



A new species of *Eriococcus* (Hemiptera: Sternorrhyncha: Coccoidea: Eriococcidae) and redescriptions of *Eriococcus roboris* Goux and *E. thymelaeae* Newstead, with a key to the *Eriococcus* species on *Quercus* in the western Palaeartic

CHRIS HODGSON¹ & KATIA TRENCHVA²

¹Department of Biodiversity and Biological Systematics, The National Museum of Wales, Cardiff, CF10 3NP.

E-mail: hodgsoncj@cardiff.ac.uk

²University of Forestry, Plant Protection Department, Sofia, Bulgaria. E-mail: k_trencheva@yahoo.com

Abstract

This paper describes a new species of felt scale, *Eriococcus melnikensis* Hodgson & Trencheva (Eriococcidae), from the western Palaeartic, off *Quercus pubescens* (Fagaceae) and *Myrtus communis* (Myrtaceae). It is close to *Eriococcus roboris* Goux. In addition, this paper reviews the Eriococcidae currently known from oaks (*Quercus* spp) in the western Palaeartic and redescribes the adult females of *Eriococcus roboris* and *E. thymelaeae* Newstead. It also describes all other stages (apart from the prepupa) of *E. melnikensis* and various immature stages of *E. roboris*, *E. thymelia* and *E. aceris* (Signoret). A key is provided for the separation of the adult females of the five species of Eriococcidae now known off oaks from the western Palaeartic.

Key words. Bulgaria, Cyprus, France, Greece, Hungary, Italy, Turkey, frontal lobes, frontal tubercles, *Kotejacoccus turcicus*

Introduction

During a survey of forests in Bulgaria and Greece to identify honeydew sources for honey bees (Trencheva *et al.*, 2008), an unidentified felt scale (Eriococcidae) was found on the oak *Quercus pubescens* in southern Bulgaria. Whilst trying to identify it, it was found that the morphology of several of the eriococcids known off *Quercus* species was poorly understood, having not been redescrbed since their original identification half a century or more ago. This paper therefore redescribes *Eriococcus roboris* Goux and *E. thymelaeae* Newstead and describes the new species, *E. melnikensis* Hodgson & Trencheva. It also describes all other stages (apart from the prepupa) of *E. melnikensis* plus some immature stages of *E. aceris* (Signoret), *E. roboris* and *E. thymelaeae*.

The Eriococcidae or felt scale insects (Hemiptera: Sternorrhyncha: Coccoidea) are a speciose group of about 550 species in nearly 70 genera, many of which are important pests of ornamental plants, particularly tree species and cacti (Miller & Gimpel, 2000). However, even today there is no agreement as to the limits of the family. The problem lies in the fact that most of the character-states used to define it are not synapomorphies. This led Cox & Williams (1987) to suggest that the family was probably paraphyletic and more recent phylogenetic studies, with large sample sizes (Cook *et al.*, 2002; Cook & Gullan, 2004; Hodgson, 2002), have supported this suggestion, with Cook & Gullan (2004), using 18S data, recovering four separate groups currently included in the Eriococcidae but with some groups including other families, such as the Dactylopiidae