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The First description of the males of the water mite *Atractides polyporus* (K. Viets, 1922) (Acari; Hydrachnidia; Hygrobatidae) for Turkey

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Abstract

In this study, description of the male of *Atractides polyporus* (K. Viets, 1922) which is the new record for the Turkish fauna of water mites, is given for the first time based on the drawings and measurements of various body organs. In addition to its zoogeographic distribution, substrate structure preference and environmental variables of water quality which is determined in its habitat were present.

Key words: Demre stream, water mite, macrozoobenthos

INTRODUCTION

Water mites, which are distributed in almost all of the inland waters, are used as biological indicators for determining clean water sources, high mountain waters, ecological studies in groundwater and non-domestic organic pollution and located in the weld zone (Boyacı, 1995, Sabatino et al, 2008, Gülle et al. 2016).

Genus Atractides Koch, 1837 has been found all over the world except Australia and the Antarctic continent. And Atractides genus is probably sensitive to human impact (Gerecke, 2003). Although the water mite fauna of Turkey is not known enough, the Atractides genus, with 38 species, is one of the richest genera of water mites in our country (Aşçı et al., 2019).

The aim of this study is to review the taxonomic characterizations of male *Atractides polyporus* (Ernez, Demre, Antalya) which is a new record for the water mite fauna of Turkey.

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MATERIAL AND METHODS

Samples, belonging to water mites were collected from the source of Demre Stream by using a standard hand net (30x50 cm size with 500 µ mesh). The area of 100 m was investigated in order to include all possible micro habitats. Collected water mites were fixed into %70 ethyl alcohol (Plafkin et al., 1989).

RESULTS

Systematics

Family Hygrobatidae Koch, 1842

Genus Atractides Koch, 1837

Subgenus Polymegapus K. Viets, 1926

Atractides polyporus (K. Viets, 1922)

Male: Idiosoma length Width 420-440/338-405µm; genital plate with extended secondary sclerotization, anterior margineqully rounded, excretory poresclerite and Vgl-1+2 fused to the posterior margin; Length P-2, 62-70 µm; P-4, 87-90 µm; Length/height ratio I-L-5, 2.5; I-L-6, 3.9. Genital field with 12 acetabula. Vgl-1 fused toVgl-2. I-L5 with S-1distally ending in a fine, flagellum-like tip.

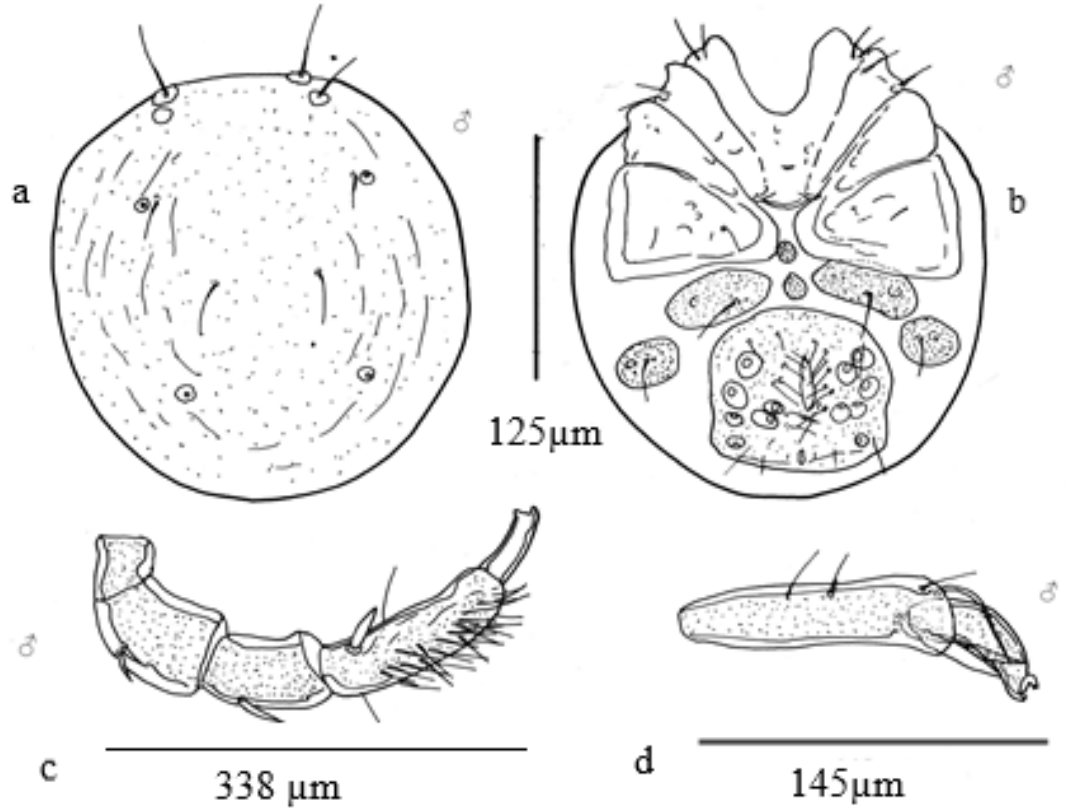

Figure 1. *Atractides polyporus* male a) Idiosoma dorsal b) Idiosoma ventral c) Palp d) I-L-5-6

MATERIAL AND HABITAT CHARACTERISTICS STUDIED

1 male and 1 female individual belonging to *Atractides polyporus* were sampled from the source of Demre Stream, near Ernez (Antalya) in the summer of 2015. Surrounding the river area, where sampling was made, it was covered with maquis shrubland. While the river bed consists of large rocks and 70% stones, sandy areas are also found in places. There were no settlements and agricultural areas in the upper parts of this part of the stream and the studied area was less affected by the contaminants and human effect. Environmental variables of water quality are given in Table 1. **Distribution.** Central, Western and Southern Europe and Northern Africa

Table 1. Habitat characteristics of the study area

Environmental variables of water quality					
Water Temperature	**pH**	**Electrical conductivity**	**Dissolved oxygen**	**BOD_5**	**Turbidity**
19.09 ℃	7.58	255.6 µS/cm	9.6 mg/L	1,89 mg/L	clear

CONCLUSION AND DISCUSSION

Atractides polyporus separates itself from other West Palearctic congeners by its increased number of acetabula. In addition**,** distinguished from tetracetabulate *A. octoporus* Piersig, 1898 because of its characteristic features of the subgenus Polymegapus. A. *polyporus* is extremely similar *A. persicus* Pešić & Asadi, 2010 which differs in having four acetabula, stockier S-2 and shorter I-L-6 (Gerecke, 2003, Gülle et. al. 2016).

CONFLICT OF INTEREST

The authors are declared that they have no conflict for this research article.

AUTHOR CONTRIBUTION

Füsun Kılçık: Field work, laboratory work, article writing; Yunus Ömer Boyacı: Identification and original drawing of sample; Selda Tekin Özan: Field work and article writing

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