ARRENURUS BORUZKII, A WATER MITE NEW TO THE DUTCH FAUNA, WITH SOME NOTES ON ITS MORPHOLOGY (ACARI: HYDRACHNIDIA)

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The water mite *Arrenurus boruzkii* is reported from The Netherlands for the first time. A female specimen was collected in a ditch in the province of Overijssel. The morphological differences with Swedish specimens and descriptions from the literature are discussed. In total 236 species of water mites are now known to occur in The Netherlands.

Arrenurus (Arrenurus) boruzkii Ssujetow, 1931 is a rare water mite, which has been reported from Russia (Ssujetow 1931), southern Sweden (Lundblad 1962) and Poland (Cichocka 1995). Recently, a female specimen of this species was collected in The Netherlands for the first time. Unfortunately, the descriptions of the female in the literature are sketchy and sometimes incomplete. Moreover, some differences can be found between these descriptions and my own specimen. Therefore, I will give a more detailed description of the female below, while the differences with Swedish specimens and descriptions from the literature will be discussed. The following abbreviations have been used: PI-PV – first to fifth palp segment; NHRS - Swedish Museum of Natural History; ZMAN - Zoological Museum University of Amsterdam.

MATERIAL EXAMINED

Sweden: 1 ♀, pond 1 km SW of train station Bärby, Funbo, 16.V.1918, leg. O. Lundblad (slide 5714, NHRS); 1 ♀, Flisby, stream near spring, Björkelund, water with H_2S and iron, Småland, 06.X.1923, leg. O. Lundblad (slide 687, NHRS); 1 ♀, Flisby, marl quarry near Björkelund, Småland, 31.VII.1936, leg. O. Lundblad (slide 5488, NHRS).
The Netherlands: 1 ♀, ditch Otterskooi, Dwarsgracht, province of Overijssel, Amersfoort coordinates 198.86/526.88, 20.IV.1998, leg. H. Hop (ZMAN).

DESCRIPTION OF THE DUTCH SPECIMEN

(data from literature in brackets)

Female: Body 1203 µm (1155-1330) long and 1048 µm (1020-1140) wide. Body colour green. Body egg-shaped, posterolateral corners absent. Dorsal furrow incomplete, dorsal shield 708 µm (655) wide. Medial distance of fourth coxal plates as large as width of gonopore. Medial margin of fourth coxal plates larger than medial margin of third coxal plates. Gonopore 165 µm long, with large chitinous patches, anterior and posterior patch fused. Genital plates two times as long as wide, sloping posteriorly. Dorsal lengths of PI-PV: 41 (40), 77 (80), 55 (50), 65 (70), 38 (30). PII with two relatively long setae on dorsal margin, lateral side of PII with three setae. PIII with a very long seta on medial side, which extends beyond anterior margin of PV; PV hook-shaped.

HABITAT

The species has been found in lentic and running waters. Lundblad (1968) reported the species from eutrophic ponds, which dry up in most years, and from a stream near the spring. The Dutch specimen has been collected in a ditch with an abundant growth of emergent macrophytes, mainly water soldier (*Stratiotes aloides* Linnaeus) and ivy duckweed (*Lemna trisulca* Linnaeus). The number of water mite species was high, with some less common species, e.g. *Arrenurus mediorotundatus* Thor, 1898, *A. truncatellus* (Müller, 1776) and *A. virens* Neuman, 1880.

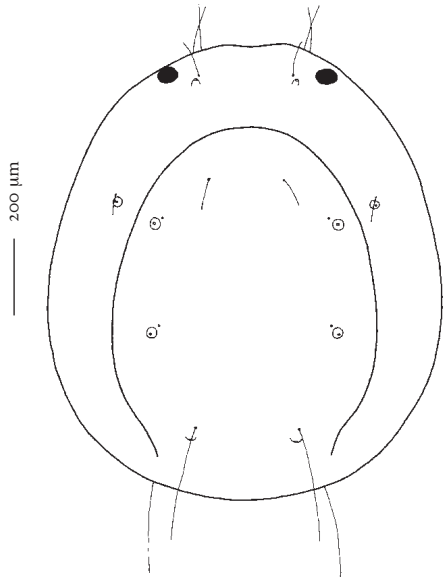

Figure 1
Body (without legs), dorsal view.
Figuur 1
Lichaam (zonder poten), dorsaal aanzicht.

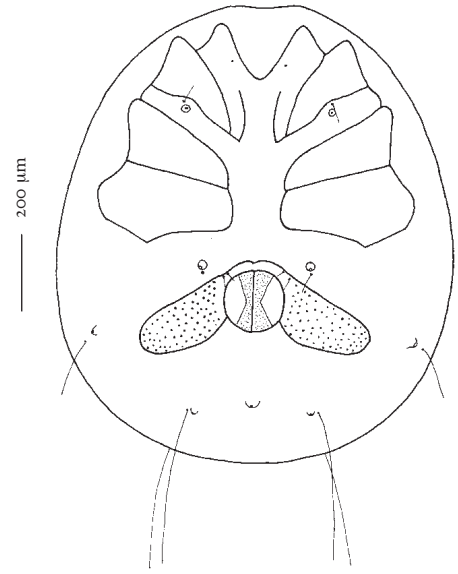

Figure 2
Body (without legs), ventral view.
Figuur 2
Lichaam (zonder poten), ventraal aanzicht.

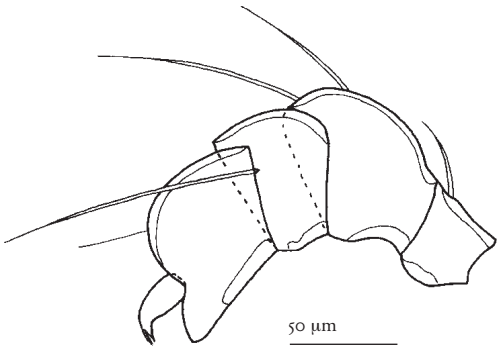

Figure 3
Left palp, outer side.
Figuur 3
Linker palp, buitenzijde.

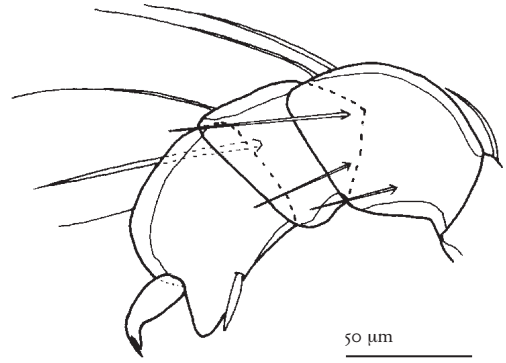

Figure 4
Right palp, inner side.
Figuur 4
Rechterpalp, binnenzijde.

Figs. 1-4 *Arrenurus boruzkii* female, The Netherlands (Otterskooi) (col. ZMAN).
Figs. 1-4 *Arrenurus boruzkii* vrouwtje, The Netherlands (Otterskooi) (col. ZMAN).

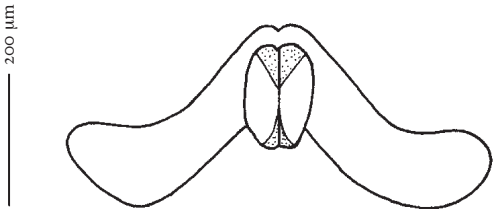

Figure 5
Genital plates. *Arrenurus boruzkii* female, Sweden (Bärby) (slide 5714, col. NHRS).
Figuur 5
Napplaten. *Arrenurus boruzkii* vrouwtje, Zweden (Bärby) (preparaat 5714, col. NHRS).

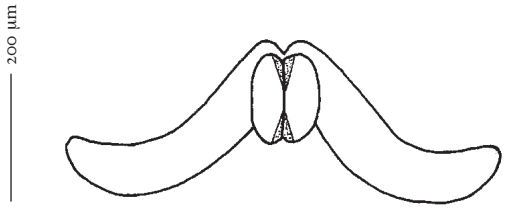

Figure 6
Genital plates. *Arrenurus boruzkii* female, Flisby (Sweden) (slide 687, col. NHRS).
Figuur 6
Napplaten. *Arrenurus boruzkii* vrouwtje, Flisby (Zweden) (preparaat 687, col. NHRS).

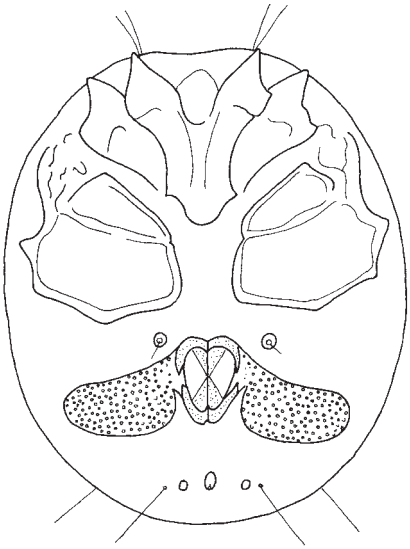

Figure 7
Body (without legs), ventral view.
Figuur 7
Lichaam (zonder poten), ventraal aanzicht.

Figure 8
Palp, inner side.
Figuur 8
Palp, binnenzijde.

Figs. 7-8 *Arrenurus boruzkii* female, Russia (after Ssujetow 1931)
Figs. 7-8 *Arrenurus boruzkii* vrouwtje, Rusland (naar Ssujetow 1931)

DISCUSSION

A number of differences can be found between the Dutch specimen and the Russian specimens. In Ssujetow (1931) the dorsal shield is rather short, not extending far posteriorly. In my specimen as well as in the specimens from Sweden, the dorsal shield extends almost to the posterior body margin. PIV of the Dutch specimen has a larger dorsal hump compared to the holotype, in which the anterodorsal margin of PIV is flattened to form a straight line with the medial anterior margin of this segment. However, one of the Swedish females has a PIV similar to the Dutch specimen. The large setae of the dorsal margin of PII and the very large medial seta of the inner side of PIII are not mentioned in the literature, but are present in the Swedish specimens. The holotype illustrated by Ssujetow (1931), as well as the Swedish specimens have two setae on the lateral side of PII. The gonopore of the Dutch specimen has the normal rounded shape, but the Russian and Swedish specimens all have an aberrant shape, which, in my opinion, is the result of either fixation or mounting. The shape of the genital plates of the Dutch specimen agrees with the original description. The Swedish specimens all have very different shaped genital plates (see figs. 5 and 6), however, and therefore the genital plates are of little value in identifying the species. Thus, the diagnostic characters of the female of the species are the shape (especially PIV) and chaetotaxy of the palp, the open dorsal shield and the body shape.

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SAMENVATTING

***Arrenurus boruzkii*, een nieuwe watermijt voor Nederland, met opmerkingen over de morfologie (Acari: Hydrachnidia)**

In 1998 werd de watermijt *Arrenurus boruzkii* Ssujetow, 1931 voor het eerst in Nederland aangetroffen. Een vrouwtje werd verzameld in een sloot in Overijssel. De morfologische verschillen met Zweedse exemplaren en beschrijvingen in de literatuur worden besproken.

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