

The redescription of *Parapygmephorus luxtoni* (Mahunka, 1970) comb. nov. (Acari: Neopygmephoridae) phoretic on bees of the family Colletidae (Hymenoptera) from New Zealand

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Abstract

In the course of examination of mites on bees, *Leioproctus imitatus* Smith (Hymenoptera: Colletidae) in New Zealand, a mite species, *Parapygmephorus luxtoni* (Mahunka, 1970) comb. nov. (Acari: Neopygmephoridae), was rediscovered. Herein, we redescribe the mite and provide a key to the world species of *Parapygmephorus*.

Key words: Taxonomy, Pygmephoroida, mite, bee, phoresy, key

Introduction

The Neopygmephoridae are distinct in having the combination of the following characters: female: prodorsum with 2 pairs of setae (v_2 and sc_2) and a pair of trichobothria (sc_1); coxisternal plates I and II each with 2 pairs of setae ($1a$, $1b$ and $2a$, $2b$); legs I always 4-segmented (tibia fused with tarsus); tibiotarsus I with only 5 eupathidia ($p'\zeta$ absent); femur I with 3 setae, $dFeI$ hook-like; physogastry undeveloped. Male: aedeagus long and transversely striated (Khaustov 2004). With 248 species in 17 genera, it ranks the third in species diversity among four families of the Pygmephoroida (Zhang *et al.* 2011).

Mites of the family Neopygmephoridae are poorly studied in New Zealand. Currently only eight valid species were recorded: *Bakerdania arborum* (Jacot 1936), *B. luxtoni* Mahunka, 1970, *B. mirabilis* (Mahunka, 1969), *B. novaezelandicus* Mahunka, 1970, *B. togatus* (Willmann, 1942), *Kerdabania inconspicuus* (Berlese, 1904), *K. quadrata* (Ewing, 1917) and *Pseudopygmephorus tarsalis* (Hirst, 1921) (Mahunka 1980; Sirvid *et al.* 2010). During our study of mites associated with bees in New Zealand, we found numerous female *B. luxtoni* on *Leioproctus imitatus* Smith (Hymenoptera: Colletidae). Previously, *B. luxtoni* was collected from *Paracolletes* sp. (Hymenoptera: Colletidae) (Mahunka 1970).

We transferred *Bakerdania luxtoni* to the genus *Parapygmephorus* because females of this species have leg I shorter than leg II (subequal in *Bakerdania*), trochanter IV weakly constricted (distinctly constricted in *Bakerdania*) and by phoresy on bees (*Bakerdania* mites not phoretic on bees). Because of incomplete original description we provide a redescription for this species based on our material.