

# FIRST RECORD OF *THERIDIOSOMA GEMMOSUM* (ARANEAE, THERIDIOSOMATIDAE) IN THE ROMANIAN FAUNA

AUGUSTIN I. NAE

*Abstract.* The Araneae species *Theridiosoma gemmosum* is cited for the first time in Romanian fauna. Also, the genus *Theridiosoma* and Theridiosomatidae family are new recorded for Romanian fauna. The original illustrations contribute to a better knowledge regarding morphological characterization of the species. The currently known distribution of this species is also given.

*Key words:* *Theridiosoma gemmosum*, Araneae, new record, Romania.

## 1. INTRODUCTION

According to the World Spiders Catalog (2024) (WSC), the species *Theridiosoma gemmosum* has a Holarctic distribution including North America, Europe, Turkey, the Caucasus, Iran and Japan. Although the presence of this species is reported in almost all of Europe, except Finland, the northwestern European part of Russia, Latvia and the western part of the Balkan peninsula (Serbia, Bosnia-Herzegovina, Montenegro, North Macedonia and Albania), in Romania has not been found until now. In the immediate vicinity of Romania, the species is reported from Bulgaria (BLAGOEV *et al.*, 2018), Croatia (MILOSEVIC B., 2002), Slovenia (KOSTANJŠEK R., KUNTNER M., 2015), Hungary (LOKSA I., 1972; SAMU F., SZINETÁR C., 1999) and the Czech Republic (RŮŽIČKA V., ŘEZÁČ M., 2022a). We found this species in the southwestern part of Romania, Caraș-Severin County, during a study carried out by a team of researchers from the “Emil Racoviță” Institute of Speleology from Bucharest, on the artificial cavities represented by tunnels and mines, led by dr. Rodica Plăiașu. The only specimen found, a male, was collected by my colleague, dr. Ioana Nae.

## 2. MATERIAL AND METHOD

This small species of spider, was collected at the entrance of Melia Mine located near to locality Ocna de Fier in the Dognecea Mountains, directly from the wall. Only a single male was collected.

The specimen was preserved in 70% ethylic alcohol, examined and determined using a Zeiss Stemi 2000 stereomicroscope. The drawings for *Theridiosoma gemmosum* were made an Olympus CH2 microscope with drawing attachment. The pictures were made by us using a Zeiss Stemi 508 stereomicroscope with AxioCam 208 and Zen software (for image acquisition). For the identification we used the identification keys from the site: <https://araneae.nmbe.ch/> and for description I used the works of WIEHLE, H., (1931) and SIMON, E., (1881a). Nomenclature follows World Spider Catalog, 2024. Measurements are given in millimetres.

The studied spider is deposited in the collection of “Emil Racoviță” Institute of Speleology, Bucharest.

### 3. NEW RECORDED SPECIES

Family THERIDIOSOMATIDAE Simone, 1881

*Theridiosoma* O. Pickard-Cambridge, 1879

***Theridiosoma gemmosum*** (L. Koch, 1877)

*Material examined*: one specimen, male (1♂, 30.06.2023) from Galeria Melia, the entrance, Banat region, 270 m altitude, captured directly from the wall, using tweezers. Coordinate: 45,352834/ 21,78232. Legit by Ioana Nae.

*Diagnosis*: The species is easily recognised by a spherical, mostly silver-shining opisthosoma; the male is distinguished by the shape and the size of the pedipalp which is very large, almost as large as the prosoma and the female by the shape of epigyne, in the form of a shallow groove and covered by a strongly chitinized protrusion.

*Colour*: Male (Fig. 1). Prosoma is light brown, with fine net-like dark color pattern. The eye region darker. Dark brown sternum with a light yellowish median area. Chelicerae yellowish-brown. Legs yellowish-brown. Opisthosoma light brown. It has a pattern of pearlescent, shiny spots that alternate with dark, blackish areas. Sternum with sternal organ.

*Male*. Palp (Figs. 3–4): Male palp is large, almost as large as prosoma. Very complex. Femur short, straight; small patella with a long, dorsal hair. The tibia is widened apically, having a bell shape. The tarsus (Cymbium) (Fig. 2) is narrow, curved, lamellar in shape and covers only a small part of the bulb. In the basal part on the outside, it presents a lobe, more or less triangular in shape, paracymbium. On its opposite side, it presents a hook-shaped apophysis, dark in color. The bulb is very large, very complex in the terminal part.

*Dimensions*: Male Total length: 1.512 mm. Cephalotorax (prosoma): length 0.612 mm, width 0.6 mm. Abdomen (opisthosoma): length 0.9 mm, width 0.812 mm.

The legs measurements are presented in Table 1.

Table 1

Leg measurements (length in mm)

Leg	Femora	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.56	0.225	0.53	0.425	0.275	2.015
II	0.56	0.212	0.375	0.325	0.275	1.747
III	0.35	0.137	0.2	0.26	0.212	1,159
IV	0.5	0.15	0.287	0.312	0.212	1.46

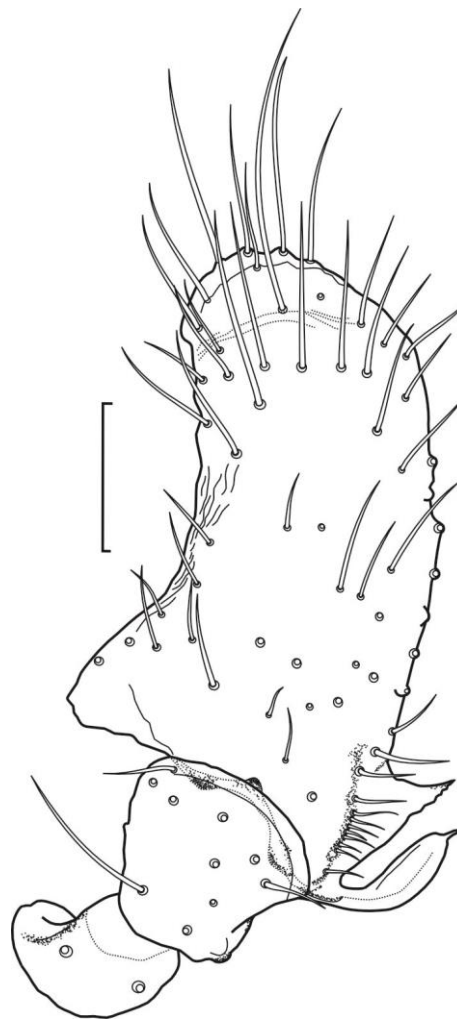
Figure 1. *Theridiosoma gemmosum*, habitus, male.

Figure 2. Cymbium, Scale line=0.1 mm



Figure 3. Pedipalp, ventral view, Scale line=0.1 mm



Figure 4. Pedipalp, dorsal view, Scale line=0.1 mm

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#### REFERENCES

- BLAGOEV, G., DELTSHEV, C., LAZAROV, S., NAUMOVA, M., *The spiders (Araneae) of Bulgaria*. Version: August 2018. National Museum of Natural History, Bulgarian Academy of Sciences. Online at <http://www.nmnh.com/spiders-bulgaria/> (accessed on 28.08.2024), 2018.
- KOSTANJŠEK, R., KUNTNER, M., *Araneae Sloveniae: a national spider species checklist*. *ZooKeys* **474**: 1–91, 2015.
- LOKSA, I., *Pokok II-Araneae II. Fauna Hungariae* **109**: 1–112, 1972.
- MILOSEVIC, B., *Aranea – Popis vrsta – Checklist*. *Hrvatsko entomološko društvo – Inventar entomofaune Hrvatske* [Aranea – List of species – Checklist. Croatian Entomological Society – Inventory of Croatian entomofauna], 2002.
- RŮŽIČKA, V., ŘEZÁČ, M. *Seznam pavouků České republiky. List of spiders of the Czech Republic*. Online at <https://www.arachnology.cz/seznam-pavouku-cr26.html> and <https://www.arachnology.cz/en/seznam-pavouku-cr-26.html>, 2022a.
- SAMU, F., SZINETÁR, C., *Bibliographic check list of the Hungarian spider fauna*. *Bulletin of the British Arachnological Society* **11**: 161–184, 1999.
- SIMON, E., *Les arachnides de France. Tome cinquième, première partie*. Roret, Paris, pp. 1–180, pl. 25, 1881a.
- WIEHLE, H., *Spinnentiere oder Arachnoidea. 27. Familie. Araneidae*. *Die Tierwelt Deutschlands* **23**: 47–136, 1931.
- WORLD SPIDER CATALOG. *World Spider Catalog. Version 25.5*. Natural History Museum Bern, online at <http://wsc.nmbe.ch>, accessed on 28.08.2024. doi: 10.24436/2, 2024.

“Emil Racoviță” Institute of Speleology of Romanian Academy  
Calea 13 Septembrie nr. 13, Sect. 5, Bucarest, Romania  
Emails: [augustin.nae@iser.ro](mailto:augustin.nae@iser.ro), [augustin.iser@gmail.com](mailto:augustin.iser@gmail.com)