

Research article

Scotina celans (Blackwall, 1841), a new record for the spider fauna of Türkiye (Araneae, Liocranidae)

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Abstract: *Scotina celans* (Blackwall, 1841) is recorded for the first time from Türkiye. Characteristic features and photographs of copulatory organs are presented together with information on the geographical distribution of the species.

Keywords: Anatolia, araneofauna, Eskişehir, spiny-legged sac spiders

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Introduction

Scotina Menge, 1873 is one of the 35 genera of the family Liocranidae Simon, 1897, consisting of four species distributed in and around Europe. These are *S. celans* (Blackwall, 1841), *S. gracilipes* (Blackwall, 1859), *S. occulta* Kritscher, 1996 and *S. palliardii* (L. Koch, 1881) (Nentwig et al., 2024). The distribution of *S. palliardii*, the only species of the genus recorded from Türkiye, extends to Korea (Topçu et al., 2007; WSC, 2024).

The genus is characterised by almost equal eye diameters, concave anterior and posterior eye rows, 6–10 pairs of ventrally located spines on tibia I, and three pairs on metatarsus I.

The aim of this paper is to report *S. celans* as a new record for the spider fauna of Türkiye. Photographs and brief descriptions of the copulatory organs of both sexes are given in the text.

Material and Methods

All specimens examined were collected by sifting leaf litter on the ground under oak trees from

Eskişehir, Türkiye (Figure 1). The specimens were preserved in 96% ethanol and deposited in the Arachnological Museum of Kırıkkale University (KUAM). Specimens were photographed using a Canon EOS 250D camera attached to the Leica S8APO stereo microscope. The number of photos taken varies according to the size of the specimens. Images were stacked using 'Combine ZM' image stacking software and edited with the 'Photoshop CC 2019' software. Maceration of the female copulatory organ was followed according to the protocol proposed by Alvarez-Padilla and Hormiga (2008). All measurements are in millimetres (mm). Terminology for the copulatory organs follows Almquist (2006). The map showing the collecting locality of the specimens in this study was generated with the SimpleMappr <https://www.simplemappr.net/api> (Shorthouse, 2010).



Figure 1. Collecting locality of *Scotina celans* in Türkiye

Results

Family **Liocranidae** Simon, 1897

Genus *Scotina* Menge, 1873

Scotina celans (Blackwall, 1841) Figures 2-3

Material examined: 2♂, 1♀ Eskişehir Province, Odunpazarı District, Yenisoğça Village (39°37'11"N 30°21'12"E), asl c. 920 m, litter sifting, 10 November 2023, leg. E. Manav & K.B. Kunt.

Description:

Male. Measurements: Total length 3.2. Carapace 1.5 long, 1.3 wide. Abdomen 1.7 long, 1.1 wide. Ocular area 0.4 long. Chelicerae 0.45 long, 0.25 wide. Sternum 1.0 long, 0.7 wide. Leg formula 4123. Leg lengths: Leg I 5.15 (1.35, 0.5, 1.4, 1.05, 0.85), Leg II 4.45 (1.25, 0.45, 1.1, 0.95, 0.7), Leg III 4.2 (1.1, 0.45, 0.95, 1.05, 0.65), Leg IV 5.6 (1.4, 0.5, 1.3, 1.6, 0.8).

Prosoma yellowish brown. The stripe extending from the middle of the posterior median eyes to the posterior end of the carapace and the stripe on both sides of the carapace are light coloured. Between these, on the right and left, there are thicker blackish stripes (Figures 2A, C). The thoracic region about three times wider than the cephalic region. Both rows of eyes concave. Length between posterior median eyes longer than anterior median eyes (Figures 2F-G). Chelicerae, gnathocoxae, labium and sternum brownish yellow. Anterior surface of the chelicerae with blackish fine long setae. Sternum

heart-shaped (Figures 2B, D). Anterior side of labium, and margins of sternum relatively darker in colour. Legs yellowish brown, tibiae IV and metatarsi IV reddish. Tarsi with two claws without scopulae and claw tufts. Tibiae II and IV with seven and four ventral spines, respectively. Metatarsi I and II with five and four ventral spines, respectively. Abdomen dark laterally. Midline with a yellowish straight line extending halfway down the abdomen, followed by five reddish-coloured chevrons to the posterior of the abdomen (Figures 2A, C).

Palp without conductor. Embolus long, s-shaped; base broad and angular. Tegular apophysis hook-shaped. Retrolateral tibial apophysis triangular. Base broad. Pointed tip slightly oriented dorsally (Figures 3A-D).

Female. Measurements: Total length 3.5. Carapace 1.6 long, 1.2 wide. Abdomen 1.9 long, 1.3 wide. Ocular area 0.4 long. Chelicerae 0.5 long, 0.25 wide. Sternum 0.9 long, 0.8 wide. Leg formula 4123. Leg lengths: Leg I 4.45 (1.3, 0.5, 1.25, 0.85, 0.55), Leg II 3.95 (1.15, 0.5, 1.0, 0.8, 0.5), Leg III 3.6 (1.0, 0.45, 0.75, 0.9, 0.5), Leg IV 5.3 (1.65, 0.45, 1.45, 1.05, 0.7).

There are no morphological differences between males and females. Only the gastral area including the epigyne is more reddish in females than in males. Epigyne is indistinct before maceration. Slightly sclerotised (Figure 2E). Parts distinct after maceration.

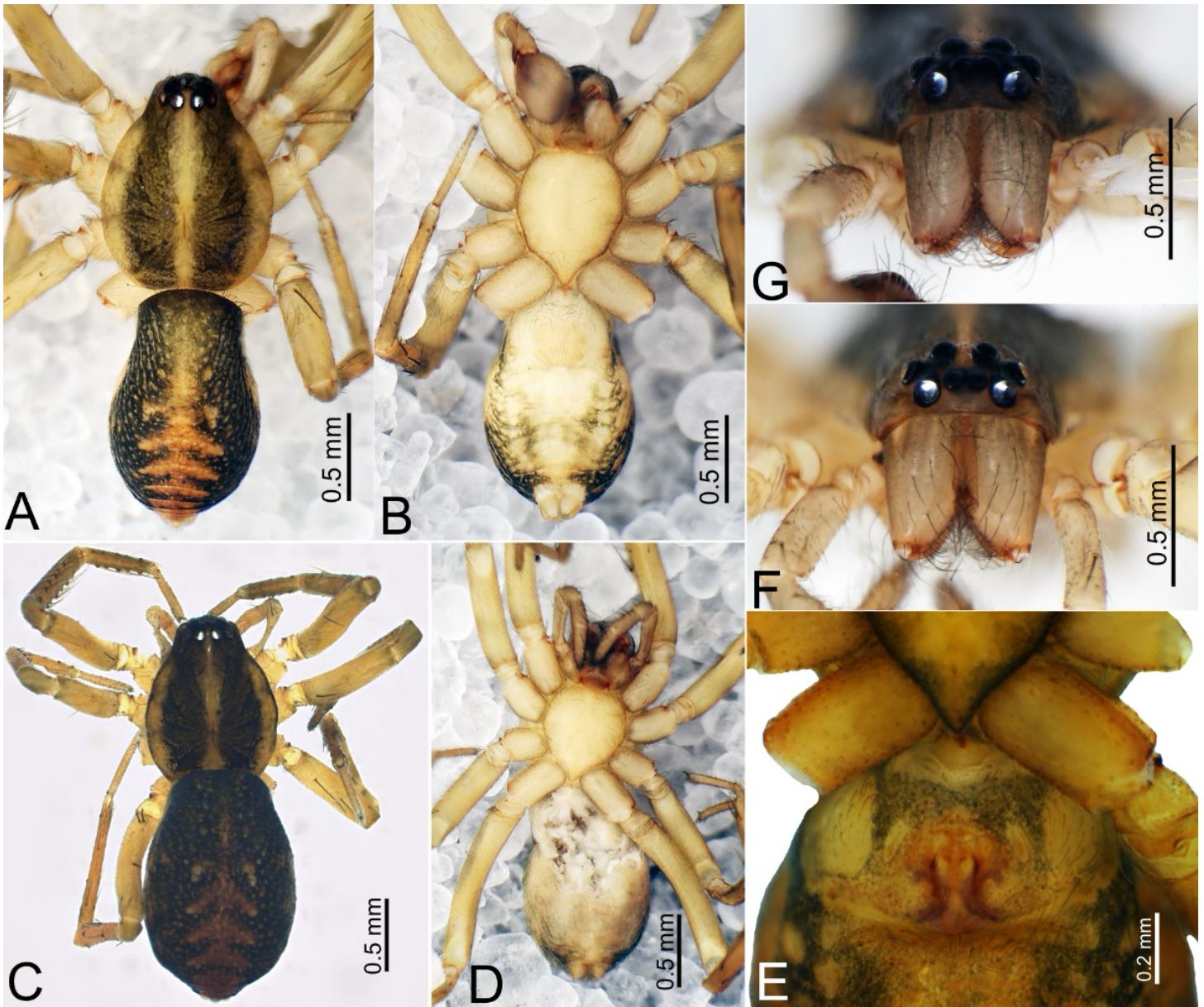


Figure 2. *Scotina celans* A. Habitus of male, dorsal view B. Ditto, ventral view C. Habitus of female, dorsal view D. Ditto, ventral view E. Gastral area of female, ventral view F. Ocular area, female, frontal view G. Ditto, male, frontal view

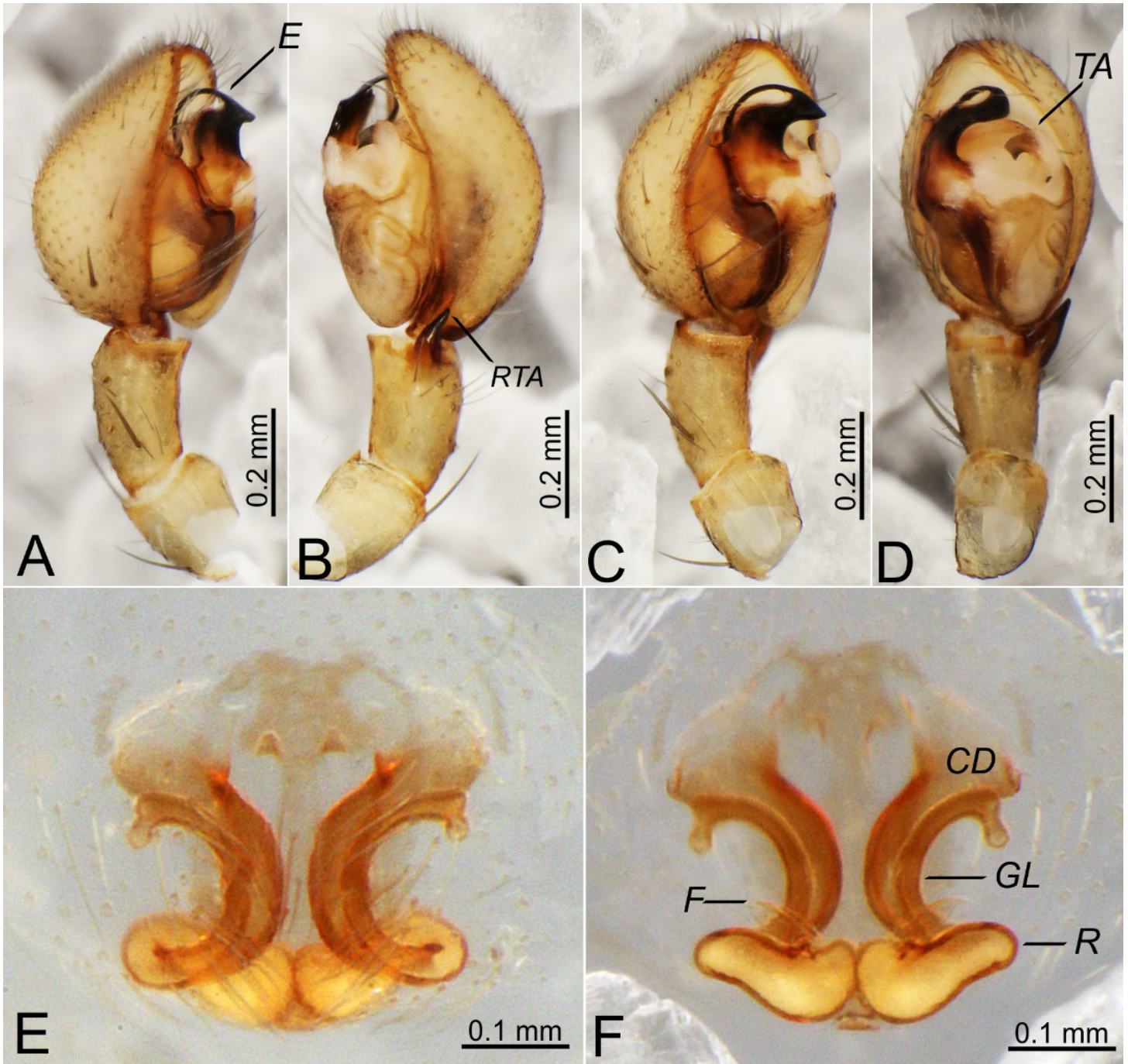


Figure 3. Male palp of *Scotina celans* A. prolateral view B. retrolateral view C. nearly prolateral view D. ventral view E. Epigyne, ventral view F. Vulva, dorsal view Abbreviations: CD copulatory duct, E embolus, F Fertilization duct, GL gland, R receptacle, RTA retrolateral tibial apophysis, TA tegular apophysis.

There is a heart-shaped opening in the region where the copulatory ducts diverge anteriorly (Figure 3E). Glands bend posteriorly and merge with receptacles. Receptacles kidney shape, symmetrical and in contact with each other. Fertilisation ducts as thin tubes extending laterally from the anterior inner edges of the receptacles (Figure 3F).

General Distribution: Austria, Belgium, Bulgaria, Belarus, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Great Britain, Hungary, Ireland, Italy, Luxemburg, Netherlands, Norway, Poland, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine (Helsdingen, 2021).

Ethical Approval

All applicable international, national, and/or institutional guidelines for the care and use of animals were followed.

World Spider Catalog. (2024). World Spider Catalog. Version 25. Natural History Museum Bern. Online at <http://wsc.nmbe.ch> (accessed on 24.01.2024).

Conflicts of Interest

The authors declare that they have no conflict of interest.

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