

The spider genus *Zaitunia* Lehtinen, 1967 (Araneae: Filistatidae) in Israel and Sinai (Egypt)

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ABSTRACT

The genus *Zaitunia* is rediagnosed, and *Z. schmitzi* (Kulczynski, 1911), the type species and only representative of the genus in Israel, is redescribed. *Z. schmitzi*, known hitherto only from the type locality in Israel, is recorded from Egypt (Sinai, Mt. Catharina) for the first time as well as from new localities in Israel.

KEY WORDS: Araneae, spiders, Filistitidae, *Zaitunia*, Near East.

INTRODUCTION

The genus *Zaitunia* was described by Lehtinen (1967) for the type and only species, *Z. schmitzi* Kulczynski, described from only two localities in Israel and originally placed in *Filistata* Latreille. Later Brignoli (1982) described three *Zaitunia* species from Iran, and Zonstein (1990) transferred to *Zaitunia* four other Central Asian species referred by Spassky (1941), Charitonov (1946), and Andreeva and Tyschchenko (1969) to *Filistata*. All those latter Asian species were previously known only from females whose characters were found suitable to include them in this genus. However, new information acquired from the examination of recently collected congeneric Central Asian male filistatids revealed a possible polyphyletic nature of *Zaitunia* s. l. For this reason the genus is redefined based only on the characters of the little-known *Z. schmitzi*.

MATERIAL AND METHODS

All the studied specimens (28 males and 11 females) were borrowed for study from the National Arachnid Collections of the Hebrew University of Jerusalem. They were collected from throughout most of the country between 1937–1993. Unfortunately, the type series of *Filistata schmitzi* was not found in V. Kulczynski's spider collection deposited in the Institute of Zoology, Polish Academy of Sciences (Prof. J. Proszynski, personal communication).

All measurements are given in millimeters, except for eye diameters and interspaces given as ratios. The following abbreviations are used: ALE, AME, PLE, and PME — anterior lateral, anterior median, posterior lateral, and posterior median eyes, respectively; MOQ — median ocular quadrangle; ALS, PLS, and PMS — anterior lateral, posterior lateral, and posterior median spinnerets, respectively; PS — probably paracribelar gland spigot (according to the terminology of Ramírez and Grismado, 1997).

TAXONOMY

ZAITUNIA LEHTINEN, 1967

Zaitunia Lehtinen, 1967: 275. Type species by monotypy — *Filistata schmitzi* Kulczynski, 1911.

Diagnosis

While reviewing the genera of the Filistatidae, Lehtinen (1967) grouped *Zaitunia* together with *Kukulkania* Lehtinen, 1967 and *Filistata* Latreille, 1810. Unlike other filistatids, these genera share a relatively broad cribellum and a very short uniseriate calamistrum in the female, as well as curved pseudosegmented tarsi in the male. *Zaitunia* differs from both these genera by a broadly rounded subvertical clypeus with a characteristic dense comb composed of stout inclined bristles, and by a shortened labium that is wider than long (in the two other genera the clypeus is subhorizontal with lateral constriction, without thickened setae, and the labium is distinctly longer than wide). Males of *Zaitunia* species are also characterized by their short palpal tibiae and laterally-arising embolus.

Redescription

Small to medium-sized filistatids with body length 2.5–6.5 mm and general color varying from light brown to dark brown; carapace with more or less darkened eye tubercle, lateral margins, and foveal area; legs indistinctly dark-annulated; abdomen dorsally uniformly dark, without pattern. Carapace distinctly domed, broad oval, widely-rounded anteriorly, covered with few bristles. Thoracic fovea indistinct. Cephalic part flattened, with median row of strong proclinate bristles. Clypeus relatively short and subvertical, with dense comb of curved stout reclinate bristles. Eye tubercle low. $ALE > PLE \approx PME > AME$. MOQ wide trapezoidal. Chelicera small subvertical; cheliceral furrow and fang very short; cheliceral lamina well-developed. Sternum subcircular, without visible sigillae. Labium slightly wider than long. Maxilla trapezoidal with lateral corner about 90° . Pedipalp rather short, especially in males, compared with the pedipalp of other filistatine males. Male palpal tibia short and thick. Cymbium short without dorsoapical excavation. Palpus subcylindrical, broadly tipped with thick spiral ejaculatory duct consisting of 3–4 coils. Embolus short, transverse, hook-shaped. Legs moderately long, without scopula, covered with more or less flattened thick and adpressed bristles. Sexual dimorphism in leg length weakly developed. All femora with 1 dorsoproximal spine; tibiae and meta-

tarsi with few (6–7 or less) ventral spines; patellae and tarsi without spines. Male tarsi curved and pseudosegmented. Short calamistrum formed by one zigzag row of thick, curved and flattened setae on raised keel. Paired tarsal claw narrow and slightly curved, with single row of long dense teeth. Unpaired claw weakly curved, edentate. Female endogyna with divided spermathecae. Spinneret group relatively large. Cribellum large bipartite trapezoidal. ALS and PLS subequal in size; PMS much smaller, with two PS.

Remarks

The generic concept of *Zaitunia* presented here is based only on the characters of the type species. Unlike *Z. schmitzi*, all other (non-Mediterranean) species assigned to this genus were described only from females. However, males collected recently in Central Asia (Zonstein, unpublished data) and those related to the Central Asian filistatids that had been included in *Zaitunia*, are distinguished from *Z. schmitzi* by the shape of the male palpus, cymbium and male palpal tibia. These observations suggest that these Central Asian filistatids do not belong to *Zaitunia*, but deserve a new genus (Zonstein, in preparation).

Zaitunia schmitzi (Kulczynski, 1911)

(Figs. 1–13)

Filistata schmitzii Kulczynski, 1911: 13, pl. 1, fig. 3 (male lectotype and female paralectotype from Jerusalem and Galilee; the recent depository unknown; not examined).

Zaitunia schmitzi (Kulczynski). Lehtinen, 1967: 275, fig. 21.

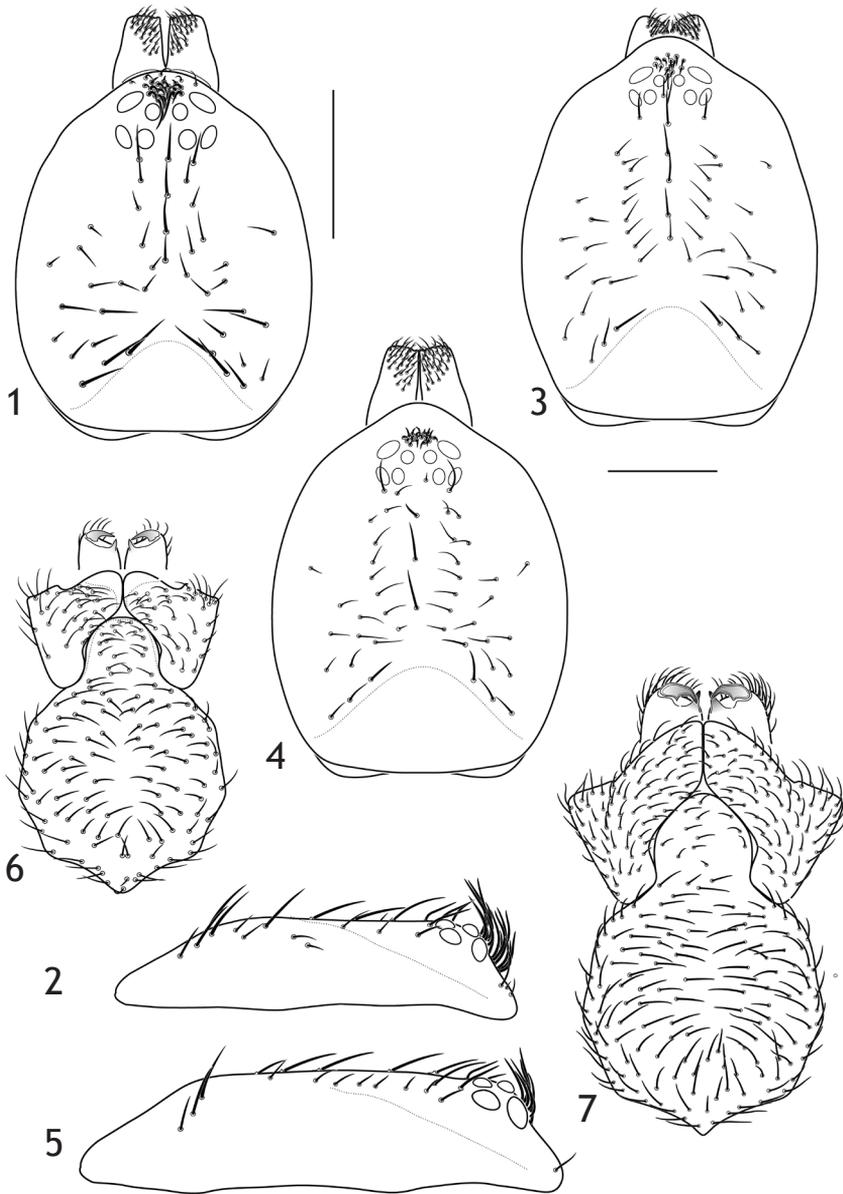
Diagnosis

Male: The palpal tibia is subequal in length to the cymbium plus tarsus; the embolus is short, lamellose (Figs. 8,9).

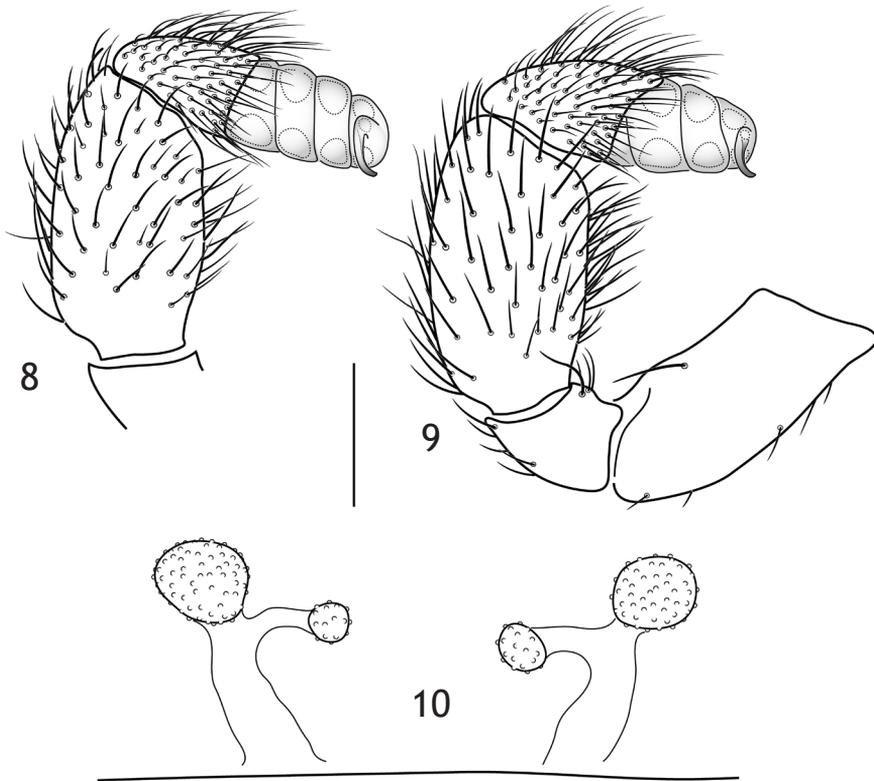
Female: the spermatheca is Y-shaped with individual receptacles arranged as shown in Fig. 10. In the related species the male palpal tibia is longer than the cymbium plus tarsus; the embolus in males and the spermatheca in females differ in shape.

Redescription

Male. Total body length 2.5–3.3; carapace length 1.0–1.3. Color (of alcohol preserved specimens): carapace brown, with margins, eye tubercle and fovea area darkened, chelicera brown; sternum pale brown to moderately dark brown with central part often lighter than margins; labium and maxilla concolorous with sternum; pedipalp and legs mainly brown; patellae, metatarsi and tarsi lighter, yellowish-brown to pale brown; abdomen dorsally dark brown; ventrally yellowish-brown, spinnerets pale brown. Carapace (Figs. 1, 2) 1.1–1.2 times as long as wide. Ratio of diameters of AME, ALE, PLE, PME: 5:9:8:7. Interspaces: AME–AME 5, ALE–AME 5, ALE–PLE 4, PLE–PME 3, PME–PME 9. Sternum subcircular; labium 1.1 times as long as wide (Fig. 6). Palp as shown in Figs. 8–9. Cymbium usually with dorsodistal projection (Fig. 9), length and



Figs. 1–7. *Zaitunia schmitzi*. 1. Male carapace, dorsal view. 2. Male carapace, lateral view. 3, 4. Female carapace, two variants, dorsal view. 5. Female carapace, lateral view. 6. Male sternum, labium and chelicerae, ventral view. 7. Female sternum, labium and chelicerae, ventral view. Scale bar—0.5 mm (large bar for Figs. 1, 2, and 6; small bar for Figs. 3–5 and 7, respectively).

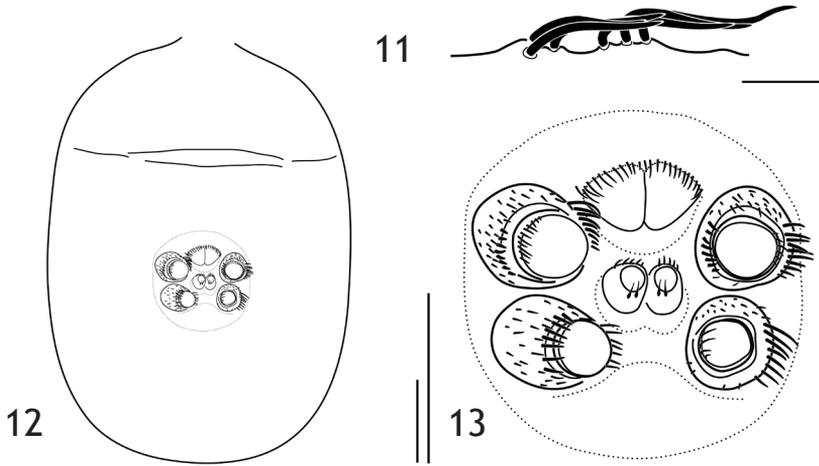


Figs. 8–10. *Zaitunia schmitzi*. 8, 9. Male palpus, two variants, retrolateral view. 10. Female endogyna, dorsal view. Scale bar: 8, 9—0.25 mm, 10—0.1 mm.

shape of projection varies; cymbium sometimes truncate with projection undeveloped (Fig. 8). Broad blunt-tipped tegulum formed by thick ejaculatory duct with 4 complete coils closely adjoining each other and twisted spirally outwards. Embolus short, flattened and curved lamella arising retrolaterally.

Leg formula 1423. Spination: palpal femur with one dorsoapical spine, other palpal segments without spines. Leg I: Fm d1-0-0; Pt 0; Tb p1-1-1, r1-1-1, v2-2-2; Mt p1-1, r1-1, v2-2-2; Tr 0. Leg II: Fm d1-0-0; Pt 0; Tb p1-1-1, r1.1.1, v2.2; Mt p1, r1-1, v2-2-1(0)-2; Tr 0; Leg III: Fm d1-0-0; Pt 0; Tb d1-0-0, p1-1, r1-1-1, v2-2; Mt p1-1-1, r1-1-1, v2-2; Tr 0. Leg IV: Fm d1-0-0; Pt 0; Tb d1-1, p1-1-1, r1-1-1, v2-2-2; Mt p1-1-1, r1-1, v2-2-2; Tr 0. Paired claws with 6–7 long teeth, unpaired claw bare and slightly curved. Spinnerets arranged as in female (as in Figs. 12 and 13), located relatively far from tip of abdomen.

Female. Total body length 3.8–5.9; carapace length 1.4–2.0. Coloration as in male.



Figs. 11–13. *Zaitunia schmitzi*, female. 11. Calamistrum, retrolateral view. 12. Abdomen, ventral view, showing position of spinnerets. 13 Spinnerets, ventral view. Scale bar: 11—0.1 mm, 12—0.5 mm, 13—0.25 mm.

Carapace (Figs. 3–5) 1.2–1.3 times as long as wide. Ratio of diameters of AME, ALE, PLE, PME: 6, 11–14, 9–11, 8–9. Interspaces: AME–AME 4, ALE–AME 4, ALE–PLE 3, PLE–PME 2, PME–PME 14. Sternum subcircular (ratio between length and width 11:10), 3.4–3.5 times as long as labium, and labium 1.2–1.3 times as long as wide (Fig. 7).

Leg formula 1423. Spination: palpal femur with one dorsoapical spine, other palpal segments without spines. Leg I: Fm d1-0-0; Pt 0; Tb 0; Mt v2-2-2(3). Tr 0. Leg II: Fm d1-0-0; Pt 0; Tb v1-1; Mt v2-2-3; Tr 0. Leg III: Fm d1-0-0; Pt 0; Tb v1-1; Mt p1-1, r1-1, v2-2-3. Leg IV: Fm d1-0-0; Pt 0; Tb v1-1; Mt v2-2-3; Tr 0. Paired claw with 5–7 teeth. Spermatheca (Fig. 10) divided with weakly sclerotized ducts. Calamistrum composed of two adjacent groups of 3–4 large and curled lamellose setae (Fig. 11). Spinnerets as in Figs. 12 and 13.

Material examined

ISRAEL: *Northern Coastal Plain*: ‘En haMifraz [Ein HaMifraz], 19.iii.1944, A. Shulov (2♂). *Central Coastal Plain*: Har Horshan, near Bat-Shlomo, 28.v.1993, Y. Lubin (1♂). *Jordan Valley*: Ein Duyuk, 11.iv.1968, M. Pener (1♀), 10.vi.1970, M. Pener (1♀). *Yizre’el Valley*: Bet haShita (Qevuzat haHugim), 6.ii.1937, A. Shulov (1 juvenile); ‘En Harod, 11.iii.1945, A. Shulov (2 juveniles). *Judean Hills*: Bet Shemesh, Hartuv [Beit-Shemesh (Har Tuv)], 3.iii.1954, A. Weissman (1♀); Yerushalayim [Jerusalem], 16.vii.1941, A. Shulov (1♀), 12.xii.1949, A. Shulov (1 juvenile), 10.iii.1961, A. Shulov (1♀); Ramat Raḥel, 23.iv.1973, unknown collector (1♀); Sansan Reserve, 22.iii.2002,

Y. Mandelik (4♂, 1 juvenile), 31.iii.2001, Y. Mandelik (6♂), 14.v.2002, Y. Mandelik (1♂); Ramat Avishur, 22.ii.2001, Y. Mandelik (7♂); Giv'at Zekharya, 22.iii.2002, Y. Mandelik (3♂), 14.v.2002, Y. Mandelik (1♂). *Southern Coastal Plain*: Dorot - Ruḥama, 31.i.1972, I. Vaisberg (2♀). *Dead Sea Area*: 'Enot Zūqim [En Fashkha], 24.ii.1942, A. Shulov (1♀); Naḥal Perat [Wadi Kelt], 13.i.1945, A. Shulov (1♂). *Judean Desert*: 'Arad, 20.xii.1962, P. Amitai (2♂, 1 juvenile); Ma'ale Adummim, 30.iv.1972, unknown collector (1♀). *Central Negev*: Yeroham, 30.xi.1964, Blond & Watz (1♀); Makhtesh Gadol, 1.iv.1962, A. Shulov (1 juvenile).

EGYPT. *Sinai*: Mt. Catarina, 16.vii.1968, unknown collector (1♀).

Distribution

Israel and Egypt (Sinai).

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