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Prodidomus rufus Hentz, 1847 (Arachnida: Araneae), Redescription of Female and New Record of Male from South of Iraq

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Abstract: The female of the species *Prodidomus rufus* Hentz 1847, which was previously recorded from Al-Najaf province in central Iraq, was described inaccurately. Therefore, we re-described it as the males were first recorded in Al-Gharraf district, north of Thi Qar province- southern Iraq, depending on the copulatory organs (Palp and Epigynum) illustrated in the figures and have a role in distinguishing between species. The habitus of males and females, leg parts measurements of males and females, and a map of specimen's locations are also presented.

Keywords: Al-Gharraf, Prodidomidae, spiders, Thi Qar.

Prodidomus rufus Hentz, 1847 (Arachnida: Araneae), Irak'ın Güneyinden Dişinin Yeniden Tanımlanması ve Yeni Erkek Kaydı

Öz: Daha önce Al-Necf ilinden (Merkez, Irak) kaydedilen *Prodidomus rufus* Hentz 1847 dişi, hatalı olarak tanımlanmıştır. Bu nedenle, bütün erkek bireyleri Irak'ın güneyindeki Thi Qar ilinin kuzeyindeki Al-Gharraf ilçesinde ilk kez kaydedilerek yeniden tanımlanmıştır. Türleri ayırt etmede taksonomik karakter olan çiftleşme organları (Palp ve Epigynum) gösterilmiştir. Türlün habitatu, erkek ve dişi bireylerin bacak parçaları ölçümleri ve bir dağılış haritası da sunulmuştur.

Anahtar kelimeler: Al-Gharraf, Prodidomidae, örümcekler, Thi Qar.

Prodidomidae Simon, 1884 is a widespread family, including 23 genera and 191 species distributed worldwide. Among them, species belonging to genus *Prodidomus* Hentz, 1847, which has almost worldwide distribution, includes ten known species from the Near East and Middle East regions (World Spider Catalog, 2022). In Iraq, previously, only one species of this genus was recorded: the female *P. redikorzevi* Spassky, 1940 by Al-Khazali (2021) in Thi Qar province. Afterwards, Mizhir (2021) recorded the female *P. rufus* Hentz, 1847 in Al-Najaf province without explaining the exact details of the epigynum. In the current study, the male species *P. rufus* Hentz, 1847 was first recorded in Thi Qar province, south of Iraq and the female was re-described based on the genitalia. *P. rufus* has been recorded from many countries including Argentina, Chile, China, Cuba, Japan, New Caledonia, and the United States (World Spider Catalog, 2022).

Specimens were collected by hand from agricultural lands, near palm trees in the city of Al-Gharraf city, north of Thi Qar Province (Fig. 1) in December 2021. The specimens were preserved in 70% ethanol and were photographed using a Nikon Z50 camera on a Krüss stereomicroscope in the Entomology Laboratory of the Biology Department, College of Science, University of Basrah. The identification was done according to Cooke (1964); Platnick and Baehr (2006); Ferrández and Carrillo (2018). Measurements are given for the segments of the legs (femur, patella, tibia, metatarsus, tarsus) and all measurements are given in millimeters.



Figure 1. Map of Iraq showing specimens collection location: Thi Qar Province, Al-Gharraf city, Iraq (circle).

Prodidomus rufus Hentz, 1847 as in Figs. 2 and 3, the materials examined were 1 ♂ and 2 ♀♀ from Al-Gharraf city, north of Thi Qar province, south of Iraq, coordinates (31°18'34.252"N, 46°12'57.211"E) in December 2021 (G. A. A. Al-Yacoub). *Prodidomus* Hentz, 1847 can be distinguished from other genera of Prodidomidae by inferior spinnerets with only short fusuli, superior spinnerets are obliquely truncated (Fig. 2C), sternum oval, while the species can be easily distinguished from other members of the genus by their widely divergent, geniculate chelicerae (Fig. 2D) and very different genitalia. Anterior eyes straight, posterior eyes procurved, forming a triangle.

Male and female are similar but there are differences

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in the measurements of the body parts. In the dorsal view, the cephalothorax is brownish-yellow, the abdomen is light pink with gray setae, both without patterns. The eyes are eight, each three of them on one side and their color is silver, anterior median eyes are surrounded with black. The legs are light yellow with two claws, tibia and metatarsus III and IV with apical ventral spines. In the ventral view, Sternum is oval, pale yellowish-brown. Abdomen is light colored. Fangs are long and thin.

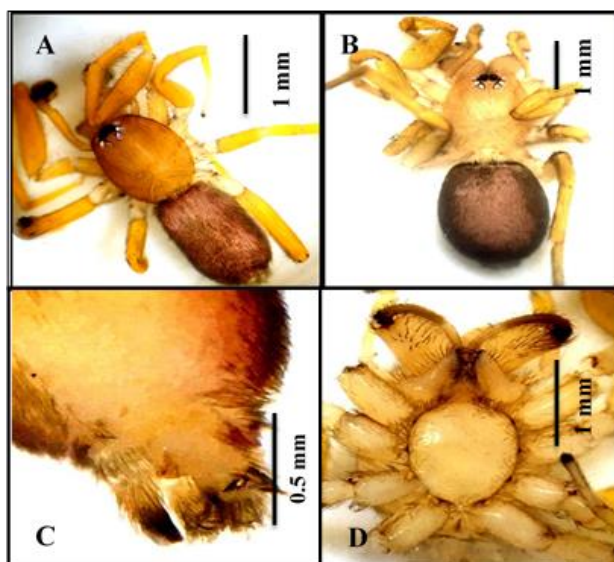


Figure 2. *Prodidomus rufus* Hentz, 1847 ♂♀. A: Habitus of male; B: Habitus of female; C: Spinnerets; D: Sternum and Chelicerae.

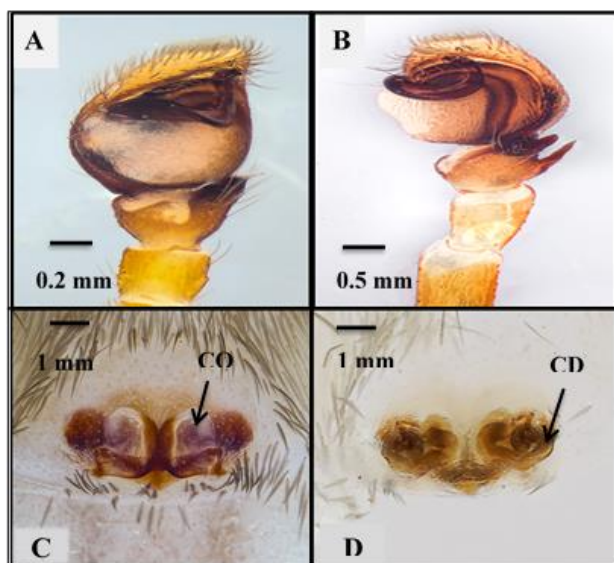


Figure 3. *Prodidomus rufus* Hentz, 1847 ♂♀. A, Ventral view of left palp; B, retrolateral left palps; C, ventral view of epigynum; D, dorsal view of epigynum. Abbreviations: CO: copulatory openings; CD: copulatory duct.

Habitus of male as in Fig. 2A. Total length 2.9, cephalothorax 1.34 length and 0.9 width. Opisthosoma 1.56 length. Leg measurements: I: 5.6 (1.6, 0.9, 1.3, 1, 0.8), II: 4.4 (1.2, 0.8, 1, 0.8, 0.6), III: 3.7 (1, 0.4, 0.9, 0.8, 0.6), IV: 5.9 (1.6, 0.9, 1.4, 1.1, 0.9). Habitus of female as in Fig. 2B. Total length 4.5, cephalothorax 2 length and 1.5 width. Opisthosoma 2.5 length. Leg measurements: I: 6.1 (1.8, 1, 1.4, 1, 0.9), II: 5 (1.4, 0.9, 1.1, 0.9, 0.7), III: 4.2 (1.1, 0.5, 1, 0.9, 0.7), IV: 6.7 (1.9, 1, 1.6, 1.2, 1).

Palp of male as in Fig. 3A and B is characterized by its cymbium straight retrolaterally, sperm duct semicircular, embolus thickened sinuous, retrolateral tibia with long, divided and sharp pointed apophysis. Epigynum of female as in Fig. 3C and D with two large inverted U shaped copulatory openings, epigynal ducts wide and irregularly curved, spermathecae widely separated.

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Conflict of interest: The authors declare that there is no conflict of interest.

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References

- Al-Khazali, A.M. (2021). *Prodidomus redikorzevi* Spassky, 1940 (Araneae: Gnaphosidae: Prodidominae), the first record of the subfamily in Iraq. *Serket*, 18(1), 36-39.
- Cooke, J.A.L. (1964). A revisionary study of some spiders of the rare family Prodidomidae. *Proceedings of the Zoological Society of London*, 142(2), 257-305. <https://doi.org/10.1111/j.1469-7998.1964.tb04625.x>
- Ferrández, M.-Á. & Carrillo, J. (2018). *Prodidomus* cfr *rufus* Hentz, 1847 (Araneae: Prodidomidae), una especie “enigmática”. *Revista Ibérica de Aracnología*, 32, 123-126.
- Mizhir, A.H. (2021). New Species of Spiders *Prodidomus rufus* Hentz, 1847 (Araneae: Gnaphosidae) in Iraq. *International Journal of Animal Biotechnology and Applications*, 7(2), 6-9.
- Platnick, N.I. & Baehr, B.C. (2006). A revision of the Australasian ground spiders of the family Prodidomidae (Araneae, Gnaphosoidea). *Bulletin of the American Museum of Natural History*, 298, 1-287. [https://doi.org/10.1206/0003-0090\(2006\)298\[1:AROTAG\]2.0.CO;2](https://doi.org/10.1206/0003-0090(2006)298[1:AROTAG]2.0.CO;2)
- World Spider Catalog (2022). World Spider Catalog. Version 23.0. Natural History Museum Bern. Retrieved from <http://wsc.nmbe.ch>