

## A new water mite species (Hydrachnidia: Aturidae) from Turkey: *Barbaxonella taurusensis* sp. nov.

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Received: 01.04.2011

**Abstract:** *Barbaxonella taurusensis* n. sp. is described and a list of species of the water mite family Aturidae Thor, 1900 from Turkey is given. *Barbaxonella taurusensis* n. sp. is the second species of genus *Barbaxonella* Lundblad, 1954 recorded from Turkey.

**Key words:** Aturidae, water mite, new species, Turkey

### Türkiye'den yeni bir su kenese türü (Hydrachnidia: Aturidae): *Barbaxonella taurusensis* sp. nov.

**Özet:** *Barbaxonella taurusensis* n. sp. tanımlanmış ve Aturidae Thor, 1900 familyasının Türkiye'den bilinen türlerinin listesi verilmiştir. *Barbaxonella taurusensis* n. sp. *Barbaxonella* Lundblad, 1954 cinsinin Türkiye'den kaydedilen 2. türüdür.

**Anahtar sözcükler:** Aturidae, su kenese, yeni tür, Türkiye

#### Introduction

The family Aturidae Thor, 1900 is the most diverse of the water mites, and occurs on every continent except Antarctica (Cook, 1974). Turkey has a rich water mite fauna, which increased considerably recently with detailed taxonomical studies. So far, 19 species of the Aturidae are known from Turkey (Aşçı et al., 2009, 2010; Esen et al., 2011): *Albaxona (Albaxona) lundbladi* Motaş & Tanasachi, 1947;

*Albia (Albia) stationis* Thon, 1899; *Aturus (Aturus) crinitus* Thor, 1902; *A. (A.) intermedius* Protz, 1900; *A. (A.) karamani* Viets, 1936; *A. (A.) natangensis* Protz, 1900; *A. (A.) scaber* Kramer, 1875; *Axonopsis (Hexaxonopsis) romijni* Viets, 1923; *A. (H.) serrata* Walter, 1928; *Woolastookia (H.) rotundifrons* (Viets, 1922); *Axonopsis (Navinaxonopsis) persica* Pešić, 2004; *A. (Paraxonopsis) vietsi* Motaş & Tanasachi, 1947; *Barbaxonella (Barbaxonella) bingolensis* Esen,

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Pešić & Erman, 2011; *Brachypoda* (*Hemibrachypoda*) *mutila* (Walter, 1928); *Javalbia* (*Javalbicula*) *turcica* Esen, Pešić & Erman, 2011; *Kongsbergia* (*Kongsbergia*) *materna* Thor, 1899; *K. (K.) persica* Pešić, 2005; *Ljanina* (*Ljanina*) *bipapillata* Thor, 1898; and *L. (L.) macilenta* Koenike, 1908.

## Material and methods

Water mites were collected, preserved, and prepared according to the methods described in the literature (Viets, 1936; Cook, 1974; Gerecke, 2003). All of the samples were examined under a trinocular microscope (Olympus CX41) with a drawing attachment. The composition of the material is given as: (males/females/deutonymphs). The following abbreviations are used in the text: CPG: Private collection of Yunus Ömer Boyacı in Süleyman Demirel University Eğirdir Fisheries Faculty (Isparta, Turkey), L: length, W: width, and P-1: palp, first segment. All of the measurements are given in micrometers.

## Results and discussion

Family Aturidae Thor, 1900

Subfamily Axonopsinae Viets, 1929

Genus *Barbaxonella* Lundblad, 1954

*Barbaxonella taurusensis* sp. nov.

Diagnosis. Male: Caudal projections medially touching (but not fused), forming a hollow crescent-shaped space at posterior end of the body and at their tips, a reversed V-shaped indentation with thick and short hairs, the ventral part of the gonopore anteriorly elongated and triangular. Acetabula arranged in an equilateral triangular shape.

## Description

Holotype. Male. Body with straight anterior margin, caudally extended (Figure 1a). Caudal projections medially touching each other, not fused, and forming anteriorly a hollow crescent-shaped space and a reversed V-shaped indentation at the tip; the posterolateral parts of dorsal shield densely pilose (Figure 1b). Caudal projections touching medially

and shortly below the furrow, posteriorly with a reversed V-shaped indentation and rows of thicker and shorter hairs. Idiosoma L/W 495/345, dorsal shield L/W 375/300. Lateral glandularia 3 and 4 not on the dorsal shield, eyes with 2 lenses. Dorsum covered with a solid and large dorsal shield bearing 4 pairs of glandularia and postocularia. Distance between pre-antenniform hairs 83. Capitulum short-nosed and with short hairs, L 88; ventral surface of P-2 straight, the area of dorsodistal end of P-4 densely haired (Figure 1c); chelicera L 92. Palps slender, dorsal L of palp segments: 25-45-34-65-30 = 199, height: 20-30-25-20-10. Anterior coxae not extending to anterior end of body. Capitular bay L/W 83/43. Genital field located in the posterior part of the body and completely fused with the ventral shield, with 3 pairs of acetabula arranged in equilateral triangle. Leg segments L (in respective order I-IV): 50-38-47-71-80-84 = 370, 52-42-53-80-90-96 = 413, 54-59-61-70-83-118 = 445, 74-56-56-65-122-118 = 491.

Female: Unknown.

Type Material. Holotype (CPG), male. Dissected and slide mounted in Hoyers fluid small, sandy, and slow flowing tributary of the Köprüçay River, 1280 m a.s.l., 18.06.2008, leg. Y.Ö. Boyacı, Eğirdir, Isparta, Turkey. Paratypes (CPG): same data as holotype (2/0/0).

## Remarks

To date, 37 genera have been described within the subfamily Axonopsinae, and the genus *Barbaxonella* includes so far 6 known species (Pešić and Gerecke, 2003; Valdecasas, 2008). *Barbaxonella taurusensis* nov. sp. was found in a small, sandy, and slow flowing tributary of the Köprüçay River. The males of the species resemble *Barbaxonella bingolensis* Esen, Pešić & Erman, 2011 with the presence of a transversal ridge separating the posterior part of the dorsal shield, lateral parts of which being anterolaterally directed; anteriorly straight and caudally extended body, the posterolateral parts of dorsal shield densely pilose, along with similar capitulum morphology. Males of *Barbaxonella taurusensis* are separated from *Barbaxonella bingolensis* basically in the anteriorly elongated triangular shape of the ventral part of

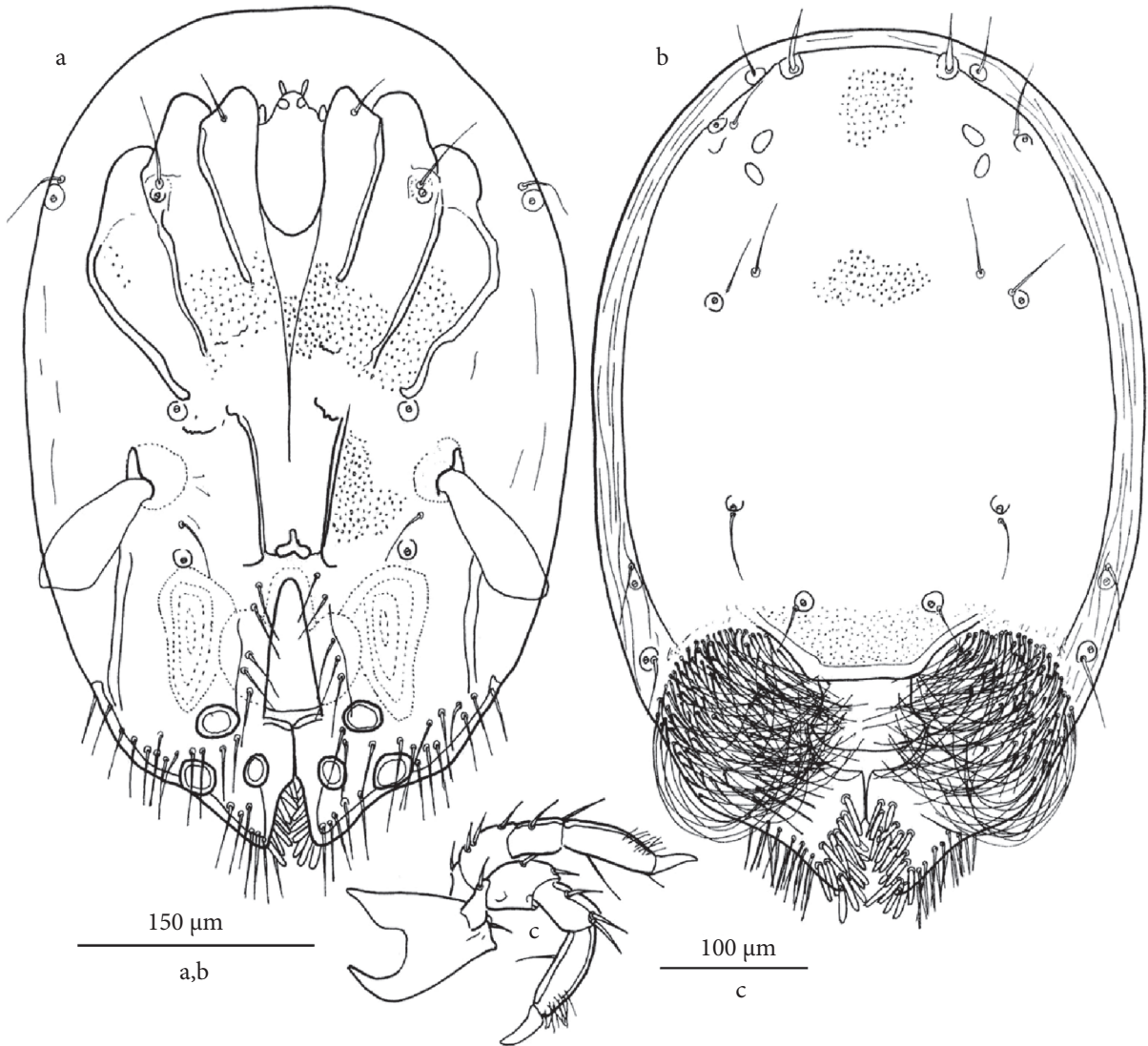


Figure 1. *Barbaxonella taurusensis*, holotype male: a) idiosoma ventral, b) idiosoma dorsal, and c) gnathosoma.

the gonopore; caudal projections extending beyond posterior idiosoma margin, touching medially and forming distally a V-shaped indentation with thick and short hairs; arrangement of acetabula in an equilateral triangle and presence of a group of anterodorsal setae on P-4.

Etymology. Named after the Taurus Mountains.

#### Acknowledgements

This study was supported by the Scientific and Technological Research Council of Turkey (Project No: 107 T 321 TBAG).

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