



## A new *Roncus* species (Pseudoscorpiones: Neobisiidae) from Montseny Natural Park (Catalonia, Spain), with remarks on karyology

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### Abstract

*Roncus montsenyensis* **sp. nov.** is described from Montseny Natural Park (Catalonia, Spain). The new species is geographically and morphologically close to *Roncus cadinensis* Zaragoza, 2007, but can be separated from it by palpal morphometrics, the chelal microsetae pattern and karyology. The diploid number was found to be  $2n=16$  in *R. montsenyensis*, with only biarmed chromosomes. The diploid number was found to be  $2n=38$  in *R. cadinensis*, with a predominance of acrocentric chromosomes. Both species possess the XY sex chromosome system and the X and Y chromosomes are only weakly differentiated.

**Key words:** Pseudoscorpiones, Neobisiidae, *Roncus*, new species, karyotype, Catalonia, Spain

### Resumen

*Roncus montsenyensis* **sp. nov.** es descrita del Parque Natural del Montseny (Cataluña, España). La nueva especie es geográfica y morfológicamente cercana a *Roncus cadinensis* Zaragoza, 2007, pero se diferencia de aquella por la morfometría del palpo, el modelo de posición de las microsedas de la quela y la cariología. El número diploide encontrado en *R. montsenyensis* ha sido  $2n=16$ , con sólo cromosomas de dos brazos. El número diploide hallado en *R. cadinensis* ha sido  $2n=38$ , con predominancia de cromosomas acrocéntricos. Ambas especies poseen el sistema de cromosomas sexuales XY y los cromosomas X e Y están sólo levemente diferenciados.

### Introduction

The presence of a new *Roncus* L. Koch, 1873 species from Montseny Natural Park that is taxonomically and geographically close (about 120 km) to *Roncus cadinensis* Zaragoza, 2007 (Zaragoza *et al.* 2007) from Cadí-Moixeró Natural Park (both in province of Barcelona, Catalonia, Spain), confirms that *Roncus* populations in Northeast Spain can present high endemism. It also provides support for the view that previous records of the genus from that region are in need of a thorough revision (Henderickx & Zaragoza 2005).

Karyotypes have been described to date for six species of *Roncus*, all from northwestern Italy. In spite of this limited information, cytogenetic analysis of four epigeal (Troiano 1990) and two hypogean (Troiano 1997) species demonstrated the great interspecific variability in the diploid numbers ( $2n=22-52$ ), chromosome morphology and even the sex chromosome system (X0 and XY). Troiano (1990, 1997) also showed that karyology may play an important role in the taxonomy of the morphologically very uniform genus *Roncus* and help to determine the relationships between the species. Later karyological studies support this hypothesis