



Report of orchid mite, *Tenuipalpus pacificus* Baker (Prostigmata: Tenuipalpidae) from Kerala, India

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ABSTRACT: Incidence of *Tenuipalpus pacificus* Baker, a mite species, was recorded on an orchid. This is the first report from India. The mite species would probably have gained entry into India through imported planting materials of hybrid orchids. © 2013 Association for Advancement of Entomology

KEY WORDS: *Tenuipalpus pacificus* Baker, a mite species, *Phalaenopsis* Blume, orchid

Orchids are the most popular ornamental and flowering plants world over. In India, all tropical orchids can be successfully grown and hence many commercial ornamental nurseries are involved in large scale production and sale of orchid plants. States of Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra, Andhra Pradesh, Odisha, West Bengal, Assam, Arunachal Pradesh, Sikkim etc. are identified as potential areas for commercial orchid cultivation. Commercial nurseries here import hybrid orchids from South East Asian Countries. Species of *Phalaenopsis* are among the most popular orchids sold in India as potted plants owing to the ease of propagation and flowering under artificial conditions. *Phalaenopsis* Blume, represented by about over 40 species, is a tropical Asiatic genus mainly distributed in Indonesia and the Philippines (Seidenfaden and Wood, 1992). Among the Southern states of India, Kerala is most suited for cultivation of almost all the tropical orchids and it is one of the leading states in commercial orchid cultivation in India. The *Phalaenopsis* orchid, commonly called as “moth

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Plate 1. Symptom of flat mite infestation



Plate 2. *Tenuipalpus pacificus* Baker

orchid” has become increasingly popular in commercial orchidariums in Kerala in recent years, where hybrid orchids imported from South East Asian Countries are on high demand.

During 2011, heavy incidence of a flat mite belonging to the genus *Tenuipalpus* was reported on *Phalaenopsis* orchid from different ornamental plant nurseries of Thrissur District, Kerala, India (Binisha and Bhaskar, 2011). Subsequently, a detailed survey was undertaken in some commercial orchidariums and homestead gardens located in Madakkathara and Vengitangu Panchayath in the district during the summer months of March – April, 2012 and incidence of flat mites belonging to the family Tenuipalpidae was confirmed. The mites are crimson in colour, flat bodied with short legs and are less active. They were found colonizing the lower surface of *Phalaenopsis* leaves causing dark patches leading to necrosis of tissues (Plate 1). Mite samples on *Phalaenopsis* leaves were collected and preserved in 70 per cent alcohol for further taxonomic studies. The mites were mounted on slides with Hoyer’s medium and taxonomic studies were carried out. The mite was identified as *Tenuipalpus pacificus* Baker.

T. pacificus (Plate.2) can be distinguished by the following characters: Podosoma distinctly broad and opisthosoma narrow; dorsal ornamentation on the body with only a few longitudinal striae, two pairs of anterior medioventral metapodosomal setae with the inner pair shorter than the outer pair; two pairs of posterior medioventral metapodosomal setae with the inner pair much longer than the outer pair; one pair of ventral plate setae; two pairs of genital plate setae; first two pairs of propodosomal setae about half as long as the third pair and about equal in size as the hysterosomal posterior marginal setae; posterior margin of hysterosoma with one pair of not so long flagellate setae.

T. pacificus reported as a pest of different species of orchids and some ferns from different parts of the world (Jeppson *et al.*, 1975; Ghai and Shenhmar, 1984 and Mesa *et al.*, 2009). However, the mite was not recorded on orchids earlier from India. This is the first record of *T. pacificus* on an orchid from India. The mite species would probably have gained entry into India through imported planting materials of hybrid orchids.

REFERENCES

- Binisha, K.V. and Bhaskar, H. (2011) Incidence of the false spider mite, *Tenuipalpus* sp. (Prostigmata: Tenuipalpidae) on *Phalaenopsis*. *Insect Environment*, 17(3):114.
- Ghai, S. and Shenhmar, M. (1984) A review of the world fauna of Tenuipalpidae (Acarina: Tetranychoidae). *Oriental Insects*, 18: 99-172.
- Jeppson, L.R., Keifer, H.H. and Baker, E.W. (1975) *Mites Injurious to Economic Plants*. University of California Press, London. pp. 272-273.
- Mesa, N. C., Ochoa, R., Welbourn, W. C., Evans, G. A. and De Moraes, G. J. (2009) A catalog of Tenuipalpidae (Acari) of the world with a key to genera. *Zootaxa*, 2098: 1-185
- Seidenfaden, G. and Wood, J. J. (1992). *The orchids of Peninsular Malaysia and Singapore*. Olsen and Olsen, Fredensborg. pp. 667.

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