



## New Zealand Eriophyoidea (Acari: Prostigmata): an update with descriptions of one new genus and six new species

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## Abstract

The New Zealand fauna of Eriophyoidea (Acari: Prostigmata) is updated with a checklist. One new genus, six new species, three new combinations, one new record and some new distribution records of eriophyoid mites from New Zealand are described and illustrated, namely *Disella rebeeveri* sp. nov. on *Kunzea ericoides* (Myrtaceae); *Cecidophyopsis hendersoni* (Keifer, 1954), rec. nov. on *Yucca glauca* and *Y. elephantipes* (Agavaceae); *Nameriophyes sapidae* gen. nov. & sp. nov. on *Rhopalostylis sapida* (Palmae); *Eriophyes bennetti* sp. nov. on *Fuchsia excorticata* (Onagraceae); *Eriophyes georgeae* sp. nov. on *Brachyglottis elaeagnifolia* (Asteraceae); *Aceria flynni* sp. nov. on *Kunzea ericoides* (Myrtaceae); *Aculops propinqua* (Manson, 1984), comb. nov. on *Coprosma propinqua* (Rubiaceae); *Aculus corynocarpi* (Manson, 1984), comb. nov. on *Corynocarpus laevigatus* (Corynocarpaceae); *Aculus heatherae* (Manson, 1984), comb. nov. on *Raukaua simplex* (Araliaceae), *Leptospermum scoparium* (Myrtaceae) and *Syzygium maire* (Myrtaceae); *Aculus lalithi* sp. nov. on *Melicope ternate* (Rutaceae). A key to the New Zealand species of *Eriophyes* is provided.

**Key words:** Eriophyoidea, plant feeding, taxonomy, new genus, new species, new record, key

## Introduction

New Zealand is one of the World's biodiversity hotspots in the Southern Hemisphere, consisting of three large islands (North Island, South Island, and Stewart Island) plus several smaller surrounding islands and lying between 34 and 46 degrees of latitude south in the Pacific Ocean. The New Zealand mite fauna is very rich, with over 1200 described species by the end of 2000, and it is estimated that 90% of New Zealand mite species are waiting to be described (Zhang & Rhode 2003). The Eriophyoidea is a hyperdiverse phytophagous superfamily of the Prostigmata (Amrine *et al.* 2003). New Zealand Eriophyoidea account for about 10% of the all mites known in New Zealand (Zhang & Rhode 2003).

The first eriophyoid mite species of New Zealand—*Eriophyes pyri* (Pagenstecher, 1857)—was reported by Thomson (1922). Lamb (1952, 1953a, 1953b, 1953c) was the first taxonomist who described new eriophyoids from New Zealand; he described 15 new species. From 1965 to 1989, Manson (1959, 1965, 1967, 1970, 1972, 1984a, 1984b, 1889) and his colleagues (Manson & Gerson 1986) described 78 new species, mainly published in two volumes in the *Fauna of New Zealand* (Manson 1984a, 1984b). With the exception of Guy and Gould (1996), who recorded *Aculodes mckenziei* (Keifer, 1944), there has been little work on the New Zealand Eriophyoidea since 1990.

To date, our survey showed that 125 species of eriophyoid mites are known to occur in New Zealand (Guy 1993; Guy & Gould 1996; Keifer 1969; Lamb 1952, 1953a, 1953b, 1953c; Manson 1959, 1965, 1967, 1970, 1972, 1984a, 1984b, 1989, Manson & Gerson 1986; Ramsay 1958). They belong to three families, seven subfamilies, and 39 genera (Table 1). Among these, 11 (28.2%) of the genera and 93 (74.4%) of the species are endemic to New Zealand. This study was initiated by identification requests to Z.-Q. Zhang from various colleagues, especially from Dr N. A. Martin (Crop and Food Research, Auckland). A systematic study of all New Zealand material available to authors revealed several new species. It is timely that we provide an update of New Zealand Eriophyoidea based on material accumulated during the last decade or so. One new genus and six new species of eriophyoid mites are described in this paper.

## Material and Methods

All specimens of eriophyoid mites used in this study were collected in New Zealand and preserved in the New Zealand Arthropod Collection (NZAC), Landcare Research, Auckland, the Plant Pest Reference Laboratory, Auckland, New Zealand (PANZ)—now part of the Investigation and Diagnostic Centre, MAF Biosecurity. The morphological terminology used here follows Lindquist (1996) and the generic classification is made