

A Study of Orgilinae (Hymenoptera: Braconidae) from Turkey with New Records

Coşkun GÜÇLÜ

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ABSTRACT

Present study was conducted in the Northeast Anatolian Region of Turkey during 2010-2013. A total of 15 braconid species were determined in *Orgilus* genus of the subfamily Orgilinae (Hymenoptera: Braconidae). Four species were new records for the Turkish fauna: *Orgilus interjectus* Teager, 1989, *O. meyeri* Telenga, 1933, *O. nanellae* Tobias, 1986 and *O. tobiasi* Teager, 1989. Additionally, *Orgilus interjectus* was obtained from the larvae of *Pandemis heparana* (Denis and Schiffermuller, 1775) (Lepidoptera: Tortricidae) as new host and *Orgilus tobiasi* was obtained from the larvae of *Archips podana* (Scopoli, 1763) (Lepidoptera: Tortricidae) as first host.

Key words: Orgilinae, Braconidae, new records, new hosts, Turkey.

INTRODUCTION

The Orgilinae is a small subfamily of the Braconidae with a total of 354 species in worldwide (Yu *et al.*, 2012). They are slender and usually medium-sized (4-5 mm) wasps (Achterberg, 1987).

The Orgilinae contains species attacking microlepidopteran larvae with a partly endophytic way of life, especially those with leaf-mining or tunnelling early instars larvae. They are koinobiont endoparasites of various caterpillars. The known hosts of Orgilinae belong to the families Coleophoridae, Gelechiidae, Tortricidae, Pyralidae, Oecophoridae and Gracillariidae (Lepidoptera) (Shaw and Huddleston, 1991; Teager, 1988). Some species are candidates for biological or integrated control of such lepidopterous pests as *Grapholita molesta* (Busck, 1916) and *Pectinophora gossypiella* (Saunders, 1844) (Achterberg, 1987).

The knowledge of Orgilinae from Turkey is limited, particularly for eastern part of the country. The first information about Orgilinae from Turkey was given by Achterberg (1985), who described a new genus, *Kerorgilus*. The first detailed faunistic study of the Orgilinae fauna was conducted by Beyarslan (1996). Beyarslan sampled in different regions and reported nine species, one of which was described as a new species and eight were new records for the Turkish Orgilinae fauna. Recently, Beyarslan and Erdoğan 2011 described a new species and recorded 12 new species from Turkey.

MATERIAL AND METHODS

Samples were carried out during the period from May to September among 2010-2013. Specimens were collected by sweeping with nets from different habitats belonging to Erzurum (Palandöken, Ataturk University, Horasan, Oltu, Konaklı, Ilica, Uzundere, Aşkale, Köprüköy, Tortum, Umudum Plateau, Olur, Narman, Esendurak, Karagöbek), Artvin (Genya Mountain, Borçka, Yusufeli), Erzincan (Sakaltutan, Gökaynak, Kemah, Üzümlü), Kars (Sarıkamış, Karakurt, Kağızman), Iğdır (Gaziler) Ardahan (Göle, Posof) Rize (Ayder) and Gümüşhane (Vauk Mountain) provinces. Collected specimens were pinned and labeled according to current taxonomic rules and regulations. Moreover, many Lepidoptera larvae were collected in the field and reared in cultural cups (35x18x15cm) at room with natural light and temperatures between 22-24°C until emerging of adults. All species distribution is given following Taxapad (Yu *et al.*, 2012), Beyarslan (1996) and Beyarslan and Erdoğan 2011. The identified material is deposited in the Collection of Entomology Museum, Erzurum, Turkey (EMET).

RESULTS

During samples, 15 braconid species were determined in the *Orgilus* genus (Hym., Braconidae, Orgilinae) from North-Eastern of Anatolia. They include 11 previously reported species and four new record species for the Turkish fauna. New records are: *Orgilus interjectus* Teager, 1989, *O. meyeri* Telenga, 1933, *O. nanellae* Tobias, 1986 and *O. tobiasi* Teager, 1989. Additionally, *Orgilus interjectus* Teager, 1989 was obtained from the larvae of *Pandemis heparana* (Denis and Schiffermuller, 1775) (Lepidoptera: Tortricidae) as a new host. Also, *Orgilus tobiasi* Teager, 1989 was obtained from the larvae of *Archips podana* (Scopoli, 1763) (Lepidoptera: Tortricidae) as first host.

Orgilus abbreviator (Ratzeburg, 1852)

Orgilus abbreviator (Ratzeburg, 1852) lehn, d Forstins. 3: 44-45; 9: loc. typ.: 1♀ Polen: Gdansk ("Danzig")

(Syn. *Orgilus nanellae* Tobias, 1986)

Material examined: Artvin province: 1♀, Genya Mountain, 1760 m, 10.vi.2013, leg. C. Güçlü; Borçka, 2♀♀, 450 m, 20.V.2012, leg. C. Güçlü; Yusufeli, 1♂, 1100 m, 26.x.2011, leg. C. Güçlü. Erzincan province: 1♀, Sakaltutan, 1050 m, 26.vi.2012, leg. C. Güçlü. Erzurum province: 1♀, Palandöken, 2150 m, 22.vii.2012, leg. H. Özbek; 1♀, Atatürk University Campus, 1850 m, 12.vi.2013, leg. C. Güçlü; 1♀, Horasan, Aras Valley, 1450 m, 04.viii.2013, leg. C. Güçlü; 1♀ and 1♂, Oltu, Başaklı, 2050 m, 24.vii.2013, leg. C. Güçlü. Kars province: 2♀♀, Sarıkamış, Karakurt, 1450 m, 02.v.2012, leg. C. Güçlü.

Hosts: *Recurvaria leucatella* (Clerck, 1759), *Recurvaria nanella* Denis and Schiffermuller, 1775 (Gelechiidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: Armenia, Germany, Greece, Hungary, Iran and Turkey.

Turkish distribution: Adapazari, Amasya, Aydın, Çankiri, Denizli, Elazığ, Erzincan, Giresun, İçel, Kastamonu, Kayseri, Kirsehir, Konya, Karaman, Malatya, Muğla, Samsun, Sivas, Tekirdağ, Tunceli (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus claripennis* Ivanov, 1899**

Orgilus claripennis Ivanov, 1899, Trudy Obsc. Prirod. Charkov 33(1898): 381-382; 1♀ loc. typ.: UdSSR: Ukraine: Umg. Kupjansk.

Material examined: Ardahan province: 1♀, Göle, 1500 m, 18.vii.2011, leg. C. Güçlü; Artvin: 1♀, Genya Mountain, 1760 m, 10.vi.2010, leg. C. Güçlü; 2♀♀, Borçka, 450 m, 20.v.2012, leg. C. Güçlü; 1♂, Yusufeli, 1100 m, 26.x.2011, leg. C. Güçlü. Erzincan province: 1♀, Sakaltutan, 1050 m, 26.vi.2012, leg. C. Güçlü. Erzurum province: 1♀, Palandöken, 2150 m, 22.vii.2011, leg. H. Özbek.

Hosts: *O. claripennis* was reared from *Depressaria depressella* F., 1798 (Oecophoridae, Lepidoptera). *Recurvaria leucatella*; *Recurvaria nanella* (Tortricidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: Moldova, Turkey and Ukraine.

Turkish distribution: Artvin, Bartın, Düzce, İstanbul Kahramanmaraş, Kastamonu, Kırklareli, Yozgat (Beyarslan and Çetin Erdoğan, 2011), and Ağrı (Taeger, 1989).

***Orgilus festivus* Papp, 1975**

Orgilus festivus Papp 1975, Folia Entomologica Hungarica (ser. nov.) 28(2): 303-306; 2♀♀; loc. typ.: Jugoslawien: Split.

Material examined: Artvin province: 1♀, Borçka, 20.v.2012, leg. C. Güçlü; 1♀, Genya Mountain, 1760, 10.vi.2010, leg. C. Güçlü. Erzurum province: 1♀, Palandöken, 2150 m, 22.vii.2012, leg. H. Özbek. Gümüşhane province: 1♀, Vauk Geçidi, 1450 m, 21.vi.2011, leg. C. Güçlü.

Hosts: unknown (Yu *et al.*, 2012).

General distribution: Croatia, Greece, Turkey and former Yugoslavia.

Turkish distribution: Gümüşhane, Isparta, Tekirdağ, Tunceli (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus hungaricus* Szépligeti, 1896**

Orgilus hungaricus Szépligeti, 1896, Termeszetr. Füz. 19: 182 (ung.), 240 (deutsch); cf 1♀; loc. typ.: Ungarn: Budapest, Sashegy; Lectotypus (cf) design. Durch Papp in Shenefelt 1970, Hym. Cat. (nov. ed.) 5(2): 256.

(Syn: *Orgilus hungaricus* Fahringer, 1937)

Material examined: Erzincan province: 1♀, Gökaynak, 1300 m, 25.v.2011, leg. C. Güçlü; 3♀♀, Kemah, 1250 m, 25.v.2011, leg. C. Güçlü. Erzurum province: 2♂♂, Konaklı, 2200m, 02.vii.2011, leg. C. Güçlü; 4♀♀, Horasan, Aras Valley, 1450 m, 04.viii.2010, leg. C. Güçlü; 3♀♀, Ilica, Atlıkonak, 2250 m, 10.vi.2011, leg. C. Güçlü; 1♀, Oltu, Ayvalı, 1100m, 20.IX.2012, leg. C. Güçlü; 1♀, Uzundere, 1100 m, 28.vi.2013, leg. C. Güçlü. Gümüşhane province: 1♀, Vauk Geçidi, 1450 m, 21.VI.2011, leg. C. Güçlü. Iğdır province: 1♂, Gaziler, 1020 m, 16.v.2010, leg. C. Güçlü. Kars province: 1♂, Kağızman, 1500 m, 24.vi.2010, leg. C. Güçlü; 2♂♂, Sarıkamış, Karakurt, Aras Valley, 1600 m, 14.vii.2012, leg. C. Güçlü; 13♀♀, same label but 14.vii.2011 and 3♂♂, same label but 23.vii.2011, leg. C. Güçlü.

Hosts: unknown (Yu *et al.*, 2012).

General distribution: Hungary, Kazakhstan, Romania, Serbia, Slovakia, Turkey and former Yugoslavia.

Turkish distribution: Adıyaman and Malatya (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus interjectus* Teager, 1989**

Orgilus interjectus Teager, 1989 1♂, 1♀; Körperlange Die Org. der Pal. 101-102p.

Material examined: Erzurum province: 3♀♀ and 1♂, Atatürk University Campus, 1850 m, 12.vi.2010, leg. C. Güçlü; 1♀, Ilica, Atlıkonak, 1760 m, 14.vii.2010, leg. C. Güçlü. Rize province: 3♀♀, Ayder, Çamlıhemşin, 1500 m, 14.vii.2012, leg. C. Güçlü.

Host: Previously, *O. interjectus* was obtained from *Agonopterix hypericella* (Hübner, 1817), and *Cochylis atricapitana* (Stephens, 1852) (Elachistidae, Lepidoptera) (Capek and Hofmann, 1997). We obtained from the larvae of *Pandemis heparana* (Denis and Schiffermuller, 1775) (Tortricidae, Lepidoptera) as a new host.

General distribution: Austria, Germany, Hungary, Italy, Netherlands, Romania, Switzerland, Turkey (new record) and United Kingdom.

***Orgilus meyeri* Telenga, 1933**

Orgilus meyeri Telenga, 1933, Konowia 12: 245; 1♂, 1♀ loc. typ.: UdSSR: Uzbekistan: Kokand. Lectotypus design. durch Tobias, 1986, Oprelidelitel' Nasekomych evrop. iasti SSSR 3(4): 273.

Material examined: Ardahan province: 1♀, Posof, Ilgar Mountain, 2200 m, 14.viii.2011, leg. C. Güçlü. Erzurum province: 1♀, Aşkale, Kop Mountain, 1900 m, 22.v. 2013, leg. C. Güçlü; 1♀, Ilica, Atlıkonak, 2250 m, 10.vi.2011, 14.vi.2012 and 1♀ and 1♂, 14.vii.2010, leg. C. Güçlü; 1♀ and 1♂, İspir, 1750 m, 16.vi.2012, leg. C. Güçlü; 2♀♀, Köprüköy, Yağan, 1200 m, 20.vi.2012, leg. C. Güçlü; 1♀, Tortum, Esendurak, 1450 m, 11.vi.2011, leg. C. Güçlü; 1♀, Uzundere, Yaylageçidi, 2100 m, 13.vii.2011, leg. C. Güçlü. Iğdir province: 1♂, Gaziler, 1100 m, 17.v.2010, leg. C. Güçlü. Kars province: 3♀♀ and 2♂♂, Kağızman, 1150 m, 15.v.2013, and 1♀, 24.vi.2010, leg. C. Güçlü; 1♀, Sarıkamış, Karakurt, Aras Valley, 1550 m, 04.vi.2012; 1♂, 04.vi.2013 and 1♀, 14.vii.2013, leg. C. Güçlü.

Host: Unknown (Yu *et al.*, 2012).

General distribution: Azerbaijan, Iran, Mongolia, Turkey (new record) and Uzbekistan.

***Orgilus nanellae* Tobias, 1986**

Orgilus nanellae Tobias, 1986; Oprelidelitel' Nasekomych evrop. iasti SSSR 3(4): 273; 2♂♂, 1♀♀; loc. typ.: UdSSR: Armenien: Jerewan.

Material examined: Ardahan province: 1♀, Göle, 1600 m, 18.vii.2011, leg. C. Güçlü. Erzurum province: 1♀, Umudum Plateau, 1900 m, 26.vi.2012, leg. C. Güçlü; 1♀, Aşkale, Kop Mountain, 1950 m, 12.vi.2013, leg. C. Güçlü; 2♂♂, Ilica, Atlıkonak, 1950 m, 10.vi.2011, 1♂, 26.vi.2013 and 1♀, 14.vii.2010, leg. C. Güçlü; 1♂, Olur, 1300 m, 21.vi.2013, leg. C. Güçlü. Kars province: 1♀, Sarıkamış, Karakurt, Aras Valley, 1550 m, 04.vi.2013, leg. C. Güçlü.

Host: *Recurvaria nanella* (Denis and Schiffermüller, 1775), *R. leucatella* (Clerck, 1759) (Gelechiidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: Armenia, Greece, Hungary, Iran and Turkey (new record).

***Orgilus obscurator* (Nees, 1812)**

Microdus obscurator Nees 1812, Mag Ges. nat. Fr. Berlin 6: 186; Taf. IV; loc. typ.: BRD: Kitzingen: prope Sickershausen

A Study of Orgilinae (Hymenoptera: Braconidae) from Turkey with New Records

Material examined: Erzurum province: 1♀, Palandöken, 2150 m, 22.vii.2012, leg. H. Özbek; 1♀, Atatürk University Campus, 1850 m, 12.vi.2010, leg. C. Güçlü; 1♀, Horasan, Aras Valley, 1450 m, 04.viii.2010, leg. C. Güçlü; 1♀, Ilica, Atlikonak, 2250 m, 10.vi.2011, 2250 m; and 1♂, 13.vi.2013, leg. C. Güçlü; 1♂, Köprüköy, Örentaş, 1750 m, 09.viii.2013, leg. C. Güçlü.

Hosts: *Coleophora pyrrhulipennella* Zeller, 1839 (Coleophoridae, Lepidoptera), *Dendrolimus pini* (L., 1758) (Lasiocampidae, Lepidoptera), *Dichomeris juniperella* (L., 1761), *Scrobipalpa ocellatella* (Boyd, 1858), (Gelechiidae, Lepidoptera) *Recurvaria nanella* (Denis and Schiffermuller, 1775) (Tortricidae, Lepidoptera), *Yponomeuta evonymella* (L., 1758) (Yponomeutidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: Armenia, Austria, Azerbaijan, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Russia, Sweden and Turkey.

Turkish distribution: Amasya, Bolu, Edirne, Erzurum, Malatya, Samsun, Tokat (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus pimpinellae* Niezabitowski, 1910**

Orgilus pimpinellae Niezabitowski, 1910; Spraw. Kom. fizyogr., Krakow 44: 81; cf; loc. typ.: Polen: Piwniczna.

Material examined: Artvin province: 1♂, Genya Mountain, 1760 m, 10.vi.2010, leg. C. Güçlü. Erzurum province: 1♀, Kemah, 1250 m, 25.v.2011 and 1♀, 25.v.2010 leg. C. Güçlü. Erzurum province: 1♀, Umudum Plateau, 1900 m, 26.vi.2012, leg. C. Güçlü; 1♂ and 1♀, Atatürk University Campus, 1850 m, 07.vi.2012, leg. C. Güçlü; 2♀♀ and 4♂♂, Aşkale, Kopdağı, 1650 m, 21.vi.2011; 1♂, same label but 2250 m, 16.vi.2011; 1♀, same label but 2200 m, 21.vi.2011, leg. C. Güçlü; 1♀, Horasan, Aras Valley, 1450 m, 19.vi.2013, leg. C. Güçlü; 1♀ and 1♂, Köprüköy, Yağan, 1600 m, 20.vi.2012; 2♀♀, 20.vii.2012, leg. C. Güçlü; 6♀♀, 7♂♂, Ilica, Atlikonak, 1900 m, 10.vi.2011; 3♀♀ and 2♂♂, 11.vi.2012; 3♀♀ and 3♂♂, 13.vi.2013; 2♀♀ and 4♂♂; 26.vi.2012; 12♂♂ and 3♀♀, same label but 2150 m, 26.vi.2012; 5♀♀, 3♂♂, 14.vii.2012, leg. C. Güçlü; 1♀, Kandilli, 1750 m, 27.vi.2011, leg. C. Güçlü; 1♀ and 1♂, Narman, Kireçli Dağı, 2100 m, 23.vii.2012, leg. C. Güçlü; 1♀ and 1♂, Oltu, Başaklı Mountain, 2100 m, 02.vii.2012, leg. C. Güçlü; 2♀♀, Tekman Plateau, 2450 m, 18.vii.2010; 1♀, 19.VII.2010, leg. C. Güçlü; 1♀, Tortum, Bağbaşı, 1550 m, 11.ix.2011, leg. C. Güçlü; 1♀, Esendurak, 1450 m, 11.vi.2011, leg. C. Güçlü. Kars province: 4♀♀ and 1♂, Kağızman, 1350 m, 03.vi.2013, leg. C. Güçlü.

Hosts: *Agonopterix bipunctosa* (Curtis, 1850) (Depressariidae, Lepidoptera), *Anacamptis populella* (Clerck, 1759), *A. temerella* (Lienig and Zeller, 1846), *Argolamprotes micella* (Denis and Schiffermuller, 1775), *Athrips pruinosa* (Lienig and Zeller, 1846), *Caryocolum tricolorella* (Haworth, 1812) (Gelechiidae, Lepidoptera), *Coleophora discordella* Zeller, 1849, *C. spiraeella* Rebel, 1916 (Coleophoridae, Lepidoptera), *Depressaria pimpinellae* Zeller, 1839 (Oecophoridae, Lepidoptera), *Dichomeris juniperella* (L., 1761) (Gelechiidae, Lepidoptera), *Digitivalva arnicella* (Heyden, 1863) (Plutellidae, Lepidoptera) *Mompha miscella* (Denis and Schiffermuller, 1775) (Mompidae, Lepidoptera) *Oncocera obductella* Zeller, 1839, *Phthorimaea operculella* (Zeller, 1873) *Recurvaria nanella* (Denis and Schiffermuller, 1775), and *Scrobipalpa ocellatella* (Boyd, 1858) (Gelechiidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: Afghanistan, Austria, Bulgaria, former Czechoslovakia, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Korea, Lithuania, Moldova, Mongolia, Norway, Poland, Romania, Russia, Serbia, Switzerland, Turkey, Ukraine, United Kingdom and former Yugoslavia.

Turkish distribution: Adapazari, Artvin, Aydin, Bartin, Bayburt, Bilecik, Bolu, Burdur, Bursa, Çanakkale, Edirne, Elazığ, Erzincan, Erzurum, Eskisehir, Giresun, Gümüşhane, Isparta, İstanbul, Kahramanmaraş, Karabük, Kastamonu, Kayseri, Kirklareli, Malatya, Muğla, Niğde, Ordu, Sinop, Sivas, Tekirdağ, Trabzon and Tunceli (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus ponticus* Tobias, 1986**

Orgilus ponticus Tobias, 1986; Opređelitel' Nasekomych evrop. iasti SSSR 3(4): 272; 1♂, 2♀♀; loc. typ.: UdSSR: Sotschi: Lazervskoe.

Material examined: Ardahan province: 1♀, Göle, 1500 m, 18.vii.2011, leg. C. Güçlü. Artvin province: 1♀, Borçka, 650 m, 20.v.2012, leg. C. Güçlü. Erzincan province: 1♂, Üzümlü, 1250 m, 13.vi. 2011, leg. C. Güçlü.

Host: Unknown (Yu *et al.*, 2012).

General distribution: Albania, Greece, Hungary, Italy, Russia, Slovenia and Turkey.

Turkish distribution: Ankara and Kastamonu (Teager, 1988).

***Orgilus punctulator* (Nees, 1812)**

Microdus punctulator Nees, 1812, Mag. Ges. nat. Fr. Berlin 6: 185; 1♂, 1♀; Typus zerstört, Neotypus hiermit festgelegt; loc. typ.: BRD: Loreley.

Material examined: Erzurum province: 1♀, Karagöbek, 1900 m, 27.vi.2011, leg. C. Güçlü; 2♂♂, Aşkale, Kopdağı, 2100 m, 21.vi.2011, leg. C. Güçlü; 1♀, Köprüköy, Yağan, 1600 m, 20.vi.2012, leg. C. Güçlü; 1♀, İlica, Atlıkonak, 1850 m, 14.vi.2012.; 2♂♂, same label but 1850 m, 26.vi.2012; 1♀, same label but 1850 m, 13.vi.2013, leg. C. Güçlü; 1♀, Oltu, Başaklı Mountain, 1800 m, 03.vii.2011, leg. C. Güçlü.

Host: *Ancylis apicella* (Denis and Schiffermuller, 1775), *Megalophanes viciella* (Denis and Schiffermuller, 1775) (Tortricidae, Lepidoptera), *Apterona crenulella* (Bruand, 1853) (Psychidae, Lepidoptera) *Coleophora auricella* (F., 1794), *C. follicularis* (Vallot, 1802), *C. galbulipennella* Zeller, 1838, *C. nigricella* Stephens 1835, *C. saponariella* Heeger, 1848, *C. serratella* (L., 1761) (Coleophoridae, Lepidoptera), *Yponomeuta malinella* Zeller, 1838, and *Y. padella* (L., 1758) (Yponomeutidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: Armenia, Azerbaijan, Bulgaria, Croatia, former Czechoslovakia, France, Germany, Hungary, Italy, Kazakhstan, Lithuania, Moldova, Mongolia, Netherlands, Poland, Russia, Sweden, Switzerland, Turkey, United Kingdom and former Yugoslavia.

Turkish distribution: Bartın, Bolu, Elazığ, Erzurum, Sivas, Tunceli and Yozgat (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus rudolphae* Tobias, 1976**

Orgilus rudolphae Tobias, 1976, Brakonidy Kavkaza, S. 135, 233; ♀; loc. typ.: UdSSR: Kaukasus: Pjatigorsk: Essentuki

Material examined: Erzurum: İlica, Atlıkonak, 1850 m, 13.VI.2013, 1♀, leg. C. Güçlü; Oltu, Başaklı, Karadağ Mountain, 1850 m, 02.VII.2013, 1♀, leg. C. Güçlü.

A Study of Orgilinae (Hymenoptera: Braconidae) from Turkey with New Records

Host: *Scrobipalpa ocelltella* (Boyd, 1858) *Phthorimea operculella* (Zeller, 1873) (Gelechiidae, Lepidoptera) (Yu *et al.*, 2012).

General distribution: former Czechoslovakia, Greece, Hungary, Kazakhstan, Russia, Turkey and former Yugoslavia.

Turkish distribution: Adapazari, Aydin, Balikesir, Burdur, Gümüşhane, Giresun, Muğla, Sinop, Tokat and Trabzon (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus simillimus* Taeger, 1989**

Orgilus similis Szepliget, 1896, Termeszetr. Füz. 19: 183 (ung.); 241 (deutsch); cf; loc. typ.: Ungarn: Budapest: Sashegy; Lectotypus design. Durch Papp, 1970, Hym. Cat (nov. ed.) 5(2): 262.

Material examined: Erzurum province: 1♀, Narman, Kireçli Dağı, 2250 m, 23.vii.2012, leg. C. Güçlü; 1♀ and 1♂, Aşkale, Kop Mountain, 1900 m, 26.v.2011, leg. C. Güçlü.

Hosts: unknown (Yu *et al.*, 2012).

General distribution: Germany, Greece, Italy, Switzerland and Turkey.

Turkish distribution: Adapazari, Afyon, Artvin, Bayburt, Bilecik, Bursa, Edirne, Elazığ Gümüşhane, Karabük, Kayseri, Konya, Niğde, Sinop, Sivas, Tekirdağ and Trabzon (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus temporalis* Tobias, 1976**

Orgilus temporalis Tobias 1976, Brakonidy Kavkaza, S. 256; 1♂, 1♀; loc. typ.: UdSSR: Sotschi: La- zervskoe.

(Syn: *Orgilus obscurator* Fahringer, 1937)

Material examined: Erzurum province: 4♂♂ and 2♀♀, Aşkale, Kop Mountain, 1900 m, 29.v.2011, leg. Ş. Güçlü. Kars province: 1♀, Sarıkamış, Karakurt, Aras Valley, 1550 m, 14.vii.2012; 1♀, same label but 09.vii.2013, leg. C. Güçlü.

Host: Unknown (Yu *et al.*, 2012).

General distribution: Azerbaijan, Czech Republic, Finland, Germany, Hungary, Mongolia, Romania, Russia, Switzerland and Turkey.

Turkish distribution: Aydin, Burdur, Çanakkale, Edirne, Elazığ, Erzurum, İçel, Kayseri (Beyarslan and Çetin Erdoğan, 2011).

***Orgilus tobiasi* Teager, 1989**

Orgilus tobiasi Teager, 1989, 1♂, 1♀; Körperlange Die Org. der Pal. 101-102p.

Material examined: Artvin province: 1♀, Borçka, 20.v.2012, leg. C. Güçlü. Rize province: 3♀♀, Ayder, Çamlıhemşin, 1500 m, 14.vii.2012, leg. C. Güçlü.

Host: *O. tobiasi* was reared from larvae of *Archips podana* (Scopoli, 1763) (Tortricidae, Lepidoptera). This is a new record for this parasitoid species (Yu *et al.*, 2012).

General distribution: Albania, Armenia, Czech Republic, Germany, Greece, Hungary, Iran, Ireland, Italy Romania, Serbia, Spain, Switzerland, Turkey (new record), United Kingdom and former Yugoslavia.

DISCUSSION

Fifteen braconid species were identified within *Orgilus* genus (Hym., Braconidae, Orgilinae) from the material collected from new localities of North-Eastern of Anatolia region in Turkey. Among these species, four species are new records for the Turkish fauna (*Orgilus interjectus* Teager, 1989, *O. meyeri* Telenga, 1933, *O. nanellae* Tobias, 1986 and *O. tobiasi* Teager, 1989). This new data increases at 26 *Orgilus* species in Turkey.

The most common species in Turkey appeared to be *Orgilus pimpinellae*, *O. festivus* and *O. obscurator* which were recorded from different provinces from Turkey (Beyarslan, 1996; Beyarslan and Çetin Erdoğan, 2011). The distribution of the species according to zoogeographical regions (Yu *et al.*, 2012) are as follows: 10 species from Western and Eastern Palaearctic (*Orgilus abbreviator* (Ratzeburg, 1852), *O. hungaricus* Szépligeti, 1896, *O. meyeri* Telenga, 1933, *O. nanellae* Tobias, 1986, *O. obscurator* (Nees, 1812), *O. pimpinellae* Niezabitowski, 1910, *O. ponticus* Tobias, 1986, *O. punctulator* (Nees, 1812), *O. rudolphae* Tobias, 1976, *O. temporalis* Tobias, 1976 and *O. tobiasi* Teager, 1989); four from Western Palaearctic (*O. claripennis* Ivanov, 1899, *O. festivus* Papp, 1975, *O. interjectus* Teager, 1989 and *O. simillimus* Teager, 1989) and one species from Western and Eastern Palaearctic, Neotropical, and Nearctic region (*O. obscurator* (Nees, 1812)).

The Orgilinae contains species attacking microlepidopteran larvae with a partly endophytic way of life, especially those with leaf-mining or tunnelling early instars. They are koinobiont endoparasites of various caterpillars; the known hosts of Orgilinae belong to the families Coleophoridae, Gelechiidae, Tortricidae, Pyralidae, Oecophoridae and Gracillariidae (Lepidoptera) (Shaw and Huddleston, 1991; Teager, 1988). Some species are candidates for biological or integrated control of such lepidopterous pests as *Grapholita molesta* (Busck, 1916) and *Pectinophora gossypiella* (Saunders, 1844) (Achterberg, 1987). Moreover, *Orgilus interjectus* was obtained from the larvae of *Pandemis heparana* (Denis and Schiffermüller, 1775) as new host and *O. tobiasi* was obtained from the larvae of *Archips podana* (Scopoli, 1763) (Lepidoptera: Tortricidae) as first host.

To conclude, further taxonomic investigations together with host association data are necessary to increase the knowledge of diversity and applicability of this group of insects because of its applicability in the control of agricultural pests.

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A Study of Orgilinae (Hymenoptera: Braconidae) from Turkey with New Records

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