FIRST DESCRIPTION OF THE FEMALE OF ARRENURUS NAGYSALLOENSIS SZALAY (ACARI, HYDRACHNIDIA)

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ABSTRACT: In this study, the female of Arrenurus (Truncaturus) nagysalloensis Szalay, 1934 is described for the first time from Elazığ Province, Turkey.

KEY WORDS: Arrenurus nagysalloensis, Hydrachnidia, female morphology, description, Turkey.

INTRODUCTION

Arrenurus is the largest genus of water mites with over 1,100 species known worldwide and occurs in every continent except Antarctica (Cook 1976; Smith 2012). With the 56 recorded species, the genus Arrenurus is the most species-rich in Turkey (Erman et al. 2010; Esen and Erman 2013). Four subgenera are known from Turkey belonging to the genus Arrenurus: Arrenurus (s. str), Megaluracarus, Micruracarus and Truncaturus. To date 8 species are known belonging to the subgenus Truncaturus: A. (T.) corsicus Angelier, 1951; A. (T.) fontinalis Viets, 1920; A. (T.) isikliensis Boyacı and Özkan, 2004; A. (T.) integrator (Müller, 1776); A. (T.) nagysalloensis Szalay, 1934; A. (T.) nodosus Koenike, 1896; A. (T.) stecki Koenike, 1894 and A. (T.) truncatellus (Müller, 1776) (Erman et al. 2010; Esen and Erman 2013).

Arrenurus (Truncaturus) nagysalloensis is a rare species and so far the females of this species were unknown. The female was attributed to A. nagysalloensis by Szalay (1934) which actually belongs to A. globator, according to Smit and Van der Hammen (1992) and Smit et al. (2000). The aim of this study is to describe the female of A. nagysalloensis.

MATERIAL AND METHODS

During field work, water mites were collected by hand netting, sorted on the spot from the living material, conserved in Koenike’s fluid, and dissected as described elsewhere (e.g., Gerecke et al. 2007).

The composition of the material is given as (males/females). All measurements are given in micrometers. The following abbreviations are used: Cx-III=third coxae; dL=dorsal length; H=height; I-L-6=leg 1, sixth segment (tarsus); L=length; P-3= palp segment 3; a.s.l.=above sea level; W=width.

RESULTS

Family: Arrenuridae Thor, 1900
Genus: Arrenurus Dugès, 1834
Subgenus: Truncaturus Thor, 1900
Arrenurus (Truncaturus) nagysalloensis
Szalay, 1934

Material examine: Elazığ Province, Karakoçan, Bahçecik Village, Sphagnum pond, 38°53’11” N, 40°05’12” E, 1,435 m a.s.l., 18.08.2016 (1/2).

Male: Idiosoma L/W 660/525, anterior margin slightly convex, dorsal furrow incomplete (Figs. 1A, 3A). Cauda not developed, posterior margin slightly undulating, medially widely convex. Cx-IV subtriangular, posterior margin straight, medial margin very narrowed (Figs. 1B, 3B). Acetabular plates not extending to lateral margin, genital field W 372. Gnathosoma ventral margin L 138, chelicera L/H 131/60, claw 52 (Fig. 1C). P-2 with 3 medial setae, P-4 not tapering distally, P-2 and P-4 almost in the same length (Figs. 1D, E). Dorsal L P-1-5 36-78-49-80-33. IV-L-4 without a spur. Leg swimming setae numbers: III-L-5: 3, IV-L-3: 3, IV-L-4: 5, IV-L-5: 10.

Female: Idiosoma egg-shaped, posterolateral corners not developed, anterior margin slightly convex, dorsal furrow incomplete (Figs. 2A, 3C). Cx-IV subtriangular, almost without a medial margin. Medial separation of Cx-III and IV narrow, equal to length of half gonopore field (Figs. 1D, E). Dorsal L P-1-5 36-78-49-80-33. IV-L-4 without a spur. Leg swimming setae numbers: III-L-5: 3, IV-L-3: 3, IV-L-4: 5, IV-L-5: 10.

Female: Idiosoma egg-shaped, posterolateral corners not developed, anterior margin slightly convex, L/W 968/790. Dorsal furrow complete, dorsal shield large, L/W 870/680 (Figs. 2A, 3C). Cx-IV subtriangular, almost without a medial margin. Medial separation of Cx-III and IV narrow, equal to length of half gonopore field (Figs. 2B, 3D). Genital field close to coxal field, gonopore membranes without sclerotized patches. Acetabular plates short, rounded laterally, directed straight to idiosoma posterolateral margin, and narrowed laterally. Genital field W 448, gonopore L/W 138/150. Gnathosoma ventral L 200, chelicera L/H 170/74, claw...
70. P-2 with 3 medial setae (Fig. 2C). dL P-1-5 40-97-55-100-37. Leg swimming setae numbers: III-L-4: 2, III-L-5: 3, IV-L-3: 2, IV-L-4: 5, IV-L-5: 7-9. **Habitat**: *Sphagnum* ponds. **Distribution**: Slovakia, the Netherlands, Eastern Turkey (Gerecke et al. 2016).
**DISCUSSION**

*Arrenurus (Truncaturus) nagysalloensis* was described by Szalay (1934) from a marsh in Nagysalló, Slovakia. The female attributed to *A. nagysalloensis* was rejected by Smit and Van der Hammen (1992) and Smit et al. (2000) because it belonged to *A. (Megaluracarus) globator*. In general, setation of the palp of male and female specimens of the genus *Arrenurus* is similar. The male collected from the Elazig Province corresponds with holotype in which P-2 with 3 medial setae and P-4 not tapering distally (see Fig. 2 in Szalay 1934). Further, the male has a posterior margin slightly undulating and more broad convex protrusion. The male reported from the Erzurum Province, Turkey has no tapering distally P-4, but there is no comment about medial seta on P-2 in the paper (Özkan and Boyaci 1994). Notwithstanding, the male reported by Smit and Van der Hammen (1992) from the Netherlands has a tapering distally P-4 and P-2 with one medial seta (Gerecke et al. 2016).

The female of *A. nagysalloensis* is similar to the female of *A. fontinalis* by the genital field close to coxal field and posterolateral corners not de-

![Fig. 2. Arrenurus (Truncaturus) nagysalloensis female: A—Idiosoma, dorsal view, B—Idiosoma, ventral view, C—Palp, medial view, D—Palp, lateral view. Scale bars=100 µm.](image)
veloped. The latter species is different by the narrow medial separation of Cx-III and -IV (less than width of half gonopore field), very small sclerotized patches and slightly bowed acetabular plates.

REFERENCES


Description of female of *Arrenurus nagysalloensis*


