

**Original article (Orijinal araştırma)**

**Two new records for Genus *Zelotes* from Turkey  
(Araneae: Gnaphosidae)**

Türkiye'den *Zelotes* cinsi için iki yeni kayıt (Araneae: Gnaphosidae)

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**Abstract**

In this study, *Zelotes daidalus* Chatzaki, 2003 and *Z. fulvaster* (Simon, 1878) species from the family Gnaphosidae were included in the araneofauna of Turkey for the first time. Although the epigynum and vulva structures of female samples are similar to each other, the difference in the structures of the copulatory ducts is easily identifiable. It's connect to proximal of the spermatheca in *Z. daidalus* unlike It's connect to distal of the spermatheca in *Z. fulvaster*. In this study, the epigyne and vulvae structures of specimens were examined in detail.

**Keywords:** Gnaphosidae, new record, spiders, *Zelotes daidalus*, *Z. fulvaster*

**Öz**

Bu çalışmada, Gnaphosidae ailesinden *Zelotes daidalus* Chatzaki, 2003 ve *Z. fulvaster* (Simon, 1878) türleri ilk kez Türkiye araneofaunasına dahil edilmiştir. Dişi örneklerin epijin ve vulva yapıları birbirlerine benzer olmakla birlikte, üreme kanallarının yapılarındaki fark kolayca tanımlanabilir. *Z. daidalus* türünde kanallar spermatekanın proksimaline bağlanır, aksine *Z. fulvaster* türünde spermatekanın distaline bağlanır. Bu çalışmada, örneklerin epijin ve vulva yapıları detaylı bir şekilde incelenmiştir.

**Anahtar sözcükler:** Gnaphosidae, yeni kayıt, örümcekler, *Zelotes daidalus*, *Z. fulvaster*

**Introduction**

Spiders on the earth spread in many different habitats. There are 2214 species in 126 genera described belong to family Gnaphosidae. Of these, 399 species belong to the genus *Zelotes* Gistel, 1848 (Nentwig et al., 2017; World spider Catalog, 2017). The Gnaphosidae are represented by 145 species in 30 genera in Turkey (Demir and Seyyar, 2017; Bayram et al., 2017). The *Zelotes* have the carapace markedly narrowed in front and most speices are dark in colour or totally black (Roberts, 1985). Posterior median eyes separated almost by their diameter. Female epigyne anteriorly most often with a pair of sclerotized sickle-shaped pockets, in some species with a single helm-shaped pocket (Nentwig et al., 2017). In this paper, two *Zelotes* species is added to the spider fauna of Turkey. With new additions, the total number of gnaphosid recorded from Turkey increase to 147 species.

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## Material and Method

The specimens were studied which they collected in May and August from 2007 to 2008 and located Kahramanmaraş province in the Mediterranean Region and the Adıyaman in the Southeast Anatolia Region. Specimens were first brought to the laboratory in 70% ethyl alcohol, and species identification and spreads were identified using a variety of labeled diagnostic keys, checklists and catalogs. Female samples were first dissected and then their permanent preparations were prepared. The identification and images of the pedipalp were made by means of a Leica DC 160 digital camera attached to a LEICA S8APO stereomicroscope. Some photographs were combined using CombineZP. Photoshop CS2 and Paint were used for enhancing photographic images. All measurements were given in millimetres (mm). The following abbreviation is used in the text: **ALe**: anteriorlateral eye; **CD**: copulatory duct; **PLe**: posteriorlateral eye; **RS**: seminal receptacle; **GAUNZM**: Zoology Museum of Gaziantep University.

## Results

### *Zelotes Gistel, 1848*

#### *Zelotes daidalus Chatzaki, 2003*

Material examined: (GAUNZM), ♀ Kahramanmaraş province, Elbistan district, Kışlaköy village, (38°20'41.90"N, 37°06'24.14"E), 06.08.2007, 1240 m, leg. A. Akpınar. ♀ Kahramanmaraş province, Center, from Beşen to Kertmen villages, (37°50'54.88"N, 36°54'58.82"E), 28.07.2008, 1392 m, leg. A. Akpınar. ♀ Adıyaman province, Center, Kuyulu village, (37°30'21.75"N, 38°13'34.29"E), 18.05.2008, 544 m, leg. A. Akpınar (Figure 1a, b, c).

Description: Body length 3.76; cephalothorax length 2.12; abdomen length 1.64; cephalothorax with 2.24; abdomen with 3.88; sternum length 1.21; labium length 0.55. Eyes: ALe - ALe 0.35; PLe – PLe 0.44. Prosoma red-brownish, darker eye area. Sternum red. Legs dark brown but trochanter and femur darker. Abdomen light smoked colored. Tarsi with two claws. Epigynum front wall shaped as a bow, interrupted. Anterior margin wide in epigyne, almost continuous. Posterior plate wider than long. Spermathecae are globular in vulva. Copulatory ducts descend parallel to posterior. Then it continues transverse in 90 degree angle and connected to proximal to the spermatheca. The species has been found in a foliage area.

Distribution: Crete (World Spider Catalog, 2017).

### *Zelotes fulvaster (Simon, 1878)*

Material examined: (GAUNZM), ♀ Adıyaman province, Center, Ataköy village, (37°46'01.80"N, 38°12'07.48"E), 28.07.2008, 730 m, leg. A. Akpınar. ♀ Adıyaman province, Besni district, Kızılın village, (37°26'03.46"N, 38°07'22.46"E), 31.07.2008, 464 m, leg. A. Akpınar (Figure 1d, e, f).

Description: Body length 5.3; cephalothorax length 2.3; abdomen length 3; cephalothorax with 1.5; abdomen with 1.6; sternum length 1.38; labium length 0.39. Eyes: ALe - ALe 0.42; PLe – PLe 0.46. Prosoma light brown. Sternum, labia, maxilla, chelicerae and legs light brown-reddish. Abdomen dirty yellow in dorsal, light yellow in vental. Epigynum front wall shaped as bow, uninterrupted. Anterior margin wide in epigyne. Posterior plate wider than long. Spermathecae are globular in vulva. Copulatory ducts posteriorly extend in the form 'X' and connected to distal to the spermatheca. The species has been found in a mixed forest near the meadow area.

Distribution: Corsica, Macedonia, Greece (World Spider Catalog, 2017).

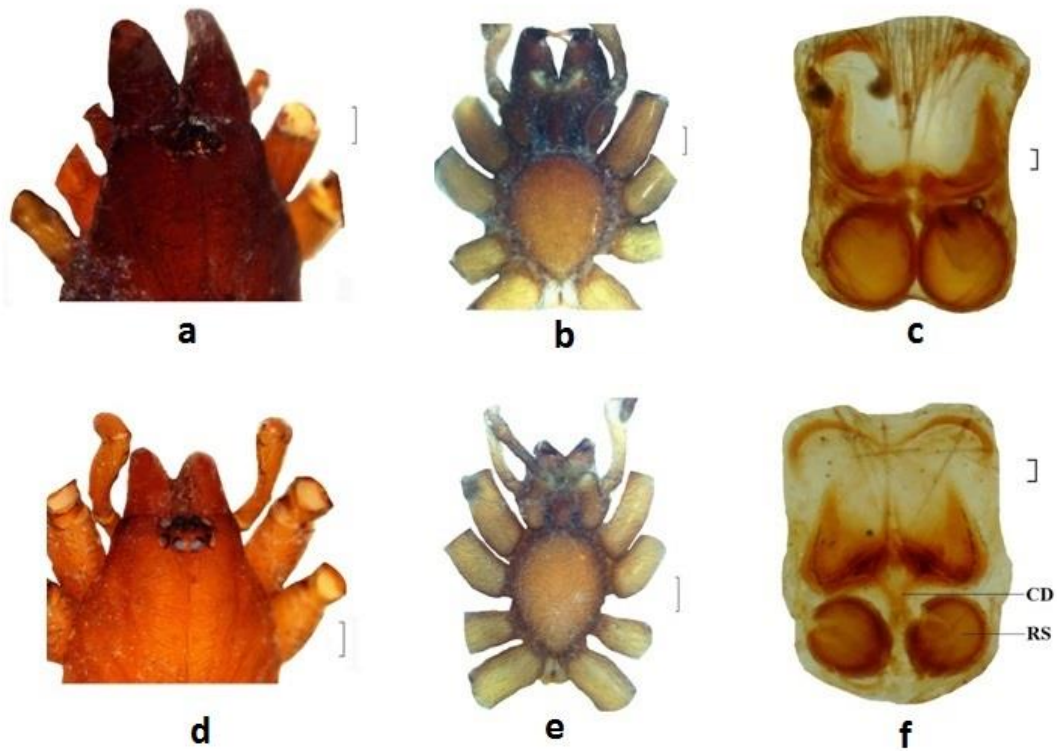


Figure 1. *Zelotes daidalus* eyes and cephalothrax (Scale = 0.25 mm) (a); *Zelotes daidalus* sternum (Scale = 0.25 mm) (b); *Zelotes daidalus* vulvae of female (Scale = 0.04 mm) (c); *Zelotes fulvaster* eyes and cephalothrax (Scale = 0.25 mm) (d); *Zelotes fulvaster* sternum (Scale = 0.25 mm) (e); *Zelotes fulvaster* vulvae of female (Scale = 0.04 mm) (f).

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