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***Dialeurolonga* re-defined (Hemiptera: Aleyrodidae): with a new genus and species from India, two new genera from Australia, and discussion of host-correlated puparial variation**

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Abstract

Aleuropositus Dubey **gen. n.**, *Australeurodes* Dubey **gen. n.** and *Septemaleurodes* Dubey **gen. n.** are proposed with their respective type species as *A. sinus* Dubey **sp. n.** from India, *D. operculobata* Martin & Carver from Australia, and *D. swainei* Martin from Australia. *A. sinus* **sp. n.** is described from Kerala, India, illustrated with line drawings, microphotographs and SEM images. The puparia are asymmetric in taxonomic characters and shape, and variation in puparia associated with a single host is discussed. A generic diagnosis of *Dialeurolonga* is provided based on SEM study of the type species, *D. elongata*. Australian species placed in this genus have puparial characteristics that distinguish them from Afrotropical assemblages, and are here referred to two new genera.

Key words: Aleyrodidae, *Aleuropositus sinus*, *Australeurodes*, *Septemaleurodes*, new species, variations

Introduction

The genus *Dialeurolonga* Dozier is a diverse assemblage of 55 species, with 40 from the Afrotropical region (33 Madagascar; 7 continental Africa), 11 Oriental, 3 Australian and 1 Neotropical. It is an Old World genus, and the recently described *D. guettardae* Martin is the only species represented from the New World (Neotropical Region) and indeed belongs to the Madagascar assemblage. Among the Old World assemblage, none of the three described Australian species are satisfactorily assignable to *Dialeurolonga*. Martin (1999) also realized that the three Australian species, *D. operculobata* Martin & Carver, *D. rusostigmoides* Martin and *D. swainei* Martin, are atypical members of the genus *Dialeurolonga* that partially agree with its generic definition, but nevertheless were assigned to it, and diagnosed using a different suite of characters. Of these three, the monotypic *D. operculobata* and *D. swainei* are here transferred to new genera, and *D. rusostigmoides* remains the only representative of this genus from Australia.

Dozier (1928) separated *Dialeurolonga* as a subgenus of *Dialeurodes*, but gave few details to distinguish the two taxa. Since his publication, the generic diagnosis of *Dialeurolonga* has been updated by subsequent workers whose work is sometimes contradictory in some aspects (see discussion). Takahashi (1951) recognized *Dialeurolonga* as a genus and differentiated it from *Dialeurodes* by its vasiform orifice which is usually distinctly longer than wide, the presence of a row of submarginal papillae, the lingula being knobbed, tracheal pores with distinct tubercles, and the presence of spine-like seta near the base of each leg. Martin (1999) added that the transverse moulting suture often almost reaches the margin and that all the *Dialeurolonga* species have invaginated tracheal pores (sometimes so shallow as to resemble tiny indented combs) whereas in many species of *Dialeurodes* these are smooth.

Considering this lack of clarity in the characteristics and limits of *Dialeurolonga*, the genus is here redefined based on SEM study of the type species, *D. elongata*. A set of characters grouping species that are different from the type species and that need further study is given separately. The characteristics of *Dialeurolonga operculobata* Martin & Carver and *Dialeurolonga swainei* Martin are found significantly different from *Dialeurolonga*, and these two species are placed in new genera.