

A survey of spider taxa new to Israel (Arachnida: Araneae)

Sergei L. Zonstein^a, Yuri M. Marusik^{b,c,*} and Mikhail Omelko^{d,e}

^aDepartment of Zoology, Steinhardt Museum of Natural History, Tel-Aviv University, Tel-Aviv, Israel; ^bInstitute for Biological Problems of the North RAS, Magadan, Russia; ^cDepartment of Zoology & Entomology, University of the Free State, Bloemfontein, South Africa; ^dGornotaezhnaya Station FEB RAS, Gornotaezhnoe Vil., Ussuriysk Dist., Primorski Krai, Russia; ^eFar Eastern Federal University, Vladivostok, Russia

(Received 11 August 2015; accepted 13 Sept. 2015; first published online 25 Sept. 2015)

This paper presents a survey of spider species that have not been previously recorded for Israel. Twenty species, twelve genera and two families (Mysmenidae and Phyxelididae) are recorded for the first time in Israel. Nine species, *Agroeca parva* Bosmans, 2011, *Aulonia kratochvili* Dunin et al., 1986, *Ero flammeola* Simon, 1881, *Hogna ferox* (Lucas, 1838), *Maculoncus parvipalpus* Wunderlich, 1995, *Neon rayi* (Simon, 1875), *Pardosa aenigmatica* Tongiorgi, 1966 and *Phyxelida anatolica* Griswold, 1990, are illustrated. *Tarentula jaffa* Strand, 1913, syn. n. is synonymised with *Hogna ferox* (Lucas, 1838), and *Hahnia carmelita* Levy, 2007, syn. n. is synonymised with *Hahnia nava* (Westring, 1851). A possible synonymy of the widespread *Prodidomus rufus* Hentz, 1847 with *P. hispanicus* Dalmat, 1919 known from the Iberian Peninsula is discussed. An original combination is restored for *Trochosa urbana* O.P.-Cambridge, 1876.

Keywords: Araneae; taxonomy; new records; distribution; East Mediterranean

Introduction

The spiders of Israel are rather well studied mainly because of numerous taxonomic works published by Levy (1973–2009: for a complete list of references, see Zonstein & Marusik, 2013), who revised many species-rich families in the country such as Agelenidae, Araneidae, Gnaphosidae, Oxyopidae, Philodromidae, Sparassidae, Theridiidae, Thomisidae, Zodariidae and several small families Anyphaenidae, Atypidae, Ctenidae, Cybaeidae, Hahniidae, Hersiliidae, Zoridae and Zoropsidae. A large contribution to the knowledge of the region's spiders also was made by Prószyński, (1998, 2000, 2003), who revised the Salticidae of the Levant, and Saaristo (2007), who revised the Oonopidae of Israel. Among Middle Eastern countries, only Turkey has more recorded spider species (1014 species, Bayram et al., 2014) than Israel (631 species, Zonstein & Marusik, 2013). Although the number of species found in the country is rather high considering its size, Israel remains inadequately studied. Regional revisions of several species rich families, such as Dictynidae, Dysderidae, Lycosidae and Pholcidae, have never been conducted.

While surveying the fauna of Israel, we found 20 species from 12 genera and two families that were not previously reported for the country. The main goals of this work are: 1) to present new records, 2) to illustrate poorly known species and 3) to synonymise two species described from Mediterranean.

*Corresponding author. Email: yurmar@mail.ru

Material and Methods

Images were taken using a Canon 500D digital camera with a 100 mm Canon macro lens and a Canon PowerShot G9 digital camera attached to a Zeiss Discovery V20 stereomicroscope at Tel Aviv University as well as an Olympus E-520 digital camera attached to an Olympus SZX16 stereomicroscope at the University of Turku. Digital images were prepared using “CombineZP” image stacking software (www.hadleyweb.pwp.blueyonder.co.uk). Vulvae were illustrated after maceration in a 20% potassium hydroxide aqueous solution and exposure to an alcohol/water solution of Chlorazol Black for a few minutes.

Comments are made for the family, genus and/or only when the taxa were not previously recorded from Israel. We provide diagnostic figures only for poorly known species.

Abbreviations: YM = Y. M. Marusik; SZ = S. L. Zonstein; IBPN = Institute for Biological Problems of the North, Magadan, Russia; HJ = Hebrew University of Jerusalem, Israel; SMF = Senckenberg Museum, Frankfurt a. M., Germany; TAU = Tel Aviv University, Israel; ZMMU = Zoological Museum of the Moscow State University, Russia.

Taxonomic survey of previously unreported taxa found in Israel

Family DICTYNIDAE

Scotolathys Simon, 1884

This is a monotypic genus known exclusively from the Mediterranean region (Marusik, Özkütük, Kunt, & Kaya, 2011; WSC, 2015) and is a new record for Israel.

Scotolathys simplex (Simon, 1870)

Scotolathys simplex: Marusik et al., 2009: 32, f. 1–3, 7–10, 18–20, 25–28, 33–37, 39–42, 48–50, 58–64 (♂♀); Marusik et al., 2011: 166, f. 20–21 (♀)

Lathys simplex: Bosmans et al., 2009: 32, f. 41–45 (♂♀)

Material. ISRAEL: Judean Hills, Adullam, 15.xi.2003 (U. Columbus & T. Levanony) – 1♂ (TAU); Bet Guvrin, 350 m, 6.xii.2011 (SZ) – 1♀ (TAU); same locality, 20.iii.2013 – 2♀ (TAU); 7 km NE Beit Guvrin, 7.i.2011 (YM) – 8♂ 4♀ (ZMMU); Pura, 28.i.2011 (SZ) – 1♂ (TAU); Bet Shemesh, 6.i.2011 (YM & SZ) – 2♂ 8♀ 1 juv. (TAU); 1 km S Zafiririm, 31°39'N, 34°57'E, 13.xi.2014 (SZ) – 1♂ 1♀ (TAU).

Comments. This species differs from other Dictynidae found in Israel by having only 6 eyes. The species was originally described by females and until recently males were not known. Females were redescribed and previously unknown males were described by Marusik et al. (2009, 2011) and Bosmans et al. (2009). *Scotolathys simplex* was earlier known from Spain and Algeria to Crimea and Turkey. It was collected in Israel, the south-easternmost locality of the range, for the first time.

Family HAHNIIDAE

Hahnia C. L. Koch, 1841

Only two species of the genus were known from Israel until recently: *H. candida* (Westring, 1851) and *H. carmelita* Levy, 2007 (Zonstein & Marusik, 2013). The former species was transferred to *Iberina* Simon, 1881 (WSC, 2015).

Hahnia nava (Westring, 1851)

Hahnia carmelita Levy, 2007: 15, f. 40–41 (holotype ♀ from Ramat HaNadiv, Mt. Carmel, Israel (HJ) examined). **Syn. n.**

Hahnia nava: Roberts, 1998: 271, f. (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

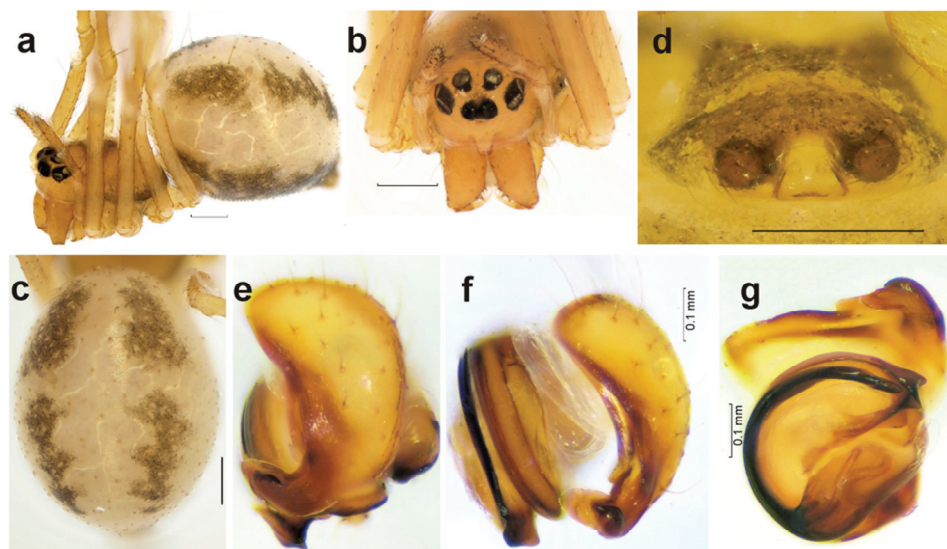


Figure 1. Female of *Maculoncus parvipalpus* (a–d) and expanded male palp of *Ero flammeola* (e–g). – a. habitus, lateral; b. prosoma, anterior; c. abdomen, dorsal; d. epigyne, ventral; e. dorsal; f. lateral; g. ventral. Scale = 0.2 mm if not otherwise indicated.

Material. ISRAEL: ‘En Ya’akov, 14–19.i.2007 (I. Shtirberg) – 2♂, 1♀ (TAU); same locality, 10.xi.2006 (I. Shtirberg) – 1♀ (TAU); Haifa, university campus, 450 m, 29.xii.2010 (YM) – 1♀ (ZMMU); Matta, 13–18.i.2007 (I. Shtirberg) – 1♂ (TAU); Adullam, 10.iii.2008 (O. Skutelsky) – 1♂, 1♀ (TAU).

Comments. Examination of the holotype female of *H. carmelita* revealed that the endogyne is identical to that of the well-known and widely distributed Transpalearctic *H. nava*. Therefore, the two names are synonymised here. It appears that records of this species from Israel are the southernmost for the entire range of the species.

Family LINYPHIIDAE

Maculoncus Wunderlich, 1995

So far, two species are known in this genus, the type species, *M. parvipalpus* Wunderlich, 1995 from Greece, and another, *M. orientalis* Tanasevitch, 2011 from Taiwan (WSC, 2015).

Maculoncus parvipalpus Wunderlich, 1995 (Figures 1a–d)

Maculoncus parvipalpus Wunderlich, 1995: 647, f. 12–19 (♂♀)

Material. ISRAEL: Haifa, 31.xii.2010 (YM) – 1♀ (ZMMU)

Comments. This species was previously only known from Greece (Peloponnese Peninsula and Naxos Island) (Wunderlich, 1995). It can be easily recognised by the pattern on carapace (Figs 1a–b) and abdomen (Fig 1a, c), long hairs covering the abdomen (Fig. 1a) and the shape of the copulatory organs. It was recorded in Israel for the first time. Haifa is the south-easternmost record of *M. parvipalpis*.

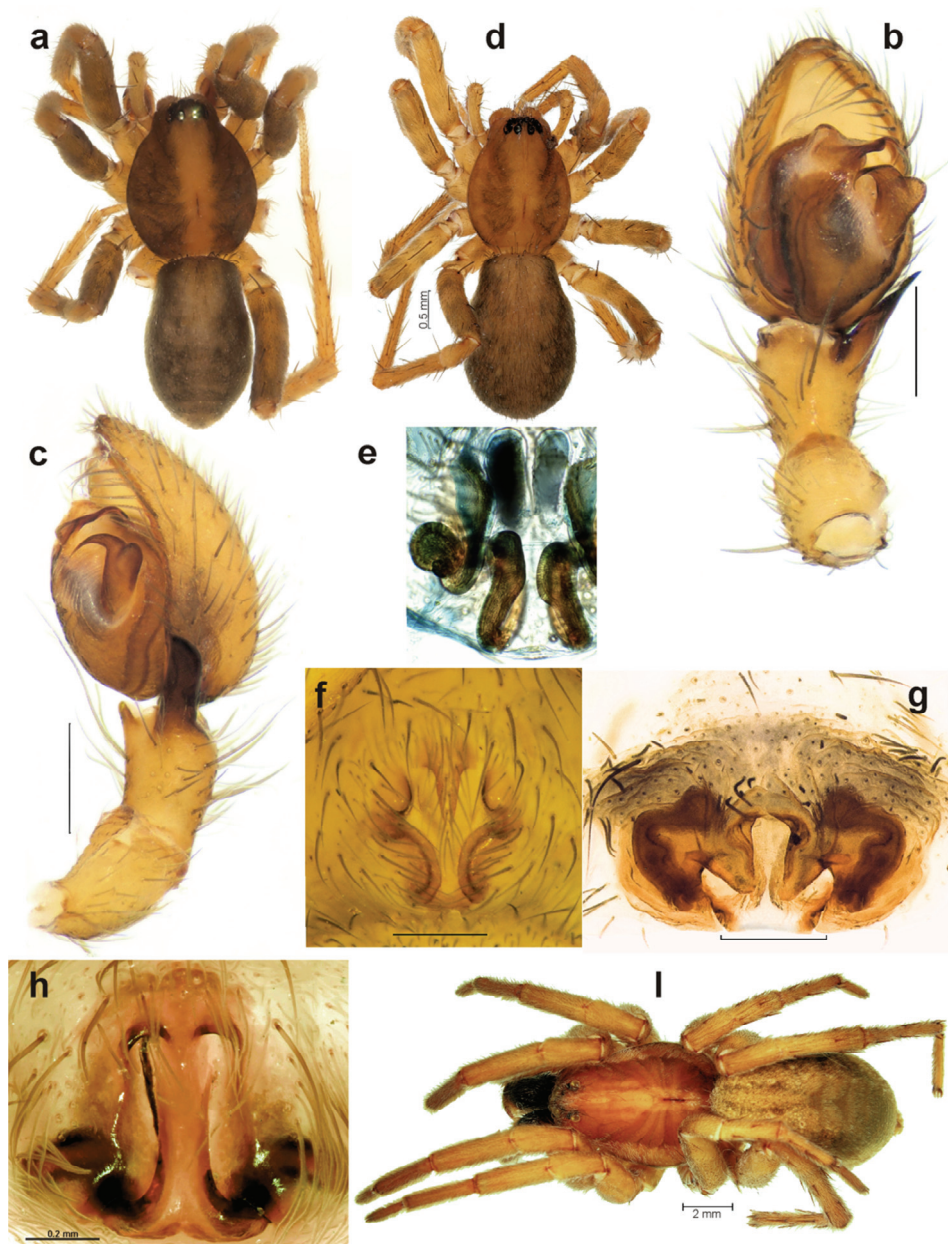


Figure 2. Habitus and copulatory organs of *Agroeca parva* (a–f), *Pardosa aenigmatica* (g, from Azerbaijan) and *Hogna ferox* (h–i, holotype of *Tarentula iaffa*). Scale = 0.2 mm if not otherwise indicated. – a. male habitus, dorsal; b–c. male palp, ventral and retrolateral; d, i. female habitus, dorsal; e. epigyne, dorsal; f–h. epigyne, ventral. Scale = 0.2 mm if not otherwise indicated.

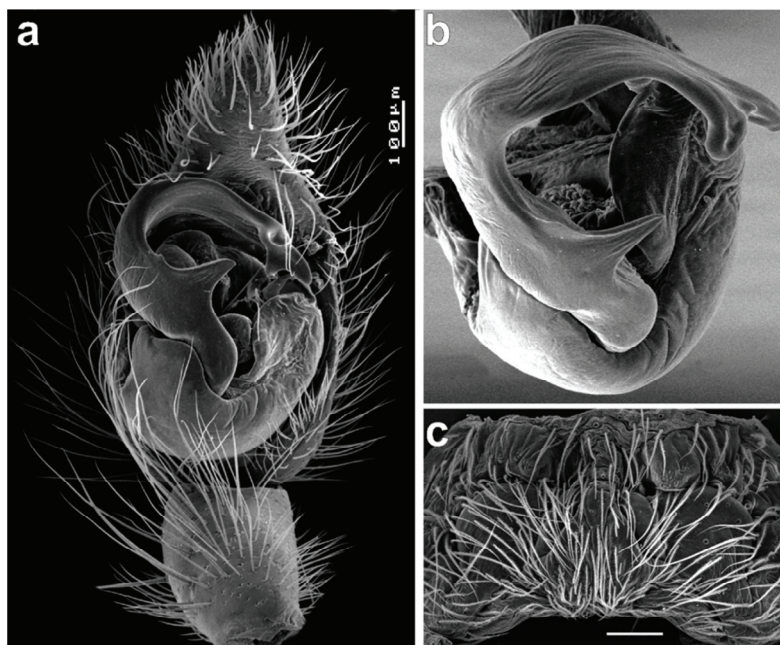


Figure 3. *Aulonion kratochvili* from Azerbaijan. – **a.** male palp, ventral; **b.** bulbus, anterior; **c.** epigyne, ventral. Scale = 0.1 mm.

Family LIOCRANIDAE

Agroeca Westring, 1861

This is a large genus with 28 species distributed throughout the Holarctic (Platnick, 2014). Two species, one from India and one from Peru, are most likely misplaced in this genus. Although the genus is common in the East Mediterranean, it was not previously reported from Israel.

Agroeca parva Bosmans, 2011 (Figures 2a–f)

Agroeca parva Bosmans, 2011: 19, f. 11–14 (♂♀)

Material. ISRAEL: Mt. Carmel, 2.5 km S Haifa, 32°45'N 35°02'E, 500 m, 7.x.2014 (SZ) – 1 ♀ (TAU); Upper Galilee, N Slope of Mt. Meron, 33°00'N 35°24.05'E 1100 m, forest litter, 27.x.2013 (SZ) – 4♂ 1♀ (TAU); Ziv'on, 773 m recent woodland 33°02'N 35°25' E, 16.iv.2005 (A. Timm & T. Assmann) – 1♀ (TAU); Carmel Ridge, Shuni Park 1 km N Binyamina, 32°32'N 34°57'E, 60 m, 27.xii.2010 (YM) – 1♀ (ZMMU).

Comments. This species is known by the original description from Lesbos. Females of *A. parva* are nearly indistinguishable from *A. inopinata* O. P.-Cambridge, 1886; however, the males are easily distinguished by the large tibial apophysis and the shape of the tegular apophysis (Figs 2b–c).

Family LYCOSIDAE

Aulonion C. L. Koch, 1847

Comments. This genus is known from the West Palaearctic and encompasses two species (WSC, 2015). It was not previously reported from Israel. Israel is the southern limit of the distribution of the genus.

Aulonia kratochvili Dunin, Buchar & Absolon, 1986 (Figures 3a–c)

Aulonia kratochvili Dunin et al., 1986: 28, f. 1–7 (♂♀); Kronestedt 1997: 77, f. 1–2 (♂).

Material (only selected localities are shown). ISRAEL: Eastern Galilee: Lake Hula, 8.iv.2010 (L. Friedman & C. Drees) – 6♂ (TAU); Jordan Valley: 1.iv.1943 (A. Shulov) – 1♀ (TAU); Central Coastal Plain: Berekhat Ya'ar, 4.iv.2010 (L. Friedman & C. Drees) – 11♂ 7♀ (TAU); Nahal Poleg (32°15.5'N 34°50.3'E), 18.iii.2013 – 1♀ (TAU).

Comments. This species was previously known from Greece to western Turkmenistan (Mikhailov 2013; WSC 2015). It is very easily distinguished from other lycosid genera in Israel because of the characteristic habitus, pattern, the huge tegular apophysis of the males (Figs 3a–b) and the very hairy epigyne lacking fovea (Fig. 3c). *Aulonia kratochvili* was not previously reported from Israel. The record from Nahal Poleg is the southernmost in the entire range.

***Hogna* Simon, 1885**

Hogna ferox (Lucas, 1838) (Figures 2h–i)

Tarentula iaffa Strand, 1913: 161 (holotype ♀ from "Jaffa-Rehoboth"(SMF 2232-138), examined). **Syn. n.**

Geolycosa iaffa: Roewer, 1955: 241

Hogna ferox: Wunderlich 1992: 458, f. 716–719 (♂♀)

For a complete synonym listing and references, see World Spider Catalog (2015).

Material (only selected localities are shown). ISRAEL: Eastern Galilee: Lake Kinneret, Degania, 26.iv.2010 (L. Friedman & C. Drees) – 1♂ (TAU); Northern Negev: HaBesor, 2.viii.2010 (L. Friedman & C. Drees) – 4♂, 3♀ (TAU).

Comments. This species was previously known from across nearly the entire Mediterranean (Canary Islands, Iberian Peninsula, Malta to Western Egypt). A comparison of recently collected material with the holotype of *Tarentula iaffa* described from "Jaffa-Rehoboth" (Jaffa now is part of Tel Aviv), as well as male specimens from Israel with figures of *Hogna ferox* reveals that the two names should be synonymised. The record of *H. ferox* from Israel is the easternmost in the entire range, although species may occur in other countries in the Middle East.

***Pardosa* C. L. Koch, 1847**

Pardosa aenigmatica Tongiorgi, 1966 (Figure 2g)

Pardosa aenigmatica Tongiorgi, 1966: 304, f. 127 (♀); Tongiorgi, 1968: 108, pl. II, f. 1–3 (♂)

Material. ISRAEL: Golan Heights: 1 km N Merom Golan, 33°08.5'N 35°46.3'E, 950 m, 14.v.2012 (SZ) – 2♀ (TAU); Judean Hills: Adullam Nat. Park, 30.iii.2008 (O. Skutelski) – 1♀ (TAU).

Comments. Until recently, it was known only from northern Italy, Turkey and southern Azerbaijan (WSC, 2015; Otto, 2014). This species was not previously recorded from Israel, and the current records are the southernmost in the range. The shape of the epigyne (Fig. 2g) and the male palp indicate that *P. aenigmatica* is not related to *P. alacris* (C.L. Koch, 1833), the type species of the genus, and most likely represents a separate genus.

***Trochosa* C. L. Koch, 1847**

Trochosa urbana O. P.-Cambridge, 1876

Trochosa urbana O. P.-Cambridge, 1876: 601, pl. 60, f. 14 (♂♀)

Lycosa urbana: Denis, 1947: 32, pl. 1, f. 6–7 (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Eastern Galilee: Lake Hula, 27.iv.2010 (L. Friedman & C. Drees) – 5♂, 1♀ (TAU); Lake Kinneret, Degania, 26.iv.2010 (L. Friedman & C. Drees) – 6♂ (TAU).

Comments. *Trochosa urbana* was originally described from Egypt. Roewer (1955) transferred it to *Geolycosa* Montgomery, 1904, although the species lacks tibial scopula (a key character of *Geolycosa*) and has a carapace pattern and male palp typical for *Trochosa*. Here, we transfer this species back to *Trochosa*. Although *T. urbana* is broadly distributed (North, Central Africa, Seychelles to India), it was not previously reported from Israel.

Family MIMETIDAE***Ero* C. L. Koch, 1836**

Only one species of the genus, *Ero tuberculata* (De Geer, 1778), was known from Israel (Zonstein & Marusik, 2013). Three additional species have now been found.

Ero aphana (Walckenaer, 1802)

Ero aphana: Roberts, 1998: 275, f. (♂♀); Thaler et al., 2004: 359, f. 1–2, 5–8, 19, 25, 31, 37–40, 47–48, 52, 53a–b (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Upper Galilee, Mt. Meron, 33°01'N 35°23'E, 900 m, 10–17.v.2007 (T. Levanony) – 1♂ (TAU); Judean Hills, Adulam, 20.v.2007 – 1♀ (TAU).

Comments. This well-known species is distributed in the Western Palearctic, from the Iberian Peninsula to the Caucasus (Helsdingen, 2014; Mikhailov, 2013). This record from Israel is the southernmost in the range.

Ero cambridgei Kulczyński, 1911

Ero cambridgei: Roberts, 1998: 274, f. (♂♀); Thaler et al., 2004: 360, f. 23–24, 28–29, 34–35, 60–61 (♂♀)

Material. ISRAEL: Hermon, 1700 m, 12.v.2010 (C. Drees & L. Friedman) – 1♂ (TAU).

For a complete synonym listing and references, see the World Spider Catalog (2015).

Comments. This well-known species is distributed across the entire Palearctic. The record from Israel is the southernmost in the entire range.

Ero flammeola Simon, 1881 (Figures 1e–g)

Ero flammeola: Thaler et al. 2004: 362, f. 4, 17–18, 20, 26, 32, 41–42, 49–50, 54–55 (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Mt. Meron, Ba'al-Shem-Tov f., 32°58'N 35°28'E, 13.ix.2007 (T. Levanony) – 1♂ (TAU); Mt. Meron, Ba'al-Shem-Tov, 32°58'N 35°28'E, 13.ix.2007 (T. Levanony) – 1♂ (TAU).

Comments. It is a poorly known species and, therefore, we provide figures of the male palp to support our identification. Until recently, *E. flammeola* was known from the

Canary Islands to Corfu. The record from Israel is the south-easternmost in the entire range.

Family MYSMENIDAE

This is a small, globally-distributed family with 135 species attributed to 13 genera (WSC, 2015). It was not previously reported from Israel.

***Mysmena* Petrunkevitch, 1928**

This is the largest genus of the family with 24 species (WSC, 2015). Most species are restricted to Southeast Asia. The type species, *Mysmena leucoplagiata*, is known only from the West Palearctic.

Mysmena leucoplagiata (Simon, 1879)

Mysmena leucoplagiata: Kraus, 1967: 388, f. 1–11 (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Haifa, university campus, 32°45'N 35°01'E, 450 m, 29.xii.2010 (YM) – 1♂ 2♀ (IBPN); same locality, 11.ix.2011 (YM) – 1♀ (IBPN).

Comments. This is the type species of the genus. *Mysmena leucoplagiata* is known from Western Europe to Azerbaijan. Israel is the southernmost locality of the species across its entire range.

Family PHOLCIDAE

***Spermophora* Hentz, 1841**

This genus is distributed worldwide (WSC, 2015) and is well-known in the West Palearctic but was not previously reported in Israel.

Spermophora senoculata (Dugès, 1836)

Spermophora senoculata: Huber, 2002: 105, f. 1–13 (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Haifa, university campus, 32°45'N 35°01'E, 450 m, 11.ix.2011 (YM) – 1♀ 4 juv. (ZMMU); Tel Aviv, Ramat-Aviv, botanical gardens 32°06'N 34°48'E, 40 m, 26.xii.2010 (YM) – 1♂ 4 juv. (ZMMU).

Comments. This is a well-known species (46 taxonomic entries in Platnick's catalogue (Platnick 2014)) with a Holarctic distribution. It was not previously reported from Israel.

Family PHYXELIDIDAE

A small family of cribellate spiders with 64 known species distributed among 14 genera (WSC, 2015). Most of the species (61) are restricted to Africa, south of the Sahara. One genus with two species is known from Southeast Asia, and one species occurs in the East Mediterranean (see below).

***Phyxelida* Simon, 1894**

This is the largest genus of the family with 14 described species (WSC, 2015). All species, except those listed below, are known from south of the Sahara (Griswold, 1990).

Phyxelida anatolica Griswold, 1990 (Figure 4)

Phyxelida anatolica Griswold, 1990: 167, f. 90c–d (♀); Thaler & Knoflach, 1998: 36, f. 1–16, 18–23 (♂♀).

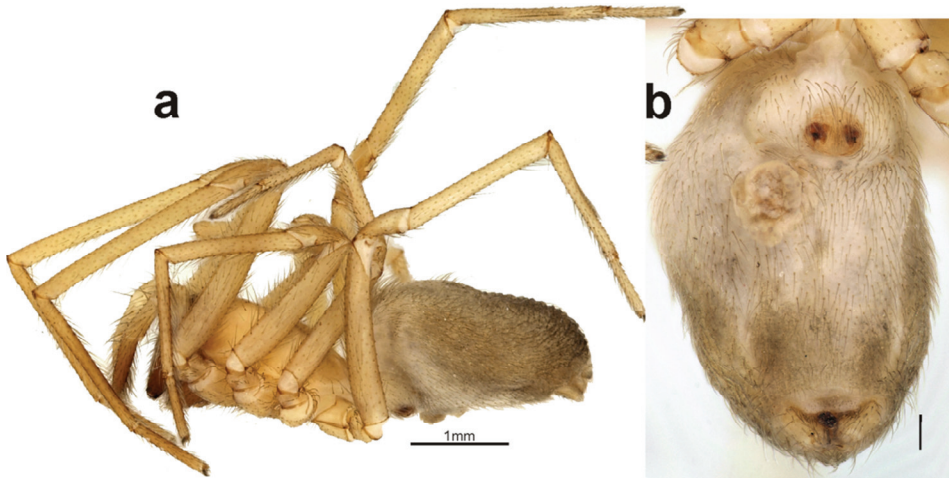


Figure 4. Female of *Phyxelida anatolica*. – a. habitus, lateral; b. abdomen, ventral. Scale = 0.2 mm if not otherwise indicated.

Material. ISRAEL: Mt. Meron area, Ziv'on. 773 m, 33°02'N 35°25'E, 16.iv.2005 (A. Timm & T. Assmann) – 1♂ (TAU); Carmel Ridge, Shuni Park 1 km N Binyamina, 32°32'N 34°57'E, 60 m, 27.xii.2010 (YM) – 1♀ (ZMMU).

Comment. *Phyxelida anatolica* is the only species of the entire family known from the Palearctic. Although it is somatically rather similar to *Mesiotelus* Simon, 1897 (Lio cranidae) and some other genera of other families, it can be easily recognised by having a cribellum, a calamistrum and light colouration. It differs from the cribellate family Titanoecidae by its light colouration (Israeli Titanoecidae are black). It differs from the cribellate Dictynidae by its larger size (over 4 mm). This species differs from other cribellate spiders occurring in Israel, such as *Zoropsis*, Uloboridae and *Oecobius*, by habitus. Here, we only provide a figure of the female because the males are easily distinguished from other cribellates by the palp. Until recently, *P. anatolica* was known from two localities, Cyprus and Antakya, in Southern Turkey (type locality). This species is a new record for Israel. The record from Ziv'on is the easternmost in the entire range, and the record from Shuni Park is the southernmost locality of the species.

Family PRODIDOMIDAE

A globally distributed family with over 309 species belonging to 31 genera (WSC, 2015). Until recently, only one genus with two species, *Prodidomus amaranthinus* (Lucas, 1846) and *P. redikorzevi* Spassky, 1940, were known from the Eastern Mediterranean.

Prodidomus rufus Hentz, 1847

Prodidomus rufus: Platnick & Baehr, 2006: 13, f. 24–28 (♂♀)

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Arava Valley (north part), Nahal Shezaf 5 km S Hazeva, -120 m, 30°43'N, 35°16'E, 28.iii.2011 (SZ) – 1♀ (TAU); Western Negev, Izuz, 320 m, 30°36'N 34°42'E, 7.ii.2013 (SZ) – 1♂ 1♀ (TAU).

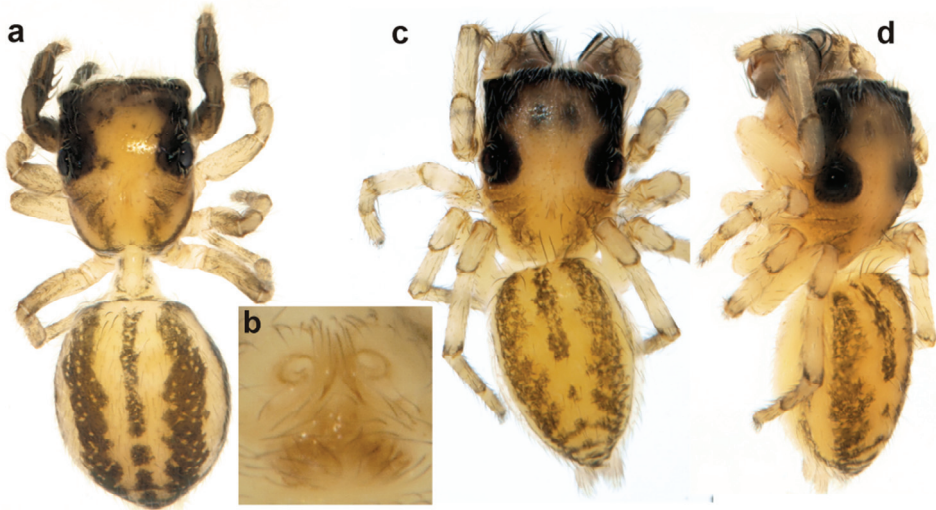


Figure 5. Habitus and epigyne of *Neon rayi* from Turkey. – a. female habitus, dorsal; b. epigyne, ventral; c–d. male habitus, dorsal and lateral.

Comments. This is the type species of the genus and the most widespread species of the family. Although it has a broad distribution and is known from China, Japan, New Caledonia, USA, Cuba, Argentina, Chile and St. Helena (WSC, 2015), it was not previously reported from the Western Palaearctic. *Prodidomus rufus* is a new record for Israel and the entire Mediterranean region. Compared with the figures of *P. hispanicus* Dalmas, 1919 (Pérez & Blasco, 1986: figs 8-9) known from the Iberian Peninsula, this species can be a junior synonym of *P. rufus*.

Family SALTICIDAE

Neon Simon, 1876

Neon is a relatively large genus with 27 species (Platnick, 2014). Most species are restricted to the Holarctic. Although the genus has a wide distribution, in the Palaearctic, it was not previously reported from Israel.

Neon rayi (Simon, 1875) (Figure 5)

Neon rayi: Roberts, 1998: 207, f. (♂♀).

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Upper Galilee, Mt. Meron, Ziv'on, 800 m, 33°00'N 35°24'E, 9–16.V.2007 (T. Levanony) – 1♂ (TAU).

Comments. This species has a characteristic pattern (Figs 6a, c–d) that allows even juvenile specimens to be identified to species. *Neon rayi* has a West Palaearctic distribution and is known from the Iberian Peninsula to Kazakhstan (Helsdingen, 2014; Mikhailov, 2013). It was not previously known from Israel, and the record from Upper Galilee is the southernmost in the entire range.

***Talavera* Peckham & Peckham, 1909**

This is a small genus with 14 species distributed in the Holarctic (WSC, 2015). Thirteen species are known exclusively from the Palaearctic, and one species is known from Siberia and the Nearctic. The record from Israel is the southernmost in the entire range.

Talavera aequipes (O. P.-Cambridge, 1871)

Talavera aequipes: Metzner, 1999: 64, f. 29a–g (♂♀); Logunov & Kronstedt, 2003: 1136, f. 13, 15–16, 29, 38, 44, 53, 118, 122–132, 134–136 (♂♀); Wunderlich, 2008: 725, f. 3–8 (♂♀).

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Upper Galilee, Mt. Meron, 33°N, 35°24'E, 9–16.v.2007 (T. Levanyony) – 1♀.

Comments. This species has a Trans-palaearctic range and is known from the Iberian Peninsula to Yakutia (Logunov & Marusik, 2000). It was not previously known from Israel, and the record from Mt. Meron is the southernmost in the entire range.

Family THERIDIIDAE***Pholcomma* Thorell, 1869**

This is a relatively small genus with 12 species known from the globe (WSC, 2015). Although it is known from Northern Africa, Turkey and Azerbaijan, it was not previously reported from Israel.

Pholcomma gibbum (Westring, 1851)

Pholcomma gibbum: Roberts, 1998: 309, f. (♂♀).

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Upper Galilee, 'En Ya'akov, 14–19.i.2007 (I. Shtirberg) – 1♂ (TAU); Upper Galilee, Mt. Meron, 33°N, 35°24'E, 9–16.v.2007 (T. Levanyony) – 1♂ (TAU).

Comments. This is a well-known West Palaearctic species, distributed from the Iberian Peninsula to Azerbaijan and south to northern Africa.

Family TRACHELIDAE***Paratrachelas* Kovblyuk & Nadolny, 2009**

Paratrachelas is a small genus with five species distributed in the Palaearctic. Four species are known exclusively from the Mediterranean region (WSC, 2015). The genus was not previously recorded from Israel.

Paratrachelas maculatus (Thorell, 1875)

Paratrachelas maculatus: Kovblyuk & Nadolny, 2009: 37, f. 37–81 (♂♀); Wunderlich, 2012: 21, f. 1–18 (♂♀).

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL, Ya'ar Bar'am, 32°02'N 35°25'N, 674 m, 24.iv.2005 (A. Timm & T. Assmann) – 5♂, 1♀ (TAU); Mt. Carmel, 2.5 km S Haifa, 32°45'N 35°02'E, 500 m, 7.x.2014 (SZ) – 1♀ (TAU); Judean Hills, 7 km NNE Beit Gurvin, 31°40'N 34°56'E, 300 m, 7.i.2011 (YM) – 2♀ (ZMMU).

Comments. *Paratrachelas maculatus* is the type species of the genus known from France to Crimea and south to Central Anatolia (Özkütük, Marusik, Kunt, & Danişman, 2011). It was not previously recorded in Israel. Israel is the south-easternmost locality in the range.

Family ULOBORIDAE

Hyptiotes Walckenaer, 1837

This is a relatively small genus with 14 species distributed chiefly in the Holarctic (Platnick, 2014). Only three species are known outside of the region, in southern India, Sri Lanka and South Africa (Platnick, 2014). Although three species of *Hyptiotes* are known from the Mediterranean and two from the Eastern Mediterranean (Helsdingen, 2014), this genus was not previously reported from Israel.

Hyptiotes flavidus (Blackwall, 1862)

Hyptiotes gerhardtii: Wiehle, 1964: 81, f. 1, 3, 5–8 (♂♀).

Hyptiotes flavidus: Wiehle, 1964: 81, f. 2, 9 (♂♀).

For a complete synonym listing and references, see the World Spider Catalog (2015).

Material. ISRAEL: Haifa, university campus, 32°45'N 35°01'E, 450 m, 29.xii.2010 (YM) – 1♂ (ZMMU); Shuni Park, 1 km N Binyamina, 32°32'N 34°57'E, 60 m, 27.xii.2010 (YM) – 1♀ (ZMMU).

Comments. This species is known from the Canary Islands across the entire Mediterranean to the northern Caucasus (Wiehle, 1964), Abkhazia (Kovblyuk, Marusik, Ponomarev, Gnelitsa, & Nadolny, 2011) and Georgia (Otto, 2014). This is the south-easternmost record in the range.

Acknowledgements

We wish to thank Dmitry Logunov (Manchester, UK) for the help with identification of *Talavera*, Seppo Koponen (Turku, Finland) for providing us facilities in the Zoological Museum, University of Turku, Tatyana Zonstein (Tel-Aviv) and Irina Marusik (Magadan) for help during collecting trips in Israel. English of the earlier draft was kindly checked by Sarah Crews. We thank also Max Kasperek and anonymous reviewers whose comments allow improving the manuscript. The completion of the study was possible due to the financial support provided by the Ministry of Absorption, Israel.

Disclosure Statement

No potential conflict of interest was reported by the authors.

References

- Bayram, A., Kunt, K. B., & Danişman, T. (2014): *The checklist of the spiders of Turkey*. Version 2014. www.kazimcapaci.com/spidersofturkey.htm [accessed 11 January 2015].
- Bosmans, R., Baert, L., Bosselaers, J., De Koninck, H., Maelfait, J.-P. & Van Keer, J. (2009): Spiders of Lesbos (Greece). *Nieuwsbrief van de Belgische Arachnologische Vereniging*, 24 (suppl.), 1–70.
- Bosmans, R. (2011): On some new or rare spider species from Lesbos, Greece (Araneae: Agelenidae, Amaurobiidae, Corinnidae, Gnaphosidae, Liocranidae). *Arachnologische Mitteilungen*, 40, 15–22.

- Cambridge, O. P. (1876): Catalogue of a collection of spiders made in Egypt, with descriptions of new species and characters of a new genus. *Proceedings of the Zoological Society of London*, 1876, 541–630.
- Denis, J. (1947): Spiders. In: Results of the Armstrong College expedition to Siwa Oasis (Libyan desert), 1935. *Bulletin de la Société Fouad Ier d'Entomologie*, 31, 17–103.
- Dunin, P. M., Buchar, J., & Absolon, K. (1986): Die dritte Paläarktische *Aulonia*-Art: *Aulonia kratochvili* sp. n. (Araneida, Lycosidae). *Věstník Československé Zoologické Společnosti v Praze*, 50, 28–32.
- Griswold, C. E. (1990): A revision and phylogenetic analysis of the spider subfamily Phyxelidinae (Araneae, Amaurobiidae). *Bulletin of the American Museum of Natural History*, 196, 1–206.
- Heldsingen, P.J. van (2014): Araneae. In: Fauna Europaea. Database European spiders and their distribution. Taxonomy. Version 2013.1. www.faunaeur.org [accessed on 11 January 2015]
- Huber, B. A. (2002): Functional morphology of the genitalia in the spider *Spermophora senoculata* (Pholcidae, Araneae). *Zoologischer Anzeiger*, 241, 105–116.
- Kovblyuk, M. M., Marusik, Y. M., Ponomarev, A. V., Gnelitsa, V. A., & Nadolny, A. A. (2011): Spiders (Arachnida: Aranei) of Abkhazia. *Arthropoda Selecta*, 20, 21–56.
- Kovblyuk, M. M., & Nadolny, A. A. (2009): The spider genus *Trachelas* L. Koch, 1872 in Crimea and Caucasus with the description of *Paratrachelas* gen. n. (Aranei: Corinnidae). *Arthropoda Selecta*, 18, 35–46.
- Kraus, O. (1967): Zur Spinnenfauna Deutschlands, II. *Mysmena jobi* n. sp., eine Symphytognathide in Mitteleuropa (Arachnida: Araneae: Symphytognathidae). *Senckenbergiana biologica*, 48, 387–399.
- Kronstedt, T. (1997): First record of *Aulonia kratochvili* (Araneae, Lycosidae) from Europe. *Arachnologische Mitteilungen*, 14, 77–80.
- Levy, G. (2007): *Calommata* (Atypidae) and new spider species (Araneae) from Israel. *Zootaxa*, 1551, 1–30.
- Logunov, D. V., & Kronstedt, T. (2003): A review of the genus *Talavera* Peckham and Peckham, 1909 (Araneae, Salticidae). *Journal of Natural History*, 37, 1091–1154.
- Logunov, D. V., & Marusik, Y. M. (2000): Miscellaneous notes on Palaearctic Salticidae (Arachnida: Aranei). *Arthropoda Selecta*, 8, 263–292.
- Marusik, Y. M., Kunt, K. B., & Danişman, T. (2009): Spiders (Aranei) new to the fauna of Turkey. 2. New species records of Theridiidae. *Arthropoda Selecta*, 18: 69–75.
- Marusik, Y. M., Özkütük, R. S., Kunt, K. B., & Kaya, R. S. (2011): Spiders (Araneae) new to the fauna of Turkey. 8. New records of Hahniidae and Dictynidae. *Anadolu University Journal of Science and Technology-C*, 1, 161–170.
- Metzner, H. (1999): Die Springspinnen (Araneae, Salticidae) Griechenlands. *Andrias*, 14, 1–279.
- Mikhailov, K. G. (2013): The spiders (Arachnida: Aranei) of Russia and adjacent countries: a non-annotated checklist. *Arthropoda Selecta. Supplement*, 3.
- Otto, S. (2014): Caucasian Spiders. A faunistic database on the spiders of the Caucasus. Version 1.4. Internet: <http://caucasus-spiders.info> [accessed 11 January 2015].
- Özkütük, R. S., Marusik, Y. M., Kunt, K. B., & Danişman, T. (2011): New records for spider (Araneae) fauna of Turkey: *Paratrachelas maculatus* (Thorell, 1875) [Corinnidae], *Sintula retroversus* (O. P.-Cambridge, 1875) [Linyphiidae] and *Agroeca proxima* (O. P.-Cambridge, 1871) [Liocranidae]. *Biological Diversity Conservation*, 4, 224–232.
- Pérez, P. J. A., & Blasco, F. A. (1986): Nota sobre los Prodidominae (Araneae: Gnaphosidae) de la Península Iberica. *Mémoires de la Société Royal Belge d'Entomologie*, 33, 155–164.
- Platnick, N. I., & Baehr, B. (2006): A revision of the Australasian ground spiders of the family Prodidomidae (Araneae, Gnaphosoidea). *Bulletin of the American Museum of Natural History*, 298, 1–287.
- Platnick, N. (2014): The World Spider Catalog, Version 15. <http://research.amnh.org/iz/spiders/catalog/INTRO1.html> [accessed on 11 January 2015].
- Prószyński, J. (1998): Description of new species of *Phlegra* (Araneae: Salticidae) from Israel. *Israel Journal of Zoology*, 44, 159–185.
- Prószyński, J. (2000): On mostly new species of Salticidae (Aranei) from Levant. *Arthropoda Selecta*, 8, 231–262.

- Prószyński, J. (2003): Salticidae (Araneae) of the Levant. *Annales Zoologici (Warsaw)*, 53, 1–180.
- Roberts, M. J. (1998): Spinnengids. Tirion, Baarn (the Netherlands).
- Roewer, C. F. (1955): Katalog der Araneae von 1758 bis 1940, bzw. 1954. Bruxelles, 2, 1–1751.
- Saaristo, M. I. (2007): The oonopid spiders (Aranei: Oonopidae) of Israel. *Arthropoda Selecta*, 15, 119–140.
- Simon, E. (1897): Arachnides recueillis par M. M. Maindron à Mascate, en octobre 1896. *Bulletin du Muséum National d'Histoire Naturelle de Paris*, 1897, 95–98.
- Strand, E. (1913): Erste Mitteilung über Spinnen aus Palästina, gesammelt von Herrn Dr J. Aharoni. *Archiv für Naturgeschichte*, 79(A10), 147–162.
- Thaler, K., & Knoflach, B. (1998): Phyxelida anatolica Griswold, new to Cyprus (Arachnida Araneae: Amaurobiidae, Phyxelidinae). *Bulletin of the British Arachnological Society*, 11, 36–40.
- Thaler, K., van Harten, A., & Knoflach, B. (2004): Pirate spiders of the genus *Ero* C.L. Koch from southern Europe, Yemen, and Ivory Coast, with two new species (Arachnida, Araneae, Mimetidae). *Denisia*, 13, 359–368.
- Tongiorgi, P. (1966): Italian wolf spiders of the genus *Pardosa* (Araneae: Lycosidae). *Bulletin of the Museum of Comparative Zoology at Harvard College*, 134, 275–334.
- Tongiorgi, P. (1968): Su alcuni ragni italiani della famiglia Lycosidae. *Bollettino del Museo Civico di Storia Naturale di Verona*, 16, 107–112.
- Wiehle, H. (1964): Über *Hyptiotes gerhardti* Wiehle (Arach., Araneae). *Senckenbergiana Biologica*, 45, 81–85.
- World Spider Catalog (2015) World Spider Catalog. Natural History Museum Bern, online at <http://wsc.nmbe.ch>, version 15.5 [accessed on 20.01.2015].
- Wunderlich, J. (1992): Die Spinnen-Fauna der Makaronesischen Inseln: Taxonomie, Ökologie, Biogeographie und Evolution. *Beiträge zur Araneologie*, 1, 1–619.
- Wunderlich, J. (1995): Zur Taxonomie europäischer Gattungen der Zwergspinnen (Arachnida: Araneae: Linyphiidae: Erigoninae). *Beiträge zur Araneologie*, 4, 643–654.
- Wunderlich, J. (2008): On the identification and taxonomy of the central European jumping spiders (Araneae: Salticidae) of the tribus Euophrydini, with special reference to *Talavera*. *Beiträge zur Araneologie*, 5, 720–735.
- Wunderlich, J. (2012): Fifteen papers on extant and fossil spiders (Araneae). *Beiträge zur Araneologie*, 7, 1–246.
- Zonstein, S. L., & Marusik Y. M. (2013): Checklist of the spiders (Araneae) of Israel. *Zootaxa*, 3671(1), 1–127.