

PORRHOMMA MICROCAVENSE WUNDERLICH, 1990 (ARANEAE, LINYPHIIDAE) NEW FOR THE NETHERLANDS**Peter J. van Helsdingen***European Invertebrate Survey – Nederland, Postbus 9517, 2300 RA Leiden (helsdingen@naturalis.nl)*

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Steven IJland*Gabriel Metzstraat 1, 2316 AJ Leiden (sijland@gmail.com)***ABSTRACT*****Porrhomma microcavense* Wunderlich, 1990 (Araneae, Linyphiidae) new for the Netherlands.**

Porrhomma microcavense is recorded as new for the Netherlands. Specimens were collected in flood plains in the Rhine river basin (Grebbeberg and Blauwe Kamer along the Lower-Rhine and the Stiftse Waarden along the Waal). Both sexes are characterized and depicted. An overview of the presently known distribution in Europa is presented.

Key words: European distribution, microcavernicolous

INTRODUCTION

Several specimens of *Porrhomma microcavense* were collected in the alluvial district in the Netherlands. We have three specimens available for this study from the area around the Grebbeberg, province of Utrecht (1♀, stony margin of waterbody, 9.vii.1990, AC 168.7-440.5; 1♀, vegetation of sedge, 3.vii.1990, AC 170.1-440.6; 1♂, 23.viii.1990, no specifications but apparently in a drier area higher up on the hill). The Grebbeberg is steep end moraine, remnant of the Saalien ice age some 150,000 years ago, situated on the north bank of the river Lower Rhine (“Nederrijn”). The measurements and description are based on this material.

Specimens have also been collected around that time in the “Stiftsche Waarden”, a water meadow area (Faber et al. 1999, sub *Porrhomma rosenhaueri*, and 2001, sub *Porrhomma* spec.) on the north bank of the river Waal, near Ophemert (RD 155-428), province of Gelderland. Comparison of that material, consisting of a number of females, with our specimens made it clear that they were of the same species, as already outlined in an earlier report on the spiders of “The Grebbeberg” (IJland et al. 2010). In the Netherlands *P. microcavense*, therefore, can be classified as alluvial or of riverine habitats.

THE GENUS PORRHOMMA

The genus *Porrhomma* is properly delimited but remains a difficult taxon as to the delimitation and recognition of species. Useful characters, apart from the genitalia, are limited. Size, coloration, chaetotaxy, and eye-reduction are traditionally used, but in *Porrhomma* their practical use is difficult. The genitalia have characteristic features but need intensive study and comparison with other species within the genus, while the shape of elements in the male palp very much depend on the angle of observation of the object.

One species group, the *microphthalmum* group, is characterized by a number of genital characters in the male (Ruzicka 2009) among which the pigmented velum of the embolus is most easily visible. The other species have not yet been grouped.

DESCRIPTION

Diagnostic features of *P. microcavense* are the light colour (fig. 1), the slightly reduced size of the eyes (fig. 2), which otherwise look normal and functional, the presence of a pro-lateral spine on femur I, Tm I 0.42, massiv, slightly cone-shaped mesodorsal branch of the radix (fig. 4, 7, 8), and relatively big and squarish opening of the epigynum (0.75-0.87 mm) (fig. 3). Vulva (fig. 5) depicted from slightly antero-ventrally so as to show the internal structures more clearly.

The species was described for the first time by Wunderlich (Wunderlich 1990) after both sexes. Prosoma, radical complex, epigynum, and vulva (dorsal view) were depicted. The vulva is depicted only from the dorsal side. This is not mentioned in Spinnen Europas, Nentwig et al. (2011) which certainly is misleading for the users of that identification tool. Thaler et al. (Thaler et al. 2002) depicted the vulva from dorsal and ventral side.



Fig. 1-4. *Porrhomma microcavense*. 1, female, dorsal view. 2, female, eye-region. 3, epigyne. 4, male palp mesal view. Photographs Jeremy Miller.

DISTRIBUTION IN EUROPE

The species up till now has been recorded from a number of European countries from the Urals in Russia to the Northsea Belgium. The present record from the Netherlands fits well into this pattern. From east to west it was found in Russia (Esyunin 2007), the Czech Republic (Rezac 2003; Kurka et al. 2006), Austria (Steinberger et al. 1994; Thaler et al. 2002), Germany (Wunderlich 1990; Fründ 1995; Jaeger 1994, 1996), Belgium (Bosmans et al. 2001, 2009; Lambrechts et al. 2002), and finally the Netherlands (this paper).

In Russia the species was found the Perm Area on the western side of the Urals in a birch forest with steppe grass in September-October (1♂ 2♀). In the Czech republic it has been found so far in the Kokorinsko National Park only, situated north of Prague at the northern border of the Melnik District (1♀); the habitat is described as calciphilous thermophilous oak wood, but a subsequent visit of the site by Vlastimil Ruzicka (pers. com.) revealed that the true habitat of this species was a pit or quarry with arenareous marle (clay mixed with sand, generally humid); the same record was repeated by Kurka (Kurka et al. 2006). In Austria one specimen (1♀) was trapped in a pitfall in a layer of pine needles in a spruce forest ("Fichtenforst") near Bachmanning in the northern foothills (Hausruck) of the Alps in Ober-Österreich; record repeated subsequently by Thaler (Thaler et al. 2002).

In Germany more specimens have been found. Wunderlich (Wunderlich 1990) collected two specimens (♂ holotype, ♀ paratype) in Brackwede near Bielefeld, early May 1989; the site is described as below a row of

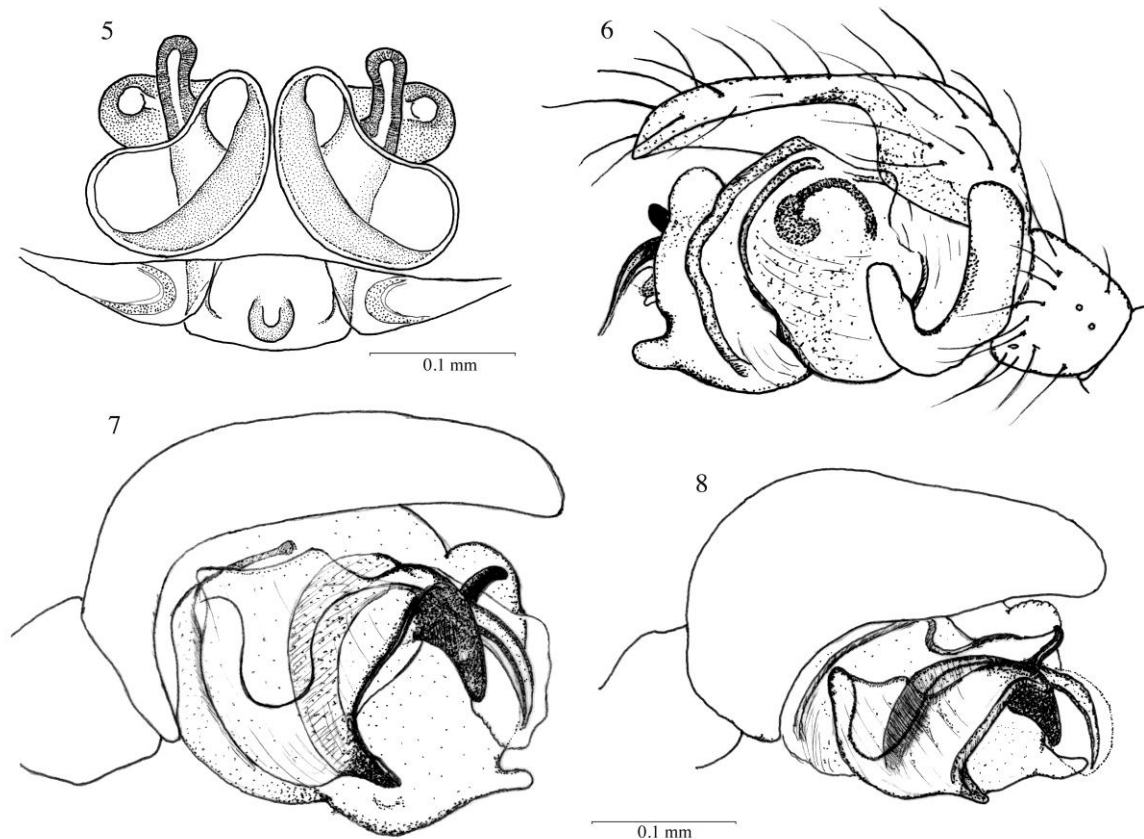


Fig. 5-8. *Porrhomma microcavense*. 5, female vulva, antero-ventral view. 6, male palp retro-lateral view. 7-8, male palp mesal view. 1: P.J. van Helsdingen; 6-8, S. IJland.

poplars on the border of a spruce vegetation and a meadow. A second discovery of this species on the Wahner Heide south of the airport near Cologne/Bonn (Nordrhein-Westfalen) was published by Jäger (Jäger 1994); the habitat is described as heathland between a birch brook, a field with shrubs, and a sanddune; a single male was trapped with a pitfall. The record was repeated in Jäger's (Jäger 1996) more extensive report on the spider fauna of that area ("Munitionsdepot-Heide"). In 1995, Fründ (Fründ 1995) published a third record, based on the capture, again with pitfalls, of two females in the city of Neumünster (Schleswig-Holstein), in June-July; the pitfalls were placed in shrubs close to the margin of an artificial lake.

For Belgium there exist, as far as we know, only two records from two different sites on the Mechelse Heide (province of Limburg) (Lambrechts et al. 2002). Both sites have heather vegetation, respectively on the Mechelse Heide itself (1♀) and on a road verge of the main road which runs through the National Park Hoge Kempen (1♂). We are not aware of more recent records of this species in Belgium.

We can state that in the Netherlands a larger number of specimens have been collected than in any of the other countries where the species was found. This article and the descriptions and illustrations are based on three specimens from the Grebbeberg near Rhenen, Province of Utrecht, and the adjacent riverine area "Blauwe Kamer". As indicated in the introduction chapter, another eight specimens had been found in the Stiftsche Waarden near Ophemert, province of Gelderland (Guelre), in 1998 (Faber et al. 1999, *Porrhomma* spec.) and at the same locality another 14 specimens in 1999 (Faber et al. 2001, *Porrhomma rosenhaueri*). We have not examined the specimens ourselves. As far as we know all were females.

REMARKS

Since only small numbers of specimens have been collected the species can be called rare in Europe. Certainly it is rare in collections. This might be due to low density of populations and/or of individuals within a population, but might as well be caused by the niche exploited by the species. Wunderlich (1990) already stated that at the site where the first specimens were collected many burrows of voles were observed. This assumption is cited or repeated in several of the above mentioned and analysed publications, but no hard proof is given. We conclude, therefore, that the species might be micro-caverniculous. This should have the attention of arachnologists in the field.

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