



## Two more new species of armoured scale insect (Hemiptera: Sternorrhyncha: Coccoidea: Diaspididae) from Fiji

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### Abstract

The adult females of two new species of Diaspididae (Hemiptera: Coccoidea) are described and placed in *Anzaspis* Henderson (previously only known from New Zealand): *A. neocordylinidis* Łagowska & Hodgson and *A. pandani* Łagowska & Hodgson. The former is close to *A. cordylinidis* (Maskell), currently only known from New Zealand and found on the same host plant species, and the latter is very close to *Chionaspis pandanicola* Williams & Watson, only currently known from Fiji, and also collected on the same host plant species. Two previously described *Chionaspis* species already known from Fiji, i.e. *C. freycinetiae* Williams & Watson and *C. pandanicola* Williams & Watson are transferred to *Anzaspis* as *Anzaspis freycinetiae* (Williams & Watson) **comb. nov.** and *A. pandanicola* (Williams & Watson) **comb. nov.**, and a third species, *C. rhapsidophorae* Williams & Watson, is transferred to *Serenaspis* as *Serenaspis rhapsidophorae* (Williams & Watson) **comb. nov.** The reasons for these nomenclatural decisions and the relationship between the scale insect fauna of Fiji and New Zealand are discussed. A key is provided to all related species in the tropical South Pacific and New Zealand.

**Key words.** *Chionaspis*, *Anzaspis*, *Serenaspis*, new combinations, biogeography, New Zealand, Agavaceae, Pandanaceae

### Introduction

The super-family Coccoidea or scale insects contains about 30 families of which the Diaspididae or armoured scale insects is the largest, with over 2400 described species (Miller & Davidson, 2005; Miller & Gimpel, 2008). Armoured scale insects are mainly diagnosed by the extreme modification of the adult females, including the complete loss of the legs, the reduction of the antennae to a single segment and the modification of the abdomen into a specialised pygidium for forming the test. The higher classification within the family is uncertain but two of the major subfamilies are the Aspidiotinae and the Diaspidinae. The two new species discussed in this paper belong to the latter subfamily.

The Coccoidea of Fiji were revised by Williams and Watson (1988a, 1988b, 1990) in their review of this group for the tropical South Pacific. The first volume covered the Diaspididae in which they recorded 43 species of armoured scale from Fiji, nine of them new. More recently, Hodgson & Łagowska (2011) produced a revised checklist for the archipelago that included 52 species of diaspidid, one of which was considered new, *Pseudaulacaspis pyrrosiae* Hodgson & Łagowska. Although a few of the species only previously known from Fiji have now been recorded from other Pacific islands, it would appear that Fiji has a very rich diaspidid fauna.

While researching the species recorded in their checklist, the authors found other unidentified slides of diaspidids in the Natural History Museum, London, collected in Fiji and labelled *Pseudaulacaspis* sp. Further study of these specimens showed that, whilst some were of known species, two appeared to represent undescribed species and these are described below. They do not appear to be *Pseudaulacaspis* species and are clearly similar to *Chionaspis* Signoret. This is discussed further below.

A major review of *Chionaspis* was undertaken by Takagi (1985) in which he introduced a modified concept of the genus. He concluded that *Chionaspis* was most abundant in Asia and North America (i.e. Holarctic). More