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Identification of exotic pest and Australian native and naturalised species of *Tetranychus* (Acari: Tetranychidae)

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Abstract

An illustrated dichotomous key to the 3 endemic Australian, 9 naturalised exotic, and 14 exotic pest species of *Tetranychus* Dufour, 1832, deemed to be of greatest risk of accidental introduction to Australia is presented. Each species is diagnosed, illustrated with line drawings and/or photographs, and supplied with remarks on its biology, potential to enter Australia and economic importance. We establish that *Tetranychus desertorum* Banks, 1900, previously thought to be present in Australia, is absent. The erroneous record of *T. desertorum* is due to confusion between this species and *T. ludeni*. *Tetranychus gloveri* Banks, 1900 was absent from Australia until a recent incursion in Darwin, now considered eradicated. All previous records of *Tetranychus gloveri*, *Tetranychus tumidus* Banks, 1900 and *Allonychus braziliensis* (McGregor, 1950) in Australia are *Oligonychus digitatus* Davis, 1966. *Tetranychus ludensis* Attiah, 1969 **syn. nov.** is synonymised with *Tetranychus ludeni* Zacher, 1913. Lectotype and paralectotype specimens are designated for *Tetranychus marianae* McGregor, 1950 and *Tetranychus mexicanus* (McGregor, 1950).

Key words: Systematics, taxonomy, illustrated key, diagnostics, spider mites

Introduction

Spider mites (Acari: Tetranychidae) are among the best-known of the Acari, yet their identification remains a persistent challenge to experts and non-experts alike. The costs incurred from crop losses and control strategies are measured in millions of dollars, but our experience is that damage is blamed on a few common species, especially Two-spotted Spider Mite, sometimes without checking species identification.