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## A new genus and two new species of feather lice (Phthiraptera: Ischnocera: Philopteridae) from New Zealand endemic passerines (Aves: Passeriformes)

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### Abstract

The first descriptions of New Zealand endemic feather lice belonging to the *Brueelia*-complex (Phthiraptera: Ischnocera: Philopteridae) are given. The new genus *Melibrueelia* and new species *M. novaeseelandiae* are described, illustrated and compared with morphologically close taxa within the complex. The type host of *M. novaeseelandiae* is the tui, *Prosthemadera novaeseelandiae* (Gmelin, 1788), and an additional host is the bellbird, *Anthornis melanura* (Sparrman, 1786) (Passeriformes: Meliphagidae), both endemic to New Zealand. Also, the new species *Brueelia callaeicola* is described and illustrated from four endemic bird species belonging to two endemic genera and an endemic family: *Philesturnus carunculatus* (Gmelin, 1789) (the type host), *Ph. rufusater* (Lesson, 1828), *Callaeas cinerea* (Gmelin, 1788) and *C. wilsoni* (Bonaparte, 1851) (Passeriformes: Callaeidae). Brief discussions on possible evolutionary histories of the new taxa are included.

**Key words:** *Brueelia*-complex, *Melibrueelia*, *Brueelia*, Philopteridae, new genus, new species, Passeriformes, Callaeidae, Meliphagidae, endemic, New Zealand

### Introduction

Currently, published records of New Zealand feather lice belonging to the speciose genus *Brueelia* (Phthiraptera: Ischnocera: Philopteridae) are several identified louse species introduced by human agency with their hosts, and a number of introduced and endemic species identified to genus only (e.g. Pilgrim & Palma 1982: 27; Palma 1999: 382). This paper is the first to include descriptions of New Zealand endemic species of lice included in the *Brueelia*-complex of genera (Clay 1951; Clay & Tandan 1967). We describe one new genus and two new species of lice from six species of New Zealand endemic birds, two in the honeyeater family Meliphagidae, and four in the wattle-bird family Callaeidae.

Probably as a result of parallel evolution, characters of the head show considerable diversity among the large number of species presently placed in *Brueelia*, as discussed by Clay (1951: 186) and Clay & Tandan (1967: 34). Therefore, it is difficult to clearly separate genera within the *Brueelia*-complex based solely on head characters, a fact that has produced very different opinions on the number of genera which should be recognised within this complex, from just three genera as in Clay (1951: 187) and Hopkins & Clay (1952: 52, 1953: 435) to more than 10 as in Eichler (1963: 177) and Złotorzycka (1964; 1977: 38), and over 20 as in Mey & Barker (2014: 81).

However, if other characters such as abdominal chaetotaxy are also considered, a more reliable generic separation on morphological grounds can be achieved within the *Brueelia*-complex. Thus, based on morphological characters common to both sexes, those exclusive to males or females, and the geographical and host distributions, we believe that erecting a new genus within the *Brueelia*-complex to include ischnoceran lice parasitic on New Zealand meliphagids is justified (see Table 1).

The lack of speciation between the *Brueelia* populations from *Callaeas* and *Philesturnus* is analogous to that between the *Melibrueelia* populations from *Prosthemadera* and *Anthornis*, as discussed above in this paper. As mentioned above under *Melibrueelia novaeseelandiae*, genetic studies of *Brueelia callaeicola* and similar species from Turdidae as well as other *Brueelia* from families believed to be close to the Callaeidae, may reveal the true relationships of these lice.

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