



## Surveys for natural enemies of the tomato red spider mite *Tetranychus evansi* (Acari: Tetranychidae) in northeastern and southeastern Brazil

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### Abstract

Surveys for predators of the tomato red spider mite *Tetranychus evansi* Baker & Pritchard on solanaceous plants were carried out in north-eastern and south-eastern Brazil to determine prospective species for the control of the pest in Africa. Surveys were carried out in areas identified as climatically similar to regions in Africa where *T. evansi* has been reported as a pest and where prospective natural enemies may be introduced. A total of 56,445 mites and insects were found in 330 samples collected from 20 different species of solanaceous plants. *Tetranychus evansi* was found in only three samples, on *Solanum americanum* Mill. and *Lycopersicon esculentum* Mill.. A total of 5,023 specimens of predatory mites, of at least 44 species, and 494 specimens of acarophagous insects, of at least three species were collected. The predominant predatory mites were (in decreasing order): *Phytoseius guianensis* DeLeon, *Pronematus ubiquitous* (McGregor), *Asca* sp., *Paraphytoseius orientalis* (Narayanan, Kaur & Ghai), *Phytoseius woodburyii* DeLeon, *Amblyseius compositus* Denmark & Muma, *Homeopronematus anconai* (Baker), *Neoparaphytoseius sooretamus* (El-Banhawy), *Cunaxoides* sp., *Typhlodromus paraevectus* Moraes & McMurtry, *Typhlodromalus peregrinus* (Muma) and *Phytoseius cismontanus* DeLeon. However, no predatory mites were found in association with *T. evansi*. Among the insects, although not the most abundant, *Stethorus tridens* Gordon seemed to be most promising, as it was found associated with *T. evansi* in all samples in which the latter was found. *Feltiella* sp. was the most abundant acarophagous insect found, but it was never found associated with the pest.

**Key words** : *Tetranychus evansi*, *Stethorus tridens*, predatory mites, exploration, classical biological control

### Introduction

*Tetranychus evansi* Baker & Pritchard is a serious pest of tomatoes and various other cultivated Solanaceae in Africa (Knapp *et al.* 2003; Saunyama & Knapp 2003). Although most common on solanaceous plants, it has also been reported on plants of other families (Blair 1983; Moraes *et al.* 1987; Bolland *et al.* 1998).

*Tetranychus evansi* most probably originated in South America and was accidentally introduced into Africa (Gutierrez & Etienne 1986). Searching for natural enemies associated with the pest in the area of origin for introduction as biocontrol agents in Africa seems to be promising. Similar introductions have been suc-