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RESEARCH PAPER

Dysdera jaegeri Bellvert & Dimitrov, 2024 (Araneae, Dysderidae): A New Record for Spider Fauna of Türkiye

Kadir Boğaç KUNT[1*], Ersen Aydın YAĞMUR[2], Recep Sulhi ÖZKÜTÜK[3]
[1] *Cyprus Wildlife Research Institute, Taşkent, Kyrenia, Cyprus.*
[2] *Manisa Celal Bayar University, Alaşehir Vocational School, Alaşehir, Manisa, Türkiye.*
[3] *Eskişehir Technical University, Faculty of Science, Department of Biology, Eskişehir, Türkiye.*

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*** Corresponding Author**
E-mail: chaetopelma@gmail.com
https://orcid.org/0000-0003-3137-5510
https://orcid.org/0000-0002-0396-3975
https://orcid.org/0000-0001-5030-3008

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Abstract

In this study, *Dysdera jaegeri* is recorded as a new record for the araneofauna of Türkiye based on male individuals collected from Gaziantep province, which is located in the transition zone between the Mediterranean and South Eastern Anatolia regions of Türkiye. Photographs of the general appearance and male copulatory organs of the species are given, descriptions of these parts are made and the taxonomic position of *D. jaegeri* is discussed.

INTRODUCTION

Except *Dysdera crocata* C.L. Koch, 1838, which is distributed almost worldwide, 643 species belonging to 24 genera of the Dysderidae are known today, mainly in the western palearctic (WSC, 2024). Among these genera, *Dysdera* Latreille, 1804 is the most numerous with 325 species. In Türkiye, Dysderidae is represented by 80 species as of today and *Dysdera* comes after *Harpactea* Bristowe, 1939 with 29 species (Danışman *et* al., 2024). The reason why these statistics do not match with the world figures in Türkiye is probably due to the recent increase in the number of studies on the family Dysderidae (Coşar *et* al., 2023; Kunt&Özkütük, 2023; Bellvert *et* al., 2024). These figures and the difference between the number of species will likely increase, sparking anticipation for the possible arachnological studies to be carried out in the future.

The goal of this paper is to report *D. jaegeri*, recently described from a museum specimen collected in 1973 from Homs, Syria, for the spider fauna of Türkiye. This paper will include photographs of the somatic and copulatory organs of *D. jaegeri*, *as* well as scanning electron microscope (SEM) images of the distal part of the bulb, which serves as the copulatory organ. These images will aid in providing a detailed description of the morphology of this part.

MATERIALS and METHODS

All specimens were collected in the Gaziantep Province by pitfall traps and preserved in 70% ethanol. Digital images of the pedipalps and vulvae were taken with a Leica DFC295 digital camera attached to a Leica S8AP0 stereomicroscope, with 5–15 photographs taken in different focal planes and combined using image stacking software CombineZP. SEM

micrographs were made from dried and sputter-coated (by Au) organs using a Zeiss Ultra Plus SEM device (Eskişehir Technical University, Eskişehir, Türkiye). Photographic images were edited using PHOTOSHOP CS2, and CorelDRAW Home Student Suite X7 was used to create the plates. All measurements are in mm. Terminology for the copulatory organs is adapted from Arnedo *et* al. (1996, 2000) and Arnedo & Ribera (1997, 1999).

Abbreviations used in text and figures are as follows. **Eyes:** AE – anterior eyes, PLE – posterior lateral eyes, PME – posterior median eyes. **Cheliceral teeth:** B – basal tooth, M – medial tooth, D – distal tooth. **Male palp:** C – crest, DH – distal haematodocha, ES – external sclerite, F – flagellum, IS – internal sclerite, LA – lateral sheet, P – posterior apophysis, T – tegulum. **Legs:** Cx – coxa, Tr – trochanter, Fe – femur, Pa – patella, Ti – tibia, Me – metatarsus, Ta – tarsus, d – dorsal, pl – prolateral, rl – retrolateral, v – ventral.

The specimens are deposited in the Alaşehir Zoological Museum, Manisa Celal Bayar University, Alaşehir, Manisa, Türkiye (AZMM).

RESULTS and DISCUSSION

Family Dysderidae C. L. Koch, 1837
Subfamily Dysderinae Cooke, 1965
Genus *Dysdera* Latreille, 1804
in Latreille (1804): 134 (type *Aranea erythrina* Walckenaer, 1802)

***Dysdera jaegeri* Bellvert & Dimitrov, 2024**
(Figures 1-3)
D. jaegeri; Bellvert & Dimitrov, in Bellvert *et* al., 2024: 218, f. 6-8 (Described ♂).

Material examined: 2 ♂ (AZMM), Gaziantep Province, Şehitkamil District, Nif Mountain, Sofalıcı Village, asl c. 1383 m, 07 April ↔ 21 Aug 2017, Leg. E.A. Yağmur.

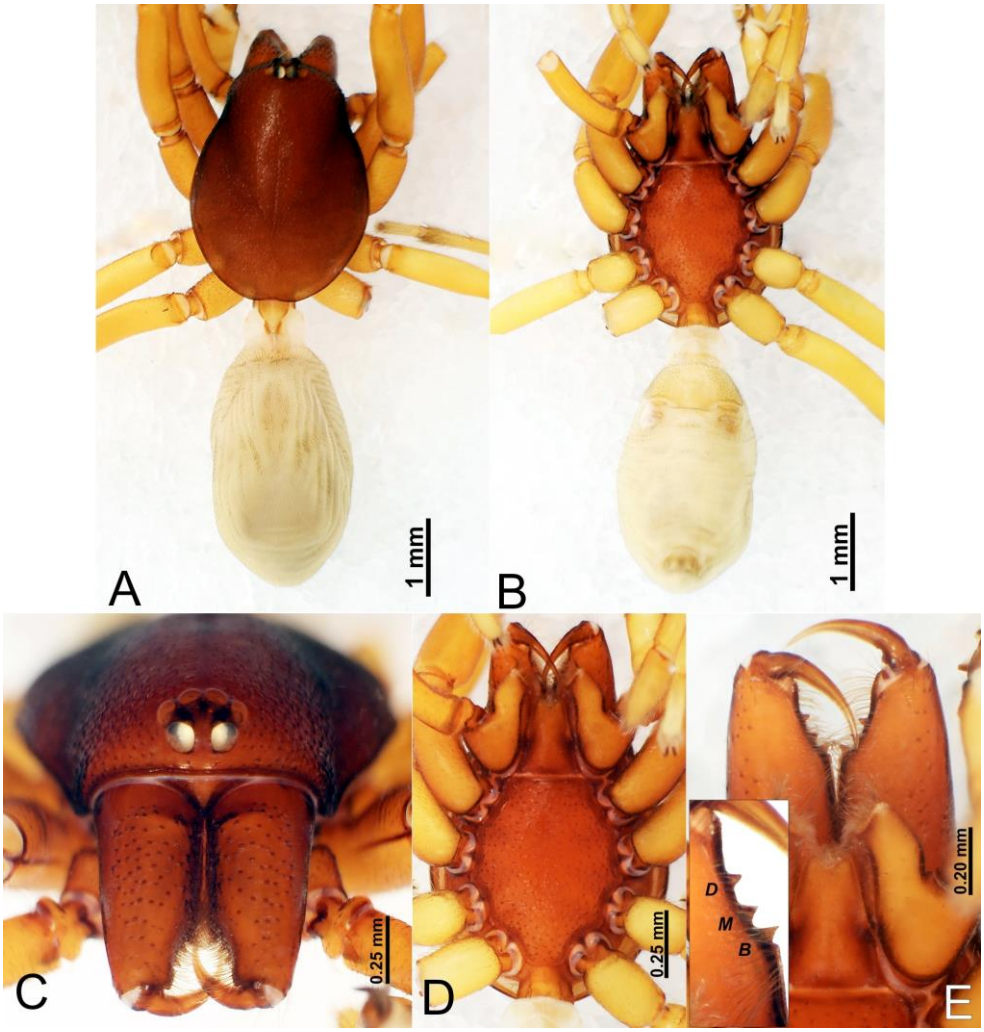

Figure 1. *D. jaegeri* A. Habitus of male, dorsal view B. Ditto, ventral view C. Carapace, frontal view D. Ditto, ventral view E. Chelicerae, ventral view. Abbreviations: *B* Basal *D* Distal *M* Medial

Description of male

Measurements (n=2): Total length 6.90-7.20. Prosoma length 3.20-3.50, width 2.60-2.60. Abdomen length 3.40-4.00, width 2-30-2.40. Ocular area length 0.50-0.60. Chelicerae length 1.40-1.70, width 0.70-0.80. Sternum length 2.00-2.10, width 1.70-1.70. Eye diameters: AE 0.15-0.20, PLE 0.12-0.15, PME 0.15-0.15.

Medium-sized Dysderinae spiders. Carapace reddish brown (Figure 1A, C). The surface is not very densely tuberculated. Short blackish setae emanate from these tubercles. Cephalic region higher than thoracic region and convex in front. The posterior part of the thoracic region is lighter in colour than the anterior part. Eyes arranged annular (Figure 1C). AE, PME, and PLE well developed and silver-coloured.

Eye groups are not in contact with each other. However, the AE is more open than the others. Chilum triangular-shaped and distinct. Margins of chilum darker than centres, especially lateral margins are thick and distinct. Chelicerae and labium brown; gnathocoxae brownish (Figure 1D). Sternum darker in comparison. Cheliceral groove with three teeth (Figure 1E). B=M=D. Legs yellowish-light brown. Anterior legs slightly darker than posterior legs. Leg measurements and spination are given in Tables 1 and 2. Abdomen greyish white with thin brown short setae.

Palp (Figures 2-3): Palpal tarsus triangular. Palpal tibia almost as long as palpal tarsus. Tegulum cylindrical. Basal margin of the posterior apophysis fused with the tegulum is strongly sclerotized (Figure 1A, B, C). Distal haematodocha prominent, broad, trapezoidal. Lateral sheet triangular, margin near bulb black, sclerotised and straight. Internal and external sclerites completely fused anterior to the bulb (Figure 1B). Terminal margin of lateral sheet membranous and serrated (Figure 1C, D and Figure 2A). Distal end of the bulb with a deeply concave crest (Figure 1C and Figure 2B).

Table 1. *D. jaegeri*, leg measurements (♂).

Legs	I	II	III	IV
♂				
Cx	1.40	1.10	0.70	0.90
Tr	0.30	0.30	0.30	0.30
Fe	2.80	2.50	1.90	2.40
Pa	1.10	1.30	0.70	1.10
Ti	1.90	2.10	1.20	1.90
Me	2.20	2.00	1.70	2.30
Ta	0.60	0.60	0.60	0.60
Total	10.30	9.90	7.10	9.50

Table 1. *D. jaegeri,* leg spination (♂).

Legs	I	II	III	IV
♂				
Cx	0	0	0	0
Fe	0	0	0	1d
Pa	0	0	0	0
Ti	0	0	1pl 1v 2rl	2pl 3v 2rl
Me	0	0	2pl 3v 5rl	2pl 2v 5rl

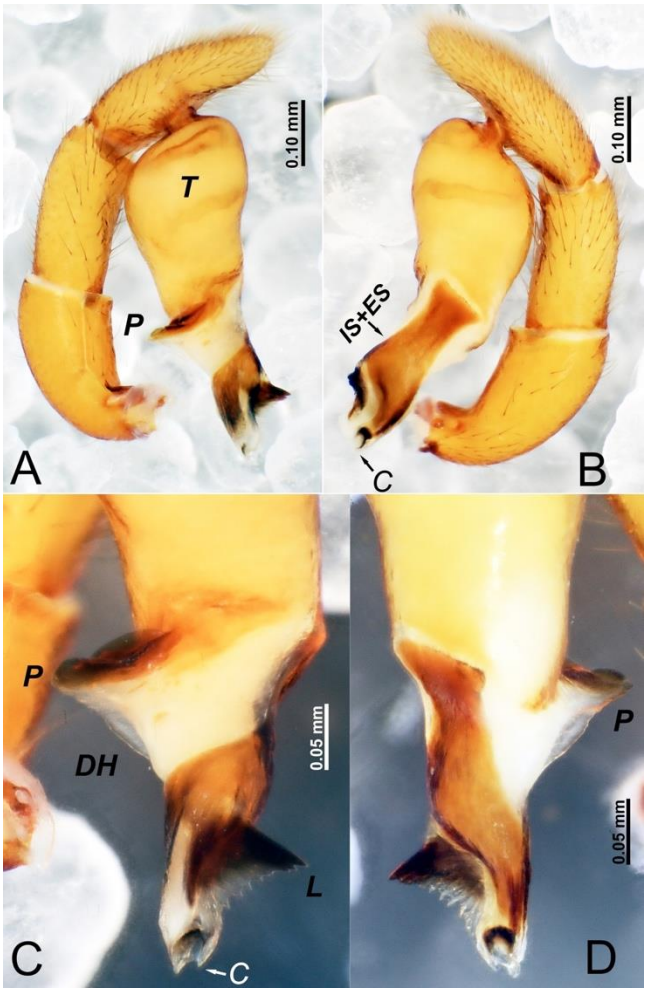

Figure 2. *D. jaegeri A, C, D. Male palp, prolateral view D. Ditto, anterior view. Abbreviations: C Crest DH Distal haematodocha ES External sclerite IE Internal sclerite L Lateral sheet P Posterior apophysis T Tegulum*

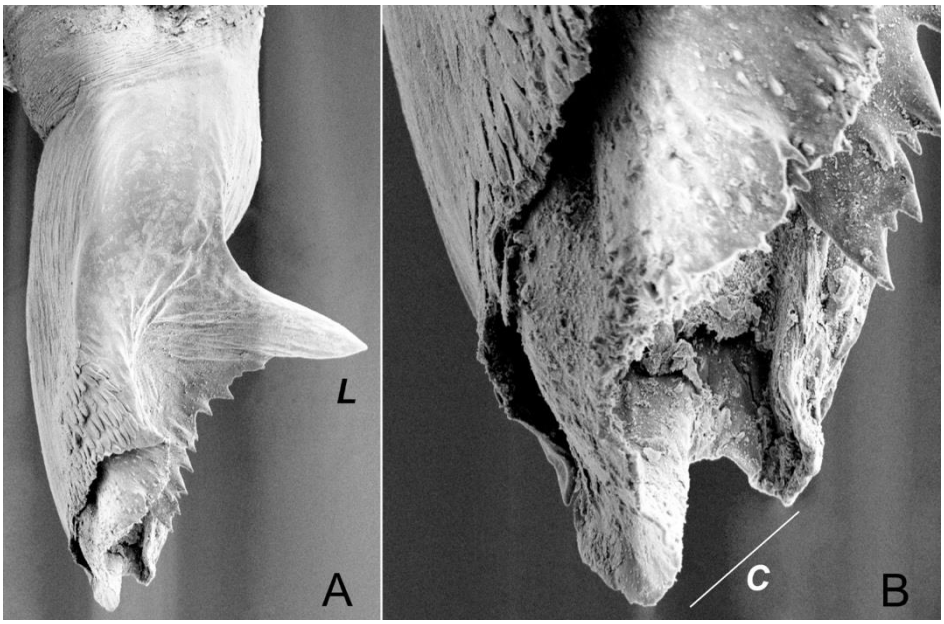

Figure 3. *D. jaegeri* A. Male palp, prolateral view B. Ditto, the detail of tip of embolic division. Abbreviations*: C* Crest *L* Lateral sheet

CONCLUSION

Bellvert *et* al. (2024), in their original description, associated *D. jaegeri* with *D. argaeica* Nosek, 1905; *D. sultani* Deeleman-Reinhold, 1988; *D. galinae* Dimitrov, 2018 and *D. yozgat* Deeleman-Reinhold, 1988, which are distributed in Türkiye, and included it in the *Asiatica* species group, remarking the following characteristics:

1. Tegulum cylindrical,
2. Internal and external sclerites are fused.

In addition, in *D. jaegeri*, the length of the chelicerae is shorter than the half of the length of the carapace, and the anterior margins of the carapace are parallel to each other, which are characteristics of the *Asiatica* species group as determined by Deeleman-Reinhold & Deeleman (1988) and support the authors' argument.

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