

# A Contribution to the Knowledge of the Linyphiid Spider Fauna of Turkey (Araneae: Linyphiidae)

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**Abstract:** This paper reports six linyphiid spider species which are new to the Turkish araneo-fauna. Descriptive notes, drawings and photographs of *Araeoncus mitriformis* Tanasevitch, 2008, *Diplostyla concolor* (Wider, 1834), *Megalephyphantes nebulosus* (Sundevall, 1830), *Neriene radiata* (Walckenaer, 1841), *Porrhomma microphthalmum* (O. P.-Cambridge, 1871) and *Walckenaeria antica* (Wider, 1834) are presented.

**Key words:** Araneae, Linyphiidae, new records, spiders, Turkey

## Introduction

The Linyphiidae Blackwall, 1859 is one of the largest family of spiders with 4412 described species (PLATNICK 2012). A total of 104 species in 60 genera are known in Turkey (BAYRAM *et. al.* 2012) from Linyphiidae. This paper deals with the characteristic features and distribution of *Araeoncus mitriformis* Tanasevitch, 2008, *Diplostyla concolor* (Wider, 1834), *Megalephyphantes nebulosus* (Sundevall, 1830), *Neriene radiata* (Walckenaer, 1841), *Porrhomma microphthalmum* (O. P.-Cambridge, 1871) and *Walckenaeria antica* (Wider, 1834), adding six new linyphiid species to the araneo-fauna of Turkey. The total number of linyphiids recorded in Turkey is now 110 species.

## Material and Methods

This study is based on the materials collected in 2010 from different regions of Turkey. The specimens were taken from leaf litter by means of a hand aspirator and sifter. Mainly, well known identification keys were used for identification (HEIMER & NENTWIG 1991 and ROBERTS 1995). Specimens

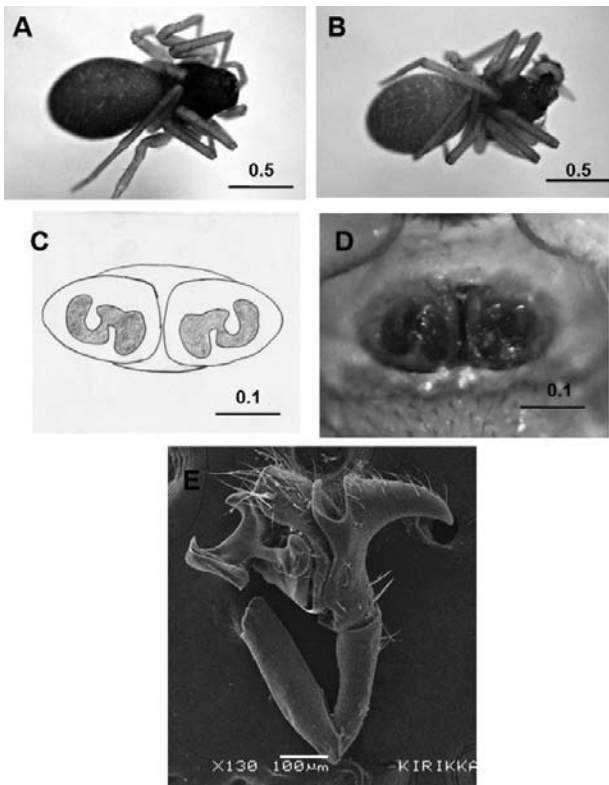
were preserved in 70% ethanol. Measurements are given in millimeters. The specimens were deposited in the collection of the Arachnological Museum of Kirikkale University (KUAM). Pictures were taken using a Leica S8APO microscope by means of the Leica DC 160 camera. SEM microphotographs were made with JEOL JSM-5600 in the University of Kirikkale.

## Results

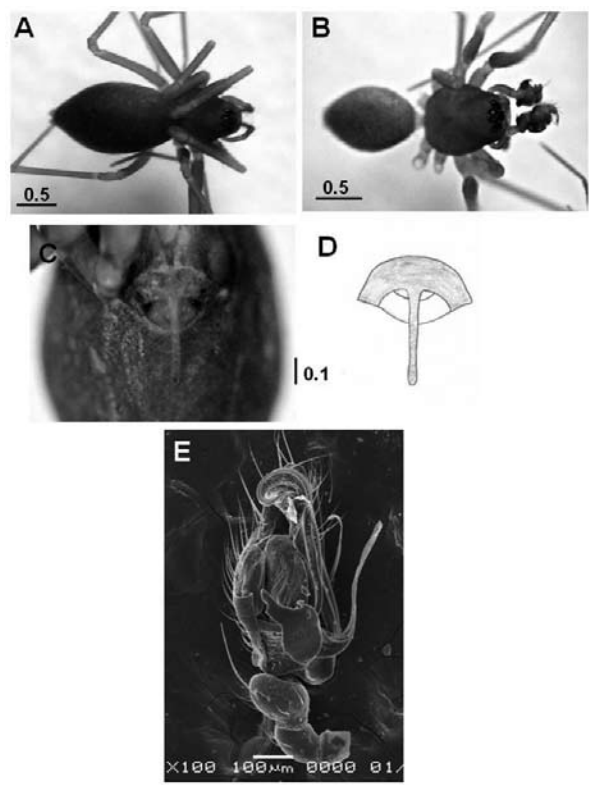
***Araeoncus mitriformis* Tanasevitch, 2008 (Fig. 1. A-E)**

**Material examined:** 1♂, 1♀, Ağrı Province, Diyadin District, Yeşildurak village. (39°36'10"N, 43°37'40"E), 22.11.2010. leg. İ. Coşar.

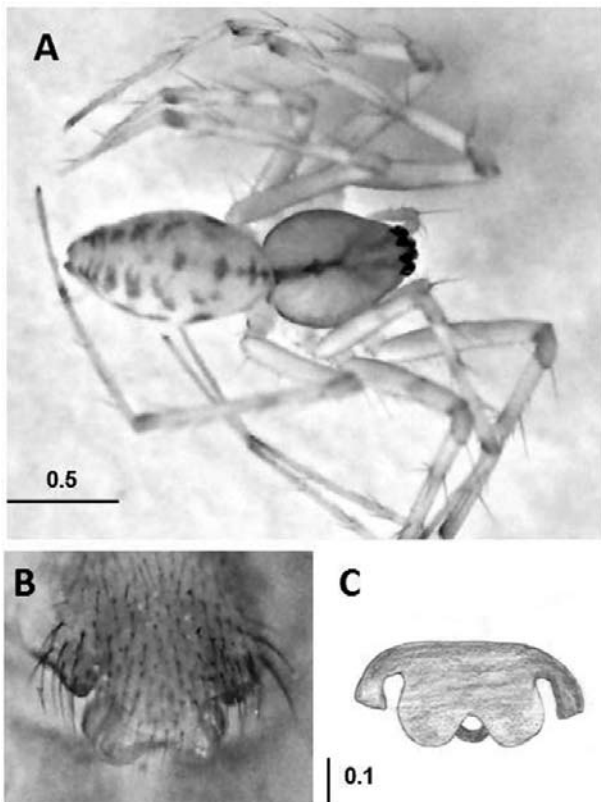
**Descriptive notes:** Male carapace elevated, reddish brown, legs pale reddish brown (Fig 1.A). Palp as in Fig 1.E. Palpal tibial apophysis with miter form. Embolic division with two large flat branches. Paracymbium hook shaped. Embolus relatively long and whip shaped. Male; Total length; 2.0, prosoma length 0.90, prosoma width 0.55, opisthosoma len-



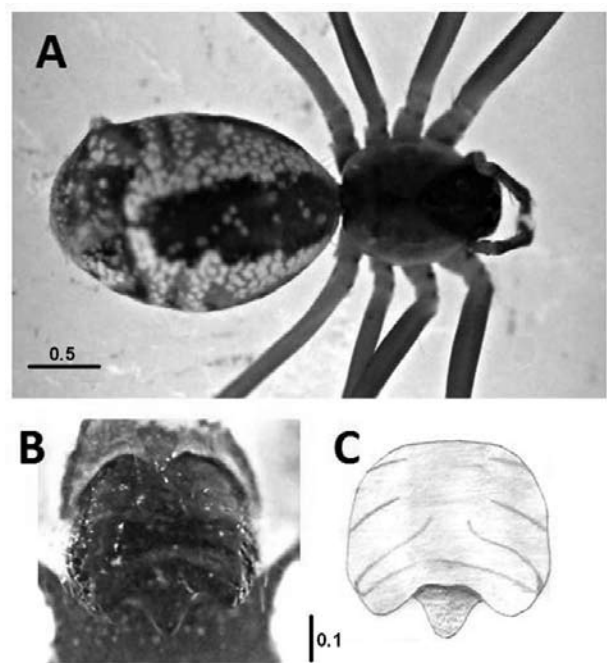
**Fig. 1.** *A. mitriformis*, A; female dorsal view, B; male dorsal view, C-D; female epigyne, E; male right pedipalp, retrolateral view, SEM micrograph



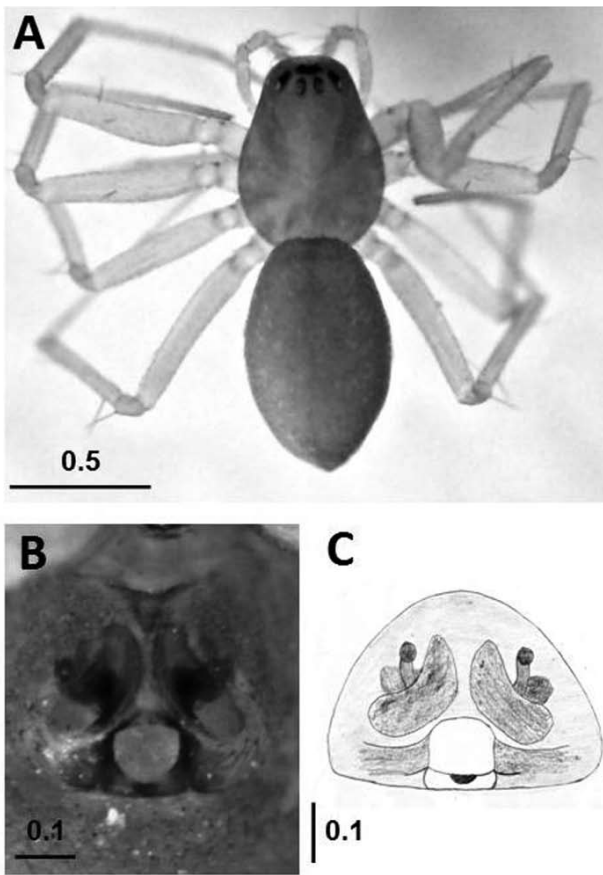
**Fig. 2.** *D. concolor*, A; female dorsal view, B; male dorsal view, C-D; female epigyne, E; male left pedipalp, retrolateral view, SEM micrograph



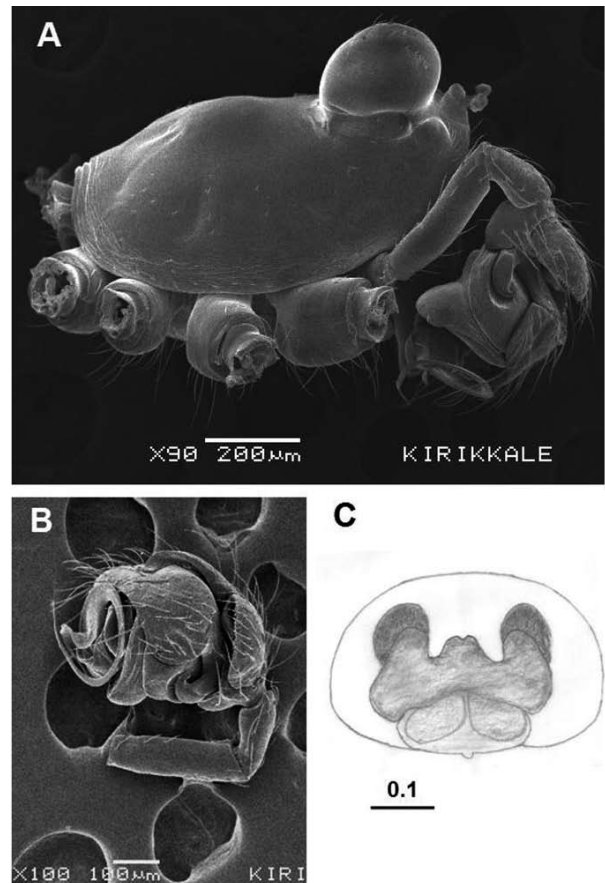
**Fig. 3.** *M. nebulosus*, A; female dorsal view, B,C; epigyne



**Fig. 4.** *N. radiata*, A; dorsal view, B, C; epigyne



**Fig. 5.** *P. microphthalmum*, A; female dorsal view, B, C; epigyne



**Fig. 6.** *W. antica*, A; male lateral view, SEM micrograph, B; male pedipalp retrolateral view, SEM micrograph, C; female epigyne

gth 1.10, opisthosoma width 0.75. Female carapace not elevated, reddish brown, legs pale reddish brown. Epigyne as in Fig 1 C.D. Female; Total length: 1.80, prosoma length 0.70, prosoma width 0.60, opisthosoma length 1.10, opisthosoma width 0.75.

**Distribution:** It is only known in Iran.

***Diplostyla concolor* (Wider, 1834) (Fig. 2. A-E)**

**Material examined:** 3♂, 9♀, Düzce Province, Cumayeri District. (40°53'23"N, 30°57'10"E), 16.06.2010. leg. İ. Coşar.

**Descriptive notes:** Male carapace unmodified, brown (Fig. 2.A). Legs yellowish brown, opisthosoma grey. Male palpal embolus forming a large loop. Palp as in Fig. 2.E. Male total length: 2.30, prosoma length 1.05, prosoma width 0.85, opisthosoma length 1.25, opisthosoma width 0.75. Female carapace unmodified, brown (Fig. 2.B). Legs yellowish brown, opisthosoma grey to black. Epigyne with a long scapus (Fig. 2.C.D). Female total length: 2.50, prosoma length 0.95, prosoma width 0.85, opisthosoma length 1.55, opisthosoma width 1.10.

**Distribution:** It is known in the Holarctic region.

***Megalephyphantes nebulosus* (Sundevall, 1830) (Fig. 3. A. B.)**

**Material examined;** 1♀, Kırıkkale Province, Yahşihan, District. (39°52'03"N, 33°27'27"E), 01.11.2010. leg. İ. Coşar.

**Descriptive notes** Female carapace with bifurcate median line and yellowish brown (Fig. 3.A.). Legs yellow, slightly annulated especially on femora. Opisthosoma yellowish grey with blackish spots. Epigyne characteristic (Fig. 3. B.C.). Female total length: 3.4, prosoma length 1.30, prosoma width 1.0, opisthosoma length 2.1, opisthosoma width 1.0.

**Distribution:** It is known in the Holarctic region.

***Neriene radiata* (Walckenaer, 1841) (Fig. 4. A. B.)**

**Material examined;** 1♀, Giresun Province, Görele District (41°33'03"N, 39°01'03"E), 30.06.2010. leg. T. Danışman.

**Descriptive notes** Female carapace brown,

with white margin. Legs yellowish brown, femora without spines. Opisthosoma grey, with black pattern (Fig 4. A.). Epigyne distinctive. (Fig. 4. B.C.). Female total length: 6.30, prosoma length 2.30, prosoma width 1.60, opisthosoma length 4.0, opisthosoma width 2.50.

**Distribution:** It is known in the Holarctic region.

***Porrhomma microphthalmum* (O. P.-Cambridge, 1871) (Fig. 5. A-C)**

**Material examined:** 1♀, Ağrı Province, Diyadin District, Atayolu village. 22.11.2010. (39°35'02"N, 43°43'31"E) leg. İ. Coşar.

**Descriptive notes** Female carapace yellowish brown (Fig. 5.A.). Tibia I with proateral and retrolateral bristle. Epigyne has spheroidal shaped opening and carries crescent-like grooves on both sides at the top (Fig. 5. B.C.). Female total length: 2.0, prosoma length 0.90, prosoma width 0.65, opisthosoma length 1.10, opisthosoma width 0.70.

**Distribution:** It is known in the Palearctic region

***Walckenaeria antica* (Wider, 1834) (Fig. 6. A-C)**

**Material examined:** 9♀, 7♂, Kırıkkale Province, Keskin District. (39°40'22"N, 33°36'28"E) 15.10.2010. leg. T. Danışman.

**Descriptive notes** Carapace reddish brown.

Legs reddish orange, tibia I and II darkened. Male carapace elevated into a lobe; anterior to this is a much smaller lobe carrying a pair of horns directed anteriorly, behind the posterior lateral eyes is a small depression with a sulcus running black from it (Fig. 6.A.). Male total length: 2.35, prosoma length 0.95, prosoma width 0.65, opisthosoma length 1.4, opisthosoma width 0.90. Embolus narrowly twisted and its diameter 0.22. Opisthosoma grey-black. Epigyne characteristic (Fig. 6. C.). Female total length: 2.15, prosoma length 0.85, prosoma width 0.55, opisthosoma length 1.3, opisthosoma width 0.85.

**Distribution:** It is known in the Palearctic region.

## Discussion

Including the new records listed above, the total number of Linyphiidae recorded in Turkey now numbers 110 species. Therefore, we expect that more new Turkish records will be found in the future for these families. The morphometric measurements and other characteristic features of the Turkish species are not different from the European specimens.

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