 2008
 Adıyaman (Çıkman and Sasakawa, 2008)
Pseudonapomyza spicata (Malloch, 1914)
 Şanlıurfa (Çıkman and Uygun, 2003)
Pseudonapomyza spinosa Spencer, 1973
 Şanlıurfa (Çıkman and Uygun, 2003)
Pseudonapomyza strobliana Spencer, 1973
 Turkey (Cerny, 2005b)

Conclusion

With this study, the number of leafminer species, which was 136 previously, has been updated to 165 species.

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