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A new species of the mygalomorph spider genus *Raveniola* Zonstein, 1987 (Araneae; Nemesiidae) from Turkey

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Abstract: A new *Raveniola* Zonstein, 1987 (Araneae; Nemesiidae) species, *Raveniola arthuri* n. sp., is described. The diagnostic characters of the new species are given.

Key words: *Raveniola*, Nemesiidae, new species, Turkey

Mygalomorf örümcek cinsi *Raveniola* Zonstein, 1987 (Araneae; Nemesiidae)'nın Türkiye'den yeni bir türü

Özet: Yeni bir *Raveniola* Zonstein, 1987 (Araneae; Nemesiidae) türü, *Raveniola arthuri* n. sp. tanımlanmıştır. Yeni türün diagnostik karakterleri de verilmiştir.

Anahtar sözcükler: *Raveniola*, Nemesiidae, yeni tür, Türkiye

Introduction

The genus *Raveniola* is one of the 41 genera currently belonging to the family Nemesiidae. It was described by Sergei Zonstein in 1987 and contains 18 species predominantly distributed in the Palaearctic region. Although it is most common in Central Asia and China, it is also known from adjacent Azerbaijan [*R. hyrcanica* Dunin, 1988], Georgia [*R. recki* (Mcheidze, 1983)], and Iran [*R. niedermeyeri* (Brignoli, 1972); *R. vonwicki* Zonstein, 2000] (Zonstein, 1987; Platnick, 2009). To date, only *Raveniola micropa* (Ausserer, 1871) has been recorded from Turkey (Bayram et al., 2008).

In this brief paper, a new *Raveniola* species from the southeast Anatolian region of Turkey is described.

Material and methods

Three males of *Raveniola arthuri* n. sp. were collected by means of a hand aspirator from Diyarbakır province in the southeast Anatolian region of Turkey. The identification was made by means of a SZ61 Olympus stereomicroscope. The specimens were preserved in 70% ethanol and deposited in the Museum of the Turkish Arachnological Society. Color is described from ethanol preserved specimens. All measurements are in millimeters.

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AL, abdominal length; **CL**, carapace length (excluding the length of chelicerae); **CW**, carapace width; **LL**, labium length; **LW**, labium width; **SL**, sternum length; **SW**, sternum width; **ALE**, anterior lateral eyes; **AME**, anterior median eyes; **PLE**, posterior lateral eyes; **PME**, posterior median eyes; **ALEd**, anterior lateral eyes diameter; **AMEd**, anterior median eyes diameter; **PLEd**, posterior lateral eyes diameter; **PMEd**, posterior median eyes diameter; **LPLS**, length of posterior lateral spinnerets; **LPMS**, length of posterior median spinnerets; **Ta**, tarsus; **Me**, metatarsus; **Ti**, tibia; **Pa**, patella; **Fe**, femur; **Tr**, trochanter; **C**, coxa; **D**, dorsal; **Pl**, prolateral; **Rl**, retrolateral; **V**, ventral; **MTAS**, Museum of Turkish Arachnological Society, Ankara, Turkey.

Results

Raveniola arthuri n. sp. Figures 1 and 2

Type material. Holotype: TURKEY: Male, “Diyarkabır Province, Eğil District, 857 m, 38°15'28.27"N; 40°5'2.44"E, 13.IV.2008, under stones, leg. E.A. Yağmur, E. Tezcan, and V. Ülgezer” (MTAS/Nem: 0804-01).

Paratype: TURKEY: 2 males, “Same data as holotype” (MTAS/ Nem: 0804-02&03).

Derivatio nominis: The new species is dedicated to Arthur Decae, who has made a great contribution to knowledge of mygalomorph spiders and is a respected friend of the first author.

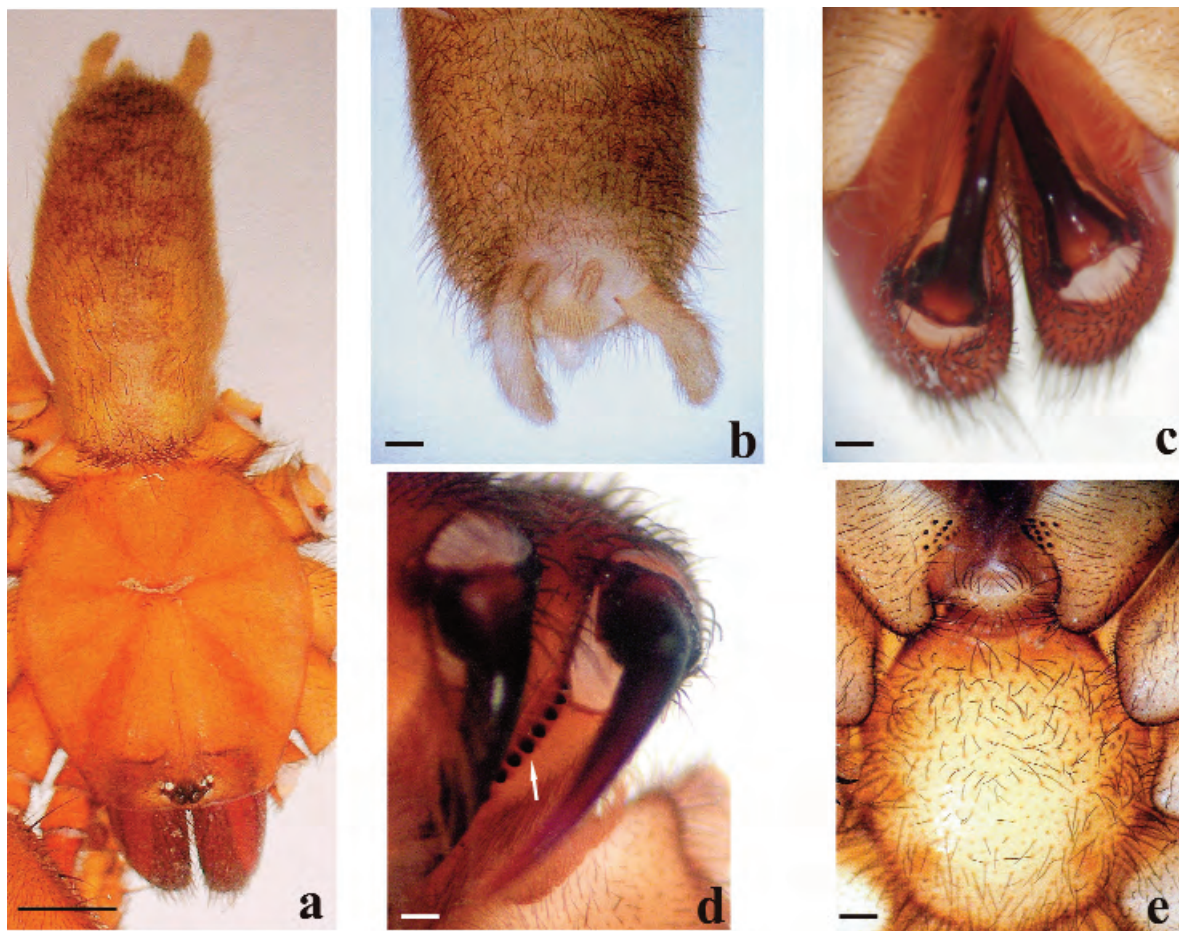


Figure 1. (a) *Raveniola arthuri* n. sp., dorsal view (scale bar: 1.2 mm); (b) Ditto, ventral view of abdomen and spinnerets (scale bar: 0.5 mm); (c) Chelicerae without rastellum (scale bar: 0.1 mm); (d) Receptacle of left chelicera (scale bar: 0.1 mm); (e) Sternum, labium and maxillae, ventral view (scale bar: 0.5 mm).

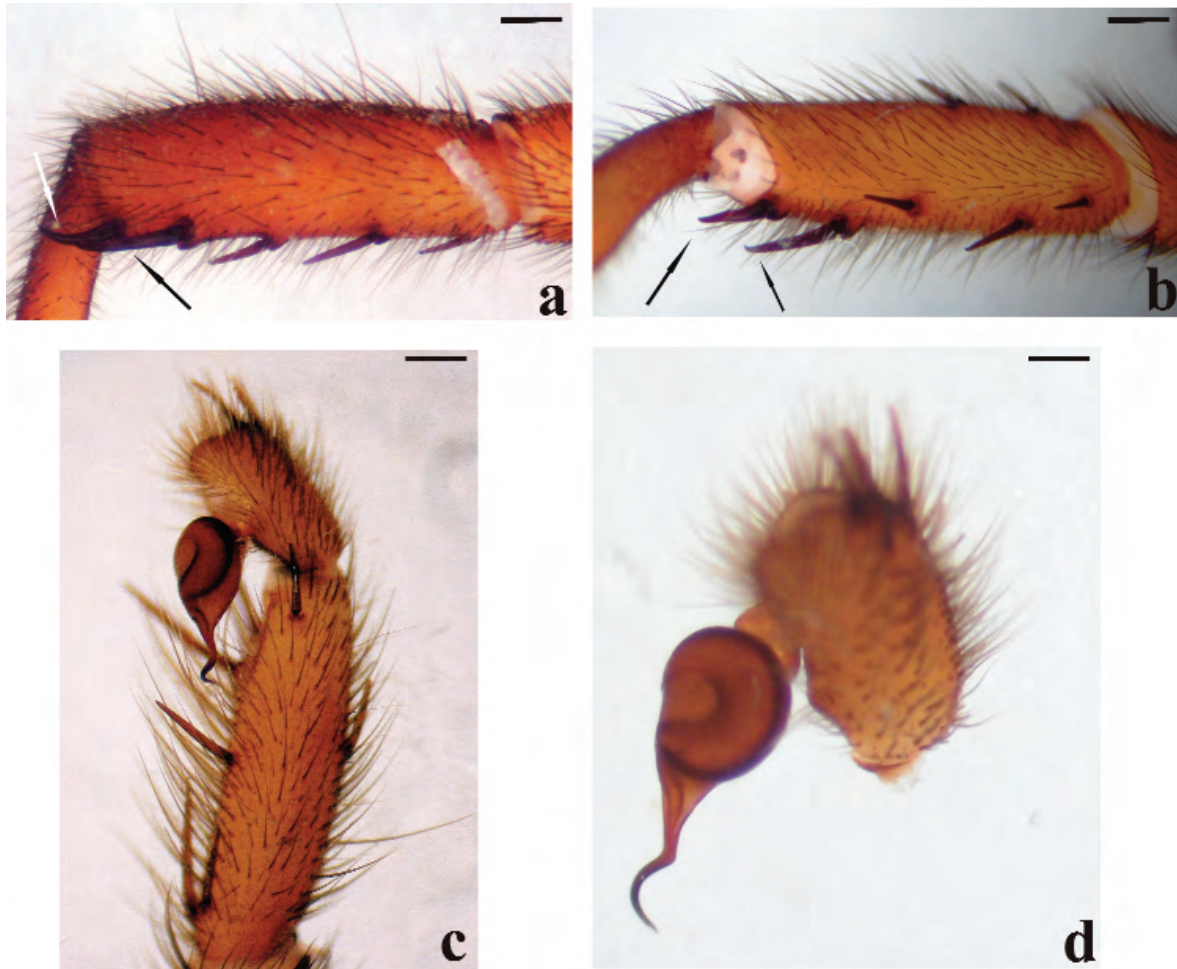


Figure 2. (a); Tibia I (left), with 2 long and strong spines (scale bar: 0.5 mm) (b); Tibia I (right), with 2 long and strong spines (scale bar: 0.5 mm) (c); Left palpal tibia, cymbium and bulb, retrolateral view (scale bar: 0.5 mm) (d); Left palpal cymbium and bulb, lateral view (scale bar: 0.25 mm).

Diagnosis: *R. arthuri* n. sp. can be distinguished from another Turkish species, *R. micropa* (Ausserer 1871), by having 2 strong spines on tibia I (absent in *R. micropa*). From other *Raveniola* species it can be distinguished due to the shape of the male palp. The male palp of the new species is similar to those in *R. hyrcanica* (Dunin, 1988), known from southern Azerbaijan, but can be easily separated due to the thinner corkscrew embolus.

Description: Measurements (Holotype ♂ /Paratype ♂♂ n = 2): AL, 5.7/5.4; CL, 4.8/4.7, CW, 4.1/3.9; LL, 0.81/0.79; LW, 0.59/0.57; SL, 2.3/2.1; SW, 2.2/2.2; ALEd, 0.17/0.16; AMEd, 0.10/0.10; PLEd, 0.12/0.11; PMed, 0.13/0.12; LPLS, 1.6/1.5; LPMS, 0.5/0.4

Carapace dorsally yellowish-light brown, with scarce brownish setae. Eye tubercle blackish-dark brown. Chelicerae reddish-dark brown. Sternum, labium, maxillae and legs light brown, ventrally. Abdomen dorsally light brown, with blackish cloudy maculae and brownish setae (Figure 1a). Ventral surface of abdomen and spinnerets yellowish-pale brown, with dense brownish setae (Figure 1b). Fovea broad, recurved (Figure 1a). Chelicerae without rastellum, but has some strong setae (Figure 1c). Receptacles of chelicerae with 11-12 strong denticles (Figure 1d). Maxillae with 11+12 cuspules. Labium without cuspules. Three pairs of cloudy sternal sigilla present (Figure 1e). Legs tarsi without spines. Tips of tibiae I have 2 long, strong spines (Figure 2a, b). Legs

Table 1. *Raveniola arthuri* n. sp. Leg spination.

Leg	I	II	III	IV
Fe	2D, 1Pl	1D,2Pl	2D, 1Pl	2D, 1Pl
Pa	0	0	1Pl, 1Rl	1Pl, 1Rl
Ti	5D, 1Pl	4Pl, 2, 4V	2D, 2, 2, 1, 2V, 2Rl, 3 Pl	2, 1, 2D, 2Pl, 3Rl, 3, 1, 1, 2
Me	0	6V	2, 2, 1D, 7Pl, 1 Rl, 2, 1, 1, 1V	4D, 4Pl, 3Rl, 2, 1, 1, 1V

Table 2. *Raveniola arthuri* n. sp. Leg measurements (holotype/paratype n = 2).

Leg	C	Tr	Fe	Pa	Ti	Me	Ta
I	2.1/2.0	1.0/0.9	4.3/4.1	2.5/2.4	3.0/2.9	3.2/3.0	1.6/1.5
II	1.7/1.5	0.9/0.8	3.4/3.3	2.1/2.0	2.8/2.7	2.7/2.6	1.6/1.5
III	1.3/1.2	0.8/0.6	2.4/2.3	1.0/0.8	2.3/2.1	2.3/2.2	1.6/1.5
IV	1.2/1.1	0.9/0.8	3.5/3.4	1.8/1.7	3.0/2.8	3.5/3.4	1.7/1.5

spination and measurements are shown in Tables 1 and 2, respectively. Paired claws with 5 teeth on outer margin; with 7 teeth on inner margin. Third claw small and curved. All tarsi with entire scopulae. All metatarsi with “thin” entire scopulae. Tip of cymbium has 4 strong spines. Palpal bulb smooth, pyriform and with long, corkscrew embolus (Figure 2c, d).

Female: Unknown.

Distribution and Habitat: *R. arthuri* n. sp. is known only from the type locality; steppic region in the Eğil district, Diyarbakır province, southeast Anatolian region of Turkey.

Discussion

Ballooning is a passive form of movement and common dispersal mechanism for many spiders. Shimojana and Haupt (2000) indicated that a great majority of mygalomorph spider species do not appear to disperse by ballooning. Apart from the ballooning habit of spiderlings of some species, mygalomorphs are generally good subjects for the study of biogeography because of their sedentary habits (Pocock, 1903). Thus, these spiders have

restricted or limited distribution ranges. Ausserer (1871) described *Raveniola micropa* from a female from Bursa (Brussa) province, northwestern (Marmara region) Turkey. In the present study, we collected *Raveniola arthuri* n. sp. samples from Diyarbakır province, southeast Anatolian region of Turkey. The endemic spider species number is high and reflects the importance of the spider fauna of Anatolia and most endemic spiders show restricted local distributions in Turkey. This kind of distribution can be explained in zoogeographic terms by the high Taurus Mountain range, which is the most mountainous area of South Anatolia, Anatolian steppes, Central Anatolian Lake system, and Euphrates area in southeastern Anatolia. From these data, it can be concluded that the topography of Anatolia is one of the main barriers limiting the distribution of many species. Because of the natural zoogeographical barriers of Anatolia, *Raveniola arthuri* n. sp. cannot be the male of *Raveniola micropa*.

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