

# Two new and rare *Arrenurus*-species from The Netherlands (Acari: Hydrachnellae)

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*Abstract:* Two new species of water mites are described from The Netherlands, viz. *A. duursemai* and *A. clavatus*. Both are very rare in The Netherlands, and known from only one and two localities respectively.

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## Introduction

Two new species are described from The Netherlands, i.e. *Arrenurus duursemai* spec. nov. and *Arrenurus clavatus* spec. nov. All material is deposited in the Zoological Museum of the University of Amsterdam. Measurements of palp and legs are dorsal lengths and are in  $\mu\text{m}$ , measurements of the paratype are given in brackets. Abbreviations used: L3: lateroglandularia 3, PI-V: segments 1 to 5 of palp, IV-leg-4-6: fourth - sixth segment of fourth leg. Coordinates are Amersfoort coordinates of the Dutch Topographical Survey.

*Arrenurus (Arrenurus) duursemai* spec. nov.  
(figs 1-5)

*Type material*

Holotype: ♂, The Netherlands, province of Drenthe, Zandveen (coordinates: 225.90-538.30), 21.ix.1992, leg. G. Duursema.

## Description

Male: Body colour purple, 1248 long and 996 wide. Anterior body margin concave. Cauda short, not well set off from body; pygal lobes short, not extending beyond posterior body margin. In lateral view the body has a very compact shape. Dorsal shield incomplete, without humps. L3 on small humps. Hyaline membrane very short, with a concave posterior margin and roun-

ded lateral corners. Petiole 107 long (measured ventrally), extending beyond posterior body margin, with undulating lateral margins and a triangular posterior margin. Ligulate process of petiole small, not extending to posterior margin of petiole. Curved setae associated with petiole extending to posterior margin of petiole. Genital plates long and broad, lateral margin indented. Lengths of PI-V: 43, 96, 74, 110, 60; PII with 5 setae on medial side. PIV short, antagonistic bristle of normal shape. Lengths of I-leg-4-6: 204, 175, 194; lengths of IV-leg-4-6: 315, 161, 180; IV-leg-4 with a truncated spur.

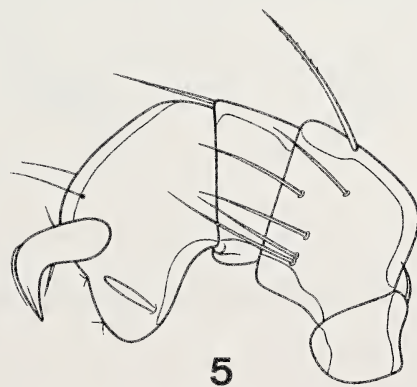
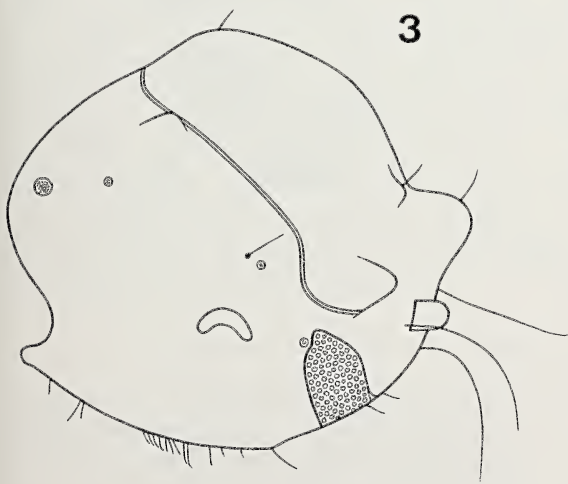
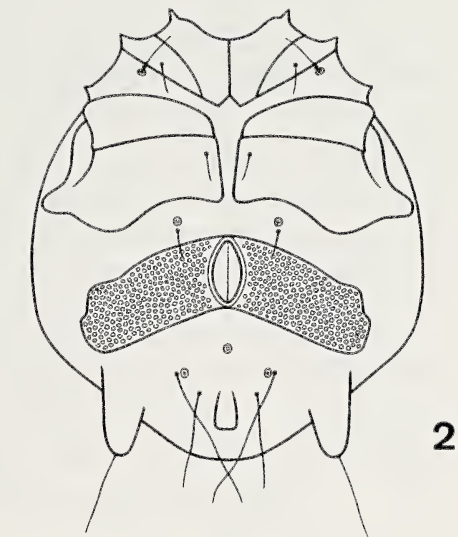
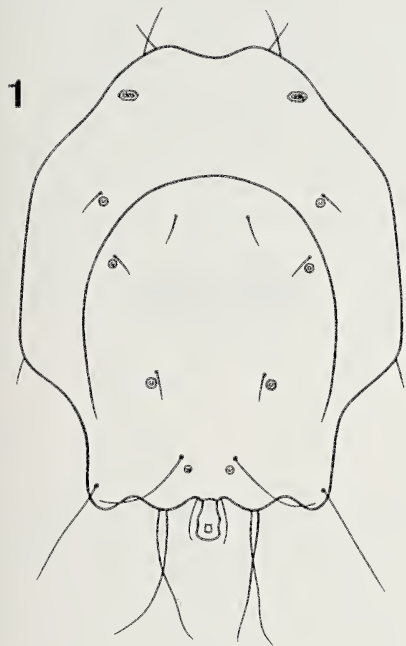
Female: Unknown.

## Discussion

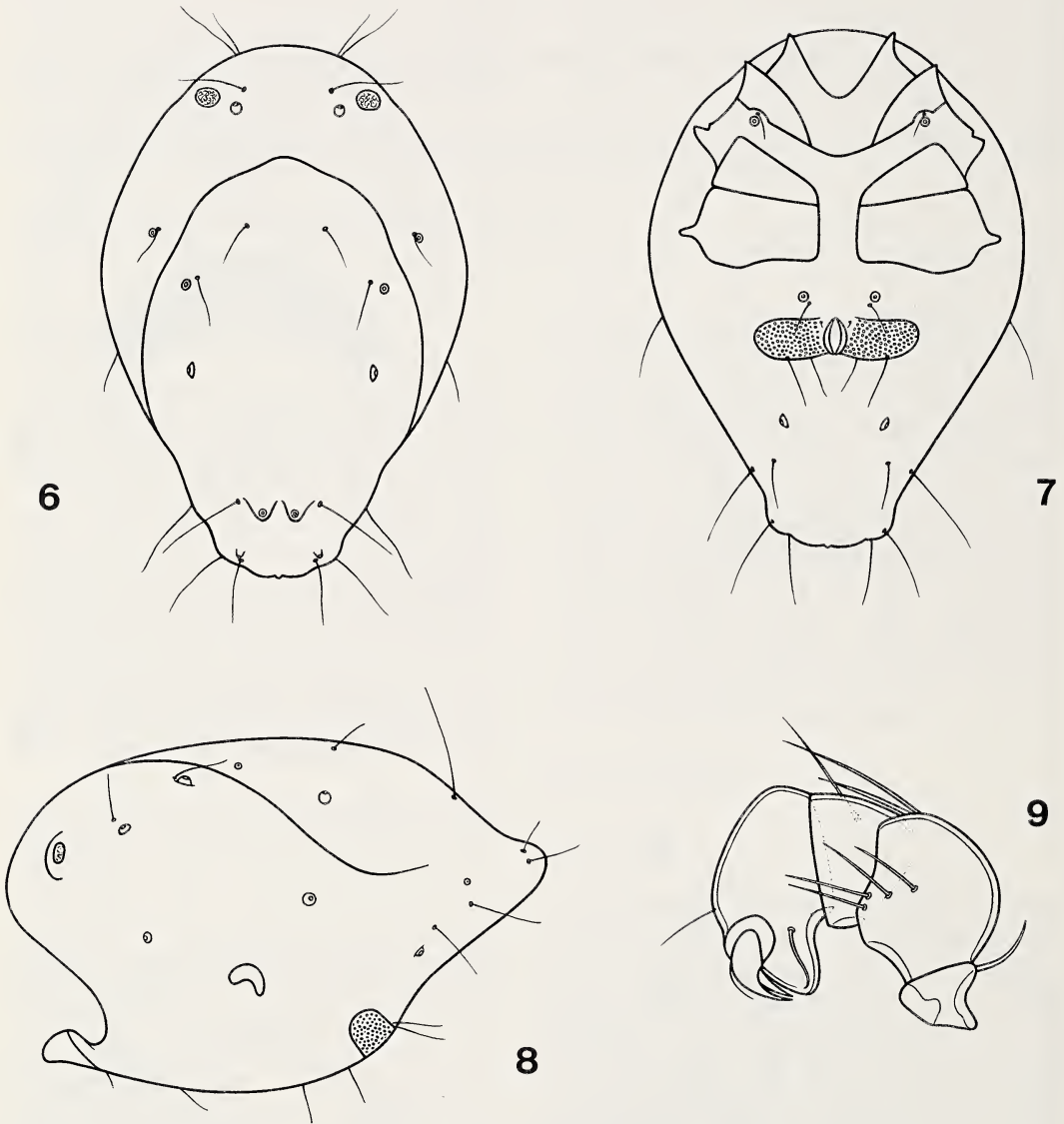
A small number of palaeartic *Arrenurus*-species have a similar short cauda and pygal lobes: *A. robustus* Koenike, *A. nielsenii* Munchberg, *A. tetracyphus* Piersig, *A. crenatus* Koenike, *A. boruzkii* Ssujetow and *A. vavrai* Thon. All differ from the new species in the shape of the petiole. Furthermore, the broad genital plates with the indented lateral margin is unique for the new species. The locality where the species has been collected is an acid moorland pool.

## Etymology

The species is named after the collector of the material, G. Duursema.



Figs 1-5. *Arrenurus duursemai* spec. nov. 1, dorsal view ♂; 2, ventral view ♂ (posterior part of body slightly uplifted); 3, lateral view ♂; 4, dorsal view of petiole; 5, palp ♂.



Figs 6-9. *Arrenurus clavatus* spec. nov. 6, dorsal view ♂; 7, ventral view ♂; 8, lateral view ♂; 9, palp ♂.

***Arrenurus (Megaluracarus) clavatus* spec. nov.**  
(figs 6-9)

*Type material*

Holotype: ♂, The Netherlands, province of Drenthe,

Oude Diep (coordinates: 250.50-526.50), 12.ix.1992, leg. G. Duursema. Paratype: 1 ♂, The Netherlands, province of Gelderland, 't Harde, ditch Veenweg (coordinates: 190.60-493.75), 7.v.1990, leg. M. Koopmans.

## Description

Male: Body 1174 (1193) long and 825 (829) wide. Body colour greenish-brown to yellowish-brown. Anterior body margin rounded. Body broad, gradually tapering into cauda. Lateral margin of cauda indented posteriorly, distal margin of cauda with three indentations; cauda without humps. Excretory pore terminal. Dorsal shield incomplete, without humps. Gonopore 78 (78) long. Genital plates short, 155 (155) long, anterior margin almost straight, posterior margin concave. Lengths of PI-PV: 41, 91, 62, 91, 48; palp stocky, PII with 4 setae on medial side. Lengths of I-leg-4-6: 165, 155, 184. Lengths of IV-leg-4-6: 233, 238, 233; IV-leg-4 without a spur.

Female: Unknown.

## Discussion

Only four palaeartic *Arrenurus*-species have a more or less similar body shape, *i.e.* *A. regulator* Thor (belonging to the subgenus *Truncaturus*), *A. viktorovi* Tuzovskij, *A. pyriformis* George and *A. scourfieldi* Soar. The first two species have a cauda with a convex distal margin and long genital plates, extending to the lateral body margin. *Arrenurus scourfieldi* has a cauda with a concave posterior margin, and also long genital plates. *Arrenurus pyriformis* has similar genital plates as the new species, but with a complete dorsal furrow, a cauda more narrowed posteriorly, the excretory pore is not terminal and the distal margin of the cauda is slightly rounded, without indentations. *Arrenurus pyriformis* and *A. scourfieldi* are insufficiently described, so Gledhill & Viets (1976) considered both as species incerta sedis.

## Etymology

The species is named for its club-like body shape.

## Discussion

Extensive collection on the locality Zandveen did not result in more specimens of *A. duursemai*. The second new species, *A. clavatus*, has been collected on two widely separated locations. Such rarity in water mite species is not unusual (see Smit & Van der Hammen, 1992). The phenomenon is not fully understood, but many species of *Arrenurus* are parasitic on dragonflies which are able to cover large distances. In this way, more or less ephemeral populations may originate far from the regular distribution area of the mites. The typical habitats of *A. duursemai* and *A. clavatus* may be rather far away from the localities where the type specimens have been found.

## Acknowledgements

I am indebted to Gerhard Duursema and Marjolein Koopmans for collecting the new species and to Dr T. Kronestedt for the loan of *A. regulator* from the collection in Lundblad. Paul Schoenmakers assisted me with the illustrations.

## References

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