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FIRST RECORDS OF PHOLCIDAE (ARACHNIDA, ARANEAE) FROM IRAQ

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ABSTRACT

The family Pholcidae represented by the species *Artema doriae* (Thorell, 1881) is recorded in Iraq for the first time.So far, 23 families of spiders have been recorded in Iraq.

In this paper, we add a new family and a description of a species belonging to this family in the checklist of Iraqi spider fauna.

Key words: Araneae, *Artema doriae*, Cellar spiders, First record, Iraq.

INTRODACTION

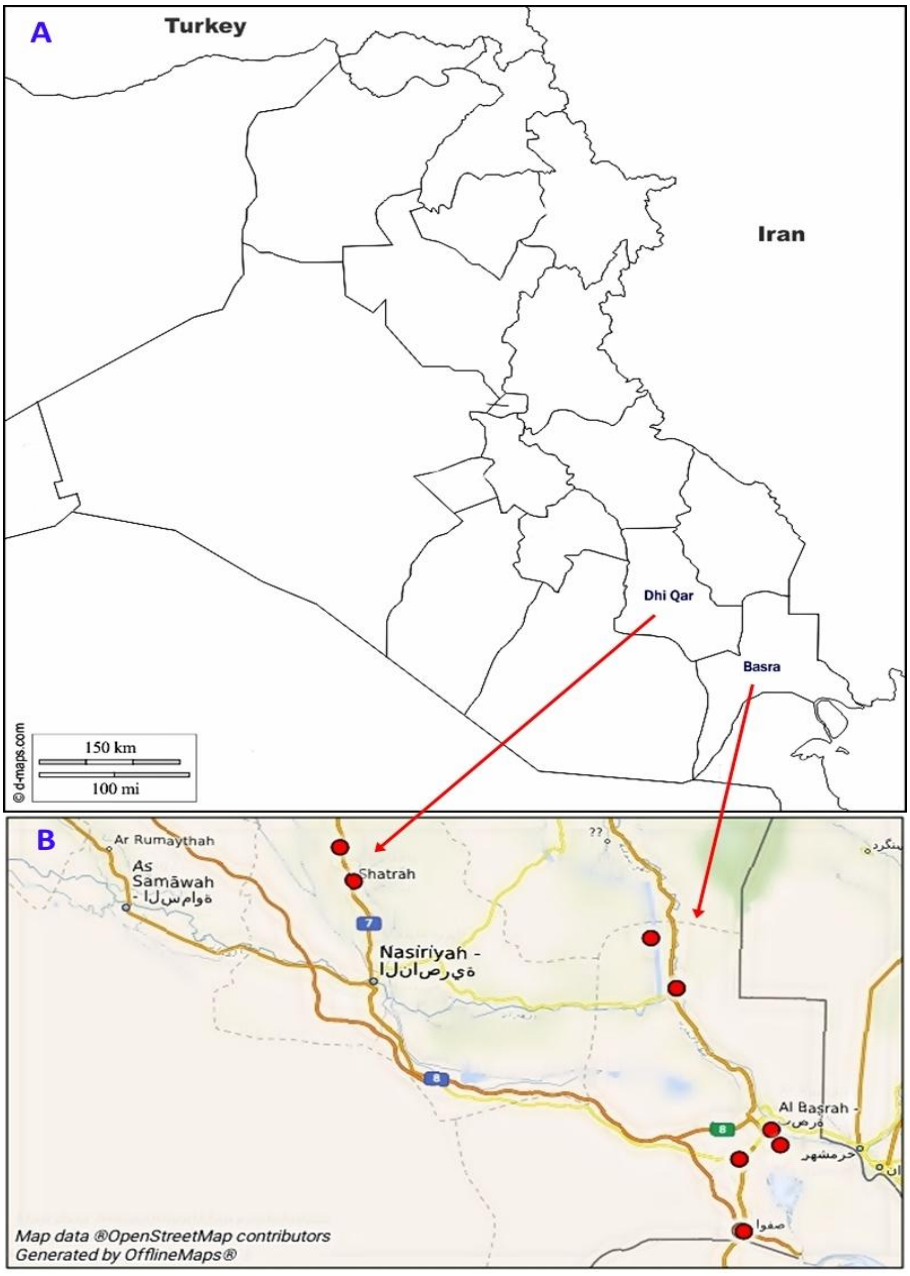
The family Pholcidae C. L. Koch, 1850 encompass thin and fragile spiders and is one of the largest number of families, which belong to the group of Araneomorphae, represented by 77 genera and 1667 species of spiders worldwide (World Spider Catalog, 2018). Members of Pholcidae are characterized by their long thin legs with three curved flexible tarsi, the cephalothorax is typically about as long as it is wide and most pholcids are present with eight or six eyes (Huber, 2005). Pholcids are very variable in coloration patterns and body size, usually their length is between 1 and 10 mm. This family can be easily distinguished from other relatives by many diagnostic characters; but the most important thing is the structure of the palpal and chelicerae in males, the modified palpal pterocymbium is called procuress, the sexual modifications of the chelicerae and the pseudo segmentation of the leg tarsi (Lissner, 2011). Pholcids presents a very high ecological diversity and can be found almost everywhere, such as deserts, wet and tropical forests. In general, they are more diverse in many tropical-climate of the world (Manhart, 1994; Huber, 2000), occurring in all over the world except for some islands and arctic regions (Lissner, 2011).

The genus *Artema* was described by Walckenaer (1837) from a single species, and it currently encompasses eight species most of them distributed from northern Africa to the Middle East including *A. doriae*. This species was described for the first time from Iran by Thorell (1881) under genus *Pholcus*, then transferred by Pickard-Cambridge (1902) to the genus *Artema* and revalidated by Brignoli (1981). This species is distributed in seven countries two of them neighboring Iraq: Iran, Turkey, United Arab Emirates, Afghanistan, Israel and Japan (World Spider Catalog, 2018).

The Araneofauna of Iraq is still largely unknown due to the lack of studies interested in the spiders during the last few years, Zamani and El-Hennawy (2016) pointed to the presence of 16 families recorded in Iraq .Recently ,Fomichev *et al*.,(2018), added six new families , and one family was added to the Iraqi spiders by Al-Khazali, (2018).Generally , so far , 23 families of spiders it has been recorded in Iraq. However, many regions of the country have not been sufficiently studied such as Dhi Qar and Basrah provinces of southern Iraq. It is therefore expected to record new families or species of Iraqi spider fauna, it is the objective of this work; in this paper, we record a new family and a species belonging to this family.

MATERIAL AND METHODES

Spiders were collected by hand from different regions in Dhi Qar and Basrah provinces in southern Iraq in May and July 2018 (Map 1,Table 1). Specimens were preserved in 80% ethanol and deposited in the Museum of Natural History, Basrah University. The specimens were studied and photographed using a Nikon camera installed on EZ4 binocular stereomicroscope, using the identification the keys of Aharon *et al.* (2017). All measurements are given in millimeters.



Map (1): (A) Iraq map and neighboring countries where it is present of *Artema doriae*, (B) Geographical distribution of the species in Dhi Qar and Basrah provinces, Southern Iraq.

A total of 41 specimens of *A. doriae* were examined in this study (Table 1).

Table (1): Collection sites and number of study specimens.

Locations		Coordinates	No. specimens
Dhi Qar province	Al-Neser	31°32'4.50"N 46° 7'14.66"E	1♂, 6♀♀
	Al-Shatrah	31°24'30.17"N 46°10'32.45"E	1♀
Basrah province	Abu AlKhasib	30°19'33.40"N 48° 2'26.43"E	2♂♂, 4♀♀
	Al-Zubayr	30°22'36.92"N 47°42'52.05"E	3♀♀
	Safwan	30° 6'34.98"N 47°43'9.79"E	2♂♂, 6♀♀
	Al-Qurnah	31° 1'2.82"N 47°25'28.31"E	1♂, 3♀♀
	Al-Madina	30°56'25.60"N 47°15'29.47"E	1♂, 4♀♀
	Al-Tannumah	30°31'37.97"N 47°52'2.76"E	2♂♂ 5♀♀
Total			9♂♂(5 adults, 4Juveniles) 32♀♀(13 adults, 19 Juveniles)

RESULTS AND DISCUSSION

Description

Male: Total body length 9.1, carapace length 5.2, width 3.4; abdomen length 3.9, width 2.7. Leg measurements: I 53.9 (17.9, 16.7, 17.1, 2.2), II 36.4 (10.1, 11.7, 13.0, 1.6), III 30.7 (9.2, 8.1, 12.0, 1.4), IV 46.4 (14.1, 13.8, 16.8, 1.7). Carapace flattened, wider than long with a deep fovea, presenting a yellowish to brownish median band. Sternum pale yellow to ochre with narrow brown edges. Legs yellow to ochre with light brown rings on proximal parts of patella and tibia, and subdistally on the tibia. Abdomen: pale ochre to beige with indistinct pale bands from dorsal to posterior of abdomen with pale brown spots forming wide marks dorsally and laterally.(Plate 1A)

Palpus: As shown in plate (1 B-C). Generally genital bulb with tow process, the first is triangular pointing towards prolateral, the second process is ventral and distinct.

Female: Total body length 8.7, carapace length 3.5, and width 4.4. Abdomen length 5.2, width 3.9. Leg measurements: I 50.2 (12.7, 15.6, 17.7, 4.2), II 40.8 (10.4, 12.5, 14.7, 3.2), III 33.1 (9.7, 10.1, 11.0, 2.3), IV 42.3 (12.3, 13.1, 14.8, 2.1). In general, other characters similar to male.

Epigyne: Epigynum plate with trapezoidal shaped, consisting of two pale brown sclerotized lateral regions and wider posteriorly, gently swelling posteriorly. Anterior epigynal projections are oval (Pl.2 A-D).

Global distribution: *A. doriae* has been recorded from Afghanistan, United Arab Emirates, Israel, Japan, Iran, Turkey (World Spider Catalog, 2018) ,and registered for Iraq in this study (current study).

Habitat :The specimens were collected of the urban and rural regions of southern Iraq, it has been observed on the roof and walls of some inhabited buildings (Pl. 3).Therefore, we believe that the species *A. doriae* may have synanthropic characteristics.

Comments: *Aharon et al.* (2017) pointed out that members of the genus *Artema* can be distinguished from other pholcids by its strong legs and large body, also by the presence dark of spots dorsally, arranged in stripes from dorsal to lateral of the abdomen, sometimes absent.

A. doriae can be distinguished from other congeners by its quadrilateral epigynal shape except in the case of *A. transcaspica* and *Artema sp.* It is worth mentioning that there is intraspecific variation of the epigyne in this species. The color pattern and epigyne characters of Iraqi specimens are at most similar to those of Iranian specimens (Aharon *et al*., 2017). *A. doriae* could be a common species in southern Iraq, found in different regions of two provinces and maybemore widely distributed across Iraq and other neighbour countries. However, the study of spiders is still poor in Iraq, according to published data there are only 55 species of spider belonging to 23 families have been recorded in different regions of this country. Accordingly, further sampling effort and research regarding the Araneofauna of Iraq are needed towards a comprehensive checklist of this still largely unknown faunistic group in the region.

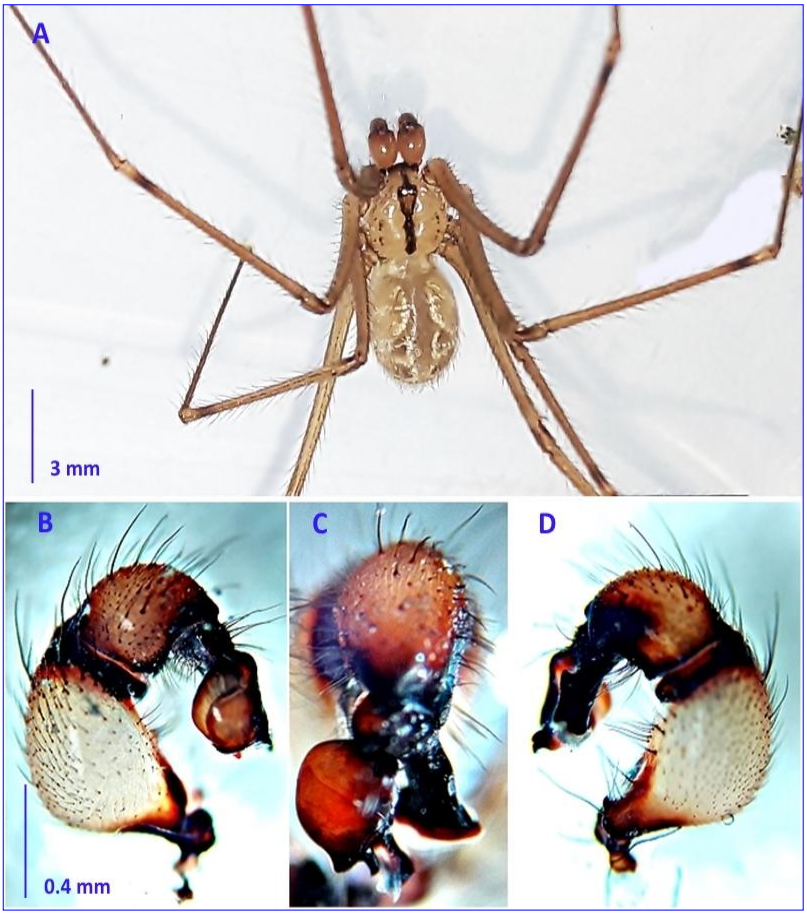


Plate (1): Male of *A. doriae*; (A) Habitus dorsal view, (B-D) Left palp: B. Prolateral view, C. Ventral view, D. Retrolateral view. (Photos by A. Al-Khazali)

Plate (2): Female of *A. doriae*; (A) Habitus, dorsal view, (B) Epigynum, ventral view, (C) Sternum, (D) Carapace and arrangement of eyes. (Photos by A. Al-Khazali)

Plate (3): Habitat of *A. doriae*; A. Male (right) and female (left) hanging in the roof of a building in a rural region, Al-Naser district, Dhi Qar, Iraq. (Photos by A. Al-Khazali)

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تسجيل اول لعائلة عناكب القبو(*Artema doriae)* Pholcidae في العراق

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الخلاصة

تمثلت عائلة Pholcidae بالنوع *Artema doriae* (Thorell,1881) ويعد هذا النوع والعائلة التي يعود اليها كتسجيل لأول مرة في العراق. فضلا عن 23 عائلة من العناكب تم تسجيلها في العراق سابقاً.