



Two new species and a new record of mealybugs (Hemiptera, Coccoidea, Pseudococcidae) from Iran

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Abstract

Chorizococcus mirzayansi Moghaddam **sp. n.** and *Phenacoccus betae* Moghaddam **sp. n.** are described and illustrated in detail based on adult females from Iran. The species *C. mirzayansi* was collected on the leaves of *Opuntia ficus-indica* (Cactaceae) and *P. betae* was collected on the roots of *Beta vulgaris* (Betulaceae). The mealybug *Phenacoccus perillustris* Borchsenius is recorded from Iran for the first time. A key and a checklist are provided for the six species of *Phenacoccus* known from Iran.

Key words: *Chorizococcus mirzayansi* **sp. n.**, *Phenacoccus betae* **sp. n.**, *P. perillustris* Borchsenius, mealybugs, Pseudococcidae, new record, Iran

Introduction

The mealybug genus *Chorizococcus* includes 58 described species, mostly known from the Nearctic (27 species), Afrotropical (8), Australasian (8), Neotropical (6) and Oriental (6) regions (Ben-Dov *et al.*, 2009). This genus is poorly represented in the Palaearctic region, with *C. rostellum* (Lobdell) and *C. vikorina* Kozár from Central Europe (Kosztarab & Kozár, 1988), *C. parietaricola* (Bodenheimer) only known from Iraq (Bodenheimer, 1943) and *C. viticola* Kaydan & Kozár, recently described from Iran (Fallahzadeh *et al.*, 2010).

The genus *Phenacoccus* is one of the largest genera in the family Pseudococcidae with about 186 species worldwide (Ben-Dov, 1994), among which about 114 occur in the Palaearctic region (Ben-Dov *et al.*, 2010). Danzig (2003, 2006) revised the genus *Phenacoccus* for the territory of the former USSR and provided a key to 40 species of this genus. Bodenheimer (1944) recorded *P. sherbinovskyi* Bodenheimer, and Kozár *et al.* (1996) added the species *P. aceris* (Signoret) to the Iranian fauna. Moghaddam (2009) listed the following two more species *P. arthrophyti* Archangelskaya and *P. solani* Ferris from Iran. Lately, *P. solenopsis* Tinsley was reported as an accidentally introduced pest from the southern part of Iran (Moghaddam & Bagheri, 2010), a species which has recently become a serious pest of cotton in Pakistan and India (Hodgson *et al.*, 2008).

Material and methods

The specimens were slide-mounted according to the method of Williams & Granara de Willink (1992) and terminology follows that of Williams (2004). Body measurements are given in millimeters (mm) and measurements of the microscopic characters in microns (μm). The illustrations show the morphology of the dorsum on the left side and the venter on the right, with enlargements of important characters around the margins. These enlargements are not drawn to scale.

The specimens are deposited at the Iranian Research Institute of Plant Protection (IRIPP), Tehran, Iran.