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A new species of *Pseudococcus* (Hemiptera: Pseudococcidae) belonging to the "*Pseudococcus maritimus*" complex from Chile: molecular and morphological description

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Abstract

A new species of mealybug from Chile, *Pseudococcus meridionalis* Prado **sp. n.**, is described and illustrated based on the morphological and molecular characterization of adult females. This species belongs to the "*Pseudococcus maritimus*" complex and displays a wide host plant range, including Japanese pear, persimmon, pomegranate, pear and grape.

Key words: *Pseudococcus meridionalis* **sp. nov.**, Chile, mealybugs, phenotypic plasticity, cytochrome oxidase, internal transcribed spacer

Introduction

Approximately 25 mealybug species have been reported from Continental Chile (excluding Easter Island). Ten are indigenous and are mostly associated with native plants (Prado, 1991; Williams & Granara de Willink, 1992; Ben-Dov *et al*., 2010). The other species have a worldwide distribution and probably have been introduced. *Pseudococcus viburni* (Signoret), *P. calceolariae* (Maskell) and *P. longispinus* (Targioni Tozzetti) are the predominant species found on fresh fruits such as table grapes, apples, pears and plums exported from Chile, and there are no quarantine restrictions on their import to the many countries. However, the literature is contradictory regarding the presence of *P. maritimus* in Chile (González *et al*., 1973; Prado, 1991; Williams & Granara de Willink, 1992; Gimpel & Miller, 1996; González *et al*., 2001; Artigas, 1994, Gonzalez 2003a, González & Volosky 2005), and it is generally believed that earlier records are misidentifications of an undescribed *Pseudococcus* species. Indeed, unknown *Pseudococcus* species belonging to the "*Pseudococcus maritimus*" complex have been intercepted occasionally in phytosanitary export inspections, and have been referred to as *Pseudococcus* sp. 1 and *Pseudococcus* sp. 2 for many years (González, 2003a, 2003b).

Here we describe a species corresponding to *Pseudococcus* sp. 1 collected in Chile both morphologically and by means of molecular tools. Considering that morphological characterization is usually restricted to the adult female stage and because very closely related species may be morphologically indistinguishable (Rung *et al*., 2008; Pieterse *et al*., 2010), we have characterized this species using two molecular markers known to be efficient for fine-scale species identification (Malausa *et al*., 2011). We have also compared the DNA sequences of the new spe-

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