

FIRST RECORD OF THE RARE SPECIES *PARDOSA MAISA* HIPPA & MANNILA, 1982 (ARANEAE: LYCOSIDAE) IN ROMANIA

ÉVA-HAJNALKA SAS-KOVÁCS¹, ISTVÁN URÁK² and ISTVÁN SAS-KOVÁCS^{3*}

¹ Babeş-Bolyai University, Faculty of Biology and Geology, Department of Taxonomy and Ecology, 400006 Cluj-Napoca, Romania

² Sapientia Hungarian University of Transylvania, Department of Environmental Sciences, 400112 Cluj-Napoca, Romania

³ University of Oradea, Faculty of Sciences, Department of Biology, 410087 Oradea, Romania

Abstract - The presence of a rare species, *Pardosa maisa*, is reported for the first time in Romania. Seven males and 4 females were collected in spring, using pitfall traps, from four marshy habitats located near two natural reserves within the Natura 2000 site “Câmpia Careiului”, northwestern Romania.

Key words: *Pardosa maisa*, first record, Romania, marsh

INTRODUCTION

With 2 393 described species (Platnick, 2013), the family Lycosidae Sundewall, 1833 represents the fourth largest spider family in the world. In Romania, there are 81 species according to the latest checklist of Romanian spiders, of which three, however, are considered doubtful (Weiss and Urák, 2000). Since then some new species have been added to the lycosid fauna of the country (Urák, 2001, Adam, 2007, Buchar, 2009, Moscaliuc, 2012).

Within the large genus *Pardosa* C. L. Koch, 1847, the species *Pardosa maisa* Hippa & Mannila, 1982, was described from Finland (Hippa and Mannila, 1982), its presence being subsequently reported from Czech Republic (Buchar, 1994), Poland (Kupryjanowicz, 1995), Austria (Zulka et al., 1997), Hungary (Szinetár and Guitprecht, 2001), Belarus (Lukashevich, 2004) and Orenburg Region (Russia) (Esyunin et al., 2007). According to Buchar (2009), it is a typical

Pannonian species that has spread northwards. This paper reports the first record of this species in Romania, thus improving the knowledge of its distribution area.

MATERIALS AND METHODS

During 2008, 282 pitfall trap samples were obtained by monthly collection (April-September) from various habitats (wetlands, sand dune, meadow, acacia plantation, oak forest, etc.) located in the Natura 2000 site “Câmpia Careiului” (ROSCI0020), as part of a larger study on the lycosids from northwestern Romania. We managed to identify 11 individuals of *P. maisa* in the samples (7 males and 4 females). Of these, 5 individuals were found in the samples collected from a sedge-reed marsh with willows in patches and bordered on one side by an acacia plantation (site 1, 47°42'52.46"N 22°18'49.18"E, 133 m a.s.l.) close to the natural reserve “Dunele de Nisip la Foieni”, in the vicinity of Foieni locality; the re-

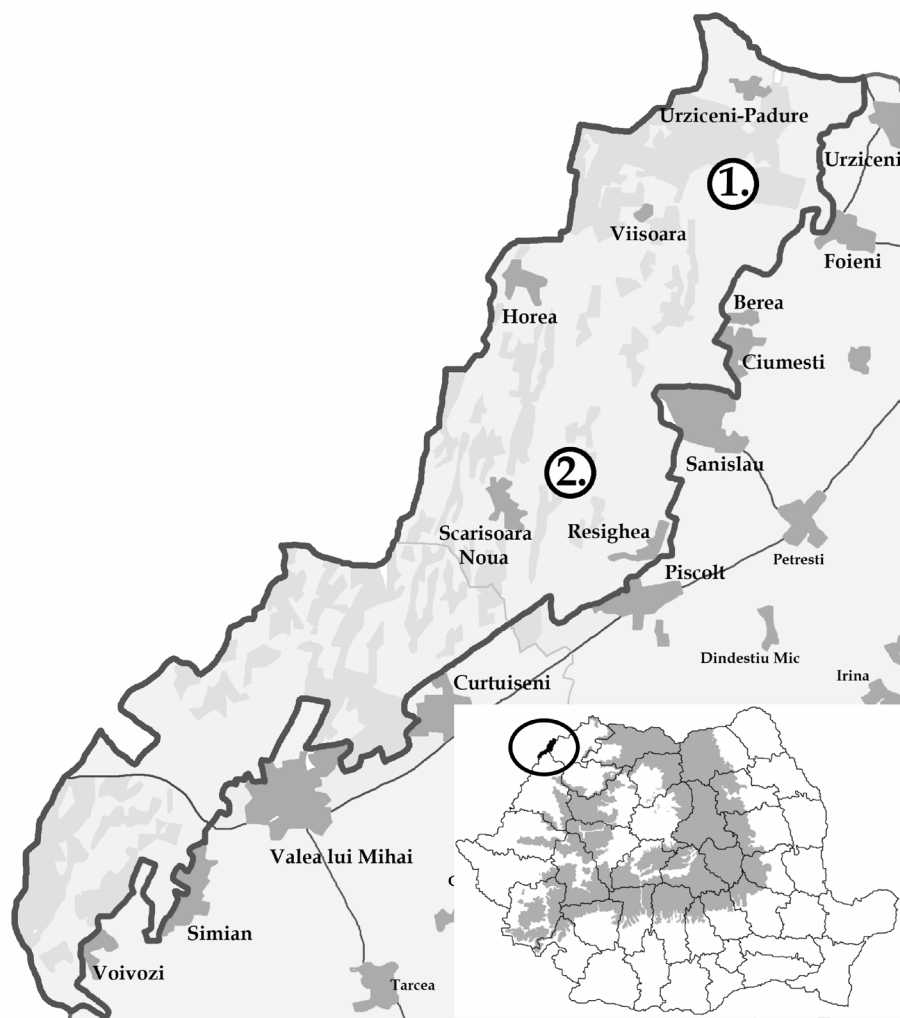


Figure 1. Map of the collection sites in northwestern Romania (number 1 corresponds to site 1 and number 2 to sites 2-4).

maining were from three moist habitats near the natural reserve “Mlaştina Vermeş” (47°37'26.46"N 22°14'44.31"E, 137 m a.s.l), in the vicinity of Scărişoara Nouă locality (Fig. 1). These habitats are represented by a marshy area near a channel (site 2), an open marsh with grassy vegetation (site 3) and by a marshy area with an acacia patch (site 4). The two above-mentioned natural reserves are located inside the Natura 2000 site.

RESULTS AND DISCUSSION

Three males and two females of *P. maisa* were identified in the samples from April and a slightly higher

number of individuals in the samples from May (4 males and 2 females). The low number of captured individuals does not allow us to draw conclusions on the phenology of the species, however the results correspond with other observations concerning the maximum activity period of adults (Milasowszky and Zülka, 1998). Both sexes had morphology similar to that described in the literature (Hippa and Mannila, 1982, Szinetár and Guitprecht, 2001), and this is why we will not discuss it here in detail.

The individuals of this species comprise only 0.65% of the total number of adult wolf spiders of the four sites (Sas-Kovács, unpublished data). *Par-*

dosa prativaga (L. Koch, 1870) and *Trochosa ruricola* (De Geer, 1778) were the species generally present with a high number of individuals at all sites, with *Piratula latitans* (Blackwall, 1841) in the sites near “Mlaştina Vermeş” and *Piratula hygrophila* (Thorell, 1872) at site 4 (SAS-Kovács, unpublished data). All these species are relatively widespread and can be found frequently and in large numbers in wet meadows, marshes, etc. (Fuhn and Niculescu-Burlacu, 1971; Szinetár and Keresztes, 2003). *Pardosa prativaga* was also the dominant species in an ungrazed salt meadow where *P. maisa* also occurred (Zulka et al., 1997). Szinetár and Guitprecht (2001) reported that *Trochosa spinipalpis* (F.O.P.-Cambridge, 1895) and *Ozyptila trux* (Blackwall, 1846) were the species found in close association with *P. maisa*.

P. maisa is a species attached to wetlands, being recorded in peat bogs (Kupryjanowicz et al., 1998), fen meadows (Szinetár and Guitprecht, 2001), salt marshes (Bryja et al., 2005), saltpans (Milasowszky and Zulka, 1998), and sedge-moss marshes (Kupryjanowicz, 2003). The moist habitats where the species was identified alternate with drier areas consisting mainly of sand dunes, a specific trait of Carei Plain (Covaciu-Marcov et al., 2009). This species was reported from several Transdanubian habitats (western Hungary) (see in: Szinetár and Keresztes, 2003), but to our knowledge, although it has been suggested to occur in the Great Hungarian Plain (eastern Hungary) (Szinetár and Guitprecht, 2001), it has not yet been found here. Thus, the current record from northwestern Romania expands the known distribution area of the species.

The natural reserve “Mlaştina Vermeş” is strongly influenced anthropogenically since agricultural land extends to its edges in some portions and the neighboring areas are sometimes overgrazed. The anthropogenic pressure might have been one of the causes that led to the low success of the species since it seems that it prefers natural or less disturbed (Szinetár and Guitprecht, 2001), ungrazed habitats (Zulka et al., 1997). On the other hand, both spring and early summer of 2008 were very rainy in this region

and the collection of species, even with pitfall traps, was shown to be negatively influenced by precipitation (Milasowszky and Zulka, 1998).

Consequently, the need to survey the other marshes from the area becomes obvious in order to identify those that might hold viable populations, especially because *Pardosa maisa* is generally considered a rare species (Zulka et al., 1997, Bryja et al., 2005), even critically endangered in some countries (Markut et al., 2012). The investigation of other wetlands in the country is also required to establish the distribution of the species in Romania. The report of this species in the Carei Plain protected area strengthens the need for conservation of the marshes from this region, as they also shelter species generally found at higher altitudes and even glacial relicts regarding both fauna (e.g. Covaciu-Marcov et al., 2009, Ferentî et al., 2012) and flora (see in: Ardelean and Karácsonyi, 2005).

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