



<http://dx.doi.org/10.11646/zootaxa.3694.2.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:1FCE5CE1-4E3F-46B5-B7AC-F712D9F56180>

## A new species of *Dialeurolobus* (Hemiptera: Aleyrodidae) from *Protea nitida* in South Africa

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### Abstract

*Dialeurolobus proteae* sp. nov. is described from *Protea nitida* (Proteaceae) in South Africa, and from specimens intercepted on protea plants imported into the U.S.A. from South Africa. Its affinities to the other species of *Dialeurolobus* are discussed, and a diagnostic key is provided to identify the species of this genus.

**Key words:** Hemiptera, Aleyrodidae, whiteflies, *Dialeurolobus*, new species, key, *Protea nitida*, South Africa

### Introduction

This species was collected in 1991 on the leaves of *Protea nitida* Mill. (Proteaceae) in the Western Cape area of South Africa, and the material was deposited in the South African National Collection of Insects (SANC), Pretoria, South Africa. In 2001, several specimens from this sample were donated to The Natural History Museum, London (BMNH), where they were subsequently determined by J.H. Martin as being a new species, referable to the genus *Dialeurolobus*.

In 2001, puparia of the same species on the leaves of *Protea* sp. cut flowers from South Africa were intercepted in quarantine at the Plant Inspection Station of the United States Department of Agriculture at Hawthorne, California. Because of the significance of this whitefly as a potential plant quarantine species, which could easily be introduced to regions such as the U.S.A. on imported protea plants, the opportunity is taken here to describe the new species. Nothing is known about the biology or precise geographical distribution of this whitefly, or whether it feeds on other plants besides *Protea nitida*. However, until more information has been gathered about this species, it would be best to regard it as a possible threat to cultivated plants of the family Proteaceae.

### Material and methods

Puparia mounted on microscope slides by the first author (IMM) were prepared according to the method described by Martin (1987). The second author (JWD) followed the techniques used by Gill (1997), Miller and Davidson (2005), and the United States Department of Agriculture, Systematic Entomology Laboratory (Anonymous 2006), for the preparation of slide mounted specimens of scale insects and whiteflies. The dark puparia of *Dialeurolobus* were placed in test tubes containing a 5% potassium hydroxide (KOH) solution, which was then heated on a hot plate. They were then rinsed in distilled water to remove the KOH and soaked in Essig's aphid fluid. Subsequently specimens were placed in 70% ethanol for 15 minutes; transferred to 90% ethanol for 10 minutes; and then transferred to clove oil for 15 minutes, prior to slide mounting in Canada balsam.

Initial identification of the new species was conducted at the Plant Inspection Station (PPQC) and the SANC using relevant publications, digital imaging, and the comparison of specimens. Publications by Corbett (1935),