

## A contribution to the knowledge of the Turkish spider fauna (Araneae)

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**Abstract:** Six spider species, *Araneus quadratus* CLERCK, 1757, *Parazygiella montana* (C.L. KOCH, 1834), *Alopecosa etrusca* LUGETTI, TONGIORGI, 1969, *Arctosa stigmosa* (THORELL, 1875), *Heliophanus cupreus* (WALCKENAER, 1802) and *Talavera aequipes* (O. P.-CAMBRIDGE, 1871), are reported for the first time from Turkey. Their morphology is briefly described and illustrated.

**Key words:** new records, *Araneus quadratus*, *Parazygiella montana*, *Alopecosa etrusca*, *Arctosa stigmosa*, *Heliophanus cupreus*, *Talavera aequipes*, Turkey

### Introduction

The spiders of Turkey are insufficiently studied as hitherto only 613 species have been registered on the territory of the country (TOPÇU *et al.* 2005). Taking into account the unique geographic position of the country as a bridge between Europe and Asia Minor, a much higher species diversity is expected, especially when the investigations are laid on a systematic ground. In comparison, the spider faunas of Bulgaria, Germany, Greece and Russia number 985 (DELTSHEV, BLAGOEV 2001), 925 (KOPONEN 1993), 856 (BOSMANS, CHATZAKI 2005) and 1974 species (MIKHAILOV 2002), respectively. The present study reports six species new for the Turkish araneofauna. Information about the species morphology, exact locality and general distributions is provided for each species.

### Material and Methods

The material were collected by pitfall trapping, or manually under stones and on plants, and were preserved in 70% ethanol. The identification and drawings were made by using SZX9 Olympus stereomicroscope with a camera lucida. The keys of HEIMER, NENTWIG (1991), ROBERTS (1995), and LOCKET, MILLIDGE (1951, 1953) were used for the species' identification. All measurements reported in the text are in millimetres. The material is deposited in the Arachnology Museum of Niğde University (NUAM).

### Results

#### *Araneus quadratus* CLERCK, 1757

Material examined: 1♀, Adana province, Belemelik, 15.VII.2002, found in the grass.

Female: Body length: 12.8; carapace length: 4.52, width: 5.96; length of legs: I - 22.9, II - 19.5, III - 14.2, IV - 20.8; leg I: coxa - 1.82, trochanter - 0.98, femur - 6.04, patella - 2.44,

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tibia- 4.88, metatarsus - 4.72, tarsus - 2.2. Carapace with extremely variable colours: pale yellow - greenish, orange and reddish-brown; edge darker. Chelicerae - brown. Opisthosoma: usually greenish-yellow varying to full red-brown, but always with 4 large, white spots. Sternum - elliptic, black, with bright central spot. Legs - light brown. Epigyne (see Fig. 1).

General distribution: Palearctic (PLATNICK 2006)

### ***Parazygiella montana* (C.L. KOCH, 1834)**

Material examined: 7♀, Niğde province, 06.VII.2001. Found on tree trunks and rocks.

Female: Body length: 4.96-7.12; carapace length: 1.44-2.04, width: 1.68-2.56; length of legs: I - 6.36-9.58, II - 9.56-12.64, III - 4.08-6.44, IV - 5.14-8.24; leg I: coxa - 0.52-0.86, trochanter - 0.32-0.58, femur - 1.94-2.5, patella - 0.86-1.12, tibia - 1.38-1.96, metatarsus - 1.12-1.74, tarsus - 0.74-1.04. Carapace - brown with some white hairs. Opisthosoma - brown-yellowish, with four black spots. Sternum - oval, faintly sharp at the apex. Legs - yellow but articular regions are very dark. Epigyne (see Fig. 2).

General distribution: Palearctic (PLATNICK 2006)

### ***Alopecosa etrusca* LUGETTI, TONGIORGI, 1969**

Material examined: 2♀♀, Ankara province, 21.V.2004; 1♀, Osmaniye province, Kadirli district, Maksutoğlu plateau, 22.V.2002. Found on the ground.

Female: Body length: 17.42-18.5; carapace length: 7.92-8.52, width: 5.88-6.16; length of legs: I - 20.54-23.16, II - 19.66-22.78, III - 18.96-21.88, IV - 24.84-27.58; leg I: coxa - 2.14-2.32, trochanter - 1.34-1.66, femur - 5.08-5.84, patella - 1.92-2.32, tibia - 3.78-4.02, metatarsus - 3.94-4.26, tarsus - 2.34-2.74. Carapace - dark brown, ocular area black, lateral longitudinal bands yellowish, median band light, reticular black stripes in the centre. Opisthosoma - dark brown, with clear heart-like mark. Sternum - oval, black. Legs - yellow-brown, all coxae blackish, femora yellow, with black spots. Epigyne (see Fig. 3).

General distribution: Italy to Central Asia (PLATNICK 2006).

### ***Arctosa stigmosa* (THORELL, 1875)**

Material examined: 1♂, Niğde province, 06.V.2001. Found on the ground.

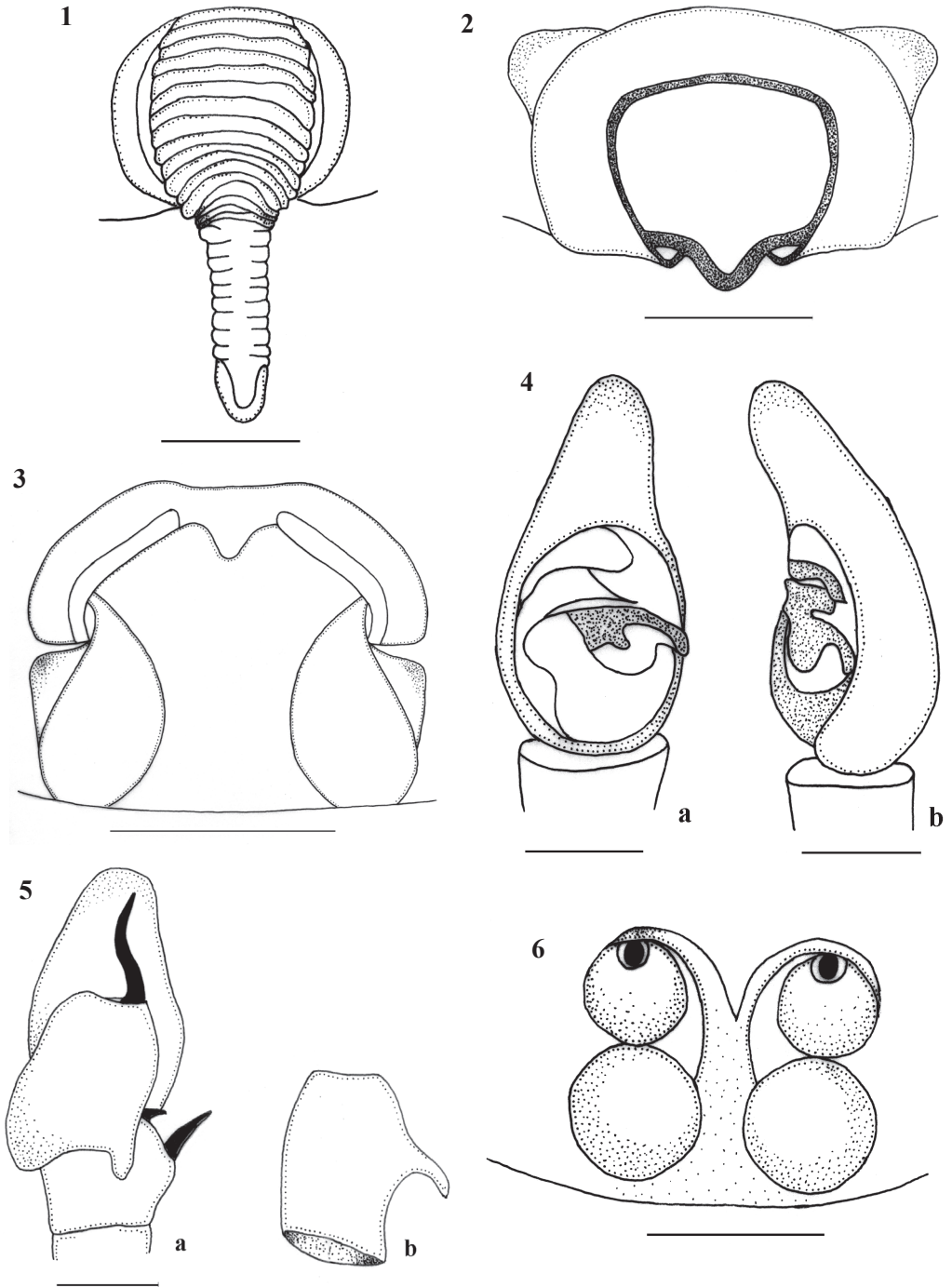
Male: Body length: 7.32; carapace length: 3.82, width: 2.74; length of legs: I - 11.54, II - 9.44, III - 10.18, IV - 14.22; leg I: coxa - 1.24, trochanter - 0.66, femur - 2.64, patella - 0.95, tibia - 2.18, metatarsus - 2.34, tarsus - 1.52. Carapace - dark brown, ocular area very dark, median band not very clear, lateral bands clear, with two black lines between ocular area and fovea. Opisthosoma - blackish, with yellow-greenish longitudinal band covering half of the opisthosoma. Sternum - oval. Legs - yellowish, covered with fine hairs. Male palp (see Fig. 4).

General distribution: Palearctic (PLATNICK 2006)

### ***Heliophanus cupreus* (WALCKENAER, 1802)**

Material examined: 1♂, Ankara province, Kızılcahamam district, 21.V.2003. Found on low vegetation.

Male: Body length: 3.82; carapace length: 1.98, width: 1.42; length of legs: I - 3.97, II - 3.78, III - 4.25, IV - 6.22; leg I: coxa - 0.42, trochanter - 0.32, femur - 1.02, patella - 0.44, tibia - 0.82, metatarsus - 0.58, tarsus - 0.52. Carapace - dark brown-reddish, ocular area - dark brown or black, covered with some black and white hairs. Opisthosoma - grey, with metallic sheen and white hairs, with two white spots near the anterior spinnerets. Sternum - oval, black and shiny, covered with sparse white hairs. Legs - yellow-brown, with femora very dark; black lines present



**Figs. 1-6.** 1 – *Araneus quadratus* CLERCK, 1757: epigyne, ventral view. 2 – *Parazygiella montana* (C. L. KOCH, 1834): epigyne, ventral view. 3 – *Alopecosa etrusca* LUGETTI, TONGIORGI, 1969: epigyne, ventral view. 4 – *Arctosa stigmosa* (THORELL, 1875): male palp: a – ventral view, b – retrolateral view. 5 – *Heliophanus cupreus* (WALCKENAER, 1802): male palp: a – ventral view, b – femoral apophyse. 6 – *Talavera aequipes* (O. P.-CAMBRIDGE, 1871): epigyne, ventral view. Scale lines: 0.5 mm.

along both sides of femur and tibia of all pairs of legs. Male palp (see Fig. 5) yellow to yellowish-brown, embolus long, tibial apophysis with a thin process.

General distribution: Palearctic (BOSMANS, CHATZAKI 2005)

### ***Talavera aequipes* (O. P.-CAMBRIDGE, 1871)**

Material examined: 1 ♀, Ankara province, Çubuk district, 16.V.2003. Found under a willow tree.

Female: Body length: 5.42; carapace length: 2.02, width: 1.62; length of legs: I - 4.45, II - 4.08, III - 4.86, IV - 5.64; leg I: coxa - 0.52, trochanter - 0.42, femur - 1.28, patella - 0.6, tibia - 0.82, metatarsus - 0.55, tarsus - 0.44. Carapace - dark brown-blackish with some yellowish hairs, ocular area - black covered with numerous yellowish hairs. Opisthosoma - longer than carapace; black, with brownish spots, covered with whitish hairs. Sternum - oval, blackish with a small yellowish area in the centre. Legs - brown-yellowish. Leg I - darker than others. Epigyne (see Fig. 6).

General distribution: Palearctic (BOSMANS, CHATZAKI 2005)

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## **Принос към аранеофауната на Турция (Araneae)**

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### **(Резюме)**

За първи път от територията на Турция се съобщават шест вида паяци: *Araneus quadratus* CLERCK, 1757, *Parazygiella montana* (C. L. KOCH, 1834), *Alopecosa etrusca* LUGETTI, TONGIORGI, 1969, *Arctosa stigmata* (THORELL, 1875), *Heliophanus cupreus* (WALCKENAER, 1802) и *Talavera aequipes* (O. P.-CAMBRIDGE, 1871). Представени са данни за морфологията на всеки един от видовете, както и илюстрации на таксономично важни белези.