Spiders (Aranei) new to the fauna of Turkey.
9. Two new family records (Mysmenidae and Synaphridae) and one species record of Mimetidae

Пауки (Aranei), новые для фауны Турции.
9. Два новых семейства (Mysmenidae и Synaphridae) и один вид семейства Mimetidae

Yu.M. Marusik¹, Kadir Boğaç Kunt ²

¹Institute for Biological Problems of the North RAS, Portovaya str., 18, Magadan 685000 Russia. E-mail: yurmar@mail.ru
²Poligon Sitesi 71/27-B TR-06810 Dodurga, Çayyolu, Ankara, Turkey. E-mail: chaetopelma@gmail.com

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Abstract. Two spider families (Mysmenidae and Synaphridae) are reported from Turkey for the first time. Mysmenidae are represented by two species and two genera: Mysmena leucoplagiata (Simon, 1879) and Mysmenella jobi (Kraus, 1967). Synaphridae are represented by only one unidentified Synaphris species. In addition, one species of Mimetidae, Ero furcata (Villers, 1789), is reported from Turkey for the first time. Both mysmenid species and Ero furcata are illustrated. These new records increase the number of spider families recorded from Turkey to 50, although this is still an underestimate of the expected total.

Резюме. В Турции впервые отмечены два семейства пауков: Mysmenidae и Synaphridae. Первое семейство представлено двумя видами и двумя родами: Mysmena leucoplagiata (Simon, 1879) и Mysmenella jobi (Kraus, 1967). Второе семейство – только одним видом Synaphris sp. Кроме этого, впервые для страны отмечен Ero furcata (Villers, 1789). Оба вида Mysmenidae и Ero furcata проиллюстрированы. Новые находки увеличили общее число семейств в Турции до 50, хотя это не предел.

Introduction
This paper is the ninth in a series on new spider records from Turkey and is devoted to three families: Mysmenidae, Synaphridae and Mimetidae. 48 spider families are known to occur in Turkey [Bayram et al., 2010], but we expect more to be discovered in the future. A brief Turkish-Russian arachnological expedition in Turkey during 2009 resulted in two new family records for the country (Mysmenidae and Synaphridae) and more than 60 species new species records for the fauna of Turkey. The main aim of this paper is to present data about new family, genus and species records from Turkey.

Material and methods
All specimens were collected during the Turkish-Russian arachnological expedition from May 27 – June 14, 2009 (Color plate 1: fig. 1). The specimens were collected by sweeping, hand picking, litter sifting and tree branch beating with the help of an aspirator and preserved in 70% ethanol. Specimens were photographed using an Olympus Camedia E-520 camera attached to an Olympus SZX12 stereomicroscope. The images were montaged using “CombineZM” image stacking software. Photographs were taken in dishes of different sizes with paraffin in the bottom. Different sized holes were made in the bottom to keep the specimens in the correct position. Each species is supplied with the most appropriate identification references (chiefly well known identification books).

The material treated herein is deposited in the personal collection of Kadir Boğaç Kunt and in the Zoological Museum of the Moscow State University.

Species survey

Family Mysmenidae Petrunkevitch, 1928

Comments. This is a small, globally distributed family with 123 species assigned to 23 genera [Platnick, 2011]. Only three genera and seven species of mysmenids are known from the Palaeartic: Mysmena Simon, 1894, Mysmenella Brignoli, 1980 and Trogloneta Simon, 1922 [Platnick, 2011]. Most of the records originate from south of 50°N. Interestingly, Mysmenidae are unknown from some countries adjacent to Turkey, such as Bulgaria and Greece [Helsdingen, 2010], but two species and two genera are known from the Caucasus [Marusik, Guseinov, 2003; Marusik, 2005] and Crimea [Kovblyuk et al., 2008].

Genus Mysmena Simon, 1894

Comments. This is the most species rich genus in the family, with 22 species distributed all over the world except for Australia. The taxonomic delimitation of this genus is not very clear because it was never been thoroughly revised.
Thus, it is highly likely that some species are misplaced. Only two species of *Mysmena* are known to occur in the Palaearctic, and both occur in the Mediterranean region [Platnick, 2011; Helsdingen, 2010].

*Mysmena leucoplagiata* (Simon, 1879)  
(Color plate 1: fig. 2–6)

*Mysmena leucoplagiata*: Kraus, 1967: 388, fig. 1–11 (♂, ♀); Wunderlich, 1980: 267, fig. 24–26 (♂, ♀); Trotta, 2005: 170, fig. 362–363 (♂, ♀).

**Material.** 126 ♀ and ♂ [T-05], Ankara prov., Kızılcabamam, Çamlıdere, 40°32.709'N / 32°30.547'E, 964 m, under flat stones in pine forest, 28.05.2009 (Yu.M.Marusik); 1♂ [T-13], İzmir prov., Kemalpaşa, Vişneli, 38°20.777'N / 27°25.271'E, 311 m, 5.06.2009 (Yu.M.Marusik).  

**Comments.** Habitus and pattern of this species is identical to those in *Mysmenella jobi*. The two mysmenid species occurring in Turkey can be distinguished by the digitiform extension of the cymbium in *M. leucoplagiata* (lacking in *M. jobi*) and the presence of a metatarsal spur on leg I in the male (*M. jobi* has both metatarsal and tarsal spurs).  

This species is distributed from Spain to Azerbaijan [Helsdingen, 2010; Marusik, Guseinov, 2003].

*M. leucoplagiata* was collected in large numbers from under flat stones in pine forest near Cambdere. Under some stones it was possible to find numerous (5+) specimens. In other places *M. leucoplagiata* was collected by sifting leaf-litter.

Genus *Mysmenella* Brignoli, 1980

**Comments.** *Mysmenella* is a small genus with 10 species distributed in the Old World. The most distant records are from Hawaii and New Guinea [Platnick, 2011]. Only two species of this genus are known to occur in the Palaearctic: *M. jobi* (Kraus, 1967) and *M. pseudojobi* Lin et Li, 2008. Both species represent the most northerly Palaearctic: species distributed in the Old World. The most distant

*Mysmena* [2 juv. (♂ and ♀) [T-03], Ankara prov., Kızılcabamam, Çamlıdere, 40°32.709'N / 32°30.547'E, 964 m, under flat stones in pine forest, 28.05.2009 (Yu.M.Marusik).  

**Material.** Only one pair of subadult specimens has been collected in Turkey, from under stones in a pine forest. Additional attempts to collect adult material in the same locality were unsuccessful. The subadult male has a palp typical of *Synaphris*. However, identification of *Synaphris* species from juvenile specimens is impossible. It is likely that our specimens belong to an undescribed species.

**Family Synaphridae** Wunderlich, 1986

Synaphridae is a small family with 12 species assigned to three genera distributed in the Mediterranean region and Madagascar [cf. Platnick, 2011]. This group was elevated to family rank by Marusik and Lehtinen [2003]. Within the Eastern Mediterranean region Synaphridae have been recorded from Crimea, Egypt, Israel and Turkmenistan [Marusik, Zonstein, 2011].

Genus *Synaphris* Simon, 1894

*Synaphris* occurs in the Mediterranean region and Madagascar. 10 species are known in this genus, with all except those from Madagascar known only from a single locality.

Genus *Synaphris* sp.

This is a relatively small, globally distributed family with 156 species assigned to 13 genera. Three of these genera occur in the Western Palaearctic, and two of them are known from Turkey. Each of them was previously known from a single species: *Ero aphana* (Walckenaer, 1802) and *Mimetus laevigatus* (Keyserling, 1863). During our expedition we collected one additional species.

*Ero furcata* (Villers, 1789)  
(Color plate 2: fig. 14–15)

*Ero furcata*: Roberts, 1985: 170, fig. 75b (♂, ♀); Roberts, 1995: 259, fig. (♂, ♀); Roberts, 1998: 274, fig. (♂, ♀); Thaler et al., 2004: 363, fig. 3, 15–16, 22, 30, 36, 44, 59 (♂, ♀).

**Material.** 1♂ [T-06], Kastamonu prov., Azdavay, 41°40.100'N / 33°22.446'E, 878 m, 30.05.2009 (Yu.M.Marusik).  

**Comments.** This species can be easily separated from *E. aphana* by having only one pair of tubercles on the abdomen (two pairs in *E. aphana*). *E. furcata* occurs throughout the Palaearctic, including countries adjacent to Turkey, such as Bulgaria, Greece, Crimea and the Caucasus.

**Conclusions**

Finds of additional species of Mysmenidae in Turkey are highly unlikely. In contrast, additional species of Synaphridae and Mimetidae most probably occur in Turkey. All *Synaphris* species have a very localized distribution and...
Spiders (Aranei) new to the fauna of Turkey. 9. Two new family records and one species record of Mimetidae

Color plate 1.

Fig. 1. Records of *Mysmena leucoplagiata* (Simon, 1879), *Mysmenella jobi* (Kraus, 1967), *Synaphris* sp. and *Ero furcata* (Villers, 1789) in Turkey.

Рис. 1. Находки *Mysmena leucoplagiata* (Simon, 1879), *Mysmenella jobi* (Kraus, 1967), *Synaphris* sp. и *Ero furcata* (Villers, 1789) в Турции.

Fig. 2–6. Habitus and pattern of *Mysmena leucoplagiata* (Simon, 1879).

2–3 – female, lateral and dorsal; 4–6 – male, dorsal, lateral and latero-ventral. Arrows indicate mating spur in male and difiform extension of the cymbium.

Рис. 2–6. Внешний вид *Mysmena leucoplagiata* (Simon, 1879).

2–3 – самка, сбоку и сверху; 4–6 – самец, сверху, сбоку и сбоку-снизу. Стрелками показаны копулятивный шип самца и пальцевидный отросток цимбия.
Color plate 2. Spiders (Aranei) new to the fauna of Turkey. 9. Two new family records and one species record of Mimetidae

Fig. 7–13. Habitus and pattern of *Mysmenella jobi* (Kraus, 1967).

7–9 – female, dorsal, frontal and ventral; 10 – male, lateral; 11–12 – male, dorsal; 13 – male, ventral. 7–11 – specimens from Azerbaijan, 12–13 – specimen from Artvin prov., Turkey. Arrows indicate chitinized spots on female femora and mating spurs in male.


7–9 – самка, сверху, спереди и снизу; 9 – самец, сбоку; 11–12 – самец, сверху; 13 – самец, снизу. 7–11 – экземпляры из Азербайджана, 12–13 – экземпляр из провинции Артвин, Турция. Стрелками показаны хитинизированные бляшки на бедрах у самки и копулятивные шипы.

Fig. 14–15. Female of *Ero furcata* (Villers, 1789).

14 – habitus, lateral; 15 – epigyne, ventral.


14 – габитус, сбоку; 15 – эпигиная, снизу.
therefore each distant locality may yield a different species [Marusik, Zonstein, 2011]. Three additional Ero species are known from adjacent Greece [Helsdingen, 2010]: E. cambridgei Kulczyński, 1911, E. flammeola Simon, 1881 and E. tuberculata De Geer, 1778. All of them may potentially be discovered in Turkey. The occurrence of species new to science is also possible. With the new family records of Mysmenidae and Synaphridae, the total number of spider families known from Turkey now totals 50. Although it is rather high (cf. 49 families in Greece), the occurrence of a few additional families can still be expected. Indeed, we found another family, Oonopidae Simon, 1890, in several provinces. This family is represented by at least three genera: Orchestina Simon, 1882, Silhouettella Benoit, 1979 and "Oonops" Templeton, 1835. However, we were unable to identify our specimens to species level.

Another family that probably occurs in Turkey is Atypidae Thorell, 1870. It has been recorded from adjacent Bulgaria, Crimea, Greece and the Caucasus. Two other mygalomorph families can also be expected: Cyrttauchenidae Simon, 1889 and Hexathelidae Simon, 1892, both of which are known from Crete [Helsdingen, 2010].

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References


Yu.M. Marusik, Kadir Boğaç Kunt

References


