

A new species of *Harpactea* (Araneae, Dysderidae) from Aegean region of Turkey

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Academic editor: Dmitry Logunov | Received 21 May 2010 | Accepted 13 June 2010 | Published 1 October 2010

[urn:lsid:zoobank.org:pub:A7EF89A6-FE57-461C-81E3-861E9CE421D2](https://doi.org/urn:lsid:zoobank.org:pub:A7EF89A6-FE57-461C-81E3-861E9CE421D2)

Citation: Kunt BK, Özkütük RS, Kaya RS (2010) A new species of *Harpactea* (Araneae, Dysderidae) from Aegean region of Turkey. ZooKeys 59: 39–45. doi: 10.3897/zookeys.59.483

Abstract

A new species of the spider genus *Harpactea* Bristowe, 1939 is described from the Aegean region of Turkey – *Harpactea erseni* **sp. n.** (males only). Detailed morphological description and illustrations of the new species are provided. The relationships of the new species are discussed.

Keywords

Dysderidae, *Harpactea*, new species, Turkey

Introduction

The family Dysderidae C. L. Koch, 1837 is represented by 504 species in 24 genera worldwide (Platnick 2010). *Harpactea* Bristowe, 1939 is a species rich genus with 155 described taxa and is particularly diverse in the Mediterranean region (Platnick 2010). Most of the species appear to be endemics with restricted distributions in the Medi-

terranean, with only a few found in adjacent areas (Rezâc 2008). So far, 19 species of *Harpactea* have been recorded from Turkey, 17 of which are endemic to the country (Bayram et al. 2010). However, most of these species are still poorly known and have not been revised since their original descriptions. Nevertheless, the diversity of *Harpactea* in Turkey is high in comparison to well-studied adjacent countries such as Azerbaijan (14 species), Bulgaria (19 species), Georgia (10 species) and Greece (24 species) (Bosmans and Chatzaki 2005; Otto and Dietzold 2006; Lazarov 2010; Lazarov and Naumova 2010; Van Keer and Bosmans 2010).

During our surveys of the Turkish spider fauna we found one undescribed species of *Harpactea* in the Aegean region, which is described herein.

Material and methods

Three males were collected from İzmir province in the Aegean region of Turkey (Fig. 1) using a hand aspirator. The specimens were preserved in 70% ethanol and deposited in the Museum of the Turkish Arachnological Society. Digital images of the pedipalp were taken with a Leica DFC290 digital camera attached to a Leica M205 C stereomicroscope and 5–15 photographs were taken in different focal planes and combined. All measurements are in mm. Terminology for the body measurements and copulatory organ structures were taken from Chatzaki and Arnedo (2006). The following abbreviations were used in the text: **AL**, abdominal length; **CL**, carapace length; **CW_{max}**, maximum carapace width; **CW_{min}**, minimum carapace width; **AME**, anterior median eyes; **PLE**, posterior lateral eyes; **PME**, posterior median eyes; **AMEd**, diameter of anterior median eyes; **PLEd**, diameter of posterior lateral eyes; **PMEd**, diameter of posterior median eyes; **ChF**, length of cheliceral fang; **ChG**, length of cheliceral groove; **ChL**, total length of chelicera (lateral external view); **Ta**, tarsus; **Me**, metatarsus, **Ti**, tibia; **Pa**, patella; **Fe**, femur; **Tr**, trochanter; **C**, coxa; **D**, dorsal; **Pl**, prolateral; **Rl**, retrolateral; **V**, ventral; **CO**, conductor; **E**, embolus; **T**, tegulum; **MTAS**, Museum of the Turkish Arachnological Society, Ankara, Turkey.

Taxonomy

Harpactea Bristowe, 1939

Harpactea erseni sp. n.

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Figs 2–9

Material examined: Holotype ♂ (MTAS) **İzmir Province**, Yamanlar Mountain, Karagöl [38°33'26.00"N; 27°13'11.00"E], 28. XI. 2008, under stones, leg. K.B.Kunt. Paratypes: 2 ♂ (MTAS) same data as holotype.



Figure 1. Type locality of *Harpactea erseni* sp. n. (*).

Derivatio nominis: The new species is dedicated to “Ersen Aydın Yağmur” who made a great contribution to our knowledge of Turkish scorpions and who is a good friend of the authors.

Diagnosis: *Harpactea erseni* sp. n. differs from other Turkish *Harpactea* species (see Nosek 1905; Alicata 1974; Brignoli 1978a-b; Brignoli 1979; Bayram et al. 2009) in the structure of the pedipalp of the male. However, the palpal structures of *Harpactea erseni* sp. n. are close to *H. strandjica* Dimitrov, 1997 and *H. terveli* Lazarov, 2009 described from Bulgaria (see Lazarov 2009). The new species can be distinguished from *H. terveli* by the different shape of the embolus and conductor; and from *H. strandjica* by having a thinner, curved embolus without a bifurcated tip.

Comments: *Harpactea* is one of the most endemic and speciose dysderid genera in Turkey, with 17 endemics (Bayram et al. 2010). Most of the endemic species have restricted distributions and occur at high elevations, such as the mountain ranges of the Mediterranean, and the north and central Anatolian regions. This distribution pattern presumably results from the combination of topography, proximate biogeographical subregions, the high number of different biotopes and the climate of Anatolia, all of which play a special role in speciation. In short, the Anatolian *Harpactea* fauna is characterized by a high level of local endemism, and by limited co-occurrence of species in the adjacent zoogeographical regions. However, one question can be raised regarding the newly described species: is the male a specimen of a previously described species known only from the female (presumably from Turkey or neighboring countries)? According to our morphometric data, our samples are larger than all previously described *Harpactea* species from Turkey (see Brignoli 1978a–b), supporting our conclusion that it is in fact a new species, rather than the male of a previously described female.

Measurements (holotype): AL 4.05; CL 3.45; CWmax 2.25; CWmin 1.35; AMEd 0.15; PLEd 0.13; PMEd 0.10; ChF 0.76; ChG 0.34; ChL 1.35 mm. Leg measurements are given in Table 1.

Description: Carapace light brown, with smooth surface and distinct fovea. AME, PLE and PME closely grouped; AME separated (Fig. 2). Sternum, labium, gnathocoxae and chelicerae yellowish-brown. Sternum with long, thin hairs near the margin (Fig. 3). Cheliceral groove with four teeth: retromargin with two teeth, including a tiny one at the base of the groove; promargin with two strong teeth of equal size close to each other. Top of the labium and gnathocoxae with short, strong hairs, sparsely distributed (Fig. 4). Abdomen greyish-light brown, with short, thin blackish hairs over the entire surface. Legs yellowish-light brown with sparse blackish setae. Leg IV > Leg I > Leg II > Leg III. Tarsi with three claws. Tarsi III and IV with fine scopulae. Legs III and IV with fine metatarsal scopulae covering slightly less than the distal half of



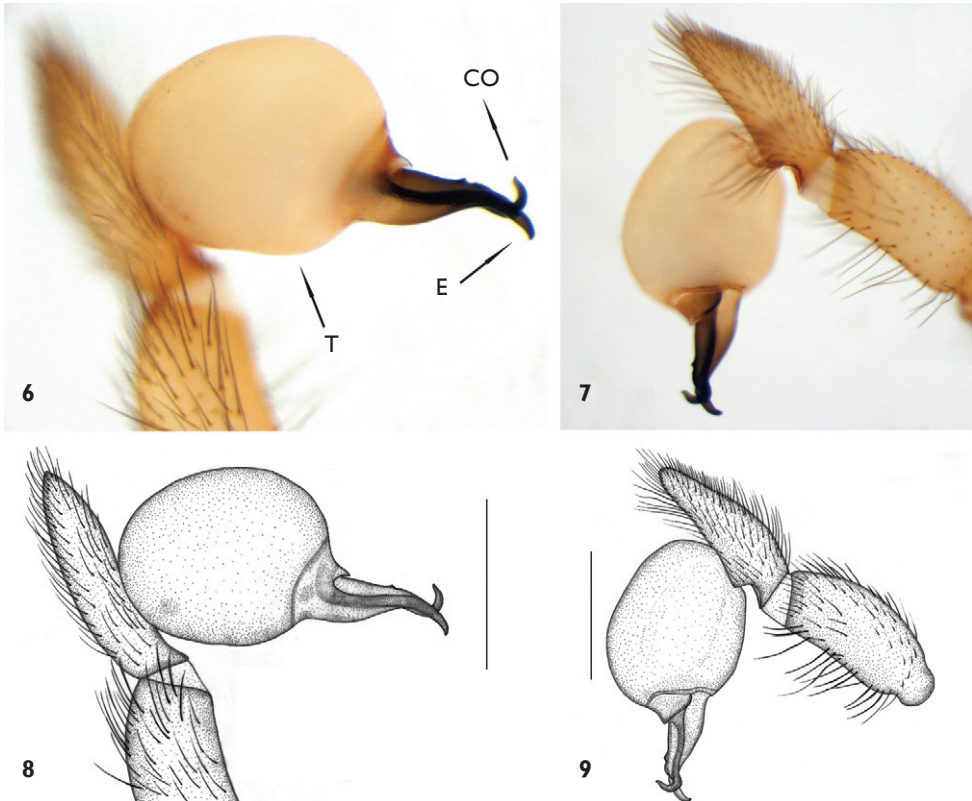
Figures 2–5. *Harpactea erseni* sp. n. **2** Carapace **3** Sternum **4** Right chelicer, ventral view **5** Coxae IV, dorsal view.

the segment (ventral surface only). Dorsal part of coxae III and IV with 2–6 spines (Fig. 5). Details of leg spination are given in Table 2.

Palpal organ with globular bulb and curved, black embolus tapering towards the tip. Conductor same colour as embolus and hook-shaped at the tip and with a tuberculum on the mid-part (Figs 6–9). Female unknown.

Table 1. Leg measurements of *Harpactea erseni* sp. n.

Legs	I	II	III	IV
C	1.65	1.28	0.88	1.20
Tr	0.52	0.34	0.34	0.37
Fe	3.15	2.63	2.45	3.00
Pa	1.20	1.76	1.23	1.50
Ti	2.55	2.46	2.02	3.38
Me	2.63	2.25	2.15	2.63
Ta	0.80	0.83	0.83	0.84
Total	12.50	11.55	9.90	12.92



Figures 6–9. *Harpactea erseni* sp. n., general appearance of right bulb **6–8** Prolateral view **7–9** Retrolateral view **CO** Conductor **E** Embolus **T** Tegulum (Scale lines: 0.5 mm)

Table 2. Leg spination of *Harpactea erseni* sp. n.

Legs	I	II	III	IV
C	0	0	2-3 D	5-6 D
Tr	0	0	0	0
Fe	2 Pl	1, 1 Pl	2, 2, 2 D	1, 2, 2 D, 2-4 Rl
Pa	0	0	1 D	1 Rl
Ti	0	0	6 Pl, 1 Rl, 2, 1, 2 V	1, 1, 1 Pl, 1, 1 Rl, 5-6 V
Me	0	0	6 Pl, 1, 1 Pl, 5-6 V	3 Pl, 4 Rl, 3-5 V
Ta	0	0	0	0

Discussion

According to the classification of Deeleman-Reinhold (1993), *H. erseni* sp. n. belongs in the *rubicunda* (D) species group which is characterized by having a globular palpal body, a massive embolus and conductor and patellae-coxae with spines. Up until now 20 (including the new species) *Harpactea* species have been reported from Turkey. Although the diversity of this genus in Turkey is comparatively high, it can be expected that the actual diversity will be even higher because many regions with favourable habitats for *Harpactea* remain to be studied in Turkey. Therefore, we expect that more species will be found in the future.

Acknowledgements

We are very grateful to Dr. Christo Deltchev and Dr. Stoyan Lazarov (Sofia; Bulgaria) for their valuable comments regarding the new species. The English of the final draft was kindly checked by Dr. David Penney (Manchester; UK).

References

- Alicata P (1974) Su una nuova specie di *Harpactea* (Araneae, Dysderidae) della Turchia. *Animalia* 1: 69–72.
- Bayram A, Kunt KB, Danışman T (2010) The checklist of the spiders of Turkey, Version 10.1.0. Ankara: Turkish Arachnological Society. <http://www.spidersofturkey.com> [accessed 17.V.2010]
- Brignoli PM (1978a) Ragni di Turchia IV. Leptonetidae, Dysderidae ed Agelenidae nuovi o interessanti di grotte della Turchia meridionale (Araneae). *Quaderni del Museo di Speleologia* 3: 37–54.
- Brignoli PM (1978b) Ragni di Turchia V. Specie nuove o interessanti, cavernicole ed epigee, di varie famiglie (Araneae). *Revue Suisse de Zoologie* 85: 461–541.

- Brignoli PM (1979) Spiders from Turkey, VI. Four new species from the coast of the Black Sea (Araneae). Bulletin of the British Arachnological Society 4: 310–313.
- Bosmans R, Chatzaki M (2005) A catalogue of the spiders of Greece. A critical review of all spider species cited from Greece with their localities. Arachnological contributions. Newsletter of the Belgian Arachnological Society. 20 (2): 1–124.
- Chatzaki M, Arnedo M (2006) Taxonomic revision of the epigeal representatives of the spider subfamily Harpacteinae (Araneae: Dysderidae) on the island of Crete. Zootaxa 1169: 1–32.
- Deeleman-Reinhold CL (1993) The genus *Rhode* and the harpacteine genera *Stalagtia*, *Folkia*, *Minotauria*, and *Kaemis* (Araneae, Dysderidae) of Yugoslavia nad Crete, with remark on the genus *Harpactea*. Revue Arachnologique 10 (6): 105–135.
- Lazarov S (2009) A new spider species from Bulgaria, *Harpactea terveli* sp. n. (Araneae: Dysderidae). International Journal of Academic Research. 1 (2): 96–98.
- Lazarov S (2010) A new spider species *Harpactea krumi* sp. n. from Bulgaria (Araneae, Dysderidae). Acta Zoologica Bulgarica. 62 (1): 27–31.
- Lazarov S, Naumova M. (2010) Two new *Harpactea* species from Bulgaria (Araneae: Dysderidae). Revue Suisse de Zoologie 117 (1): 101–110.
- Nosek A (1905) Araneiden, Opilionen und Chernetiden. In: Penther A, Zederbauer E. Ergebnisse einer naturwissenschaftlichen Reise zum Erdschias-Dagh (Kleinasien). Annales des naturhistorischer Museum, Wien 20: 114–154.
- Otto S, Dietzold S (2006) Caucasian Spiders, A faunistic database on the spiders of the Caucasus. Version 1.3. <http://caucasus-spiders.info> [accessed 17.V.2010]
- Platnick NI (2010) The world spider catalog, Version 10.5. New York: American Museum of Natural History. <http://research.amnh.org/entomology/spiders/catalog/DYSDERIDAE.html> [accessed 17.V.2010]
- Řezáč M (2008) Description of *Harpactea sadistica* n. sp. (Araneae: Dysderidae) — a haplogyne spider with reduced female genitalia. Zootaxa 1698: 65–68.
- Van Keer J, Bosmans R (2010) On some new *Harpactea* and *Stalagtia* Species from Lesbos, Greece (Araneae: Dysderidae). Acta Zoologica Bulgarica. 61 (3): 277–285.