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Larinia chloris and *Uroctea thaleri* represent new records of two genera for Iraq (Araneae: Araneidae, Oecobiidae)

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Abstract. Female specimens of the genera *Larinia* Simon, 1874 (Araneidae) and *Uroctea* Dufour, 1820 (Oecobiidae) are reported from southern Iraq, representing the first records of both these genera for the Iraqi spider fauna. The specimens were identified as *Larinia chloris* (Audouin, 1826) and *Uroctea thaleri* Rheims, Santos & van Harten, 2007. The first species was found near water, corroborating observations in the literature that it prefers riparian habitats. The characteristic features of the species are described and figured and illustrations of the habitat are presented.

Keywords: distribution, Middle East, spider, taxonomy

Zusammenfassung. *Larinia chloris* und *Uroctea thaleri* sind zwei neue Gattungsnachweise für den Irak (Araneae: Araneidae, Oecobiidae). Weibliche Individuen der Gattungen *Larinia* Simon, 1874 (Araneidae) und *Uroctea* Dufour, 1820 (Oecobiidae) werden aus dem südlichen Irak präsentiert und stellen die Erstinachweise der beiden Gattungen für den Irak dar. Die Individuen wurden als *Larinia chloris* (Audouin, 1826) und *Uroctea thaleri* Rheims, Santos & van Harten, 2007 identifiziert. Die erste Art wurde in der Nähe von einem Gewässer gefunden, was bisherige Angaben in der Literatur bestätigt. Die charakteristischen Merkmale der Arten werden beschrieben und illustriert sowie Bilder des Habitats gezeigt.

Araneidae is the third-largest spider family after Salticidae and Linyphiidae, with 3090 described species (World Spider Catalog 2022). In Iraq, there are only six species from four genera known so far: *Argiope lobata* (Pallas, 1772), *Argiope trifasciata* (Forsskal, 1775) (Al-Kazhali et al. 2022) *Mangora acalypha* (Walckenaer, 1802) (Reimoser 1913), *Hypsosinga albowittata* (Westring, 1851), *Singa neta* (O. Pickard-Cambridge, 1872) and *Singa semiatra* L. Koch, 1867 (Fomichev et al. 2018). The genus *Larinia* Simon, 1874 is currently represented by 61 species, but only *Larinia chloris* (Audouin, 1826) is known from the Middle East, namely Iran (Mozaffarian 2000) and Turkey (Kunt et al. 2012). With a record of *Oecobius* cf. *templi* from Erbil province, the family Oecobiidae was firstly recorded in Iraq by Fomichev et al. (2018). The genus *Uroctea* Dufour, 1820 currently comprises 21 described species, three of them known from Turkey and Iran (Zamani & Bosselaers 2020, World Spider Catalog 2022), which are adjacent to Iraq. While studying newly collected material from Dhi Qar province in southern Iraq, we found specimens that belong to the genera *Larinia* and *Uroctea*, which are not known from Iraq so far. The aim of the present paper is to report these newly found Iraqi specimens. Both species, *Larinia chloris* (Audouin, 1826) and *Uroctea thaleri* Rheims, Santos & van Harten, 2007, thus represent new genus and species records for the country and bring the total number of spider species known from Iraq up to 69.

Material and methods

All specimens were collected by hand by the first author from two districts in Dhi Qar province, southern Iraq (Fig. 1). Individuals of *L. chloris* were collected at night from one of the orchards located on the outskirts of Al-Nasr District, while individuals of *U. thaleri* were collected during the day from temporary agricultural lands in the countryside of Qalaat

Sukkar district. The specimens are deposited at the College of Basic Education, University of Sumer, Dhi Qar, Iraq (CBEUS). The epigynes were cleared in a KOH/water solution until the soft tissue was dissolved. Photographs were taken using a Nikon camera connected to a stereomicroscope. Photographs of the epigynes were taken in a dish with alcohol. Leg measurements are provided as: total (femur, patella, tibia, metatarsus, tarsus). All measurements are in mm. The maps (Fig. 1, 5) were made with Marble (<https://marble.kde.org/>; software version: 0.8.) and Shorthouse (2010). The sketches of the epigyne of *L. chloris* and the vulva of *U. thaleri* are based on several photographs from various angles and were made in Photoshop CS2 by T. Bauer.



Fig. 1: Map of Iraq showing the collecting locality (circle) in Dhi Qar province southern Iraq

Results

Larinia chloris (Audouin, 1826) (Figs 2-3)

Determination. Grasshoff (1970), Levy (1986).

Specimens examined. IRAQ, Dhi Qar Province, AL-Neser district, barbed wire on top of a chain link metal fence of a garden, at night, 31.5345°N, 46.1207°E, 12 m a.s.l. (Fig. 1), 2. Jul. 2021, 2 ♀♀, leg. A. M. Al-Khazali (CBEUS).

Comments. The general appearance fits the description in Grasshoff (1970) and Levy (1986). The very similar, and possibly synonymous, *Larinia phthisica* (C. L. Koch, 1871) can be differentiated by its larger body length (Grasshoff 1970).

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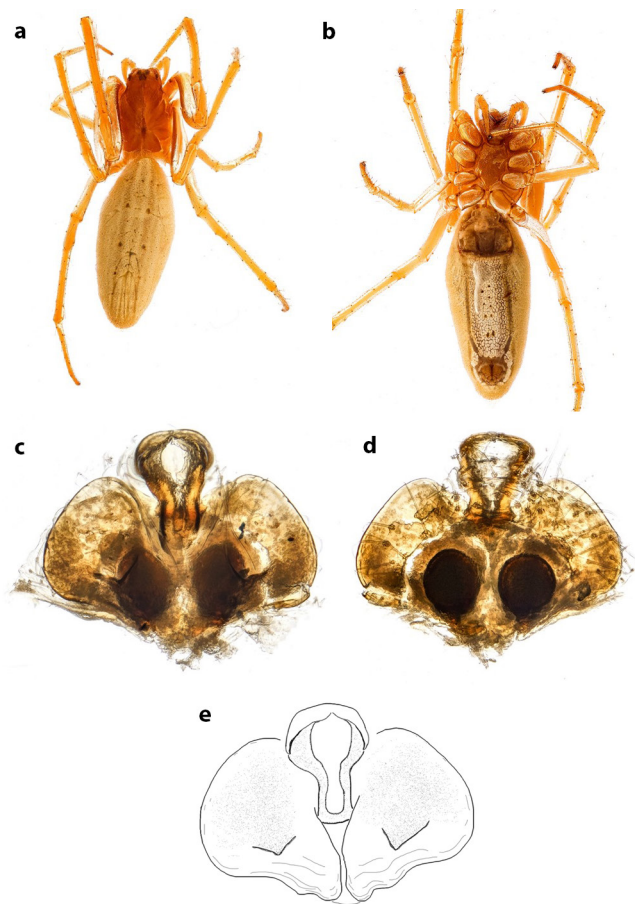


Fig. 2: *Larinia chloris* (Audouin, 1826), female. **a.** dorsal; **b.** ventral; **c.** macerated epigyne (scapus broken off), ventral; **d.** vulva, dorsal; **e.** epigyne (scapus broken off) (image T. Bauer)

Measurements. Body length 7.62; prosoma length 2.06, width 1.62; opisthosoma length 5.56, width 1.98. Leg measurements: I 11.06 (3.21, 0.78, 3.73, 2.75, 0.59), II 8.58 (2.67, 0.72, 2.46, 2.21, 0.52), III 4.11 (1.48, 0.42, 1.02, 0.82, 0.37), IV 8.94 (2.75, 0.62, 2.63, 2.29, 0.65).

Distribution. *Larinia chloris* is known from several countries: India, Iran, Israel, Syria, Turkey: Algeria, Bangladesh, Democratic Republic of the Congo, Egypt, Libya, Mozambique, South Africa, South Sudan, Uganda, Sri Lanka and Yemen (Alioua et al. 2020). We expected to find this species in Iraq, as it is recorded in three neighbouring countries. Thus, our new record comes from almost the centre of the known range of the species. For more details on its distribution see Alioua et al. (2020).

Habitat. This species was found during the night on barbed wire placed on top of a chain link metal fence along one of the palm orchards and Alfalfa cropland on the banks of the AL-Garraf river, one of the main branches of the Tigris River, which passes through the centre of Al-Nasr District. Kunt et al. (2012) collected specimens of *L. chloris* from one of the regions near the Euphrates River in Turkey, and Alioua et al. (2020) collected it from vegetation around the freshwater basin of Sebkhet El Melah and the Wadi Kef Doukhane in Algeria. In the current study, the species was also found in a habitat close to water. Accordingly, it seems that this species prefers riparian and other humid habitats with a dense vegetation cover.



Fig. 3: *Larinia chloris* (Audouin, 1826), habitat. **a.** palm orchard and Alfalfa cropland; **b, c.** live specimens in their orb webs

***Uroctea thaleri* Rheims, Santos & van Harten, 2007** (Fig. 4) **Determination.** Rheims et al. (2007), Kunt et al. (2009).

Specimens examined. IRAQ, Dhi Qar Province, Qalht Suker district, agricultural land (annual cropland), 31.857319°N, 46.081533°E, 12 m a.s.l., 18. Jan. 2020, 1 ♀ and 1 subadult ♀, leg. A. M. Al-Khazali (CBEUS).

Comments. The general appearance and colour pattern fully fit the description in Rheims et al. (2007). The diagnostic blind ending duct (Fig. 4) of the vulva is present, however, the usually curled fertilization ducts (Baum 1972, sub. *Uroctea* sp. indet. a) seem to be slightly shifted from their original position, possibly as a consequence of preparation. In addition, the atrium of the epigyne is slightly wider; however this is considered intraspecific variation.

Measurements. Body length 7.48; prosoma length 2.16, width 3.12; opisthosoma length 5.32 long, width 3.02. Leg measurements: I 7.49 (2.19, 0.95, 1.43, 2.03, 0.89), II 7.98 (2.43, 1.05, 1.30, 2.47, 0.73), III 8.28 (2.12, 0.64, 1.82, 2.55, 1.15), IV 8.18 (1.91, 1.03, 1.58, 2.36, 1.30).

Distribution. According to the World Spider Catalog (2022), *U. thaleri* is known from five countries so far, four of which are in Western Asia: Turkey, Iran, Israel and Yemen, and one in South Asia (India). In the current study, the new record extends the known distribution of this species in Western Asia (Fig. 5).

Habitat. All specimens were collected from under dry mud heaps in annual cropland located in rural areas, 17 km from the centre of Qalaat Sukkar district (Fig. 6). Rheims et al. (2007) reported specimens that were found under large stones on dry mountain slopes. These anecdotal observations suggest that *U. thaleri* prefers dry habitats with larger stones or other structures that can be used as a hideout.

Discussion

The Iraqi spider fauna currently includes only a few dozen species. According to Al-Khazali et al. (2021), 61 species have been described and reported, mostly by local researchers plus the three species recorded in their study. During the period following that publication, a few papers (e.g. Al-Khazali 2022, Al-Yacoub et al. 2021, Al-Yacoub & Al-Abbad 2022)

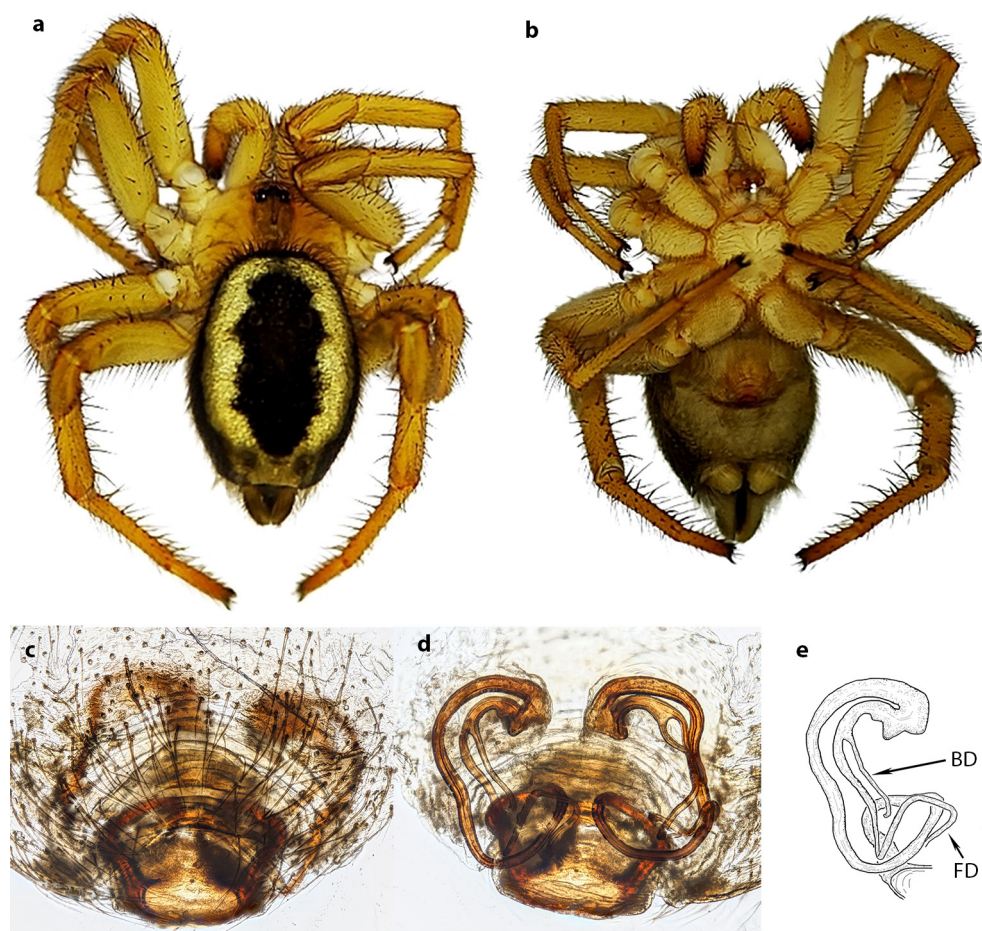


Fig. 4: Female of *Uroctea thaleri* Rheims, Santos & van Harten, 2007. **a.** habitus in dorsal view; **b.** habitus in ventral view; **c.** epigyne in ventral view; **d.** vulva, dorsal view; **e.** vulva, ducts, dorsal view, left side (BD = blind ending duct, FD = fertilisation duct, image T. Bauer)



Fig. 5: Map showing the known distribution of *Uroctea thaleri* Rheims, Santos & van Harten, 2007 (circles: previous records in the literature (World Spider Catalog 2022); square: new record in Iraq; ellipse: presumed wider distribution in Southern Turkey, see Kunt et al. (2009))



Fig. 6: Habitat of *Uroctea thaleri* Rheims, Santos & van Harten, 2007 in Iraq, the arrow marks the place where the specimens were collected

reported new records of spiders, and as a result the number of Iraqi spider species has risen to 68. However, there are still very large sampling gaps. Given the diverse landscape, land use and variations in altitude, several hundred spider species inhabiting the country can be expected. However, there are many regions of this country that have not been studied at all so far, which may be due to the small number of local researchers interested in this group of arachnids as well as the circumstances that the country has been through in general during the past few years. As a result, if any new spider material can be collected it is likely to contain species that were not previously recorded in Iraq or are even new to science.

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