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Description of the previously unknown female of *Drassodes bifidus* Kovblyuk & Seyyar, 2009 (Araneae: Gnaphosidae) from Turkey

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Abstract: *Drassodes bifidus* Kovblyuk & Seyyar, 2009, previously known only from one male from southern Turkey (Alanya District, Antalya Province), is redescribed on the basis of newly collected materials. The female of *Drassodes bifidus* is described for the first time. Illustrations, description, and distribution are presented.

Key words: Gnaphosidae, female, *Drassodes bifidus*, redescription, Turkey

1. Introduction

Gnaphosidae is one of the large spider families, containing 2162 species from 122 genera worldwide (Platnick, 2014). The members of this family are generally characterized by having barrel-shaped anterior spinnerets that are one spinneret's diameter apart. At present, it is the largest and most studied spider family, including 133 species and 30 genera in Turkey (Bayram et al., 2014).

The genus *Drassodes* Westring, 1851 is one of the larger groups in Gnaphosidae. This genus is characterized by the presence of deeply notched trochanters, and often by the characteristic genitalia. According to Platnick's catalogue (2014), 171 species and subspecies are listed from all over the world; 59 of them are known from the western Palearctic (Canard, 2005). Ten species and subspecies of *Drassodes* are present in Turkey. They are *Drassodes bifidus* Kovblyuk & Seyyar, 2009; *D. cupreus* (Blackwall, 1834); *D. difficilis* (Simon, 1878); *D. lacertosus* (O.P.-Cambridge, 1872); *D. lapidosus* (Walckenaer, 1802); *D. lutescens* (C.L. Koch, 1839); *D. pubescens* (Thorell, 1856); *D. serratichelis* (Roewer, 1928); *D. similis* Nosek, 1905; and *D. villosus* (Thorell, 1856) (Topçu et al., 2005; Seyyar et al., 2008). Some of these are common and well known in Europe, while others are only known from the western Mediterranean and southern Turkey (Kovblyuk et al., 2009; Bayram et al., 2014; Platnick, 2014).

In the present study, we describe the female of *Drassodes bifidus* for the first time, based on newly collected material. The species was previously known only from one male from southern Turkey.

2. Materials and methods

The specimens were obtained by aspirator and pitfall traps and were found under stones in Central Anatolia (Melendiz Mountains in Niğde Province). They were preserved in 70% ethanol. Examined specimens were deposited in the NUAM (Arachnology Museum of Niğde University). The identification and photographs were made by means of an Olympus SZ61 stereomicroscope. Scales are millimetric. Measurements were made from preserved adult spider materials.

The following abbreviations are used in the text: AME- anterior median eyes, PME- posterior median eyes, RTA- retrolateral tibial apophysis, a- apical, d- dorsal, pl- prolateral, rl- retrolateral, v- ventral.

3. Results and discussion

***Drassodes bifidus* Kovblyuk & Seyyar, 2009** (Figures 1–3)

3.1. Material examined

(33♀♀, 11♂♂), TURKEY: Central Anatolia, Niğde Province; all samples were collected from different localities in the Melendiz Mountains from May to September in 2012–2013 (38°06′ N, 34°36′ E, 2000–2200 m), leg. O. Seyyar & H. Demir.

3.2. Description

3.2.1. Male

Total length 8.2–7.2; carapace length 5.3–4.5, width 3.6–3.0; abdomen length 5.0–4.3, width 3.0–2.58. Carapace: Flattened and light brown, slightly narrowed in front, cephalic area slightly elevated, ocular area somewhat darker. Thoracic groove short and distinct. Eyes in 2

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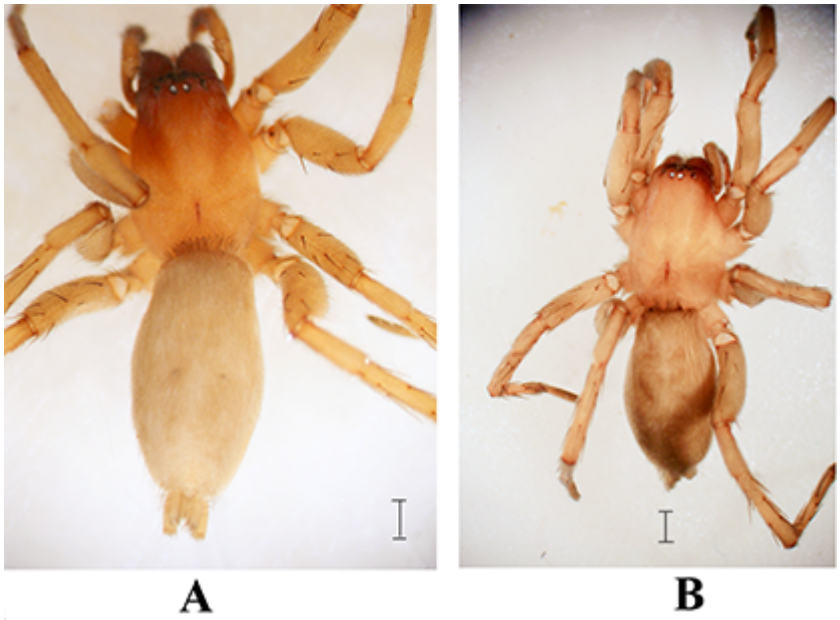

Figure 1. General habitus of *Drassodes bifidus*: A- male, B- female. Scale bar: 2 mm.

rows: Anterior row of eyes nearly straight, posterior row slightly recurved in dorsal view; PME largest and oval-shaped, lateral eyes subequal and circular-shaped; AME smallest. Chelicerae, labium, and endites somewhat darker than carapace. Chelicerae with small fang and 3 promarginal teeth (central tooth larger than others) and 1 small retromarginal tooth. Labium longer than wide. Sternum nearly heart-shaped, same color as carapace. Abdomen pale yellow-gray. Legs light brown. Lengths of leg segments:

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	2.6–2.8	1.4–1.6	2.2–2.4	2.0–2.2	1.4–1.7
II	2.5–2.8	1.4–1.6	2.0–2.2	1.8–2.1	1.4–1.6
III	2.4–2.6	1.2–1.4	1.6.1.8	1.9–2.2	1.2–1.6
IV	3.0–3.4	1.4–1.6	2.4.–2.6	3.0–3.2	1.4–1.7

Male leg spination. Femur: I – d 1-1, pl 1-1; II – d 1-1, pl 1-1; III – d 1-1-1, pl 1-1, rl 1-1; IV – d 1-1-1, pl 1-1, rl 1-1. Tibia: I – v 1-2; II – pl 1, v 2; III – d 1, pl 2-1, rl 2-1, v 1(pl)-2-2(a); IV – d 1-1, pl 2-1, rl 2-1, v 2-2-2(a). Metatarsus: I – v 1; II – v 2; III – pl 1-2-2, rl 2-2-2, v 2-2-2(a); IV – pl 1-2-2, rl 2-2-2, v 2-2-2(a).

Male palp: Palp long and cylindrical, median apophysis clear but not large. Embolus elongated and longer than conductor. RTA long and its end bifurcate (Figures 2A and 2B).

3.2.2 Female

Total length 9.2–7.6; carapace length 5.7–4.8, width 4.0–3.4; abdomen length 5.4–4.7, width 3.3–2.8. Carapace: Flattened and light brown, slightly narrowed in front, cephalic area slightly elevated, ocular area darker than carapace. Thoracic groove short and distinct. Eyes in 2 rows: anterior row of eyes nearly straight, posterior row slightly recurved in dorsal view; PME largest and oval-shaped, lateral eyes subequal and circular-shaped; AME smallest. Chelicerae, labium, and endites darker than carapace. Chelicerae with small fang and 3 promarginal teeth (the upper 2 nearly the same length and larger than the other) and 1 small retromarginal tooth. Labium longer than wide. Sternum nearly heart-shaped, same color as carapace. Abdomen pale yellow-gray. Legs light brown. Lengths of leg segments:

	Femur	Patella	Tibia	Metatarsus	Tarsus
I	2.9–2.6	1.7–1.4	2.2–2.5	2.0–2.2	1.5–1.7
II	2.8–2.6	1.6–1.4	2.0–2.3	1.8–2.0	1.4–1.6
III	2.6–2.5	1.1–1.3	1.7–1.9	1.8–2.1	1.2–1.4
IV	3.4–3.2	1.3–1.5	2.4–2.7	3.0–3.3	1.4–.1.7

Female leg spination. Femur: I – d 1-1, pl 1, v–pl 1; II – d 1-1, pl 1-1, v–pl 1; III – d 1-1-1, pl 1-1, rl 1-1; IV – d 1-1-1, pl 1-1, rl 1-1. Tibia: I – v 1; II – pl 1, v 2; III – d 1, pl 2-1, rl 2-1, v 1-2-2(a); IV – d 1-1, pl 1-1, rl 1-1, v 2-2-2(a). Metatarsus: I – v 1; II – v 2; III – pl 1-2-2, rl 2 (1)2(1)-2, v 2-2-2(a); IV – pl 1-2-2, rl 2-2-2, v 2-2-2(a).

Epigyne: Median plate relatively large basally, curved lateral margins are clear, spermathecae adjacent and distinctive (Figures 3A and 3B).

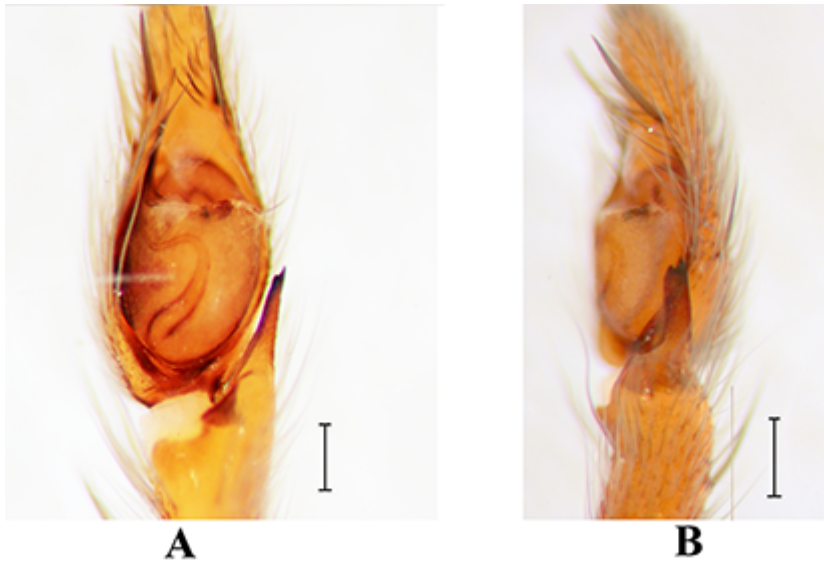

Figure 2. Male palp of *Drassodes bifidus*: A- ventral view, B- retrolateral view. Scale line: 0.1 mm.

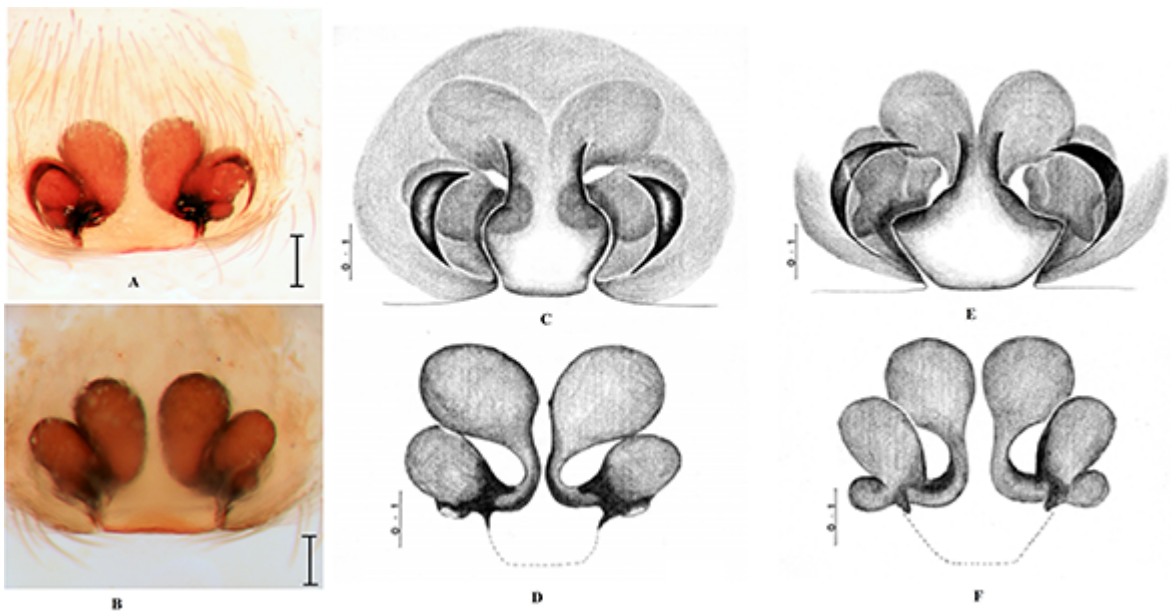

Figure 3. Female genitalia of *Drassodes* species. *Drassodes bifidus*: A- epigyne (dorsal view), B- vulva (ventral view); *D. unicolor*: C- epigyne (dorsal view), D- vulva (ventral view); *D. pubescens*: E- epigyne (dorsal view), F- vulva (ventral view). Scale bar: 0.1 mm. Drawings of *D. unicolor* and *D. pubescens* taken from Levy (2004) for comparison.

3.3. Ecology

This species reaches elevations of up to 2000–2200 m, and prefers steppe areas on mountains. At higher altitudes it is found under stones.

3.4. Phenology

Mature males were captured from April to September, females from May to October.

3.5. Distribution

Turkey only.

3.6. Discussion

According to the palp and epigyne conformation, this species clearly belongs to the genus *Drassodes* Westring, 1851. The female of the species is similar to Drassodes pubescens (Thorell, 1856) and D. unicolor (O.P.-

Cambridge, 1872), which are known in the Mediterranean fauna, but it can be distinguished from these species by the shape of the epigynal plate and nearly adjacent inner and outer spermathecae (Figures 3A–3E).

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