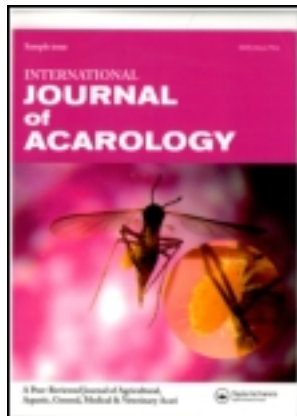


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## International Journal of Acarology

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/taca20>

### First Record of *Raoiella indica* (Hirst, 1924) (Acari: Tenuipalpidae) in Guadeloupe and Saint Martin, West Indies

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Published online: 17 Mar 2009.

To cite this article: Jean Etienne & Carlos H.W. Flechtmann (2006) First Record of *Raoiella indica* (Hirst, 1924) (Acari: Tenuipalpidae) in Guadeloupe and Saint Martin, West Indies, *International Journal of Acarology*, 32:3, 331-332, DOI: [10.1080/01647950608684476](https://doi.org/10.1080/01647950608684476)

To link to this article: <http://dx.doi.org/10.1080/01647950608684476>

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## SHORT NOTE

### FIRST RECORD OF *RAOIELLA INDICA* (HIRST, 1924) (ACARI: TENUIPALPIDAE) IN GUADELOUPE AND SAINT MARTIN, WEST INDIES

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#### INTRODUCTION

The red palm mite, *Raoiella indica* Hirst (Prostigmata: Tenuipalpidae), described in 1924 from coconut leaves in India, spread to the Near East, Mauritius, Reunion and Russia and became an important pest. Details of its distribution are summarized in Mendonça *et al.* (2005) and Kane *et al.* (2005). It was recently reported from Martinique (Flechtmann and Etienne, 2004), St. Lucia, Dominica and Trinidad-Tobago (Kane *et al.*, 2005), mainly on palms (Arecaceae) and bananas (Musaceae).

**Observations** - Surveys conducted by authors in Guadeloupe in May 2006 showed that *R. indica* was pres-

ent in large populations on the lower surface of median leaves of coconut palms (*Cocos nucifera* L.) all along the coastal line and on the ornamental palms *Caryota mitis* Lour. L., *Licuala grandis* H. Wendl., *Phoenix canariensis* Hort. ex Chabaud, *Pritchardia pacifica* B.C. Seem. and H. Wendl, *Ptychosperma macarthuri* H. Wendl ex Hook, *Veitchia merrillii* (Becc.) H. E. Moore and *Washingtonia robusta* H. Wendl as well as on other ornamental plants: *Heliconia rostrata* R. and P. (Heliconiaceae), *Strelitzia reginae* Banks (Strelitziaceae), *Alpinia purpurata* Vieill. ex K. Schum. and *Etilingera elatior* (Jack.) R. M. Smith (Zingiberaceae) and bananas (*Musa* sp., Musaceae). The mites were easily noticed due to their large populations

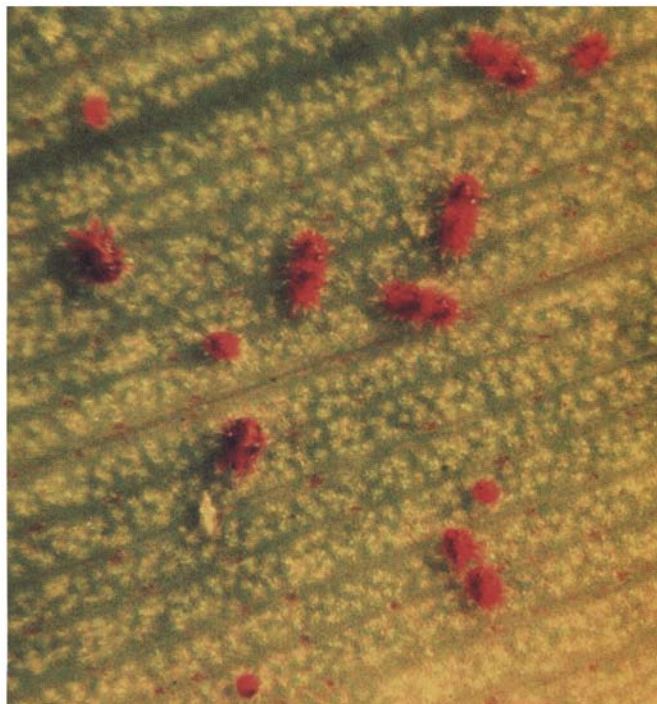


Fig. 1. *Raoiella indica* on *Ptychosperma macarthuri* leaf.

and red color (Fig. 1). Infested leaves initially became yellow and later developed more or less extensive areas of brown and dark necrotic tissue. Recently (11 June 2006), Mr. E. Dubois-Millot collected this mite from coconut leaves in Rambaud, isle of Saint Martin.

**Biology** - The biology of *R. indica* on coconut was studied in India by Nageshaschandra and Channa-Basavanna (1984). Under laboratory conditions, at temperatures between 24 - 26°C and 60% relative humidity, females completed their development in 24.5 days and males in 20.6 days; adult longevity was 50.9 days for females and 21.6 days for males. Fertilized females produced an average of 22 eggs and virgin females 18.4 eggs. These authors also observed that the population increase of *R. indica* was correlated with periods of high temperatures and low relative humidity and that the numbers of mites decreased rapidly with the onset of the rainy period. Slightly different data were observed by Moutia (1958) in Mauritius on coconuts, Zaher *et al.* (1969) in Egypt and Gerson *et al.* (1983) in Israel on date palms.

**Control** - In the case of an invasion by a new pest, such as *R. indica* in Guadeloupe, it is difficult to suggest an appropriate chemical control measure because it can only be recommended on basis of previous experiments conducted locally or conducted abroad under different conditions. Chemical control measures tested in India have shown that these can be carried out only on plants in nurseries on young ornamental palms (Jalaluddin and Mohanasundaram, 1990; Jayaraj *et al.*, 1991). They are not economically feasible and are threatening to the environment when applied to large plants in the field. Therefore, it seems advisable to wait until the invasive phase is over before venturing into chemical control. As is the case with other invasive pests, one frequently notices a considerable lowering in their attacks due to the action of predators which naturally occur in the area. The predators which may be efficient in regulating the populations of *R. indica* in Guadeloupe are mainly acarines (mites) of the family Phytoseiidae. Over 50 species of Phytoseiidae have already been reported from the French Antilles (Moraes *et al.*, 1999). In fact, in all samples collected in the present survey, one species of phytoseiid mite, *Amblyseius largoensis* (Muma, 1955) was always present, although not in large numbers. Females, males and nymphs of this predator had gut contents of the same reddish color as *R. indica* and in one instance active feeding of a female of *A. largoensis* on the red palm mite was observed. This association was also observed in La Réunion (Ueckermann, 2004).

#### ACKNOWLEDGEMENTS

We thank Mr. Edmilson Santos Silva for the confirmation of the identification of the phytoseiid mite, *A.*

*largoensis*, and Mr. Daniel Marival for the identification of the palms.

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