

Micaria lenzi and *Clubiona juvenis* (Araneae: Gnaphosidae, Clubionidae), two spider species new to the dune fauna of Finland

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During the last ten years, the two rare spider species *Micaria lenzi* Bösenberg, 1899 (Gnaphosidae) and *Clubiona juvenis* Simon, 1878 (Clubionidae) have been found on coastal sand dunes and inland dunes near the coast in Finland. The findings are the northernmost ones in Europe, extending the known range of *M. lenzi* from southernmost Sweden northwards by almost 1000 kilometers.

Introduction

Due to pitfall trapping on coastal and inland sand dunes during the last ten years, two spider species new to the fauna of Finland have been recorded. *Micaria lenzi* Bösenberg, 1899 was found for the first time on inland dunes on the Hangö peninsula in the southernmost part of Finland in 2004, but it was also recently found on a coastal dune in Kalajoki almost 500 kilometers north of the first site. *Clubiona juvenis* Simon, 1878 was found in the coastal dunes of Yyteri in Pori in 2011. To date there are no other known locations of this species in Finland. Both species are rare but occur throughout most parts of Europe being scarcer or lacking in the north. In this short paper the collected material is listed and comments on the distribution and habitat of the species are given. All specimens listed below are, for the time being, stored at the private collection of the author. The locations are mapped in Fig 1. The coordinates are given in Finnish grid (YKJ).

Micaria lenzi Bösenberg, 1899

2♀ FI N: Hangö, E of Falkpottarna 664395:328711, pitfall traps on open sand dune with debris and pine saplings, 20.7–8.8.2004 (Leg. N.R.Fritzén); 2♂ FI N: Hangö, W of Tvärminneträsket 664463:328821, semi-open dune with young pines, 15.6.2005 (Leg. N.R.Fritzén); 1♀ FI N: Hangö, S of Tvärminneträsket 6644134:3287453, pitfall traps on dune, 14.6–11.7.2007 (Leg. S. Karjalainen & L. Pulli); 1♀ FI Om: Kalajoki, Hiekkasärkät 71300:33454, running on open dune close to patch of vegetation, 8.6.2010 (Leg. N.R.Fritzén).

During a survey of red-listed spider species on the Hangö peninsula in 2004 two females of the small gnaphosid *M. lenzi* were caught in pitfall traps. A year later the Finnish expert group on Araneae made an excursion to the area. Two males were caught by hand-collecting while searching in debris at a site one kilometer from the first finding site. Two years later a nature study for land use was made in a dune area between these sites, where pitfall trapping was used. The material was sent to the author for determination. A single fe-

male was found in this material. These three sites on the Hangö peninsula are located within the restricted military area of Syndalen. In 2010 during

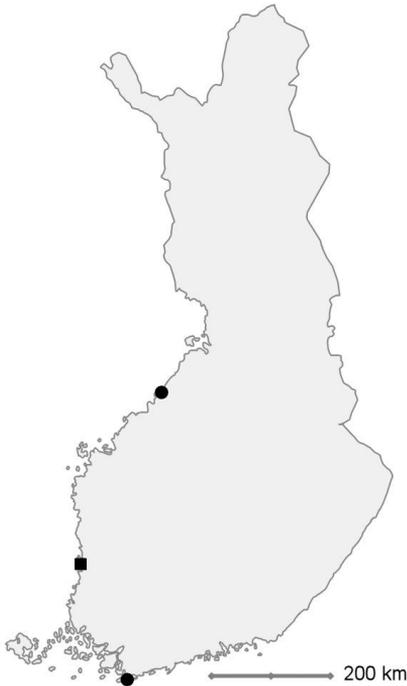


Figure 1. The known locations of *Micaria lenzi* (filled circles) and *Clubiona juvenis* (filled box) in Finland.

another excursion of the Finnish expert group on Araneae a single female of *M. lenzi* (Fig 2.) was caught by hand when rapidly running in the sun on the large sand dunes of the coast of Kalajoki. The specimen was caught near a patch of vegetation close to a grove of pines about 400 meters from the seashore.

M. lenzi is the smallest representative of the genus in Europe, males and females reaching a size of 3 mm and 2.7 mm respectively (Roberts 1998). The species has a trans-Palaeartic distribution occurring from scattered countries in Central Europe (van Helsdingen 2009) to China (Song et al. 1999). Before the present findings its distribution in Europe reached southernmost Sweden (Almquist 2006), but is now extended almost 1000 kilometers northwards. *M. lenzi* occurs on open sand dunes and dune heaths (Roberts 1998, Almquist 2006). In Sweden it is considered endangered (EN), due to the few scattered locations and habitat loss (Sandström et al. 2010). In the Evaluation of Threatened Species in Finland in 2010 it was classified as a vulnerable (VU) species (Pajunen et al. 2010). *M. lenzi* can easily be identified based on genitalia (cf. Almquist 2006) under a microscope, but its small size also helps to identify it in the field.



Figure 2. The female of *Micaria lenzi* found at the Kalajoki coastal sand dunes in 2010.

***Clubiona juvenis* Simon, 1878**

3♂2♀10 juv. FI St: Pori, Yyteri, 6839438:3209419–6838866:3209301, pitfall trapping on dune shores with *Leymus arenarius*, 2–29.6.2011 (Leg. J. Mattila).

In the summer of 2011 a survey of Coleoptera was done in a part of the coastal dune areas of Yyteri in Pori. The spider material from one of the two collecting periods was kept and sent to the author for determination. Among these were juveniles and adults of both sexes of *C. juvenis*. They were collected using pitfall traps placed mainly between tufts of *Leymus arenarius* on fixed coastal dunes (grey dunes) and shifting dunes. The area belongs to the Natura 2000 network (Preiviikinlahti FIO200080).

The record of *C. juvenis* is the first for the Nordic countries. The nearest locations are in Estonia (one old finding) (Vilbaste 1987) and Lithuania (Biteniekyte & Relys 2011). *C. juvenis* occurs in most Central European countries but is generally rare and locally distributed (Decler & Bosmans 1989, Roberts 1998). It occurs in two very different habitats: in reed beds or similar vegetation of wetlands and on coastal sand dunes (Decler & Bosmans 1989). In reed beds it can be found from ground level to the flower heads of reed. On sand dunes it lives in the densest parts of grass tussocks where moisture content is probably higher. The species can be identified based on the genitalia (cf. Roberts 1998), which are rather similar to the ones of *C. trivialis* C.L. Koch 1843. However, the anterior median eyes of *C. juvenis* are distinctly larger than the lateral ones (Fig. 3), and this character seems to allow for easy identification also of juveniles (cf. Wiehle 1965). The juveniles reported on in this paper were determined based on this character alone.

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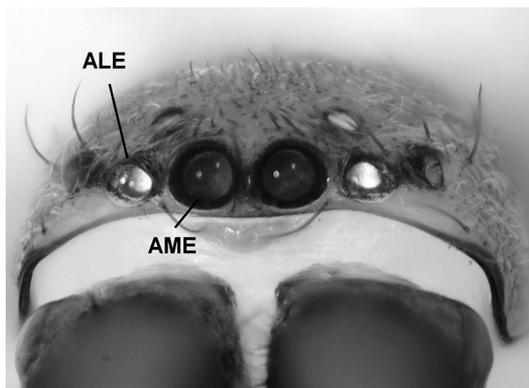


Figure 3. The head of *Clubiona juvenis* from anterior view showing the characteristic difference in size between the eyes (AME = anterior median eye, ALE = anterior lateral eye).

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