



Scale insect fauna (Hemiptera: Sternorrhyncha: Coccoidea) of New Zealand's pygmy mistletoes (*Korthalsella*: Viscaceae) with description of three new species: *Leucaspis albotecta*, *L. trilobata* (Diaspididae) and *Eriococcus korthalsellae* (Eriococcidae)

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Abstract

The scale insect fauna recorded on the pigmy mistletoe genus *Korthalsella* (Viscaceae) and New Zealand's loranthaceous mistletoes is reviewed. Three new species from New Zealand discovered on *Korthalsella* species during this study are described: the adult female, 2nd-instar male and female nymphs of two pupillarial species *Leucaspis albotecta* **sp. nov.** and *Leucaspis trilobata* **sp. nov.** (Diaspididae); and the adult female, 2nd-instar male and female nymphs and 1st-instar nymph of *Eriococcus korthalsellae* **sp. nov.** (Eriococcidae). A distribution map is provided for the three new species. We report the first records of adventive (exotic) scale insects on *Korthalsella* species in New Zealand – *Ceroplastes sinensis* Del Guercio, *Coccus hesperidum* Linnaeus, soft brown scale, *Saissetia coffeae* (Walker), hemispherical scale, *S. oleae* (Olivier), black scale (Coccidae), and *Aspidiotus nerii* Bouché, oleander scale, *Hemiberlesia lataniae* (Signoret), latania scale, *H. rapax* (Comstock), greedy scale (Diaspididae), while three native scale insects are also first records: *Kalasisiris perforata* (Maskell) (Coccidae), *Eriococcus pallidus* Maskell (Eriococcidae) and *Paracoccus glaucus* (Maskell) (Pseudococcidae). Ten scale insect species are listed for New Zealand's loranthaceous mistletoes.

Key words: Coccidae, Diaspididae, Eriococcidae, Pseudococcidae, distribution, host plants, first records

Introduction

The pygmy mistletoes of New Zealand belong to the genus *Korthalsella* in the family Viscaceae. *Korthalsella* is a genus of about 25 species of leafless, aerial hemiparasites. The genus is distributed from Ethiopia, Madagascar and Mascarenes through South and South East Asia to Japan in the north, Australia and New Zealand in the south and the Hawaiian Archipelago, Marquesas and Henderson Island in the east (Molvray *et al.* 1999; Burrows 1996). New Zealand is home to three species, *K. salicornioides*, *K. clavata* and *K. lindsayi* (Fig. 1).

Korthalsella salicornioides occurs throughout the North and South Islands and on Stewart Island and is classified as “naturally uncommon-sparse” in the threatened and uncommon plants list for New Zealand (de Lange *et al.* 2009). *K. salicornioides* mainly occurs on *Leptospermum scoparium* and *Kunzea* spp. but has also been recorded on the introduced *Erica lusitanica* and *E. vagans* (Bannister 1989). *Korthalsella clavata* occurs throughout the South Island but is rare in the North Island occurring from near Whakamaru in the Central Volcanic Plateau southwards to Cape Turakirae. *K. clavata* is regarded as a regionally threatened plant in Wellington Conservancy (Department of Conservation 2001). The favoured host of *Korthalsella clavata* is *Coprosma propinqua*, but it also occurs on several other *Coprosma* spp., *Aristotelia fruticosa*, *Discaria toumatou* and *Melicope simplex*. *Korthalsella lindsayi* occurs throughout the South Island and in the North Island occurs from Pureora in the Western Volcanic Plateau southwards. The main host for *K. lindsayi* is