

A new species of the hersiliid spiders (Aranei: Hersiliidae) from Iran

Новый вид пауков-херсилиид (Aranei: Hersiliidae) из Ирана

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Ключевые слова: Аранеае, Ближний Восток, *Duninia*, Курдистан.

Abstract. A new species, *Duninia grodnitskyi* sp.n., is described on the basis of the holotype female from Kurdistan Province of Iran. The generic assignment of the species is provisional, as it is likely to belong to an undescribed genus.

Резюме. Описан новый вид *Duninia grodnitskyi* sp.n. на основе голотипа самки из провинции Курдистан, Иран. Новый вид возможно относится к неопisanному роду.

Introduction

To date, 11 species of Hersiliidae belonging to four genera have been known from Iran: *Bastanius* Mirshamsi, Zamani et Marusik, 2016; *Duninia* Marusik et Fet, 2009; *Hersilia* Audouin, 1826; and *Hersiliola* Thorell, 1870 [Zamani et al., 2018]. Although the species diversity of the family in Iran is higher than it is in any other neighboring country and Hersiliidae has been the subject of several regional revisions [Marusik, Fet, 2009; Mirshamsi et al., 2013; Mirshamsi et al., 2016; Zamani et al., 2017], new collecting efforts in western Iran have yielded one more new species, of which description is given below. The new species has an uncertain generic position and is likely to belong to a new genus. The absence of males does not allow us to make a solid, well-justified conclusion regarding this matter.

Material and methods

Specimen was photographed using an Olympus Camera E-520 camera attached to an Olympus SZX16 stereomicroscope or to the eye piece of an Olympus BH 2 transmission microscope. Digital images were prepared using «CombineZP» image stacking software (<http://www.hadleyweb.pwp.blueyonder.co.uk/>). Illustrations of internal genitalia were made after clearing the epigyne in 10 % KOH water solution and exposure

for a few minutes in an alcohol/water solution of Chlorazol Black. All measurements are given in millimeters. The holotype is deposited in the Manchester Museum of the University of Manchester, UK (MMUE).

Taxonomy

Hersiliidae Thorell, 1870

Duninia grodnitskyi Zamani et Marusik, sp.n.

Figs 1–9.

Material. Holotype: ♀ (MMUE, G7612.1), Iran: Kurdistan Province, Sanandaj County, Nime Chah, 35°33'N, 47°E, 3.05.2017, A. Zamani.

Etymology. The species is named after the late Dr. Dmitry L. Grodnitsky, university mate of the junior author and an outstanding researcher of the insect flight and general problems of evolution.

Diagnosis. *Duninia grodnitskyi* sp. n. differs from other congeners in having two pairs of receptacles, the long copulatory duct and the presence of distinct pore glands. Other *Duninia* species have only one pair of receptacles, very short copulatory ducts and heads of receptacles without distinct gland pores [cf. Marusik, Fet, 2009; Mirshamsi et al., 2013].

Comments. The epigyne of the new species differs from those of other hersiliid genera with short spinnerets occurring in Iran and adjacent regions (see under «Diagnosis»). We have placed this species in *Duninia* because it has the lateral pouches [or the deep pockets *sensu* Marusik and Fet (2009)] as three other *Duninia* species known to date (see figs 8.6–7, 11 in Marusik and Fet [2009] and 4e–g in Mirshamsi et al. [2013]). It is likely that the new species belongs to an undescribed genus, but the absence of the males does not allow us to come up with a justified decision regarding this. The matter is to be further considered, when the males have been collected.

Description. Female (holotype). Total body length 5.5. Carapace 2.1 long, 2.15 wide, femur I 3.45 long, femur I/ carapace length ratio 1.64. Eye sizes and interdistances: AME



Figs 1–2. General appearance of *Duninia grodnitskyi* sp.n.: 1 — body, dorsal; 2 — abdomen, ventral.
 Рис. 1–2. Внешний вид *Duninia grodnitskyi* sp.n.: 1 — тело, сверху; 2 — брюшко, снизу.

0.12, ALE 0.10, PME 0.10, PLE 0.11, AME-AME 0.08. General coloration light yellowish brown. Carapace with 4 pairs of dark marginal spots, 2 pairs of radial stripes, 2 pairs of lateral dark spots in the anterior half and an unpaired median spot in the thoracic part, with darkening at the ocular area (Fig. 1). Abdomen greyish, dorsally with a distinct darker median folium pattern (Fig. 1) and lateral lines, ventrally without pattern with long scattered setae; colulus large, well-sclerotized; posterior lateral spinnerets short, about a half of the abdominal length (Fig. 2). Legs with distinct annulations (Fig. 1).

Epigyne as in Figs 3–9; weakly sclerotized and with indistinct copulatory openings; plate longer than wide, with a distinct median plate (*Mp*) having subparallel lateral margins; copulatory opening (*Co*) lead to pouch, from which originates three pairs of ducts leading to two pairs of receptacle-like structures, lateral and mesal, both receptacles bear pore glands (*Pg*); lateral receptacles seems to be the proper seminal receptacles (*Rs*), and mesal receptacles seems to represent the accessory glands (*Ag*); copulatory duct forms one loop.

Male. Unknown.

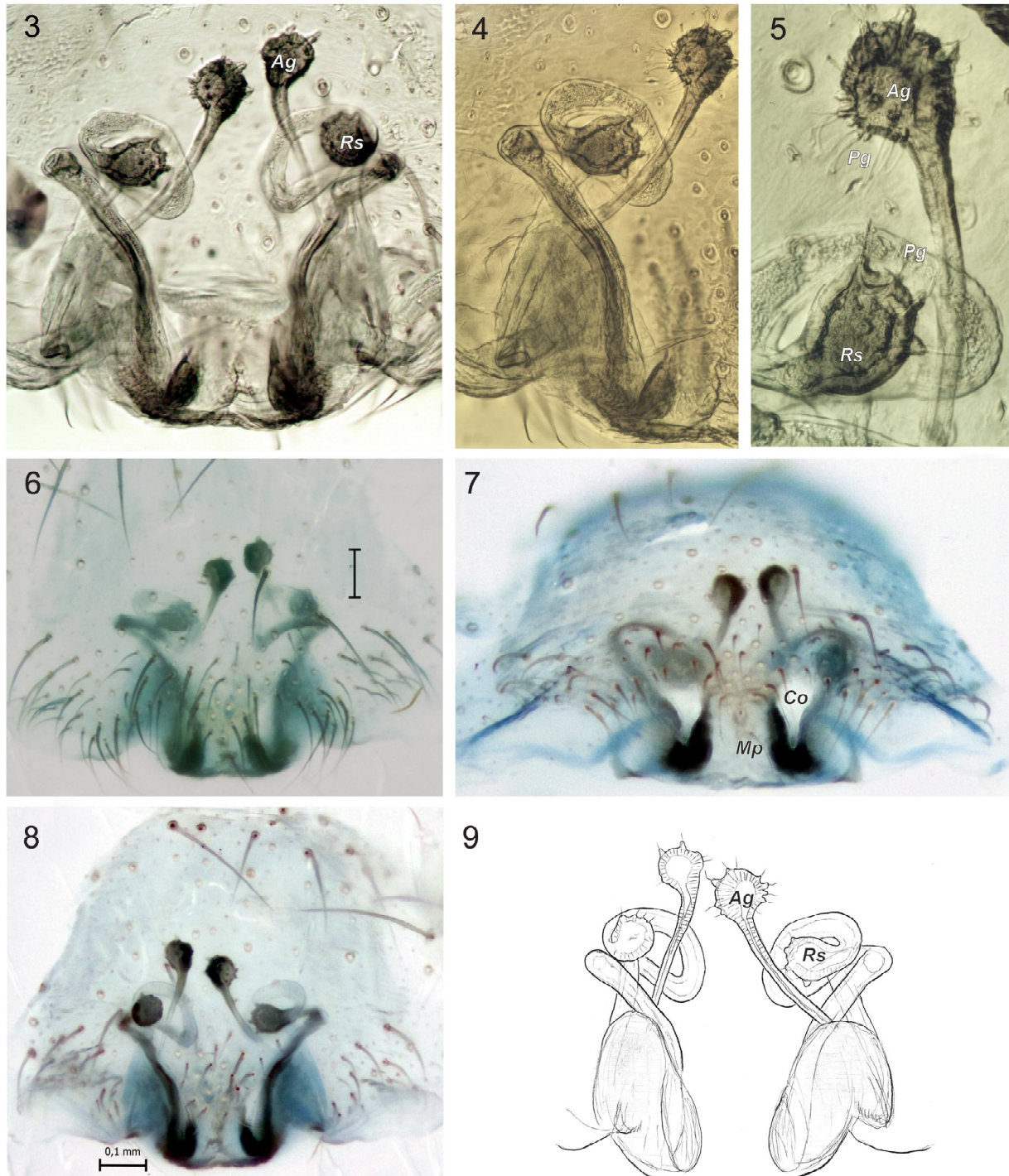
Distribution. Known only from the type locality in Kurdistan Province, western Iran.

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References

- Marusik Y.M., Fet V. 2009. A survey of east Palearctic *Hersiliola* Thorell, 1870 (Araneae, Hersiliidae), with a description of three new genera // *ZooKeys*. No.16. P.75–114.
- Mirshamsi O., Marusik Y.M., Jamili E. 2013. The spider family Hersiliidae Thorell, 1870 (Arachnida: Araneae) in Iran // *Zoology in the Middle East*. Vol.59. P.347–352.
- Mirshamsi O., Zamani A., Marusik Y.M. 2016. A survey of Hersiliidae (Arachnida: Araneae) of Iran with description of one new genus and two new species // *Journal of Natural History*. Vol.50. No.23–24. P.1447–1461.
- Zamani A., Mirshamsi O., Marusik Y.M. 2017. Description of a new species of *Hersiliola* and the male of *Duninia rheimsae* Marusik & Fet, 2009 from Iran (Araneae: Hersiliidae) // *Turkish Journal of Zoology*. Vol.41. N.4. P.624–629.
- Zamani A., Mirshamsi O., Marusik Y.M., Moradmand M. 2018. The Checklist of the Spiders of Iran. Version 2018, Online at <http://www.spiders.ir> (visited on 4.06.2018).



Figs 3–9. Epigyne of *Duninia grodnitskyi* sp.n.: 3, 8–9 — dorsal; 4 — left side, dorsal; 5 — receptacle and gland; 6 — ventral; 7 — ventro-posterior. Abbreviations: Ag — accessorial gland, Co — copulatory opening, Mp — median plate, Pg — pore glands, Rs — seminal receptacles.

Рис. 3–9. Эпигина *Duninia grodnitskyi* sp.n.: 3, 8–9 — сверху; 4 — левая половина, сверху; 5 — рецептакула и железа; 6 — снизу; 7 — снизу-сзади. Сокращения: Ag — вспомогательная железа, Co — копулятивное отверстие, Mp — срединная пластинка, Pg — железистые поры, Rs — рецептакула.