

## A new record of the genus *Clubiona* (Araneae: Clubionidae) from Turkey

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### Abstract

This study reports a spider species which is new for the Turkish Araneo-fauna. The species, *Clubiona pseudosimilis* Mikhailov, 1990, was collected from Ardahan Province. Its characteristic features and photographs are presented. The distribution of species in Turkey is also mapped.

**Keywords** Anatolia; biodiversity; morphology; new record; taxonomy.

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### 1 Introduction

The Clubionidae (Wagner, 1887) family is represented by 661 species belonging to 19 genera within the large order Araneae (World Spider Catalog, 2022). The genus *Clubiona* Latreille, 1804 constitutes the majority of species (with 517 species) (World Spider Catalog, 2022). In Europe, the number of recorded species of this genus is 45, of which 38 are known from both sexes (Nentwig et al., 2022). Within Turkish spider fauna, with a total of 55 families and 1247 species, Clubionidae is represented by 13 species of 2 genus. *Clubiona* genus is represented by 12 species (Danışman et al., 2022). In this study, we add one spider species to the spider fauna of Turkey. Thus, the number of species belonging to the genus *Clubiona* is increased to 13.

### 2 Material and Methods

Two male specimen were examined in this study. Samples were collected from two different regions of Turkey, the Eastern Anatolian region and the Marmara region. They were collected with the help of a hand aspirator under the stone. Identifications were made by use of Leica S8APO stereomicroscope. Samples were photographed using a Canon EOS 250D camera attached to a Leica S8APO stereomicroscope. The number of photos taken varied according to specimen size (usually between 5–15). Images were montaged using Combine ZM images tacking software and processed in Photoshop CC 2019. Scanning electronmicroscopy

microphotographs were made with a JEOL JSM-5600 at Kırıkkale University. Specimens were preserved in 70% ethanol. The map in this study was generated with the online tool SimpleMappr (Shorthouse, 2010) (Fig. 1). Abbreviations used in the text are as follows: Cx, coxa; Tr, trochanter; Fe, femur; Pa, patella; Ti, tibia; Mt, metatarsus; Ta, tarsus. All measurements are given in millimeters. Specimens are deposited in the collection of the Arachnological Museum of Kırıkkale University (KUAM).



Fig. 1 Distribution of *Clubiona pseudosimilis* (red star) and *Clubiona similis* (blue star).

### 3 Results

Family **Clubionidae** Wagner, 1887

Genus ***Clubiona*** Latreille, 1804

***Clubiona pseudosimilis*** Mikhailov, 1990

*Clubiona pseudosimilis* Mikhailov, 1990b: 311, f. 16-20 (D ♂♀).

*Clubiona pseudosimilis* Bosmans et al., 2017: 22, f. 103-110 (♂♀).

**Material examined:** 1♂ (KUAM-CLB-2021/10). Turkey, Ardahan Province, Posof District, Yeniköy Village, 41°27'03"N, 42°47'49"E, 2008 m, 03.08.2021, from under the stone, Ş. Bahar Can leg.

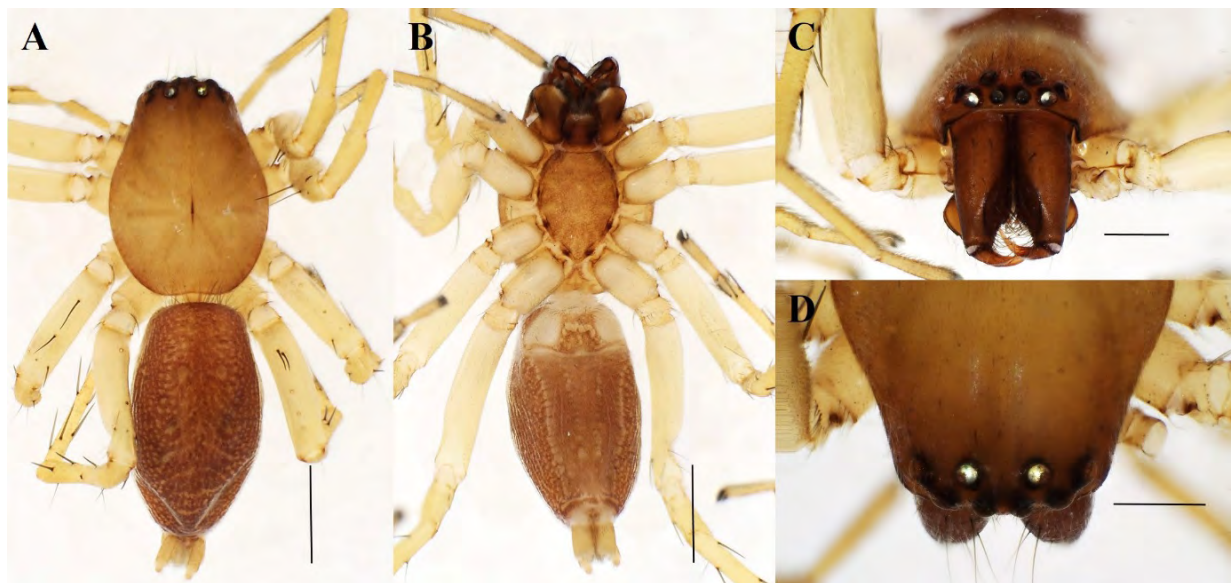
**Comparative material:** *Clubiona similis* L. Koch, 1867. 1♂ (KUAM-CLB-2018/6). Bursa Province, Osmangazi District, 40°17'47"N, 29°01'19"E, 183 m, 07.06.2015, from under the stone, T. Danişman leg.

**Species identification:** This species is included in the similis group. In addition to *Clubiona pseudosimilis* there are three species of this group currently known from Turkey: *Clubiona neglecta* O.P.-Cambridge, 1862, *Clubiona pseudoneglecta* Wunderlich, 1994 and *Clubiona similis* L. Koch, 1867. It resembles *C. similis* but can be distinguished from them by having considerably short erembolus and with form of tibial apophysis (Figs 2-4).

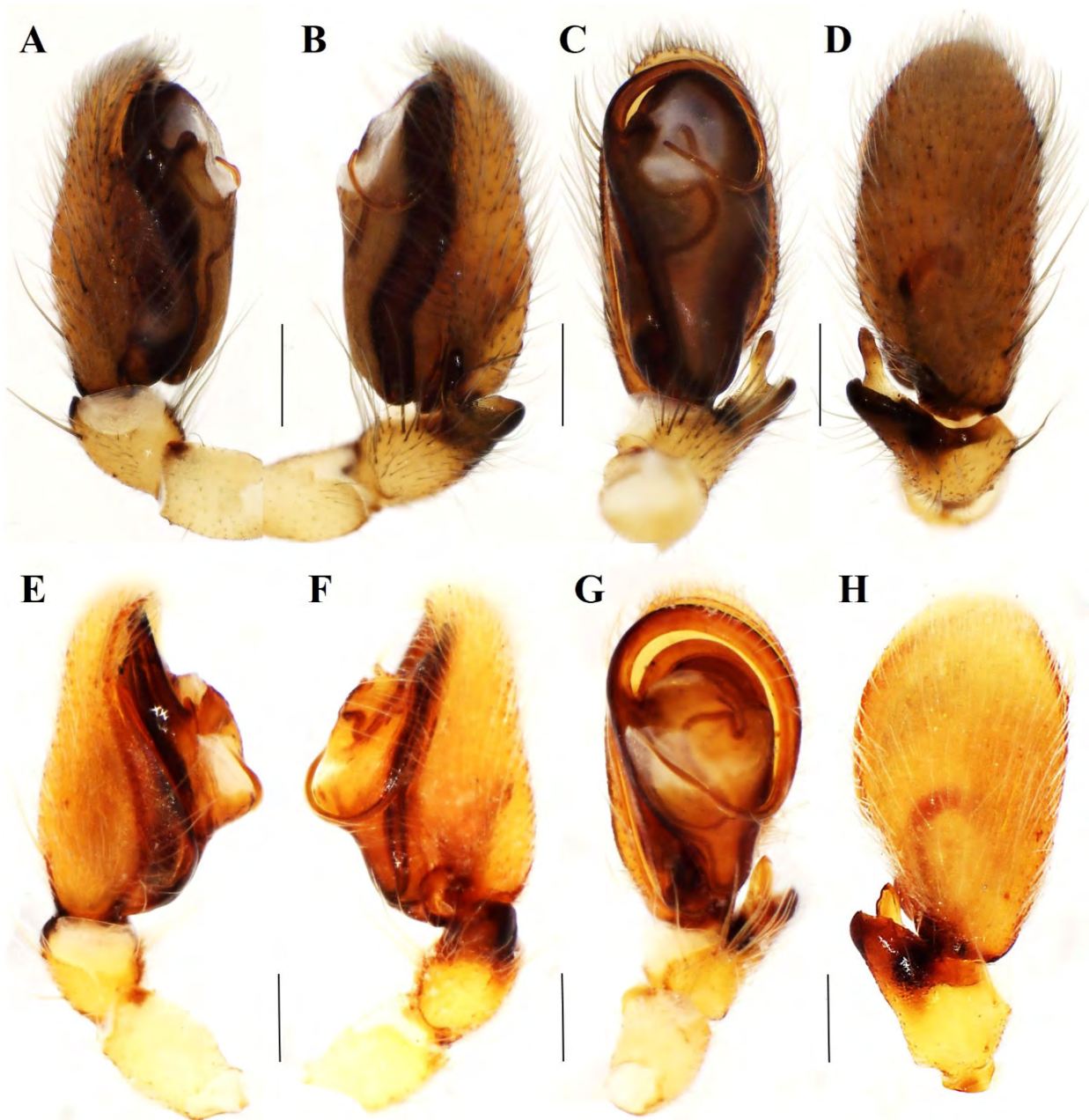
**Distribution:** Algeria, Portugal, Greece (Crete), Caucasus (World Spider Catalog, 2022).

**Redescription:** Male (KUAM-CLB-2021/10). Total length 5.2. Carapace 2.4 long, 1.8 wide. 1.15 height. Abdomen 2.8 long, 1.5 wide, 1.3 height. Oculararea 1.0 long. Chelicerae 1.1 long, 0.5 wide. Sternum 1.3 long, 0.9 wide. Leg lengths: I 6.65 (Cx: 0.65, Tr: 0.25, Fe: 1.6, Pa: 0.7, Ti: 1.6, Mt: 1.15, Ta: 0.7), II 7.0 (Cx: 0.6, Tr: 0.2, Fe: 1.7, Pa: 0.85, Ti: 1.7, Mt: 1.2, Ta: 0.75), III 5.65 (Cx: 0.55, Tr: 0.2, Fe: 1.45, Pa: 0.6, Ti: 1.05, Mt: 1.25,

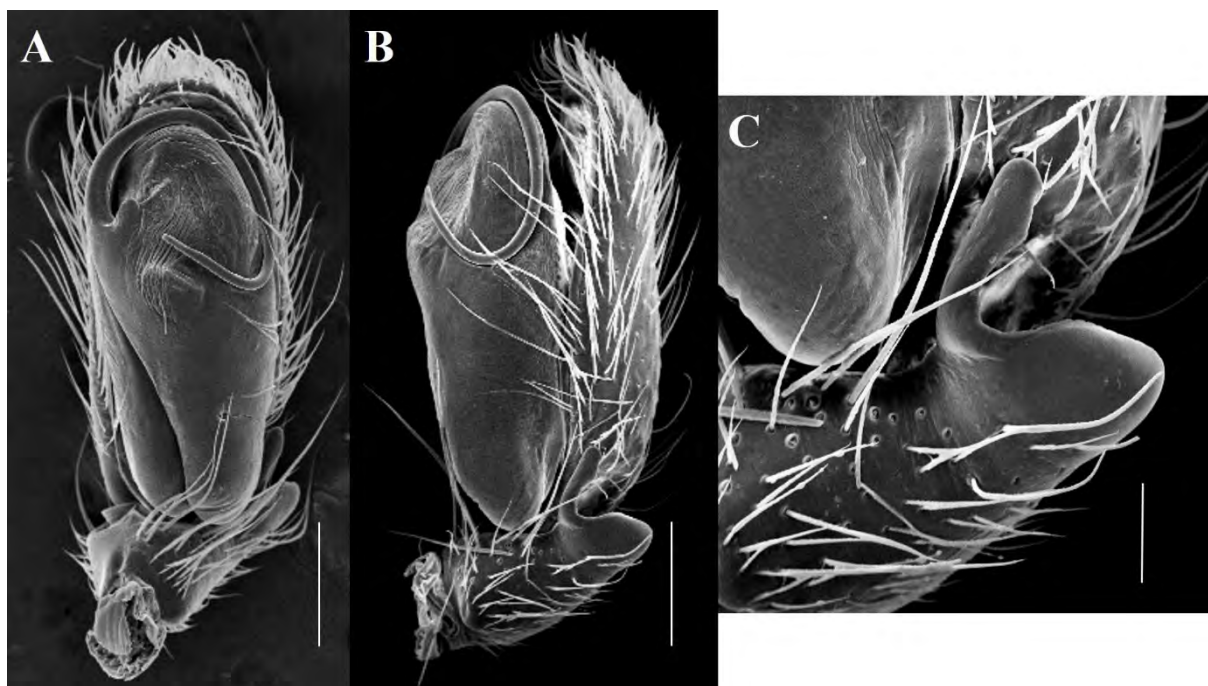
Ta: 0.55), IV 8.35 (Cx: 0.75, Tr: 0.2, Fe: 2.0, Pa: 0.8, Ti: 1.8, Mt: 2.05, Ta: 0.75). Prosoma yellowish brown, high its anterior part and darker than the posterior part (Fig. 2A). Clypeus narrow, dark brown. Chelicerae long, dark brown, with intensely hairs near teeth (Fig. 2C). Sternum light, labium and maxilla light brown (Fig. 2B). Abdomen brown, with yellowish brown pattern and its anterior part densely covered with long hairs (Fig. 2A). Legs light yellow, covered with long thick black hairs (Figs. 2A-B). Pedipalp yellowish brown, covered with long light color hairs (Figs. 3A-D). Tibia light brown, covered with long hairs and with long apophysis that dark brown, with thick base and thin tip (Fig. 3C, Figs. 4B-C). Embolus thick at base, medially long and curved along its course, originates at 10:00 o'clock position and tapering towards the tip (Fig. 3C, Fig. 4A).



**Fig. 2** *Clubiona pseudosimilis*, habitus, male, A. dorsal view, B. ventral view, C. idem, frontal view, D. ocular area, dorsal view (Scale: A-B 1.0 mm, C-D 0.5 mm).



**Fig. 3** Male, palp, *Clubiona pseudosimilis* (A-D), A-B. Lateral view, C. ventralview, D. Dorsal view, *Clubiona similis* (E-H), E-F. lateral view, G. ventral view, H. dorsal view (Scale: 0.2 mm).



**Fig. 4** *Clubiona pseudosimilis*, SEM microphotographs of male, A. ventral view, B. lateral view, D. retrolateral tibial apophysis view (Scale: 0.2 mm).

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