



A new *Paracoccus* species from Palaearctic region (Hemiptera, Sternorrhyncha, Coccoidea, Pseudococcidae)

GAETANA MAZZEO¹, JOSÉ CARLOS FRANCO^{2,3} & AGATINO RUSSO¹

¹Dipartimento di Scienze e Tecnologie Fitosanitarie, Università di Catania, Via Santa Sofia 100, 95123 Catania, Italy.

E-mail: gamazzeo@unict.it

²Departamento de Protecção de Plantas e de Fitoecologia, Instituto Superior de Agronomia, Universidade Técnica de Lisboa, 1349-017 Lisboa, Portugal. E-mail: jsantossilva@isa.utl.pt

³Centro de Estudos Florestais, Instituto Superior de Agronomia, Universidade Técnica de Lisboa, 1340-017 Lisboa, Portugal

Abstract

A new mealybug species, *Paracoccus leucadendri* **sp. nov.**, is described from Portugal. This is the first record of a *Paracoccus* species from Europe. It is suggested that its presence in Portugal is the result of a fortuitous introduction with its host plant, *Leucadendron* sp. (Proteaceae). An identification key is presented to distinguish this new *Paracoccus* species from other mealybug species reported on Proteaceae in the world.

Key words: *Paracoccus leucadendri* **sp. nov.**, *P. claudus*, *P. evae*, *P. herreni*, *P. invectus*, *P. orsomi*, Iberian Peninsula

Introduction

Mealybugs (Hemiptera: Pseudococcidae) constitute the second largest family of scale insects (Hemiptera: Coccoidea), with more than 2000 described species and ca. 290 genera (Ben-Dov, 2009a). About 160 species of mealybugs are recognized as pests worldwide (Miller *et al.*, 2002). Pest mealybugs are often invasive species. For example, approximately 70% of the mealybug species that are considered as pests in USA are invasive (Miller *et al.*, 2002).

The mealybug genus *Paracoccus* includes 86 described species, mostly from the Australasian (36 species), Afrotropical (21) and Nearctic (17) regions, plus a few species from the Neotropical (8) and Oriental (10) regions (Ben-Dov, 2004). Only one species, *Paracoccus tuaregensis* (Balachowsky), is known from the Palaearctic region, described off *Ficus* (Moraceae) from Algeria (Balachowsky, 1951; Ben-Dov, 1994). In this paper, a new species of *Paracoccus*, collected off *Leucadendron* (Proteaceae) in Portugal, is described.

Proteaceae have been cultivated for cut flowers along the Southwestern coast of Portugal since the 1990s. Mealybugs are considered major pests of several Proteaceae cultivars in this region (Leandro *et al.*, 2006). Their pest status is due both to cosmetic damage originated by the contamination of flowers with mealybugs, honeydew and/or sooty mold, as well as to the inefficacy of chemical control. In the most susceptible varieties, infestation levels can reach 65% of plant stems in late spring (Leandro *et al.*, 2006). No information was available on the identity of mealybug species associated with Proteaceae in Portugal. The *Paracoccus* species here described is the first mealybug species reported of Proteaceae from mainland Europe. The possible occurrence of other mealybug species is under investigation.

According to Ben-Dov (2009b), 29 species of mealybugs in 15 genera are reported worldwide on Proteaceae, namely *Apodastococcus* (1 species), *Australicoccus* (1 species), *Delottococcus* (3 species), *Dysmicoccus* (1 species), *Eucalyptococcus* (1 species), *Ferrisia* (2 species), *Maconellicoccus* (2 species), *Melanococcus* (1 species), *Misericoccus* (1 species), *Nipaecoccus* (4 species), *Phenacoccus* (2 species),