

# New species of water mites for the Dutch fauna, with some taxonomic notes on the genus *Nautarachna* (Acari: Hydrachnellae)

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*Abstract:* Five species of water mites are reported new for the Dutch fauna: *Zschokkea oblonga*, *Lebertia porosa*, *Nautarachna crassa*, *Mideopsis willmanni* and *Arrenurus imitator*. *Nautarachna karamani* is considered a junior synonym of *N. crassa*. The subgenus *Pionella* cannot be retained anymore.

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## Introduction

The Dutch list of water mites is still growing. Recently, 19 species have been reported new for the Dutch fauna (Smit & Van der Hammen, 1990, 1992a, 1992b; Smit & Duursema, 1993). In this paper five new species are added to the Dutch list. All species are deposited in the collection of the first author.

## New species for the Dutch fauna

### *Zschokkea oblonga* Koenike

A widespread species, reported throughout Europe. According to Lundblad (1920) *Zschokkea oblonga* is a species of temporary waters. However, our specimen was collected

in a permanent water, the Reeënnen, a moorland pool in the province of Drenthe (Amersfoort coordinates x: 229.50; y: 537.40).

### *Lebertia porosa* Thor

A common and widespread species in Europe. In the collection of the Dutch acarologist Besseling we found a number of specimens collected in 1946 from the Geul, a stream in the province of Limburg. However, they were misidentified by Besseling as *L. inaequalis* (Koch). Nowadays, *Lebertia porosa* is still present on this locality. Other streams where this species was collected include the Roer and the Gulp, both larger streams in the same province.

In table 1 some measurements are given to

Table 1. Measurements of PIII of *Lebertia porosa* and *L. inaequalis*.

Origin of specimens	Number	Length PIII ( $\mu$ )	Ratio PIII <sup>1</sup>	Species
France/Spain	8	115-125	55-63	<i>L. porosa</i>
The Netherlands	5	108-122	56-60	<i>L. porosa</i>
France/Spain	6	106-117	45-48	<i>L. inaequalis</i>
The Netherlands	8	88-115	43-53	<i>L. inaequalis</i>

1. Ratio PIII = height: dorsal length of PIII

separate *L. porosa* and *L. inaequalis*. The best character is the ratio of the height of PIII (third segment of the palp) and the length of PIII, which is 55 or more in *L. porosa*, and 53 or less in *L. inaequalis*. Besides this, *L. porosa* has much heavier legs compared to *L. inaequalis*.

*Nautarachna crassa* (Koenike)  
*Nautarachna (Pionella) karamani* (Viets)  
**new. syn.**

A widespread but rare species, reported

throughout Europe. Three *Nautarachna*-species have been described from Europe: *N. scutata* (Walter), *N. crassa* and *N. karamani*. The first species is a synonym of *N. crassa* (Viets & Viets, 1960). *Nautarachna crassa* is only known from the female, *N. karamani* only from the male. In the type-locality of *N. karamani* an imagochrysalis of *N. crassa* was present (Viets, 1937), while Halbert (cited in Smith, 1972) reported females of *N. crassa* and males of *N. karamani* from Ireland, occurring in the same river. Therefore, Smith (1972) supposed that *N. karamani* was the male of *N. crassa*.

We found a male in the Ruenbergerbeek (coordinates x: 268.8; y: 473.4), province of Overijssel and some females in the same stream, but on the German side of the border. With this third case of a male and females occurring in the same stream, we conclude that both species are conspecific. Cook (1974) doubted the synonymy of both species and retained two subgenera, *Nautarachna* (with *N. crassa*) and *Pionella* (with *N. karamani*). Now that the two species are synonymized, the subgenus *Pionella* cannot be retained anymore.

*Mideopsis willmanni* (Viets)

A widespread species, found in springs throughout Europe. Schwoerbel (1991) found this species in springs near the Mindelsee, Germany. The description of these springs agrees well with our spring, *i.e.* a helocrene with much detritus (German: Schlamm). Accompanying species in our spring were *Tartarothyas romanica* Husiatinschi and *Sperchon squamosus* Kramer, and both species also occurred in the springs near the Mindelsee. Our record (a female) comes from Lage Kavik, province of Overijssel (coordinates x: 264.2; y: 483.6).

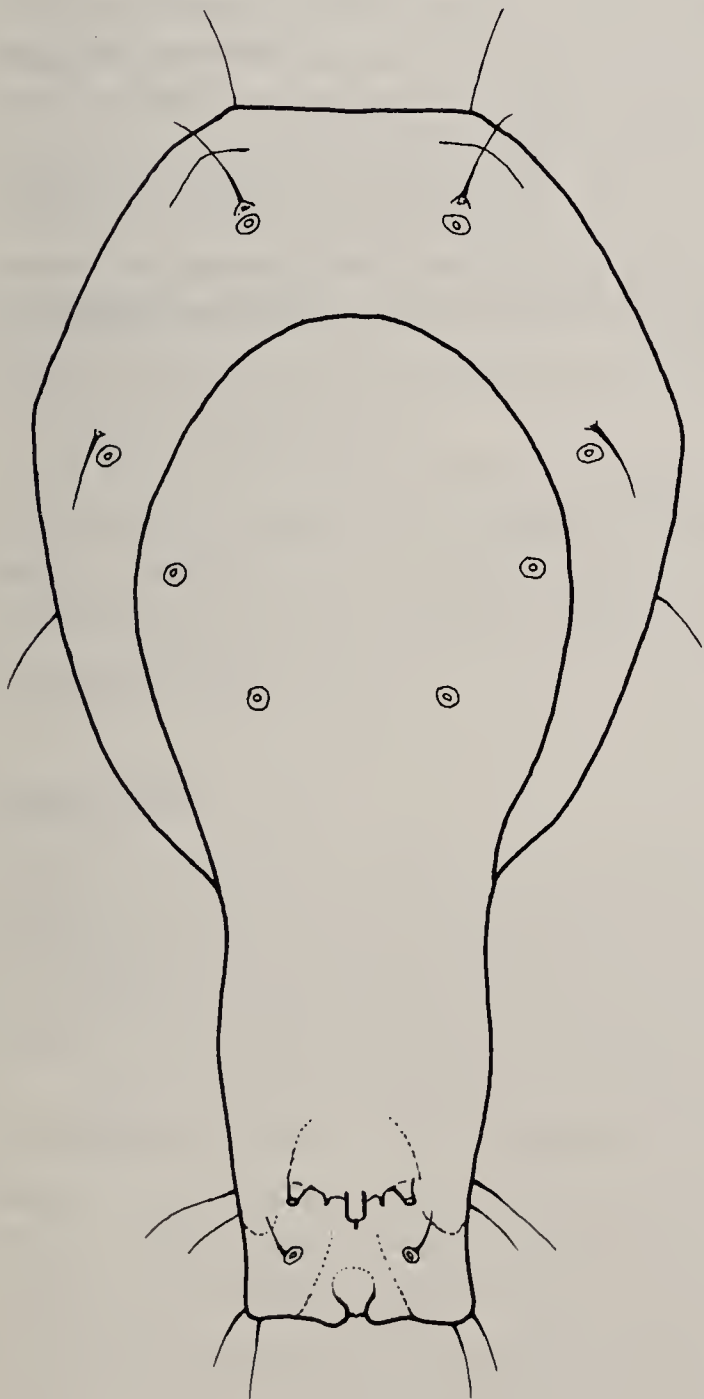


Fig. 1. Dorsal view of male *Arrenurus imitator* (scale 0.5 mm).



Fig. 2. Lateral view of male *Arrenurus imitator* (scale 0.5 mm).



*Arrenurus imitator* Koenike  
(figs 1-2)

A rare species with only a few records from Germany, Sweden, Denmark and Poland. The illustrations in the literature are few and insufficient. According to Lundblad (1962), the original drawing of Koenike (1908) is not correct. There are two records from The Netherlands, both males: one from the Nieuwe Wetering near Wapenveld, province of Gelderland (coordinates x: 202.35; y: 494.78), the other from a ditch south of Kortenhoef (coordinates x: 135.02; y: 469.84), province of Noord-Holland.

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