

## ***Porcellio monticola* Lereboullet, 1853 a new species for Belgium (Isopoda: Porcellionidae)**

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### **Abstract**

*Porcellio monticola* Lereboullet, 1853 is reported here for the first time in Belgium. The first individuals were captured in Viroinval (Namur) on calcareous grasslands in April 2014. In September 2014, the species was also found on calcareous grassland in Rochefort (Namur). After an extensive field survey in the south of Belgium, the species was found in oak-hornbeam forest on calcareous soil in Etalle (Luxembourg). In April 2015, the species was also found in oak-hornbeam forest in Viroinval. *P. monticola* seems to prefer calcareous soils in the southern part of Belgium, where it does not seem very rare. The distribution pattern in the neighbouring countries suggests that the species occurs along river valleys, where calcareous soils outcrop. It is expected the species could also be found further north along the river Meuse in Belgium and the Netherlands. We propose 'Rotspissebed' as Dutch name for the species.

**Keywords:** *Porcellio monticola*, isopods, woodlice, distribution, Belgian fauna.

### **Samenvatting**

*Porcellio monticola* Lereboullet, 1853 wordt voor het eerst gemeld uit België. De eerste exemplaren werden gevangen op kalkgraslanden in Viroinval (Namur) gedurende april 2014. In september 2014, werd de soort gezien op kalkgraslanden nabij Rochefort (Namur). Na een intensieve veldcampagne in Zuid-België werd de soort gevonden in eiken-haagbeukenbos op kalkgrond in Etalle (Luxembourg). In april 2015, werd de soort in eiken-haagbeukenbos in Viroinval gevonden. *P. monticola* lijkt een voorkeur te hebben voor kalkbodems in het zuidelijke deel van België, waar de soort niet zeldzaam lijkt te zijn. Het verspreidingspatroon in de buurlanden suggereert dat de soort voorkomt langs rivier valleien, waar kalk dagzoomd. We verwachten dat de soort ook meer noordelijk langs de Maas gevonden kan worden in België en Nederland. We stellen 'Rotspissebed' voor als nederlands naam.

### **Résumé**

*Porcellio monticola* Lereboullet, 1853 est rapporté pour la première fois de Belgique. Les premiers individus ont été capturés à Viroinval (Namur) sur des pelouses calcaires en avril 2014. Depuis lors, cette espèce a été trouvée sur d'autres sites: en septembre 2014, sur pelouses calcaires à Rochefort (Namur) et sur sol calcaire dans une chênaie-charmaie à Etalle (Luxembourg) et en avril 2015, dans une chênaie-charmaie à Viroinval. *P. monticola* semble préférer les sols calcaires dans la partie sud de la Belgique où il ne paraît pas très rare. Sa distribution dans les pays voisins montre que l'espèce est présente le long des vallées fluviales où les sols calcaires affleurent. L'espèce est supposée présente plus au nord, le long de la Meuse en Belgique et aux Pays-Bas.

## Introduction

During a natural history course of the Youth Movement for Nature and Environment (JNM) in Viroinval (Namur), the first Belgian specimens of *Porcellio monticola* Lereboullet, 1853 were found in April 2014. One female was found on the 16<sup>th</sup> of April under a log on the calcareous grasslands of Les Abannets. One day later, two males and one female were caught under stones at the calcareous grasslands of Montagne-aux-Buis. In September 2014, the species was seen again in Viroinval and a first record in Rochefort (Namur) some 50 km to the east, also on calcareous grasslands. A special excursion undertaken by the recently founded Belgian land isopod group (Spinicornis) revealed the first sighting of the species in the far south of Belgium (Etalle, Luxembourg). Here, the species was found in an oak-hornbeam forest (*Quercus-Carpinetum*) on calcareous soil and in April 2015, the species was found in a similar habitat in Viroinval. *P. monticola* is the 33<sup>th</sup> terrestrial isopod species for the fauna of Belgium, which has free-living populations. TAVERNIER & WOUTERS (1989) reported 30 species, but *Armadillidium depressum* Brandt, 1833 is considered as an introduced species which did not establish a viable population and two species only occur in greenhouses (i.e. *Trichorina tomentosa* (Budde-Lund, 1893) and *Cordioniscus stebbingi* (Patience, 1907)). Since their publication, four species were added to the Belgian fauna (LOCK & VANACKER, 1999; LOCK & DURWAELE, 2000; LOCK, 2001; 2007). In addition, *Trichoniscus pusillus* s.l. was split into two distinct species: *T. pusillus* Brandt, 1833 and *T. provisorius* Racovitza, 1908, which both occur in Belgium (KERSMAEKERS, 1973; SCHMALFUSS, 2003).

## Description

*Porcellio monticola* belongs to the family of the Porcellionidae, represented in Belgium by six species of which five in the genus *Porcellio*. *P. monticola* is a large species with a body size ranging between 12 and 16 mm. It is a nicely coloured *Porcellio* with some distinct body features, which can be easily observed in the field (Fig. 1). The body is brownish with a dark brown longitudinal stripe and two longitudinal whitish stripes at the borders of each side of the pereon. The head is dark brown, almost black. The antenna has two flagella segments of which the first is much longer than the second (Fig. 1A). The hind tip of every epimeron has an orange to white spot (Fig. 1B). The tip of the head is not upturned as in *Porcellio scaber* Latreille, 1804 (Fig. 1C). The exopodit of the uropod (Fig. 2A) is orange at the end. The protodit (Fig. 2B) is hollow at the tip in which the uropod is embedded. The exopodit of the first pleopod of the male (Fig. 3) is triangular with rounded margins (A) and an obtuse end (B).

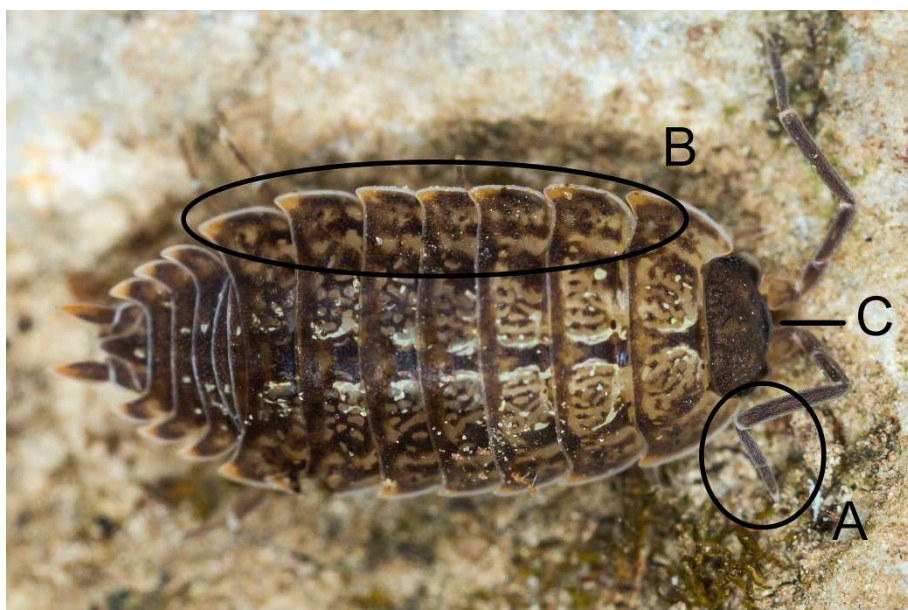


Fig. 1. *Porcellio monticola* (Viroinval) with the antenna flagella (A), the hind tip of the epimeron (B) and the tip of the head (C) (Photo: Gert Arijs).

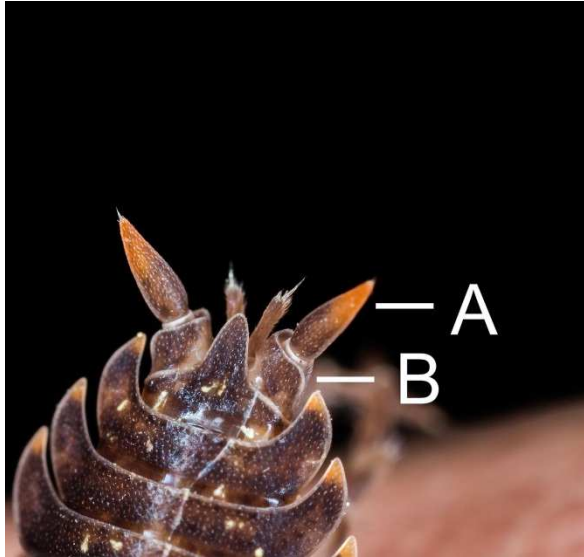


Fig. 2. Uropods of *Porcellio monticola* with exopodit (A) and protodit (B) (Photo: Gert Arijs).

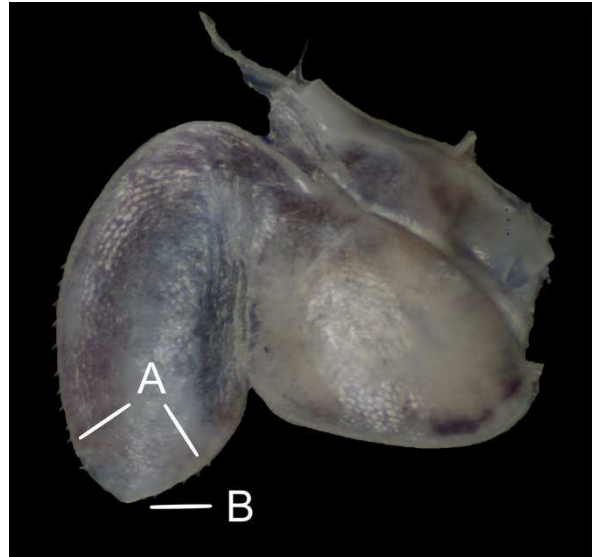


Fig. 3. Exopodit of the first pleopod of a male *Porcellio monticola* with rounded margins (A) and an obtuse end (B) (Photo: Sam Van de Poel).

### Distribution and habitat

SCHMALFUSS (2003) reports *P. monticola* from northeast Spain, through France towards southwest Germany. GRUNER (1965) reports the species also for the Grand Duchy of Luxembourg. Belgium is the fifth country where the species occurs. The Belgian locations (Fig. 4) are all in the south of Belgium in the provinces of Namur and Luxembourg.

According to VANDEL (1962), *P. monticola* can be typically found in valleys in sandy areas close to rivers. It is a species from temperate and humid regions. It can be found underneath stones, between herbs and under death leaves. It can also be found frequently underneath bark of death and fallen trees and even under bark of living trees in forests. In Belgium, one observation was made in oak-hornbeam forest along a small stream in the town of Etalle but also in Viroinval, the species was found in a similar forest type. The species was found in both locations under dead wood and in the litter layer as well as underneath stones. This habitat description corresponds with the one given by VANDEL (1962). However, the other Belgian observations were made on calcareous grasslands, where the species seems to prefer hiding underneath stones in this warm and dry habitat. Only few observations are done and probably the species has been overlooked for quite a long time, therefore, more observations are needed to obtain a better insight in the preferred habitat in Belgium. Since most observations were done under stones and in accordance with the scientific name, we propose to use the Dutch name 'Rotspissebed'.



Fig. 4. Distribution of *Porcellio monticola* in Belgium and within the catchment of the river Meuse. Black stars indicate the species presence.

## Discussion

*Porcellio monticola* is a large species of woodlouse and probably already present for a long time, judging by its occurrence in different regions of the country. It has probably been overlooked because its superficial resemblance to other bigger species like *Trachelipus rathkii* (Brandt, 1833), *Porcellio scaber* Latreille, 1804 and *Porcellio spinicornis* Say, 1818. However, some distinct features allow to identify the species easily in the field.

VANDEL (1962) suggests that the species can spread quickly since it occurs in river valleys in France. This is supported by its distribution in Germany, where the species occurs along the Rhine valley and the Mosel valley (a tribute of the Rhine) in Luxembourg (GRUNER, 1965). It is possible that the individuals from Belgium have reached the country via the Meuse valley, since all reported locations are within the Meuse catchment (Fig. 4). New locations could be searched along the Meuse valley and it seems possible that the species could be discovered in the Netherlands as well.

The fact that this species is only now mentioned for the first time in Belgium makes it very reasonable that other bigger species still go unnoticed in the south of Belgium such as *Porcellio gallicus* Dollfus, 1904 and *Philoscia affinis* Verhoeff, 1908. Both species are present in northern France, close to the Belgian border.

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