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A new *Dysdera* species (Araneae: Dysderidae) from Azerbaijan

Narmin BEYDİZADE, Sepideh SHAFARİ & Elchin GUSEİNOV

A b s t r a c t : A study of *Dysdera* LATREILLE, 1804 in Azerbaijan indicates a new species. Somatic and genitalic characters reveal that the only male specimen from Nakhchivan belongs to an undescribed new species, *D. nakhchivanica* nov.sp. Characters for distinguishing *D. nakhchivanica* nov.sp. and morphologically similar to some species. Here are given comparative study for similar species.

K e y w o r d s : ground dweller spiders, Aranei, Middle East, Nakhchivan, description.

Introduction

Dysderidae C.L. KOCH, 1837 is a group of ground dweller spiders which has 545 species assigned to 24 genera. The fame of this family is due to its Palearctic endemicity which ranges from Azores to Kyrgyzstan (MARUŠÍK 2017). *Dysdera* LATREILLE, 1804 is the largest genus of dysderids with 266 species distributed all over the world only *Dysdera cylindrica* from Pakistan and has the highest species diversity in the Mediterranean and the Caucasus (World Spider Catalog 2017). In the Dunin's research is showed 61 dysderid spider species 2 species of them are *Hygrocrates*, 3 *Cryptoparachtes*, 1 *Dysderella*, 28 *Harpactea* and 27 *Dysdera* from few following groups-*concinna*, *crocata*, *richteri*, *hungarica*, *azerbajdzhanica*) of Caucasian fauna. (DUNIN 1992d). At the present time diversity of dysderid species in Azerbaijan includes 28 species 13 of which are species of the genus *Dysdera* and in Nakhchivan AR was given only 3 species *Harpactea nachitschevanica*, *Dydera* sp. and *Dysdera richteri*. 21 dysderis spicies 17 of which are *Dysdera*, 4 *Harpactocrates*, 3 *Harpactea* is given by Mcheidze for the Georgian fauna (MCHEIDZE 1997).

The majority of *Dysdera* species belong to complexes of sibling species (DEELEMANN-REINHOLD & DEELEMANN 1988; ŘEZÁČ et al. 2014) and the members of every complex often show similarities in somatic and genitalic characters (ARNEDO et al. 2007; EBERHARD 1996).

Although the first *Dysdera* species of Azerbaijan were reported many years ago (KOCH 1878), we have a little information about this genus in this country (OTTO 2017). While studying specimens from Nakhchivan, we noticed one male of unknown to us species. Therefore, we conducted a detailed examination of somatic characters and the shape of the copulatory organ. Results indicate that it belongs to a new undescribed species, which is described here.

Material and Methods

Methods: One male specimen was examined and photographed in the Institute of Zoology, Azerbaijan National Academy of Sciences, Azerbaijan using a Nikon SMZ 1270 stereomicroscope with a Leica EZ4D camera. Digital images of bulb were taken by Leica DFC 425 cameras. Spination of legs is reported. All measurements are given in millimeters (mm).

The material examined is preserved in the Institute of Zoology, Azerbaijan National Academy of Sciences, Azerbaijan (ANAS).

Abbreviations: The following abbreviations are used here for designating of position of spines on legs: d – dorsal, pl – prolateral, rl – retrolateral, v – ventral.

Taxonomy

Family *Dysderidae* C.L. KOCH, 1837

Dysdera LATREILLE, 1804

Dysdera nakhchivanica nov.sp. (Figs. 1-4, 7-8)

Material examined: Holotype ♂ (ANAS), Azerbaijan, Nakhchivan AR, Kengerli Distr., Chalkhangala, under the stones, 39°27'9.23"N 45°15'54.3"E, 2.V.2012 (E. GUSEINOV).

Diagnosis: The general characters of *Dysdera* as dark-brown cephalotorax and chelicerae, brown sternum, light brown legs, grey abdomen combine *nakhchivanica* nov.sp. with some species. The new species differs from other congeners in size: the cephalotorax length (3,65x2,95 in *D. borealicaucasia*, 3,70x3,15 in *D. gmelini*, 4,35x3,40 in *D. daghestanica*, 3,30x2,50 in *D. enguriensis* and 2,90x2,15 in *D. richteri*). All species also differ by eye pattern und leg supination and measurement (DUNIN 1991a).

Dysdera nakhchivanica nov.sp. male reproductive organ is clearly distinguished from other type of structures and can be identified. Male palp structures of *Dysdera nakhchivanica* nov.sp. is similar to *Dysdera enguriensis* DEELEMEN-REHNHOLD, 1988 from asiatica group, from *richteri* group *Dysdera richteri* CHARITONOV, 1956 and *Dysdera gmelini* DUNIN, 1991; from *crocata* group *Dysdera borealicaucasica* DUNIN, 1991 and *Dysdera daghestanica* DUNIN, 1991. But the male *nakhchivanica* differ well from all comparative congeners by the shape of size and structur of tegular, posterior apophysis and by the proportions of the bulb and shape of the lateral part of the bulb (Figs. 1, 3). So the bulbus of *D. borealicaucasus* with the curved medial apophysis; medial apophysis of *D. daghestanica* is curved with two teeth and posterior apophysis is smooth; *D. enguriensis* and *D. raddei* have curved medial apophysis with small denticle, apophysis is almost smooth. In compared to another species it is clearly visible that *D. nakhchivanica* nov.sp. has almost identical structur by palp of *D. richteri*. Both species have similar bulb proportions (tegular and embolic parts equal in length), a triangular posterior apophysis and small process (Sp) anteriorly (Fig. 1). *D. richteri* was found by Dunin in Nakhchivan, Shahbuz distr. in 1986 (DUNIN 1992). Judge by general characteristic and structure of the male *nakhchivanica* nov.sp. and geographical factor of

both species give us grounds to say that the new species is rather similar to *D. richteri* (after Dunin's description). This species that was described by Dunin is not similar to the *D. richteri* described after CHARITONOV, 1956 and DEELEMEN-REINHOLD 1988. It means that Dunin's species is another species, probably a new species.

E t y m o l o g y : The name refers to the type locality of the new species.

M e a s u r e m e n t s (♂) : Total length 13.4. Carapace 6.0 long, 5.0 wide (Figs. 7-8).

Prosoma. Carapace, maxillae, labium and sternum dark-brown. Cephalic region 1.78 wide. Clypeus 0.12 long. Sternum 4.2 long, 2.8 wide and wrinkled. Chelicerae 3.5 long, 0.15 wide with 3 teeth in one row. Fang of chelicerae is 1.98 long. Labium 0.17 long, 0.08 wide (Figs. 7-9).

Eyes. Diameter of AME 0.16, PME 0.13, PLE 0.15. Distances between AME–AME 0.15, PME–PME 0.01, PME–PLE 0.04. Distance between anterior median eyes almost equal to AME diameter.

Abdomen. Abdomen 7.4 long, 3.8 wide. Abdomen whitish grey. Book lungs, opercula and margins of spiracles brown and sclerotized (Figs. 7-8).

Legs. Legs orange, light brown. Measurements and spination as in Tables 1–2. Legs formula as 1:2:4:3.

Palp. Palp as in Figures 1-4. Femur 3.6, patella 0.18, tibia 0.5, cymbium 0.17 and bulb 3.4 long. Tegulum yellow. Sperm duct is a little darker and clear. Posterior apophysis (*Pa*) beak-shaped in lateral view-has slightly above the tip and is lightly sclerotized. More prominent sign for this species is a structure of medial apophysis that consist of four teeth and small denticle. This sign brings our species closer to another group-*richteri*.

D i s t r i b u t i o n : The species has been detected up to this point only in Nakhchivan Autonomous Republic, Kengerli distr, Chalkhangala, Azerbaijan (Fig. 10).

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Autors addresses:

Narmin BEYDIZADE
 Dr. Elchin GUSEINOV
 Institute of Zoology of the Azerbaijan National Academy of Sciences
 (ANAS)
 A. Abbaszadeh street, block 504, passage 1128,
 AZ1073, Baku, Azerbaijan
 E-Mail: beydizade.n@gmail.com
 E-Mail: apsheron@list.ru

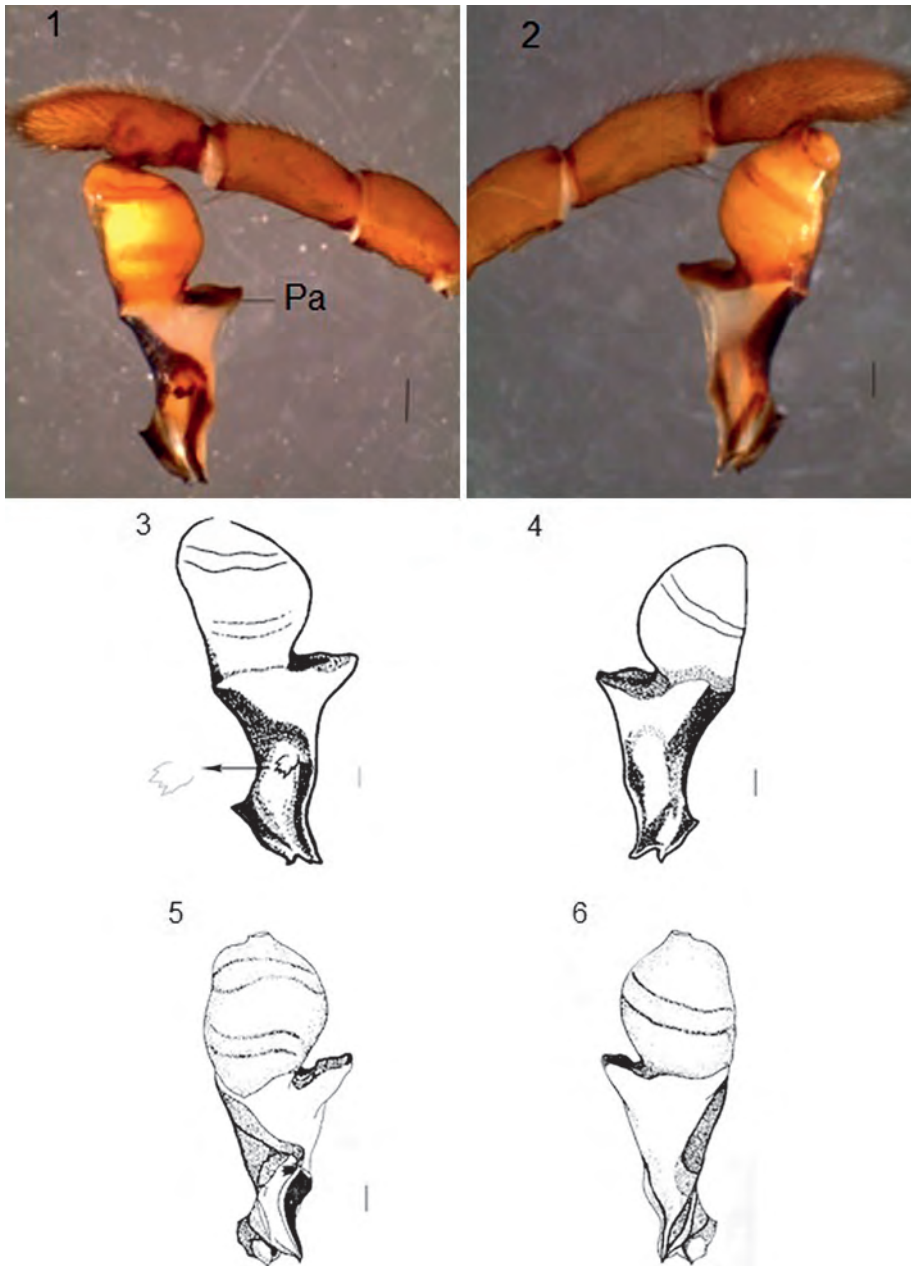
Dr. Sepideh SHAFARIE
 Department of Biology, Faculty of Sciences,
 Ferdowsi University of Mashhad,
 Mashhad, Iran
 E-Mail: s.shafaie87@yahoo.com

Tab. 1: Leg spination of *Dysdera nakhchivanica* nov.sp. (male holotype)

| | d | pl | rl | v | total |
|--------|----------|-----------|-----------|----------|--------------|
| Cx III | – | – | – | – | – |
| Cx IV | – | – | – | – | – |
| Fe I | – | – | – | – | – |
| Fe II | – | – | – | – | – |
| Fe III | – | – | – | – | – |
| Fe IV | 2-1-1 | – | – | – | 2-1-1 |
| Pa III | – | – | – | – | – |
| Pa IV | – | – | – | – | – |
| Ti III | – | 1 | 1-1 | 1-1 | 3-3 |
| Ti IV | – | 1 | 1-1 | 1-1 | 3-3 |
| Mt III | – | 1-1-1 | 1-1-1 | 2-2 | 4-4 2 |
| Mt IV | – | 1-1-1 | 1-1-1 | 2-2 | 4-4-2 |

Tab. 2: Leg measurements of *Dysdera nakhchivanica* nov.sp. (male holotype)

| | Cx | Fe | Pa | Ti | Mt | Total |
|----|-----------|-----------|-----------|-----------|-----------|--------------|
| I | 1,5 | 2,9 | 1,85 | 2,7 | 2,65 | 11,6 |
| II | 1,3 | 2,5 | 1,65 | 2,4 | 2,45 | 10,3 |
| II | 0,08 | 2,0 | 1,15 | 1,4 | 2,0 | 6,63 |
| IV | 1,2 | 2,6 | 1,5 | 2,15 | 2,5 | 9,95 |



Figs. 1-4: Male palp of *Dysdera nakhchivanica* nov.sp.: (1, 3)retrolateral (2, 4) prolateral view.
Figs. 5-6: Male palp of *Dysdera richteri* (after Dunin): (5) retrolateral (6) prolateral.



Fig. 7-9: Male habitus (7) dorsal, (8) ventral and (9) lateral view of chelicerae of *D. nakhchivanica* nov.sp.



Fig. 10: The sampling locality of *Dysdera nakhchivanica* nov.sp. (red) und *D. richteri* (yellow).

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Autor(en)/Author(s): Beydizade Narmin, Shafaie Sepideh, Guseinov Elchin

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