

# **Article**



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## A survey of East Palaearctic Lycosidae (Araneae). 10. Three new *Pardosa* species from the mountains of Central Asia

YURI M. MARUSIK<sup>1,2</sup>, ANTON A. NADOLNY<sup>2,3</sup> & MIKHAIL M. OMELKO<sup>4,5</sup>

<sup>1</sup>Institute for Biological Problems of the North, Portovaya Str. 18, Magadan 685000, Russia. E-mail: yurmar@mail.ru

<sup>2</sup>Zoological Museum, University of Turku, FI-20014 Turku, Finland

<sup>3</sup>Zoology Department, V.I. Vernadsky Taurida National University, 4 Yaltinskaya str., Simferopol 95007, Ukraine.

E-mail: nadolnyanton@mail.ru

<sup>4</sup>Gornotaezhnaya Station FEB RAS, Gornotaezhnoe Vil., Ussuriyski Dist., Primorski krai 692533 Russia.

E-mail: omelkom@gmail.com

<sup>5</sup>Far Eastern Federal University, Sukhanova 8, Vladivostok 690950, Russia

#### **Abstract**

Three new species of *Pardosa*, *P. svatoni* sp. n. ( $\varnothing \subsetneq$ , SE Kazakhstan), *P. fengi* sp. n. ( $\varnothing \subsetneq$ , Central Xinjiang) and *P. lii* sp. n. (♂♀, Central Xinjiang) are described and illustrated. The two former species cannot be placed in any species group. Pardosa lii sp. n. belongs to the P. wagleri species group. It is compared with P. italica Tongiorgi, 1966, whose embolic division has not previously been illustrated.

**Key words:** wolf spider, *Pardosa*, new species, Central Asia

### Introduction

Pardosa C. L. Koch, 1847 is the largest genus of lycosid spiders with 557 currently valid species names (Platnick 2013) and third largest among all spider genera. Only Theridion Walckenaer, 1805 (578 species) and Araneus Clerck, 1757 (661) have more species currently assigned to them. Most Pardosa species are restricted to the Holarctic and Southeast Asia. The genus has been studied irregularly through its range and has been subject for recent revisions or reviews in the Nearctic (Dondale & Redner 1990; Vogel 2004), Europe (Tongiorgi 1966a, b; Nentwig et al. 2013) and Japan (Tanaka 2009). It is very likely that many species described in Pardosa outside of the Holarctic and Southeast Asia are misplaced.

The *Pardosa* in some regions remain poorly studied. One such region is Central Asia, an area from the Caspian Sea to Mongolia. Only one species group, the P. monticola group, has been recently revised in Central Asia (Marusik & Fritzén 2009; Marusik et al. 2012; Ballarin et al. 2012). The Pardosa of only two parts of Central Asia have been relatively well studied due to the monograph on the spiders of Xinjiang (Hu & Wu 1989) and the taxonomic-faunistic work on spiders of northeastern Kazakhstan (Eskov & Marusik 1995). Currently about 50 Pardosa species are known in Central Asia (Mikhailov 1997 and unpublished data) and 23 in Xinjiang (Song et al. 1999; Marusik & Fritzén 2009). Eight species in Xinjiang are endemic to the province. While studying spiders of Xinjiang and neighboring Kazakhstan we found three species new to science, which are described in this paper.

#### Material and methods

Photographs were taken in dishes of different sizes with paraffin at the bottom. Specimens were photographed using an Olympus Camedia E-520 camera attached to an Olympus SZX16 stereomicroscope at the Zoological Museum, University of Turku. SEM microphotographs were made with a JEOL JSM-5200 in the Zoological Museum, University of Turku. Digital images were prepared using "CombineZP" image stacking software (http://