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Editorial

Tuckerella japonica (Acari: Tuckerellidae) in China and New Zealand: new data and an alternative hypothesis for its route of invasion

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The Tuckerellidae is a relatively small family of the Tetranychoidea, with just one genus and 28 species (Zhang *et al.* 2011). They are commonly known as peacock mites due to the attractive colour (orange to red) of the body, which is ornamented by rows of white, palmate, oval or circular setae and a row of whip-like caudal setae (Fig. 1). In New Zealand, two species—*Tuckerella flabellifera* Miller, 1964 and *T. litoralis* Collyer, 1969—had been known for over four decades (Collyer, 1969), until Beard *et al.* (2013) added a third species—*T. japonica* Ehara, 1975—based on New Zealand exported mites on blueberry and kiwifruit that were intercepted in Australia. They distinguished *T. japonica* from *T. flabellifera* with excellent descriptions and also noted that *T. japonica* appears strongly associated with tea (*Camellia sinensis*). They hypothesized, after a fascinating historic account of the cultivation and movement of tea, that *T. japonica* has travelled as tea's hidden companion when tea plants were transported around the world. Here, we examine and develop this hypothesis further, especially regarding the origin of *T. japonica* and the possible alternative invasion route to New Zealand. We also report new host association for *T. japonica* in New Zealand.



FIGURE 1. *Tuckerella japonica* adult female and also a newly laid egg near its posterior end (note that it is nearly half as long as the female). The female mite was collected from the twig of *Cryptomeria japonica* in Te Puke, New Zealand and reared on a kiwifruit (sepal end around the base of the stalk). Photograph: Rosa Henderson.

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